

---

---

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

---

**FORM 10-K**

---

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2021

**OR**

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission File Number: 001-39548

---

**BENTLEY SYSTEMS, INCORPORATED**

(Exact name of registrant as specified in its charter)

---

**Delaware**

(State or other jurisdiction of incorporation or organization)

**685 Stockton Drive**

**Exton, Pennsylvania**

(Address of principal executive offices)

**95-3936623**

(I.R.S. Employer Identification No.)

**19341**

(Zip Code)

Registrant's telephone number, including area code: **(610) 458-5000**

---

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol	Name of each exchange on which registered
Class B Common Stock, par value \$0.01 per share	BSY	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes  No

---

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Non-accelerated filer

Accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2021, the last business day of the registrant's most recently completed second fiscal quarter, was \$7.0 billion based on the closing price reported on the Nasdaq Stock Market LLC on that date. As of February 22, 2022, the registrant had 11,601,757 shares of Class A and 272,292,311 shares of Class B Common Stock outstanding.

#### DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for registrant's Annual Meeting of Stockholders (the "Proxy Statement") are incorporated by reference in Part III of this Form 10-K to the extent stated herein. The Proxy Statement will be filed within 120 days of the registrant's fiscal year ended December 31, 2021.

Auditor Name: KPMG LLP

Auditor Location: Philadelphia, Pennsylvania

Audit Firm ID: 185

---

---

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**FORM 10-K**  
**TABLE OF CONTENTS**

	<u>Page</u>
	<u>4</u>
<b><u>PART I</u></b>	
Item 1.	<u>5</u>
Item 1A.	<u>33</u>
Item 1B.	<u>48</u>
Item 2.	<u>48</u>
Item 3.	<u>48</u>
Item 4.	<u>48</u>
<b><u>PART II</u></b>	
Item 5.	<u>49</u>
Item 6.	<u>49</u>
Item 7.	<u>50</u>
Item 7A.	<u>93</u>
Item 8.	<u>94</u>
Item 9.	<u>94</u>
Item 9A.	<u>94</u>
Item 9B.	<u>95</u>
Item 9C.	<u>95</u>
<b><u>PART III</u></b>	
Item 10.	<u>96</u>
Item 11.	<u>97</u>
Item 12.	<u>97</u>
Item 13.	<u>97</u>
Item 14.	<u>97</u>
<b><u>PART IV</u></b>	
Item 15.	<u>98</u>
Item 16.	<u>101</u>
<b><u>SIGNATURES</u></b>	<u>102</u>
	<u>F-1</u>
	<u>F-6</u>
	<u>F-12</u>

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements. All statements contained in this report other than statements of historical facts, including statements regarding our future results of operations and financial position, our business strategy and plans and our objectives for future operations, are forward-looking statements. The words “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations, projections, and assumptions about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties, and assumptions, including those described in the section titled “Risk Factors.” Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties, and assumptions, the future events and trends discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements. The forward-looking statements, as well as our report as a whole, are subject to risks and uncertainties.

These statements are only current predictions and are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry’s actual results, levels of activity, performance, or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in this report in greater detail in the section titled “Risk Factors” and elsewhere in this report. You should not rely upon forward-looking statements as predictions of future events.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, achievements, events, or circumstances reflected in the forward-looking statements will occur. Except as required by law, we undertake no obligation to update any of these forward-looking statements after the date of this report to conform these statements to actual results or revised expectations.



## PART I

### Item 1. Business

#### **Bentley Systems: The Infrastructure Engineering Software Company**

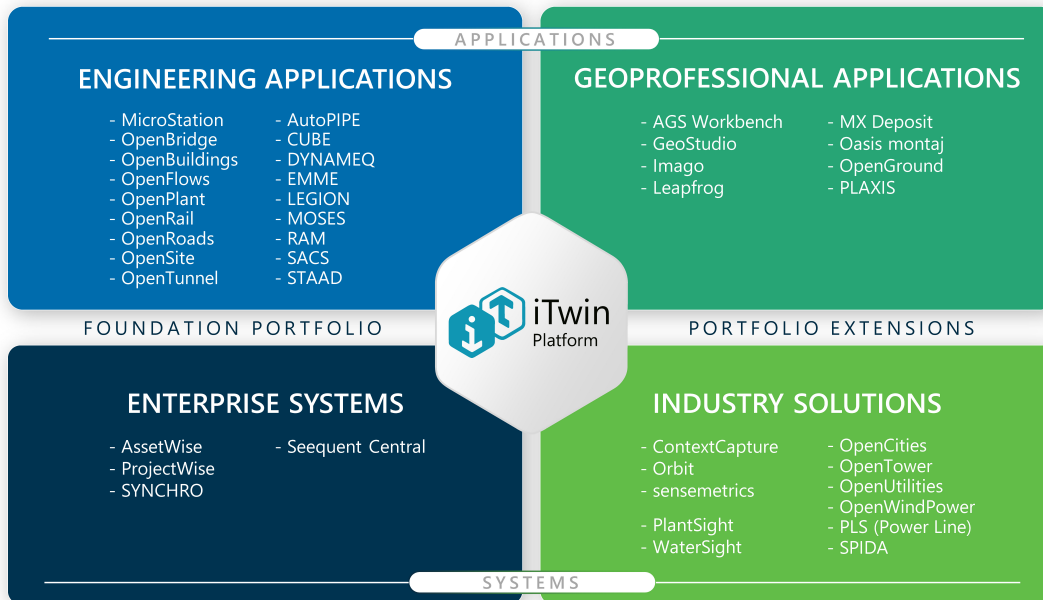
We are a leading global provider of software for infrastructure engineering, enabling the work of civil, structural, geoprofessional, and plant engineering practitioners, their project delivery enterprises, and owner-operators of infrastructure assets. We were founded in 1984 by the Bentley brothers and on September 25, 2020, we completed our initial public offering (“IPO”). Our enduring commitment is to develop and support the most comprehensive portfolio of integrated software offerings across professional disciplines, project and asset lifecycles, infrastructure sectors, and geographies. Our software enables digital workflows across engineering disciplines, distributed project teams, from offices to the field, and across computing form factors, including desktops, on-premises servers, cloud-native services, mobile devices, and web browsers. We deliver our solutions via on-premises, cloud, and hybrid environments. Our users engineer, construct, and operate projects and assets across the following infrastructure sectors:

- *public works* (including roads, rail, airports, ports, and water and wastewater networks)/*utilities* (including electric, gas, water, and communications). We estimate that this sector represents 52% of the net infrastructure asset value of the global top 500 infrastructure owners (the “global top 500 infrastructure owners”) based on the 2021 edition of the *Bentley Infrastructure 500 Top Owners*, our annual compilation of the world’s largest infrastructure owners ranked by net depreciated value of their tangible fixed assets;
- *industrial* (including discrete and process manufacturing, power generation, and water treatment plants)/*resources* (including oil and gas, mining, offshore, and environmental). We estimate that this sector represents 34% of the global top 500 infrastructure owners’ net infrastructure asset value; and
- *commercial/facilities* (including office buildings, hospitals, and campuses). We estimate that this sector represents 14% of the global top 500 infrastructure owners’ net infrastructure asset value.

We address both the project and asset lifecycle phases of infrastructure, each with applications and enterprise information systems. Our Project Lifecycle solutions encompass conception, planning, surveying, design, engineering, simulation, and construction, as well as the collaboration offerings required to coordinate and share the work of interdisciplinary and/or distributed project teams. Our Asset Lifecycle solutions span the operating life of commissioned infrastructure assets, allowing our accounts to manage engineering changes for safety and compliance and to model performance and reliability to support operating and maintenance decisions.

**Our Solutions**

We offer solutions for enterprises and professionals across the infrastructure lifecycle. Our Engineering Applications and Geoprofessional Applications support the breadth of engineering and geoprofessional disciplines and are primarily desktop applications for professional practitioners. Our project delivery and asset performance Enterprise systems are provided via cloud and hybrid environments, developed respectively to extend enterprise collaboration during project delivery, and to manage and leverage engineering information during operations and maintenance. Our Industry Solutions solve domain-specific problems for owners of infrastructure assets, and the project delivery ecosystems that support these owners. Our cloud-native iTwin Platform solutions enable digital twin workflows, which can span project and asset lifecycles.



Our comprehensive solutions for the entire project delivery and asset performance lifecycle—spanning conception, planning, surveying, geoscience, design, simulation, construction, and operations—include *Engineering Applications*, *Geoprofessional Applications*, *Enterprise Systems*, *Industry Solutions*, and our *iTwin Platform* for infrastructure digital twins.

**Engineering Applications.** Our Engineering Applications are for modeling and simulation. Our modeling applications are domain-specific authoring tools used by professionals for the 3D design and documentation of infrastructure assets. Our simulation applications enable engineers to analyze the functional performance of the designs created with our modeling applications (or those of competitive vendors), preferably in iterative digital workflows, to improve engineering outcomes and to ensure compliance with design codes.

Benefits of our Engineering Applications to infrastructure engineers include:

- *Better designs.* Our modeling and simulation applications work together to improve infrastructure engineering quality, for instance to eliminate “clashes” across respective disciplines’ work. Each application is for a specific purpose (asset-type or discipline; for example, *OpenRoads* for roadway design), and supports corresponding asset-specific engineering workflows (for example, the workflow a civil engineer would use in designing a road) by virtue of:
  - *Better engineering productivity.* We endeavor to provide in our applications the most advanced and automated intelligence for transforming engineers’ conceptual decisions into complete, detailed, and editable deliverables; and
  - *Better configurability and continuity.* We take care to enable users to continuously refine their modeling preferences and standards across successive generations of our applications. This capability enables engineers, throughout their careers, to maintain continuity and compatibility with their preferred interfaces, formats, and methodologies, while advancing their work at the leading edge of innovation;
- *Better deliverables.* Our applications share a common modeling environment to enable streamlined coordination and production of multi-discipline documentation; and
- *Better handoff.* Our comprehensive modeling environment and our supplemental cloud services enable projects to enrich information sharing (and to minimize problematic translations) across project delivery processes. For instance:
  - by starting with reality modeling of existing conditions (often from drone surveying);
  - by sharing engineering component definitions across disciplines and projects; and
  - through “constructioneering” digital workflows, which automate the exchange of 3D design models to control GPS-enabled construction equipment (for earthmoving and paving), and to validate and preserve the resulting 3D as-built models for maintenance.

**Geoprofessional Applications.** Our Geoprofessional Applications support modeling and simulation to help engineers and scientists develop a detailed understanding, and take full account of, near and deep subsurface conditions.

Our recent acquisition of Seequent Holdings Limited (“Seequent”) adds industry-leading earth modeling, geoscience-data management, and geoprofessional team collaboration software to our portfolio. The integration of these sophisticated technologies in combination with our existing geotechnical products, supplements visible built asset representations above ground with more probabilistic modeling of invisible subsurface conditions – deepening the potential of infrastructure digital twins.

Benefits of our geoprofessional applications to infrastructure professionals include:

- *Delivering a clearer picture of what lies beneath.* Our geodata modeling and visualization technologies helps geoprofessionals see what lies in the subsurface. When they can see it, they can understand it and make better decisions that reduce ground risk throughout the project lifecycle – saving budget and compressing timelines;
- *Connecting workflows.* As infrastructure and engineering projects become ever more complex, users need greater confidence in the earth sciences disciplines which support all surface infrastructure. The combination of Seequent’s subsurface geoscience and our existing geotechnical products means users have more flexibility in how they comprehensively solve complex geoscience and engineering problems; and

- *Better decisions that benefit people and the planet.* Our geoprofessional applications help geoprofessionals to develop vital mineral resources more sustainably, design and build better infrastructure, protect the environment, source renewable energy, and help resolve historical challenges such as groundwater contamination. Our technology enables engineers and geoprofessionals to collaborate - ensuring infrastructure digital twins can reach full subsurface depths and augment environmental and economic resilience.

**Enterprise Systems.** Our Enterprise Systems support data management and collaborative workflows for both project delivery and asset performance.

**Project Delivery Systems.** Our Project Delivery systems support information and document management, engineering-specific collaboration and work-sharing for distributed project teams and enterprises, and construction planning, modeling and execution. The scope of these solutions is not limited to users of only our own engineering applications.

Often during the project delivery lifecycle, key data are constantly changing, with inputs received from multiple sources, resulting in the need for a single source of information that is used to collect, manage, and disseminate information for the whole project team. Our software assures that the rapidly-changing data are managed in a common data environment (“CDE”) such that only the correct milestone versions can be shared and referenced across the project. This functionality enables infrastructure project organizations to “virtualize” their talent so that the required work can be shared by all participants everywhere through our software, reducing the need for physical co-location of the project resources.

Our 4D construction modeling software spatially and temporally integrates a project’s 3D engineering models into its construction schedules to assess sequencing strategies and to visualize and understand planned and actual progress over the project timeline. Our solutions also enable project delivery teams to optimally define and manage discrete engineering, construction, and installation work packages, including the construction trades’ “workface planning,” which considers crafts and materials by day and zone. For work packages, which increasingly take advantage of modular offsite fabrication and manufacturing, our software manages and enables 4D visualization of the necessary spatial and logistical interfaces.

Benefits of our Project Delivery systems to project delivery enterprises include:

- *Distributed work-sharing.* Our solutions incorporate the rigorous workflow protocols required for structured coordination across engineering and construction supply chains and across geographies, enabling global sourcing for integrated project delivery, while maximizing economics, quality, and safety;
- *Comprehensive collaboration.* Our software leverages cloud and hybrid environments to streamline the aggregation, distribution, and interaction for project deliverables, ensuring that the right project participants have the right information in the right format at the right time, including at the project site and on every device; and
- *Construction visibility.* Our solutions’ broad span and continuous detail across design integration, construction modeling and work packaging, and mixed-reality 4D visualization, advances predictability, accountability, and safety throughout the construction process.

**Asset Performance Systems.** Our Asset Performance systems span the operating life of commissioned infrastructure assets, capturing and managing changes to engineering models and enterprise information for compliance and safety, and to model performance and reliability to support operating and maintenance decisions.

Our Asset Performance systems are used to manage engineering information and geospatial relationships for operating and provisioning infrastructure across all sectors, including linear networks for transportation, energy transmission and distribution, water, and communications. Our asset performance modeling provides the needed analytical context for “right-time” data, including from Internet of Things (“IoT”) sensor capabilities, to yield actionable insights.

Benefits of our Asset Performance systems for owner-operators include:

- *Better compliance and assurance.* Our systems intrinsically enforce the rigor appropriate for operating infrastructure assets in order to provide dependable visibility into the impact of changes;
- *Better asset performance.* Our solutions include operational dashboards that provide decision support insights to maintain and improve throughput and reliability; and
- *Better risk management.* Our solutions include predictive analytics that identify potential problems before they occur and ensure the accessibility of best-available engineering information and models for mitigation and resilience.

**Industry Solutions.** Our Industry solutions solve domain-specific problems for owners of infrastructure assets, and the project delivery ecosystems that support these owners. These offerings span reality modeling, urban mobility simulation, and design and engineering of utility and communication networks; and support fit-for-purpose infrastructure digital twins through configurations of our iTwin Platform.

Benefits of our current Industry solutions include:

- *Evergreen reality models.* Our reality modeling software maintains engineering-ready 3D models of cities, asset sites, or project sites, incorporating incrementally updated surveys, and thus ensures that project teams or engineering departments can rely on up-to-date geospatial context for digital workflows;
- *Domain specific solutions.* Our Industry solutions for transportation owners solve such problems as managing their assets, bridge inspections, and determining safe routes for oversize or overweight vehicles. For cities, our solutions help with planning, visualization, and mapping, including 3D mobile mapping. For utilities, our solutions help in the design and operation of electric distribution and transmission networks and substations, and gas and district energy networks;
- *Better resilience.* Our solutions can integrate geotechnical, structural/seismic, and hydrological engineering modeling with evergreen 3D city models to harden infrastructure from flood and other natural hazards, and to apply engineering simulations for mitigation and emergency response;
- *Resource conservation.* Taking full advantage of our solutions can significantly increase efficiency and reduce waste. For instance, our water network modeling tools, applied to compare “as-designed” specifications to observed flows and pressures, can help to non-invasively locate subsurface water network leaks; and
- *Fit-for-purpose infrastructure digital twins.* We leverage our deep domain expertise and our iTwin Platform to support fit-for-purpose digital twins, such as our current offerings for industrial plants, water and wastewater networks, and communications towers.

**iTwin Platform.** Our iTwin Platform for infrastructure digital twin offerings enable our users to create and curate cloud-native 4D digital representations of physical infrastructure assets, incorporating underlying engineering information, federated with operational data, and then to model, simulate, analyze, chronicle, and predict performance over time. Using digital twins, our users can more fully extend digital workflows across project delivery and asset performance, increasing the value of infrastructure engineers’ work.

Our digital twins technology is built on our iTwin Platform, which we use to build cloud services to enable digital twin workflows for a wide range of potential use cases. We have used the iTwin Platform to create cloud services which add digital twin capabilities to our project delivery and asset performance offerings, to create fit-for-purpose digital twin solutions for specific asset classes, and to support an emerging ecosystem of third-party developers.

Third parties can participate in this ecosystem by using iTwin.js, an open-source development library, to develop desktop, mobile, or web apps that leverage the iTwin Platform or that augment iTwin products from us or from other third parties. While iTwin.js is open source, use of the iTwin Platform or of our products built on the iTwin Platform do require licenses from us.

Applications from Bentley Systems and third parties can participate in digital twin workflows through connectors, which enable any engineering file format to populate the iTwin Platform database schema. The iModel database is a distributed database based on a semantically intelligent infrastructure schema. It maintains transactional information to manage change as data is added or changed.

Benefits of our digital twin solutions to project delivery firms and owner-operators include:

- *Managing change.* The design and construction of an infrastructure asset is complex and can take many years with participation of many different organizations working together as a widely distributed team. An operational asset may be designed to last many decades, with even more different stakeholders. Managing data transactions (who, what, when) against a timeline is key to enabling many digital twin workflows, such as revisiting why a design change was made at a particular point in time, orchestrating data from contributing disciplines to conduct design reviews, or comparing the performance of an asset at different points in time;
- *Advanced insights.* For project delivery, digital twins can reveal insights beyond what would be visible with traditional workflows; for example, a digital twin can show 3D heat maps highlighting where changes in a design have been unusually pervasive, indicating possible design flaws. For asset performance, such insights from digital twins can be used to evaluate different strategies for optimizing operational efficiencies and throughput;
- *Predictive analytics.* For project delivery, digital twins and machine learning can compare the progress of a current project with similar projects that have been previously completed, and identify in advance potential bottlenecks, in time to take corrective action. For asset performance, a digital twin can track observations from various operational inputs against design intelligence to predict future failures and recommend maintenance actions to minimize downtime;
- *Continuous and comprehensive design reviews.* For project delivery, digital twins can aggregate and align design models and data from all sources “on the fly” (without interruptions for translations, and without specialized software) to present immersive 3D status visualization in a web browser for any authorized stakeholder to participate in ongoing interactive design reviews;

- *Convergence of OT, IT, and now ET.* Infrastructure owner-operators are increasingly able to instrument their assets with IoT sensors, producing torrents of Operational Technology (“OT”) data that are difficult to interpret. Software advances in Information Technology (“IT”) can in turn make data from enterprise transaction systems, such as maintenance work order history, accessible for analytics. But even OT and IT together cannot inform decisions for improved asset performance as sufficiently as when combined with accessibility to comparable analytics from the assets’ engineering models, which we refer to as the Engineering Technology (“ET”). Infrastructure digital twins notably enable the convergence of ET with OT and IT. With infrastructure digital twins, the design intent (the “digital DNA” captured in the digital twins’ engineering models and simulations) can serve as a baseline for comparison to IoT-monitored “as-operated” performance, in light of the asset’s operations and maintenance history stored in IT systems, to enable integrated analytics to provide timely insights and recommended actions to optimize safety and performance; and
- *Addressing a wide range of emerging use cases.* There are proliferating use cases to address infrastructure lifecycle issues that are made possible by semantically opening up engineering data to be combined with observed operational data. Many of these use cases have heretofore been impractical by virtue of having required multiple disconnected steps in a manual process. For example, maintenance of a bridge traditionally depends upon manual visual inspections, generally requiring human inspectors climbing precariously to capture photographs and to produce written inspection assessments. The work can be dangerous, and entail subjective judgements which may not be repeatable. A digital twin for a bridge, on the other hand, advances periodic inspections to more continuous and/or real-time monitoring. Sensors on the bridge can gather data on traffic flow, vibration, and other indicators. Drones can (increasingly autonomously) capture imagery to be processed into a high-resolution reality model of the bridge, to which artificial intelligence (machine learning) can be applied to recognize cracks, corrosion, or other defects or changes in the bridge that may affect structural integrity. The digital twin’s structural models (which were initially developed to validate the “as-designed” capacity) can then be reapplied to the “as-operated” bridge conditions, to indicate to engineers potential needs for maintenance or remediation interventions. In addition to comparable operational engineering use cases for every existing infrastructure asset, there are at least as many non-engineering use cases where infrastructure digital twins can be leveraged, such as 3D city models being used to adapt for mobility and safety under pandemic lockdowns.

### **Comprehensiveness of Our Offerings**

Our offerings are comprehensive across professional disciplines, lifecycle stages, infrastructure sectors, and geographies, resulting in what we believe to be durable competitive advantages:

***Professional Disciplines.*** Each infrastructure project requires seamless and deep collaboration among professional disciplines, which can include civil, structural, geotechnical, geoscience subsurface engineers, and process engineers, architects, geospatial professionals, city and regional planners, contractors, fabricators, and operations and maintenance engineers. Our open modeling and open simulation applications facilitate iterative interactions between disciplines and coordination across project participants. Additionally, we believe our collaboration systems lead the market in managing infrastructure engineering firms’ preferred work-in-progress workflows.

For example, to illustrate the benefits of interdisciplinary digital workflows in roadway design, our offerings’ comprehensiveness can enhance both safety and economics by enriching the interfaces between geotechnical (earthworks) and structural analyses to share full 3D modeling details. Previously, structural decisions tended to be based on just a single imported parameter for subsurface foundation strength, frequently resulting in designs that included specifications and reinforcing materials beyond what was necessary to sufficiently mitigate risk.

The importance of integrating our offerings broadly across disciplines is also a reason that we have always prioritized interoperability with competitors' design tools. For major projects, owners and their contractors want to have the choice of the best professionals in every discipline, rather than limiting their choices to those using a particular software vendor's applications. Our offerings win acceptance within major organizations and projects both through our breadth of applications, and through each application's virtuosity in interpreting and emulating formats beyond our own.

**Lifecycle Stages.** Both project delivery enterprises and owner-operators benefit from our solutions, which enable digital workflows to extend between project and asset lifecycles, from design to construction and ultimately asset management. This capability allows our users' digital engineering models to be leveraged as the context for real-time condition monitoring to achieve better and safer operations and maintenance.

For an example of advantageous digital workflows from projects to assets, consider our solutions for permitting and routing of over-weight and over-sized loads by departments of transportation. Instead of routing based merely on static maximum load ratings for each bridge, we use actual bridge design models for dynamic structural simulations, and 3D clearances of the actual load configurations. As a result, user organizations are able to engineer safe routes to maximize commerce while protecting bridge longevity.

**Infrastructure Sectors.** Most major engineering and project delivery firms pursue an ever-changing mix of projects across the public works/utilities, industrial/resources, and commercial/facilities sectors and for flexibility tend to favor an infrastructure engineering software vendor whose portfolio correspondingly spans their full breadth. This comprehensiveness provides diversification for our own business, as an incidental advantage. For example, when there have been cyclical downturns in the primarily privately-financed industrial/resources and commercial/facilities sectors, we have historically witnessed offsetting counter-cyclical government investment in public works/utilities.

**Geographies.** While design codes may vary by country, infrastructure purposes and engineering practices are fundamentally the same throughout the world, which makes it possible for our infrastructure modeling applications to be used globally. Our offerings are available in most major languages, supporting country-specific design codes, standards, and conventions. Our development teams are also globally dispersed, due in part to acquisitions made in various countries, but also to provide any needed last mile localization of our applications. Our global comprehensiveness enables our project delivery accounts to compete more efficiently across geographic markets, thus also providing global supply-chain sourcing choices for owners.

### **The Digital Twins Opportunity**

We believe that digital progress in infrastructure advancement has to date lagged behind other economic domains for several reasons, including that:

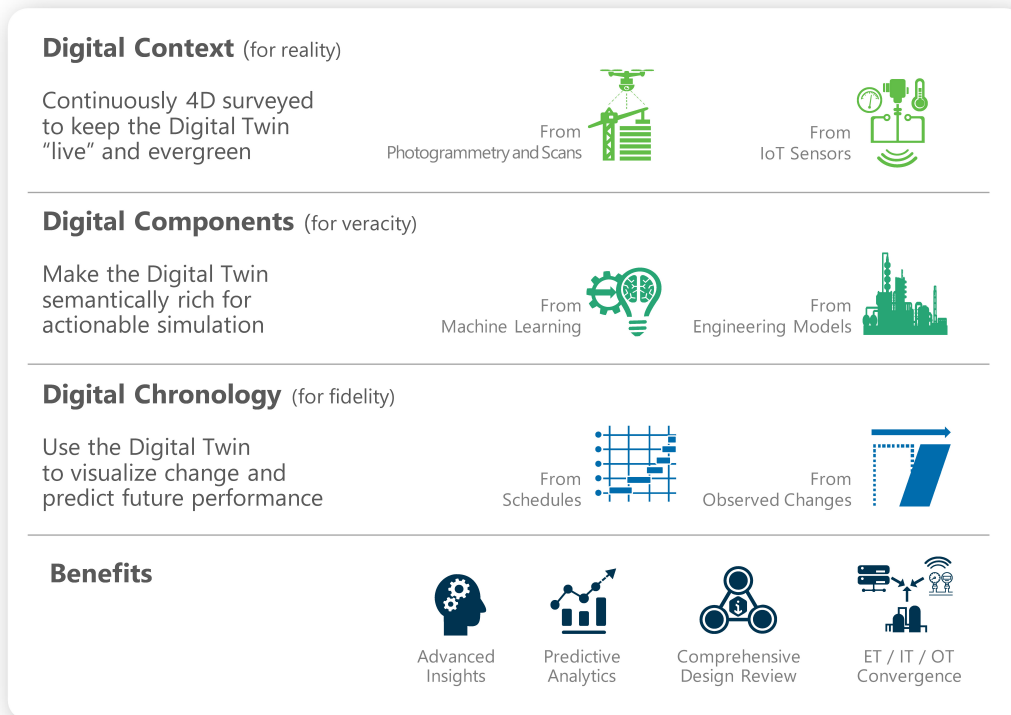
- most existing infrastructure assets predate engineering modeling software;
- engineers' work, including by way of building information modeling ("BIM") or geographic information systems ("GIS"), has been sequestered in native file formats that amount to "dark data," inaccessible without the software that was used to create it, and therefore unavailable for use in digital workflows or analytics; and
- construction processes are often fragmented and isolated from digital workflows altogether, resulting in engineering information being effectively abandoned between the project and the asset lifecycle phases of infrastructure.



Over our company’s history, as computing capabilities have advanced, the scope of infrastructure engineering software has correspondingly increased. However, project and asset lifecycle software markets have developed independently from one another and connecting digital workflows have not been offered. We believe that the new advancement of BIM and GIS to “evergreen” infrastructure digital twins will have the effect of merging what have to date been separate market spaces as well as enabling new use cases that were not possible or practical with previous technologies.

<b>Period</b>	<b>Project Lifecycle Software</b>	<b>Asset Lifecycle Software</b>
1985 – 1995	<i>2D Drafting</i> (“Computer Aided Design” or “CAD”): Workstations and then personal computers make possible interactive graphical applications to automate the creation of previously manually drafted 2D engineering drawings.	<i>2D Mapping</i> : Workstations and personal computers make possible interactive graphical applications to automate the creation of maps.
1996 – 2005	<i>Collaboration</i> : Networked personal computers and servers provide platforms for file-sharing and referencing. CDEs are introduced.	<i>GIS</i> : Networked personal computers and servers enable querying and visualization of geographic data.
2006 – 2015	<i>3D BIM</i> : Increased personal computing power enables the development of 3D applications for design of specific asset types including buildings, process plants, roads, water networks, and buildings. CDEs and the internet lead to global work-sharing and collaborative BIM.	<i>Geospatial</i> : Increased computing address space enables geo-coordinated engineering models. GPS technology enables alignment of digital components and real-world coordinates. <i>Asset Performance Management (“APM”)</i> : solutions are introduced for reliability-centered maintenance and risk-based inspection.
2015 – 2018	<i>Reality Modeling</i> : Advances in digital imagery, unmanned aerial vehicles (“UAVs” or “drones”), and specialized software enable the automated capture of “as-operated” conditions of an asset or site in an engineering-ready, geo-coordinated 3D model. Cloud ubiquity enables <i>Common Data Environments</i> to evolve into <i>Connected Data Environments</i> .	<i>APM</i> evolves into <i>Asset Performance Modeling</i> , with engineering models recalibrated to reproduce and understand observed behaviors, and apply algorithms and analytics to derive insights and drive decisions.
2019 – Present	<i>4D Digital Twins</i> : Digital twins make possible the simulation of the behavior and the visualization of the changes of a project or infrastructure asset over time. Digital twins are continually updated in a cloud database and remain current and “evergreen,” over the full project and asset lifecycle, through continuous surveying of the physical context and embedded links to inputs from connected IoT sensors in the operating asset. With digital twins, users are empowered to better understand the impact of changes over time for projects and assets to improve project, construction, and operational efficiencies, predictability, and overall outcomes.	

To enable infrastructure engineering to catch up to other sectors and to advance in “going digital,” we have enabled infrastructure digital twins, cloud-provisioned digital representations of projects and assets that incorporate and converge their 3D physical conditions (“digital context”) for reality, their underlying engineering information (“digital components”) for veracity, and their 4D timeline of changes (“digital chronology”) for fidelity, enabling the merging of project and asset lifecycle workflows.



Digital twin solutions are now made possible by new technologies including UAVs and their intrinsic “surveying” sensors, machine learning, cloud computing, open-source development libraries, distributed ledger software, and mixed-reality visualization.

Our software to leverage these advancements for digital twin offerings includes:

- **Reality modeling software**, which processes any combination of overlapping digital photography, video, and scanned imagery to produce a 3D reality model. Our software then uses machine learning to recognize and classify components within the 3D model (such as equipment, structural elements, pipes, valves, tags, and nameplates). This process populates the reality model’s digital context with these digital components, adding intelligence which can be aligned with engineering models from the design stage;
- **iModels**, which can be created through connectors which we provide for our own engineering applications or for the major third-party applications (and which can be developed for any others using our Application Programming Interfaces (“APIs”)). Connectors transform data from the application’s proprietary format to correspond to the iModel’s distributed database schema. Since the iModel schema is comprehensive across infrastructure engineering disciplines (and can be extended as needed), all project and asset data can be aligned semantically and spatially with all other relevant models and data, allowing all this information to be accessed and queried to maximize the digital twin’s values of reality, veracity, and fidelity; and

- **iTwin Platform cloud services**, which provides a range of cloud services to support digital twin solutions. At its core is the iModelHub, a cloud service that hosts and manages change to a digital twin’s data, keeping it synchronized as required with physical and engineering changes. Our iTwin services can be added to any user’s or accounts’ environments to generate incremental value by incorporating infrastructure engineering data within cloud-native evergreen digital twins. The go-to-market strategy for our iTwin cloud includes:
  - Sales to accounts using *ProjectWise* and *AssetWise* of complementary services built on the iTwin Platform, such as *ProjectWise Design Review Service* for comprehensive project-wide 4D design review and status visibility;
  - Sales of new solutions purposely built on the iTwin platform, such as *PlantSight*;
  - Adding digital twin capabilities to an existing offering “powered by iTwin”, such as *SYNCHRO*; and
  - Creation of a third-party ecosystem developing solutions built on the iTwin platform, using our open source iTwin.js APIs, by leveraging our acceleration initiatives such as iTwin Ventures, which invests in early-stage software companies building infrastructure digital twin solutions.

We believe that the growing adoption of infrastructure digital twins will serve to overcome the factors that have held back the digital advancement of infrastructure engineering, and will facilitate the broader use of intelligent engineering data in the operation of infrastructure assets. Moreover, we believe that due to the comprehensiveness of our solutions across project and asset lifecycles, infrastructure digital twins and newly enabled digital workflows spanning design, construction, and operations, will most particularly benefit our users and enhance our competitiveness.

### **Our Growth Strategies**

We employ the following growth strategies to address the infrastructure engineering software market opportunities:

- **Accretion within existing accounts.** Most of our accounts currently use a small portion of our overall portfolio, even though they are often working on projects and assets where a large portion of our portfolio could be applied. We believe we can further penetrate our existing accounts by broadening their use of our portfolio. There are three primary mechanisms for this expansion:
  - *New commercial formulations.* We continually innovate with new commercial formulations to align the use of our software to the needs of our users. We offer options enabling unrestricted access to our comprehensive software portfolio by the day, month, quarter, and year. We believe the flexibility in our commercial models and deployment options facilitates our accounts’ continuous growth in usage. In particular, *enterprise 365 (“E365”)* is our premier enterprise subscription that bundles virtually-delivered expert services, through a structured execution process, with our software, enabling us to work strategically with subscriber accounts to achieve the business outcomes they seek;
  - *Automating user engagement.* We employ various technologies to drive user engagement. These technologies help to automate the user experience and drive engagement by suggesting and recommending best practices and appropriate software upgrades, as well as providing access to our deep bench of domain experts. We will continue to leverage these interactive technologies to virtually assist our users and drive engagement across our software offerings; and

- **Adding new offerings.** We have a history of building and maintaining leadership in infrastructure software engineering comprehensiveness and intend to continue to innovate and develop our software offerings. Selected recent examples of our product innovations include the introduction of newly integrated multi-disciplinary modeling and simulation applications since 2019 for offshore wind turbines, since 2020 for 5G-ready communications towers, and since 2021 to incorporate Seequent’s geoprofessional applications for subsurface digital twins. Over the near term, we believe our iTwin Platform’s cloud services represent a compelling opportunity to enhance value for our accounts. We intend to continue to develop and integrate new products and capabilities over time.
- **Focusing on Asia.** We believe Asia represents a large market opportunity and will continue to do so over the foreseeable future. According to the Oxford Economics Outlook, a majority of expected infrastructure spending for the period through 2040 is expected to occur in Asia. Additionally, we believe that in Asia there is an abundance of skilled engineers whose work can be virtually exported, as well as engineering organizations that are eager and aggressive to win mandates for engineering and construction projects around the world. We intend to continue investing in strategies to enhance our market position in Asia.
- **Increasing inside sales.** Historically, our account management resources have focused on larger firms. Smaller- and medium-sized engineering firms, however, represent a significant market opportunity and have the same needs for our comprehensive portfolio as the larger firms. While these firms have generally been served by our competitors’ channel partners, we believe they will prefer to deal directly with us. We will continue to expand our global inside sales resources and to multiply their reach and effectiveness with superior digital tools to convert leads and to provide the self-service administration that engineering practitioners prefer.
- **Digital co-ventures.** We have forged substantial alliances with other major participants in the infrastructure engineering supply chain, primarily to jointly develop and offer digital twin cloud services that extend the scope of our software. These alliances include:
  - Siemens AG (“Siemens”): Our partnership integrates leading industrial software and IoT capabilities for a broad joint development program focused on improving outcomes during infrastructure operations and maintenance through digital workflows enabled by digital twins cloud services; and
  - Microsoft: Our partnership extends Azure-powered machine learning and analytics through digital workflows for infrastructure professionals and enterprises.
- **Investing in programmatic acquisitions.** Since our founding, we have purposefully pursued a strategy of regularly acquiring and integrating specialized infrastructure engineering software businesses. Our acquisitions have the following purposes:
  - Filling in the breadth and depth of our comprehensive applications portfolio across disciplines and infrastructure sectors, especially where the developer organizations have already worked on integration and compatibility with our platforms and APIs;
  - Extending our lifecycle comprehensiveness;
  - Adding new horizontal technologies that we can incorporate within our platforms for the benefit of our applications and systems at large, such as reality modeling; and
  - Adding new distribution capacity, such as acquiring channel partners in geographies where we wish to accelerate our scale and growth.

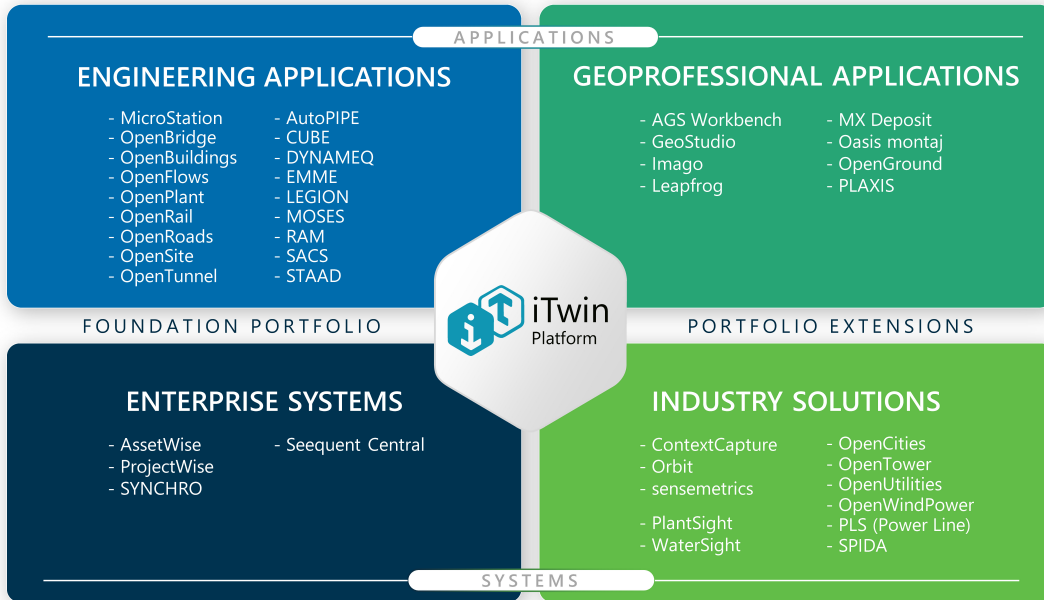
Our executive management and our dedicated “*BSY Investments*” team (our executive team focused on portfolio development, mergers and acquisitions, venture capital investing, digital integrator business activities, and various incubating and accelerating business activities) proactively identify, develop, and evaluate acquisition opportunities across various disciplines and infrastructure sectors, and also consider unsolicited opportunities. We have a disciplined and robust diligence and valuation process for evaluating acquisition targets. Our general practice is to fully assimilate the acquired companies’ functions into our global functional structure as quickly as possible, supported by a dedicated team to manage and streamline the integration process. However, for rare “platform” acquisitions beyond our typical programmatic scale, we may choose to “onboard” in a different manner that would least jeopardize continuity of their independent momentum. We prioritize the retention and development of the incoming colleagues from our acquisitions, including offering talent mobility for key personnel. Further, many of our current executives are former founders and/or executive officers of companies we have acquired.

- **Investing to develop an ecosystem in support of infrastructure digital twin adoption.** Through our *BSY Investments* team, in addition to the aforementioned acquisition activities, we pursue strategic investments to enhance and grow our core software business with the objective of cultivating an ecosystem to stimulate the adoption of infrastructure digital twins. These investments may take the form of acquisitions, wholly owned start-up initiatives, minority equity stakes, alliances, or loans. *BSY Investments*’ responsibilities include:
  - *Digital Integrator Businesses* are our relatively service-intensive businesses that stimulate pull-through demand for our solutions. Certain of our recent digital integrator activities include: (i) The *Cohesive Companies*, a consolidation of several acquisitions during 2020 and 2021, as well as certain legacy Bentley Systems professional services businesses. The *Cohesive Companies* provide advisory, systems integration, and technology strategies and services to help owner-operators advance their BIM, enterprise asset management, asset lifecycle information, and asset performance modeling environments; and (ii) Digital Construction Works, Inc. (“DCW”), a joint venture with Topcon Positioning Systems, Inc. (“Topcon”), which integrates leading surveying technologies, geospatial machine control technologies and IoT technologies to augment digital twins and derived workflows in construction operations and infrastructure asset monitoring activities;
  - *iTwin Ventures* is our business for investing up to \$100 million of corporate venture capital funding for seed, early, and growth stage technology companies with promising and emerging opportunities for infrastructure digital twin solutions strategically relevant to our business. We operate and govern the activities of iTwin Ventures as a distinct venture capital business, and refer to this business as our iTwin Ventures corporate venture capital fund for both internal and external branding purposes; and
  - *Acceleration Activities* are our vehicle for investing in initiatives with unusually high growth opportunity or where we see a need to incubate solutions to augment our current portfolio of products and services. Such initiatives presently include (i) investment in our *OpenTower* solution and related go-to-market activities to assist owners and operators of telecom towers rapidly transitioning to 5G and embracing digital twins to manage their critical tower assets; (ii) investing in, incubating, and integrating our sensemetrics and Vista Data Vision acquisitions to establish infrastructure IoT standardization and integration of IoT data into the Bentley Systems’ iTwin platform and to help digital twins remain evergreen by comparing the asset’s behavior to its design and construction specifications; and (iii) integrating and investing in go-to-market initiatives for our recently acquired Power Line Systems business to rapidly scale to address the looming demand and accumulating support and funding to harden, optimize, and expand the world’s electrical grids.

The forgoing activities of *BSY Investments* may have lower initial margin contribution than the mainstream of our software business activities due to the professional services nature of digital integrator revenues, due to the seed or early-stage nature of the investments, or due to the focused and upfront investments to demonstrate technologies and accelerate market position and/or scale advantages for future returns.

**Our Software Offerings**

Our software offerings are managed within *Engineering Applications*, *Geoprofessional Applications*, *Enterprise Systems*, *Industry Solutions*, and *iTwin Platform*.



***Engineering Applications***

We undertake to provide comprehensive open modeling and open simulation applications for infrastructure design integration.

Our open modeling applications include:

- *MicroStation*, for flexible 3D design and documentation providing the common modeling environment upon which our applications are built;
- *OpenRoads*, for the planning, 3D design, and documentation of roads and highways;
- *OpenRail*, for the planning, 3D design, and documentation of rail and transit systems;
- *OpenPlant*, for the 2D and 3D design and documentation of process plants;
- *OpenBuildings*, for the 3D design and documentation of buildings and their integrated structural, HVAC, electrical, and plumbing systems;
- *OpenBridge*, for the 3D design and documentation of bridges;

- *OpenSite*, for the optimal planning, 3D design, and documentation of building, residential development, and infrastructure sites; and
- *OpenFlows*, for water, wastewater, and stormwater system planning, design, and operations, incorporating hydrological, hydraulic, and flood modeling.

Our open simulation applications include:

- *STAAD* and *RAM*, for analysis and simulation respectively of infrastructure and building structural performance;
- *SACS*, for analysis and simulation of offshore structural performance;
- *MOSES*, for analysis and simulation of floating structures;
- *AutoPIPE*, for analysis and simulation of pipe stress in industrial process plants;
- *SITEOPS*, for simulation of compliant site layout, and optimization of earthworks, drainage, and parking;
- *CUBE*, for multi-modal transportation network modeling and land-use modeling;
- *DYNAMEQ*, for traffic simulation and dynamic traffic assignment;
- *EMME*, for multimodal urban, regional, and transport planning; and
- *LEGION*, for pedestrian traffic simulation.

### ***Geoprofessional Applications***

We undertake to provide comprehensive modeling and simulation of near and deep subsurface conditions.

Our applications include:

- *Leapfrog*, for 3D implicit modeling designed to rapidly integrate, communicate, and interpret geological data;
- *AGS Workbench*, for processing, inversion, and visualization of geophysical data;
- *GeoStudio*, for integrated geotechnical analysis for analyzing slope stability, groundwater flow, and heat and mass transfer in soil and rock;
- *Imago*, for the capture and management of drilling core images;
- *MX Deposit*, cloud drill hole software for simplifying and controlling how drill and other field data is collected, managed, and shared throughout the lifecycle of an ore deposit from early exploration through to mine production;
- *Oasis montaj*, for the quality control, correction, visualization, analysis, and interpretation of geophysical, geologic and geochemical data;
- *PLAXIS*, for geotechnical analysis to solve common and complex geotechnical problems, including advanced analysis for excavations, foundations, tunnels, and other infrastructure projects; and

- *OpenGround*, for geotechnical information management for collecting, reporting, managing, visualizing, analyzing, and accessing geotechnical data.

### ***Enterprise Systems***

Our Enterprise Systems include solutions for both project delivery and asset performance.

Our Project Delivery systems support collaboration, work-sharing, and 4D construction modeling for infrastructure project delivery enterprises.

These offerings include:

- *ProjectWise*, for helping teams to manage, share, and distribute work-in-progress engineering content. *ProjectWise* enables all stakeholders involved in design and engineering to share and find information, conduct collaborative design reviews, and manage contractual exchanges faster for maximum team productivity;
- *ProjectWise Design Review Service*, a *ProjectWise* service built on the iTwin Platform that allows project participants to leverage a digital twin throughout the project delivery lifecycle and that provides browser-level immersive visualization, 3D and 4D design reviews, change management, and project analytics; and
- *SYNCHRO*, for 4D construction modeling across schedule simulation and immersive virtual or augmented visualization; cloud-based construction operational solutions for project and field management; and advanced work packaging, inclusive of engineering, construction, and installation work packages, and trade and task workforce planning.

Our Asset Performance systems manage engineering information and geospatial relationships for operating and provisioning infrastructure across all sectors.

These offerings include:

- *AssetWise*, for asset performance throughout the operations and maintenance lifecycle of infrastructure assets and their associated networks, in transportation, energy, and communications. *AssetWise* services include:
  - *AssetWise ALIM*, for managing infrastructure asset information and linear networks and for controlling and managing change over the asset lifecycle;
  - *AssetWise Asset Reliability*, for reducing equipment downtime and limiting business risk associated with equipment failures, while increasing safety, reliability, and cost effectiveness;
  - *AssetWise Enterprise Interoperability*, for enabling access to multiple data sources from third-party providers, and integrating them in operations and maintenance workflows;
  - *AssetWise 4D Analytics*, for employing advanced analytics and machine learning, particularly to IoT time series, to gather insights to understand current conditions and predict future performance;
  - *AssetWise Linear Network Management*, for managing transportation network infrastructure and associated information including assets and linear events; and
  - *Sequent Central*, a cloud solution designed for geoprofessional teams to visualize, track, integrate, and manage their geoscience data in a single, centralized, auditable environment.



## **Industry Solutions**

Our Industry Solution offerings solve domain-specific problems for owners of infrastructure assets, and the project delivery ecosystems that support these owners. Many offerings extend *AssetWise* and/or leverage the iTwin Platform.

Industry Solution offerings include:

- *AssetWise Linear SUPERLOAD*, for automating the safe routing and permitting of overweight/oversized vehicles;
- *AssetWise Linear Analytics*, for visualizing and understanding vast quantities of linear network data to identify trends and anomalies, and optimize maintenance decisions, for rail or road networks;
- *AssetWise Inspections*, for performing inspections of bridges and related assets;
- *ContextCapture*, for surveying existing conditions of a city, construction site, or operating infrastructure asset by processing digital imagery captured by UAVs, cameras, and scanners into 3D, geo-located, engineering-ready mesh models underlying the necessary digital context for digital twins;
- *OpenCities*, for engineering-ready geospatial urban planning and visualization, as well as engineering-level GIS functions such as mapping, cadaster, and parcel management;
- *OpenUtilities*, for the design and management of electric, gas, and district energy networks, and substations;
- *OpenTower*, for the design of communications towers, including for 5G capacity;
- *OpenWindPower*, for the design of fixed and floating wind turbine structures;
- *Power Line (PLS)* applications, for design of overhead electric power transmission, distribution, and communication lines and their structures;
- *SPIDA*, for modeling and analysis of overhead electric distribution network systems;
- *OrbitGT*, for 3D and mobile mapping for use with reality modeling and digital twins;
- *sensometrics*, for centralizing sensor data for environmental condition monitoring of critical assets;
- *PlantSight*, a digital twin solution for operating industrial plants; and
- *WaterSight*, a digital twin solution for water and wastewater networks.

## **iTwin Platform**

Our iTwin Platform for infrastructure digital twins enables Bentley Systems and other third-party developers to build solutions for a wide range of potential digital twin use cases. We have used this platform to create cloud services which complement and extend project delivery systems and asset performance systems offerings, to create fit-for-purpose industry digital twin solutions, and to support an emerging ecosystem of third-party developers.

New complementary services leveraging the iTwin Platform for current products will be marketed and monetized under their existing brands. We may also incorporate iTwin capabilities to enhance currently monetized offerings. New products created on the iTwin Platform will have their own distinct branding and pricing. All will use the designation “Powered by iTwin” to help identify where the iTwin Platform advances have been leveraged.

The iTwin brand is reserved for the iTwin Platform. Its many cloud services will be leveraged both by us and by third-party solutions.

## **Our Commercial Offerings**

### ***Licensing Models***

Our applications are offered through perpetual licenses or term licenses, priced dependent on the country of purchase and use. Most accounts owning perpetual licenses subscribe to our SELECT coverage which, in addition to providing support and upgrades, enables the use of their licenses for each product to be pooled within each country. For most larger accounts (generally a minimum of \$250,000 annualized recurring revenues), we have traditionally offered an enterprise license subscription (“ELS”), which entitles unlimited use of any of our applications for an annual fixed fee, reset annually generally based on actual usage (within each country) for the previous year. During the fourth quarter of 2018, to respond to and improve upon new commercial models offered by peers and competitors, we introduced a new global consumption-based plan with consumption measurement durations of less than one year, E365 subscription, which is priced uniformly per application per day of actual usage in any country, and inclusive of Success Services (described below) by our colleagues to assist with expanding and gaining the most value from usage of our software. Most of our largest ELS accounts have upgraded to E365, and many of the remainder, and of our largest SELECT subscriber accounts, continue to upgrade each quarter.

Our *ProjectWise* and *AssetWise* enterprise systems are offered under our cloud services subscription program, charged quarterly based on actual users of “passports” and “visas” for various levels of functionality. Passport and visa pricing include Azure provisioning at our cost, although some accounts elect to continue on-premises and/or hybrid hosting. CSS commercial models entail an annual funding commitment, generally paid upfront, based on an estimation of services to be used for the upcoming year. Actual consumption is monitored and invoiced against the deposit on a calendar quarter basis. Accounts are charged only for what gets used, and deposited amounts never expire. At the end of 2021, accounts representing approximately 60% of our total annualized recurring revenues had chosen to institute our new commercial models of CSS and/or E365 consumption funding for licensing of our software.

### ***User Success***

Over the last two years, we have reorganized our activities focused on substantive support for existing users and their accounts into our new User Success group, now consisting of approximately 600 colleagues, most with domain experience and credentials in infrastructure engineering. User Success has enabled us to transition from traditional paradigms of on-demand technical support, and episodically contracted professional services, to instead delivering proactive and continuous engagement with users and accounts through “Success Plans.” Success Plans are designed with our accounts’ business outcomes in mind ensuring that users and accounts maximize the value achieved from our solutions. Working collaboratively with our accounts, User Success Specialists deliver Success Plans through structured engagements based on explicit and standardized “Success Blueprints” that include annual planning, virtual or in-person engagements with subject matter experts, and quarterly business reviews. Typically, our User Success colleagues engage with our accounts remotely. Success Plans, based on allotted credits toward multiple Success Blueprints per calendar quarter, are bundled into our new E365 commercial program which has grown rapidly among our larger accounts.

## **Our Accounts**

We provide our software solutions to over 39,000 accounts in 186 countries worldwide. Our revenues are balanced and diversified between engineering and construction contracting firms who work together to deliver the design and construction of capital projects (representing 56%, 57%, and 55% of our 2021, 2020, and 2019 total revenues, respectively), and their clients, the world’s public and private infrastructure asset owners and operators (representing 44%, 43%, and 45% of our 2021, 2020, and 2019 total revenues, respectively).

We do not have material account concentration. No account, including any group of accounts under common control or accounts that are affiliates of each other, represented more than 2.5% of our total revenues in 2021, 2020, or 2019.

### **Our Technology**

Our business is singularly focused on software for infrastructure engineering, primarily for the world's largest projects and assets. As a result, we manage our software products to meet constraints imposed for fitness to this purpose. Our market position is built on several reputational hallmarks, including:

- generational stability of file formats, corresponding to the long lives of infrastructure projects and assets;
- commitment to openness and interoperability with competitors' file formats;
- continuity of software applications' lifecycles, never jeopardizing users' cumulative investments by requiring them to "start over"; and
- highest capacity and performance, versus competitors, for large infrastructure models and datasets.

#### *Application Framework*

Our software solutions are delivered using flexible, reusable, and open technology, which results in highly integrated applications and cloud services that support comprehensive digital workflows in a scalable manner. For example, our modeling and simulation applications, including *MicroStation*, leverage a set of reusable components for graphics editing, visualization, solid modeling, and other capabilities. This open framework supports the addition of domain specific features, allowing us to offer highly compatible and well-integrated discipline-specific applications based on this common framework.

#### *Microsoft Integration*

Our software leverages Microsoft's platform technologies. We seek to take full advantage of integration with Microsoft Office 365 and other horizontal applications such as Teams for workflows that unify our engineering applications within enterprise environments across all computing form factors and devices.

#### *iTwin Platform*

Our iTwin Platform is a collection of cloud services used to create, curate, and leverage digital twins. The platform is used by us to create complementary digital twin offerings for current products, to embed digital twin capabilities in current products, and to support fit-for-purpose digital twin solutions for particular domains. Third parties can use the iModel.js open-source APIs to create desktop, mobile, and web apps, as well as cloud services and agents, that leverage and extend the iTwin Platform. They can create new digital twin solutions or provide complementary applications or services to existing Bentley Systems and third-party solutions. The iTwin platform is managed by us on Azure providing anywhere, anytime access to infrastructure digital twin solutions for all stakeholders.

#### *Our Licensing and Administration Platform*

All of our applications and systems share a cloud-native platform for license pooling, management of subscription entitlements, and usage reporting for us and for accounts, including for commercial consumption metrics. Our platform also logs usage of particular "instrumented" functions within our applications to enable our Success Plans to be of most value. Our platform can also provide in-application messaging to users from our User Success group.

## Our Acquisitions

Since our founding, we have purposefully pursued a strategy of regularly acquiring and integrating specialized infrastructure engineering software businesses, including 33 acquisitions over the past five years.

As a public company, we have been able to make platform acquisitions which appreciably increase our scale and/or the scope of our platform capabilities. Our platform acquisitions have been:

- *Seequent* (2021), and subsequent complementary programmatic acquisitions, to enable infrastructure digital twin capabilities to incorporate modeling and simulation of full subsurface depths, and advancing infrastructure resilience and sustainability by helping geoprofessionals to understand environmental conditions and to mitigate environmental risks; and
- *Power Line Systems* (2022), to bring design, analysis, and management of overhead electric power transmission lines and structures to our grid digital twin solutions. Power Line Systems substantially completes the reach of our comprehensive portfolio for the lifecycle integration of grid infrastructure across electrical transmission, substation, and distribution assets, and communications towers.

Our relatively numerous and frequent programmatic acquisitions, which most often “fill white space” from within our ecosystem of adjacent smaller companies, add their particular value principally by virtue of our existing platform comprehensiveness, and accordingly we consider this programmatic aspect of our growth as characteristically within our mainstream business performance (unlike platform acquisitions). Our average historical annualized recurring revenues growth rate from programmatic acquisitions over the last five years has been approximately 1.5% measured on a constant currency basis. Examples of recent programmatic acquisitions, along with their purposes, include:

- *Citilabs* (2019) and *Inro* (2021), to add traffic simulation software for multi-modal mobility digital twins;
- *OrbitGT* (2019), to add specialized capabilities for mobile mapping (such as vehicle-based scanning and photogrammetry) to our reality modeling offerings;
- *GroupBC* (2020), to bring additional common data environment solutions for construction projects and infrastructure assets, and federate to iTwin cloud services, extending the value of project and asset information through digital twins;
- *Cohesive Solutions* (2020), and subsequent complementary programmatic acquisitions, to bring digital integrator expertise for the convergence, through digital twin cloud services, of digital engineering models (ET), with IT and OT, for infrastructure assets in the utilities, energy, and facilities sectors;
- *Vista Data Vision* (2021), to add intrinsic IoT capabilities for infrastructure digital twins to incorporate real-time sensor data. By virtue of the resulting “infrastructure IoT” standardization, the full IoT ecosystem becomes seamlessly accessible for IT/OT/ET integration through infrastructure digital twins; and
- *SPIDA Software* (2021), adds a key element to our grid digital twin solutions, the design, analysis, and management of utility pole systems, which deliver the environmentally vulnerable “last mile” of critical infrastructure for vital energy and communications.

## **Our Competition**

The market for our software solutions is highly competitive and subject to change. We compete against large, global, publicly-traded companies that have resources greater than our own, and also against small, new, or geographically-focused firms that specialize in developing niche software offerings. While we do not believe that any competitor offers a portfolio as comprehensive as ours, we do face strong competition, varying by infrastructure lifecycle phase and sector:

- our key competitors in *public works/utilities* applications include Autodesk, Inc., Trimble Inc., Hexagon AB, and Dassault Systèmes;
- our key competitors in *industrial/resources* applications include Hexagon AB, AVEVA Group plc, and Dassault Systèmes;
- our key competitors in *commercial/facilities* applications include Autodesk, Inc., Nemetschek SE, and Trimble Inc.;
- our key competitors in project delivery systems include Autodesk, Inc. and Oracle Corporation with their Primavera P6 and Aconex offerings; and
- our key competitors in asset performance systems include Aspen Technology, Inc., AVEVA Group plc, Environmental Systems Research Institute, Inc., and General Electric Corp.

The principal competitive factors affecting our market include:

- product features, performance, and effectiveness;
- reliability and security;
- product line breadth, depth, and continuity;
- comprehensiveness of offerings across disciplines and infrastructure sectors;
- specification by and endorsement of infrastructure owners, and degree of adoption across the relevant supply chain;
- familiarity and loyalty by professionals throughout their training and careers;
- ability to integrate with other technology;
- capacity to operate at scale;
- capabilities for configurability and APIs;
- ease of use and efficient workflows;
- price, commercial model, and total cost of use;
- support of industry standards;
- strength of sales and marketing efforts; and
- brand awareness and reputation.

We believe we compete favorably against our competitors based on the factors above and that we distinguish ourselves through our comprehensive software portfolio, our commitment to both integration and interoperability across the entire infrastructure lifecycle, our flexible commercial models, and our direct sales channels.

### **Our Sales and Marketing**

We bring our offerings to market primarily through direct sales channels that generated approximately 92% of our 2021 total revenues. Our direct sales channel includes:

- Account Managers, who are responsible for our largest accounts. For pre-sales technical activities, Account Managers are supported by the engineering domain experts within our User Success organization;
- Inside Sales Specialists, who are responsible for servicing smaller- to medium-sized accounts in territories defined by geography and product lines; and
- Product Sales Specialists, who are technical experts in a specific product line, help to sell across the territories of both Account Managers and Inside Sales Specialists.

We rely on specialist channel partners in geographic regions where we do not currently have a meaningful presence or where, for some of our offerings, direct sales efforts are less economically feasible. Channel partners accounted for approximately 8% of our 2021 total revenues.

Sales cycles for our applications tend to be relatively short, measured in weeks. The most prevalent transactions are increases by accounts in their use of our applications already in use. Our sales model allows and encourages accounts to try usage of our applications that are new to them with minimal obligation. We act upon our logs of such new usage to assign user success colleagues to help the new users in this expanded adoption.

Our *ProjectWise* and *AssetWise* enterprise systems offerings are generally sold through either proactive proposals or responses to requests for proposal, so sales cycles for those offerings range from months to several quarters. We have a comprehensive global proposals team to assure appropriate business development resources are allocated, to quality-assure efficient and effective proposal contents, and to maximize the capture ratio for our proposal pursuit.

Our marketing functions include:

- *Corporate marketing*, to build brand awareness, brand equity, and thought leadership, including through corporate events and programs covering industry trends and challenges, and to conduct market research and industry studies;
- *Industry and product marketing*, for demand generation through digital marketing channels, including our website, Internet advertising, webinars, and virtual events, and paid and organic social media, and through traditional marketing channels such as trade print advertising, press releases, editorial placements, industry-specific trade shows and conferences, in-person seminars, and locally-sponsored events; and
- *Regional marketing*, to localize and deliver our marketing programs throughout the world.

We also invest in our annual *Year in Infrastructure* Conference, which brings together leading infrastructure thought leaders from around the world for presentations on innovative projects, to learn about the latest advances to our applications and cloud offerings, and to network and share best practices. Our associated *Year in Infrastructure and Going Digital Awards*, which we held virtually in 2021 due to the COVID-19 pandemic, attracted nearly 300 project nominations from our accounts to be judged by independent juries in 19 categories for digital advancements in infrastructure engineering.

## **Our Research and Development**

We continue to make substantial investments in research and development because we believe the infrastructure engineering software market presents compelling opportunities for the application of new technologies that advance our current solutions. Our research and development roadmap balances technology advances and new offerings with continuous enhancements to existing offerings. Our allocation of research and development resources is guided by management-established priorities, input from product managers, and user and sales force feedback.

We had more than 1,600 colleagues engaged globally in software research and development as of December 31, 2021. Each of our product advancement groups for Engineering Applications, Geoprofessional Applications, Enterprise Systems, and Industry Solutions have research and development resources and responsibilities. Our iTwin Services group consists of approximately 180 colleagues and is entirely devoted to the rapid development of new and incremental cloud-native services for infrastructure digital twins. Our separate Technology office assesses the potential of new software technologies and sources.

As part of our resource allocation process, we also conduct a cost-benefit analysis of acquiring available technology in the marketplace versus developing our own solutions. Our Portfolio Development office, in addition to pursuing appropriate acquisitions and digital-integrator startups, allocates funding for internal “acceleration” projects, to “make” rather than “buy.” Each such project is staffed with colleagues dedicated to the “intrapreneurial” incubation of a new offering, which is brought back to its respective sponsoring product advancement group after market introduction.

For the years ended December 31, 2021, 2020, and 2019, our research and development spending was \$220.9 million, \$185.5 million, and \$183.6 million, respectively, and as a percentage of our total revenues was 22.9%, 23.1%, and 24.9%, respectively.

### *Digital co-ventures*

In 2019, we and Topcon created an equally-owned joint venture, DCW, to serve as a digital integrator for major construction projects and related enterprises. We and Topcon each contributed experienced colleagues in addition to the required capital commitments.

As part of our co-venturing with Siemens, we undertake a program of joint research and development investment in which each company bears its own costs. These investments have led to jointly offered cloud services for infrastructure digital twins, some of which are already commercially available.

## **Our Intellectual Property**

We believe that the success of our business depends more on the quality of our proprietary software solutions, technology, processes, and domain expertise than on copyrights, patents, trademarks, and trade secrets. While we consider our intellectual property rights to be valuable, we do not believe that our competitive position depends primarily on obtaining legal protection for our software solutions and technology. Instead, we believe that our competitive position depends primarily on our ability to maintain a leadership position by developing innovative proprietary software solutions, technology, information, processes, and know-how. Nevertheless, we rely on a combination of copyrights, patents, trademarks, and trade secrets in the United States (“U.S.”) and other jurisdictions to secure our intellectual property, and we use contractual provisions and non-disclosure agreements to protect it. As of December 31, 2021, we had 134 patents granted and 48 patents pending in the U.S., the first of which expires on January 12, 2022, and 25 patents granted and 65 patents pending internationally, the first of which expires on August 14, 2022. In addition, from time to time we enter into collaboration arrangements and in-bound licensing agreements with third parties, including certain of our competitors, in order to expand the functionality and interoperability of our software solutions. We are not substantially dependent upon any one of these arrangements, and we are not obligated to pay any material royalty or license fees with respect to them.

Our patents cover systems and methods relating to various aspects of software for infrastructure design and modeling, collaboration and work-sharing, and infrastructure asset operations. Among other things, our patents address a broad range of issues in infrastructure domains from analyzing building energy usage and structural analysis, railway system maintenance, water network design and operation and augmented reality, as well as techniques for creating, storing, displaying, and processing infrastructure models.

To innovate and increase our strategic position, our software developers are incentivized to alert our internal patent committee to innovations that might be patentable or of strategic value. In 2021, our patent committee reviewed 21 invention disclosures submitted by our software developers, and filed 17 U.S. and 14 foreign patent applications, while 17 U.S. and no foreign patents were granted. We also plan to assess appropriate occasions for seeking patent and other intellectual property protections for aspects of our technology and solutions that we believe constitute innovations providing significant competitive advantages. We have registered 173 trademarks, including “Bentley,” “MicroStation,” “AssetWise,” and “ProjectWise,” with the U.S. Patent and Trademark Office and in several jurisdictions outside the U.S.

Our names, logos, website names, and addresses are owned by us or licensed by us. This Annual Report on Form 10-K contains trademarks, trade names, and service marks of other companies, which are the property of their respective owners. Solely for convenience, trademarks and trade names referred to in this Annual Report on Form 10-K may appear without the ®, TM, or SM symbols, but the lack of those references is not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the right of the applicable licensor to these trademarks, trade names, and service marks. We do not intend our use or display of other parties’ trademarks, trade names, or service marks to imply, and such use or display should not be construed to imply, endorsement or sponsorship of us by these other parties.

### **Environmental, Social, and Governance (“ESG”)**

At Bentley Systems, our commitment to ESG is driven by our service to engineering and related professions, and the positive impacts our products enable through the design, building, and operation of the world’s infrastructure. In 2021, we enhanced our ESG efforts and improved our performance, particularly in the areas of governance, strategy, and disclosure.

#### *ESG Governance*

In our first year as a public company, our primary objective was to establish strong ESG governance. In early 2021, we established formal Board oversight of ESG through the newly created Sustainability Committee of our board of directors. The Sustainability Committee, a committee of independent Bentley Systems directors, meets quarterly to assess the Company’s ESG performance, strategy, and disclosures. In addition, we enhanced internal governance of ESG through the formation of the internal ESG Steering Committee. The ESG Steering Committee meets regularly and consists of Bentley Systems executive sponsors from relevant functional departments and other subject matter experts with responsibilities for ESG strategy, implementation, and reporting.

#### *ESG Strategy*

To define our approach to ESG and our areas of focus, we reviewed the leading ESG reporting frameworks and engaged our ESG Steering Committee to develop our ESG Framework. Using the Sustainable Accounting Standards Board Software and IT Services Standard and the United Nations Sustainable Development Goals, we identified nine areas of focus that align with our E, S, and G pillars. These areas are where we believe Bentley Systems can best create value and mitigate potential risks. Building from this initial framework, we seek to articulate our current performance in each area, develop strategies to manage these areas over time, and engage stakeholders to refine this framework following the ESG principles of materiality.



## *ESG Disclosure*

As a first step to enhancing our ESG reporting, we developed an ESG website to centralize our relevant disclosures and to prepare for future reporting. The website details our ESG Framework, current ESG efforts, and numerous resources linked in the ESG Data Center.

To learn more, visit our ESG website at [www.bentley.com/en/esg](http://www.bentley.com/en/esg).

### **Human Capital Management**

We consider our colleagues a key success factor in driving our continued growth. Our overall Talent Strategy focuses on building an inclusive and engaging culture in which our colleagues develop, collaborate, contribute, and thrive, so they can make a difference through advancing the world's infrastructure.

As of December 31, 2021, we had 4,626 full-time colleagues globally, including 1,860 in the Americas (the U.S., Canada, and Latin America (including the Caribbean)), 1,231 in Europe, the Middle East, and Africa ("EMEA"), and 1,535 in Asia-Pacific ("APAC"). None of our full-time U.S. colleagues are unionized. Outside the U.S., a small overall portion of our colleagues in certain countries are represented by a colleague representative organization, such as a union or colleague association. Our colleagues bring 67 languages to fulfill the needs of our globally dispersed accounts and users. Our colleagues are highly qualified with an average of six years of total service with the Company and advanced academic credentials, including 124 doctoral degrees and 1,264 master's-level degrees.

We believe our culture and values are a key driver for attracting, developing, and retaining highly talented colleagues. Our culture and values are rooted in the philosophy of corporate responsibility and ESG, which drive workforce motivation to make an impact on the world's infrastructure and improve quality of life, a passion to solve our users' challenging problems through innovation and creativity, a desire to connect and collaborate, and a commitment to deliver on our promises.

Our approach to talent management is guided by our strong sense of corporate culture. We do this by striving to remain competitive with our peers and to embed opportunity, engagement, diversity, inclusion, and continuous growth throughout the entire lifecycle of talent management.

#### *Talent Acquisition Strategy*

Our Talent Acquisition Strategy leverages best practices to attract, engage, and hire diverse people and current and future leaders who will work hand-in-hand with all colleagues to achieve success. Thanks to our culture and values, investment in colleague development opportunities, and competitive total rewards, we enjoy high levels of colleague referrals to supplement our corporate hiring practices, which are encouraged through our colleague referral program. We also build relationships with universities around the world as part of our Future Talent Program to hire talented graduates into our rotational Graduate Development Program, which provides curated growth and development opportunities while creating a solid talent pipeline for our critical business units and teams.

As part of our commitment to diversity, equity, and inclusion ("DEI"), we deploy strategies to identify diverse candidates with each open position, take measures to keep our Talent Acquisition process free of bias, and in the U.S., we intentionally partner and advertise jobs with organizations focused on women, veterans, people of color, people with disabilities, and LGBTQ+ populations. As part of our university efforts, we partner with Historically Black Colleges and Universities ("HBCUs") in the U.S. and provide free Bentley Systems software learning licenses to HBCU students. We have also expanded our reach to students in our local communities via partnerships with organizations like CodePath, a non-profit organization striving to eliminate educational inequity in technical education.

## *Professional Development*

We are committed to investing in our most valuable resource, our colleagues. We provide our colleagues with various tools and opportunities to enhance their professional development and, as a result, the career potential of each colleague. Our goal is to enable and empower colleagues with learning and development resources to support their skills development as individual contributors, team managers, or organization leaders.

We offer:

- *Colleague and Manager Portals.* These robust portals provide colleagues and managers with essential resources throughout their career lifecycle at Bentley Systems. The portals contain learning pathways and programs on topics such as goal setting, competency training, coaching, feedback, performance reviews, and career development;
- *Skill Development Portal.* Colleagues are encouraged to create a habit of learning, and to develop foundational and core job function skills to improve efficiency and productivity. We offer colleagues access to a powerful learning platform, connecting them with content from over 30 integrated providers and millions of curated articles, videos, courses, podcasts, and events;
- *Career Development Program.* We encourage colleagues to take ownership of their career development. We expect our colleagues to craft their development plans with the assistance of their managers. Our managers are trained to support and empower their team members by giving continuous feedback and supporting their career goals. The Career Development Program includes self-assessments, career planning guides, goal setting tools, skill development, and career management resources;
- *Formal Mentorship Programs.* Our Leadership Enablement and Development (LEAD) Program arranges intensive mentorships to identify and accelerate growth potential for the next generation of Bentley Systems leaders. The LEAD Program was developed based on our leadership competence framework. Learning pathways corresponding to each competence and intensive one-on-one mentoring with our executives are offered to develop leadership competencies based on 360 feedback, personality assessment, and action planning. Our Bentley Network of Women (NOW) Program is a formal mentorship opportunity for our female colleagues to develop their skills and advance their careers;
- *Educational Assistance Program.* The Educational Assistance Program encourages professional development through formal education so that colleagues may further develop job-related skills and enhance career progression within Bentley Systems. This program covers a range of training programs and courses leading to degrees and certifications; and
- *Subsidized Professional Memberships and Subscriptions.* We reimburse colleagues for the annual fees related to continuing membership in, or subscription to, professional organizations that are directly related to the colleague's role.

## *Engagement and Performance Management*

Colleague engagement is critical to maintaining our strong sense of corporate culture. We conduct annual talent reviews and engagement surveys to ensure that we are executing business objectives, providing resources to optimize the performance and potential of our colleagues, and to ensure our colleagues are motivated and engaged.

In our 2021 Annual Colleague Engagement Survey, we were pleased to report an 86% participation rate across the organization despite the challenges of remote work. Of the colleagues who participated in the survey, 85% responded they were proud to work for Bentley Systems and 87% responded they would gladly recommend Bentley Systems as a place to work to people they know and respect.

## *Diversity, Equity, and Inclusion*

As a global company with colleagues of different cultures, backgrounds, and perspectives based in more than 40 countries worldwide, our diversity is what makes us successful. Bentley Systems is committed to fostering and continuing to build programs to promote DEI so that all colleagues can reach their highest performance and potential. We have developed strategies and programs focused on DEI and increasing diversity and equity, as well as fostering a culture of inclusion and well-being in the workplace. These strategies and programs include:

- *Building Diversity.* We are building a pipeline of diverse candidates by recruiting and partnering in education programs at HBCUs. We are partnering with professional organizations to support underrepresented groups in engineering and technology. We provide internships; scholarships; Science, Technology, Engineering, and Mathematics (STEM) grants; mentorships; and programmatic support to organizations and schools with diverse and underrepresented groups. We implemented pre-hire assessments to reduce implicit bias in the hiring process;
- *Colleagues.* We continue to create an inclusive workplace through our colleague resource groups, the Inclusion, Diversity, and Equity Alliance (“IDEA”), which provides our colleagues a platform to join other colleagues from all regions, levels, demographics, and departments to build community and celebrate our diversity and differences. IDEA currently has four global focus groups: Bentley Pride, Open Abilities, People of Color in the U.S., and Women at Bentley. Our IDEA groups have built community and provided platforms for discussion by hosting book clubs, panel discussion, speakers, and celebrating global awareness days and events. We also invest in the Bentley Network of Women (NOW), a development and mentoring program for women globally at the Director level and below; and
- *Awareness and Training.* We have implemented robust DEI training as part of our annual compliance commitments. We have held interactive sessions with our executives, emerging leaders, and talent acquisition in fostering DEI and eliminating unconscious bias, and have implemented training for hiring managers to ensure fairness in the interview process.

In the U.S., we have provided extended paid parental leave and benefits for qualified gender affirming surgery. We plan to continue our commitments to gender pay parity and analysis and benefits to ensure our colleague’s well-being.

Additional information on our DEI program can be found on our website at [www.bentley.com/en/about-us/diversity-equity-inclusion](http://www.bentley.com/en/about-us/diversity-equity-inclusion).

## *COVID-19 Response*

From the start of the COVID-19 pandemic, we took immediate action to ensure our colleagues had the equipment and resources they needed to work from home, which also enabled success for our users. Our global task force provided continuous communication, education, and support services to our colleagues. Their well-being fueled our response plan and we created learning resources to support them throughout the pandemic. These learning resources included guides and practices for managers to lead virtually with empathy, tips for maintaining team collaboration, and resources and support for colleagues to maintain a healthy work-life balance. We are proud to share that at no point during the COVID-19 pandemic have we had to resort to furloughs.

As the pandemic continues, and work flexibility is seen as the key to success for our business and colleagues’ well-being, we created the Infrastructure Empowered Workforce Plan (the “IEWP”) in July 2021. The principle of the IEWP is for colleagues to take advantage of the world’s infrastructure through mobility, productive and enjoyable facilities, and the flexibility to work remotely, all while leveraging the power of technology. The IEWP encourages our colleagues to make the best of both remote and in-office working worlds to perform at a high level in contributing to our company’s success— and accordingly to the world’s economy and environment, which depends on infrastructure.

The IEWP is built on a solid foundation of trust, empowering colleagues to make responsible and effective choices about the right balance between working from the office and remotely. This plan does not require colleagues to come into the office at any specific frequency. Rather, it provides colleagues the flexibility to make these choices with their manager and within their teams, to achieve business success and maintain a high level of productivity and engagement.

From the IEWP survey conducted in September 2021, 85% of our colleagues who participated in the survey responded that they believed the IEWP will positively contribute to their work-life balance and 78% responded that the IEWP will positively impact their productivity and effectiveness at work.

### **Corporate Information**

Bentley Systems, Incorporated was incorporated in Delaware in 1987 and is headquartered in Exton, Pennsylvania. We were originally incorporated in California in 1984 upon our founding.

### **Website Access to Reports**

Our internet address is [www.bentley.com](http://www.bentley.com). The information posted on our website is not incorporated into this Annual Report on Form 10-K. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to reports filed or furnished pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on the Investor Relations portion of our website at [www.bentley.com](http://www.bentley.com) (or [investors.bentley.com](http://investors.bentley.com)) as soon as reasonably practicable after we electronically file such material with, or furnish it to, the U.S. Securities and Exchange Commission ("SEC").

## **Item 1A. Risk Factors**

The following is a discussion of the material factors that make an investment in the Company and its securities speculative or risky. The risks described herein are not the only risks we may face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially adversely affect our business, financial condition, or operating results.

### **Risks Related to Our Business and Industry**

***Demand for our software solutions is subject to volatility in our accounts' underlying businesses, which includes infrastructure projects that typically have long timelines.***

Our sales are based significantly on accounts' demand for software solutions in the following infrastructure sectors: (i) public works/utilities; (ii) industrial/resources; and (iii) commercial/facilities. Although these sectors are typically countercyclical to one another in nature, each periodically experiences economic declines and may be exacerbated by other economic factors. If participants in any of these sectors reduce spending or allocate future funding in a manner that results in fewer infrastructure improvement or expansion projects, then our accounts' underlying business may be impacted and demand for our software solutions may decrease or our rate of contract renewals may decrease. A prolonged decrease in such spending may harm our results of operations. Our accounts may request discounts or extended payment terms on new arrangements or seek to extend payment terms on existing arrangements due to lower levels of infrastructure spending or for other reasons, all of which may reduce revenue. We may not be able to adjust our operating expenses to offset such discounts or other arrangements because a substantial portion of our operating expenses is related to personnel, facilities, and marketing programs. The level of personnel and related expenses may not be able to be adjusted quickly and is based, in significant part, on our expectations for future revenues and demand.

Infrastructure projects typically have long timelines and we may invest in building capacity based on expected demand for our software solutions that takes longer to develop than we expect or fails to develop at all. Additionally, government spending on infrastructure may decrease, which could decrease the demand for our software solutions and have a negative impact on our results of operations. We may not be successful in forecasting future demand levels and could fail to win business at the expected rates. If we underestimate the demand for our software solutions, we may be unable to fulfill the increased demand in a timely fashion or at all. If we overestimate the demand for our software solutions, we may incur additional expenses for which we would not have corresponding revenues, negatively impacting our results of operations.

***The ongoing global coronavirus outbreak could materially and adversely affect our business.***

In March 2020, the World Health Organization declared a global pandemic related to the rapidly growing outbreak of the disease COVID-19, caused by a novel strain of coronavirus, SARS-CoV-2. The COVID-19 outbreak and certain preventative or protective actions that governments, businesses, and individuals have taken in respect of COVID-19 have resulted in global business disruptions. The COVID-19 pandemic has adversely affected global economies, financial markets, and the overall environment in which we do business, and the extent to which it may impact our future results of operations and overall financial performance remains uncertain. The COVID-19 pandemic has had a modest impact on the usage of our solutions by our users. Throughout 2020 and 2021, usage rates fluctuated modestly when compared to the corresponding periods in the prior year. Usage declines have had a minimal impact on our recurring revenues, which are comprised primarily of longer term contracts where short-term usage rate declines do not adversely impact revenues. However, to the extent declines in usage have also occurred within our recurring revenue contracts with shorter term resets, as is the case with our E365 contracts, the usage declines have modestly impacted revenues. Our revenues from services have also been impacted as certain accounts have delayed new projects. Overall, while our rate of growth has been impacted, our revenues have continued to grow given the mission critical nature of our solutions. There can be no assurance that we will not experience more severe downward trends in usage for as long as the pandemic lasts and thereafter. While recent vaccine approvals and rollouts have raised expectations of a turnaround in the COVID-19 pandemic, new waves of outbreaks and variants as well as delays in vaccinations pose risks to recovery and our outlook. In addition, supply chain disruption and resulting inflationary pressures, a global labor shortage, and the ebb and flow of COVID-19 are currently impacting the pace of recovery. Growth may slow if virus outbreaks (including from new variants) prove difficult to contain, infections and deaths mount rapidly before vaccines are widely available, and social distancing measures and/or lockdowns return and are more stringent than anticipated. These uncertainties and risks could have a material adverse impact on our financial condition, business and results of operations, as well as those of our

customers and counterparties. The duration and extent of the impact from the COVID-19 pandemic depends on future developments that cannot be accurately predicted at this time, such as the severity and transmission rate of the virus, the extent and effectiveness of containment actions, and the impact of these and other factors on our colleagues, accounts, suppliers, and partners. The COVID-19 pandemic may continue to materially affect the economies and financial markets in impacted countries and countries in which we operate, causing continued economic downturn that could decrease spending on infrastructure projects and adversely affect demand for our software solutions. Such impact on our business, financial condition, operating results, and/or cash flows could be material. The COVID-19 pandemic may also have the effect of heightening other risks disclosed in these Risk Factors, such as, but not limited to, those related to supply chain disruptions and global labor availability and cost.

***The majority of our revenues and an increasing percentage of our operations are attributable to operations outside the U.S., and our results of operations therefore may be materially affected by the legal, regulatory, social, political, economic, and other risks of foreign operations.***

Approximately 59%, 57%, and 58% of our total revenues were from outside the U.S. for the years ended December 31, 2021, 2020, and 2019, respectively. We anticipate that revenues from accounts outside the U.S. will continue to comprise a majority of our total revenues for the foreseeable future.

Our international revenues, including from emerging economies, are subject to general economic and political conditions in foreign markets and our revenues are impacted by the relative geographical and country mix of our revenues over time. These factors could adversely impact our international revenues and, consequently, our business. Our dependency on international revenues also makes us more exposed to global economic and political trends, which can negatively impact our financial results. Further, our operations outside the U.S. are subject to legal, regulatory, social, political, economic, and other risks inherent in international business operations, including, without limitation, local product preference and product requirements, trade protection measures, sanctions, quotas, embargoes, import and export licensing requirements, duties, tariffs or surcharges and more stringent regulations relating to privacy and data security and access to, or use of, commercial and personal information, such as the General Data Protection Regulation (the “GDPR”) applicable in the European Union (“E.U.”), the Personal Information Protection Law (the “PIPL”) applicable in the People’s Republic of China, and Brazil’s General Data Protection Law.

The occurrence of any one of these risks could negatively affect our international business and, consequently, our business, financial condition, and results of operations. Additionally, operating in international markets requires significant management attention and financial resources. We cannot be certain that the investment and additional resources required to operate in other countries will produce desired levels of revenue or profitability.

***Decreased investment by APAC, including China, may have a negative effect on our business.***

Approximately 19% for the years ended December 31, 2021 and 2020 and 20% of our total revenues for the years ended December 31, 2019 relate to infrastructure projects in APAC, including China. We cannot assure you that spending in these countries on infrastructure projects will continue at historical levels or increase in the future, or that demand for our software solutions in APAC in general will not be negatively affected by reductions in spending or other limitations.

***We are exposed to fluctuations in currency exchange rates that could negatively impact our financial results and cash flows.***

We sell our solutions in 186 countries, primarily through a direct sales force located throughout the world. Approximately 59%, 57%, and 58% of our total revenues were from outside the U.S. for the years ended December 31, 2021, 2020, and 2019, respectively. As we continue to expand our presence in international regions, the portion of our revenues, expenses, cash, accounts receivable, and payment obligations denominated in foreign currencies continues to increase. Further, we anticipate that revenues from accounts outside of the U.S. will continue to comprise the majority of our total revenues for the foreseeable future.

Because of our international activities, we have revenues, expenses, cash, accounts receivable and payment obligations denominated in foreign currencies. For the years ended December 31, 2021, 2020, and 2019, 47%, 43%, and 47%, respectively, of our total revenues were denominated in a currency other than the U.S. Dollar. As a result, we are subject to currency exchange risk. Our revenues and results of operations are adversely affected when the U.S. Dollar strengthens relative to other currencies and are positively affected when the U.S. Dollar weakens. As a result, changes in currency

exchange rates will affect our financial position, results of operations, and cash flows. In the event that there are economic declines in countries in which we conduct transactions, the resulting changes in currency exchange rates may affect our financial condition, results of operations, and cash flows. We are most impacted by movements in and among the Euro, British Pound, Australian Dollar, Canadian Dollar, Chinese Yuan Renminbi, and New Zealand Dollars. For example, the Chinese Yuan Renminbi has fluctuated against the U.S. Dollar, at times significantly and unpredictably, due to changes in foreign exchange for a wide variety of reasons, including actions instituted by China. Because of changes in trade between the U.S. and China and Renminbi internationalization, China may in the future announce further changes to the exchange rate system, and we cannot assure you that the Renminbi will not appreciate or depreciate significantly in value against the U.S. Dollar in the future.

In addition, countries in which we operate may be classified as highly inflationary economies, requiring special accounting and financial reporting treatment for such operations, or such countries' currencies may be devalued, or both, which may harm our business, financial condition, and results of operations.

We cannot predict the impact of foreign currency fluctuations and we may not be successful in minimizing the risks of these fluctuations. In addition, the fluctuation and volatility of currencies, even when it increases our revenues or decreases our expenses, impacts our ability to accurately predict our future results and earnings.

***We may not be able to increase the number of new subscription-based accounts or cause existing accounts to renew their subscriptions, which could have a negative impact on our future revenues and results of operations.***

We may not be able to increase demand for our subscription-based services in line with our growth strategy. Our accounts are not obligated to renew their subscriptions for our offerings, and they may elect not to renew. We cannot assure renewal rates or the mix of subscriptions renewals. Account renewal rates may decline or fluctuate due to a number of factors, including offering pricing, competitive offerings, account satisfaction, and reductions in account spending levels or account activity due to economic downturns or financial markets uncertainty. If our accounts do not renew their subscriptions or if they renew on less favorable terms, our revenues may decline, which could harm our business, financial condition, and results of operations.

***Consolidation among our accounts and other enterprises in the markets in which we operate may result in a loss of business.***

It is likely that some of our existing accounts will consolidate, be acquired, or experience a change in management, which could lead to a decrease in the size of our account base. We expect consolidation among our accounts as they attempt to strengthen or maintain their market positions. If two or more of our accounts consolidate, they may also wish to consolidate the software solutions and services that we provide to them. If an existing account is acquired by another company that uses the solutions of one of our competitors, we may lose business in that account to our competitor. In addition, if an account experiences a change in management, the new management team may be accustomed to the software of one of our competitors, and we could lose that account. Any such consolidation, acquisition, or management change could lead to pricing pressure, erosion of our margins, loss of accounts, and loss of market share, all of which could harm our business, financial condition, and results of operations.

***We have in the past and expect to continue in the future to seek to grow our business through acquisitions of or investments in new or complementary businesses, software solutions, or technologies, and the failure to manage acquisitions or investments, or the failure to integrate them with our existing platform and business, could harm us.***

Since our founding, we have strategically acquired and integrated numerous software assets and businesses. We may, however, be unable to identify suitable acquisition candidates in the future or, if suitable candidates are identified, we may be unable to complete the business combination on commercially acceptable terms. The process of exploring and pursuing acquisition opportunities may result in devotion of significant management and financial resources.

Even if we are able to consummate acquisitions that we believe will be successful, these transactions present many risks including, among others, failing to achieve anticipated synergies and revenue increases, difficulty incorporating and integrating the acquired technologies or software solutions with our offerings and existing applications, difficulties managing an acquired company's technologies or lines of business or entering new markets where we have limited prior experience or where competitors may have stronger market positions, the loss of key colleagues, accounts, and channel partners of ours or of the acquired company, and the requirement to test and assimilate the internal control processes of the

acquired business in accordance with the requirements of Section 404 of the Sarbanes-Oxley Act of 2002.

***Quality problems, defects, errors, failures, or vulnerabilities in our software solutions or services could harm our reputation and adversely affect our business, financial condition, results of operations, and prospects.***

Our solutions are, in some cases, highly complex and incorporate advanced software technologies that we attempt to make interoperable with the products of other software providers. Despite testing prior to release, our software may contain undetected defects or errors. Further, the combined use of our software with those of other software providers may cause errors or failures, or it may expose undetected defects, errors, or failures in our software. These defects, errors, or failures could affect software performance and damage the businesses of our accounts, as well as delay the development or release of new software or new versions of software. Further, we cannot guarantee that all of our accounts are using the latest versions of our software solutions with enhanced security features and may be more vulnerable to cyber-attacks. Allegations of unsatisfactory performance in any of these situations could damage our reputation in the market and our relationships with our accounts, cause us to lose revenue or market share, increase our service costs, cause us to incur substantial costs in analyzing, correcting, or redesigning the software, cause us to lose accounts, subject us to liability for damages, and divert our resources from other tasks, any one of which could adversely affect our business, financial condition, results of operations, and prospects. We may also be required to provide full replacements or refunds for such defective software. We cannot assure you that such remediation would not harm our business, financial condition, results of operations, and prospects.

***Our business, financial condition, results of operations, and prospects may be harmed if we are unable to cross-sell our solutions.***

A significant component of our growth strategy is to increase the cross-selling of our solutions to current and future accounts, however, we may not be successful in doing so if our accounts find our additional solutions to be unnecessary or unattractive. We have invested, and intend to continue to invest, significant resources in developing and acquiring additional solutions, which resources may not be recovered if we are unable to successfully cross-sell these solutions to accounts using our existing solutions. Any failure to sell additional solutions to current and future accounts could harm our business, financial condition, results of operations, and prospects.

***There are significant costs and restrictions associated with the repatriation of cash from our non-U.S. operations.***

Our cash and cash equivalents balances are concentrated in a few locations around the world, with approximately 48% and 94% of those balances held outside of the U.S. as of December 31, 2021 and 2020. Cash repatriation restrictions may limit our ability to repatriate cash held by our foreign subsidiaries. Additionally, the repatriation of cash held by our foreign subsidiaries may result in adverse tax consequences. Any repatriation of cash may be restricted or may result in our incurring substantial costs. As a result, we may be required to seek sources of cash to fund our operations, including through the issuance of equity securities, which may be dilutive to existing stockholders, or by incurring additional indebtedness. There can be no assurance that we will be able to secure sources of financing on terms favorable to us, or at all.

***From time to time we realign or introduce new business initiatives, including reorganizing our sales and marketing, research and development, and administrative functions; if we fail to successfully execute and manage these initiatives, our results of operations could be negatively impacted.***

We rely heavily on our direct sales force. From time to time, we reorganize and make adjustments to our sales leadership and/or our sales force in response to such factors as management changes, performance issues, market opportunities, and other considerations. These changes may result in a temporary lack of sales production and may adversely impact revenues in future quarters. Market acceptance of any new business or sales initiative is dependent on our ability to match our accounts' needs at the right time and price. There can be no assurance that we will not restructure our sales force in future periods or that the transition issues associated with such a restructuring will not occur. Similarly, reorganization of our research and development and administrative functions can disrupt our operations and negatively impact our results of operations if the execution is not managed properly. If any of our assumptions about expenses, revenues, or revenue recognition principles from these initiatives proves incorrect, or our attempts to improve efficiency are not successful, our actual results may vary materially from those anticipated, and our financial results could be negatively impacted.



***A portion of our revenues are from sales by our channel partners and we could be subject to loss or liability based on their actions.***

Sales through our global network of independent regional channel partners accounted for 8% of our total revenues for the years ended December 31, 2021, 2020, and 2019. These channel partners sell our software solutions to smaller-sized accounts, in geographic regions where we do not have a meaningful presence, and in niche markets where they have specialized industry and technical knowledge. Where we rely on channel partners, we may have reduced contact with ultimate users that purchase through such channel partners, thereby making it more difficult to establish brand awareness, ensure proper installation, service ongoing requirements, estimate demand, and respond to the evolving needs of an account. Any of our channel partners may choose to terminate its relationship with us at any time. As a result, our ability to service the ultimate users who were interfacing with that channel partner may take time to develop as we divert resources to service those users directly or find a suitable alternative channel partner to continue the relationship. Any disruption in service may damage our reputation and business. In addition, our channel partners may be unable to meet their payment obligations to us, which would have a negative impact on our results of operations and revenues. Our channel partners may also not have loyalty to our brand and therefore may not be particularly motivated to sell our software solutions or services.

The use of channel partners could also subject us to lawsuits, potential liability, and reputational harm if, for example, any channel partners misrepresent the functionality of our software solutions or services to accounts, fail to comply with their contractual obligations, or violate laws or our corporate policies. Such actions may impact our ability to distribute our software solutions into certain regions and markets, and may have an adverse effect on our results of operations and cash flows.

### **Risks Related to Information Technology Systems and Intellectual Property**

***Interruptions in the availability of server systems or communications with Internet, third-party hosting facilities or cloud-based services, or failure to maintain the security, confidentiality, accessibility, or integrity of data stored on such systems, could harm our business or impair the delivery of our managed services.***

A significant portion of our software development personnel, source code, and computer equipment is located at operating facilities outside the U.S. We also depend on data maintained on servers running third-party enterprise resource planning, account relationship management, and other business operations systems. We further rely upon a variety of Internet service providers, third-party hosting facilities, and cloud computing platform providers, such as Microsoft Azure, as well as local service providers to support project teams and users in most regions and countries throughout the world, particularly with respect to our cloud service solutions. Failure to maintain the security, confidentiality, accessibility, or integrity of data stored on such systems could damage our reputation in the market and our relationships with our accounts, cause us to lose revenue or market share, increase our service costs, cause us to incur substantial costs, cause us to lose accounts, subject us to liability for damages, and divert our resources from other tasks, any one of which could adversely affect our business, financial condition, results of operations, and prospects. Any damage to, or failure of, such systems, or communications to and between such systems, could result in interruptions in our operations, managed services, and software development activities. Such interruptions may reduce our revenue, delay billing, cause us to issue credits or pay penalties, cause accounts to terminate their subscriptions, or adversely affect our attrition rates and our ability to attract new accounts. Our business would also be harmed if our accounts and potential accounts believe our products or services are unreliable.

***If our security measures or those of our third-party cloud data hosts, cloud computing platform providers, or third-party service partners, are breached, and unauthorized access is obtained to an account's data, our data or our IT systems, our services may be perceived as not being secure, accounts may curtail or stop using our services, and we may incur significant legal and financial exposure and liabilities.***

As we digitize and use cloud and web-based technologies to leverage account data to deliver a more complete account experience, we are exposed to increased security risks and the potential for unauthorized access to, or improper use of, our and our accounts' information. Certain of our services involve the storage and transmission of accounts' proprietary information, and security breaches could expose us to a risk of loss of this information, litigation, and possible liability. Although we devote resources to maintaining our security and integrity, we may not prevent security incidents.

The risk of a security breach or disruption, particularly through cyber-attack or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has increased as the number, intensity, and sophistication of attempted

attacks and intrusions from around the world have increased. These threats include but are not limited to identity theft, unauthorized access, domain name system attacks, wireless network attacks, viruses and worms, advanced persistent threat, application centric attacks, peer-to-peer attacks, phishing, backdoor trojans, and distributed denial of service attacks. Any of the foregoing could attack our accounts' data (including their employees' personal data), our data (including colleagues' personal data), or our IT systems. It is virtually impossible for us to entirely eliminate this risk. Like all software, our software is vulnerable to cyber-attacks. The impact of cyber-attacks could disrupt the proper functioning of our software solutions or services, cause errors in the output of our accounts' work, allow unauthorized access to sensitive, proprietary, or confidential information of ours or our accounts, and other destructive outcomes.

Additionally, third parties may attempt to fraudulently induce colleagues or accounts into disclosing sensitive information such as user names, passwords, or other information in order to gain access to our accounts' data, our data, or our IT systems. Malicious third parties may also conduct attacks designed to temporarily deny accounts access to our services. Any security breach could result in a loss of confidence in the security of our products and services, damage our reputation, negatively impact our future sales, disrupt our business, and lead to regulatory inquiry and legal liability.

***Failure to protect our intellectual property rights could impair our ability to protect our proprietary technology and our brand.***

Our future success and competitive position depend in large part on our ability to protect our intellectual property and proprietary technologies. We rely on a combination of copyright, patent, trademark, and trade secret laws, as well as confidentiality procedures and contractual restrictions, to secure and protect our intellectual property rights, all of which provide only limited protection and may not currently or in the future provide us with a competitive advantage. Patents or trademarks may not issue from any of our pending or future patent or trademark applications. Patents or trademarks that do issue from such applications may not give us the protection that we seek, and such patents or trademarks may be challenged, invalidated, or circumvented. Any patents or trademarks that may issue in the future from our pending or future patent and trademark applications may not provide sufficiently broad protection and may not be enforceable in actions against alleged infringers.

The steps we take may not be adequate to protect our technologies and intellectual property, our patent and trademark applications may not lead to issued patents or registered trademarks, others may develop or patent similar or superior technologies or solutions, and our patents, trademarks, and other intellectual property may be challenged, invalidated, designed around, or circumvented by others. Furthermore, effective copyright, patent, trademark, and trade secret protection may not be available in every country in which our solutions are available or where we do business.

***Increasingly stringent and growing data protection and privacy laws with respect to cloud computing, cross-border data transfer restrictions, and other restrictions may apply to our business and non-compliance with such rules may limit the use and adoption of our services, adversely affect our business, or expose us to increased liability.***

As a global software and service provider, we collect and process personal data and other data from our users and prospective users. We use this information to provide solutions and applications to our accounts, to validate user identity, to fulfill contractual duties and administer billing and support, to expand and improve our business, and to communicate and recommend products and services through our marketing and advertising efforts. We may also share accounts' personal data with certain third parties as described in the privacy policy provided to each account. As a result, we are required to comply with federal, state, and foreign privacy and data security laws and regulations that apply to the treatment of personal data. Governments, regulators, privacy advocates, plaintiffs' attorneys, and our users and accounts are increasingly focused on how companies collect, process, use, store, share, and transmit personal data.

Globally, new and evolving regulations regarding data protection and privacy and other standards governing the collection, processing, storage, sharing, transmission, and use of personal data impose additional burdens for us due to increasing compliance standards that could restrict the use and adoption of our solutions and applications (in particular cloud services).

We have significant business operations in the E.U. and European Economic Area ("EEA"), where the GDPR went into effect on May 25, 2018. The GDPR harmonized data protection regulations across the E.U. and EEA, implementing stringent requirements for the protection of E.U. and EEA individuals' ("data subjects") personal data. These requirements include expanded requirements for our users as E.U. and EEA data subjects, new obligations on us as data controllers and processors, and mandatory breach notification to affected individuals and data protection supervisory authorities. Non-

compliance with GDPR could result in fines and penalties up to the greater of €20 million or 4% of global turnover for the preceding financial year. Moreover, individuals can claim damages resulting from infringement of the GDPR. As a result of the GDPR, as a personal data processor for our business-to-business accounts, we must commit to detailed contractual obligations, including to ensure we only process such data on our accounts' instructions, keep it secure, require our sub-processors to commit to similar commitments, delete data when the contract ends, and let our accounts audit our compliance.

In addition, E.U. and EEA data protection rules regulate the transfers of E.U. and EEA individuals' personal data to other countries that have been deemed by the European Commission not to provide adequate protection to personal data. The U.S. is not deemed to have adequate laws to protect personal data. Following the invalidation of the E.U.-U.S. Privacy Shield program on July 16, 2020, we transitioned to relying upon standard contractual clauses to legitimize the transfer of personal data to the U.S. and other third countries in compliance with the GDPR. Notably, on June 4, 2021, the European Commission published revised standard contractual clauses, which imposed additional requirements on companies that utilize this to legitimize transfers of personal data to the U.S. and other third countries. There are a number of legal uncertainties regarding the application of the revised standard contractual clauses and we will continue to face uncertainty as regulatory guidance is developed in this area as to whether our efforts to comply with our obligations under European privacy laws will be sufficient. Our accounts continue to access the data transfer mechanisms we utilize and may decide not to do business with us. For example, some of our accounts or potential accounts in the E.U. may require their vendors to host all personal data within the E.U. and may decide to do business with one of our competitors who hosts personal data within the E.U. instead of doing business with us. This and other future developments regarding the flow of data across borders could increase the cost and complexity of delivering our products and services in some markets and may lead to governmental enforcement actions, litigation, fines and penalties, or adverse publicity, which could have an adverse effect on our reputation and business.

Further, laws such as the E.U.'s Privacy and Electronic Communications Directive 2002 ("ePrivacy Directive") and national legislation across the E.U. implementing the ePrivacy Directive and the proposed ePrivacy Regulation are increasingly aimed at the use of personal data for marketing purposes, and the tracking of individuals' online activities. These existing or proposed laws and regulations are subject to differing interpretations and may be inconsistent among jurisdictions and member states. These and other requirements may have a negative effect on businesses, including ours, that collect and use online usage information for consumer acquisition and marketing. As the text of the ePrivacy Regulation is still under development, and as further guidance is issued and interpretation of both the ePrivacy Regulation and GDPR develop, we could incur costs to comply with these regulations.

In the Asia-Pacific region, where we have significant business operations, changes in privacy and cybersecurity regulation, some of which is similar to changes effected by the GDPR, have come into effect in 2021, and similar significant regulatory changes are expected across the Asia-Pacific region in the future. These changes, including the PIPL in China introduce more stringent requirements, including that we register our data processing activities in certain jurisdictions, appoint local representatives in-country, restrict the cross-border transfer of personal, confidential, and commercially sensitive information in some cases, provide expanded disclosures to tell our accounts about how we use their personal information, and obtain detailed consents from accounts to processing of personal information. There are also increased rights for accounts to access, control, and delete their personal information. In addition, there are mandatory data breach notification requirements that differ depending on the jurisdiction, as well as increases to penalties and expanded enforcement powers for regulators.

We also expect that there will continue to be new proposed laws, regulations, and industry standards concerning privacy, data protection, and information security in the U.S., the E.U., the EEA, and other jurisdictions, and we cannot yet determine the impact such future laws, regulations, and standards may have on our business. For example, there are currently three states in the U.S. which have adopted different comprehensive consumer privacy laws: California enacted the California Consumer Privacy Act (the "CCPA"), its amendment and the California Privacy Rights Act; Virginia enacted the Virginia Consumer Data Protection Act; and Colorado enacted the Colorado Privacy Act. These acts give residents expanded privacy rights and protections, provide for civil penalties for violations and in certain instances provide for a private right of action for data breaches. In addition to government activity, privacy advocacy groups and technology and other industries are considering various new, additional, or different self-regulatory standards that may place additional burdens on us. Future laws, regulations, standards, and other obligations, and changes in the interpretation of existing laws, regulations, standards, and other obligations could impair our ability to collect, use, or disclose personally identifiable information, increase our costs, and impair our ability to maintain and grow our account base and increase our revenue.

New laws, amendments to or re-interpretations of existing laws and regulations, industry standards, contractual obligations, and other obligations may require us to incur additional costs and restrict our business operations. Such laws and regulations may require companies to implement privacy and security policies, localize data (even at a state level) permit users to access, correct, and delete personal data stored or maintained by such companies, inform individuals of security breaches that affect their personal data, and, in some cases, obtain individuals' consent to use personal data for certain purposes. If we, or the third parties on which we rely, fail to comply with federal, state, and international data privacy laws and regulations, our ability to successfully operate our business and pursue our business goals could be harmed.

Our failure to comply with applicable laws and regulations, or to protect such data, could result in enforcement action against us, including fines and public censure, claims for damages by accounts and other affected individuals, damage to our reputation and loss of goodwill (both in relation to existing accounts and prospective accounts), any of which could harm our business, financial condition, and results of operations.

Around the world, there are numerous lawsuits in process against various technology companies that process personal data. If those lawsuits are successful, it could increase the likelihood that we may be exposed to liability for our own policies and practices concerning the processing of personal data and could hurt our business.

Our accounts expect us to meet voluntary certification or other standards established by third parties or imposed by the accounts themselves. If we are unable to maintain these certifications or meet these standards, it could adversely affect our ability to provide our solutions to certain accounts and could harm our business. Further, if we were to experience a breach of systems compromising our accounts' sensitive data, our brand and reputation could be adversely affected, use of our software solutions and services could decrease, and we could be exposed to a risk of loss, litigation, and regulatory proceedings.

The costs of compliance with and other burdens imposed by laws, regulations, and standards may limit the use and adoption of our services and reduce overall demand for them, or lead to significant fines, penalties, or liabilities for any noncompliance.

Furthermore, concerns regarding data privacy may cause our accounts' customers to resist providing the data necessary to allow our accounts to use our services effectively. Even the perception that the privacy of personal information is not satisfactorily protected or does not meet regulatory requirements could inhibit sales of our software solutions or services, and could limit adoption of our cloud-based solutions.

***We license third-party technologies for the development of certain of our software solutions, and, in some instances, we incorporate third-party technologies, including open source software, into our software solutions. If we fail to maintain these licenses or are unable to secure alternative licenses on reasonable terms, our business could be adversely affected.***

We license third-party technologies to develop certain of our products, and, in some cases, we incorporate third-party technologies into our own software solutions, including technologies owned by our competitors. If we were to seek to expand the scope of this activity in the future, we could be required to obtain additional licenses and enter into long-term arrangements with third parties on whose technology we could become substantially dependent.

If we are unable to use or license these third-party technologies on reasonable terms, including commercially justifiable royalty rates, or if these technologies fail to operate properly or be appropriately supported, maintained, or enhanced, we may not be able to secure alternatives in a timely manner and our ability to develop and commercialize our own software solutions could be adversely impacted. In addition, licensed technology may be subject to claims that it infringes others' intellectual property rights and we may lose access to or have restrictions placed on our use of the licensed technology. We also incorporate open source software into our products. While we have attempted not to use open source code in a manner which could adversely impact our proprietary code, the terms of many open source licenses have not been interpreted by U.S. courts, and there is a risk that such licenses could be construed in a manner that could impose unanticipated conditions or restrictions on our ability to market or sell our products or to develop new products.

***Assertions by third parties of infringement or other violations by us of their intellectual property rights could result in significant costs and harm our business and results of operations.***

Vigorous protection and pursuit of intellectual property rights has resulted in protracted and expensive litigation for many companies in our industry. Although claims of this kind have not materially affected our business to date, there can

be no assurance such claims will not arise in the future. Any claims or proceedings against us, regardless of whether meritorious, could be time consuming, result in costly litigation, require significant amounts of management time, result in the diversion of significant operational resources, or require us to enter into royalty or licensing agreements, any of which could harm our business, financial condition, and results of operations.

### **Risks Related to Regulation and Litigation**

***Recent and potential tariffs imposed by the U.S. government or a global trade war could increase the cost of our products and services and the cost of conducting our business, which could harm our business, financial condition, and results of operations.***

Recent and potential tariffs imposed by the U.S. government or a global trade war could increase the cost of our products and services and the cost of conducting our business, which could harm our business, financial condition, and results of operations. The U.S. government has threatened substantial changes to trade agreements and has raised the possibility of imposing significant increases on tariffs on goods imported into the U.S., particularly from China. The imposition of additional tariffs by the U.S. could result in the adoption of tariffs by other countries, leading to a global trade war. In addition, certain of these risks may be heightened as a result of changing political climates, which may also be exacerbated as a result of the COVID-19 pandemic. For example, throughout 2018 and 2019, the U.S. and China have been levying tariffs on their respective imports. Such tariffs could have a significant impact on our business and the business of our accounts. While we may attempt to renegotiate prices with suppliers or diversify our supply chain in response to tariffs, such efforts may not yield immediate results or may be ineffective. We might also consider increasing prices to the end consumer; however, this could reduce the competitiveness of our products and services and adversely affect revenue. If we fail to manage these dynamics successfully, our gross margins and profitability could be adversely affected.

***The withdrawal by the United Kingdom (“U.K.”) from the E.U. may have a negative effect on global economic conditions, financial markets, and our business.***

The U.K.’s withdrawal from the E.U. (“Brexit”) has created political and economic uncertainty, particularly in the U.K. and the E.U., and this uncertainty may last for years. Despite the implementation of the EU-U.K. Trade and Cooperation Agreement beginning on January 1, 2021, it is still unclear how Brexit will ultimately impact relationships within the U.K. and between the U.K. and other countries on many aspects of fiscal policy, cross-border trade and international relations. As a result, it is possible that there may be adverse practical or operational implications on our business. Demand for our software solutions or services could be affected by the impact of Brexit. For example, while we have invoiced our U.K.-based accounts and operated our business within the U.K. through our U.K.-based subsidiary since the fourth quarter of 2018 to manage risks posed to our business and operations by Brexit, Brexit may cause delays in purchasing decisions by our potential and current accounts affected by this transition and there is considerable uncertainty as to when the long-term nature of the U.K.’s relationship with the E.U. will be agreed and implemented and what the terms of that relationship will be. The final terms of this exit by the U.K. from the E.U. may result in new regulatory and cost challenges to our U.K. and global operations. In addition, our business and our channel partners’ businesses could be negatively affected by new trade agreements between the U.K. and other countries, including the U.S. and by the possible imposition of trade or other regulatory barriers in the U.K. The unresolved final terms of Brexit have also created uncertainty with regard to the regulation of data protection in the U.K. For example, the UK Data Protection Act, which substantially implements the GDPR, became effective in May 2018. It remains unclear, however, how U.K. data protection laws or regulations will develop and be interpreted in the medium to longer term, how data transfers to and from the U.K. will be regulated, and how those regulations may differ from those in the E.U. Further, the U.K.’s exit from the E.U. may create increased compliance costs and an uncertain regulatory landscape for offering equity-based incentives to our employees in the U.K. If we are unable to maintain equity-based incentive programs for our employees in the U.K. due to the departure of the U.K. from the E.U., our business in the U.K. may suffer and we may face legal claims from employees in the U.K. to whom we previously offered equity-based incentive programs.

***We are subject to legal proceedings and regulatory inquiries, and we may be named in additional legal proceedings or become involved in regulatory inquiries in the future, any of which may be costly, distracting to our core business and could result in an unfavorable outcome, or harm on our business, financial condition, results of operations, cash flows, or the trading price for our securities.***

We are subject to various investigations, claims, and legal proceedings that arise in the ordinary course of business, including commercial disputes, labor and employment matters, tax audits, alleged infringement of intellectual property

rights, and other matters. As the global economy has changed, our industry has seen an increase in litigation activity and regulatory inquiries. Like many other high technology companies, on a regular and ongoing basis, we receive inquiries from U.S. and foreign regulatory agencies regarding our business and our business practices, and the business practices of others in our industry. In the event that we are involved in significant disputes or are the subject of a formal action by a regulatory agency, we could be exposed to costly and time consuming legal proceedings that could result in any number of outcomes. Any claims or regulatory actions initiated by or against us, whether successful or not, could result in expensive costs of defense, costly damage awards, injunctive relief, increased costs of business, fines or orders to change certain business practices, significant dedication of management time, diversion of significant operational resources, or otherwise harm our business. In any of these cases, our financial results could be negatively impacted.

***Failure to comply with the U.S. Foreign Corrupt Practices Act (“FCPA”) and similar anti-bribery and anti-corruption laws associated with our activities outside the U.S. could subject us to penalties and other adverse consequences.***

The majority of our revenues are from jurisdictions outside of the U.S. We are subject to the FCPA, which generally prohibits U.S. companies and their intermediaries from making payments to foreign officials for the purpose of directing, obtaining, or keeping business, and requires companies to maintain reasonable books and records and a system of internal accounting controls. The FCPA applies to companies and individuals alike, including company directors, officers, employees, and agents. Under the FCPA, U.S. companies may be held liable for corrupt actions taken by employees, strategic or local partners, or other representatives. In addition, the government may seek to rely on a theory of successor liability and hold us responsible for FCPA violations committed by companies or associated with assets that we acquire.

***We are subject to governmental export and import controls that could impair our ability to compete in international markets or subject us to liability if we violate the controls.***

Our offerings may be subject to U.S. export controls and economic sanctions laws and regulations that restrict the delivery of our solutions and services to certain locations, governments, and persons. While we have processes in place to prevent our offerings from being exported in violation of these laws, including obtaining authorizations as appropriate and screening against U.S. government lists of restricted and prohibited persons, we cannot guarantee that these processes will prevent all violations of export control and sanctions laws. We may also decide to acquire companies whose past activities could give rise to potential liability under export control and sanctions laws. Such acquisitions may require substantial time and resources to integrate the acquired company into our compliance processes, to correct potential compliance gaps, and to remediate past potential violations by the acquired company, including through our own internal actions, voluntary self-disclosures, or other measures.

Further, if our channel partners fail to obtain appropriate import, export, or re-export licenses or permits, we may also be adversely affected, for example, through reputational harm, as well as other negative consequences including government investigations and penalties. Complying with export control and sanctions regulations for a particular sale may be time-consuming and may result in the delay or loss of sales opportunities.

Violations of U.S. sanctions or export control laws can result in fines, penalties, denial of export and trading privileges, and seizure of goods and assets. Other consequences include negative publicity and harm to business reputation, increased government scrutiny (including intrusive audits, and increased difficulty obtaining government licenses and approvals), and/or remedial compliance measures as a condition of settling government charges.

***We may face exposure to product or professional liability claims that could cause us to be liable for damages.***

The use of our software could lead to the filing of product liability claims against us were someone to allege that our software provided inaccurate or incomplete information at any stage of the infrastructure lifecycle or otherwise failed to perform according to specifications. In the event that accounts or third parties sustain property damage, injury, death, or other loss in connection with their use of our software or infrastructure for which our software solutions and services were used to engineer, we, along with others, may be sued, and whether or not we are ultimately determined to be liable, we may incur significant legal expenses, management’s attention could be diverted from operations, and market acceptance of our software could decrease. Our risk of exposure to litigation in these situations could rise as our software solutions and services are used for increasingly complex and high-profile infrastructure projects. Litigation could also impair our ability to obtain professional liability or product liability insurance or increase the cost of such insurance. These claims may be brought by individuals seeking relief on their own behalf or purporting to represent a class. In addition, product liability claims may be asserted against us in the future based on events we are not aware of at the present time.

The limitations of our liability included in our contracts with accounts may not be enforceable or may not otherwise protect us from liability for damages. Additionally, we may be subject to claims that are not explicitly covered by contract, such as a claim directly by a third party. There is no assurance that our insurance coverage will be adequate to cover incurred liabilities or that we will be able to obtain acceptable product and professional liability coverage in the future.

#### **Risks Related to Our Indebtedness**

***Our credit agreement, as amended, contains restrictive covenants that may limit our operating flexibility, and certain changes in ownership of equity interests in us by the Bentley Family (Barry J. Bentley, Gregory S. Bentley, Keith A. Bentley, Raymond B. Bentley, and Richard P. Bentley, collectively (the “Bentleys”), certain other family members and trusts and other entities controlled by or primarily for the benefit of the Bentleys and their families) constitutes an event of default.***

Our amended and restated credit agreement, entered into on December 19, 2017 (the “Credit Facility”), contains certain restrictive covenants that limit our ability to, among other things, incur indebtedness other than amounts under the Credit Facility and specified baskets, incur additional liens, merge or consolidate with other companies or consummate certain changes of control, enter into new lines of business, pay dividends to our stockholders, make investments in and acquire other businesses, and transfer or dispose of assets. In certain circumstances, the agreement governing the Credit Facility may also limit our ability to transfer cash among our subsidiaries and between us and our subsidiaries, including our foreign subsidiaries. It also contains certain financial covenants, including a covenant requiring us not to permit the net leverage ratio to exceed 3.50 to 1.00 and a covenant requiring the fixed charge coverage ratio for any period of four consecutive fiscal quarters to not be less than 3.00 to 1.00, and financial reporting requirements. Borrowings under the Credit Facility are secured by a first priority security interest in substantially all of our U.S. assets and 65% of the stock of our foreign subsidiaries owned by a party to the agreement governing the Credit Facility.

Further, if the Bentley Family ceases to collectively own equity interests in us representing at least 20% of the aggregate voting power of the Company, then such change in ownership will be an event of default under the agreement governing the Credit Facility and, among other things, the commitments under the Credit Facility may be terminated immediately and the outstanding loans and accrued interest may become due and payable immediately.

In addition, there is no guarantee that we will be able to generate sufficient cash flow or revenues to meet these financial covenants or pay the principal and interest on any debt. Furthermore, there is no guarantee that future working capital, borrowings, or equity financing will be available to repay or refinance any debt. Any inability to make scheduled payments or meet the financial covenants in the agreement governing the Credit Facility would adversely affect our business.

#### ***The phase-out of LIBOR could affect interest rates under our Credit Facility.***

In July 2017, the Financial Conduct Authority (“FCA”) (the authority that regulates LIBOR) announced it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR after 2021. Further, on November 30, 2020, the ICE Benchmark Administration Limited (“ICE”) announced its plan to extend the date that most USD-LIBOR values would cease being computed to June 30, 2023. The Alternative Reference Rates Committee (“ARRC”) and the International Swaps and Derivatives Association (“ISDA”) have identified the Secured Overnight Financing Rate (“SOFR”) as its preferred alternative rate for USD-LIBOR in debt, derivatives, and other financial contracts. LIBOR is used as the reference rate for Euro currency borrowings under our Credit Facility and as one of the alternatives for U.S. Dollar borrowings under our Credit Facility. If LIBOR ceases to exist, the administration agent under our Credit Facility has the authority to select a benchmark replacement index and adjustment margins and, as such, the interest rate on Euro currency borrowings under our Credit Facility may change. The new rate may not be as favorable as those in effect prior to any LIBOR phase-out. Furthermore, the transition process may result in delays in funding, higher interest expense, additional expenses, and increased volatility in markets for instruments that currently rely on LIBOR, all of which could negatively impact our interest expense, results of operations, and cash flow. Even if financial instruments are transitioned to alternative benchmarks, such as SOFR, successfully, the new benchmarks are likely to differ from LIBOR, and our interest expense associated with our outstanding indebtedness or any future indebtedness we incur may increase. Further, transitioning to an alternative benchmark rate, such as SOFR, may result in us incurring significant expense and legal risks, as renegotiation and changes to documentation may be required in effecting the transition. Any alternative benchmark rate may be calculated differently than LIBOR and may increase the interest expense associated with our existing or future

indebtedness.

***We may incur substantial additional debt, which could exacerbate the risks described above.***

We may incur additional debt in the future. Although the agreement governing the Credit Facility contains restrictions on our ability to incur indebtedness, those restrictions are subject to a number of exceptions which permit us and our subsidiaries to incur substantial debt. Adding new debt to current debt levels could intensify the related risks that we and our subsidiaries now face. See the section titled “Liquidity and Capital Resources” included in Part II, Item 7 of this Annual Report on Form 10-K.

***Servicing our debt requires a significant amount of cash, and we may not have sufficient cash flow from our business to pay our substantial debt.***

Our ability to make scheduled payments of the principal of, to pay interest on, or to refinance our indebtedness depends on our future performance, which is subject to economic, financial, competitive, and other factors beyond our control. Our business may not continue to generate cash flow from operations in the future sufficient to service our debt and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives, such as selling assets, restructuring debt, or obtaining additional equity capital on terms that may be onerous or highly dilutive. Our ability to refinance our indebtedness will depend on the capital markets and our financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on our debt obligations. In addition, any future indebtedness we may incur may contain financial and other restrictive covenants that limit our ability to operate our business, raise capital, or make payments under our other indebtedness. If we fail to comply with these covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that and our other indebtedness becoming immediately payable in full.

**Risks Related to Our Class B Common Stock**

***We issued convertible notes that have rights senior to our Class B Common Stock.***

In January 2021, we issued \$690 million aggregate principal amount of convertible senior notes due 2026 (the “2026 Notes”), which will mature on January 15, 2026, unless earlier redeemed or repurchased by us or converted by the holder pursuant to their terms. In June 2021, we issued \$575 million aggregate principal amount of convertible senior notes due 2027 (the “2027 Notes”), which will mature on July 1, 2027, unless earlier redeemed or repurchased by us or converted by the holder pursuant to their terms. The 2026 Notes and 2027 Notes rank senior in right of payment to our Class B Common Stock and any of our indebtedness that is expressly subordinated in right of payment to the 2026 Notes and 2027 Notes; equal in right of payment to any of our liabilities that are not so subordinated; effectively junior in right of payment to any of our secured indebtedness, to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries. In the event of our bankruptcy, liquidation, reorganization, or other winding up, our assets that secure debt ranking senior or equal in right of payment to the 2026 Notes and 2027 Notes will be available to pay obligations on the 2026 Notes and 2027 Notes only after the secured debt has been repaid in full from these assets, and our assets will be available to pay common stockholders only after all debt obligations have been repaid. There may not be sufficient assets remaining to pay amounts due on any or all of the 2026 Notes and 2027 Notes then outstanding or any or all shares of our Class B Common Stock then outstanding.

***The accounting method for convertible debt securities that may be settled in cash, such as the 2026 Notes and 2027 Notes, could have a material effect on our reported financial condition and results.***

The accounting method for reflecting the 2026 Notes and 2027 Notes on our consolidated balance sheet and reflecting the underlying shares of our Class B Common Stock in our reported diluted earnings per share may adversely affect our reported earnings and financial condition.

In August 2020, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) No. 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity* (“ASU 2020-06”). Effective January 1, 2021, we early adopted ASU 2020-06. In accordance with ASU 2020-06, we are required to calculate diluted earnings per share under the if-converted method. Under the if-converted method,



diluted earnings per share will be calculated assuming that all the 2026 Notes and 2027 Notes are converted solely into shares of Class B Common Stock at the beginning of the reporting period, unless the result would be anti-dilutive. The application of the if-converted method will reduce our reported diluted earnings per share.

Furthermore, if any of the conditions to the convertibility of the 2026 Notes and/or the 2027 Notes is satisfied, then we may be required under applicable accounting standards to reclassify the liability carrying value of the 2026 Notes and/or the 2027 Notes as a current, rather than long-term, liability. This reclassification could be required even if no noteholders convert their notes and could materially reduce our reported working capital.

***The conditional conversion feature of the 2026 Notes and 2027 Notes may adversely affect our financial condition and operating results.***

In the event the conditional conversion feature of the 2026 Notes and/or the 2027 Notes is triggered, holders of the 2026 Notes and/or the 2027 Notes will be entitled to convert the 2026 Notes and/or the 2027 Notes at any time during specified periods at their option. If one or more holders elect to convert their 2026 Notes and/or their 2027 Notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our Class B Common Stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their 2026 Notes and/or their 2027 Notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the 2026 Notes and/or the 2027 Notes as a current, rather than long-term, liability, which would result in a material reduction of our net working capital.

***Conversion of the 2026 Notes and/or the 2027 Notes will dilute the ownership interest of existing stockholders, including holders who had previously converted their 2026 Notes and/or their 2027 Notes, or may otherwise depress the price of our Class B Common Stock.***

The conversion of some or all of the 2026 Notes and/or the 2027 Notes will dilute the ownership interests of existing stockholders to the extent we deliver shares upon conversion of any of the 2026 Notes and/or the 2027 Notes. Any sales in the public market of the Class B Common Stock issuable upon such conversion could adversely affect prevailing market prices of our Class B Common Stock. In addition, the existence of the 2026 Notes and 2027 Notes may encourage short selling by market participants because the conversion of the 2026 Notes and/or the 2027 Notes could be used to satisfy short positions, or anticipated conversion of the 2026 Notes and/or the 2027 Notes into shares of our Class B Common Stock could depress the price of our Class B Common Stock. As of December 31, 2021, without giving effect to any potential adjustments to the conversion rate set forth in the indenture or any limits on conversion, and assuming our Class B Common Stock is trading at or above \$64.13 per share for the 2026 Notes and \$83.23 per share for the 2027 Notes, 10,759,395 and 6,908,567 shares of our Class B Common Stock would be issuable upon a full conversion of the 2026 Notes and 2027 Notes, respectively.

***The capped call transactions entered into when we issued the 2026 Notes and 2027 Notes may affect the value of our common stock.***

In connection with the issuances of the 2026 Notes and 2027 Notes, we entered into capped call transactions with the respective option counterparties. The capped call transactions are expected generally to reduce the potential dilution upon conversion of the 2026 Notes and 2027 Notes, and/or offset any cash payments we are required to make in excess of the principal amount of converted 2026 Notes and 2027 Notes with such reduction and/or offset subject to a cap. In connection with establishing their initial hedges of the capped call transactions, the option counterparties or their respective affiliates entered into various derivative transactions with respect to our Class B Common Stock concurrently with or shortly after the pricing of the 2026 Notes and 2027 Notes. The option counterparties or their respective affiliates may modify their hedge positions by entering into or unwinding derivatives with respect to our Class B Common Stock and/or purchasing or selling our Class B Common Stock or other securities of ours in secondary market transactions prior to the maturity of the 2026 Notes and 2027 Notes (and are likely to do so during any observation period related to a conversion of 2026 Notes and 2027 Notes). This activity could cause or avoid an increase or a decrease in the market price of our Class B Common Stock.

***The dual class structure of our common stock has the effect of concentrating voting control with the Bentley Control Group (the Bentleys and certain of their family members, trusts or other permitted transferees, as well as all other holders of our Class A Common Stock in respect of such shares of Class A Common Stock, who collectively are acting as a group).***

Our Class A Common Stock has 29 votes per share, and our Class B Common Stock, which is the class of common stock that is issuable upon conversion of the 2026 Notes and 2027 Notes, and is the only class that is publicly traded and listed, has one vote per share. The beneficial owners of our Class A Common Stock together hold approximately 55.4% of the voting power of our outstanding capital stock as of December 31, 2021. Moreover, as a result of the 29 to one voting ratio between our Class A and Class B Common Stock, the Bentley Control Group controls and will continue to control a majority of the combined voting power of our common stock and therefore is able to control all matters submitted to our stockholders for approval, subject to the occurrence of certain events that would reduce the voting power of our Class A Common Stock or cause the conversion thereof. This concentrated control will limit or preclude stockholders' ability to influence corporate matters for the foreseeable future and may have the effect of delaying, deferring or preventing a change in control, impeding a merger, consolidation, takeover, or other business combination involving us, or discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of our business, even if such a transaction would benefit other stockholders. The Bentley Control Group may also have interests that differ from those of other stockholders and may vote in a way with which other stockholders disagree and which may be adverse to such other stockholders' interests.

In addition, we are a "controlled company" for the purposes of Nasdaq Listing Rules, which provides us with exemptions from certain of the corporate governance standards imposed by the rules of The Nasdaq Global Select Market. These provisions further allow the Bentley Control Group to exercise significant control over our corporate decisions and limit the ability of the public stockholders to influence our decision making.

***The choice of forum provision in our amended and restated certificate of incorporation could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or colleagues.***

Our amended and restated certificate of incorporation provides that, to the fullest extent permitted by law, the Court of Chancery of the State of Delaware is the sole and exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a claim of a breach of fiduciary duty owed by any of our directors or officers, any action asserting a claim against us arising pursuant to Delaware General Corporation Law, our amended and restated certificate of incorporation or amended and restated bylaws, or any action seeking to interpret, apply, enforce, or determine the validity of our amended and restated certificate of incorporation or amended and restated bylaws, and any action asserting a claim against us that is governed by the internal affairs doctrine. In addition, the choice of forum provision provides that, to the extent permitted by applicable law, claims brought under the Securities Act or the Exchange Act must be brought exclusively in the federal district court for the District of Delaware. Despite the choice of forum provision, investors cannot waive compliance with federal securities laws and rules and regulations thereunder. The choice of forum provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers, or other colleagues, which may discourage such lawsuits against us and our directors, officers, and other colleagues. Alternatively, if a court were to find the choice of forum provision contained in our amended and restated certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

## **General Risk Factors**

***Global economic conditions may negatively impact our business, financial condition, and results of operations.***

Our operations and performance depend significantly on foreign and domestic economic conditions. Uncertainty regarding economic conditions may negatively impact us as accounts defer spending or postpone infrastructure projects in response to tighter credit, higher unemployment, higher inflation, financial market volatility, government austerity programs, negative financial news, escalations of hostilities or the threat of hostilities, pandemics, declining valuations of investments, and other factors. In addition, certain of our accounts' budgets may be constrained and they may be unable to procure our solutions at the same level as in prior periods. Our accounts' ability to pay for our software solutions and services may also be impaired, which may lead to an increase in our allowance for doubtful accounts and write-offs of accounts receivable. Since we are exposed to the majority of major world markets, uncertainty in any significant market

may negatively impact our performance and results, particularly with respect to our largest geographic accounts. Our accounts include government entities, including the U.S. government, and if spending cuts impede the ability of governments to purchase our products and services, our revenues could decline. In addition, a number of our accounts rely, directly and indirectly, on government spending. We are unable to predict economic conditions or the likelihood of additional economic uncertainty arising in any of our key markets. Changes in economic conditions could result in us not meeting our revenue growth objectives and could harm our business, financial condition, results of operations, and cash flows.

Geopolitical trends toward nationalism and protectionism and the weakening or dissolution of international trade pacts may increase the cost of, or otherwise interfere with, conducting our business. These trends have increased levels of political and economic unpredictability globally, and may increase the volatility of global financial markets; the impact of such developments on the global economy remains uncertain. Political instability or adverse political developments, including, without limitation, as a result of or in connection with trade relations between the U.S. and China, in any of the countries in which we do business could harm our business, financial condition, and results of operations.

***Changes in existing financial accounting standards or practices, or taxation rules or practices may adversely affect our results of operations.***

Changes in existing accounting or taxation rules or practices, new accounting pronouncements or taxation rules, or varying interpretations of current accounting pronouncements or taxation practices could have a significant adverse effect on our results of operations or the way we conduct our business. Further, such changes could potentially affect our reporting of transactions completed before such changes are effective.

***We are required to evaluate our internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 and any adverse results from such evaluation could result in a loss of investor confidence in our financial reports and have an adverse effect on our stock price.***

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish a report by our management on our internal control over financial reporting, including an assessment of the effectiveness of our internal control over financial reporting as of the end of our fiscal year. This assessment must include a statement as to whether or not our internal control over financial reporting is effective and disclosure of any material weaknesses in our internal control over financial reporting identified by management. If our management or independent registered public accounting firm identifies one or more material weaknesses in our internal control over financial reporting, we are unable to assert that our internal control over financial reporting is effective, or our independent registered public accounting firm is unable to express an opinion that our internal controls are effective, investors could lose confidence in the accuracy and completeness of our financial reports, which could have an adverse effect on our business and stock price.

***In preparing our financial statements, we make certain estimates and assumptions that affect amounts reported in our consolidated financial statements which, if not accurate, may significantly impact our financial results.***

We make estimates and assumptions for a number of items, including revenue recognition, the fair value of acquired assets and liabilities, the fair value of stock consideration in conjunction with business combinations, the fair value of deferred compensation plan liabilities, the fair value of derivative financial instruments, the fair value of common stock (prior to our IPO), operating lease assets and liabilities, useful lives for depreciation and amortization, impairment of goodwill and intangible assets, valuation allowances for tax assets, and accruals for uncertain tax positions. These estimates and assumptions are drawn from historical experience and various other factors that we believe are reasonable under the circumstances as of the date of the consolidated financial statements. Actual results could differ materially from our estimates and such differences could significantly impact our financial results.

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

Our corporate headquarters are located in Exton, Pennsylvania and consist of approximately 107,000 square feet of office space, of which we own approximately 76,000 square feet. Our lease for the remainder expires in 2025. Our headquarters accommodates our principal software engineering, sales, marketing professional services, and administrative activities. In addition to our headquarters, we own one other location in India, which is used for office space, for an aggregate total, including our headquarters, of approximately 107,000 square feet of real property owned by us. See Note 5 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for more information about our properties. We lease facilities in an additional 129 locations in the U.S. and internationally through our foreign subsidiaries. See Note 8 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K for more information about our lease commitments.

We believe that our current facilities are suitable and adequate to meet our current needs and that suitable additional or substitute space will be available as needed in the future to accommodate our operations.

**Item 3. Legal Proceedings**

We are subject from time to time to various legal proceedings and claims which arise in the ordinary course of our business. Although the outcome of these and other claims cannot be predicted with certainty, we do not believe that the ultimate resolution of pending matters will have a material adverse effect on our financial condition, results of operations, or cash flows. We currently believe that we do not have any material litigation pending against us.

**Item 4. Mine Safety Disclosures**

Not applicable.

## PART II

### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

#### *Market Information for Common Stock*

Our Class B Common Stock is traded on the Nasdaq Stock Market LLC under the symbol BSY.

#### *Stockholders*

As of January 31, 2022, there were 17 holders of record of our Class A Common Stock and 2,935 holders of record of our Class B Common Stock. Because many of our shares of Class B Common Stock are held by brokers or other institutions on behalf of stockholders, we are unable to estimate the total number of Class B stockholders represented by the record holders.

#### *Dividend Policy*

The declaration and payment of dividends is within the discretion of our board of directors. We paid quarterly dividends of \$0.03 per share of common stock in both 2021 and 2020, and quarterly dividends of \$0.025 per share of common stock in 2019. In addition, we paid a special dividend of \$1.50 per share of common stock on September 2, 2020. While we intend to continue paying quarterly dividends, any future determination will be subject to the discretion of our board of directors and will be dependent on a number of factors, including our results of operations, capital requirements, restrictions under Delaware law, and overall financial condition, as well as any other factors our board of directors considers relevant. In addition, the terms of the agreement governing the Credit Facility limit the amount of dividends we can pay.

#### *Recent Sales of Unregistered Equity Securities*

From October 1, 2021 to December 31, 2021, we issued 87,646 shares of our Class B Common Stock in connection with distributions from our amended and restated Bentley Systems, Incorporated Nonqualified Deferred Compensation Plan.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. Unless otherwise stated, the sales of the above securities were deemed to be exempt from registration under the Securities Act in reliance on Rule 701 promulgated under Section 3(b) of the Securities Act as transactions by an issuer pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. All recipients had adequate access, through their relationships with us, to information about us. The issuance of these securities were made without any general solicitation or advertising.

#### **Item 6. [Reserved]**

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

*The following discussion should be read in conjunction with our audited consolidated financial statements and notes thereto appearing in Part II, Item 8 of this Annual Report on Form 10-K. In addition to historical information, this discussion contains forward-looking statements that involve risks, uncertainties, and assumptions that could cause actual results to differ materially from management's expectations. Factors that could cause such differences are set forth in Part I, Item 1A. Risk Factors of this Annual Report on Form 10-K.*

All amounts presented in this Management's Discussion and Analysis of Financial Condition and Results of Operations, except share and per share amounts, are presented in thousands. Additionally, many of the amounts and percentages have been rounded for convenience of presentation.

### Overview:

We are a leading global provider of software for infrastructure engineering, enabling the work of civil, structural, geoprofessional, and plant engineering practitioners, their project delivery enterprises, and owner-operators of infrastructure assets. We were founded in 1984 by the Bentley brothers and on September 25, 2020, we completed our IPO.

Our enduring commitment is to develop and support the most comprehensive portfolio of integrated software offerings across professional disciplines, project and asset lifecycles, infrastructure sectors, and geographies. Our software enables digital workflows across engineering disciplines, distributed project teams, from offices to the field, and across computing form factors, including desktops, on-premises servers, cloud-native services, mobile devices, and web browsers. We deliver our solutions via on-premise, cloud, and hybrid environments. Our users engineer, construct, and operate projects and assets across the following infrastructure sectors:

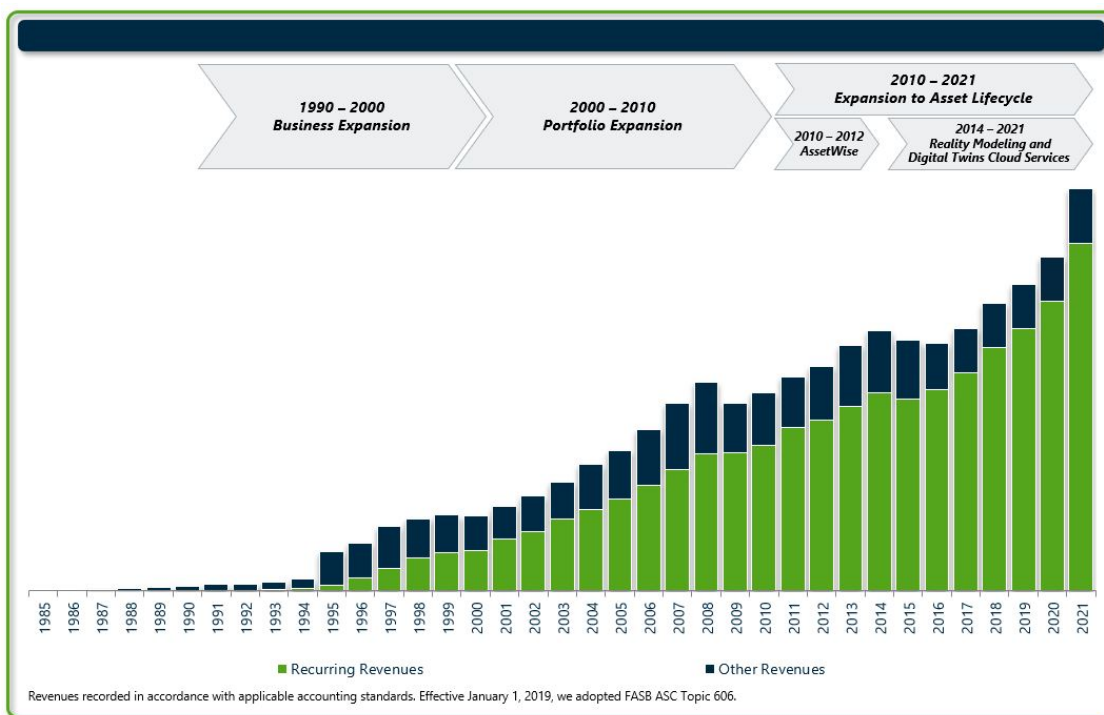
- *public works* (including roads, rail, airports, ports, and water and wastewater networks)/*utilities* (including electric, gas, water, and communications). We estimate that this sector represents 52% of the net infrastructure asset value of the global top 500 infrastructure owners based on the 2021 edition of the *Bentley Infrastructure 500 Top Owners*, our annual compilation of the world's largest infrastructure owners ranked by net depreciated value of their tangible fixed assets;
- *industrial* (including discrete and process manufacturing, power generation, and water treatment plants)/*resources* (including oil and gas, mining, and offshore). We estimate that this sector represents 34% of the global top 500 infrastructure owners' net infrastructure asset value; and
- *commercial/facilities* (including office buildings, hospitals, and campuses). We estimate that this sector represents 14% of the global top 500 infrastructure owners' net infrastructure asset value.

We offer solutions for enterprises and professionals across the infrastructure lifecycle. Our Engineering Applications and Geoprofessional Applications support the breadth of engineering and geoprofessional disciplines and are primarily desktop applications for professional practitioners. Our project delivery and asset performance Enterprise systems are provided via cloud and hybrid environments, developed respectively to extend enterprise collaboration during project delivery, and to manage and leverage engineering information during operations and maintenance. Our Industry Solutions solve domain-specific problems for owners of infrastructure assets, and the project delivery ecosystems that support these owners. Our cloud-native iTwin Platform solutions enable digital twin workflows, which can span project and asset lifecycles.

We continue to make substantial investments in research and development because we believe the infrastructure engineering software market presents compelling opportunities for the application of new technologies that advance our current solutions. Our research and development roadmap balances technology advances and new offerings with continuous enhancements to existing offerings. Our allocation of research and development resources is guided by management-established priorities, input from product managers, and user and sales force feedback.

We bring our offerings to market primarily through direct sales channels that generated approximately 92% of our 2021 total revenues.

Since its founding, Bentley Systems has remained focused on our mission to provide software in support of the professional needs of those responsible for creating and managing the world’s infrastructure. We have methodically grown through periods of global expansion, periods of expansion in our portfolio of solutions, and periods of rapid technological change. The following provides key corporate milestones over our 37-year history:



Our sources of revenue growth, in order of magnitude and excluding the impact from acquisitions, come from the recurrence of existing subscriptions revenues, additional revenue and growth from existing accounts using the same products, additional revenue and growth from existing accounts using new products, and growth from new accounts. For the year ended December 31, 2021, subscriptions represented 84% of our total revenues, and together with certain services revenues that are recurring in nature and represented 2% of our total revenues, bring the proportion of our recurring revenues to 86% of our total revenues. The remaining 14% of our revenues were generated from the sale of perpetual licenses and the delivery of non-recurring services. We have a highly-diversified account base, with our largest account representing no more than 2.5% of our total revenues in 2021. Our 2021 total revenues were also diversified by account type, size, and geography. Additionally, we believe that we have a loyal account base, with over 70% of our 2021 total revenues from organizations that have been our accounts for over ten years. Between 2001 and 2021, our total revenues had an approximately 8% compound annual growth rate.

## Our Commercial Offerings:

Our solutions are made available to our accounts in a broad range of commercial offerings designed to accommodate the diverse preferences of our accounts, which range from owned versus subscribed, short-term subscriptions versus longer term annual subscriptions, and fee-certain arrangements versus variable or consumption-based arrangements with consumption measurement durations of less than one year. We contract our commercial offerings under a single form of standard contract, which includes liability and other risk protections in our favor, and appropriate standard addendums to the primary contract, which specifically address the commercial offerings provided. Our standard commercial offerings are summarized in the table below, with further descriptions following the table:

	Subscription Offerings					Perpetual Licenses	Services
	SELECT Subscriptions	Enterprise Subscriptions		Term License Subscriptions	Virtuoso Subscriptions		
		E365	ELS				
<b>Overview</b>	<ul style="list-style-type: none"> <li>Prepaid annual recurring subscription based on owned perpetual licenses</li> </ul>	<ul style="list-style-type: none"> <li>Complete and unlimited global access to our comprehensive portfolio of solutions</li> <li>Includes benefits of SELECT subscriptions</li> </ul>		<ul style="list-style-type: none"> <li>Consumption-based growth and expansion</li> </ul>	<ul style="list-style-type: none"> <li>Prepaid annual subscription inclusive of training and expert consultation</li> </ul>	<ul style="list-style-type: none"> <li>Available for accounts that prefer to own software licenses</li> </ul>	<ul style="list-style-type: none"> <li>Offered alongside all subscription and license offerings</li> </ul>
<b>Topic 606 Revenue Recognition</b>	<ul style="list-style-type: none"> <li>Substantially ratable</li> </ul>	<ul style="list-style-type: none"> <li>Quarterly</li> </ul>	<ul style="list-style-type: none"> <li>Substantially upfront</li> </ul>	<ul style="list-style-type: none"> <li>Usage based or substantially upfront if prepaid</li> </ul>	<ul style="list-style-type: none"> <li>Substantially upfront with services as delivered</li> </ul>	<ul style="list-style-type: none"> <li>Upfront</li> </ul>	<ul style="list-style-type: none"> <li>As delivered</li> </ul>
<b>Key Features</b>	<ul style="list-style-type: none"> <li>Free software upgrades</li> <li>Technical support</li> <li>License pooling</li> <li>CONNECTservices</li> <li>Open Access</li> <li>Portfolio Balancing</li> </ul>	<ul style="list-style-type: none"> <li>Unlimited portfolio access and users</li> <li>Global pricing (per usage day for applications)</li> <li>Access to Enterprise Success team</li> <li>Success Blueprints included</li> </ul>	<ul style="list-style-type: none"> <li>Unlimited portfolio access; unlimited users</li> <li>License pooling</li> </ul>	<ul style="list-style-type: none"> <li>On-demand access for any user to any application, charged per quarter of usage, or monthly under Cloud Services Subscriptions</li> </ul>	<ul style="list-style-type: none"> <li>Annual subscriptions for small and medium sized businesses</li> <li>Customizable training and expert consultation administered through "keys" or credits</li> </ul>	<ul style="list-style-type: none"> <li>License ownership for select accounts</li> </ul>	<ul style="list-style-type: none"> <li>Training</li> <li>Implementation</li> <li>Configuration</li> <li>Customization</li> <li>Strategic consulting</li> </ul>

**SELECT Subscriptions.** Our SELECT subscription is a prepaid annual recurring subscription that accompanies a new or previously purchased perpetual license. We believe that the SELECT benefits summarized below support our favorable rates of account retention and growth:

- Software upgrades;
- Comprehensive technical support;
- License pooling providing accounts with efficiency advantages;
- Portfolio balancing providing accounts the opportunity to exchange unused or under used licenses with other of our license offerings;
- Learning benefits, Azure-based cloud collaboration services, and mobility advantages; and
- Access to our entire application portfolio with usage of licenses not previously purchased monetized quarterly in arrears based on consumption. See the section titled "—Term License Subscriptions" below.



*Enterprise Subscriptions.* Our Enterprise subscription offerings provide our largest accounts with complete and unlimited global access to our comprehensive portfolio of solutions.

- *Enterprise License Subscriptions (“ELS”).* Our ELS offering provides access to our comprehensive portfolio of solutions for a fixed annual fee. Subsequent annual renewals are based on the account’s usage of software in the preceding year, effectively resulting in an annual consumption-based arrangement. The majority of our ELS subscribers were historically SELECT subscribers that have grown into a position to take full advantage of our ELS offering.
- *Enterprise 365 (“E365”) Subscriptions.* Under our E365 subscription, participating accounts have unrestricted access to our comprehensive software portfolio, similar to ELS, however they are charged based upon daily usage. E365 subscriptions can contain quarterly usage floors or collars as accounts transition to the usage model or for accounts within the public sector. The daily usage fee also includes a term license component, SELECT maintenance and support, hosting, and Success Blueprints, which are designed to achieve business outcomes through more efficient and effective use of our software. The E365 subscription offering was introduced during the fourth quarter of 2018. We are prioritizing efforts to transition ELS subscribers to E365 subscriptions, primarily to simplify pricing, more closely align consumption to monetization, and to establish Success Blueprints as recurring to ensure better business outcomes for our users. To the extent we succeed in transitioning subscribers to E365, we recognize a greater proportion of our revenues on a quarterly basis rather than substantially upfront. See the section titled “—Key Factors Impacting Comparability and Performance.”

#### *Term License Subscriptions*

*Annual Term Licenses (“ATL”) Subscription.* Annual term licenses are generally prepaid annually for named user access to specific products and include our Virtuoso subscriptions sold via our Virtuosity eStore for practitioner licenses. Virtuoso subscriptions are bundles with customizable training and expert consultation administered through “keys” or credits. ATL are also used to monetize site or enterprise wide access for certain of our *AssetWise* solutions within given usage bands.

*Quarterly Term License (“QTL”) Subscription.* Through quarterly term licenses, accounts pay quarterly in arrears for licenses they have used representing usage beyond their contracted quantities. Much like our Enterprise subscription programs, a QTL allows smaller- and medium-sized accounts to match usage to ongoing project requirements.

*Monthly Term License (“MTL”) Subscription.* Monthly term licenses are identical to QTL subscriptions, except for the term of the license, and the manner in which they are monetized. MTL subscriptions require a Cloud Services Subscription, which is discussed below.

*Visas and Passports.* Visas and Passports are quarterly or annual term licenses enabling users to access specific project or enterprise information and entitles our users to certain functionality of our *ProjectWise* and *AssetWise* systems. Generally, a Passport provides desktop, web, and mobile application access to project information and certain functions, and a Visa provides similar access, plus added functionality depending upon the product to which the Visa is aligned.

While certain legacy arrangements are supported, our standard offering requires Visas and Passports to be fulfilled and contracted via a CSS, which is discussed below.

*Cloud Services Subscription (“CSS”).* CSS is designed to streamline the procurement, administration, and payment process for us and our accounts. A CSS requires an upfront annual estimation of MTL, Visa and Passport consumption, and any Success Services expected for the upcoming year. A deposit for the annual estimated consumption is submitted in advance. Actual consumption is monitored and invoiced against the deposit on a calendar quarter basis. Accounts are charged only for what gets used and deposited amounts never expire.

### Perpetual Licenses

We historically have sold perpetual licenses and continue to offer them to our accounts as an available option for most of our applications. Perpetual licenses are available for accounts that prefer to own their software licenses and may be sold with or without attaching a SELECT subscription. Historically, attachment and retention of the SELECT subscription has been high given the benefits of the SELECT subscription.

### Services

We provide professional services, including training, implementation, configuration, customization, and strategic consulting services. We perform projects on both a time and materials and a fixed fee basis. Certain of our fixed-fee arrangements, including our Success Services offerings, are structured as subscription-like, packaged offerings that are annually recurring in nature. Success Services are standard service offerings that provide a level of dedicated professional services above the standard technical support offered to all accounts as part of their SELECT or Enterprise agreement.

### Key Business Metrics:

We regularly review the following key metrics to evaluate our business, measure our performance, identify trends in our business, prepare financial projections, and make strategic decisions.

	Year Ended December 31,		
	2021	2020	2019
Last twelve-months recurring revenues	\$ 834,150	\$ 696,662	\$ 631,097
Constant Currency:			
Annualized recurring revenues (“ARR”) growth rate	26 %	8 %	12 %
Account retention rate	98 %	98 %	98 % <sup>(1)</sup>
Recurring revenues dollar-based net retention rate	109 %	107 %	108 % <sup>(1)</sup>

(1) On January 1, 2019, we adopted FASB ASU No. 2014-09, *Revenue from Contracts with Customers*, and related amendments (“Topic 606”), which superseded the guidance provided by Accounting Standards Codification (“ASC”) 985-605, *Software-Revenue Recognition*, and Topic 605-25, *Revenue Recognition, Multiple-Element Arrangements*. We refer to ASC 985-605 and Topic 605-25 collectively as “Topic 605.” Prior to the year ended December 31, 2020, the account retention rate and recurring revenues dollar-based net retention rate were calculated using revenues recognized pursuant to Topic 605 for all periods in order to enhance comparability during our transition to Topic 606 as we did not have all information that was necessary to calculate account retention rate pursuant to Topic 606 for earlier periods.

**Last twelve-months recurring revenues.** Last twelve-months recurring revenues is calculated as recurring revenues recognized over the preceding twelve-month period. We define recurring revenues as subscriptions revenues that recur monthly, quarterly, or annually with specific or automatic renewal clauses and services revenues in which the underlying contract is based on a fixed fee and contains automatic annual renewal provisions.

We believe that last twelve-months recurring revenues is an important indicator of our performance during the immediately preceding twelve-month time period. We believe that we will continue to experience favorable growth in recurring revenues primarily due to our strong account retention and recurring revenues dollar-based net retention rates, as well as the addition of new accounts with recurring revenues. The last twelve-months recurring revenues for the periods ended December 31, 2021, 2020, and 2019 compared to the last twelve-months of the preceding twelve-month period increased by \$137,488, \$65,565, and \$44,631, respectively. This increase was primarily due to growth in ARR, which is primarily the result of growth in our recurring revenues dollar-based net retention rate, as well as additional recurring revenues resulting from new accounts and acquisitions. For the twelve months ended December 31, 2021, 2020, and 2019, 86%, 87%, and 86%, respectively, of our revenues were recurring revenues.

**Constant currency metrics.** In reporting period-over-period results, we calculate the effects of foreign currency fluctuations and constant currency information by translating current period results using prior period average foreign currency exchange rates. Our definition of constant currency may differ from other companies reporting similarly named measures, and these constant currency performance measures should be viewed in addition to, and not as a substitute for, our operating performance measures calculated in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”).

**ARR growth rate.** Our ARR growth rate is the growth rate of our ARR, measured on a constant currency basis. Our ARR is defined as the sum of the annualized value of our portfolio of contracts that produce recurring revenues as of the last day of the reporting period, and the annualized value of the last three months of recognized revenues for our contractually recurring consumption-based software subscriptions with consumption measurement durations of less than one year. We believe that the last three months of recognized revenues, on an annualized basis, for our recurring software subscriptions with consumption measurement period durations of less than one year is a reasonable estimate of the annual revenues, given our consistently high retention rate and stability of usage under such subscriptions. ARR resulting from the annualization of recurring contracts with consumption measurement durations of less than one year, as a percentage of total ARR, was 38%, 36%, and 25% as of December 31, 2021, 2020, and 2019, respectively. Within our consumption-measured ARR, the continuous uptake of our E365 subscription offering has introduced daily consumption-measured ARR, representing 29% of total ARR as of December 31, 2021. ARR is inclusive of the ARR of acquired companies as of the date they are acquired. We believe that ARR and ARR growth are important metrics indicating the scale and growth of our business. Furthermore, we believe ARR, considered in connection with our recurring revenues dollar-based net retention rate, is a leading indicator of revenue growth. Our ARR as of December 31, 2021 was \$921,218, calculated using the spot foreign exchange rates as of December 31, 2021.

For the year ended December 31, 2021, our ARR growth rate was favorably impacted from the Seequent acquisition by 13%.

**Account retention rate.** Our account retention rate for any given twelve-month period is calculated using the average currency exchange rates for the prior period, as follows: the prior period recurring revenues from all accounts with recurring revenues in the current and prior period, divided by total recurring revenues from all accounts during the prior period. The account retention rate for the years ended December 31, 2021 and 2020 was calculated under Topic 606. For the year ended December 31, 2019, the account retention rate was calculated using revenues recognized pursuant to Topic 605 as we did not have all information that was necessary to calculate account retention rate pursuant to Topic 606. Our account retention rate is an important indicator that provides insight into the long-term value of our account relationships and our ability to retain our account base. We believe that our consistent and high account retention rates illustrate our ability to retain and cultivate long-term relationships with our accounts.

**Recurring revenues dollar-based net retention rate.** Our recurring revenues dollar-based net retention rate is calculated using the average exchange rates for the prior period, as follows: the recurring revenues for the current period, including any growth or reductions from existing accounts, but excluding recurring revenues from any new accounts added during the current period, divided by the total recurring revenues from all accounts during the prior period. A period is defined as any trailing twelve months. The recurring revenues dollar-based net retention rate for the years ended December 31, 2021 and 2020 was calculated under Topic 606. For the year ended December 31, 2019, the recurring revenues dollar-based net retention rate was calculated using revenues recognized pursuant to Topic 605 as we did not have all information that was necessary to calculate recurring revenues dollar-based net retention rate pursuant to Topic 606. We believe our recurring revenues dollar-based net retention rate is a key indicator of our success in growing our revenues within our existing accounts. Given that recurring revenues represented 86% of our total revenues for the twelve months ended December 31, 2021, this metric helps explain our revenue performance as primarily growth into existing accounts. We believe that our consistent and high recurring revenues dollar-based net retention rate illustrates our ability to consistently retain accounts and grow them.

Our calculation of these metrics may not be comparable to other companies with similarly-titled metrics.

**Non-GAAP Financial Measures:**

In addition to our results determined in accordance with U.S. GAAP, we also use the below non-GAAP financial information to evaluate our ongoing operations and for internal planning and forecasting purposes.

	Year Ended December 31,		
	2021	2020	2019
Adjusted EBITDA	\$ 324,948	\$ 266,376	\$ 188,537
Adjusted Net Income	266,940	192,812	135,357

*Adjusted EBITDA.* We define Adjusted EBITDA as net income adjusted for interest expense, net, provision (benefit) for income taxes, depreciation and amortization, stock-based compensation, expense (income) relating to deferred compensation plan liabilities, acquisition expenses, realignment expenses, expenses associated with IPO, other non-operating (income) expense, net, and (income) loss from investment accounted for using the equity method, net of tax.

*Adjusted Net Income.* We define Adjusted Net Income as net income adjusted for the following: amortization of purchased intangibles and developed technologies, stock-based compensation, expense (income) relating to deferred compensation plan liabilities, acquisition expenses, realignment expenses, expenses associated with IPO, other non-operating (income) expense, net, the tax effect of the above adjustments to net income, and (income) loss from investment accounted for using the equity method, net of tax. The tax effect of adjustments to net income is based on the estimated marginal effective tax rates in the jurisdictions impacted by such adjustments.

Adjusted EBITDA and Adjusted Net Income are not presentations made in accordance with U.S. GAAP, and our use of the terms Adjusted EBITDA and Adjusted Net Income may vary from the use of similarly titled measures by others in our industry due to the potential inconsistencies in the method of calculation and differences due to items subject to interpretation. We believe the presentation of Adjusted EBITDA and Adjusted Net Income provides useful information to management and investors regarding financial and business trends related to our results of operations and that when non-GAAP financial information is viewed with U.S. GAAP financial information, investors are provided with a more meaningful understanding of our ongoing operating performance. We also use Adjusted EBITDA and Adjusted Net Income to compare our results to those of our competitors and to consistently measure our performance from period to period. During the third quarter of 2021, we modified our definitions of Adjusted EBITDA and Adjusted Net Income to adjust for expense (income) relating to deferred compensation plan liabilities and amounts for all periods herein reflect application of the modified definition.

Adjusted EBITDA and Adjusted Net Income should not be considered as alternatives to net income, operating income, or any other performance measures derived in accordance with U.S. GAAP as measures of operating performance. Adjusted EBITDA and Adjusted Net Income have important limitations as analytical tools and should not be considered in isolation or as a substitute for analysis of our results as reported under U.S. GAAP.

Reconciliation of net income to Adjusted EBITDA:

	Year Ended December 31,		
	2021	2020	2019
Net income	\$ 93,192	\$ 126,521	\$ 103,096
Interest expense, net	12,491	7,476	8,199
(Benefit) provision for income taxes	(3,448)	38,625	23,738
Depreciation and amortization <sup>(1)</sup>	52,793	36,117	32,160
Stock-based compensation <sup>(3)</sup>	48,152	32,114	8,091
Deferred compensation plan <sup>(4)</sup>	95,046	177	408
Acquisition expenses <sup>(5)</sup>	34,368	11,666	6,597
Realignment expenses <sup>(6)</sup>	—	10,022	(584)
Expenses associated with IPO <sup>(7)</sup>	—	26,130	—
Other (income) expense, net <sup>(8)</sup>	(11,231)	(24,946)	5,557
Loss from investment accounted for using the equity method, net of tax	3,585	2,474	1,275
Adjusted EBITDA	<u>\$ 324,948</u>	<u>\$ 266,376</u>	<u>\$ 188,537</u>

Reconciliation of net income to Adjusted Net Income:

	Year Ended December 31,		
	2021	2020	2019
Net income	\$ 93,192	\$ 126,521	\$ 103,096
Non-GAAP adjustments, prior to income taxes:			
Amortization of purchased intangibles and developed technologies <sup>(2)</sup>	34,001	20,721	18,731
Stock-based compensation <sup>(3)</sup>	48,152	32,114	8,091
Deferred compensation plan <sup>(4)</sup>	95,046	177	408
Acquisition expenses <sup>(5)</sup>	34,368	11,666	6,597
Realignment expenses <sup>(6)</sup>	—	10,022	(584)
Expenses associated with IPO <sup>(7)</sup>	—	26,130	—
Other (income) expense, net <sup>(8)</sup>	(11,231)	(24,946)	5,557
Total non-GAAP adjustments, prior to income taxes	200,336	75,884	38,800
Income tax effect of non-GAAP adjustments	(30,173)	(12,067)	(7,814)
Loss from investment accounted for using the equity method, net of tax	3,585	2,474	1,275
Adjusted Net Income	<u>\$ 266,940</u>	<u>\$ 192,812</u>	<u>\$ 135,357</u>

Further explanation of certain of our adjustments in arriving at Adjusted EBITDA and Adjusted Net Income are as follows:

- (1) *Depreciation and amortization.* Depreciation and amortization includes amortization of \$7,020, \$4,699, and \$3,516 for the years ended December 31, 2021, 2020, and 2019, respectively, related to certain projects under our Accelerated Commercial Development Program (“ACDP”).

- (2) *Amortization of purchased intangibles and developed technologies.* Amortization of purchased intangibles varies in amount and frequency and is significantly impacted by the timing and size of our acquisitions. Amortization of acquisition related developed technologies under our ACDP was \$275, \$388, and \$723 for the years ended December 31, 2021, 2020, and 2019, respectively. Management finds it useful to exclude these non-cash charges from our operating expenses to assist in budgeting, planning, and forecasting future periods. The use of intangible assets and developed technologies contributed to our revenues earned during the periods presented and will also contribute to our revenues in future periods. Amortization of purchased intangible assets and developed technologies will recur in future periods.
- (3) *Stock-based compensation.* We exclude certain stock-based compensation expenses from our non-GAAP measures primarily because they are non-cash expenses and management finds it useful to exclude certain non-cash charges to assess the appropriate level of various operating expenses to assist in budgeting, planning, and forecasting future periods. Moreover, because of varying available valuation methodologies, subjective assumptions and the variety of award types that companies can use under FASB ASC Topic 718, *Compensation—Stock Compensation*, we believe excluding stock-based compensation expenses allows investors to make meaningful comparisons between our recurring core business results of operations and those of other companies.
- (4) *Deferred compensation plan.* In August 2021, our board of directors approved an amendment to the Company’s unfunded Nonqualified Deferred Compensation Plan, as amended and restated, effective as of September 22, 2020 (the “DCP”), which offered to certain active executives in the DCP a one-time, short-term election to reallocate a limited portion of their DCP holdings from phantom shares of the Company’s Class B Common Stock into other DCP phantom investment funds. The offer to reallocate was subject to a proration mechanism which adjusted the aggregate elections to a maximum of 1,500,000 phantom shares of the Company’s Class B Common Stock. This one-time reallocation opportunity was offered only to certain active executives (but not to Directors or Bentley family members) in order to encourage retention, as otherwise these executives could only have materially diversified their investments in Company equity (primarily held in the DCP) by voluntarily terminating employment to trigger DCP distributions. These executives in aggregate accordingly diversified 24% of their phantom shares of the Company’s Class B Common Stock. While DCP participants’ investments in phantom shares remain equity classified, as they will be settled in shares of Class B Common Stock upon eventual distribution, the amendment and elections resulted in a change to liability classification for the reallocated phantom investments, as they will be settled in cash upon eventual distribution. As a result, during the year ended December 31, 2021, we recognized a one-time compensation charge of \$90,721 to *Deferred compensation plan* expenses in the consolidated statements of operations to record the reallocated deferred compensation plan liabilities at their fair value. Deferred compensation plan liabilities are marked to market at the end of each reporting period, with changes in the liabilities recorded as an expense (income) to *Deferred compensation plan* in the consolidated statements of operations. We exclude these charges because they are not reflective of our ongoing business and results of operation. We believe it is useful for investors to understand the effects of these items on our total operating expenses.
- (5) *Acquisition expenses.* We incur expenses for professional services rendered in connection with business combinations, which are included in our U.S. GAAP presentation of general and administrative expense. Also included in our acquisition expenses are retention incentives paid to executives of the acquired companies, as well as adjustments related to deferred revenues from acquisitions that closed prior to 2021. The adjustment to acquired deferred revenues has no impact on our business or cash flow, but it does reduce reported U.S. GAAP revenues in the periods following an acquisition. We exclude these acquisition expenses when we evaluate our continuing operational performance as we would not have otherwise incurred these expenses in the periods presented as part of our continuing operations. For the year ended December 31, 2021, \$16,557 of our acquisition expenses related to the acquisition of Seequent.

- (6) *Realignment expenses.* These expenses are associated with realigning our business strategies to better serve our accounts and to better align resources with the evolving needs of the business. In connection with these actions, we recognize costs related to termination benefits for colleagues whose positions were eliminated. We exclude these charges because they are not reflective of our ongoing business and results of operations. We believe it is useful for investors to understand the effects of these items on our total operating expenses. In the ordinary course of operating our business, we incur severance expenses that are not included in this adjustment.
- (7) *Expenses associated with IPO.* These expenses include certain non-recurring costs relating to our IPO, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the selling stockholders, professional fees, and other expenses. We exclude these charges because they are not reflective of our ongoing business and results of operation. We believe it is useful for investors to understand the effects of these items on our total operating expenses.
- (8) *Other (income) expense, net.* Primarily consists of foreign exchange (gains) losses of \$(827), \$(22,919), and \$5,591 for the years ended December 31, 2021, 2020, and 2019, respectively. The foreign exchange (gains) losses derive primarily from U.S. Dollar denominated cash and cash equivalents, accounts receivable, and intercompany balances held by foreign subsidiaries. The gains and losses from such translations are included in *Other (income) expense, net* in the consolidated statements of operations. Intercompany finance transactions denominated in U.S. Dollars resulted in unrealized foreign exchange losses (gains) of \$779, \$(22,310), and \$5,270 for the years ended December 31, 2021, 2020, and 2019, respectively. These U.S. Dollar denominated balances are being translated into their functional currencies at the rates in effect at the balance sheet date and are fully eliminated in consolidation. For the year ended December 31, 2021, other (income) expense, net includes a gain from the change in fair value of our interest rate swap of \$9,770. For the year ended December 31, 2020, other (income) expense, net includes a gain from the change in fair value of our interest rate swap of \$347 and a gain from the change in fair value of acquisition contingent consideration of \$1,340. We exclude these charges because they are not reflective of ongoing business and results of operations. We believe it is useful for investors to understand the effects of these items on our total operating expenses.

## Key Factors Impacting Comparability and Performance:

*Highlights for the year ended December 31, 2021.* In addition to our performance previously discussed in “—Key Business Metrics” and “—Non-GAAP Financial Measures,” and as discussed further below in “—Results of Operations” and “—Liquidity and Capital Resources,” our consolidated financial statements for the year ended December 31, 2021 were impacted by the following:

- On June 17, 2021, we completed the acquisition of Seequent, a leader in software for geological and geophysical modeling, geotechnical stability, and cloud services for geodata management and collaboration, for approximately \$883,336 in cash, net of cash acquired, plus 3,141,342 shares of our Class B Common Stock. For the year ended December 31, 2021, we incurred \$16,557 of expenses related to the acquisition of Seequent;
- On June 28, 2021, we completed a private offering of \$575,000 of 0.375% convertible senior notes due 2027. We incurred \$15,065 of expenses in connection with the 2027 Notes offering consisting of the payment of initial purchasers’ discounts and commissions, professional fees, and other expenses (“transaction costs”). Transaction costs were recorded as a direct deduction from the related debt liability in the consolidated balance sheet and are amortized to interest expense over the term of the 2027 Notes;
- In connection with the pricing of the 2027 Notes, we entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. The capped call options are expected to reduce potential dilution to our Class B Common Stock upon any conversion of 2027 Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. We paid premiums of \$25,875 in connection with the capped call options. The capped call options are indexed to our common stock and classified in stockholders’ equity. As such, the premiums paid for the capped call options have been included as a net reduction to *Additional paid-in capital* in the consolidated balance sheet;
- On January 26, 2021, we completed a private offering of \$690,000 of 0.125% convertible senior notes due 2026. We incurred \$18,055 of expenses in connection with the 2026 Notes offering consisting of transaction costs. Transaction costs were recorded as a direct deduction from the related debt liability in the consolidated balance sheet and are amortized to interest expense over the term of the 2026 Notes;
- In connection with the pricing of the 2026 Notes, we entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. The capped call options are expected to reduce potential dilution to our Class B Common Stock upon any conversion of 2026 Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. We paid premiums of \$25,530 in connection with the capped call options. The capped call options are indexed to our common stock and classified in stockholders’ equity. As such, the premiums paid for the capped call options have been included as a net reduction to *Additional paid-in capital* in the consolidated balance sheet;
- On January 25, 2021, we entered into the Second Amendment to the Credit Facility, which increased the senior secured revolving loan facility from \$500,000 to \$850,000 and extended the maturity date from December 18, 2022 to November 15, 2025. We performed an extinguishment versus modification assessment on a lender-by-lender basis resulting in the write-off of unamortized debt issuance costs of \$353 and the capitalization of fees paid to lenders and third parties of \$3,577. Debt issuance costs are amortized to interest expense through the maturity date of November 15, 2025;
- On December 22, 2021, we entered into the Fourth Amendment to the Credit Facility, which provided for a new \$200,000 senior secured term loan with a maturity of November 15, 2025 (the “2021 Term Loan”). We incurred \$540 of debt issuance costs related to the 2021 Term Loan. We used borrowings under the 2021 Term Loan to pay down borrowings under the swingline sub-facility and revolving facility under the Credit Facility;



- In August 2021, our board of directors approved an amendment to the DCP, which offered to certain active executives in the DCP a one-time, short-term election to reallocate a limited portion of their DCP holdings from phantom shares of our Class B Common Stock into other DCP phantom investment funds. The offer to reallocate was subject to a proration mechanism which adjusted the aggregate elections to a maximum of 1,500,000 phantom shares of the Company's Class B Common Stock. This one-time reallocation opportunity was offered only to certain active executives (but not to Directors or Bentley family members) in order to encourage retention, as otherwise these executives could only have materially diversified their investments in Company equity (primarily held in the DCP) by voluntarily terminating employment to trigger DCP distributions. These executives in aggregate accordingly diversified 24% of their phantom shares of the Company's Class B Common Stock. While DCP participants' investments in phantom shares remain equity classified, as they will be settled in shares of Class B Common Stock upon eventual distribution, the amendment and elections resulted in a change to liability classification for the reallocated phantom investments, as they will be settled in cash upon eventual distribution. As a result, during the year ended December 31, 2021, we recognized a one-time compensation charge of \$90,721 to *Deferred compensation plan* expenses in the consolidated statements of operations to record the reallocated deferred compensation plan liabilities at their fair value. Subsequent to the one-time reallocation, these diversified deferred compensation plan liabilities are marked to market at the end of each reporting period, with changes in the liabilities recorded as an expense (income) to *Deferred compensation plan* in the consolidated statements of operations;
- Effective as of the beginning of the fourth quarter of 2020, participants in the Bentley Systems, Incorporated Bonus Pool Plan, as amended and restated, effective as of September 22, 2020 (the "Bonus Plan") may elect to receive any portion, or all, of such participants' non-deferred incentive bonus in the form of shares of fully vested Class B Common Stock instead of cash payments and subject to a combined quarterly limit of \$7,500. For the year ended December 31, 2021, we recorded \$23,121 of stock-based compensation expense related to this plan, as compared to \$6,524 during the fourth quarter of 2020; and
- Effective September 22, 2020, our board of directors and stockholders adopted and approved the Bentley Systems, Incorporated Global Employee Stock Purchase Plan (the "ESPP"). The ESPP has been implemented by means of consecutive offering periods, with the first offering period commencing on the first trading day on or after January 1, 2021 and ending on the last trading day on or before June 30, 2021. For the year ended December 31, 2021, we recorded \$2,118 of stock-based compensation expense related to this plan.

*Impact of foreign currency.* A portion of our total revenues and operating expenses were derived from outside the U.S. and as such, were denominated in various foreign currencies, including most significantly: Euros, British Pounds, Australian Dollars, Canadian Dollars, Chinese Yuan Renminbi, and New Zealand Dollars. Our financial results are therefore affected by changes in foreign currency rates. In 2021, 47% of our total revenues were denominated in various foreign currencies. Correspondingly, in 2021, 42% of our total operating expenses were denominated in various foreign currencies. Other than the natural hedge attributable to matching revenues and expenses in the same currencies, we do not currently hedge foreign currency exposure. Accordingly, our results of operations have been, and in the future will be, affected by changes in foreign exchange rates.

We identify the effects of foreign currency on our operations and present constant currency growth rates and fluctuations because we believe exchange rates are an important factor in understanding period-over-period comparisons and enhance the understanding of our results and evaluation of our performance. In reporting period to period results, we calculate the effects of foreign currency fluctuations and constant currency information by translating current period results using prior period average foreign currency exchange rates. Our definition of constant currency may differ from other companies reporting similarly named measures, and these constant currency performance measures should be viewed in addition to, and not as a substitute for, our operating performance measures calculated in accordance with U.S. GAAP.

*Acquisitions.* Historically, we have enhanced our business with acquisitions of businesses, software solutions, and technologies. Going forward, we plan to selectively acquire adjacent software solutions that can be sold broadly across our account base, as well as to acquire new technologies that we can leverage across our existing software solution portfolio. We completed 13 and six acquisitions for the years ended December 31, 2021 and 2020, respectively.

*Impact of COVID-19.* In March 2020, the World Health Organization declared a global pandemic related to the rapidly growing outbreak of the disease COVID-19, caused by a novel strain of coronavirus, SARS-CoV-2. In response to the COVID-19 pandemic, we implemented a number of initiatives to ensure the safety of our colleagues and enable them to move to a work from home environment seamlessly and continue working effectively. We continue to monitor the global situation, with the health and safety of our colleagues and users as a top priority. Currently, the majority of our workforce remains remote due to COVID-19.

Our business model is such that we have experienced minimal disruption to our ability to deliver our solutions to accounts. The COVID-19 pandemic has had a modest impact on the usage of our solutions by our users. Throughout 2020 and 2021, usage rates fluctuated modestly when compared to the corresponding periods in the prior year. Usage declines have had a minimal impact on our recurring revenues, which are comprised primarily of longer term contracts where short-term usage rate declines do not adversely impact revenues. However, to the extent declines in usage have also occurred within our recurring revenue contracts with shorter term resets, as is the case with our E365 contracts, the usage declines have modestly impacted revenues. Our services revenues have also been impacted as certain accounts have delayed new projects. Overall, while our rate of growth has been impacted, our revenues have continued to grow given the mission critical nature of our solutions.

As a precaution in the COVID-19 environment, we have and continue to actively manage our spending. Actions taken during 2020 included efforts to minimize colleague travel, and to reduce and recharacterize promotional spending with a shift to virtual events. Although compensation levels and incentive plan payouts have returned to normal for 2021, during 2020 our actions also included curtailment in variable compensation plans to align to COVID-19 pandemic related uncertainties. These actions have resulted in substantial cost savings during the pandemic, which are unlikely to be fully sustainable prospectively.

For further discussion of the potential impact of COVID-19 on our business, see Part I, Item 1A. Risk Factors of this Annual Report on Form 10-K.

#### **Components of Results of Operations:**

We manage our business globally within one operating segment, the development and marketing of computer software and related services, which is consistent with how our chief operating decision maker reviews and manages our business.

#### **Revenues**

We generate revenues from subscriptions, perpetual licenses, and services.

#### *Subscriptions*

*SELECT subscriptions.* We provide prepaid annual recurring subscriptions that accounts can elect to add to a new or previously purchased perpetual license. SELECT provides accounts with benefits, including upgrades, comprehensive technical support, pooled licensing benefits, annual portfolio balancing exchange rights, learning benefits, certain Azure-based cloud collaboration services, mobility advantages, and access to other available benefits. SELECT subscriptions revenues are recognized as distinct performance obligations are satisfied.

*Enterprise subscriptions.* We also provide Enterprise subscription offerings, which provide our largest accounts with complete and unlimited global access to our comprehensive portfolio of solutions. ELS provides access for a prepaid fee. Our E365 subscription, which was introduced during the fourth quarter of 2018, provides unrestricted access to our comprehensive software portfolio, similar to ELS, however is charged based upon daily usage. E365 subscriptions can contain quarterly usage floors or collars as accounts transition to the usage model or for accounts within the public sector. The daily usage fee also includes a term license component, SELECT maintenance and support, hosting, and Success Blueprints, which are designed to achieve business outcomes through more efficient and effective use of our software. The ELS and E365 offerings both contain a distinct term license component. ELS revenues are recognized as the distinct performance obligations are satisfied. E365 revenues are recognized based upon usage incurred by the account.

*Term license subscriptions.* We provide annual, quarterly, and monthly term licenses for our software products. ATL subscriptions are generally prepaid annually for named user access to specific products and include our Virtuoso subscriptions sold via our Virtuosity eStore for practitioner licenses. Virtuoso subscriptions are bundles with customizable training and expert consultation administered through “keys” or credits. QTL subscriptions allow accounts to pay quarterly in arrears for license usage that is beyond their SELECT contracted quantities. MTL subscriptions are identical to QTL subscriptions, except for the term of the license, and the manner in which they are monetized. MTL subscriptions require a CSS, which is described below.

Visas and Passports are quarterly or annual term licenses enabling users to access specific project or enterprise information and entitles users to certain functionality of our *ProjectWise* and *AssetWise* systems. Our standard offerings are usage based with monetization through our CSS program as described below. Annual, quarterly, and monthly term licenses revenues are recognized as the distinct performance obligations for each are satisfied. Billings in advance are recorded as *Deferred revenues* in the consolidated balance sheets. QTL, MTL, Visas and Passports subscriptions are recognized based upon usage incurred by the account.

CSS is a program designed to streamline the procurement, administration, and payment process. The program requires an estimation of annual usage for CSS eligible offerings and a deposit of funds in advance. Actual consumption is monitored and invoiced against the deposit on a calendar quarter basis. CSS balances not utilized for eligible products or services may roll over to future periods or are refundable. Paid and unconsumed CSS balances are recorded in *Accruals and other current liabilities* in the consolidated balance sheets. Software and services consumed under CSS are recognized pursuant to the applicable revenue recognition guidance for the respective software or service and classified as subscriptions or services based on their respective nature.

#### *Perpetual licenses*

Perpetual licenses may be sold with or without attaching a SELECT subscription. Historically, attachment and retention of the SELECT subscription has been high given the benefits of the SELECT subscription discussed above. Perpetual licenses revenues are recognized upon delivery of the license to the user.

#### *Services*

We provide professional services, including training, implementation, configuration, customization, and strategic consulting services. We perform projects on both a time and materials and a fixed fee basis. Certain of our fixed-fee arrangements, including our Success Services offerings, are structured as subscription-like, packaged offerings that are annually recurring in nature. Success Services are standard service offerings that provide a level of dedicated professional services above the standard technical support offered to all accounts as part of their SELECT or Enterprise agreement. Revenues are recognized as services are performed.

### ***Headcount-related costs***

For the years ended December 31, 2021, 2020, and 2019, approximately 80% of our aggregate cost of revenues, and research and development, selling and marketing, and general and administrative expenses were represented by what we refer to herein as “headcount-related” costs. These costs primarily include salaries, incentives, benefits, employment taxes, travel, and realignment of our colleagues, and third-party personnel and related overhead. Our headcount-related costs are variable in nature. We actively manage these costs to align to our trending run rate of revenue performance, with the objective of enhancing visibility and predictability of resulting operating profit margins.

### ***Cost of subscriptions, licenses, and services***

*Cost of subscriptions and licenses.* Cost of subscriptions and licenses includes salaries and other related costs, including the depreciation of property and equipment and the amortization of capitalized software costs associated with servicing software subscriptions, the amortization of intangible assets associated with acquired software and technology, channel partner compensation for providing sales coverage to subscribers, as well as cloud-related costs incurred for servicing our accounts using cloud provisioned solutions and our license administration platform.

*Cost of services.* Cost of services includes salaries for internal and third-party personnel and related overhead costs, including depreciation of property and equipment and amortization of capitalized software costs, for providing training, implementation, configuration, and customization services to accounts.

### ***Operating expenses***

*Research and development.* Research and development expenses, which are generally expensed as incurred, primarily consist of personnel and related costs of our research and development staff, including salaries, incentives, and benefits, and costs of certain third-party contractors, as well as allocated overhead costs. We expense software development costs, including costs to develop software products or the software component of products to be sold, leased, or marketed to external accounts, before technological feasibility is reached. In general, technological feasibility is reached shortly before the release of such products and as a result, development costs that meet the criteria for capitalization were not material for the periods presented.

Under our ACDP (our structured approach to an in-house business incubator function), we capitalize certain development costs related to certain projects once technological feasibility is established. Technological feasibility is established when a detailed program design has been completed and documented; we have established that the necessary skills, hardware, and software technology are available to produce the product; and there are no unresolved high-risk development issues. Once the software is ready for its intended use, amortization is recorded over the software’s estimated useful life (generally three years). Total costs capitalized under the ACDP were \$6,608, \$7,809, and \$6,060 for the years ended December 31, 2021, 2020, and 2019, respectively. Additionally, total ACDP related amortization recorded in *Costs of subscriptions and licenses* was \$7,020, \$4,699, and \$3,516 for the years ended December 31, 2021, 2020, and 2019, respectively.

*Selling and marketing.* Selling and marketing expenses include salaries, benefits, bonuses, and stock-based compensation expense for our selling and marketing colleagues, the expense of travel, entertainment, and training for such personnel, online marketing, product marketing and other brand-building activities, such as advertising, trade shows, and expositions, various sales and promotional programs, and costs of computer equipment and facilities used in selling and marketing activities. We anticipate that we will continue to make strategic investments in our global business systems and methods to enhance major account sales activities and to support our worldwide sales and marketing strategies, and the business in general. We capitalize certain incremental costs of obtaining a contract and recognize these expenses over the period of benefit associated with these costs, resulting in a deferral of certain contract costs each period. The contract costs are amortized based on the economic life of the goods and services to which the contract costs relate. We apply a practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less. These costs include our internal sales force compensation program and certain channel partner sales incentive programs for which the annual compensation is commensurate with annual sales activities.

*General and administrative.* General and administrative expenses include salaries, bonuses, benefits, and stock-based compensation expense for our finance, human resources, and legal colleagues, the expense of travel, entertainment, and training for such personnel, professional fees for legal and accounting services, and costs of computer equipment and facilities used in general and administrative activities. Following the completion of the IPO, we continued to incur additional expenses as a result of operating as a public company, including costs to comply with the rules and regulations applicable to companies listed on a U.S. securities exchange and costs related to compliance and reporting obligations pursuant to the rules and regulations of the SEC. In addition, as a public company, we incur increased expenses in the areas of insurance, investor relations, and professional services. As a result, we expect the dollar amount of our general and administrative expenses to increase for the foreseeable future. We expect, however, that our general and administrative expenses will decrease as a percentage of our total revenues over time, although the percentage may fluctuate from period to period depending on fluctuations in our revenue and the timing and extent of our general and administrative expenses.

*Deferred compensation plan.* In August 2021, our board of directors approved an amendment to the DCP, which offered to certain active executives in the DCP a one-time, short-term election to reallocate a limited portion of their DCP holdings from phantom shares of the Company's Class B Common Stock into other DCP phantom investment funds. The offer to reallocate was subject to a proration mechanism which adjusted the aggregate elections to a maximum of 1,500,000 phantom shares of the Company's Class B Common Stock. This one-time reallocation opportunity was offered only to certain active executives (but not to Directors or Bentley family members) in order to encourage retention, as otherwise these executives could only have materially diversified their investments in Company equity (primarily held in the DCP) by voluntarily terminating employment to trigger DCP distributions. These executives in aggregate accordingly diversified 24% of their phantom shares of the Company's Class B Common Stock. While DCP participants' investments in phantom shares remain equity classified, as they will be settled in shares of Class B Common Stock upon eventual distribution, the amendment and elections resulted in a change to liability classification for the reallocated phantom investments, as they will be settled in cash upon eventual distribution. As a result, during the year ended December 31, 2021, we recognized a one-time compensation charge of \$90,721 to *Deferred compensation plan* expenses in the consolidated statements of operations to record the reallocated deferred compensation plan liabilities at their fair value. Deferred compensation plan liabilities are marked to market at the end of each reporting period, with changes in the liabilities recorded as an expense (income) to *Deferred compensation plan* in the consolidated statements of operations.

*Amortization of purchased intangibles.* Amortization of purchased intangibles includes the amortization of acquired non-product related intangible assets, primarily customer relationships, trademarks, and non-compete agreements recorded in connection with completed acquisitions.

*Expenses associated with initial public offering.* Expenses associated with IPO include certain non-recurring costs relating to our IPO, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the selling stockholders, professional fees, and other expenses. We completed our IPO on September 25, 2020. These fees were expensed in the period incurred.

***Interest expense, net***

Interest expense, net primarily represents interest associated with the Credit Facility, the 2026 Notes, and the 2027 Notes, amortization and write-off of deferred debt issuance costs, and interest income from our investments in money market funds.

***Other income (expense), net***

Other income (expense), net primarily consists of foreign currency translation results derived primarily from U.S. Dollar denominated cash and cash equivalents, accounts receivable, and intercompany balances held by foreign subsidiaries with non-U.S. Dollar functional currencies. Other income (expense), net also includes the fair value valuation result of our interest rate swap and changes in fair value of acquisition contingent consideration.

***(Provision) benefit for income taxes***

(Provision) benefit for income taxes includes the aggregate consolidated income tax expense for U.S. domestic and foreign income taxes.

***Loss from investment accounted for using the equity method, net of tax***

Loss from investment accounted for using the equity method includes our proportional share of loss in a joint venture.

## Results of Operations:

The following table sets forth selected consolidated statements of operations data for each of the periods indicated:

	Year Ended December 31,		
	2021	2020	2019
<b>Revenues:</b>			
Subscriptions	\$ 812,807	\$ 679,273	\$ 608,300
Perpetual licenses	53,080	57,382	59,693
Subscriptions and licenses	865,887	736,655	667,993
Services	99,159	64,889	68,661
Total revenues	965,046	801,544	736,654
<b>Cost of revenues:</b>			
Cost of subscriptions and licenses	124,321	95,803	71,578
Cost of services	92,218	71,352	72,572
Total cost of revenues	216,539	167,155	144,150
Gross profit	748,507	634,389	592,504
<b>Operating expenses:</b>			
Research and development	220,915	185,515	183,552
Selling and marketing	162,240	143,791	155,294
General and administrative	150,116	113,274	97,172
Deferred compensation plan	95,046	177	408
Amortization of purchased intangibles	25,601	15,352	14,213
Expenses associated with initial public offering	—	26,130	—
Total operating expenses	653,918	484,239	450,639
Income from operations	94,589	150,150	141,865
Interest expense, net	(12,491)	(7,476)	(8,199)
Other income (expense), net	11,231	24,946	(5,557)
Income before income taxes	93,329	167,620	128,109
Benefit (provision) for income taxes	3,448	(38,625)	(23,738)
Loss from investment accounted for using the equity method, net of tax	(3,585)	(2,474)	(1,275)
Net income	93,192	126,521	103,096
Less: Net income attributable to participating securities	(9)	(234)	(8)
Net income attributable to Class A and Class B common stockholders	\$ 93,183	\$ 126,287	\$ 103,088
<b>Per share information:</b>			
Net income per share, basic	\$ 0.30	\$ 0.44	\$ 0.36
Net income per share, diluted	\$ 0.30	\$ 0.42	\$ 0.35
Weighted average shares, basic	305,711,345	289,863,272	284,625,642
Weighted average shares, diluted	314,610,814	299,371,129	293,796,707

In reporting period-over-period results, we calculate the effects of foreign currency fluctuations and constant currency information by translating current period results using prior period average foreign currency exchange rates. Our definition of constant currency may differ from other companies reporting similarly named measures, and these constant currency performance measures should be viewed in addition to, and not as a substitute for, our operating performance measures calculated in accordance with U.S. GAAP.

### Comparison of the Years Ended December 31, 2021 and 2020

#### Revenues

	Year Ended December 31,		Comparison		
			Constant Currency		
	2021	2020	Amount	%	%
<b>Revenues:</b>					
Subscriptions	\$ 812,807	\$ 679,273	\$ 133,534	19.7 %	17.6 %
Perpetual licenses	53,080	57,382	(4,302)	(7.5)%	(8.9)%
Subscriptions and licenses	865,887	736,655	129,232	17.5 %	15.6 %
Services	99,159	64,889	34,270	52.8 %	48.6 %
Total revenues	\$ 965,046	\$ 801,544	\$ 163,502	20.4 %	18.2 %

Total revenues increased by \$163,502, or 20.4%, to \$965,046 for the year ended December 31, 2021. This increase was primarily driven by improvements in our business performance and the impact from acquisitions in subscriptions revenues, the impact from acquisitions in services revenues, and the overall positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies. We define business performance as our organic growth results inclusive of the impact from certain programmatic acquisitions, which generally are immaterial, individually and in the aggregate. On a constant currency basis, our revenues increased by 18.2% for the year ended December 31, 2021, as compared to the year ended December 31, 2020.

- *Subscriptions.* For the year ended December 31, 2021, subscriptions revenues increased by \$133,534, or 19.7%, as compared to the year ended December 31, 2020. This increase was driven primarily by improvements in our business performance, \$51,557 related to our acquisition of Seequent, and the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies. On a constant currency basis, our subscriptions revenues increased by 17.6% for the year ended December 31, 2021 as compared to the year ended December 31, 2020.

Our growth in subscriptions was primarily due to expansion within our existing accounts, growth of 2% attributable to new accounts exclusive of acquisitions, most notably smaller- and medium-sized accounts, and the acquisition of Seequent. The improvements in business performance for the year ended December 31, 2021 was led by our civil design, *SYNCHRO*, *ProjectWise*, and geoprofessional products. For the year ended December 31, 2021, the impact of the Seequent acquisition includes organic growth within their existing accounts compared to the prior periods.

- *Perpetual licenses.* For the year ended December 31, 2021, perpetual licenses revenues decreased by \$4,302, or 7.5%, as compared to the year ended December 31, 2020. This decrease was driven by a reduction in our business performance, partially offset by the impact of acquisitions and the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies. On a constant currency basis, our perpetual licenses revenues decreased by 8.9% for the year ended December 31, 2021 as compared to the year ended December 31, 2020.



- *Services*. For the year ended December 31, 2021, services revenues increased by \$34,270, or 52.8%, as compared to the year ended December 31, 2020. This increase was driven primarily by the impact of acquisitions of \$30,013, as well as the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies. On a constant currency basis, our services revenues increased by 48.6% for the year ended December 31, 2021 as compared to the year ended December 31, 2020.

For the year ended December 31, 2021, the acquisition impact is attributable to several digital integrator businesses acquired throughout 2020 and 2021. Business performance continued to be impacted by COVID-19 related delays in new projects and the redeployment of some services colleagues to support Success Services of our E365 subscription offering.

#### Revenues by Geographic Area

Revenues are allocated to individual countries based upon the location of users. Revenues by geographic area are as follows:

	Year Ended December 31,		Comparison		
			Amount	Constant Currency	
	2021	2020		Amount	%
Revenues by geographic area:					
Americas	\$ 483,087	\$ 395,746	\$ 87,341	22.1 %	21.4 %
EMEA	300,123	254,036	46,087	18.1 %	14.2 %
APAC	181,836	151,762	30,074	19.8 %	16.8 %
Total revenues by geographic area	<u>\$ 965,046</u>	<u>\$ 801,544</u>	<u>\$ 163,502</u>	20.4 %	18.2 %

- *Americas*. For the year ended December 31, 2021, revenues from the Americas increased by \$87,341, or 22.1%, as compared to the year ended December 31, 2020. This increase was driven primarily by improvements in our business performance in subscriptions revenues and the impact from acquisitions in subscriptions and services revenues. On a constant currency basis, our revenues from the Americas increased by 21.4% for the year ended December 31, 2021 as compared to the year ended December 31, 2020.

The constant currency growth in the Americas primarily reflects growth in recurring subscriptions revenues from our existing accounts in the U.S., the impact of the Seequent acquisition, and growth in services revenues in the U.S. and Canada from the acquisition of digital integrator businesses.

- *EMEA*. For the year ended December 31, 2021, revenues from EMEA increased by \$46,087, or 18.1%, as compared to the year ended December 31, 2020. On a constant currency basis, our revenues from EMEA increased by 14.2% for the year ended December 31, 2021 as compared to the year ended December 31, 2020. The positive foreign currency effects were due to a weaker U.S. Dollar relative to our other functional currencies.

The constant currency growth primarily reflects growth in services revenues from the 2020 acquisitions of two digital integrator businesses in Europe. Constant currency growth also includes modest business growth in subscriptions revenues in Europe.

- *APAC*. For the year ended December 31, 2021, revenues from APAC increased by \$30,074, or 19.8%, as compared to the year ended December 31, 2020. This increase was driven primarily by improvements in our business performance in subscriptions revenues, the impact of the Seequent acquisition, and the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies. On a constant currency basis, our revenues from APAC increased by 16.8% for the year ended December 31, 2021 as compared to the year ended December 31, 2020.

Excluding the impact of the Seequent acquisition, the constant currency growth was primarily due to expansion of our recurring subscriptions revenues in Australia, India, and China, net of attrition, for the year ended December 31, 2021.

#### Cost of Revenues

	Year Ended December 31,		Comparison		
			Amount	%	Constant Currency
	2021	2020			
Cost of subscriptions and licenses	\$ 124,321	\$ 95,803	\$ 28,518	29.8 %	27.3 %
Cost of services	92,218	71,352	20,866	29.2 %	24.4 %
Total cost of revenues	<u>\$ 216,539</u>	<u>\$ 167,155</u>	<u>\$ 49,384</u>	29.5 %	26.1 %

For the year ended December 31, 2021, cost of revenues increased by \$49,384, or 29.5%, to \$216,539. This increase was driven by an increase in both cost of subscriptions and licenses and cost of services relative to the prior period. On a constant currency basis, total cost of revenues increased by 26.1% for the year ended December 31, 2021 as compared to the year ended December 31, 2020.

For the year ended December 31, 2021, cost of subscriptions and licenses increased 29.8%, or 27.3% in constant currency, as compared to the year ended December 31, 2020. On a constant currency basis, this increase was substantially due to an increase in headcount-related costs of approximately \$20,200, primarily driven by the redeployment of certain colleagues to our User Success group in support of Success Services available to accounts under programs such as our E365 subscription offering.

For the year ended December 31, 2021, cost of services increased by 29.2%, or 24.4% in constant currency, as compared to the year ended December 31, 2020. On a constant currency basis, this increase was substantially due to an increase in headcount-related costs of approximately \$15,800. The approximate \$15,800 increase in headcount-related costs was primarily comprised of an increase in salaries and variable compensation costs of approximately \$18,900, primarily driven by our digital integrator acquisitions, partially offset by a decrease in stock-based compensation expense of approximately \$1,700 and the realignment costs from the 2020 program of approximately \$1,400.

## Operating Expenses

	Year Ended December 31,		Comparison		
			Amount	%	Constant Currency
	2021	2020			
Research and development	\$ 220,915	\$ 185,515	\$ 35,400	19.1 %	16.5 %
Selling and marketing	162,240	143,791	18,449	12.8 %	10.1 %
General and administrative	150,116	113,274	36,842	32.5 %	31.1 %
Deferred compensation plan	95,046	177	94,869	*	*
Amortization of purchased intangibles	25,601	15,352	10,249	66.8 %	61.3 %
Expenses associated with initial public offering	—	26,130	(26,130)	*	*
<b>Total operating expenses</b>	<b>\$ 653,918</b>	<b>\$ 484,239</b>	<b>\$ 169,679</b>	<b>35.0 %</b>	<b>32.8 %</b>

\* Not meaningful

*Research and development.* For the year ended December 31, 2021, research and development expenses increased 19.1%, or 16.5% in constant currency, as compared to the year ended December 31, 2020. On a constant currency basis, this increase was primarily due to an increase in headcount-related costs of approximately \$26,300. The approximate \$26,300 increase in headcount-related costs was primarily comprised of an increase in salaries and variable compensation costs of approximately \$34,400, primarily due to annual salary adjustments in 2021 combined with lower variable compensation costs in the prior period due to COVID-19, and an increase in stock-based compensation expense of approximately \$7,400. Partially offsetting these increases in headcount-related costs is a decrease of approximately \$14,700 in Bonus Plan related cash compensation due to the change in our Bonus Plan (see Note 11 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K), which allows participants within certain limitations to elect share delivery instead of cash compensation for their non-deferred incentive bonuses. Through the nine months ended September 30, 2020, non-deferred incentive bonuses earned under the Bonus Plan were paid in cash. The other component of the offsetting decrease in headcount-related costs is the realignment costs from the 2020 program of approximately \$800.

*Selling and marketing.* For the year ended December 31, 2021, selling and marketing expenses increased 12.8%, or 10.1% in constant currency, as compared to the year ended December 31, 2020. On a constant currency basis, this increase was primarily due to an increase in headcount-related costs of approximately \$12,400. The approximate \$12,400 increase in headcount-related costs was primarily comprised of an increase in salaries and variable compensation costs of approximately \$19,200, primarily due to annual salary adjustments in 2021 combined with lower variable compensation costs in the prior period due to COVID-19, partially offset by the realignment costs from the 2020 program of approximately \$6,000 and a decrease in stock-based compensation expense of approximately \$800.

*General and administrative.* For the year ended December 31, 2021, general and administrative expenses increased 32.5%, or 31.1% in constant currency, as compared to the year ended December 31, 2020. On a constant currency basis, this increase was primarily due to an increase in acquisition and other corporate initiatives expenses of approximately \$17,200, primarily due to expenses related to the acquisition of Seequent, and an increase in headcount-related costs of approximately \$15,000. The approximate \$15,000 increase in headcount-related costs was primarily comprised of an increase in stock-based compensation expense of approximately \$12,300 and an increase in salaries and variable compensation costs of approximately \$11,000, primarily due to annual salary adjustments in 2021 combined with lower variable compensation costs in the prior period due to COVID-19. Partially offsetting these increases in headcount-related costs is a decrease of approximately \$6,500 in Bonus Plan related cash compensation due to the change in our Bonus Plan as described above and the realignment costs from the 2020 program of approximately \$1,800.

*Deferred compensation plan.* For the year ended December 31, 2021, deferred compensation plan expenses increased by \$94,869 as compared to the year ended December 31, 2020. This increase was primarily attributable to a one-time \$90,721 compensation charge recognized during the year ended December 31, 2021 as discussed further below and an increase of \$4,148 attributable to changes in the deferred compensation liabilities which are marked to market at the end of each reporting period and recorded as an expense (income).

In August 2021, our board of directors approved an amendment to the DCP, which offered to certain active executives in the DCP a one-time, short-term election to reallocate a limited portion of their DCP holdings from phantom shares of the Company's Class B Common Stock into other DCP phantom investment funds. The offer to reallocate was subject to a proration mechanism which adjusted the aggregate elections to a maximum of 1,500,000 phantom shares of the Company's Class B Common Stock. This one-time reallocation opportunity was offered only to certain active executives (but not to Directors or Bentley family members) in order to encourage retention, as otherwise these executives could only have materially diversified their investments in Company equity (primarily held in the DCP) by voluntarily terminating employment to trigger DCP distributions. These executives in aggregate accordingly diversified 24% of their phantom shares of the Company's Class B Common Stock. While DCP participants' investments in phantom shares remain equity classified, as they will be settled in shares of Class B Common Stock upon eventual distribution, the amendment and elections resulted in a change to liability classification for the reallocated phantom investments, as they will be settled in cash upon eventual distribution. As a result, during the year ended December 31, 2021, we recognized a one-time compensation charge of \$90,721 to *Deferred compensation plan* expenses in the consolidated statements of operations to record the reallocated deferred compensation plan liabilities at their fair value.

*Amortization of purchased intangibles.* For the year ended December 31, 2021, amortization of purchased intangibles increased by 66.8%, or 61.3% in constant currency, as compared to the year ended December 31, 2020. On a constant currency basis, this increase was primarily attributable to amortization from recently acquired purchased intangibles.

*Expenses associated with initial public offering.* For the year ended December 31, 2020, expenses associated with IPO include certain non-recurring costs relating to our IPO, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the selling stockholders, professional fees, and other expenses. We completed our IPO on September 25, 2020. These fees were expensed in the period incurred.

*Interest Expense, Net*

	Year Ended December 31,	
	2021	2020
Interest expense	\$ (12,797)	\$ (7,913)
Interest income	306	437
Interest expense, net	<u>\$ (12,491)</u>	<u>\$ (7,476)</u>

	Year Ended December 31,	
	2021	2020
Bank credit facility	\$ (3,448)	\$ (5,680)
Term loans	(117)	(502)
Interest rate swap	(1,270)	(696)
Convertible senior notes, coupon interest	(1,899)	—
Amortization and write-off of deferred debt issuance costs	(5,955)	(985)
Other, net	198	387
Interest expense, net	<u>\$ (12,491)</u>	<u>\$ (7,476)</u>

For the year ended December 31, 2021, interest expense, net increased from the year ended December 31, 2020 primarily due to the increase in amortization and write-off of deferred debt issuance costs and an increase in interest expense in connection with the convertible senior notes, partially offset by a lower outstanding average balance under the Credit Facility.

*Other Income, Net*

	Year Ended December 31,	
	2021	2020
Foreign exchange gain	\$ 827	\$ 22,919
Other income, net	10,404	2,027
Total other income, net	<u>\$ 11,231</u>	<u>\$ 24,946</u>

For the years ended December 31, 2021 and 2020, total other income, net consists of foreign exchange gains of \$827 and \$22,919, respectively. The foreign exchange gains derive primarily from U.S. Dollar denominated cash and cash equivalents, accounts receivable, and intercompany balances held by foreign subsidiaries. For the years ended December 31, 2021 and 2020, intercompany finance transactions denominated in U.S. Dollars resulted in unrealized foreign exchange (losses) gains of \$(779) and \$22,310, respectively.

For the year ended December 31, 2021, other income, net includes a gain from the change in fair value of our interest rate swap of \$9,770. For the year ended December 31, 2020, other income, net includes a gain from the change in fair value of our interest rate swap of \$347 and a gain from the change in fair value of acquisition contingent consideration of \$1,340.

*(Benefit) Provision for Income Taxes*

The income tax provisions for the years ended December 31, 2021 and 2020 were based on the effective income tax rates for those periods presented. For the years ended December 31, 2021 and 2020, we recognized an aggregate consolidated income tax (benefit) expense of \$(3,448) and \$38,625, respectively, for U.S. domestic and foreign income taxes. For the years ended December 31, 2021 and 2020, we recorded discrete tax benefits of \$49,031 and \$8,644, respectively, associated with stock-based compensation. The effective income tax rate of (3.7)% on *Income before income taxes* of \$93,329 for the year ended December 31, 2021 was lower than the effective income tax rate of 23.0% on *Income before income taxes* of \$167,620 for the year ended December 31, 2020 primarily due to significant windfall tax benefits from stock-based compensation, partially offset by the impact from officer compensation limitation provisions.

*Net Income*

	Year Ended December 31,	
	2021	2020
Net income	\$ 93,192	\$ 126,521

For the year ended December 31, 2021, net income decreased by \$33,329 compared to the year ended December 31, 2020. The changes are due to the factors described above.

*Adjusted EBITDA and Adjusted Net Income*

	Year Ended December 31,	
	2021	2020
Adjusted EBITDA	\$ 324,948	\$ 266,376
Adjusted Net Income	\$ 266,940	\$ 192,812

For the year ended December 31, 2021, Adjusted EBITDA increased by \$58,572 compared to the year ended December 31, 2020. For the years ended December 31, 2021 and 2020, Adjusted EBITDA as a percentage of total revenues was 33.7% and 33.2%, respectively.

For the year ended December 31, 2021, Adjusted Net Income increased by \$74,128 compared to the year ended December 31, 2020. For the years ended December 31, 2021 and 2020, Adjusted Net Income as a percentage of total revenues was 27.7% and 24.1%, respectively.

For additional information, including the limitations of using non-GAAP financial measures, and reconciliations of the non-GAAP financial measures to the most directly comparable financial measures stated in accordance with U.S. GAAP, see the section titled “—Non-GAAP Financial Measures.”

## Comparison of the Years Ended December 31, 2020 and 2019

### Revenues

	Year Ended December 31,		Comparison		
			Amount	%	Constant Currency
	2020	2019			
<b>Revenues:</b>					
Subscriptions	\$ 679,273	\$ 608,300	\$ 70,973	11.7 %	11.0 %
Perpetual licenses	57,382	59,693	(2,311)	(3.9)%	(4.6)%
Subscriptions and licenses	736,655	667,993	68,662	10.3 %	9.6 %
Services	64,889	68,661	(3,772)	(5.5)%	(5.7)%
Total revenues	<u>\$ 801,544</u>	<u>\$ 736,654</u>	<u>\$ 64,890</u>	8.8 %	8.2 %

Total revenues increased by \$64,890, or 8.8%, to \$801,544 for the year ended December 31, 2020. For the year ended December 31, 2020, the increase was driven by improvements in our organic performance of \$26,757, the impact from acquisitions of \$33,463, and the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies of \$4,670. On a constant currency basis, our revenues increased by 8.2% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

- *Subscriptions.* For the year ended December 31, 2020, subscriptions revenues increased by \$70,973, or 11.7%, as compared to the year ended December 31, 2019. This increase was driven primarily by improvements in our organic performance of \$52,012, and to a lesser extent, the impact from acquisitions of \$14,841, as well as the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies of \$4,120. On a constant currency basis, our subscriptions revenues increased by 11.0% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

For the year ended December 31, 2020, the increase in organic performance was primarily due to expansion within our existing accounts, as reflected by our recurring revenues dollar-based net retention rate of 107% and approximately 2% of the increase was attributed to new accounts. Approximately 50% of our organic performance expansion was driven by *ProjectWise* and civil design products for the year ended December 31, 2020.

- *Perpetual licenses.* For the year ended December 31, 2020, perpetual licenses revenues decreased by \$2,311, or 3.9%, as compared to the year ended December 31, 2019. This decrease was driven by a reduction in our organic performance of \$4,427, partially offset by the impact from acquisitions of \$1,706, as well as the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies of \$410. On a constant currency basis, our perpetual licenses revenues decreased by 4.6% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

We observed a decrease in organic performance for the year ended December 31, 2020 as certain accounts delayed purchase decisions or shifted spend to subscription solutions due to COVID-19.

- *Services.* For the year ended December 31, 2020, services revenues decreased by \$3,772, or 5.5%, as compared to the year ended December 31, 2019. This decrease was driven primarily by a reduction in our organic performance of \$20,828, partially offset by the impact from acquisitions of \$16,916, as well as the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies of \$140. On a constant currency basis, our services revenues decreased by 5.7% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

For the year ended December 31, 2020, the decrease in organic performance was primarily due to the winding down or completion of several larger services projects during 2019 and 2020, COVID-19 related delays of new projects while social distancing measures are in place, the inclusion of learning benefits in our subscription offerings, and the partial redeployment of our services colleagues to support Success Blueprints of our E365 subscription offering.

#### Revenues by Geographic Area

Revenues are allocated to individual countries based upon the location of the users. Revenues by geographic area are as follows:

	Year Ended December 31,		Comparison		Constant Currency %
			Amount	%	
	2020	2019			
Revenues by geographic area:					
Americas	\$ 395,746	\$ 356,331	\$ 39,415	11.1 %	11.3 %
EMEA	254,036	236,602	17,434	7.4 %	5.8 %
APAC	151,762	143,721	8,041	5.6 %	4.4 %
Total revenues by geographic area	\$ 801,544	\$ 736,654	\$ 64,890	8.8 %	8.2 %

- *Americas*. For the year ended December 31, 2020, revenues from the Americas increased by \$39,415, or 11.1%, as compared to the year ended December 31, 2019. This increase was driven primarily by improvements in our organic performance of \$18,002 and the impact from acquisitions of \$22,226, partially offset by negative foreign currency effects due to a stronger U.S. Dollar relative to our other functional currencies of \$813. On a constant currency basis, our revenues from the Americas increased by 11.3% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

The increase in organic performance was primarily due to expansion of our recurring subscription revenues from our existing accounts in the U.S. and Canada. Approximately 30% of our subscription-related organic performance expansion was driven by *ProjectWise* for the year ended December 31, 2020.

- *EMEA*. For the year ended December 31, 2020, revenues from EMEA increased by \$17,434, or 7.4%, as compared to the year ended December 31, 2019. This increase was driven by improvements in our organic performance of \$3,168, the impact from acquisitions of \$10,554, and the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies of \$3,712. On a constant currency basis, our revenues from EMEA increased by 5.8% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

The increase in organic performance was primarily due to expansion of our recurring subscription revenues throughout the region. Approximately 50% of our subscription-related organic performance expansion was driven by *ProjectWise* for the year ended December 31, 2020.

- *APAC*. For the year ended December 31, 2020, revenues from APAC increased by \$8,041, or 5.6%, as compared to the year ended December 31, 2019. This increase was driven by improvements in our organic performance of \$5,587 and, to a lesser extent, the impact from acquisitions of \$683 and the positive foreign currency effects due to a weaker U.S. Dollar relative to our other functional currencies of \$1,771. On a constant currency basis, our revenues from APAC increased by 4.4% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.



For the year ended December 31, 2020, the increase in organic performance was primarily due to expansion of our recurring subscription revenues from our existing accounts in Australia, China, and South East Asia. Approximately 40% of our subscription-related organic performance expansion was driven by *ProjectWise* and Offshore Structural Analysis products.

*Cost of Revenues*

	Year Ended December 31,		Comparison		
			Amount	%	Constant Currency
	2020	2019			
Cost of subscriptions and licenses	\$ 95,803	\$ 71,578	\$ 24,225	33.8 %	32.9 %
Cost of services	71,352	72,572	(1,220)	(1.7)%	(1.5)%
Total cost of revenues	\$ 167,155	\$ 144,150	\$ 23,005	16.0 %	15.6 %

For the year ended December 31, 2020, cost of revenues increased by \$23,005, or 16.0%, to \$167,155. This increase was driven primarily by an increase in cost of subscriptions and licenses, partially offset by lower cost of services relative to the prior period. On a constant currency basis, total cost of revenues increased by 15.6% for the year ended December 31, 2020 as compared to the year ended December 31, 2019.

For the year ended December 31, 2020, cost of subscriptions and licenses increased 33.8%, or 32.9% in constant currency, as compared to the year ended December 31, 2019. On a constant currency basis, this increase was primarily due to an increase in headcount-related costs, excluding stock-based compensation expense, of approximately \$8,500, an increase in stock-based compensation expense of approximately \$800, an increase in hosting costs of approximately \$8,000, an increase in amortization expense for software and technology of approximately \$2,200, and an increase in facility-related costs of approximately \$600.

For the year ended December 31, 2020, cost of services decreased by 1.7%, or 1.5% in constant currency, as compared to the year ended December 31, 2019. On a constant currency basis, the decrease was primarily due to a decrease in headcount-related costs, excluding stock-based compensation expense and incremental realignment costs from the 2020 program, of approximately \$1,500 and a decrease in amortization of previously capitalized costs related to certain professional services projects of approximately \$4,600, partially offset by an increase in stock-based compensation expense of approximately \$2,400, incremental realignment costs from the 2020 program of approximately \$1,400, and an increase in facility-related costs of approximately \$1,400.

Operating Expenses

	Year Ended December 31,		Comparison		
	2020	2019	Amount	%	Constant Currency %
	Research and development	\$ 185,515	\$ 183,552	\$ 1,963	1.1 %
Selling and marketing	143,791	155,294	(11,503)	(7.4)%	(7.3)%
General and administrative	113,274	97,172	16,102	16.6 %	16.0 %
Deferred compensation plan	177	408	(231)	(56.6)%	(56.6)%
Amortization of purchased intangibles	15,352	14,213	1,139	8.0 %	7.3 %
Expenses associated with initial public offering	26,130	—	26,130	*	*
Total operating expenses	\$ 484,239	\$ 450,639	\$ 33,600	7.5 %	7.4 %

\* Not meaningful

*Research and development.* For the year ended December 31, 2020, research and development expenses increased 1.1%, or 1.0% in constant currency, as compared to the year ended December 31, 2019. On a constant currency basis, the increase was primarily due to an increase in stock-based compensation expense of approximately \$8,900 and incremental realignment costs from the 2020 program of approximately \$800, partially offset by a decrease in headcount-related costs, excluding stock-based compensation expense and incremental realignment costs from the 2020 program, of approximately \$7,300 due to COVID-19 related modification to colleague travel and variable compensation plans.

*Selling and marketing.* For the year ended December 31, 2020, selling and marketing expenses decreased 7.4%, or 7.3% in constant currency, as compared to the year ended December 31, 2019. On a constant currency basis, this decrease was primarily due to a decrease in headcount-related costs, excluding stock-based compensation expense and incremental realignment costs from the 2020 program, of approximately \$16,700 due to COVID-19 related modification to colleague travel and variable compensation plans and a reduction in promotional costs of \$5,000, substantially from rationalizing our marketing spend and shifting to virtual events given the evolving business environment as a result of COVID-19, partially offset by an increase in stock-based compensation expense of approximately \$4,400 and incremental realignment costs from the 2020 program of approximately \$6,000.

*General and administrative.* For the year ended December 31, 2020, general and administrative expenses increased 16.3%, or 16.0% in constant currency, as compared to the year ended December 31, 2019. On a constant currency basis, the increase was primarily due to an increase in headcount-related costs, excluding stock-based compensation expense and incremental realignment costs from the 2020 program, of approximately \$4,000, an increase in stock-based compensation expense of approximately \$8,100, incremental realignment costs from the 2020 program of approximately \$1,800, and an increase in acquisition and other corporate initiatives expenses of \$2,300.

*Deferred compensation plan.* For the year ended December 31, 2020, deferred compensation plan expenses decreased by \$231, or 56.6%, as compared to the year ended December 31, 2019. This decrease was attributable to changes in the deferred compensation liabilities which are marked to market at the end of each reporting period and recorded as an expense (income).

*Amortization of purchased intangibles.* For the year ended December 31, 2020, amortization of purchased intangibles increased by 8.0%, or 7.3% in constant currency, as compared to the year ended December 31, 2019. The increase was primarily attributable to acquisitions that closed in 2020.

*Expenses associated with initial public offering.* For the year ended December 31, 2020, expenses associated with IPO included certain non-recurring costs relating to our IPO, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the selling stockholders, professional fees, and other expenses. We completed our IPO on September 25, 2020. These fees were expensed in the period incurred.

*Interest Expense, Net*

	Year Ended December 31,	
	2020	2019
Interest expense	\$ (7,913)	\$ (9,731)
Interest income	437	1,532
Interest expense, net	<u>\$ (7,476)</u>	<u>\$ (8,199)</u>

	Year Ended December 31,	
	2020	2019
Bank credit facility	\$ (5,680)	\$ (8,971)
Term loan	(502)	—
Interest rate swap	(696)	—
Amortization and write-off of deferred debt issuance costs	(985)	(553)
Other, net	387	1,325
Interest expense, net	<u>\$ (7,476)</u>	<u>\$ (8,199)</u>

For the year ended December 31, 2020, net interest expense decreased from the year ended December 31, 2019 primarily due to a lower average interest rate, partially offset by a higher outstanding average balance under the Credit Facility, which includes the term loan of \$125,000 we entered into on September 2, 2020 via the First Amendment to the Credit Facility (the “2020 Term Loan”) and subsequently repaid in November 2020.

*Other Income (Expense), Net*

	Year Ended December 31,	
	2020	2019
Foreign exchange gain (loss)	\$ 22,919	\$ (5,591)
Other income, net	2,027	34
Total other income (expense), net	<u>\$ 24,946</u>	<u>\$ (5,557)</u>

For the years ended December 31, 2020 and 2019, other income (expense), net primarily consists of foreign exchange gains (losses) of \$22,919 and \$(5,591), respectively. The foreign exchange gains (losses) derive primarily from U.S. Dollar denominated cash and cash equivalents, accounts receivable, and intercompany balances held by foreign subsidiaries. For the years ended December 31, 2020 and 2019, intercompany finance transactions denominated in U.S. Dollars resulted in unrealized foreign exchange gains (losses) of \$22,310 and \$(5,270), respectively.

For the year ended December 31, 2020, other income, net also includes a gain from the change in fair value of our interest rate swap of \$347 and a gain from the change in fair value of acquisition contingent consideration of \$1,340.

*(Provision) Benefit for Income Taxes*

The income tax provisions for the years ended December 31, 2020 and 2019 were based on the effective income tax rates applicable for those periods. For the years ended December 31, 2020 and 2019, we recognized an aggregate consolidated income tax expense of \$38,625 and \$23,738, respectively, for U.S. domestic and foreign income taxes. For the years ended December 31, 2020 and 2019, we recorded a discrete tax benefit of \$8,644 and \$2,940, respectively, associated with stock-based compensation. The effective income tax rate of 23.0% for the year ended December 31, 2020 was higher than the effective income tax rate of 18.5% for the year ended December 31, 2019 primarily due to officer compensation limitation provisions resulting from our IPO, which went effective during the third quarter of 2020, and the non-deductibility of expenses associated with our IPO, partially offset by increased discrete windfall tax benefits from stock-based compensation.

*Net Income*

	<b>Year Ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
Net income	\$ 126,521	\$ 103,096

For the year ended December 31, 2020, net income increased by \$23,425, or 22.7%, compared to the year ended December 31, 2019. The changes are due to the factors described above.

*Adjusted EBITDA and Adjusted Net Income*

	<b>Year Ended December 31,</b>	
	<b>2020</b>	<b>2019</b>
Adjusted EBITDA	\$ 266,376	\$ 188,537
Adjusted Net Income	\$ 192,812	\$ 135,357

For the year ended December 31, 2020, Adjusted EBITDA increased by \$77,839 compared to the year ended December 31, 2019. For the years ended December 31, 2020 and 2019, Adjusted EBITDA as a percentage of total revenues was 33.2% and 25.6%, respectively.

For the year ended December 31, 2020, Adjusted Net Income increased by \$57,455 compared to the year ended December 31, 2019. For the years ended December 31, 2020 and 2019, Adjusted Net Income as a percentage of total revenues was 24.1% and 18.4%, respectively.

For additional information, including the limitations of using non-GAAP financial measures, and reconciliations of the non-GAAP financial measures to the most directly comparable financial measures stated in accordance with U.S. GAAP, see the section titled “—Non-GAAP Financial Measures.”

## Liquidity and Capital Resources:

Our primary source of operating cash is from the sale of subscriptions, perpetual licenses, and services. Our primary use of cash is payment of our operating costs, which consist primarily of colleague-related expenses, such as compensation and benefits, as well as general operating expenses for marketing, facilities, and overhead costs. In addition to operating expenses, we also use cash to pay quarterly dividends, to service our debt obligations, and for capital expenditures in support of our operations. We also use cash to fund our growth initiatives, which include acquisitions of software assets and businesses, and other investment activities of *BSY Investments*, including *iTwin Ventures* for which, over a period of approximately 5 years, we expect to invest up to \$100 million of corporate venture capital funding for seed, early, and growth stage technology companies with promising and emerging opportunities for infrastructure digital twin solutions strategically relevant to our business. In connection with the acquisition of Seequent in June 2021, we used readily available cash, including a portion of the net proceeds from the 2026 Notes, and borrowings under our Credit Facility to fund the cash component of the transaction. As described further below, we used \$25,875 of the net proceeds from the sale of the 2027 Notes to pay the premiums of the capped call options, and \$536,062 to repay outstanding indebtedness under the Credit Facility and to pay related fees and expenses. We used \$25,530 of the net proceeds from the sale of the 2026 Notes to pay the premiums of the capped call options, and approximately \$250,500 to repay outstanding indebtedness under the Credit Facility and to pay related fees and expenses. We used the remainder of the net proceeds from the sale of the 2026 Notes for general corporate purposes and towards funding certain acquisitions, including Seequent.

Our cash and cash equivalent balances are concentrated in a few locations around the world, with substantial amounts held outside of the U.S. As of December 31, 2021 and 2020, 48% and 94%, respectively, of our total cash and cash equivalents were located outside of the U.S. We intend to continue to permanently reinvest these funds outside of the U.S. and current plans do not demonstrate a need to repatriate them to fund our U.S. operations. We expect to meet our U.S. liquidity needs through ongoing cash flows or external borrowings including available liquidity under the Credit Facility described below. We regularly review our capital structure and consider a variety of potential financing alternatives and planning strategies to ensure that we have the proper liquidity available in the locations in which it is needed and to fund our operations and growth investments with cash that has not been permanently reinvested outside the U.S.

We believe that existing cash and cash equivalent balances, together with cash generated from operations, and liquidity under the Credit Facility, will be sufficient to meet our domestic and international working capital and capital expenditure requirements through the next twelve months. However, our future capital requirements may be materially different than those currently planned in our budgeting and forecasting activities and depend on many factors, including our rate of revenue growth, the timing and extent of spending on research and development, the expansion of our sales and marketing activities, the timing of new product introductions, market acceptance of our products, competitive factors, currency fluctuations, and overall economic conditions, globally. To the extent that current and anticipated future sources of liquidity are insufficient to fund our future business activities and requirements, we may be required to seek additional equity or debt financing. The sale of additional equity would result in additional dilution to our stockholders, while the incurrence of debt financing, including convertible debt, would result in debt service obligations. Such debt instruments also could introduce covenants that might restrict our operations. We cannot provide assurance that we could obtain additional financing on favorable terms or at all.

### **Cash and cash equivalents**

We consider all highly liquid investments with an original maturity of three months or less at the date of purchase to be cash equivalents. Our cash and cash equivalents consisted of cash held in checking accounts and money market funds maintained at various financial institutions. The following table presents our foreign and domestic holdings of cash and cash equivalents:

	December 31,	
	2021	2020
Cash and cash equivalents:		
Held domestically	\$ 170,267	\$ 7,861
Held by foreign subsidiaries	159,070	114,145
Total cash and cash equivalents	<u>\$ 329,337</u>	<u>\$ 122,006</u>

The amount of cash and cash equivalents held by foreign subsidiaries is subject to translation adjustments caused by changes in foreign currency exchange rates as of the end of each respective reporting period, the offset to which is recorded in *Accumulated other comprehensive loss* on our consolidated balance sheets.

### **Bank Credit Facility**

On January 25, 2021, we entered into the Second Amendment to the Amended and Restated Credit Agreement dated December 19, 2017, which increased the senior secured revolving loan facility from \$500,000 to \$850,000 and extended the maturity date from December 18, 2022 to November 15, 2025. In connection with the Second Amendment, certain lenders exited the Credit Facility. We performed an extinguishment versus modification assessment on a lender-by-lender basis resulting in the write-off of unamortized debt issuance costs of \$353 and the capitalization of fees paid to lenders and third parties of \$3,577. Debt issuance costs are amortized to interest expense through the maturity date of November 15, 2025.

On June 22, 2021, we entered into the Third Amendment to the Credit Facility, which increased the aggregate amount of approved convertible debt to permit the issuance and sale of additional convertible senior notes. See the section titled “—Convertible Senior Notes—2027 Notes” below.

On December 22, 2021, we entered into the Fourth Amendment to the Credit Facility, which provided for a new \$200,000 senior secured term loan with a maturity of November 15, 2025 and included certain other amendments. The 2021 Term Loan requires principal repayment at the end of each calendar quarter. Beginning with March 31, 2022 and ending with December 31, 2023, we are required to repay \$1,250 per quarter. Beginning with March 31, 2024 and ending with the last such date prior to the maturity date, we are required to repay \$2,500 per quarter. We incurred \$540 of debt issuance costs related to the 2021 Term Loan. As of December 31, 2021, \$45 of the transaction costs were recorded in *Accruals and other current liabilities* in the consolidated balance sheet. We used borrowings under the 2021 Term Loan to pay down borrowings under the swingline sub-facility and revolving facility under the Credit Facility.

Under the 2021 Term Loan, we may make either Euro currency or non-Euro currency interest rate elections. Interest on the Euro currency borrowings bear a base interest rate of LIBOR, plus a spread ranging from 100 basis points (“bps”) to 200 bps as determined by our net leverage ratio. Under the non-Euro currency elections, the 2021 Term Loan bears a base interest rate of the highest of (i) the prime rate, (ii) the overnight bank funding effective rate plus 50 bps, or (iii) LIBOR plus 100 bps, plus a spread ranging from 0 bps to 100 bps as determined by our net leverage ratio.

On September 2, 2020, we entered into the First Amendment to the Credit Facility, which provided a new term loan of \$125,000 with a maturity of December 18, 2022 and included certain other amendments, including the addition of a mandatory prepayment provision requiring us to prepay borrowings under the Credit Facility in an aggregate amount equal to the net proceeds from any underwritten public offering by us, which prepayment shall be applied, first, to the 2020 Term Loan and, second, to any borrowings outstanding under the revolving facility under the Credit Facility without reducing the revolving commitments thereof. We used borrowings under the 2020 Term Loan and under the revolving facility under the Credit Facility to pay a special dividend declared by our board of directors on August 28, 2020. We incurred \$432 of debt issuance costs related to the 2020 Term Loan. In November 2020, we used a portion of the net proceeds from our follow-on public offering to repay the 2020 Term Loan. See Notes 10 and 13 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

In addition to the senior secured revolving loan facility, the Credit Facility also provides up to \$50,000 of letters of credit and other incremental borrowings subject to availability, including a \$85,000 U.S. Dollar swingline sub-facility and a \$200,000 incremental “accordion” sub-facility. We had \$150 of letters of credit and surety bonds outstanding as of December 31, 2021 and 2020. As of December 31, 2021 and 2020, we had \$849,850 and \$253,850 available under the Credit Facility.

Under the Credit Facility, we may make either Euro currency or non-Euro currency interest rate elections. Interest on the Euro currency borrowings bear a base interest rate of the London Interbank Offered Rate (“LIBOR”) plus a spread ranging from 125 bps to 225 bps as determined by our net leverage ratio. Under the non-Euro currency elections, Credit Facility borrowings bear a base interest rate of the highest of (i) the prime rate, (ii) the overnight bank funding effective rate plus 50 bps, or (iii) LIBOR plus 100 bps, plus a spread ranging from 25 bps to 125 bps as determined by our net leverage ratio. In addition, a commitment fee for the unused Credit Facility ranges from 20 bps to 30 bps as determined by our net leverage ratio.

Borrowings under the Credit Facility are guaranteed by all of our first tier domestic subsidiaries and are secured by a first priority security interest in substantially all of our and the guarantors’ U.S. assets and 65% of the stock of their directly owned foreign subsidiaries. The Credit Facility contains both affirmative and negative covenants, including maximum net leverage ratios. As of December 31, 2021 and 2020, we were in compliance with all covenants in our Credit Facility.

Interest rate risk associated with the Credit Facility is managed through an interest rate swap which we executed on March 31, 2020. The interest rate swap has an effective date of April 2, 2020 and a termination date of April 2, 2030. Under the terms of the interest rate swap, we fixed our LIBOR borrowing rate at 0.73% on a notional amount of \$200,000. The interest rate swap is not designated as a hedging instrument for accounting purposes. We account for the interest rate swap as either an asset or a liability in the consolidated balance sheets and carry the derivative at fair value. Gains and losses from the change in fair value are recognized in *Other income (expense), net*, in the consolidated statements of operations. As of December 31, 2021 and 2020, we recorded a swap related asset at fair value of \$10,117 and \$347, respectively, in *Other assets* in the consolidated balance sheets.

The weighted average interest rate under the Credit Facility was 2.03%, 1.92%, and 3.47% for the years ended December 31, 2021, 2020, and 2019, respectively.

The agreement governing the Credit Facility contains customary events of default, including, without limitation, payment defaults, breaches of representations and warranties, covenants defaults, cross-defaults to certain other indebtedness in excess of \$50,000, certain events of bankruptcy and insolvency, judgment defaults in excess of \$10,000, failure of any security document supporting the Credit Facility to be in full force and effect, and a change of control.

Voluntary prepayments of amounts outstanding under the Credit Facility, in whole or in part, are permitted at any time, so long as we give notice as required by the Credit Facility. However, if prepayment is made with respect to a LIBOR-based loan and the prepayment is made on a date other than an interest payment date, we must pay customary breakage costs.

### ***Convertible Senior Notes***

**2027 Notes.** On June 28, 2021, we completed a private offering of \$575,000 of 0.375% convertible senior notes due 2027. The 2027 Notes were issued pursuant to an indenture, dated as of June 28, 2021, between the Company and Wilmington Trust, National Association, as trustee (the “2027 Trustee”) (the “2027 Indenture”). Interest will accrue from June 28, 2021 and will be payable semi-annually in arrears in cash on January 1 and July 1 of each year, with the first payment due on January 1, 2022. The 2027 Notes will mature on July 1, 2027, unless earlier converted, redeemed or repurchased. We incurred \$15,065 of expenses in connection with the 2027 Notes offering consisting of transaction costs. We used \$25,875 of the net proceeds from the sale of the 2027 Notes to pay the premiums of the capped call options described further below, and \$536,062 to repay outstanding indebtedness under the Credit Facility and to pay related fees and expenses.

Prior to April 1, 2027, the 2027 Notes will be convertible at the option of the holder only under the following circumstances: (1) during any calendar quarter (and only during such quarter) commencing after the calendar quarter ending on September 30, 2021, if the last reported sale price per share of our Class B Common Stock exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter; (2) during the five consecutive business days immediately after any ten consecutive trading day period (such ten consecutive trading day period, the “measurement period”) in which the trading price per \$1 principal amount of 2027 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of our Class B Common Stock on such trading day and the conversion rate on such trading day; (3) upon the occurrence of certain corporate events or distributions on our Class B Common Stock, as described in the 2027 Indenture; and (4) if we call the 2027 Notes for redemption. On or after April 1, 2027 until 5:00 p.m., New York City time, on the second scheduled trading day immediately before the maturity date, the 2027 Notes will be convertible at the option of the holder at any time.

We will settle conversions by paying or delivering, as applicable, cash, shares of our Class B Common Stock or a combination of cash and shares of our Class B Common Stock, at our election, based on the applicable conversion rate. The initial conversion rate is 12.0153 shares of our Class B Common Stock per \$1 principal amount of 2027 Notes, which represents an initial conversion price of approximately \$83.23 per share, and is subject to adjustment as described in the 2027 Indenture. If a “make-whole fundamental change” (as defined in the 2027 Indenture) occurs, then we will, in certain circumstances, increase the conversion rate for a specified period of time.

We will have the option to redeem the 2027 Notes in whole or in part at any time on or after July 5, 2024 and on or before the 40th scheduled trading day immediately before the maturity date if the last reported sale price per share of our Class B common stock exceeds 130% of the conversion price on (1) each of at least 20 trading days, whether or not consecutive, during any 30 consecutive trading days ending on, and including, the trading day immediately before the date we send the related redemption notice; and (2) the trading day immediately before the date we send such notice. The redemption price will be equal to the principal amount of the 2027 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

Upon a fundamental change (as defined in the 2027 Indenture), holders may, subject to certain exceptions, require us to purchase their 2027 Notes in whole or in part for cash at a price equal to the principal amount of the 2027 Notes to be purchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date (as defined in the 2027 Indenture). In addition, upon a Make-Whole Fundamental Change (as defined in the 2027 Indenture), we will, under certain circumstances, increase the applicable conversion rate for a holder that elects to convert its 2027 Notes in connection with such Make-Whole Fundamental Change. No adjustment to the conversion rate will be made if the stock price in such Make-Whole Fundamental Change is either less than \$61.65 per share or greater than \$325.00 per share. We will not increase the conversion rate to an amount that exceeds 16.2206 shares per \$1 principal amount of 2027 Notes, subject to adjustment. The 2027 Indenture also contains a customary merger covenant.



Under the 2027 Indenture, the 2027 Notes may be accelerated upon the occurrence of certain customary events of default. If certain bankruptcy and insolvency-related events of default with respect to us occur, the principal of, and accrued and unpaid interest on, all of the then outstanding 2027 Notes shall automatically become due and payable. If any other event of default occurs and is continuing, the 2027 Trustee by notice to us, or the holders of the 2027 Notes of at least 25% in principal amount of the outstanding 2027 Notes by notice to us and the 2027 Trustee, may declare the principal of, and accrued and unpaid interest on, all of the then outstanding 2027 Notes to be due and payable. Notwithstanding the foregoing, the 2027 Indenture provides that, to the extent we elect, the sole remedy for an event of default relating to certain failures by us to comply with reporting covenant in the 2027 Indenture consists exclusively of the right to receive additional interest on the 2027 Notes.

We early adopted ASU 2020-06 as of January 1, 2021 and concluded the 2027 Notes will be accounted for as debt, with no bifurcation of the embedded conversion feature. Transaction costs were recorded as a direct deduction from the related debt liability in the consolidated balance sheet and are amortized to interest expense over the term of the 2027 Notes. The effective interest rate for the 2027 Notes is 0.864%.

As of December 31, 2021, none of the conditions of the 2027 Notes to early convert has been met.

The 2027 Notes are our senior, unsecured obligations that rank senior in right of payment to our future indebtedness that is expressly subordinated to the 2027 Notes, rank equally in right of payment with our existing and future senior unsecured indebtedness that is not so subordinated (including our 2026 Notes), effectively subordinated to our existing and future secured indebtedness (including obligations under our senior secured credit facilities), to the extent of the value of the collateral securing such indebtedness, and structurally subordinated to all existing and future indebtedness and other liabilities (including trade payables and preferred equity (to the extent we are not a holder thereof)) of our subsidiaries. The 2027 Notes contain both affirmative and negative covenants. As of December 31, 2021, we were in compliance with all covenants in the 2027 Notes.

*Capped Call Options.* In connection with the pricing of the 2027 Notes, we entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. We incurred \$50 of expenses in connection with the capped call options. The capped call options are expected to reduce potential dilution to our Class B Common Stock upon any conversion of 2027 Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. The cap price of the capped call options is initially \$95.5575 per share, which represents a premium of 55% above the last reported sale price per share of our Class B Common Stock on the Nasdaq Global Select Market on June 23, 2021 and is subject to customary adjustments under the terms of the capped call options.

The capped call options were entered into in conjunction with the issuance of the 2027 Notes, however, they are legally separate agreements that can be separately exercised, with the receipt of shares under the capped call options having no effect on the 2027 Notes, and are legally detachable. As the capped call options are both legally detachable and separately exercisable from the 2027 Notes, we account for the capped call options separately from the 2027 Notes. The capped call options are indexed to our own common stock and classified in stockholders' equity. As such, the premiums paid for the capped call options have been included as a net reduction to *Additional paid-in capital* in the consolidated balance sheet.

*2026 Notes.* On January 26, 2021, we completed a private offering of \$690,000 of 0.125% convertible senior notes due 2026. The 2026 Notes were issued pursuant to an indenture, dated as of January 26, 2021, between the Company and Wilmington Trust, National Association, as trustee (the "2026 Trustee") (the "2026 Indenture"). Interest will accrue from January 26, 2021 and will be payable semi-annually in arrears in cash on January 15 and July 15 of each year, with the first payment due on July 15, 2021. The 2026 Notes will mature on January 15, 2026, unless earlier converted, redeemed or repurchased. We incurred \$18,055 of expenses in connection with the 2026 Notes offering consisting of transaction costs. We used \$25,530 of the net proceeds from the sale of the 2026 Notes to pay the premiums of the capped call options described further below, and approximately \$250,500 to repay outstanding indebtedness under the Credit Facility and to pay related fees and expenses. We used the remainder of the net proceeds from the sale of the 2026 Notes for general corporate purposes and towards funding certain acquisitions, including Sequent.

Prior to October 15, 2025, the 2026 Notes will be convertible at the option of the holder only under the following circumstances: (1) during any calendar quarter (and only during such quarter) commencing after the calendar quarter ending on June 30, 2021, if the last reported sale price per share of our Class B Common Stock exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter; (2) during the five consecutive business days immediately after any ten consecutive trading day period (such ten consecutive trading day period, the “measurement period”) in which the trading price per \$1 principal amount of 2026 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of our Class B Common Stock on such trading day and the conversion rate on such trading day; (3) upon the occurrence of certain corporate events or distributions on our Class B Common Stock, as described in the 2026 Indenture; and (4) if we call the 2026 Notes for redemption. On or after October 15, 2025 until 5:00 p.m., New York City time, on the second scheduled trading day immediately before the maturity date, the 2026 Notes will be convertible at the option of the holder at any time.

We will settle conversions by paying or delivering, as applicable, cash, shares of our Class B Common Stock or a combination of cash and shares of our Class B Common Stock, at our election, based on the applicable conversion rate. The initial conversion rate is 15.5925 shares of our Class B Common Stock per \$1 principal amount of 2026 Notes, which represents an initial conversion price of approximately \$64.13 per share, and is subject to adjustment as described in the 2026 Indenture. If a “make-whole fundamental change” (as defined in the 2026 Indenture) occurs, then we will, in certain circumstances, increase the conversion rate for a specified period of time.

We will have the option to redeem the 2026 Notes in whole or in part at any time on or after January 20, 2024 and on or before the 40th scheduled trading day immediately before the maturity date if the last reported sale price per share of our Class B common stock exceeds 130% of the conversion price on (1) each of at least 20 trading days, whether or not consecutive, during any 30 consecutive trading days ending on, and including, the trading day immediately before the date we send the related redemption notice; and (2) the trading day immediately before the date we send such notice. The redemption price will be equal to the principal amount of the 2026 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

Upon a fundamental change (as defined in the 2026 Indenture), holders may, subject to certain exceptions, require us to purchase their 2026 Notes in whole or in part for cash at a price equal to the principal amount of the 2026 Notes to be purchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date (as defined in the 2026 Indenture). In addition, upon a Make-Whole Fundamental Change (as defined in the 2026 Indenture), we will, under certain circumstances, increase the applicable conversion rate for a holder that elects to convert its 2026 Notes in connection with such Make-Whole Fundamental Change. No adjustment to the conversion rate will be made if the stock price in such Make-Whole Fundamental Change is either less than \$44.23 per share or greater than \$210.00 per share. We will not increase the conversion rate to an amount that exceeds 22.6090 shares per \$1 principal amount of 2026 Notes, subject to adjustment. The 2026 Indenture also contains a customary merger covenant.

Under the 2026 Indenture, the 2026 Notes may be accelerated upon the occurrence of certain customary events of default. If certain bankruptcy and insolvency-related events of default with respect to us occur, the principal of, and accrued and unpaid interest on, all of the then outstanding 2026 Notes shall automatically become due and payable. If any other event of default occurs and is continuing, the 2026 Trustee by notice to us, or the holders of the 2026 Notes of at least 25% in principal amount of the outstanding 2026 Notes by notice to us and the 2026 Trustee, may declare the principal of, and accrued and unpaid interest on, all of the then outstanding 2026 Notes to be due and payable. Notwithstanding the foregoing, the 2026 Indenture provides that, to the extent we elect, the sole remedy for an event of default relating to certain failures by us to comply with reporting covenant in the 2026 Indenture consists exclusively of the right to receive additional interest on the 2026 Notes.

As previously discussed, we early adopted ASU 2020-06 as of January 1, 2021 and concluded the 2026 Notes will be accounted for as debt, with no bifurcation of the embedded conversion feature. Transaction costs were recorded as a direct deduction from the related debt liability in the consolidated balance sheet and are amortized to interest expense over the term of the 2026 Notes. The effective interest rate for the 2026 Notes is 0.658%.

As of December 31, 2021, none of the conditions of the 2026 Notes to early convert has been met.

The 2026 Notes are our senior, unsecured obligations that rank senior in right of payment to our future indebtedness that is expressly subordinated to the 2026 Notes, rank equally in right of payment with our existing and future senior unsecured indebtedness that is not so subordinated (including our 2027 Notes, see the section titled “—2027 Notes” below), effectively subordinated to our existing and future secured indebtedness (including obligations under our senior secured credit facilities), to the extent of the value of the collateral securing such indebtedness, and structurally subordinated to all existing and future indebtedness and other liabilities (including trade payables and preferred equity (to the extent we are not a holder thereof)) of our subsidiaries. The 2026 Notes contain both affirmative and negative covenants. As of December 31, 2021, we were in compliance with all covenants in the 2026 Notes.

*Capped Call Options.* In connection with the pricing of the 2026 Notes, we entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. We incurred \$150 of expenses in connection with the capped call options. The capped call options are expected to reduce potential dilution to our Class B Common Stock upon any conversion of 2026 Notes and/or offset any cash payments we are required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. The cap price of the capped call options is initially \$72.9795 per share, which represents a premium of 65% above the last reported sale price per share of our Class B Common Stock on the Nasdaq Global Select Market on January 21, 2021 and is subject to customary adjustments under the terms of the capped call options.

The capped call options were entered into in conjunction with the issuance of the 2026 Notes, however, they are legally separate agreements that can be separately exercised, with the receipt of shares under the capped call options having no effect on the 2026 Notes, and are legally detachable. As the capped call options are both legally detachable and separately exercisable from the 2026 Notes, we account for the capped call options separately from the 2026 Notes. The capped call options are indexed to our own common stock and classified in stockholders’ equity. As such, the premiums paid for the capped call options have been included as a net reduction to *Additional paid-in capital* in the consolidated balance sheet.

#### **Comparison of the Year Ended December 31, 2021 and 2020**

The following table summarizes our cash flow activities for the years ended December 31, 2021 and 2020:

	Year Ended December 31,	
	2021	2020
Net Cash Provided By (Used In):		
Operating activities	\$ 288,024	\$ 258,340
Investing activities	(1,056,603)	(117,333)
Financing activities	982,582	(136,511)

#### *Operating activities*

Net cash provided by operating activities was \$288,024 for the year ended December 31, 2021. Compared to the prior year, net cash provided by operating activities was higher by \$29,684 due to a net increase in non-cash adjustments of \$22,933 and a net increase in net cash flows from the change in operating assets and liabilities of \$40,080, partially offset by a decrease in net income of \$33,329. The net increase in cash flows from the change in operating assets and liabilities was primarily due to the increase in deferred compensation plan liabilities (as previously discussed above), partially offset by an increase in accounts receivable due to revenue growth and the timing of collections from accounts.

For the year ended December 31, 2020, net cash provided by operating activities was \$258,340 due to net income of \$126,521 increased by \$60,747 of non-cash adjustments and \$71,072 from changes in operating assets and liabilities.

#### *Investing activities*

Net cash used in investing activities was \$1,056,603 for the year ended December 31, 2021, primarily due to \$17,539 related to purchases of property and equipment and investment in capitalized software and \$1,034,983 in acquisition related payments, net of cash acquired.

For the year ended December 31, 2020, net cash used in investing activities was \$117,333, primarily due to \$16,447 related to purchases of property and equipment and investment in capitalized software and \$93,032 in acquisition related payments, net of cash acquired.

#### *Financing activities*

Net cash provided by financing activities was \$982,582 for the year ended December 31, 2021. Compared to the prior year, net cash provided by financing activities increased by \$1,119,093, primarily due to the net proceeds from the convertible senior notes of \$1,233,377 in 2021 and a decrease in payments for dividends of \$389,250, partially offset by \$294,429 of proceeds from our follow-on public offering, net of expenses, in 2020, a decrease in net borrowings of \$58,745 under the Credit Facility, and the purchase of capped call options of \$51,605 in 2021.

For the year ended December 31, 2020, net cash used in financing activities was \$136,511, primarily due to payments of dividends of \$422,646, partially offset by \$294,429 of proceeds from our follow-on public offering, net of expenses.

#### ***Subsequent Event after December 31, 2021***

On January 31, 2022, we completed the acquisition of Power Line Systems, a leader in software for the design of overhead electric power transmission lines and their structures, for approximately \$700,000 in cash, net of cash acquired, and subject to customary adjustments including for working capital. We used readily available cash and borrowings under our bank credit facility to fund the transaction. The acquisition is not expected to be material to our consolidated statements of operations. The acquisition is expected to be material to our financial position and cash flows.

#### **Contractual Obligations and Other Commitments:**

As of December 31, 2021, our future contractual obligations were related to debt (see Note 10), leases (see Note 8), purchase obligations (see Note 18), deferred compensation plan liabilities (see Note 12), and contingent and non-contingent consideration from acquisitions (see Note 4). For information about those obligations, see the above referenced notes to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K, which are incorporated by reference into this section. As of December 31, 2021, our purchase obligations were \$50,329, with \$34,889 expected to be paid within one year and \$15,440 thereafter. Purchase obligations include the non-cancelable future cash purchase commitment for services related to the provisioning of our hosted software solutions. Our purchase obligations are in addition to amounts included in current liabilities and prepaid expenses in our consolidated balance sheet.

As noted above, on January 31, 2022, we completed the acquisition of Power Line Systems for approximately \$700,000 in cash, net of cash acquired, and subject to customary adjustments including for working capital. We used readily available cash and borrowings under our bank credit facility to fund the transaction.

### **Critical Accounting Policies and Estimates:**

Our consolidated financial statements are prepared in conformity with U.S. GAAP. In preparing our consolidated financial statements, we make assumptions, judgments, and estimates that can have a significant impact on amounts reported in the consolidated financial statements. We base our assumptions, judgments, and estimates on historical experience and various other factors that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates under different assumptions or conditions. We regularly reevaluate our assumptions, judgments, and estimates. Our significant accounting policies are described in Note 1 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.

An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably possible could materially impact the financial statements. We believe that the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our consolidated financial statements.

*Revenue recognition.* We recognize revenue in accordance with Topic 606. For a full description of our revenue accounting policy, see Note 1 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K. We generate revenues from subscriptions, perpetual licenses, and services.

Our contracts with customers may include promises to transfer licenses (perpetual or term-based), maintenance, and services to a user. Judgment is required to determine if the promises are separate performance obligations, and if so, the allocation of the transaction price to each performance obligation. When an arrangement includes multiple performance obligations which are concurrently delivered and have the same pattern of transfer to the customer, we account for those performance obligations as a single performance obligation. For contracts with more than one performance obligation, the transaction price is allocated among the performance obligations in an amount that depicts the relative SSP of each obligation. Judgment is required to determine the SSP for each distinct performance obligation. In instances where SSP is not directly observable, such as when we do not sell the product or service separately, we determine the SSP using information that may include market conditions and other observable inputs. We use a range of amounts to estimate SSP when we sell each of the products and services separately and need to determine whether there is a discount that should be allocated based on the relative SSP of the various products and services.

Our SELECT agreement provides users with perpetual licenses a right to exchange software for other eligible perpetual licenses on an annual basis upon renewal. We refer to this option as portfolio balancing and concluded that the portfolio balancing feature represents a material right resulting in the deferral of the associated revenue. Judgment is required to estimate the percentage of users who may elect to portfolio balance and considers inputs such as historical user elections. This feature is available once per term and must be exercised prior to the respective renewal term. We recognize the associated revenue upon election or when the portfolio balancing right expires. This right is included in the initial and subsequent renewal terms and we reestablish the revenue deferral for the material right upon the beginning of the renewal term. Portfolio balancing exchange rights are included in *Deferred revenues* in the consolidated balance sheets.

*Business combinations.* We allocate the fair value of the consideration transferred to the assets acquired and liabilities assumed, including trademarks, customer relationships, in-process research and development, and acquired software and technology, based on their estimated fair values at the acquisition date. Any residual purchase price is recorded as goodwill. The purchase price allocation requires us to make significant estimates and assumptions, especially at the acquisition date, with respect to intangible assets and deferred revenue obligations.

Although we believe the assumptions and estimates we have made are reasonable, they are based in part on historical experience and information obtained from the management of the acquired companies and are inherently uncertain. Examples of critical estimates used in valuing certain of the intangible assets we have acquired or may acquire in the future include but are not limited to:

- future expected cash flows from sales, maintenance agreements, and acquired developed technologies;
- the acquired company's trade name and customer relationships as well as assumptions about the period of time the acquired trade name and customer relationships will continue to be used in our product portfolio;
- expected costs to develop the in-process research and development into commercially viable software and estimated cash flows from the projects when completed; and
- discount rates used to determine the present value of estimated future cash flows.

These estimates are inherently uncertain and unpredictable, and if different estimates were used the purchase price for the acquisition could be allocated to the acquired assets and liabilities differently from the allocation that we have made. In addition, unanticipated events and circumstances may occur, which may affect the accuracy or validity of such estimates, and, if such events occur, we may be required to record a charge against the value ascribed to an acquired asset or an increase in the amounts recorded for assumed liabilities.

*Goodwill and other intangible assets.* Intangible assets arise from acquisitions and principally consist of goodwill, trademarks, customer relationships, and acquired software and technology. Intangible assets, other than goodwill, are amortized on a straight-line basis over their estimated useful lives, which range from three to ten years.

Goodwill consists of the excess of cost over the fair value of net assets acquired in business combinations. Goodwill is not amortized. Instead, it is tested annually for impairment, or more frequently if events occur or circumstances change that would more likely than not reduce its fair value below its carrying amount. We operate as a single reporting unit.

In testing for goodwill impairment, we may first qualitatively assess whether it is more likely than not (a likelihood of more than 50 percent) that a goodwill impairment exists. If it is determined that a quantitative assessment is required, we will recognize goodwill impairment as the difference between the carrying amount of the reporting unit and its fair value, but not to exceed the carrying amount of goodwill within the reporting unit. Based upon our most recent annual impairment assessment completed as of October 1, 2021, there were no indicators of impairment, and no impairment losses were recorded. There was no impairment of goodwill as a result of our annual impairment assessments conducted for the years ended December 31, 2021, 2020, and 2019.

*Income taxes.* We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the consolidated financial statements. Under this method, deferred tax assets and liabilities are determined based on net operating loss carryforwards, credit carryforwards, and temporary differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the items are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period of the enactment date.

We record net deferred tax assets to the extent we believe the assets will more likely than not be realized. In making such determination, we consider all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and recent financial operations. In the event we determine that we will not be able to realize deferred income tax assets in the future in excess of our net recorded amount, an adjustment to the valuation allowance would be recorded that would increase the provision for income taxes.

We perform a quarterly assessment of the recoverability of the net deferred tax assets and believe that we will generate sufficient future taxable income in appropriate tax jurisdictions to realize the net deferred tax assets. Our judgment regarding future profitability may change due to future market conditions and other factors, including intercompany transfer pricing adjustments. Any change in future profitability may require material adjustments to these net deferred tax assets, resulting in a reduction in net income in the period when such determination is made. We believe our tax positions, including intercompany transfer pricing policies, are consistent with the tax laws in the jurisdictions in which we conduct our business. It is possible that these positions may be challenged by jurisdictional tax authorities and may have a significant impact on our effective tax rate.

We are subject to income taxes in the U.S. and in numerous foreign jurisdictions. As part of the process of preparing our consolidated financial statements, we are required to calculate our income tax expense based on taxable income by jurisdiction. There are many transactions and calculations about which the ultimate tax outcome is uncertain. As a result, our calculations involve estimates by management. Some of these uncertainties arise as a consequence of revenue-sharing, cost-reimbursement, and transfer pricing arrangements among related entities, and the differing tax treatment of revenue and cost items across various jurisdictions. If we were compelled to revise or to account differently for our arrangements, that revision could affect our tax liability. While we believe the positions we have taken are appropriate, we record reserves for taxes to address potential exposures involving tax positions that we believe could be challenged by taxing authorities. We record a benefit on a tax position when we determine that it is more likely than not that the position is sustainable upon examination, including resolution of any related appeals or litigation processes, based on the technical merits of the position. For tax positions that are more likely than not to be sustained, we measure the tax position at the largest amount of benefit that has a greater than 50 percent likelihood of being realized when it is effectively settled. We review the tax reserves as circumstances warrant and adjust the reserves as events occur that affect our potential liability for additional taxes. We follow the applicable guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure, and transition with respect to uncertain tax positions. We recognize interest and penalties related to income taxes within the *(Provision) benefit for income taxes* line in the consolidated statements of operations. Accrued interest and penalties are included within the related tax liability line in the consolidated balance sheets.

*Fair value of common stock prior to IPO.* We were a privately held company with no active public market of our common stock prior to our IPO. Therefore, the estimated fair value of the common stock underlying our stock-based awards granted prior to our IPO was determined by our board of directors, with input from management and contemporaneous third-party valuations. We believe that our board of directors had the relevant experience and expertise to determine the fair value of our common stock prior to our IPO.

Prior to the IPO, and given the absence of a public trading market for our common stock, and in accordance with the American Institute of Certified Public Accountants practice guide, *Valuation of Privately-Held-Company Equity Securities Issued as Compensation*, our board of directors exercised reasonable judgment and considered numerous objective and subjective factors to determine the best estimate of the fair value of our common stock, including:

- contemporaneous independent valuations performed by an unrelated third-party valuation specialist;
- the nature of our business and its history;
- our operating and financial performance and forecast;
- present value of estimated future cash flows;
- the likelihood of achieving a liquidity event, such as an initial public offering, listing, or sale of our Company, given prevailing market condition and the nature and history of our business;
- any adjustment necessary to recognize a lack of marketability for our common stock;
- the market performance of comparable publicly traded companies; and

- the U.S. and global capital market conditions.

In valuing our common stock, our board of directors determined the equity value of our business generally using the income approach and the market comparable approach valuation methods.

The income approach estimates value based on the expectation of future cash flows that a company will generate such as cash earnings, cost savings, tax deductions, and proceeds from disposition. These future cash flows are discounted to their present values using a discount rate derived from an analysis of the cost of capital of comparable publicly traded companies in our industry or similar lines of business as of each valuation date and is adjusted to reflect the risks inherent in our cash flows.

The market comparable approach estimates value based on a comparison of the Company to comparable public companies in a similar line of business. To determine our peer group of companies, we considered public enterprises with similar operations and selected those that are similar to our size, stage of life cycle, and financial leverage. From the comparable companies, a representative market value multiple is determined and applied to our results of operations to estimate the value of the Company.

Application of these approaches involved the use of estimates, judgments, and assumptions that are highly complex and subjective, such as those regarding our expected future cash flows, cost savings and expenses, discount rates, market multiples, the selection of comparable companies, and the probability of possible future events.

**Emerging Growth Company:**

Effective December 31, 2021, we ceased to be an emerging growth company and are now categorized as a Large Accelerated Filer based upon the current market capitalization of the Company according to Rule 12b-2 of the Exchange Act. As a result, we must comply with all financial disclosure and governance requirements applicable to Large Accelerated Filers.

**Off-Balance Sheet Arrangements:**

We do not have any off-balance sheet arrangements, as defined by applicable SEC regulations.

**Recent Accounting Pronouncements:**

For information regarding recent accounting guidance and the impact of this guidance on our consolidated financial statements, see Note 2 to our consolidated financial statements included in Part II, Item 8 of this Annual Report on Form 10-K.



## Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in foreign currency rates, although we also have exposure due to potential changes in interest rates. We do not hold financial instruments for trading purposes.

*Foreign currency exchange risk.* Our revenues, earnings, cash flows, receivables, and payables are subject to fluctuations due to changes in foreign currency exchange rates. We regularly evaluate our foreign currency positions in the context of the natural hedging of revenues and expenses and corresponding exposure. We have concluded that our naturally hedged positions support our strategy and no incremental hedging strategies have been deployed. The primary currencies for which we have exchange rate exposure are the U.S. Dollar versus Euros, British Pounds, Australian Dollars, Canadian Dollars, Chinese Yuan Renminbi, and New Zealand Dollars. For the year ended December 31, 2021, approximately 59% of our total revenues are derived from outside of the U.S. and approximately 47% of our revenues are denominated in foreign currencies. In 2021, 53%, 13%, 7%, and 27% of our total revenues were denominated in U.S. Dollars, Euros, British Pounds, and other currencies, respectively, and 58%, 11%, 8%, and 23% of our aggregate cost of revenues and operating expenses were denominated in U.S. Dollars, Euros, British Pounds, and other currencies, respectively. Financial results therefore are affected by changes in foreign currency rates. We estimate that a 10% strengthening of the U.S. Dollar versus our other currencies would have lowered our 2021 annual operating income by approximately \$9.3 million.

*Interest rate risk.* We had cash and cash equivalents of \$329.3 million and \$122.0 million as of December 31, 2021 and 2020, respectively, which consisted of bank deposits and money market funds maintained at various financial institutions. The cash and cash equivalents are held primarily for working capital purposes. Such interest-earning instruments carry a degree of interest rate risk. To date, fluctuations in interest income have not been significant. The primary objective of our investment activities is to preserve principal while maximizing income without significantly increasing risk. The interest rates on our Credit Facility also fluctuate based on various market conditions that affect LIBOR, the prime rate, or the overnight bank funding effective rate. The cost of borrowing thereunder may be impacted as a result of our interest rate risk exposure. Interest rate risk associated with the Credit Facility is managed through an interest rate swap which we executed on March 31, 2020. Under the terms of the interest rate swap, we fixed our LIBOR borrowing rate at 0.73% on a notional amount of \$200.0 million and for a period of ten years. We do not enter into investments or derivative instruments for trading or speculative purposes. The fair value of our 2026 Notes and 2027 Notes is subject to interest rate risk, market risk, and other factors due to the conversion feature. The capped call options that were entered into concurrently with the issuance of our 2026 Notes and 2027 Notes were completed to reduce the potential dilution from the conversion of the 2026 Notes and 2027 Notes. The fair value of the 2026 Notes and 2027 Notes will generally increase as interest rates fall and decrease as interest rates rise. In addition, the fair value of the 2026 Notes and 2027 Notes will generally increase as our Class B Common Stock price increases and will generally decrease as the common stock price declines. The interest and market value changes affect the fair value of the 2026 Notes and 2027 Notes, but do not impact our financial position, results of operations, or cash flows due to the fixed nature of the debt obligation. Due to the short-term nature of our investments, we have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in interest rates. A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our consolidated financial statements.

*Inflation risk.* We do not believe that inflation has had a material effect on our business, financial condition, or results of operations.

## **Item 8. Financial Statements and Supplementary Data**

The information required by this item is included at the end of this report beginning on page F-1.

## **Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure**

None.

## **Item 9A. Controls and Procedures**

### ***Evaluation of Effectiveness of Disclosure Controls and Procedures***

Our management maintains disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) that are designed to provide reasonable assurance that information required to be disclosed in our reports filed or submitted under the Exchange Act is processed, recorded, summarized, and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer (our principal executive officer and principal financial officer, respectively), as appropriate, to allow for timely decisions regarding required disclosure.

We evaluated, under the supervision and with the participation of management, including our principal executive and principal financial officers, the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of December 31, 2021, our disclosure controls and procedures were effective at the reasonable assurance level.

Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our disclosure controls and procedures or our internal control over financial reporting will necessarily prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within Bentley Systems, Incorporated have been detected.

### ***Management’s Annual Report on Internal Control over Financial Reporting***

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934, as amended). Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2021. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in *Internal Control – Integrated Framework* (2013).

Our management has concluded that, as of December 31, 2021, our internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

The Company acquired Seequent Holdings Limited (“Seequent”) in June 2021. As permitted by the U.S. Securities and Exchange Commission staff interpretative guidance for newly acquired businesses, the Company excluded Seequent from management’s assessment of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2021. Seequent’s total assets and total revenues represent approximately 1.8% and 5.6%, respectively, of the Company’s total assets and total revenues, as of and for the year ended December 31, 2021.

Our independent registered public accounting firm, KPMG LLP, has issued an audit report on our internal control over financial reporting, which is included in Part II, Item 8 of this Annual Report on Form 10-K.

***Changes in Internal Control over Financial Reporting***

During the quarter ended December 31, 2021, management identified and remediated a material weakness in internal control over financial reporting related to user access controls to adequately restrict user and privileged access over certain information technology systems that support our financial reporting processes and to ensure appropriate segregation of duties. No misstatement arose as a result of this deficiency.

Except for the foregoing, there was no change in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a or 15d of the Exchange Act that occurred during the quarter ended December 31, 2021 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. Other Information**

None.

**Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections**

Not applicable.

## PART III

### Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to our definitive proxy statement for our 2022 Annual Meeting of Stockholders (the “2022 Proxy Statement”), which will be filed with the SEC not later than 120 days subsequent to December 31, 2021.

#### INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following sets forth certain information as of March 1, 2022, regarding our executive officers.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Gregory S. Bentley	66	Chief Executive Officer and President
Keith A. Bentley	63	Chief Technology Officer
Werner Andre	52	Chief Financial Officer and Chief Accounting Officer
Gus Bergsma	59	Chief Revenue Officer
Nicholas Cumins	45	Chief Operating Officer
David J. Hollister	56	Chief Investment Officer
David R. Shaman	56	Chief Legal Officer and Secretary

**Gregory S. Bentley** has served as our President since June 1996 and Chief Executive Officer since August 2000. Prior to joining us in 1991, Mr. Bentley founded and served as chief executive officer of Devon Systems International, Inc., a provider of financial trading software, which was sold to SunGard Data Systems, Inc. in 1987. Mr. Bentley served as a director of SunGard and a member of its audit committee from 1991 through 2005. He holds a B.S. in Economics and an M.B.A. in Finance and Decision Sciences from the Wharton School, University of Pennsylvania.

**Keith A. Bentley** co-founded our Company and has served as our Chief Technology Officer since 2000. Mr. Bentley previously served as our President from 1984 to 1995 and as the Chief Executive Officer from 1984 to 2000. Mr. Bentley is the principal architect of our technology directions and is the primary inventor on numerous Company patents. He holds a Bachelor’s degree in Electrical Engineering from the University of Delaware and an M.S. in Electrical Engineering from the University of Florida.

**Werner Andre** has served as our Chief Financial Officer since January 1, 2022 and is responsible for all aspects of finance including worldwide accounting, financial planning and analysis, tax, and treasury. Mr. Andre joined us in 2015 as Global Corporate Controller and serves as our Chief Accounting Officer since 2020. Prior to joining us, Mr. Andre served as the assistant corporate controller, international accounting and reporting, for Rockwood Holdings, Inc. from 2010 to 2015, and held several roles with PricewaterhouseCoopers LLP from 1995 to 2010. He is a Certified Public Accountant in the state of Pennsylvania, and holds B.S. and M.B.A. degrees in Accounting and Financial Reporting from the University for Economics and Business Administration in Vienna.

**Gus Bergsma** has served as our Chief Revenue Officer since 2016. Mr. Bergsma is responsible for our global accounts. Mr. Bergsma has held several executive management roles at the Company including global sales of structural and water applications, and all smaller- and medium-sized accounts. He holds a Bachelor’s degree and a Master’s degree in civil engineering from the University of California at Berkeley.

**Nicholas Cumins** has served as our Chief Operating Officer since January 1, 2022. Mr. Cumins is responsible for our sales and marketing, product, user success, and business operations globally. Mr. Cumins previously served as our Chief Product Officer since 2020. Prior to joining us, Mr. Cumins served as general manager of SAP Marketing Cloud, a comprehensive marketing automation platform, from 2018 to 2020. Mr. Cumins also served as chief product officer of ScytI, a platform for online voting, in Barcelona from 2016 to 2018, and senior vice president of product with OpenX, a pioneer in programmatic advertising, in Los Angeles from 2013 to 2016. He holds Masters degrees in Law and in Business from Paris II Panthéon-Assas University.

**David J. Hollister** has served as our Chief Investment Officer since January 1, 2022. Mr. Hollister previously served as our Chief Financial Officer since 2007 and Chief Operations Advancement Officer since 2016. As Chief Investment Officer, Mr. Hollister is responsible for our acquisition and investment activities, including our iTwin Ventures corporate venture capital fund, our Cohesive Companies digital integrator business, and certain other Bentley Acceleration activities. Prior to joining us, Mr. Hollister was the chief financial officer and a member of the board of directors of Broder Bros., Co. from 2004 to 2007. Mr. Hollister previously served as a director in the M&A Transaction Services practice at PricewaterhouseCoopers LLP, where he specialized in international transactions. He holds a Bachelor's degree in Business Administration from the University of Northern Colorado and an M.B.A. from the University of Michigan.

**David R. Shaman**, our Chief Legal Officer, has led our legal team since 2015 and is responsible for legal, regulatory compliance, government relations, and license compliance activities. Mr. Shaman previously served as Deputy General Counsel from 2006 to 2015. Prior to joining us in 1998, Mr. Shaman was an associate at the law firm Covington & Burling LLP. Mr. Shaman's international experience includes eight years leading our legal operations outside the United States, as well as tenures at the European Commission, Directorate-General for Informatics in Brussels and Harlequin Limited, a software company in Cambridge, United Kingdom. He holds a Bachelor's degree in Mathematics from the University of Pennsylvania, a J.D. from Harvard Law School, and a Diploma in Mathematical Statistics from Cambridge University.

#### **Item 11. Executive Compensation**

The information required by this item is incorporated by reference to our 2022 Proxy Statement, which will be filed with the SEC not later than 120 days subsequent to December 31, 2021.

#### **Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information required by this item is incorporated by reference to our 2022 Proxy Statement, which will be filed with the SEC not later than 120 days subsequent to December 31, 2021.

#### **Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information required by this item is incorporated by reference to our 2022 Proxy Statement, which will be filed with the SEC not later than 120 days subsequent to December 31, 2021.

#### **Item 14. Principal Accountant Fees and Services**

The information required by this item is incorporated by reference to our 2022 Proxy Statement, which will be filed with the SEC not later than 120 days subsequent to December 31, 2021.

## PART IV

### Item 15. Exhibit and Financial Statement Schedules

(a) The following documents are filed as part of this report:

- |   | Page                 |
|---|----------------------|
| 1. Financial Statements:  |                      |
| <a href="#">Reports of Independent Registered Public Accounting Firm</a>  | <a href="#">F-1</a>  |
| <a href="#">Consolidated Balance Sheets as of December 31, 2021 and 2020</a>  | <a href="#">F-6</a>  |
| <a href="#">Consolidated Statements of Operations for the years ended December 31, 2021, 2020, and 2019</a>   | <a href="#">F-7</a>  |
| <a href="#">Consolidated Statements of Comprehensive Income for the years ended December 31, 2021, 2020, and 2019</a>   | <a href="#">F-8</a>  |
| <a href="#">Consolidated Statements of Stockholders' Equity for the years ended December 31, 2021, 2020, and 2019</a>   | <a href="#">F-9</a>  |
| <a href="#">Consolidated Statements of Cash Flows for the years ended December 31, 2021, 2020, and 2019</a>   | <a href="#">F-10</a> |
| <a href="#">Notes to Consolidated Financial Statements</a>  | <a href="#">F-12</a> |
| 2. Financial Statement Schedules:   |                      |
| Financial statement schedules have been omitted since they are either not required, not applicable, or the information is included in the consolidated financial statements or notes thereto. |                      |
| 3. Exhibits:  |                      |

Exhibit Number	Description
3.1	<a href="#">Amended and Restated Certificate of Incorporation of Bentley Systems, Incorporated (filed as Exhibit 3.1 to our Current Report on Form 8-K filed on September 25, 2020 (File No. 001-39548) and incorporated herein by reference)</a>
3.2	<a href="#">Amended and Restated Bylaws of Bentley Systems, Incorporated (filed as Exhibit 3.2 to our Current Report on Form 8-K filed on September 25, 2020 (File No. 001-39548) and incorporated herein by reference)</a>
4.1	<a href="#">Form of Bentley Systems, Incorporated Class B common stock certificate (filed as Exhibit 4.1 to our Registration Statement on Form S-1/A filed on September 18, 2020 (File No. 333-248246) and incorporated herein by reference)</a>
4.2	<a href="#">Indenture, dated as of January 26, 2021, between Bentley Systems, Incorporated and Wilmington Trust, National Association, as trustee (filed as Exhibit 4.1 to our Current Report on Form 8-K filed on January 26, 2021 (File No. 001-39548) and incorporated herein by reference)</a>
4.3	<a href="#">Form of 0.125% Convertible Senior Note due 2026 (included as Exhibit A in Exhibit 4.1 to our Current Report on Form 8-K filed on January 26, 2021 (File No. 001-39548) and incorporated herein by reference)</a>
4.4	<a href="#">Indenture, dated as of June 28, 2021, between Bentley Systems, Incorporated and Wilmington Trust, National Association, as trustee (filed as Exhibit 4.1 to our Current Report on Form 8-K filed on June 29, 2021 (File No. 001-39548) and incorporated herein by reference)</a>
4.5	<a href="#">Form of 0.375% Convertible Senior Note due 2027 (included as Exhibit A in Exhibit 4.1 to our Current Report on Form 8-K filed on June 29, 2021 (File No. 001-39548) and incorporated herein by reference)</a>
4.6	<a href="#">Description of Bentley Systems, Incorporated Securities (filed as Exhibit 4.4 to our Annual Report on Form 10-K filed on March 2, 2021 (File No. 001-39548) and incorporated herein by reference)</a>

Exhibit Number	Description
10.1	<a href="#"><u>Form of Capped Call Confirmation relating to the 0.125% Convertible Senior Note due 2026 (filed as Exhibit 10.1 to our Current Report on Form 8-K filed on January 26, 2021 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.2	<a href="#"><u>Form of Capped Call Confirmation relating to the 0.375% Convertible Senior Note due 2027 (filed as Exhibit 10.1 to our Current Report on Form 8-K filed on June 29, 2021 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.3	<a href="#"><u>Amended and Restated Credit Agreement, dated as of December 19, 2017, by and among Bentley Systems, Incorporated, PNC Bank, National Association, as administrative agent, and the lenders party thereto (filed as Exhibit 10.1 to our Registration Statement on Form S-1 filed on August 21, 2020 (File No. 333-248246) and incorporated herein by reference)</u></a>
10.4	<a href="#"><u>First Amendment to Amended and Restated Credit Agreement, dated as of September 2, 2020, (filed as Exhibit 10.10 to our Registration Statement on Form S-1/A filed on September 8, 2020 (File No. 333-248246) and incorporated herein by reference)</u></a>
10.5	<a href="#"><u>Second Amendment to Amended and Restated Credit Agreement, dated as of January 25, 2021 (filed as Exhibit 10.2 to our Current Report on Form 8-K filed on January 26, 2021 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.6	<a href="#"><u>Third Amendment to Amended and Restated Credit Agreement, dated as of June 22, 2021 (filed as Exhibit 10.1 to our Current Report on Form 8-K filed on June 22, 2021 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.7	<a href="#"><u>Fourth Amendment to Amended and Restated Credit Agreement, dated as of December 22, 2021 (filed as Exhibit 10.1 to our Current Report on Form 8-K filed on December 29, 2021 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.8†	<a href="#"><u>Bentley Systems, Incorporated 2015 Equity Incentive Plan, as amended and restated effective as of May 29, 2018 (filed as Exhibit 10.6 to our Registration Statement on Form S-1 filed on August 21, 2020 (File No. 333-248246) and incorporated herein by reference)</u></a>
10.9†	<a href="#"><u>Bentley Systems, Incorporated 2020 Omnibus Incentive Plan (filed as Exhibit 10.1 to our Current Report on Form 8-K filed on September 25, 2020 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.10†*	<a href="#"><u>Amendment No. 1 to the Bentley Systems, Incorporated 2020 Omnibus Incentive Plan</u></a>
10.11†	<a href="#"><u>Bentley Systems, Incorporated Global Employee Stock Purchase Plan (filed as Exhibit 10.2 to our Current Report on Form 8-K filed on September 25, 2020 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.12†	<a href="#"><u>Bentley Systems, Incorporated Nonqualified Deferred Compensation Plan, as amended and restated effective as of September 22, 2020 (filed as Exhibit 10.3 to our Current Report on Form 8-K filed on September 25, 2020 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.13†	<a href="#"><u>Amendment No. 1 to the Bentley Systems, Incorporated Nonqualified Deferred Compensation Plan, as amended and restated effective as of September 22, 2020 (filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q filed on November 9, 2021 (File No. 001-39548) and incorporated herein by reference)</u></a>
10.14†	<a href="#"><u>Bentley Systems, Incorporated Nonqualified Deferred Compensation Plan for Non-Employee Directors, as amended and restated effective as of January 1, 2015 (filed as Exhibit 10.7 to our Registration Statement on Form S-1/A filed on September 8, 2020 (File No. 333-248246) and incorporated herein by reference)</u></a>
10.15†	<a href="#"><u>Bentley Systems, Incorporated Bonus Pool Plan, as amended and restated effective as of September 22, 2020 (filed as Exhibit 10.4 to our Current Report on Form 8-K filed on September 25, 2020 (File No. 001-39548) and incorporated herein by reference)</u></a>

Exhibit Number	Description
10.16	<a href="#">Common Stock Purchase Agreement, by and among Bentley Systems, Incorporated, Siemens AG, and the persons listed as “Key Holders” therein, dated September 23, 2016, as amended on October 28, 2016, and April 23, 2018 (filed as Exhibit 10.2 to our Registration Statement on Form S-1 filed on August 21, 2020 (File No. 333-248246) and incorporated herein by reference)</a>
10.17 <sup>+</sup>	<a href="#">Side Letter Agreement, dated as of March 11, 2021, by and among Bentley Systems, Incorporated, Sequent Holdings Limited and the Sellers named therein (filed as Exhibit 10.1 to our Quarterly Report on Form 10-Q filed on May 11, 2021 (File No. 001-39548) and incorporated herein by reference)</a>
10.18	<a href="#">Amendment to Side Letter Agreement, dated as of March 11, 2021, by and between Bentley Systems, Incorporated and Accel-KKR Capital Partners V, LP (filed as Exhibit 10.2 to our Quarterly Report on Form 10-Q filed on May 11, 2021 (File No. 001-39548) and incorporated herein by reference)</a>
21.1*	<a href="#">List of Subsidiaries</a>
23.1*	<a href="#">Consent of Independent Registered Public Accounting Firm</a>
31.1*	<a href="#">Certification of CEO pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended</a>
31.2*	<a href="#">Certification of CFO pursuant to Rule 13a-14(a) and Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended</a>
32.1*	<a href="#">Certification of CEO and CFO Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
101.INS	Inline XBRL Instance Document—the instance document does not appear in the Interactive Data File as its XBRL tags are embedded within the Inline XBRL document
101.SCH	Inline XBRL Taxonomy Extension Schema
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase
104	Cover page formatted as Inline XBRL and contained in Exhibit 101

† Management contract or compensatory plan or arrangement.

+ Certain portions of this exhibit have been omitted.

\* Filed or furnished herewith. The certification attached as Exhibit 32.1 that accompanies this Annual Report on Form 10-K is not deemed filed with the U.S. Securities and Exchange Commission and is not to be incorporated by reference into any filing of Bentley Systems, Incorporated under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K, irrespective of any general incorporation language contained in such filing.



(b) Exhibits:

We hereby file the exhibits listed in the attached Exhibit Index.

(c) Financial Statement Schedules:

None.

**Item 16. Form 10-K Summary**

None.



## Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors  
Bentley Systems, Incorporated:

### *Opinion on Internal Control Over Financial Reporting*

We have audited Bentley Systems, Incorporated and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements), and our report dated March 1, 2022 expressed an unqualified opinion on those consolidated financial statements.

The Company acquired Seequent Holdings Limited during 2021, and management excluded from its assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2021, Seequent Holdings Limited's internal control over financial reporting associated with total assets and total revenues of approximately 1.8% and 5.6%, respectively of the Company's total assets and revenues included in the consolidated financial statements of the Company as of and for the year ended December 31, 2021. Our audit of internal control over financial reporting of the Company also excluded an evaluation of the internal control over financial reporting of Seequent Holdings Limited.

### *Basis for Opinion*

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

*Definition and Limitations of Internal Control Over Financial Reporting*

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ KPMG LLP

Philadelphia, Pennsylvania  
March 1, 2022

## Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors  
Bentley Systems, Incorporated:

### *Opinion on the Consolidated Financial Statements*

We have audited the accompanying consolidated balance sheets of Bentley Systems, Incorporated and subsidiaries (the Company) as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2021, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2021, based on criteria established in *Internal Control – Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 1, 2022 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

### *Change in Accounting Principle*

As discussed in Note 1 to the consolidated financial statements, the Company has changed its method of accounting for leases as of January 1, 2020 due to the adoption of Topic 842, *Leases*.

### *Basis for Opinion*

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

### *Critical Audit Matters*

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

*Evaluation of the fair value of certain customer relationships acquired through business combinations*

As discussed in Note 4 to the consolidated financial statements, the Company consummated 13 business combinations for total consideration of \$1,269.8 million during the year ended December 31, 2021. These acquisitions were accounted for under the acquisition method of accounting for business combinations and the purchase prices were allocated to the assets acquired and liabilities assumed based on their respective fair values, which included a fair value allocated to the acquired customer relationships that totaled \$158.6 million based on an income method of valuation. The determination of the acquisition date fair value of the acquired customer relationships required the Company to make assumptions regarding estimated future cash flows and discount rates.

We identified the evaluation of the fair value of certain customer relationships acquired through business combinations as a critical audit matter. Specifically, a high degree of subjective auditor judgment was required to evaluate the estimated future revenues, future operating margins, and discount rates used to value these customer relationships due to their estimation uncertainty. Additionally, assessment of the discount rate assumptions required valuation professionals with specialized skills and knowledge.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's acquisition-date valuation processes to value the acquired customer relationships, including controls related to the development of the assumptions related to estimated future revenues, future operating margins, and discount rates. We evaluated the reasonableness of management's estimated future revenues and operating margins assumptions for certain acquired customer relationships by comparing the estimates to historical results and to information included in industry and analyst reports and selected peer company reports. We involved valuation professionals with specialized skills and knowledge for certain business combinations, who assisted in independently developing a range of discount rates based on publicly available market data for comparable entities and comparing them to the Company's discount rates.

*Evaluation of the standalone selling price for certain term license subscriptions and portfolio balancing material rights*

As discussed in Note 3 to the consolidated financial statements, the Company recognized subscription revenue of \$812.8 million for the year ended December 31, 2021, a portion of which relates to certain term license subscriptions and portfolio balancing material rights. The Company allocates the transaction price to each distinct performance obligation, including portfolio balancing material rights based upon their relative standalone selling prices (SSPs). In instances where a performance obligation or portfolio balancing material right does not have directly observable SSPs, the Company maximizes the use of other observable inputs to estimate SSPs. For the portfolio balancing material rights, the Company uses historical user elections to estimate future user elections, which are used to estimate the SSPs.

We identified the evaluation of the SSPs for certain term license subscriptions and portfolio balancing material rights as a critical audit matter. Specifically, there was a high degree of subjective auditor judgment involved in assessing the nature and sufficiency of the evidence obtained to support the Company's determination of SSPs for certain term licenses and the portfolio balancing material rights.

The following are the primary procedures we performed to address this critical audit matter. We evaluated the design and tested the operating effectiveness of certain internal controls related to the Company's revenue process, including controls over the development of SSPs. We obtained and inspected the Company's SSP analysis for certain term licenses and compared the estimated SSPs to a selection of historical disaggregated sales data that reflected the discounts from list price. For certain term licenses, we also obtained the Company's pricing policies and practices and compared them to the SSPs determined. We tested the historical user elections for the portfolio balancing material rights by sampling user elections and comparing them to signed revenue contracts. We evaluated the sufficiency of audit evidence obtained by assessing the results of procedures performed, including the appropriateness of the nature of such evidence.

/s/ KPMG LLP

We have served as the Company's auditor since 2002.

Philadelphia, Pennsylvania

March 1, 2022

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Consolidated Balance Sheets**  
(in thousands, except share and per share data)

	December 31,	
	2021	2020
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 329,337	\$ 122,006
Accounts receivable	241,807	195,782
Allowance for doubtful accounts	(6,541)	(5,759)
Prepaid income taxes	16,880	3,535
Prepaid and other current assets	34,348	24,694
Total current assets	615,831	340,258
Property and equipment, net	31,823	28,414
Operating lease right-of-use assets	50,818	46,128
Intangible assets, net	245,834	45,627
Goodwill	1,588,477	581,174
Investments	6,438	5,691
Deferred income taxes	71,376	39,224
Other assets	48,646	39,519
Total assets	<u>\$ 2,659,243</u>	<u>\$ 1,126,035</u>
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 16,483	\$ 16,492
Accruals and other current liabilities	323,603	226,793
Deferred revenues	224,610	202,294
Operating lease liabilities	17,482	16,610
Income taxes payable	6,696	3,366
Current portion of long-term debt	5,000	—
Total current liabilities	593,874	465,555
Long-term debt	1,430,992	246,000
Deferred compensation plan liabilities	94,890	2,422
Long-term operating lease liabilities	35,274	31,767
Deferred revenues	7,983	7,020
Deferred income taxes	65,014	10,849
Income taxes payable	7,725	7,883
Other liabilities	14,269	12,940
Total liabilities	2,250,021	784,436
Commitments and contingencies (Note 18)		
Stockholders' equity:		
Preferred stock, \$0.01 par value, authorized 100,000,000 shares; none issued or outstanding as of December 31, 2021 and 2020	—	—
Class A Common Stock, \$0.01 par value, authorized 100,000,000 shares; issued and outstanding 11,601,757 shares as of December 31, 2021 and 2020, and Class B Common Stock, \$0.01 par value, authorized 1,800,000,000 shares; issued and outstanding 270,924,962 and 260,552,747 shares as of December 31, 2021 and 2020, respectively	2,825	2,722
Additional paid-in capital	937,805	741,113
Accumulated other comprehensive loss	(91,774)	(26,233)
Accumulated deficit	(439,634)	(376,003)
Total stockholders' equity	409,222	341,599
Total liabilities and stockholders' equity	<u>\$ 2,659,243</u>	<u>\$ 1,126,035</u>

See accompanying notes to consolidated financial statements.





**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Consolidated Statements of Operations**  
(in thousands, except share and per share data)

	Year Ended December 31,		
	2021	2020	2019
<b>Revenues:</b>			
Subscriptions	\$ 812,807	\$ 679,273	\$ 608,300
Perpetual licenses	53,080	57,382	59,693
Subscriptions and licenses	865,887	736,655	667,993
Services	99,159	64,889	68,661
Total revenues	965,046	801,544	736,654
<b>Cost of revenues:</b>			
Cost of subscriptions and licenses	124,321	95,803	71,578
Cost of services	92,218	71,352	72,572
Total cost of revenues	216,539	167,155	144,150
Gross profit	748,507	634,389	592,504
<b>Operating expenses:</b>			
Research and development	220,915	185,515	183,552
Selling and marketing	162,240	143,791	155,294
General and administrative	150,116	113,274	97,172
Deferred compensation plan	95,046	177	408
Amortization of purchased intangibles	25,601	15,352	14,213
Expenses associated with initial public offering	—	26,130	—
Total operating expenses	653,918	484,239	450,639
Income from operations	94,589	150,150	141,865
Interest expense, net	(12,491)	(7,476)	(8,199)
Other income (expense), net	11,231	24,946	(5,557)
Income before income taxes	93,329	167,620	128,109
Benefit (provision) for income taxes	3,448	(38,625)	(23,738)
Loss from investment accounted for using the equity method, net of tax	(3,585)	(2,474)	(1,275)
Net income	93,192	126,521	103,096
Less: Net income attributable to participating securities	(9)	(234)	(8)
Net income attributable to Class A and Class B common stockholders	\$ 93,183	\$ 126,287	\$ 103,088
<b>Per share information:</b>			
Net income per share, basic	\$ 0.30	\$ 0.44	\$ 0.36
Net income per share, diluted	\$ 0.30	\$ 0.42	\$ 0.35
Weighted average shares, basic	305,711,345	289,863,272	284,625,642
Weighted average shares, diluted	314,610,814	299,371,129	293,796,707

See accompanying notes to consolidated financial statements.

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Consolidated Statements of Comprehensive Income**  
(in thousands)

	Year Ended December 31,		
	2021	2020	2019
Net income	\$ 93,192	\$ 126,521	\$ 103,096
Other comprehensive (loss) income, net of taxes:			
Foreign currency translation adjustments	(65,648)	(2,311)	5,959
Actuarial gain (loss) on retirement plan, net of tax effect of \$(44), \$(1), and \$203, respectively	107	5	(472)
Total other comprehensive (loss) income, net of taxes	(65,541)	(2,306)	5,487
Comprehensive income	\$ 27,651	\$ 124,215	\$ 108,583

See accompanying notes to consolidated financial statements.

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Consolidated Statements of Stockholders' Equity**  
(in thousands, except share data)

	Class A and Class B Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity
	Shares	Par Value				
Balance, December 31, 2018	250,283,513	\$ 2,502	\$ 392,896	\$ (29,414)	\$ (218,553)	\$ 147,431
Cumulative effect of accounting changes	—	—	—	—	107,822	107,822
Net income	—	—	—	—	103,096	103,096
Other comprehensive income	—	—	—	5,487	—	5,487
Dividends declared	—	—	—	—	(25,390)	(25,390)
Profit-sharing plan shares, net	(318,203)	(3)	—	—	(2,414)	(2,417)
Shares issued in connection with deferred compensation plan, net	2,322,983	23	—	—	(5,632)	(5,609)
Deferred compensation plan elective participant deferrals and vesting of awards	—	—	3,586	—	—	3,586
Payment of shareholder Put and Call rights	(1,126,747)	(11)	—	—	(8,827)	(8,838)
Common Stock Purchase Agreement, net	64,509	—	466	—	(48)	418
Stock option exercises, net	3,214,542	33	3,579	—	(2,309)	1,303
Stock-based compensation expense	—	—	8,091	—	—	8,091
Shares related to restricted stock, net	395,336	4	(4)	—	(399)	(399)
Other	7,016	—	53	—	(15)	38
Balance, December 31, 2019	254,842,949	2,548	408,667	(23,927)	(52,669)	334,619
Net income	—	—	—	—	126,521	126,521
Other comprehensive loss	—	—	—	(2,306)	—	(2,306)
Class B Common Stock follow-on offering, net of expenses of \$12,898	9,603,965	96	294,333	—	—	294,429
Dividends declared	—	—	—	—	(424,018)	(424,018)
Profit-sharing plan shares, net	(549,834)	(5)	—	—	(6,965)	(6,970)
Shares issued in connection with deferred compensation plan, net	3,081,607	31	—	—	(4,656)	(4,625)
Deferred compensation plan elective participant deferrals	—	—	3,530	—	—	3,530
Payment of shareholder Put and Call rights	(128,007)	(1)	—	—	(1,453)	(1,454)
Common Stock Purchase Agreement, net	—	—	—	—	(57)	(57)
Stock option exercises, net	4,060,839	41	9,070	—	(4,755)	4,356
Shares issued for stock grants, net	21,956	—	319	—	—	319
Stock-based compensation expense	—	—	25,194	—	—	25,194
Shares related to restricted stock, net	1,221,029	12	—	—	(7,951)	(7,939)
Balance, December 31, 2020	272,154,504	2,722	741,113	(26,233)	(376,003)	341,599
Net income	—	—	—	—	93,192	93,192
Other comprehensive loss	—	—	—	(65,541)	—	(65,541)
Shares issued related to acquisition	3,141,342	31	182,359	—	—	182,390
Purchase of capped call options, net of tax of \$12,871	—	—	(38,734)	—	—	(38,734)
Dividends declared	—	—	—	—	(33,537)	(33,537)
Shares issued in connection with deferred compensation plan, net	2,378,645	24	—	—	(69,031)	(69,007)
Deferred compensation plan elective participant deferrals	—	—	2,619	—	—	2,619
Deferred compensation plan modification	—	—	(4,739)	—	—	(4,739)
Shares issued in connection with Executive Bonus Plan, net	238,755	2	20,951	—	(8,739)	12,214
Shares issued in connection with employee stock purchase plan, net	104,716	1	3,845	—	(438)	3,408
Stock option exercises, net	4,587,053	46	5,559	—	(37,785)	(32,180)
Shares issued for stock grants, net	7,824	—	450	—	—	450
Stock-based compensation expense	—	—	24,382	—	—	24,382
Shares related to restricted stock, net	(86,120)	(1)	—	—	(7,293)	(7,294)
Balance, December 31, 2021	282,526,719	\$ 2,825	\$ 937,805	\$ (91,774)	\$ (439,634)	\$ 409,222

See accompanying notes to consolidated financial statements.

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Consolidated Statements of Cash Flows**  
(in thousands)

	Year Ended December 31,		
	2021	2020	2019
<b>Cash flows from operating activities:</b>			
Net income	\$ 93,192	\$ 126,521	\$ 103,096
<b>Adjustments to reconcile net income to net cash provided by operating activities:</b>			
Depreciation and amortization	52,793	36,117	32,160
Bad debt allowance (recovery)	1,203	(1,000)	862
Deferred income taxes	(19,745)	16,246	732
Stock-based compensation expense	49,045	32,114	8,091
Amortization and write-off of deferred debt issuance costs	5,955	985	553
Change in fair value of derivative	(9,770)	(347)	159
Change in fair value of contingent consideration	550	(1,340)	62
Foreign currency remeasurement loss (gain)	64	(24,502)	5,311
Loss from investment accounted for using the equity method, net of tax	3,585	2,474	1,275
<b>Changes in assets and liabilities, net of effect from acquisitions:</b>			
Accounts receivable	(35,519)	12,388	(21,152)
Prepaid and other assets	14,260	11,705	(668)
Accounts payable, accruals, and other liabilities	50,077	47,656	41,880
Deferred compensation plan liabilities	92,926	3,706	3,994
Deferred revenues	5,340	(565)	(268)
Income taxes payable, net of prepaid income taxes	(15,932)	(3,818)	(5,314)
Net cash provided by operating activities	<u>288,024</u>	<u>258,340</u>	<u>170,773</u>
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment and investment in capitalized software	(17,539)	(16,447)	(16,639)
Acquisitions, net of cash acquired	(1,034,983)	(93,032)	(34,054)
Other investing activities	(4,081)	(7,854)	(3,000)
Net cash used in investing activities	<u>(1,056,603)</u>	<u>(117,333)</u>	<u>(53,693)</u>
<b>Cash flows from financing activities:</b>			
Proceeds from credit facilities	745,310	550,875	191,250
Payments of credit facilities	(991,310)	(538,625)	(216,250)
Proceeds from convertible senior notes, net of discounts and commissions	1,233,377	—	—
Payments of debt issuance costs	(5,643)	(432)	—
Purchase of capped call options	(51,605)	—	—
Proceeds from term loans	199,505	125,000	—
Repayment of term loan	—	(125,000)	—
Payments of financing leases	(197)	(189)	—
Payments of acquisition debt and other consideration	(2,371)	(3,425)	(11,029)
Proceeds from Class B Common Stock follow-on offering, net of underwriters' discounts and commissions	—	295,802	—
Payments of Class B Common Stock follow-on offering expenses	—	(1,373)	—
Payments of dividends	(33,396)	(422,646)	(24,989)
Payments for shares acquired including shares withheld for taxes	(120,539)	(83,975)	(24,166)
Proceeds from Common Stock Purchase Agreement	—	58,349	4,510
Proceeds from stock purchases under employee stock purchase plan	3,846	—	—
Proceeds from exercise of stock options	5,605	9,128	3,626
Net cash provided by (used in) financing activities	<u>982,582</u>	<u>(136,511)</u>	<u>(77,048)</u>
Effect of exchange rate changes on cash and cash equivalents	<u>(6,672)</u>	<u>(3,591)</u>	<u>(114)</u>
Increase in cash and cash equivalents	207,331	905	39,918
Cash and cash equivalents, beginning of year	122,006	121,101	81,183
Cash and cash equivalents, end of year	<u>\$ 329,337</u>	<u>\$ 122,006</u>	<u>\$ 121,101</u>

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Consolidated Statements of Cash Flows**  
(in thousands)

	Year Ended December 31,		
	2021	2020	2019
<b>Supplemental information:</b>			
Cash paid for income taxes	\$ 40,203	\$ 28,986	\$ 27,907
Income tax refunds	9,372	3,863	1,752
Interest paid	4,631	8,012	9,221
<b>Non-cash investing and financing activities:</b>			
Shares issued related to acquisition	182,390	—	—
Contingent acquisition consideration	4,544	2,380	4,498
Deferred, non-contingent consideration, net	10,090	1,416	—
Term loan expenses included in <i>Accruals and other current liabilities</i>	45	—	—
Share-settled Executive Bonus Plan awards	20,953	—	—
Deferred compensation plan elective participant deferrals	2,619	3,530	3,586

See accompanying notes to consolidated financial statements.

**BENTLEY SYSTEMS, INCORPORATED AND SUBSIDIARIES**  
**Notes to Consolidated Financial Statements**  
**(in thousands, except share and per share data)**

**Note 1: Description of Business and Summary of Significant Accounting Policies**

**Business and Operations** — Bentley Systems, Incorporated (“Bentley” or the “Company”) is a Delaware corporation that was founded in 1984 and is headquartered in Exton, Pennsylvania. The Company, together with its subsidiaries, is a leading global provider of infrastructure engineering software solutions for professionals and organizations involved in the project delivery and operational performance of infrastructure assets. The Company is dedicated to advancing infrastructure through its comprehensive software solutions that span engineering disciplines, assets, and lifecycle processes. The Company’s integrated software platform encompasses both the design and construction of infrastructure, which the Company refers to as project delivery, and the operation of infrastructure assets, which the Company refers to as asset performance. The Company’s software solutions are designed to enable information mobility for a more complete flow of information among applications, across distributed project teams, from offices to the field, and throughout the infrastructure lifecycle. The Company believes its solutions extend the reach and scope of digital engineering models from the project delivery phase into the asset performance phase of the infrastructure lifecycle, which enables engineers to make infrastructure assets more intelligent and sustainable. Users of the Company’s solutions include engineers and construction professionals who collaborate on project delivery, and owner-operators who maintain, adapt, and optimize the performance of infrastructure assets.

**Basis of Presentation and Consolidation** — The consolidated financial statements and accompanying notes have been prepared in United States (“U.S.”) Dollars and in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. The Company is party to a joint venture, which is accounted for using the equity method. All intercompany accounts and transactions have been eliminated in consolidation.

**Use of Estimates** — The preparation of consolidated financial statements and related disclosures in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the dates of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ materially from these estimates. In March 2020, the World Health Organization declared a global pandemic related to the rapidly growing outbreak of the disease COVID-19, caused by a novel strain of coronavirus, SARS-CoV-2. The COVID-19 pandemic has created and may continue to create significant uncertainty in the macroeconomic environment which, in addition to other unforeseen effects of this pandemic, may adversely impact our results of operations. As the COVID-19 pandemic continues to develop, many of our estimates could require increased judgment and carry a higher degree of variability and volatility. As events continue to evolve our estimates may change materially in future periods.

Examples of significant estimates and assumptions made by management include revenue recognition, the fair value of acquired assets and liabilities, the fair value of stock consideration in conjunction with business combinations, the fair value of deferred compensation plan liabilities, the fair value of derivative financial instruments, the fair value of common stock (prior to the Company’s initial public offering (“IPO”)), operating lease assets and liabilities, useful lives for depreciation and amortization, impairment of goodwill and intangible assets, valuation allowances for tax assets, and accruals for uncertain tax positions.

**Initial Public Offering** — On September 25, 2020, the Company completed its IPO. The selling stockholders sold 12,360,991 shares of Class B Common Stock at a public offering price of \$22.00 per share. The Company did not sell any shares in the IPO and did not receive any of the proceeds from the sale of the Class B Common Stock sold by the selling stockholders (see Notes 13 and 15). For the year ended December 31, 2020, the Company recorded \$26,130 in *Expenses associated with initial public offering* in the consolidated statement of operations. These expenses included certain non-recurring costs relating to the Company’s IPO, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the selling stockholders, professional fees, and other expenses.

**Follow-On Public Offering** — On November 17, 2020, the Company completed its follow-on public offering of 11,500,000 shares of Class B Common Stock at a public offering price of \$32.00 per share (the “Follow-On Offering”). The Company sold 9,603,965 shares of Class B Common Stock (inclusive of 1,500,000 shares sold upon the exercise by the underwriters of their option to purchase additional shares of the Company’s Class B Common Stock). The selling stockholders sold 1,896,035 shares of Class B Common Stock. The Company received net proceeds of \$294,429 after deducting expenses of \$12,898. The Company did not receive any of the proceeds from the sale of the Class B Common Stock sold by the selling stockholders. Expenses associated with the Follow-On Offering included certain non-recurring costs, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the Company, professional fees, and other expenses. The Company agreed to pay certain expenses in connection with the Follow-On Offering on behalf of the selling stockholders and made an accounting policy election to offset these expenses against the Follow-On Offering proceeds (see Note 13).

**Convertible Senior Notes** — On January 26, 2021, the Company completed a private offering of \$690,000 of 0.125% convertible senior notes due 2026 (the “2026 Notes”). The Company incurred \$18,055 of expenses in connection with the 2026 Notes offering consisting of the payment of initial purchasers’ discounts and commissions, professional fees, and other expenses (“transaction costs”). In connection with the pricing of the 2026 Notes, the Company entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. The capped call options are expected to reduce potential dilution to the Company’s Class B Common Stock upon any conversion of 2026 Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. The Company paid premiums of \$25,530 in connection with the capped call options (see Note 10).

On June 28, 2021, the Company completed a private offering of \$575,000 of 0.375% convertible senior notes due 2027 (the “2027 Notes”). The Company incurred \$15,065 of expenses in connection with the 2027 Notes offering consisting of transaction costs. In connection with the pricing of the 2027 Notes, the Company entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. The capped call options are expected to reduce potential dilution to the Company’s Class B Common Stock upon any conversion of 2027 Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. The Company paid premiums of \$25,875 in connection with the capped call options (see Note 10).

**Special Dividend** — On August 28, 2020, the Company’s board of directors declared a special dividend of \$1.50 per share of the Company’s common stock (\$392,489 in the aggregate) (the “Special Dividend”), payable to all stockholders of record as of August 31, 2020, including dividends which accrue on certain unvested restricted stock and restricted stock units (“RSUs”). The Company used its bank credit facility to pay the Special Dividend (see Note 10). In connection with the Special Dividend declaration, an in kind adjustment was made to phantom shares issuable pursuant to the Company’s nonqualified deferred compensation plan (see Note 12) and the exercise price of all outstanding stock options at that time were reduced by \$1.50, but not lower than \$0.01 (see Note 15).



**Segment** — Operating segments are defined as components of an enterprise about which separate financial information is evaluated regularly by the chief operating decision maker (“CODM”) to allocate resources and assess performance. The Company defines its CODM to be its chief executive officer. The chief executive officer reviews the financial information presented on a consolidated basis for purposes of making operating decisions, allocating resources, and evaluating the Company’s financial performance. Accordingly, the Company has determined it operates and manages its business in a single reportable operating segment, the development and marketing of computer software and related services. The Company markets its products and services through the Company’s offices in the U.S. and its wholly-owned branches and subsidiaries internationally.

**Business Combinations** — The Company allocates the purchase price for each acquisition to the net tangible and intangible assets acquired and liabilities assumed based on their estimated fair value at the respective acquisition date. Goodwill is measured as the excess of the purchase price over the value of net identifiable assets acquired. While best estimates and assumptions are used to accurately value assets acquired and liabilities assumed at the acquisition date, as well as contingent and non-contingent consideration, where applicable, the Company’s estimates are inherently uncertain and subject to refinement. Any adjustments to estimated fair value are recorded to goodwill, provided that the Company is within the measurement period (up to one year from the acquisition date) and that the Company continues to collect information to determine estimated fair value. Subsequent to the measurement period or the Company’s final determination of estimated fair value, whichever comes first, adjustments are recorded in the consolidated statements of operations. On June 17, 2021, the Company completed the acquisition of Seequent Holdings Limited (“Seequent”), a leader in software for geological and geophysical modeling, geotechnical stability, and cloud services for geodata management and collaboration, for \$883,336 in cash, net of cash acquired, plus 3,141,342 shares of the Company’s Class B Common Stock (see Note 4).

**Revenue Recognition** — Effective January 1, 2019, the Company adopted Financial Accounting Standards Board (“FASB”) Accounting Standards Update (“ASU”) No. 2014-09, *Revenue from Contracts with Customers*, and related amendments (“Topic 606”) using the modified retrospective method. The Company recognizes revenue upon the transfer of promised goods or services to customers in an amount that reflects the expected consideration received in exchange for those goods or services. The Company generates revenues from subscriptions, perpetual licenses, and services (see Note 3).

With the adoption of Topic 606, the Company also adopted Accounting Standards Codification (“ASC”) Topic 340-40, *Other Assets and Deferred Costs-Contracts with Customers* (“Topic 340-40”). Under Topic 340-40, the Company recognizes an asset for the incremental costs of obtaining a contract with a customer if the Company expects the benefit of those costs to be longer than one year. The contract costs are amortized based on the economic life of the goods and services to which the contract costs relate. The Company has determined that costs under certain sales incentive programs meet the requirements to be capitalized. The Company applies a practical expedient to expense costs as incurred for costs to obtain a contract with a customer when the amortization period would have been one year or less. These costs include the Company’s internal sales force compensation program and certain channel partner sales incentive programs for which the annual compensation is commensurate with annual sales activities.

**Cost of Revenues** — Cost of subscriptions and licenses includes salaries and other related costs, including the depreciation of property and equipment and the amortization of capitalized software costs associated with servicing software subscriptions, the amortization of intangible assets associated with acquired software and technology, channel partner compensation for providing sales coverage to subscribers, as well as cloud-related costs incurred for servicing the Company’s customers using cloud deployed hosted solutions and those using the Company’s SELECT subscription offering. Cost of services includes salaries for internal and third-party personnel and related overhead costs, including depreciation of property and equipment and amortization of capitalized software costs, for providing training, implementation, configuration, and customization services to customers.

**Software Development Costs** — The Company’s software development costs, including costs to develop software products or the software component of products to be sold, leased, or marketed to external accounts, before technological feasibility is reached, are included in *Research and development* in the consolidated statements of operations. Research and development expenses, which are generally expensed as incurred, primarily consist of personnel and related costs of the Company’s research and development staff, including colleagues’ salaries, incentives, and benefits, and costs of certain third-party contractors, as well as allocated overhead costs. In general, technological feasibility is reached shortly before the release of such products and, as a result, development costs that meet the criteria for capitalization were not material for the periods presented.

Under its Accelerated Commercial Development Program (“ACDP”) (the Company’s structured approach to an in-house business incubator function), the Company capitalizes certain development costs related to certain projects once technological feasibility is established. Technological feasibility is established when a detailed program design has been completed and documented, the Company has established that the necessary skills, hardware, and software technology are available to produce the product, and there are no unresolved high-risk development issues. Once the software is ready for its intended use, amortization is recorded over the software’s estimated useful life (generally three years). For the years ended December 31, 2021, 2020, and 2019, total costs capitalized under the ACDP were \$6,608, \$7,809, and \$6,060, respectively. Additionally, for the years ended December 31, 2021, 2020, and 2019, total ACDP related amortization recorded in *Cost of subscriptions and licenses* in the consolidated statements of operations was \$7,020, \$4,699, and \$3,516, respectively.

**Stock-Based Compensation** — The Company records all stock-based compensation as an expense in the consolidated statements of operations measured at the grant date fair value of the award and is recognized ratably over the requisite service period, which is generally the vesting period. The fair value of stock option awards is determined using the Black-Scholes option pricing model. For all other equity-based arrangements, the stock-based compensation expense is based on the share price at the grant date (see Note 15).

**Deferred Compensation** — Under the amended and restated Bentley Systems, Incorporated Nonqualified Deferred Compensation Plan (the “DCP”), certain officers and key employees may defer all or any part of their incentive compensation, and the Company may make discretionary awards on behalf of such participants. Elective participant deferrals and discretionary Company awards are received in the form of phantom shares of the Company’s Class B Common Stock, which are valued for tax and accounting purposes in the same manner as actual shares of Class B Common Stock, and are recorded as stock-based compensation expense in the consolidated statements of operations (see Note 15).

In August 2021, the Company’s board of directors approved an amendment to the DCP, which offered to certain active executives in the DCP a one-time, short-term election to reallocate a limited portion of their DCP holdings from phantom shares of the Company’s Class B Common Stock into other DCP phantom investment funds. The offer to reallocate was subject to a proration mechanism which adjusted the aggregate elections to a maximum of 1,500,000 phantom shares of the Company’s Class B Common Stock. This resulted in a reduction of 1,500,000 shares in both the basic and diluted count of Company shares.

While DCP participants’ investments in phantom shares remain equity classified, as they will be settled in shares of Class B Common Stock upon eventual distribution, the amendment and elections resulted in a change to liability classification for the reallocated phantom investments, as they will be settled in cash upon eventual distribution. As a result, during the year ended December 31, 2021, the Company reclassified cumulative compensation cost of \$4,739 from *Additional paid-in capital* to *Accruals and other current liabilities* or *Deferred compensation plan liabilities* in the consolidated balance sheet and recognized a compensation charge of \$90,721 to *Deferred compensation plan* expenses in the consolidated statements of operations to record the reallocated deferred compensation plan liabilities at their fair value of \$95,460. Subsequent to the one-time reallocation, these diversified deferred compensation plan liabilities are marked to market at the end of each reporting period, with changes in the liabilities recorded as an expense (income) to *Deferred compensation plan* in the consolidated statements of operations (see Note 12).

Certain reclassifications of prior period amounts have been made to conform to the current period presentation.

**Advertising Expense** — The Company expenses advertising costs as incurred. Advertising expense of \$2,396, \$1,726, and \$1,579 is included in *Selling and marketing* in the consolidated statements of operations for the years ended December 31, 2021, 2020, and 2019, respectively.

**Derivative Arrangements** — The Company records derivative instruments as an asset or liability measured at fair value and depending on the nature of the hedge, the corresponding changes in the fair value of these instruments are recorded in the consolidated statements of operations or comprehensive income. If the derivative is determined to be a hedge, changes in the fair value of the derivative are offset against the change in the fair value of the hedged assets or liabilities through the consolidated statements of operations or recognized in *Other comprehensive income (loss), net of taxes* until the hedged item is recognized in the consolidated statements of operations. The ineffective portion of a derivative's change in fair value is recognized in earnings. Also, changes in the entire fair value of a derivative that is not designated as a hedge are recognized in earnings.

On March 31, 2020, the Company entered into an interest rate swap with a notional amount of \$200,000 and a ten-year term to reduce the interest rate risk associated with the Company's Credit Facility (see Note 10). The interest rate swap is not designated as a hedging instrument for accounting purposes. The Company accounts for the interest rate swap as either an asset or a liability on the consolidated balance sheets and carries the derivative at fair value. Gains and losses from the change in fair value are recognized in *Other income (expense), net* and payments related to the interest rate swap are recognized in *Interest expense, net* in the consolidated statements of operations. The bank counterparty to the derivative potentially exposes the Company to credit-related losses in the event of nonperformance. To mitigate that risk, the Company only contracts with counterparties who meet the Company's minimum requirements under its counterparty risk assessment process. The Company monitors counterparty risk on at least a quarterly basis and adjusts its exposure as necessary. The Company does not enter into derivative instrument transactions for trading or speculative purposes.

**Foreign Currency Translation** — Gains and losses resulting from foreign currency transactions denominated in currencies other than the functional currency are included in *Other income (expense), net* in the consolidated statements of operations. The assets and liabilities of foreign subsidiaries are translated from their respective functional currencies into U.S. Dollars at the rates in effect at the balance sheet date, and revenue and expense amounts are translated at average rates during the period. Foreign currency translation adjustments are recorded as a component of *Other comprehensive income (loss), net of taxes* in the consolidated statements of comprehensive income.

**Income Taxes** — The Company recognizes deferred income tax assets and liabilities for the expected future tax consequences of net operating loss carryforwards, credit carryforwards, and temporary differences between financial statement carrying amounts of assets and liabilities and their respective tax bases, using enacted tax rates in effect for the year in which the items are expected to reverse.

The Company accounts for uncertain tax positions based on an evaluation as to whether it is more likely than not that a tax position will be sustained on audit, including resolution of any related appeals or litigation processes. This evaluation is based on all available evidence and assumes that the appropriate tax authorities have full knowledge of all relevant information concerning the tax position. The tax benefit recognized is based on the largest amount that is greater than 50 percent likely of being realized upon ultimate settlement. Interest expense and penalties are included in *Provision for income taxes* in the consolidated statements of operations.

**Net Income Per Share** — Net income per share of Class A and Class B Common Stock amounts are computed using the two-class method required for participating securities, using the treasury stock method for awards under the Company's equity compensation plans and global employee stock purchase plan, and using the if-converted method for the convertible senior notes in accordance with FASB ASU No. 2020-06, *Debt-Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity* ("ASU 2020-06"). In addition, the weighted average number of shares of the Company's Class A and Class B Common Stock is inclusive of undistributed shares held in the DCP as phantom shares of the Company's Class B Common Stock.

**Fair Value Measurements** — The Company categorizes its assets and liabilities measured at fair value into a three-level hierarchy, based on the priority of the inputs to the respective valuation technique. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). An asset or liability’s classification within the fair value hierarchy is based on the lowest level of significant input to its valuation. The Company’s assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

**Cash and Cash Equivalents** — The Company considers all highly liquid investments with a maturity of three months or less at the date of purchase to be cash equivalents. As of December 31, 2021 and 2020, all of the Company’s cash and cash equivalents consisted of money market funds and cash held in checking accounts maintained at various financial institutions. Cash equivalents are recorded at cost, which approximates fair value.

**Accounts Receivable and Allowance for Doubtful Accounts** — Accounts receivable represent receivables from customers for products and services invoiced by the Company for which payment is outstanding. Receivables are recorded at the invoiced amount and do not bear interest.

The Company establishes an allowance for doubtful accounts for expected losses during the accounts receivable collection process. The allowance for doubtful accounts is presented separately in the consolidated balance sheets and reduces the accounts receivable balance to the net realizable value of the outstanding accounts and installment receivables. The development of the allowance for doubtful accounts is based on an expected loss model which considers historical write-off and recovery experience, aging trends affecting specific accounts, and general operational factors affecting all accounts. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

The Company considers current economic trends and takes into account reasonable and supportable forecasts of future conditions when evaluating the adequacy of the allowance for doubtful accounts. If circumstances relating to specific customers change or unanticipated changes occur in the general business environment, the Company’s estimate of the recoverability of receivables could be further adjusted.

Activity related to the Company’s allowance for doubtful accounts was as follows:

	<b>Year Ended December 31,</b>	
	<b>2021</b>	<b>2020</b>
Balance, beginning of year	\$ 5,759	\$ 7,274
Bad debt allowance (recovery)	1,203	(1,000)
Write-offs	(700)	(812)
Foreign currency translation adjustments	279	297
Balance, end of year	<u>\$ 6,541</u>	<u>\$ 5,759</u>

**Concentration of Credit Risk** — Financial instruments that potentially subject the Company to concentration of credit risk consist primarily of its cash and cash equivalents and receivables. To reduce credit risk, the Company performs ongoing credit evaluations of its customers and limits the amount of credit extended when deemed necessary. Generally, the Company requires no collateral from its customers. The Company maintains an allowance for potential credit losses, but historically has not experienced any significant losses related to individual customers or groups of customers in any particular industry or geographic area. No single customer accounted for more than 2.5% of the Company’s revenue for the years ended December 31, 2021, 2020, or 2019.

The Company’s cash and cash equivalents are deposited with financial institutions and invested in money market funds that the Company believes are of high credit quality.

**Property and Equipment** — Property and equipment are recorded at cost less accumulated depreciation. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, which range from three to 25 years. Leasehold improvements are depreciated over the shorter of the estimated useful life of the leasehold improvements or the lease term. Land is not depreciated. Depreciation for equipment commences once it is placed in service and depreciation for buildings and leasehold improvements commences once they are ready for their intended use. Estimated useful lives of property and equipment are as follows:

	<b>Useful Life</b>
Building and improvements	25 years
Computer equipment and software	3 years
Furniture, fixtures, and equipment	5 years
Aircraft	6 years
Automobiles	3 years

Cost of maintenance and repairs is charged to expense as incurred. Upon retirement or other disposition, the cost of the asset and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in the consolidated statements of operations.

**Leases** — The Company adopted FASB ASU No. 2016-02 regarding FASB ASC Topic 842, *Leases* (“Topic 842”), as of January 1, 2020 using the modified retrospective method for all existing leases. Upon adoption, the Company recognized its lease assets and lease liabilities measured at the present value of all future fixed lease payments, discounted using the Company’s incremental borrowing rate. The Company elected the package of practical expedients as permitted under the transition guidance, which allows the Company: (1) to not reassess whether any existing contracts are leases or contain a lease; (2) to not reassess the lease classification of existing leases; and (3) to not reassess treatment of initial direct costs for existing leases. Additionally, the Company elected the practical expedients to combine lease and non-lease components for new leases post adoption and to not recognize lease assets and lease liabilities for leases with a term of 12 months or less. Upon adoption of Topic 842, the Company recognized right-of-use assets of \$45,850 and lease liabilities of \$47,666 calculated based on the present value of the remaining minimum lease payments as of the adoption date.

The Company determines if an arrangement is a lease at inception. Operating leases are included in *Operating lease right-of-use assets*, *Operating lease liabilities*, and *Long-term operating lease liabilities* in the consolidated balance sheets. Operating lease right-of-use assets represent the Company's right to use an underlying asset for the lease term and operating lease liabilities represent the Company's obligation to make lease payments arising from the lease. Operating lease right-of-use assets and operating lease liabilities are recognized at the commencement date based on the present value of lease payments over the lease term. The Company uses its incremental borrowing rate, if the Company's leases do not provide an implicit rate, based on the information available at the commencement date in determining the present value of lease payments. The incremental borrowing rate is determined based on the Company's estimated credit rating, the term of the lease, economic environment where the asset resides, and full collateralization. The operating lease right-of-use assets also include any lease payments made and are reduced by any lease incentives. Options to extend or terminate the lease are considered in determining the lease term when it is reasonably certain that the option will be exercised. Lease expense for lease payments is recognized on a straight-line basis over the lease term. The Company's operating leases are primarily for office facilities, office equipment, and automobiles. The Company's finance lease is included in *Property and equipment, net*, *Accruals and other current liabilities*, and *Other liabilities* in the consolidated balance sheets.

**Goodwill and Other Intangible Assets** — Intangible assets arise from acquisitions and principally consist of goodwill, trademarks, customer relationships, in-process research and development, and acquired software and technology. Intangible assets, other than goodwill and in-process research and development, are amortized on a straight-line basis over their estimated useful lives, which range from three to ten years.

Goodwill consists of the excess of cost over the fair value of net assets acquired in business combinations. Goodwill is not amortized, but instead is tested annually for impairment, or more frequently if events occur or circumstances change that would more likely than not reduce its fair value below its carrying amount. The Company operates as a single reporting unit.

In testing for goodwill impairment, the Company may first qualitatively assess whether it is more likely than not (a likelihood of more than 50 percent) that a goodwill impairment exists. If it is determined that a quantitative assessment is required, the Company will recognize goodwill impairment as the difference between the carrying amount of the reporting unit and its fair value, but not to exceed the carrying amount of goodwill within the reporting unit. Based upon the Company's most recent annual impairment assessment completed as of October 1, 2021, there were no indicators of impairment, and no impairment losses were recorded. There was no impairment of goodwill as a result of the Company's annual impairment assessments conducted for the years ended December 31, 2021, 2020, and 2019.

**Long-Lived Assets** — The Company evaluates the recoverability of long-lived assets, such as property and equipment, operating lease right-of-use assets, and amortizable intangible assets, in accordance with authoritative guidance on accounting for the impairment or disposal of long-lived assets, which includes evaluating long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. If circumstances require a long-lived asset to be tested for possible impairment, the Company first compares the undiscounted cash flows expected to be generated by that asset to its carrying value. If the carrying value of the long-lived asset is not recoverable on an undiscounted cash flow basis, an impairment is recognized to the extent that the carrying value exceeds its fair value. No impairment of long-lived assets occurred for the years ended December 31, 2021, 2020, and 2019.

**Investments** — The Company applies the cost method of accounting for its investment in which it does not have the ability to exercise significant influence over operating and financial policies. Under the cost method, the Company records the investment based on original cost less impairments, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same investee. The Company's share of income or loss of such companies is not included in the Company's consolidated statements of operations. The Company applies the equity method of accounting for its investment in which it does have the ability to exercise significant influence over operating and financial policies. Under the equity method, the Company recognizes its initial investment at cost and updates the carrying value of its investment by its proportional share of income or losses from the investment. In addition, the Company decreases the carrying value by any dividends received from the investee. The Company does not otherwise adjust the carrying value to reflect changes to the fair market value of the investment. The Company tests its investments for impairment whenever circumstances indicate that the carrying value of the investment may not be recoverable. No impairment of investments occurred for the years ended December 31, 2021, 2020, and 2019.

**Guarantees** — The Company's software license agreements typically provide for indemnification of customers for intellectual property infringement claims. The Company also warrants to customers, when requested, that its software products operate substantially in accordance with standard specifications for a limited period of time. The Company has not incurred significant obligations under customer indemnification or warranty provisions historically and does not expect to incur significant obligations in the future. Accordingly, the Company does not maintain accruals for potential customer indemnification or warranty-related obligations.

## **Note 2: Recent Accounting Pronouncements**

In March 2020, the FASB issued ASU No. 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting* ("ASU 2020-04"), which provides optional expedients and exceptions for applying U.S. GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. ASU 2020-04 applies only to contracts, hedging relationships, and other transactions that reference the London Interbank Offered Rate ("LIBOR") or another reference rate expected to be discontinued because of reference rate reform between March 12, 2020 and December 31, 2022. The expedients and exceptions provided by ASU 2020-04 do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022, except for hedging relationships existing as of December 31, 2022, that an entity has elected certain optional expedients for and that are retained through the end of the hedging relationship. The Company had no transactions that were impacted by ASU 2020-04 during the year ended December 31, 2021.

### **Recently Adopted Accounting Guidance**

In January 2017, the FASB issued ASU No. 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*, which removes Step 2 of the goodwill impairment test. A goodwill impairment will now be calculated as the amount by which a reporting unit's carrying value exceeds its fair value, not to exceed the carrying amount of goodwill. The new guidance is required to be applied on a prospective basis and as such, the Company used the simplified test in its annual fourth quarter testing. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

In August 2018, the FASB issued ASU No. 2018-15, *Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"), which aligns the requirements for capitalizing implementation costs in cloud computing arrangements with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software. The Company prospectively adopted the ASU effective January 1, 2021. Capitalized costs related to cloud computing arrangements for the year ended December 31, 2021, which are included in *Prepaid and other current assets* in the consolidated balance sheet, were not material.

In August 2020, the FASB issued ASU 2020-06, *Debt—Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging—Contracts in Entity’s Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity*, which simplifies the accounting for convertible instruments by reducing the number of accounting models available for convertible debt instruments. This guidance also eliminates the treasury stock method to calculate diluted earnings per share for convertible instruments and requires the use of the if-converted method. The Company early adopted the ASU effective January 1, 2021 using the modified retrospective method of adoption (see Notes 10 and 23).

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers* (“ASU 2021-08”), which improves the comparability of accounting for acquired revenue contracts with customers in a business combination. The new guidance is meant to reduce diversity in practice and inconsistencies related to recognition of an acquired contract liability and revenue contract payment terms and their effect on subsequent revenue recognized by the acquirer. The Company early adopted the ASU effective January 1, 2021 using the modified retrospective method of adoption, which does not include retrospectively recasting prior periods presented in the consolidated financial statements. The adoption of this ASU did not have a material impact on the Company’s consolidated financial statements.

### **Note 3: Revenue from Contracts with Customers**

#### **Nature of Products and Services**

The Company generates revenues from subscriptions, perpetual licenses, and services.

#### **Subscriptions**

*SELECT subscriptions* — The Company provides prepaid annual recurring subscriptions that accounts (which are based on distinct contractual and billing relationships with the Company, where affiliated entities of a single parent company may each have an independent account with the Company) can elect to add to a new or previously purchased perpetual license. SELECT provides accounts with benefits, including upgrades, comprehensive technical support, pooled licensing benefits, annual portfolio balancing exchange rights, learning benefits, certain Azure-based cloud collaboration services, mobility advantages, and access to other available benefits. SELECT subscriptions revenues are recognized as distinct performance obligations are satisfied. The performance obligations within the SELECT offering, outside of the portfolio balancing exchange right, are concurrently delivered and have the same pattern of recognition. These performance obligations are accounted for ratably over the term as a single performance obligation.

*Enterprise subscriptions* — The Company also provides Enterprise subscription offerings, which provide its largest accounts with complete and unlimited global access to the Company’s comprehensive portfolio of solutions. Enterprise License Subscriptions (“ELS”) provide access for a prepaid fee, which is based on the account’s usage of software in the preceding year, to effectively create a fee-certain consumption-based arrangement. ELS contain a term license component, SELECT maintenance and support, and performance consulting days. The SELECT maintenance and support benefits under ELS do not include a portfolio balancing performance obligation. Revenue is allocated to the various performance obligations based on their respective standalone selling price (“SSP”). Revenue allocated to the term license component is recognized upon delivery at the start of the subscription term while revenues for the SELECT maintenance and support and the performance consulting days are recognized as delivered over the subscription term. Billings in advance are recorded as *Deferred revenues* in the consolidated balance sheets.



Enterprise 365 (“E365”) subscriptions provide unrestricted access to the Company’s comprehensive software portfolio, similar to ELS, however, the accounts are charged based upon daily usage. The daily usage fee also includes a term license component, SELECT maintenance and support, hosting, and Success Blueprints, which are designed to achieve business outcomes through more efficient and effective use of the Company’s software. E365 revenues are recognized based upon usage incurred by the account. Usage is defined as distinct user access on a daily basis. E365 subscriptions can contain quarterly usage floors or collars as accounts transition to the usage model or for accounts within the public sector. The term of E365 subscriptions aligns with calendar quarters and revenue is recognized based on actual usage.

*Term license subscriptions* — The Company provides annual, quarterly, and monthly term licenses for its software products. Term license subscriptions contain a term license component and SELECT maintenance and support. Revenue is allocated to the various performance obligations based on their SSP. Annual term licenses (“ATL”) are generally prepaid annually for named user access to specific products and include the Company’s Virtuoso subscriptions sold via the Company’s Virtuosity eStore for practitioner licenses. Virtuoso subscriptions are bundles with customizable training and expert consultation administered through “keys” or credits. Quarterly term license (“QTL”) subscriptions allow accounts to pay quarterly in arrears for license usage that is beyond their prepaid subscriptions. Monthly term license (“MTL”) subscriptions are identical to QTL subscriptions, except for the term of the license, and the manner in which they are monetized. MTL subscriptions require a Cloud Services Subscription (“CSS”), which is described below. For ATL, revenue allocated to the term license component is recognized upon delivery at the start of the subscription term while revenue for the SELECT maintenance and support is recognized as delivered over the subscription term. For Virtuoso keys, revenue is recognized as services are delivered. Billings in advance are recorded as *Deferred revenues* in the consolidated balance sheets. For usage-based QTL and MTL subscriptions, revenues are recognized based upon usage incurred by the account. Usage is defined as peak usage over the respective terms. The terms of QTL and MTL subscriptions align with calendar quarters and calendar months, respectively, and revenue is recognized based on actual usage.

Visas and Passports are quarterly or annual term licenses enabling users to access specific project or enterprise information and entitles users to certain functionality of the Company’s *ProjectWise* and *AssetWise* systems. The Company’s standard offerings are usage based with monetization through the Company’s CSS program as described below.

CSS is a program designed to streamline the procurement, administration, and payment process. The program requires an estimation of annual usage for CSS eligible offerings and a deposit of funds in advance. Actual consumption is monitored and invoiced against the deposit on a calendar quarter basis. CSS balances not utilized for eligible products or services may roll over to future periods or are refundable. Paid and unconsumed CSS balances are recorded in *Accruals and other current liabilities* in the consolidated balance sheets. Software and services consumed under CSS are recognized pursuant to the applicable revenue recognition guidance for the respective software or service and classified as subscriptions or services based on their respective nature.

### ***Perpetual licenses***

Perpetual licenses may be sold with or without attaching a SELECT subscription. Historically, attachment and retention of the SELECT subscription has been high given the benefits of the SELECT subscription discussed above. Perpetual licenses revenues are recognized upon delivery of the license to the user.

### ***Services***

The Company provides professional services, including training, implementation, configuration, customization, and strategic consulting services. The Company performs projects on both a time and materials and a fixed fee basis. Certain of the Company’s fixed-fee arrangements, including its Success Services offerings, are structured as subscription-like, packaged offerings that are annually recurring in nature. Success Services are standard service offerings that provide a level of dedicated professional services above the standard technical support offered to all accounts as part of their SELECT or Enterprise agreement. Revenues are recognized as services are performed.

The Company primarily utilizes its direct internal sales force and also has arrangements through independent channel partners to promote and sell Bentley products and subscriptions to end-users. Channel partners are authorized to promote the sale of an authorized set of Bentley products and subscriptions within an authorized geography under a Channel Partner Agreement.

### Significant Judgments and Estimates

The Company's contracts with customers may include promises to transfer licenses (perpetual or term-based), maintenance, and services to a user. Judgment is required to determine if the promises are separate performance obligations, and if so, the allocation of the transaction price to each performance obligation. When an arrangement includes multiple performance obligations which are concurrently delivered and have the same pattern of transfer to the customer, the Company accounts for those performance obligations as a single performance obligation. For contracts with more than one performance obligation, the transaction price is allocated among the performance obligations in an amount that depicts the relative SSP of each obligation. Judgment is required to determine the SSP for each distinct performance obligation. In instances where SSP is not directly observable, such as when the Company does not sell the product or service separately, the Company determines the SSP using information that may include market conditions and other observable inputs. The Company uses a range of amounts to estimate SSP when it sells each of the products and services separately and needs to determine whether there is a discount that should be allocated based on the relative SSP of the various products and services.

The Company's SELECT agreement provides users with perpetual licenses a right to exchange software for other eligible perpetual licenses on an annual basis upon renewal. The Company refers to this option as portfolio balancing and has concluded that the portfolio balancing feature represents a material right resulting in the deferral of the associated revenue. Judgment is required to estimate the percentage of users who may elect to portfolio balance and considers inputs such as historical user elections. This feature is available once per term and must be exercised prior to the respective renewal term. The Company recognizes the associated revenue upon election or when the portfolio balancing right expires. This right is included in the initial and subsequent renewal terms and the Company reestablishes the revenue deferral for the material right upon the beginning of the renewal term. As of December 31, 2021 and 2020, the Company has deferred \$18,020 and \$18,166, respectively, related to portfolio balancing exchange rights which is included in *Deferred revenues* in the consolidated balance sheets.

### Contract Assets and Contract Liabilities

	December 31,	
	2021	2020
Contract assets	\$ 336	\$ 446
Deferred revenues	232,593	209,314

As of December 31, 2021 and 2020, the Company's contract assets relate to performance obligations completed in advance of the right to invoice and are included in *Prepaid and other current assets* in the consolidated balance sheets. Contract assets were not impaired as of December 31, 2021 and 2020.

Deferred revenues consist of billings made or payments received in advance of revenue recognition from subscriptions and services. The timing of revenue recognition may differ from the timing of billings to users.

For the year ended December 31, 2021, \$183,997 of revenues that were included in the December 31, 2020 deferred revenues balance were recognized. There were additional deferrals of \$215,947, which were primarily related to new billings and acquisitions (see Note 4). For the year ended December 31, 2020, \$203,682 of revenues that were included in the December 31, 2019 deferred revenues balance were recognized. There were additional deferrals of \$193,999, which were primarily related to new billings.

## Remaining Performance Obligations

The Company's contracts with customers include amounts allocated to performance obligations that will be satisfied at a later date. As of December 31, 2021, amounts allocated to these remaining performance obligations are \$232,593, of which the Company expects to recognize 96.6% over the next 12 months with the remaining amount thereafter.

## Disaggregation of Revenues

The following table details revenues:

	Year Ended December 31,		
	2021	2020	2019
<b>Subscriptions:</b>			
SELECT subscriptions	\$ 269,283	\$ 270,749	\$ 267,249
Enterprise subscriptions <sup>(1)</sup>	290,097	221,524	184,833
Term license subscriptions	253,427	187,000	156,218
Subscriptions	812,807	679,273	608,300
Perpetual licenses	53,080	57,382	59,693
Subscriptions and licenses	865,887	736,655	667,993
<b>Services:</b>			
Recurring	21,343	17,389	22,797
Other	77,816	47,500	45,864
Services	99,159	64,889	68,661
Total revenues	<u>\$ 965,046</u>	<u>\$ 801,544</u>	<u>\$ 736,654</u>

(1) Enterprise subscriptions includes revenue attributable to E365 subscriptions of \$223,293, \$110,979, and \$24,668 for the years ended December 31, 2021, 2020, and 2019, respectively.

The Company recognizes perpetual licenses and the term license component of subscriptions as revenue when either the licenses are delivered or at the start of the subscription term. For the years ended December 31, 2021, 2020, and 2019, the Company recognized \$412,375, \$338,792, and \$311,689 of license related revenues, respectively, of which \$359,295, \$281,410, and \$251,996, respectively, were attributable to the term license component of the Company's subscription based commercial offerings recorded in *Subscriptions* in the consolidated statements of operations.

The Company derived 8% of its total revenues through channel partners for the years ended December 31, 2021, 2020, and 2019.

Revenue to external customers is attributed to individual countries based upon the location of the customer.

	Year Ended December 31,		
	2021	2020	2019
Revenues:			
Americas <sup>(1)</sup>	\$ 483,087	\$ 395,746	\$ 356,331
Europe, the Middle East, and Africa (“EMEA”) <sup>(2)</sup>	300,123	254,036	236,602
Asia-Pacific (“APAC”)	181,836	151,762	143,721
Total revenues	<u>\$ 965,046</u>	<u>\$ 801,544</u>	<u>\$ 736,654</u>

(1) Americas includes the U.S., Canada, and Latin America (including the Caribbean). Revenue attributable to the U.S. totaled \$393,865, \$348,222, and \$306,493 for the years ended December 31, 2021, 2020, and 2019, respectively.

(2) Revenue attributable to the United Kingdom (“U.K.”) totaled \$85,656, \$64,433, and \$57,321 for the years ended December 31, 2021, 2020, and 2019, respectively.

#### Note 4: Acquisitions

For the years ended December 31, 2021, 2020, and 2019, the Company completed a number of acquisitions, for an aggregate purchase price of \$1,269,844, \$102,094, and \$41,075, respectively. On June 17, 2021, the Company completed the acquisition of Seequent, a leader in software for geological and geophysical modeling, geotechnical stability, and cloud services for geodata management and collaboration, for \$883,336 in cash, net of cash acquired, plus 3,141,342 shares of the Company’s Class B Common Stock. The operating results of the acquired businesses, except for Seequent, were not material, individually or in the aggregate, to the Company’s consolidated statements of operations and financial position.

The aggregate details of the Company’s acquisition activity are as follows:

	Acquisitions Completed in Year Ended December 31,		
	2021	2020	2019
Number of acquisitions	13	6	4
Cash paid at closing <sup>(1)</sup>	\$ 1,072,820	\$ 98,298	\$ 36,577
Cash acquired	(37,837)	(5,266)	(2,523)
Net cash paid	<u>\$ 1,034,983</u>	<u>\$ 93,032</u>	<u>\$ 34,054</u>

(1) Of the cash paid at closing for the year ended December 31, 2021, \$8,701 was deposited into an escrow account to secure any potential indemnification and other obligations of the seller.

The fair value of the contingent consideration from acquisitions is included in the consolidated balance sheets as follows:

	December 31,	
	2021	2020
Accruals and other current liabilities	\$ 5,382	\$ 2,884
Other liabilities	1,231	1,415
Contingent consideration from acquisitions	<u>\$ 6,613</u>	<u>\$ 4,299</u>

The fair value of non-contingent consideration from acquisitions is included in the consolidated balance sheets as follows:

	December 31,	
	2021	2020
Accruals and other current liabilities	\$ 4,751	\$ 685
Other liabilities	6,177	1,774
Non-contingent consideration from acquisitions	<u>\$ 10,928</u>	<u>\$ 2,459</u>

The operating results of the acquired businesses are included in the Company's consolidated financial statements from the closing date of each respective acquisition. The purchase price for each acquisition has been allocated to the net tangible and intangible assets and liabilities based on their estimated fair values at the respective acquisition date.

As discussed in Note 2, the Company early adopted ASU 2021-08 effective January 1, 2021. In connection with the purchase price allocations related to the Company's acquisitions that closed prior to 2021, the Company estimated the fair values of the support obligations assumed relative to acquired deferred revenues. The estimated fair values of the support obligations assumed were determined using a cost-build-up approach. The cost-build-up approach determines fair value by estimating the costs related to fulfilling the obligations plus a normal profit margin. These fair value adjustments reduce the revenues recognizable over the remaining support contract term of the Company's acquired contracts. For the years ended December 31, 2021, 2020, and 2019, the fair value adjustments to reduce revenue related to acquisitions that closed prior to 2021 were \$32, \$599, and \$553, respectively.

The Company finalized the purchase accounting for acquisitions completed through the year ended December 31, 2021.

Acquisition costs are expensed as incurred and are recorded in *General and administrative* in the consolidated statements of operations. For the years ended December 31, 2021, 2020, and 2019, the Company incurred acquisition expenses of \$20,471, \$2,227, and \$950, respectively, which include costs related to legal, accounting, valuation, insurance, general administrative, and other consulting fees. For the year ended December 31, 2021, \$16,557 of the Company's acquisition expenses related to the acquisition of Seequent.

The following summarizes the fair values of the assets acquired and liabilities assumed, as well as the weighted average useful lives assigned to acquired intangible assets at the respective date of each acquisition (including contingent consideration):

	Acquisitions Completed in		
	Year Ended December 31,		
	2021	2020	2019
<b>Consideration:</b>			
Cash paid at closing	\$ 1,072,820	\$ 98,298	\$ 36,577
Shares issued at closing <sup>(1)(2)</sup>	182,390	—	—
Contingent consideration	4,544	2,380	4,498
Deferred, non-contingent consideration, net	10,090	1,416	—
<b>Total consideration</b>	<b>\$ 1,269,844</b>	<b>\$ 102,094</b>	<b>\$ 41,075</b>
<b>Assets acquired and liabilities assumed:</b>			
Cash	\$ 37,837	\$ 5,266	\$ 2,523
Accounts receivable and other current assets	24,174	8,701	1,782
Operating lease right-of-use assets	12,095	2,529	—
Property and equipment	4,383	499	411
Other assets	874	36	84
Software and technology (weighted average useful life of 5, 3, and 3 years, respectively)	43,560	2,207	2,423
Customer relationships (weighted average useful life of 9, 6, and 7 years, respectively)	158,555	11,371	6,534
Trademarks (weighted average useful life of 10, 7 and 5 years, respectively)	38,256	3,953	1,431
Non-compete agreement (useful life of 5 years)	—	200	150
In-process research and development	3,700	—	—
Total identifiable assets acquired excluding goodwill	323,434	34,762	15,338
Accruals and other current liabilities	(27,649)	(4,991)	(3,538)
Deferred revenues	(26,245)	(5,351)	(2,897)
Operating lease liabilities	(11,988)	(2,529)	—
Deferred income taxes	(53,342)	(1,701)	(1,869)
Other liabilities	(716)	(86)	—
Total liabilities assumed	(119,940)	(14,658)	(8,304)
Net identifiable assets acquired excluding goodwill	203,494	20,104	7,034
Goodwill	1,066,350	81,990	34,041
<b>Net assets acquired</b>	<b>\$ 1,269,844</b>	<b>\$ 102,094</b>	<b>\$ 41,075</b>

(1) Of the total 3,141,342 shares issued at closing, 83,627 shares are subject to forfeiture if post-closing employment service conditions are not met. Accordingly, \$5,452 is being recorded as stock-based compensation expense over the related forfeiture period of two years (see Note 15).

(2) A fair value adjustment of \$16,943 was applied to the stock consideration due to restrictions on the transfer of securities.

The fair values of the working capital, other assets (liabilities), and property and equipment approximated their respective carrying values as of the acquisition date.

As discussed above, the fair values of deferred revenues related to the Company's acquisitions that closed prior to 2021 were determined using the cost-build-up approach. The fair values of deferred revenues related to the Company's acquisitions that closed during 2021 were determined in accordance with Topic 606 (see Note 3).

The fair values of the intangible assets were primarily determined using the income approach. When applying the income approach, indications of fair values were developed by discounting future net cash flows to their present values at market-based rates of return. The cash flows were based on estimates used to price the acquisitions and the discount rates applied were benchmarked with reference to the implied rate of return from the Company's pricing model and the weighted average cost of capital.

Goodwill recorded in connection with the acquisitions was attributable to synergies expected to arise from cost saving opportunities, as well as future expected cash flows. Of the goodwill recorded as of December 31, 2021, \$18,534 is expected to be deductible for tax purposes.

#### ***Unaudited Pro Forma Financial Information***

Had the acquisition of Seequent been made at the beginning of 2020, unaudited pro forma total revenues for the years ended December 31, 2021 and 2020 would have been \$1,017,975 and \$877,584, respectively. Net income, net income per share, basic, and net income per share, diluted for the years ended December 31, 2021 and 2020 would not have been materially different than the amounts reported primarily due to the pro forma adjustments to reflect the amortization of purchased intangibles and the cost to finance the transaction, net of the related tax effects.

The unaudited pro forma financial information is for informational purposes only and is not indicative of the results of operations that would have been achieved if the acquisition had taken place at the beginning of 2020. The unaudited pro forma financial information combines the historical results of the Company, the adjusted historical results of Seequent considering the date the Company completed the acquisition of Seequent, and the effects of the pro forma adjustments described above.

#### ***Acquisition Subsequent to December 31, 2021***

On January 31, 2022, the Company completed the acquisition of Power Line Systems, a leader in software for the design of overhead electric power transmission lines and their structures, for approximately \$700,000 in cash, net of cash acquired, and subject to customary adjustments including for working capital. The Company used readily available cash and borrowings under its bank credit facility (see Note 10) to fund the transaction. The acquisition is not expected to be material to the Company's consolidated statements of operations. The acquisition is expected to be material to the Company's financial position and cash flows.

**Note 5: Property and Equipment, Net**

Property and equipment, net consist of the following:

	December 31,	
	2021	2020
Land	\$ 2,811	\$ 2,811
Building and improvements	35,188	33,094
Computer equipment and software	47,651	44,369
Furniture, fixtures, and equipment	14,274	12,849
Aircraft	4,075	4,075
Other	61	58
Property and equipment, at cost	104,060	97,256
Less: Accumulated depreciation	(72,237)	(68,842)
Total property and equipment, net	<u>\$ 31,823</u>	<u>\$ 28,414</u>

Depreciation expense for the years ended December 31, 2021, 2020, and 2019 was \$11,217, \$10,166, and \$9,813, respectively.

**Related Party Equipment Sale Subsequent to December 31, 2021**

In January 2022, the audit committee of the Company's board of directors authorized the Company to sell 50% of its interest in the Company's aircraft at fair market value to an entity controlled by the Company's Chief Executive Officer. The transaction was completed on February 1, 2022 for \$2,380 and resulted in a gain of \$2,029. Ongoing operating and fixed costs of the aircraft will be shared on a proportional use basis subject to a cost-sharing agreement. Pursuant to FASB ASC Topic 850, *Related Party Disclosures*, the Company determined this transaction was to a related party.

**Note 6: Goodwill and Other Intangible Assets**

The changes in the carrying amount of goodwill are as follows:

Balance, December 31, 2019	\$ 480,065
Acquisitions	81,990
Foreign currency translation adjustments	19,195
Other adjustments	(76)
Balance, December 31, 2020	581,174
Acquisitions	1,066,350
Foreign currency translation adjustments	(58,408)
Other adjustments	(639)
Balance, December 31, 2021	<u>\$ 1,588,477</u>



Details of intangible assets other than goodwill are as follows:

	Estimated Useful Life	December 31, 2021			December 31, 2020		
		Gross Carrying Amount	Accumulated Amortization	Net Book Value	Gross Carrying Amount	Accumulated Amortization	Net Book Value
Intangible assets subject to amortization:							
Software and technology	3-5 years	\$ 101,588	\$ (63,225)	\$ 38,363	\$ 67,691	\$ (63,046)	\$ 4,645
Customer relationships	3-10 years	245,325	(83,799)	161,526	97,008	(66,030)	30,978
Trademarks	3-10 years	63,080	(20,893)	42,187	26,610	(16,888)	9,722
Non-compete agreements	5 years	350	(139)	211	350	(68)	282
		410,343	(168,056)	242,287	191,659	(146,032)	45,627
Intangible assets not subject to amortization:							
In-process research and development		3,547	—	3,547	—	—	—
Total intangible assets		\$ 413,890	\$ (168,056)	\$ 245,834	\$ 191,659	\$ (146,032)	\$ 45,627

The aggregate amortization expense for purchased intangible assets with finite lives was reflected in the Company's consolidated statements of operations as follows:

	Year Ended December 31,		
	2021	2020	2019
Cost of subscriptions and licenses	\$ 8,125	\$ 4,981	\$ 3,795
Amortization of purchased intangibles	25,601	15,352	14,213
Total amortization expense	\$ 33,726	\$ 20,333	\$ 18,008

Amortization expense for the years following December 31, 2021 are estimated as follows:

2022	\$ 43,782
2023	37,752
2024	31,568
2025	28,787
2026	22,693
Thereafter	77,705
	\$ 242,287

**Note 7: Investments**

Investments consist of the following:

	December 31,	
	2021	2020
Cost method investments	\$ 6,438	\$ 3,440
Equity method investment	—	2,251
Total investments	<u>\$ 6,438</u>	<u>\$ 5,691</u>

Through *iTwin Ventures*, the Company invests in technology development companies, generally in the form of equity interests or convertible notes. The Company recorded these investments under the cost method. For the years ended December 31, 2021 and 2020, the Company invested \$2,781 and \$3,440 in cost method investments, respectively.

In June 2021, in connection with the acquisition of Seequent, the Company recorded an equity method investment arising from a pre-existing investment made by Seequent. The investee offers a broad range of data and software related services with a focus on the mining and exploration industry. During the third quarter of 2021, the Company acquired the remaining interest in this investment and accounted for it as a business combination (see Note 4).

In September 2019, the Company and Topcon Positioning Systems, Inc. (“Topcon”) formed Digital Construction Works, Inc. (“DCW”), a joint venture which operates as a digital integrator of software and cloud services for the construction industry, which the Company accounts for using the equity method. DCW’s focus is to transform the construction industry from its legacy document-centric paradigm by simplifying and enabling digital automated workflows and processes, technology integration, and digital twinning services for infrastructure. The Company and Topcon each have a 50% ownership in DCW. For the years ended December 31, 2021 and 2020, the Company invested \$1,300 and \$3,000 in DCW, respectively. Pursuant to FASB ASC Topic 850, *Related Party Disclosures*, the Company has determined that DCW is a related party. For the years ended December 31, 2021 and 2020, transactions between the Company and DCW were not material to the Company’s consolidated financial statements.

**Note 8: Leases**

The Company’s operating leases consist of office facilities, office equipment, and automobiles, and the Company’s finance lease consists of computer equipment. The finance lease is not material for the periods presented. As of December 31, 2021, the Company’s leases have remaining terms of less than one year to nine years, some of which include one or more options to renew, with renewal terms from one year to ten years and some of which include options to terminate the leases from less than one year to five years.

For contracts with lease and non-lease components, the Company has elected not to allocate the contract consideration, and account for the lease and non-lease components as a single lease component. Payments under the Company’s lease arrangements are primarily fixed, however, certain lease agreements contain variable payments, which are expensed as incurred and not included in the operating lease assets and liabilities. Variable lease cost may include common area maintenance, property taxes, utilities, and fluctuations in rent due to a change in an index or rate. The Company has elected not to recognize a right-of-use asset or lease liability for short-term leases (leases with a term of twelve months or less). Short-term leases are recognized in the consolidated statements of operations on a straight-line basis over the lease term.

The components of operating lease cost reflected in the consolidated statements of operations were as follows:

	Year Ended December 31,	
	2021	2020
Operating lease cost <sup>(1)</sup>	\$ 19,425	\$ 18,194
Variable lease cost	4,151	3,881
Short-term lease cost	21	399
Total operating lease cost	<u>\$ 23,597</u>	<u>\$ 22,474</u>

(1) Operating lease cost includes rent cost related to operating leases for office facilities of \$18,636 and \$17,417 for the years ended December 31, 2021 and 2020, respectively.

For the year ended December 31, 2019, total rent expense related to operating leases recognized on straight-line basis over the life of the lease under the previous accounting guidance was \$17,036.

Other information related to leases was as follows:

	Year Ended December 31,	
	2021	2020
Cash paid for amounts included in the measurement of lease liabilities:		
Operating cash flows from operating leases	\$ 19,636	\$ 18,384
Right-of-use assets obtained in exchange for new operating lease liabilities <sup>(1)</sup>	\$ 12,842	\$ 15,522

(1) Right-of-use assets obtained in exchange for new operating lease liabilities does not include the impact from acquisitions of \$12,095 and \$2,529 for the years ended December 31, 2021 and 2020, respectively.

The weighted average remaining lease term for operating leases was 4.1 years and 3.7 years as of December 31, 2021 and 2020, respectively. The weighted average discount rate was 2.5% and 2.1% as of December 31, 2021 and 2020.

Maturities of operating lease liabilities are as follows:

	December 31, 2021
2022	\$ 18,411
2023	13,212
2024	8,645
2025	6,398
2026	3,972
Thereafter	5,262
Total future lease payments	<u>55,900</u>
Less: Imputed interest	(3,144)
Total operating lease liabilities	<u>\$ 52,756</u>

As of December 31, 2021, the Company had additional operating lease minimum lease payments of \$1,383 for executed leases that have not yet commenced, primarily for office locations.

Supplemental balance sheet information related to the financing lease was as follows:

	December 31,	
	2021	2020
Property and equipment	\$ 484	\$ 572
Accumulated depreciation	(453)	(229)
Property and equipment, net	<u>\$ 31</u>	<u>\$ 343</u>
Accruals and other current liabilities	\$ 98	\$ 197
Other liabilities	—	99
Total financing lease liabilities	<u>\$ 98</u>	<u>\$ 296</u>

**Note 9: Accruals and Other Current Liabilities**

Accruals and other current liabilities consist of the following:

	December 31,	
	2021	2020
CSS deposits	\$ 162,046	\$ 110,291
Accrued compensation	37,725	22,131
Accrued benefits	36,656	36,613
Due to customers	12,798	9,869
Accrued acquisition stay bonus	9,461	5,599
Accrued indirect taxes	7,520	6,361
Deferred compensation plan liabilities	7,309	169
Accrued professional fees	6,940	4,210
Accrued cloud provisioning costs	5,862	7,988
Contingent consideration from acquisitions	5,382	2,884
Employee stock purchase plan contributions	4,818	—
Non-contingent consideration from acquisitions	4,751	685
Accrued facility costs	2,194	2,095
Accrued severance and realignment costs	664	7,209
Other accrued and current liabilities	19,477	10,689
Total accruals and other current liabilities	<u>\$ 323,603</u>	<u>\$ 226,793</u>

## Note 10: Long-Term Debt

Long-term debt consists of the following:

	December 31,	
	2021	2020
<b>Bank credit facility:</b>		
Revolving loan facility	\$ —	\$ 246,000
<b>Term loan:</b>		
Principal	200,000	—
Unamortized debt issuance costs	(534)	—
Term loan net carrying value	199,466	—
Bank credit facility net carrying value	199,466	246,000
<b>2026 Notes:</b>		
Principal	690,000	—
Unamortized debt issuance costs	(14,677)	—
2026 Notes net carrying value	675,323	—
<b>2027 Notes:</b>		
Principal	575,000	—
Unamortized debt issuance costs	(13,797)	—
2027 Notes net carrying value	561,203	—
Total net carrying value	1,435,992	246,000
Less: Current portion of long-term debt	(5,000)	—
Total long-term debt	\$ 1,430,992	\$ 246,000

### Bank Credit Facility

On January 25, 2021, the Company entered into the Second Amendment to the Amended and Restated Credit Agreement dated December 19, 2017, which increased the senior secured revolving loan facility from \$500,000 to \$850,000 and extended the maturity date from December 18, 2022 to November 15, 2025 (the “Credit Facility”). In connection with the Second Amendment, certain lenders exited the Credit Facility. The Company performed an extinguishment versus modification assessment on a lender-by-lender basis resulting in the write-off of unamortized debt issuance costs of \$353 and the capitalization of fees paid to lenders and third parties of \$3,577. Debt issuance costs are amortized to interest expense through the maturity date of November 15, 2025.

On June 22, 2021, the Company entered into the Third Amendment to the Credit Facility, which increased the aggregate amount of approved convertible debt to permit the issuance and sale of additional convertible senior notes. See the section titled “—Convertible Senior Notes—2027 Notes” below.

On December 22, 2021, the Company entered into the Fourth Amendment to the Credit Facility, which provided for a new \$200,000 senior secured term loan with a maturity of November 15, 2025 (the “2021 Term Loan”) and included certain other amendments. The 2021 Term Loan requires principal repayment at the end of each calendar quarter. Beginning with March 31, 2022 and ending with December 31, 2023, the Company is required to repay \$1,250 per quarter. Beginning with March 31, 2024 and ending with the last such date prior to the maturity date, the Company is required to repay \$2,500 per quarter. The Company incurred \$540 of debt issuance costs related to the 2021 Term Loan. As of December 31, 2021, \$45 of the transaction costs were recorded in *Accruals and other current liabilities* in the consolidated balance sheet. The Company used borrowings under the 2021 Term Loan to pay down borrowings under the swingline sub-facility and revolving facility under the Credit Facility.

Under the 2021 Term Loan, the Company may make either Euro currency or non-Euro currency interest rate elections. Interest on the Euro currency borrowings bear a base interest rate of LIBOR, plus a spread ranging from 100 basis points (“bps”) to 200 bps as determined by the Company’s net leverage ratio. Under the non-Euro currency elections, the 2021 Term Loan bears a base interest rate of the highest of (i) the prime rate, (ii) the overnight bank funding effective rate plus 50 bps, or (iii) LIBOR plus 100 bps, plus a spread ranging from 0 bps to 100 bps as determined by the Company’s net leverage ratio.

On September 2, 2020, the Company entered into the First Amendment to the Credit Facility, which provided a new term loan of \$125,000 (the “2020 Term Loan”) with a maturity of December 18, 2022 and included certain other amendments, including the addition of a mandatory prepayment provision requiring the Company to prepay borrowings under the Credit Facility in an aggregate amount equal to the net proceeds from any underwritten public offering by the Company, which prepayment shall be applied, first, to the 2020 Term Loan and, second, to any borrowings outstanding under the revolving facility under the Credit Facility without reducing the revolving commitments thereof. The Company used borrowings under the 2020 Term Loan and under the revolving facility under the Credit Facility to pay the Special Dividend declared by the Company’s board of directors on August 28, 2020 (see Note 1). The Company incurred \$432 of debt issuance costs related to the 2020 Term Loan. In November 2020, the Company used a portion of the net proceeds from the Follow-On Offering to repay the 2020 Term Loan (see Note 13).

In addition to the senior secured revolving loan facility, the Credit Facility also provides up to \$50,000 of letters of credit and other incremental borrowings subject to availability, including a \$85,000 U.S. Dollar swingline sub-facility and a \$200,000 incremental “accordion” sub-facility. The Company had \$150 of letters of credit and surety bonds outstanding as of December 31, 2021 and 2020. As of December 31, 2021 and 2020, the Company had \$849,850 and \$253,850 available under the Credit Facility.

Under the Credit Facility, the Company may make either Euro currency or non-Euro currency interest rate elections. Interest on the Euro currency borrowings bear a base interest rate of LIBOR plus a spread ranging from 125 bps to 225 bps as determined by the Company’s net leverage ratio. Under the non-Euro currency elections, Credit Facility borrowings bear a base interest rate of the highest of (i) the prime rate, (ii) the overnight bank funding effective rate plus 50 bps, or (iii) LIBOR plus 100 bps, plus a spread ranging from 25 bps to 125 bps as determined by the Company’s net leverage ratio. In addition, a commitment fee for the unused Credit Facility ranges from 20 bps to 30 bps as determined by the Company’s net leverage ratio.

Borrowings under the Credit Facility are guaranteed by all of the Company’s first tier domestic subsidiaries and are secured by a first priority security interest in substantially all of the Company’s and the guarantors’ U.S. assets and 65% of the stock of their directly owned foreign subsidiaries. The Credit Facility contains both affirmative and negative covenants, including maximum net leverage ratios. As of December 31, 2021 and 2020, the Company was in compliance with all covenants in its Credit Facility.

The agreement governing the Credit Facility contains customary events of default, including, without limitation, payment defaults, breaches of representations and warranties, covenants defaults, cross-defaults to certain other indebtedness in excess of \$50,000, certain events of bankruptcy and insolvency, judgment defaults in excess of \$10,000, failure of any security document supporting the Credit Facility to be in full force and effect, and a change of control.

Voluntary prepayments of amounts outstanding under the Credit Facility, in whole or in part, are permitted at any time, so long as the Company gives notice as required by the Credit Facility. However, if prepayment is made with respect to a LIBOR-based loan and the prepayment is made on a date other than an interest payment date, the Company must pay customary breakage costs.

## Convertible Senior Notes

### 2026 Notes

On January 26, 2021, the Company completed a private offering of \$690,000 of 0.125% convertible senior notes due 2026. The 2026 Notes were issued pursuant to an indenture, dated as of January 26, 2021, between the Company and Wilmington Trust, National Association, as trustee (the “2026 Trustee”) (the “2026 Indenture”). Interest will accrue from January 26, 2021 and will be payable semi-annually in arrears in cash on January 15 and July 15 of each year, with the first payment due on July 15, 2021. The 2026 Notes will mature on January 15, 2026, unless earlier converted, redeemed or repurchased. The Company incurred \$18,055 of expenses in connection with the 2026 Notes offering consisting of transaction costs. The Company used \$25,530 of the net proceeds from the sale of the 2026 Notes to pay the premiums of the capped call options described further below, and approximately \$250,500 to repay outstanding indebtedness under the Credit Facility and to pay related fees and expenses. The Company used the remainder of the net proceeds from the sale of the 2026 Notes for general corporate purposes and towards funding certain acquisitions, including Seequent (see Note 4).

Prior to October 15, 2025, the 2026 Notes will be convertible at the option of the holder only under the following circumstances: (1) during any calendar quarter (and only during such quarter) commencing after the calendar quarter ending on June 30, 2021, if the last reported sale price per share of the Company’s Class B Common Stock exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter; (2) during the five consecutive business days immediately after any ten consecutive trading day period (such ten consecutive trading day period, the “measurement period”) in which the trading price per \$1 principal amount of 2026 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of the Company’s Class B Common Stock on such trading day and the conversion rate on such trading day; (3) upon the occurrence of certain corporate events or distributions on the Company’s Class B Common Stock, as described in the 2026 Indenture; and (4) if the Company calls the 2026 Notes for redemption. On or after October 15, 2025 until 5:00 p.m., New York City time, on the second scheduled trading day immediately before the maturity date, the 2026 Notes will be convertible at the option of the holder at any time.

The Company will settle conversions by paying or delivering, as applicable, cash, shares of the Company’s Class B Common Stock or a combination of cash and shares of the Company’s Class B Common Stock, at the Company’s election, based on the applicable conversion rate. The initial conversion rate is 15.5925 shares of the Company’s Class B Common Stock per \$1 principal amount of 2026 Notes, which represents an initial conversion price of approximately \$64.13 per share, and is subject to adjustment as described in the 2026 Indenture. If a “make-whole fundamental change” (as defined in the 2026 Indenture) occurs, then the Company will, in certain circumstances, increase the conversion rate for a specified period of time.

The Company will have the option to redeem the 2026 Notes in whole or in part at any time on or after January 20, 2024 and on or before the 40th scheduled trading day immediately before the maturity date if the last reported sale price per share of the Company’s Class B common stock exceeds 130% of the conversion price on (1) each of at least 20 trading days, whether or not consecutive, during any 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company sends the related redemption notice; and (2) the trading day immediately before the date the Company sends such notice. The redemption price will be equal to the principal amount of the 2026 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

Upon a fundamental change (as defined in the 2026 Indenture), holders may, subject to certain exceptions, require the Company to purchase their 2026 Notes in whole or in part for cash at a price equal to the principal amount of the 2026 Notes to be purchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date (as defined in the 2026 Indenture). In addition, upon a Make-Whole Fundamental Change (as defined in the 2026 Indenture), the Company will, under certain circumstances, increase the applicable conversion rate for a holder that elects to convert its 2026 Notes in connection with such Make-Whole Fundamental Change. No adjustment to the conversion rate will be made if the stock price in such Make-Whole Fundamental Change is either less than \$44.23 per share or greater than \$210.00 per share. The Company will not increase the conversion rate to an amount that exceeds 22.6090 shares per \$1 principal amount of 2026 Notes, subject to adjustment. The 2026 Indenture also contains a customary merger covenant.

Under the 2026 Indenture, the 2026 Notes may be accelerated upon the occurrence of certain customary events of default. If certain bankruptcy and insolvency-related events of default with respect to the Company occur, the principal of, and accrued and unpaid interest on, all of the then outstanding 2026 Notes shall automatically become due and payable. If any other event of default occurs and is continuing, the 2026 Trustee by notice to the Company, or the holders of the 2026 Notes of at least 25% in principal amount of the outstanding 2026 Notes by notice to the Company and the 2026 Trustee, may declare the principal of, and accrued and unpaid interest on, all of the then outstanding 2026 Notes to be due and payable. Notwithstanding the foregoing, the 2026 Indenture provides that, to the extent the Company elects, the sole remedy for an event of default relating to certain failures by the Company to comply with reporting covenant in the 2026 Indenture consists exclusively of the right to receive additional interest on the 2026 Notes.

As discussed in Note 2, the Company early adopted ASU 2020-06 as of January 1, 2021 and concluded the 2026 Notes will be accounted for as debt, with no bifurcation of the embedded conversion feature. Transaction costs were recorded as a direct deduction from the related debt liability in the consolidated balance sheet and are amortized to interest expense over the term of the 2026 Notes. The effective interest rate for the 2026 Notes is 0.658%.

As of December 31, 2021, none of the conditions of the 2026 Notes to early convert has been met.

The 2026 Notes are the Company's senior, unsecured obligations that rank senior in right of payment to the Company's future indebtedness that is expressly subordinated to the 2026 Notes, rank equally in right of payment with the Company's existing and future senior unsecured indebtedness that is not so subordinated (including the Company's 2027 Notes, see the section titled "—2027 Notes" below), effectively subordinated to the Company's existing and future secured indebtedness (including obligations under the Company's senior secured credit facilities), to the extent of the value of the collateral securing such indebtedness, and structurally subordinated to all existing and future indebtedness and other liabilities (including trade payables and preferred equity (to the extent the Company is not a holder thereof)) of the Company's subsidiaries. The 2026 Notes contain both affirmative and negative covenants. As of December 31, 2021, the Company was in compliance with all covenants in the 2026 Notes.



*Capped Call Options* — In connection with the pricing of the 2026 Notes, the Company entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. The Company incurred \$150 of expenses in connection with the capped call options. The capped call options are expected to reduce potential dilution to the Company's Class B Common Stock upon any conversion of 2026 Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. The cap price of the capped call options is initially \$72.9795 per share, which represents a premium of 65% above the last reported sale price per share of the Company's Class B Common Stock on the Nasdaq Global Select Market on January 21, 2021 and is subject to customary adjustments under the terms of the capped call options.

The capped call options were entered into in conjunction with the issuance of the 2026 Notes, however, they are legally separate agreements that can be separately exercised, with the receipt of shares under the capped call options having no effect on the 2026 Notes, and are legally detachable. As the capped call options are both legally detachable and separately exercisable from the 2026 Notes, the Company accounts for the capped call options separately from the 2026 Notes. The capped call options are indexed to the Company's own common stock and classified in stockholders' equity. As such, the premiums paid for the capped call options have been included as a net reduction to *Additional paid-in capital* in the consolidated balance sheet.

### **2027 Notes**

On June 28, 2021, the Company completed a private offering of \$575,000 of 0.375% convertible senior notes due 2027. The 2027 Notes were issued pursuant to an indenture, dated as of June 28, 2021, between the Company and Wilmington Trust, National Association, as trustee (the "2027 Trustee") (the "2027 Indenture"). Interest will accrue from June 28, 2021 and will be payable semi-annually in arrears in cash on January 1 and July 1 of each year, with the first payment due on January 1, 2022. The 2027 Notes will mature on July 1, 2027, unless earlier converted, redeemed or repurchased. The Company incurred \$15,065 of expenses in connection with the 2027 Notes offering consisting of transaction costs. The Company used \$25,875 of the net proceeds from the sale of the 2027 Notes to pay the premiums of the capped call options described further below, and \$536,062 to repay outstanding indebtedness under the Credit Facility and to pay related fees and expenses.

Prior to April 1, 2027, the 2027 Notes will be convertible at the option of the holder only under the following circumstances: (1) during any calendar quarter (and only during such quarter) commencing after the calendar quarter ending on September 30, 2021, if the last reported sale price per share of the Company's Class B Common Stock exceeds 130% of the conversion price for each of at least 20 trading days, whether or not consecutive, during the 30 consecutive trading days ending on, and including, the last trading day of the immediately preceding calendar quarter; (2) during the five consecutive business days immediately after any ten consecutive trading day period (such ten consecutive trading day period, the "measurement period") in which the trading price per \$1 principal amount of 2027 Notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price per share of the Company's Class B Common Stock on such trading day and the conversion rate on such trading day; (3) upon the occurrence of certain corporate events or distributions on the Company's Class B Common Stock, as described in the 2027 Indenture; and (4) if the Company calls the 2027 Notes for redemption. On or after April 1, 2027 until 5:00 p.m., New York City time, on the second scheduled trading day immediately before the maturity date, the 2027 Notes will be convertible at the option of the holder at any time.

The Company will settle conversions by paying or delivering, as applicable, cash, shares of the Company's Class B Common Stock or a combination of cash and shares of the Company's Class B Common Stock, at the Company's election, based on the applicable conversion rate. The initial conversion rate is 12.0153 shares of the Company's Class B Common Stock per \$1 principal amount of 2027 Notes, which represents an initial conversion price of approximately \$83.23 per share, and is subject to adjustment as described in the 2027 Indenture. If a "make-whole fundamental change" (as defined in the 2027 Indenture) occurs, then the Company will, in certain circumstances, increase the conversion rate for a specified period of time.

The Company will have the option to redeem the 2027 Notes in whole or in part at any time on or after July 5, 2024 and on or before the 40th scheduled trading day immediately before the maturity date if the last reported sale price per share of the Company's Class B common stock exceeds 130% of the conversion price on (1) each of at least 20 trading days, whether or not consecutive, during any 30 consecutive trading days ending on, and including, the trading day immediately before the date the Company sends the related redemption notice; and (2) the trading day immediately before the date the Company sends such notice. The redemption price will be equal to the principal amount of the 2027 Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date.

Upon a fundamental change (as defined in the 2027 Indenture), holders may, subject to certain exceptions, require the Company to purchase their 2027 Notes in whole or in part for cash at a price equal to the principal amount of the 2027 Notes to be purchased, plus accrued and unpaid interest, if any, to, but excluding, the fundamental change repurchase date (as defined in the 2027 Indenture). In addition, upon a Make-Whole Fundamental Change (as defined in the 2027 Indenture), the Company will, under certain circumstances, increase the applicable conversion rate for a holder that elects to convert its 2027 Notes in connection with such Make-Whole Fundamental Change. No adjustment to the conversion rate will be made if the stock price in such Make-Whole Fundamental Change is either less than \$61.65 per share or greater than \$325.00 per share. The Company will not increase the conversion rate to an amount that exceeds 16.2206 shares per \$1 principal amount of 2027 Notes, subject to adjustment. The 2027 Indenture also contains a customary merger covenant.

Under the 2027 Indenture, the 2027 Notes may be accelerated upon the occurrence of certain customary events of default. If certain bankruptcy and insolvency-related events of default with respect to the Company occur, the principal of, and accrued and unpaid interest on, all of the then outstanding 2027 Notes shall automatically become due and payable. If any other event of default occurs and is continuing, the 2027 Trustee by notice to the Company, or the holders of the 2027 Notes of at least 25% in principal amount of the outstanding 2027 Notes by notice to the Company and the 2027 Trustee, may declare the principal of, and accrued and unpaid interest on, all of the then outstanding 2027 Notes to be due and payable. Notwithstanding the foregoing, the 2027 Indenture provides that, to the extent the Company elects, the sole remedy for an event of default relating to certain failures by the Company to comply with reporting covenant in the 2027 Indenture consists exclusively of the right to receive additional interest on the 2027 Notes.

As previously discussed, the Company early adopted ASU 2020-06 as of January 1, 2021 and concluded the 2027 Notes will be accounted for as debt, with no bifurcation of the embedded conversion feature. Transaction costs were recorded as a direct deduction from the related debt liability in the consolidated balance sheet and are amortized to interest expense over the term of the 2027 Notes. The effective interest rate for the 2027 Notes is 0.864%.

As of December 31, 2021, none of the conditions of the 2027 Notes to early convert has been met.

The 2027 Notes are the Company's senior, unsecured obligations that rank senior in right of payment to the Company's future indebtedness that is expressly subordinated to the 2027 Notes, rank equally in right of payment with the Company's existing and future senior unsecured indebtedness that is not so subordinated (including the Company's 2026 Notes), effectively subordinated to the Company's existing and future secured indebtedness (including obligations under the Company's senior secured credit facilities), to the extent of the value of the collateral securing such indebtedness, and structurally subordinated to all existing and future indebtedness and other liabilities (including trade payables and preferred equity (to the extent the Company is not a holder thereof)) of the Company's subsidiaries. The 2027 Notes contain both affirmative and negative covenants. As of December 31, 2021, the Company was in compliance with all covenants in the 2027 Notes.

*Capped Call Options* — In connection with the pricing of the 2027 Notes, the Company entered into capped call options with certain of the initial purchasers or their respective affiliates and certain other financial institutions. The Company incurred \$50 of expenses in connection with the capped call options. The capped call options are expected to reduce potential dilution to the Company’s Class B Common Stock upon any conversion of 2027 Notes and/or offset any cash payments the Company is required to make in excess of the principal amount of converted notes, as the case may be, with such reduction and/or offset subject to a cap. The cap price of the capped call options is initially \$95.5575 per share, which represents a premium of 55% above the last reported sale price per share of the Company’s Class B Common Stock on the Nasdaq Global Select Market on June 23, 2021 and is subject to customary adjustments under the terms of the capped call options.

The capped call options were entered into in conjunction with the issuance of the 2027 Notes, however, they are legally separate agreements that can be separately exercised, with the receipt of shares under the capped call options having no effect on the 2027 Notes, and are legally detachable. As the capped call options are both legally detachable and separately exercisable from the 2027 Notes, the Company accounts for the capped call options separately from the 2027 Notes. The capped call options are indexed to the Company’s own common stock and classified in stockholders’ equity. As such, the premiums paid for the capped call options have been included as a net reduction to *Additional paid-in capital* in the consolidated balance sheet.

### Interest Expense

Interest expense consists of the following:

	Year Ended December 31,		
	2021	2020	2019
<b>Bank credit facility <sup>(1)</sup>:</b>			
Revolving loan facility	\$ 3,448	\$ 5,680	\$ 8,971
Term loans	117	502	—
Interest rate swap	1,270	696	—
Amortization and write-off of deferred debt issuance costs	1,309	985	553
	<u>6,144</u>	<u>7,863</u>	<u>9,524</u>
<b>2026 Notes:</b>			
0.125% Coupon interest	803	—	—
Amortization of deferred debt issuance costs	3,378	—	—
	<u>4,181</u>	<u>—</u>	<u>—</u>
<b>2027 Notes:</b>			
0.375% Coupon interest	1,096	—	—
Amortization of deferred debt issuance costs	1,268	—	—
	<u>2,364</u>	<u>—</u>	<u>—</u>
<b>Other obligations</b>	<b>108</b>	<b>50</b>	<b>207</b>
<b>Total interest expense</b>	<b>\$ 12,797</b>	<b>\$ 7,913</b>	<b>\$ 9,731</b>

(1) The weighted average interest rate was 2.03%, 1.92%, and 3.47% for the years ended December 31, 2021, 2020, and 2019, respectively.

Interest rate risk associated with the Credit Facility is managed through an interest rate swap which the Company executed on March 31, 2020. The interest rate swap has an effective date of April 2, 2020 and a termination date of April 2, 2030. Under the terms of the interest rate swap, the Company fixed its LIBOR borrowing rate at 0.73% on a notional amount of \$200,000. The interest rate swap is not designated as a hedging instrument for accounting purposes. The Company accounts for the interest rate swap as either an asset or a liability in the consolidated balance sheets and carries the derivative at fair value. Gains and losses from the change in fair value are recognized in *Other income (expense), net* in the consolidated statements of operations. As of December 31, 2021 and 2020, the Company recorded a swap related asset at fair value of \$10,117 and \$347, respectively, in *Other assets* in the consolidated balance sheets.

Scheduled maturities of long-term debt are as follows:

	<b>December 31, 2021</b>
2022	\$ 5,000
2023	5,000
2024	10,000
2025	180,000
2026	690,000
Thereafter	575,000
<b>Total scheduled maturities of long-term debt</b>	<b>\$ 1,465,000</b>

#### **Note 11: Executive Bonus Plan**

Certain of the Company's key employees, including its named executive officers, participate in the Bentley Systems, Incorporated Bonus Pool Plan, as amended and restated, effective as of September 22, 2020 (the "Bonus Plan"). Pursuant to the Bonus Plan, participants are eligible to receive incentive bonuses that are determined based on the Company's adjusted Management Report Operating Income ("MROI"), as defined in the plan agreement and before deduction for such plan payments. For purposes of the Bonus Plan, the bonus pool thereunder may be funded with up to an aggregate of 20% of the Company's adjusted MROI, subject to approval by the board of directors, with payments made to plan participants based on each such participant's allocated interest in the bonus pool. The plan permits the deduction of certain holdback amounts from the plan's pool, from which amounts can then be allocated to fund items including equity and/or cash incentive compensation for non-plan participants and participant charitable contributions.

A participant may defer any portion, or all, of such participant's incentive bonus payable pursuant to the Bonus Plan into the DCP (see Note 12). Prior to September 22, 2020, a participant's non-deferred incentive bonus was payable in cash. Effective September 22, 2020, the Bonus Plan provides, in part, that a participant may elect to receive any portion, or all, of such participant's non-deferred incentive bonus in the form of shares of fully vested Class B Common Stock issued under the Bentley Systems, Incorporated 2020 Omnibus Incentive Plan (the "2020 Incentive Award Plan") beginning in the fourth quarter of 2020, subject to the limitation described below. The Company records the election of non-deferred incentive bonus in the form of shares of fully vested Class B Common Stock as stock-based compensation expense in the consolidated statements of operations (see Note 15). Such election must be made prior to the start of the applicable calendar quarter for which the incentive bonus is to be paid, and the number of shares of Class B Common Stock payable in respect of such elected amount is calculated using a volume-weighted average price of the Company's Class B Common Stock for the period commencing on the tenth trading day prior to the end of the applicable calendar quarter and ending on the tenth trading day following the end of the applicable calendar quarter. Notwithstanding participants' elections to receive shares of fully vested Class B Common Stock in respect of their non-deferred incentive bonus payments, if, in any calendar quarter, the aggregate U.S. Dollar value of shares of fully vested Class B Common Stock payable in respect of the non-deferred incentive bonuses exceeds \$7,500, the portion of each participant's non-deferred incentive bonus payable in shares of fully vested Class B Common Stock will be reduced pro rata such that the \$7,500 limit is not exceeded, and, for each affected participant, the amount of such reduction will be payable in cash.

For the years ended December 31, 2021, 2020, and 2019, the incentive compensation, including cash payments, election to receive shares of fully vested Class B Common Stock beginning in the fourth quarter of 2020, and deferred compensation to plan participants, recognized under this plan (net of all applicable holdbacks) was \$33,454, \$34,340, and \$31,061, respectively.

## **Note 12: Retirement Plans**

### ***Deferred Compensation Plan***

Under the Company's unfunded DCP, certain officers and key employees may defer all or any part of their incentive compensation, and the Company may make discretionary awards on behalf of such participants. Elective participant deferrals and discretionary Company awards are received in the form of phantom shares of the Company's Class B Common Stock, which are valued for tax and accounting purposes in the same manner as actual shares of Class B Common Stock, and are recorded as stock-based compensation expense in the consolidated statements of operations (see Note 15).

In August 2021, the Company's board of directors approved an amendment to the DCP, which offered to certain active executives in the DCP a one-time, short-term election to reallocate a limited portion of their DCP holdings from phantom shares of the Company's Class B Common Stock into other DCP phantom investment funds. The offer to reallocate was subject to a proration mechanism which adjusted the aggregate elections to a maximum of 1,500,000 phantom shares of the Company's Class B Common Stock. This resulted in a reduction of 1,500,000 shares in both the basic and diluted count of Company shares.

While DCP participants' investments in phantom shares remain equity classified, as they will be settled in shares of Class B Common Stock upon eventual distribution, the amendment and elections resulted in a change to liability classification for the reallocated phantom investments, as they will be settled in cash upon eventual distribution. As a result, during the year ended December 31, 2021, the Company reclassified cumulative compensation cost of \$4,739 from *Additional paid-in capital* to *Accruals and other current liabilities* or *Deferred compensation plan liabilities* in the consolidated balance sheet and recognized a compensation charge of \$90,721 to *Deferred compensation plan* expenses in the consolidated statements of operations to record the reallocated deferred compensation plan liabilities at their fair value of \$95,460. Subsequent to the one-time reallocation, these diversified deferred compensation plan liabilities are marked to market at the end of each reporting period, with changes in the liabilities recorded as an expense (income) to *Deferred compensation plan* in the consolidated statements of operations.

Amounts in the DCP attributable to certain non-colleague participants are settled in cash and are classified as liabilities in either *Accruals and other current liabilities* or *Deferred compensation plan liabilities* in the consolidated balance sheets. The deferred compensation plan liabilities are marked to market at the end of each reporting period, with changes in the liabilities recorded as an expense (income) to *Deferred compensation plan* in the consolidated statements of operations.

*Deferred compensation plan* expense was \$95,046, \$177, and \$408 for the years ended December 31, 2021, 2020, and 2019, respectively.

For the years ended December 31, 2021, 2020, and 2019, DCP elective participant deferrals were \$2,619, \$3,530, and \$3,586, respectively. No discretionary contributions were made to the DCP during the years ended December 31, 2021, 2020, and 2019. Pursuant to the terms of the DCP, in connection with the Special Dividend (see Note 1) declared on August 28, 2020, participants received 2,709,851 phantom shares in lieu of the Special Dividend. As of December 31, 2021 and 2020, phantom shares of the Company's Class B Common Stock issuable by the DCP were 25,384,449 and 30,590,955, respectively.

The total liabilities related to the DCP is included in the consolidated balance sheets as follows:

	December 31,	
	2021	2020
Accruals and other current liabilities	\$ 7,309	\$ 169
Deferred compensation plan liabilities	94,890	2,422
Total DCP liabilities	\$ 102,199	\$ 2,591

### **Other Plans**

The Company maintains a qualified 401(k) profit-sharing plan (the “401(k) Plan”) for the benefit of substantially all U.S.-based full-time colleagues. The Company may make discretionary profit-sharing contributions to the 401(k) Plan. The Company matches 50%, up to a maximum of 5% of “qualified cash compensation” for each eligible participating colleague. The Company’s matching contributions to the 401(k) Plan were \$4,114, \$3,583, and \$3,311, for the years ended December 31, 2021, 2020, and 2019, respectively. Effective January 1, 2022, the Company will match 50%, up to a maximum of 6% of “qualified cash compensation” for each eligible participating colleague.

The Company also maintains various retirement benefit plans (primarily defined contribution plans) for colleagues of its international subsidiaries. The Company’s contributions to these plans were \$10,729, \$7,347, and \$8,070, for the years ended December 31, 2021, 2020, and 2019, respectively.

### **Note 13: Preferred and Common Stock**

#### **Initial Public Offering**

On September 25, 2020, the Company completed its IPO. The selling stockholders sold 12,360,991 shares of Class B Common Stock at a public offering price of \$22.00 per share. The Company did not sell any shares in the IPO and did not receive any of the proceeds from the sale of the Class B Common Stock sold by the selling stockholders. For the year ended December 31, 2020, the Company recorded \$26,130 in *Expenses associated with initial public offering* in the consolidated statement of operations. These expenses included certain non-recurring costs relating to the Company’s IPO, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the selling stockholders, professional fees, and other expenses.

In connection with the IPO, the Company’s amended and restated Certificate of Incorporation authorizes shares of undesignated preferred stock. See below for further detail.

#### **Follow-On Public Offering**

On November 17, 2020, the Company completed its Follow-On Offering of 11,500,000 shares of Class B Common Stock at a public offering price of \$32.00 per share. The Company sold 9,603,965 shares of Class B Common Stock (inclusive of 1,500,000 shares sold upon the exercise by the underwriters of their option to purchase additional shares of the Company’s Class B Common Stock). The selling stockholders sold 1,896,035 shares of Class B Common Stock. The Company received net proceeds of \$294,429 after deducting expenses of \$12,898. The Company did not receive any of the proceeds from the sale of the Class B Common Stock sold by the selling stockholders. Expenses associated with the Follow-On Offering included certain non-recurring costs, consisting of the payment of underwriting discounts and commissions applicable to the sale of shares by the Company, professional fees, and other expenses. The Company agreed to pay certain expenses in connection with the Follow-On Offering on behalf of the selling stockholders and made an accounting policy election to offset these expenses against the Follow-On Offering proceeds. The Follow-On Offering net proceeds were used to repay outstanding borrowings under the 2020 Term Loan and revolving facility of the Company’s Credit Facility (see Note 10).

### ***Preferred Stock Authorized and Selected Terms***

Upon the closing of the IPO, the Company's amended and restated Certificate of Incorporation authorizes the Company to issue up to 100,000,000 shares of preferred stock. Preferred stock has rights, preferences, and privileges which may be designated from time to time by the Company's board of directors.

### ***Common Stock Authorized and Selected Terms***

Upon the closing of the IPO, the Company's amended and restated Certificate of Incorporation authorizes the Company to issue up to 100,000,000 shares of Class A Common Stock and up to 1,800,000,000 shares of Class B Common Stock. Prior to the IPO, the Company amended and restated its Certificate of Incorporation on April 20, 2018 to authorize 320,000,000 shares of Class A Common Stock and 600,000,000 shares of Class B Common Stock.

Upon the closing of the IPO, the rights of the holders of Class A Common Stock and Class B Common Stock are identical, except with respect to voting and conversion rights. Each share of Class B Common Stock is entitled to one vote per share, while each share of Class A Common Stock is entitled to 29 votes per share and is convertible at any time into one share of Class B Common Stock. Class A Common Stock will automatically convert into Class B Common Stock upon certain transfers, and its votes per share will be reduced to 11 in the event none of the Bentleys (Barry J. Bentley, Gregory S. Bentley, Keith A. Bentley, Raymond B. Bentley, and Richard P. Bentley, collectively) serves as a Company director or executive officer. Class A Common Stock also will automatically convert into shares of Class B Common Stock upon the affirmative vote of at least 90% of the then outstanding shares of Class A Common Stock or such time that the Bentley family (the Bentleys, certain other family members and trusts and other entities controlled by or primarily for the benefit of the Bentleys and their families, collectively) directly or indirectly, own less than 20% of the issued and outstanding Class B Common Stock on a fully-diluted basis (assuming the conversion of all issued and outstanding Class A Common Stock). Pursuant to the terms of the Company's amended and restated Certificate of Incorporation in effect prior to the IPO, each share of Class B Common Stock had the same rights and privileges as each share of Class A Common Stock, except that the holders of outstanding shares of Class B Common Stock did not have any right to vote on, or consent with respect to, any matters to be voted on or consented to by the stockholders of the Company except as was required by law, and the shares of Class B Common Stock were not included in determining the number of shares voting or entitled to vote on any such matters.

### ***Common Stock Issuances, Sales, and Repurchases***

On June 17, 2021, the Company issued 3,141,342 shares of the Company's Class B Common Stock pursuant to the acquisition of Seequent (see Note 4).

The Company has a Class B Common Stock Purchase Agreement with a strategic investor (the "Common Stock Purchase Agreement"), pursuant to which the investor could acquire in a series of transactions up to \$250,000 of the Company's Class B Common Stock at the then prevailing fair market value, either directly from selling stockholders, in which case the Company would act as pass through agent, or by funding the Company's repurchase and subsequent sale to the investor of shares acquired by the Company from existing Company stockholders. The Company had the right to retain a portion of the shares that would otherwise be sold to the investor. As of December 31, 2020, the investor reached the maximum purchase amount of \$250,000.

The Common Stock Purchase Agreement grants to the strategic investor certain informational and protective rights, including, for so long as the Company remains party to a long-term strategic collaboration agreement with the investor the right to participate in any sale process the Company may undertake. The Common Stock Purchase Agreement expires in 2030.

During the year ended December 31, 2020, the investor purchased 4,574,399 shares under the Common Stock Purchase Agreement, with 3,769,346 of such shares having been repurchased by the Company and re-sold to the investor for consideration of \$58,349 and 805,053 shares acquired directly by the investor for consideration of \$12,462.

During the year ended December 31, 2019, the investor purchased 791,873 shares under the Common Stock Purchase Agreement, with 622,873 of such shares having been repurchased by the Company and re-sold to the investor for consideration of \$4,510 and 169,000 shares acquired directly by the investor for consideration of \$1,224.

For the year ended December 31, 2021, the Company issued 4,587,053 shares of Class B Common Stock to colleagues who exercised their stock options, net of 1,066,498 shares withheld at exercise to pay for the cost of the stock options, as well as for \$37,785 of applicable income tax withholdings. The Company received \$5,605 in proceeds from the exercise of stock options.

For the year ended December 31, 2020, the Company issued 4,060,839 shares of Class B Common Stock to colleagues who exercised their stock options, net of 1,425,352 shares withheld at exercise to pay for the cost of the stock options, as well as for \$4,755 of applicable income tax withholdings. The Company received \$9,128 in proceeds from the exercise of stock options. For the year ended December 31, 2020, the Company paid \$1,454 for 128,007 shares sold back to the Company upon exercise of the Put and Call provisions under its applicable equity incentive plans (see Note 15).

For the year ended December 31, 2019, the Company issued 3,214,542 shares of Class B Common Stock to colleagues who exercised their stock options, net of 1,516,616 shares withheld at exercise to pay for the cost of the stock options, as well as for \$2,324 of applicable income tax withholdings. The Company received \$3,627 in proceeds from the exercise of stock options. For the year ended December 31, 2019, the Company paid \$8,838 for 1,126,747 shares sold back to the Company upon exercise of the Put and Call provisions under its applicable equity incentive plans (see Note 15).

Upon the completion of the IPO, the Put and Call provisions of the Company's Amended and Restated 2015 Equity Incentive Plan (the "2015 Equity Incentive Plan") terminated automatically.

For the year ended December 31, 2021, the Company issued 238,755 shares of Class B Common Stock in connection with Bonus Plan incentive compensation, net of shares withheld. Of the total 407,473 shares awarded, 168,718 shares were sold back to the Company to pay for applicable income tax withholdings of \$8,739.

For the years ended December 31, 2021, 2020, and 2019, the Company issued 2,378,645, 3,081,607, and 2,322,983 shares of Class B Common Stock to DCP participants in connection with distributions from the plan. The distribution in shares for the year ended December 31, 2021 totaled 3,820,099 shares of which 1,441,454 shares were sold back to the Company in the same period to pay for applicable income tax withholdings of \$69,007. The distribution in shares for the year ended December 31, 2020 totaled 3,352,931 shares of which 271,324 shares were sold back to the Company to pay for the cost of applicable income tax withholding of \$4,625. The distribution in shares for the year ended December 31, 2019 totaled 3,082,607 shares of which 759,624 shares were sold back to the Company to pay for the cost of applicable income tax withholding of \$5,609.

For the year ended December 31, 2021, the Company did not repurchase shares from its profit-sharing plan. The Company repurchased 549,834 and 318,203 shares from its profit-sharing plan for \$6,970 and \$2,417 for the years ended December 31, 2020 and 2019, respectively.



## Dividends

The Company declared cash dividends during the periods presented as follows:

	<b>Dividend Per Share</b>	<b>Amount</b>
<b>2021:</b>		
Fourth quarter	\$ 0.030	\$ 8,461
Third quarter	0.030	8,485
Second quarter	0.030	8,372
First quarter	0.030	8,219
Total	<u>\$ 0.120</u>	<u>\$ 33,537</u>
<b>2020:</b>		
Fourth quarter	\$ 0.030	\$ 8,270
Third quarter <sup>(1)</sup>	1.530	400,311
Second quarter	0.030	7,771
First quarter	0.030	7,666
Total	<u>\$ 1.620</u>	<u>\$ 424,018</u>
<b>2019:</b>		
Fourth quarter	\$ 0.025	\$ 6,367
Third quarter	0.025	6,380
Second quarter	0.025	6,375
First quarter	0.025	6,268
Total	<u>\$ 0.100</u>	<u>\$ 25,390</u>

(1) As discussed in Note 1, on August 28, 2020, the Company's board of directors declared a Special Dividend of \$1.50 per share of the Company's common stock (\$392,489 in the aggregate).

## Global Employee Stock Purchase Plan

Effective September 22, 2020, the Company's board of directors and its stockholders adopted and approved the Bentley Systems, Incorporated Global Employee Stock Purchase Plan (the "ESPP"). The ESPP provides eligible colleagues of the Company with an opportunity to contribute up to 15% of their eligible compensation toward the purchase of the Company's Class B Common Stock at a discounted price, up to a maximum of \$25 per year and subject to any other plan limitations. The ESPP has 25,000,000 shares of Class B Common Stock reserved for issuance. The ESPP has been implemented by means of consecutive offering periods, with the first offering period commencing on the first trading day on or after January 1, 2021 and ending on the last trading day on or before June 30, 2021. Unless otherwise determined by the board of directors, offering periods will run from January 1st (or the first trading day thereafter) through June 30th (or the first trading day prior to such date), and from July 1st (or the first trading day thereafter) through December 31st (or the first trading day prior to such date). The purchase price per share at which shares of Class B Common Stock are sold in an offering period under the ESPP will be equal to the lesser of 85% of the fair market value of a share of Class B Common Stock (i) on the first trading day of the offering period, or (ii) on the purchase date (i.e., the last trading day of the purchase period). During the year ended December 31, 2021, colleagues who elected to participate in the ESPP purchased a total of 104,716 shares of Class B Common Stock, net of shares withheld, resulting in cash proceeds to the Company of \$3,846. Of the total 111,486 shares purchased, 6,770 shares were sold back to the Company to pay for applicable income tax withholdings of \$438. During the year ended December 31, 2020, no shares were issued under the ESPP. As of December 31, 2021, \$4,818 of ESPP withholding via colleague payroll deduction were recorded in *Accruals and other current liabilities* in the consolidated balance sheet. As of December 31, 2020, there was no ESPP withholding via colleague payroll deduction.

**Note 14: Accumulated Other Comprehensive Loss**

Accumulated other comprehensive loss consists of the following:

	Foreign Currency Translation	Actuarial (Loss) Gain on Retirement Plan	Total
Balance, December 31, 2018	\$ (28,867)	\$ (547)	\$ (29,414)
Other comprehensive income (loss), before taxes	5,959	(675)	5,284
Tax benefit	—	203	203
Other comprehensive income (loss), net of taxes	5,959	(472)	5,487
Balance, December 31, 2019	(22,908)	(1,019)	(23,927)
Other comprehensive (loss) income, before taxes	(2,311)	6	(2,305)
Tax expense	—	(1)	(1)
Other comprehensive (loss) income, net of taxes	(2,311)	5	(2,306)
Balance, December 31, 2020	(25,219)	(1,014)	(26,233)
Other comprehensive (loss) income, before taxes	(65,648)	151	(65,497)
Tax expense	—	(44)	(44)
Other comprehensive (loss) income, net of taxes	(65,648)	107	(65,541)
Balance, December 31, 2021	\$ (90,867)	\$ (907)	\$ (91,774)

**Note 15: Equity Awards and Instruments**

Effective September 22, 2020, the Company adopted and approved the 2020 Incentive Award Plan. The 2020 Incentive Award Plan provides for the granting of stock, stock options, restricted stock, RSUs, and other stock-based or performance-based awards to certain directors, officers, colleagues, consultants, and advisors of the Company. The 2020 Incentive Award Plan provides that the total number of shares of Class B Common Stock that may be issued under the 2020 Incentive Award Plan is 25,000,000 (the "Absolute Share Limit"). Effective December 31, 2021, the board of directors amended the 2020 Incentive Award Plan to eliminate a provision that automatically increased the Absolute Share Limit on the first day of each fiscal year in an amount equal to the lower of 1% of the total number of shares of Class B Common Stock outstanding on the last day of the immediately preceding fiscal year and a lower number of shares of Class B Common Stock as determined by the Company's board of directors. For fiscal year 2021, the board of directors determined that the increase to the Absolute Share Limit would be set at zero. The 2020 Incentive Award Plan terminates in September 2030. Equity awards that are expired, canceled, forfeited, or terminated for any reason will be available for future grant under the 2020 Incentive Award Plan. As of December 31, 2021, equity awards available for future grants under the 2020 Incentive Award Plan were 24,073,298.

The Company also has equity awards outstanding under its 2015 Equity Incentive Plan, which provided for the granting of awards in the form of stock options, stock appreciation rights, dividend equivalent rights, restricted stock, RSUs, and stock grants. The 2015 Equity Incentive Plan had 50,000,000 shares of Class B Common Stock reserved for issuance and terminates in November 2024. Following the completion of the IPO, no further awards may be granted under the 2015 Equity Incentive Plan.

## **Equity Awards**

### ***Stock Options***

Stock options generally vest ratably on each of the first four anniversaries of the grant date. Prior to the IPO, stock options granted under the 2015 Equity Incentive Plan included Put and Call provisions that allowed colleagues who have exercised an option to sell all or part of their shares acquired upon such exercise to the Company at the fair market value at the time of the sale. The exercise period for the Put right began on the second day after the six-month anniversary of the date the option was exercised and ended after an additional 30 days. The Call right provision allowed the Company to purchase all or a part of the shares acquired by a colleague upon exercise of an option, at the fair market value at the time of such purchase. The Company could exercise the Call right at any time within seven months of the later of i) the optionee's termination of service with the Company, or ii) the optionee's (or his or her beneficiary's) exercise of such option after a termination of service. These Put and Call rights terminated upon the completion of the IPO.

In accordance with the terms of the 2015 Equity Incentive Plan, in connection with the payment of the Special Dividend of \$1.50 per share of the Company's common stock on September 2, 2020, the Company equitably reduced the exercise price of each outstanding stock option granted under the 2015 Equity Incentive Plan by \$1.50, but not lower than \$0.01 (see Note 1).

### ***Stock Grants***

Under the equity incentive plans, the Company may grant unrestricted, fully vested shares of Class B Common Stock to eligible colleagues. Prior to the IPO, any such shares awarded had Put and Call rights similar to those described above with respect to stock options, which terminated upon the completion of the IPO.

### ***Restricted Stock and RSUs***

Under the equity incentive plans, the Company may grant both time-based and performance-based shares of restricted Class B Common Stock and RSUs to eligible colleagues. Time-based awards generally vest ratably on each of the first four anniversaries of the grant date. Performance-based awards vesting is determined by the achievement of certain business profitability and growth targets, which include growth in annualized recurring revenues, as well as actual bookings for perpetual licenses and non-recurring services, and certain non-financial performance targets. Performance targets are set for annual performance periods.

Shares of restricted stock have voting rights and, subject to the terms of the award agreements, the time-based restricted stock awards generally accrue declared dividends which are paid upon vesting. RSUs, which may be cash or share-settled depending on the award, do not have voting rights, but, subject to the terms of the award agreements, generally accrue declared dividends which are paid upon vesting. Beginning with the April 2021 grant, time-based RSUs have dividend equivalent rights and do not accrue cash dividends. Certain historical RSUs granted in 2016 under the Company's 2015 Equity Incentive Plan have dividend equivalent rights and do not accrue cash dividends. Recipients of the Company's outstanding performance-based restricted stock awards and RSUs are paid dividends prior to vesting.

## Stock-Based Compensation Expense

Total stock-based compensation expense was as follows:

	Year Ended December 31,		
	2021	2020	2019
Bonus Plan expense (see Note 11)	\$ 23,121	\$ 6,524	\$ —
Restricted stock and RSUs expense <sup>(1)</sup>	19,917	4,248	1,749
Stock option expense	3,271	6,858	6,342
ESPP expense (see Note 13)	2,118	—	—
Stock grants expense	445	319	—
DCP elective participant deferrals expense <sup>(2)</sup> (see Note 12)	173	—	—
IPO vested restricted stock and RSU expense	—	15,102	—
Total stock-based compensation expense <sup>(3)</sup>	<u>\$ 49,045</u>	<u>\$ 33,051</u>	<u>\$ 8,091</u>

(1) Includes acquisition-related shares (see Note 4).

(2) DCP elective participant deferrals expense excludes deferred incentive bonus payable pursuant to the Bonus Plan.

(3) As of December 31, 2021 and 2020, \$6,749 and \$6,835 remained in *Accruals and other current liabilities* in the consolidated balance sheets, respectively.

Total stock-based compensation expense is included in the consolidated statements of operations as follows:

	Year Ended December 31,		
	2021	2020	2019
Cost of subscriptions and licenses	\$ 1,442	\$ 960	\$ 115
Cost of services	1,257	2,939	522
Research and development	19,740	12,105	3,107
Selling and marketing	5,980	6,692	2,210
General and administrative	20,626	10,355	2,137
Total stock-based compensation expense	<u>\$ 49,045</u>	<u>\$ 33,051</u>	<u>\$ 8,091</u>

Stock-based compensation expense is measured at the grant date fair value of the award and is recognized ratably over the requisite service period, which is generally the vesting period. The Company accounts for forfeitures of equity awards as those forfeitures occur.

The fair value of the common stock during periods prior to the IPO was determined by the board of directors at each award grant date based upon a variety of factors, including the results obtained from independent third-party valuations, the Company's financial position, and historical financial performance.

## Stock Options

The fair value of each stock option award was estimated on the date of grant using the Black-Scholes option pricing model. The determination of the fair value of share-based payment awards using an option pricing model is affected by the Company's stock price, as well as assumptions regarding a number of complex and subjective variables, which are estimated as follows:

*Expected volatility.* The expected stock price volatility for the Company's common stock was estimated by using the average historic price volatility for industry peers based on daily price observations over a period equivalent to the expected term of the stock option grants. The Company intends to continue to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of the Company's own common stock share price becomes available.

*Expected dividend yield.* The expected dividend yield is calculated by dividing the Company's annual dividend, based on the most recent quarterly dividend rate, by the Company's common stock price (as described above) on the grant date.

*Risk-free interest rate.* The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected term of the stock options at the time of grant.

*Expected term.* The expected term represents the period that the Company's stock-based awards are expected to be outstanding. The expected term is based on the simplified method, which represents the average period from vesting to the expiration of the award.

The following weighted average assumptions were used in the Black-Scholes option pricing model to estimate the fair values of stock options granted during the years ended December 31, 2020 and 2019. The Company did not grant stock options during the year ended December 31, 2021.

	Year Ended December 31,	
	2020	2019
Expected volatility	31.04%	29.57%
Expected dividend yield	1.11%	1.38%
Risk-free interest rate	1.31%	2.48%
Expected term (in years)	3.75	3.75
Weighted average grant date fair value of stock options issued	\$2.49	\$1.66

The following is a summary of stock option activity and related information under the Company's applicable equity incentive plans:

	Stock Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Outstanding, December 31, 2020	12,842,226	\$ 4.87		
Exercised	(5,653,551)	4.36		
Forfeited	(270,750)	5.56		
Outstanding, December 31, 2021	6,917,925	\$ 5.26	1.57	\$ 297,933
Exercisable, December 31, 2021	3,837,800	\$ 5.00	1.26	\$ 166,305

For the years ended December 31, 2021, 2020, and 2019, the Company received cash proceeds of \$5,605, \$9,128, and \$3,612, respectively, related to the exercise of stock options. The total intrinsic value of stock options exercised for the years ended December 31, 2021, 2020, and 2019 was \$270,614, \$72,275, and \$22,914, respectively.

As of December 31, 2021, there was \$2,668 of unrecognized compensation expense related to unvested stock options, which is expected to be recognized over a weighted average period of approximately 0.9 years.

*Acquisition Options* — In addition to stock options granted under the Company's equity incentive plans, in connection with an acquisition completed in March 2018, the Company issued to certain selling shareholder entities options to acquire an aggregate of up to 900,000 shares of Class B Common Stock. The options have a five-year term, are exercisable on the fourth anniversary of the closing of the acquisition, and have an initial exercise price of \$6.805 per share. The options had a four-year service condition, which was incorporated into the Company's Call rights. The exercise price of the options is subject to a cap and collar adjustment mechanism that automatically reduces (but not to less than \$0.01) or increases the exercise price based on the difference between the exercise price and the fair market value of the Company's Class B Common Stock on the exercise date. The fair value of the awards was estimated on the date of grant using the Black-Scholes option pricing model. The grant date fair value of each option was \$3.44. Any shares of Class B Common Stock acquired upon exercise of the options were generally entitled to the Put and Call rights summarized above under "Stock Options," and the options contain customary adjustment provisions in case of stock splits, stock dividends, or other corporate transactions. Upon the completion of the IPO, the Put and Call provisions, as well as the incorporated service condition, of the Company's acquisition options terminated automatically and as such, the Company accelerated \$1,548 of previously unrecognized stock-based compensation associated with these options for the year ended December 31, 2020. The Company recorded a total of \$2,012 of stock-based compensation expense associated with these options for the year ended December 31, 2020. As of December 31, 2021, all options to acquire 900,000 shares remain outstanding. As of December 31, 2021, these options are non-exercisable and have an aggregate intrinsic value of \$7,992.

### Restricted Stock and RSUs

The fair value of restricted stock and RSUs is determined by the product of the number of shares granted and the Company's common stock price (as described above) on the grant date.

The following is a summary of unvested restricted stock and RSU activity and related information under the Company's applicable equity incentive plans:

	Total Restricted Stock and RSUs	Time- Based Restricted Stock and RSUs	Performance- Based Restricted Stock and RSUs	Time- Based Weighted Average Grant Date Fair Value Per Share	Performance- Based Weighted Average Grant Date Fair Value Per Share
Unvested, December 31, 2020	1,423,715	1,263,193	160,522 <sup>(3)</sup>	\$ 16.38	\$ 16.62
Granted	894,595 <sup>(1)</sup>	794,787	99,808 <sup>(4)</sup>	52.80	49.93
Vested	(399,893)	(364,963)	(34,930) <sup>(3)</sup>	21.95	17.53
Forfeited	(209,872)	(81,155)	(128,717)	22.00	17.18
Unvested, December 31, 2021	<u>1,708,545 <sup>(2)</sup></u>	<u>1,611,862</u>	<u>96,683 <sup>(5)</sup></u>	<u>\$ 32.81</u>	<u>\$ 49.93</u>

(1) For the year ended December 31, 2021, the Company granted RSUs only.

(2) Includes 48,927 RSUs which are expected to be settled in cash.

(3) Relates to the 2020 annual performance period. Total stock-based compensation expense associated with these awards was fully recognized as of December 31, 2020.

(4) Relates to the 2021 annual performance period.

(5) Relates to the 2021 annual performance period. Total stock-based compensation expense associated with these awards was fully recognized as of December 31, 2021.

In 2016, the Company granted RSUs subject to performance-based vesting as determined by the achievement of certain business growth targets. Certain colleagues elected to defer delivery of such shares upon vesting. During the years ended December 31, 2021 and 2020, 10,864 and 9,831 shares, respectively, were delivered to colleagues, and 45 and 3,030 additional shares, respectively, were earned as a result of dividends. As of December 31, 2021 and 2020, 20,221 and 31,040 shares, respectively, of these vested and deferred RSUs remained outstanding.

The weighted average grant date fair values of restricted stock and RSUs granted were \$52.48, \$16.03, and \$7.24, for the years ended December 31, 2021, 2020, and 2019, respectively.

For the years ended December 31, 2021, 2020, and 2019, restricted stock and RSUs were issued net of 125,825, 339,833, and 54,418 shares, respectively, which were sold back to the Company to settle applicable income tax withholdings of \$7,293, \$7,951, and \$399, respectively.

As of December 31, 2021, there was \$46,271 of unrecognized compensation expense related to unvested time-based restricted stock and RSUs, which is expected to be recognized over a weighted average period of approximately 2.0 years. There was no remaining unrecognized compensation expense related to unvested performance-based restricted stock and RSUs.

### Stock Grants

The fair value of stock grants is determined by the product of the number of fully vested Class B Common Stock granted and the Company's common stock price (as described above) on the grant date. The total expense related to stock grants is recognized on the grant date as the issued award is fully vested.

For the years ended December 31, 2021 and 2020, the Company granted 7,824 and 21,956 fully vested shares of Class B Common Stock, respectively, with a fair value of \$450 and \$319, respectively. The Company did not grant fully vested shares of Class B Common Stock during 2019.

### ESPP

In accordance with the guidance in FASB ASC Topic 718-50, *Compensation—Stock Compensation - Employee Share Purchase Plans*, the ability to purchase shares of the Company's Class B Common Stock for 85% of the lower of the price of the first day of the offering period or the last day of the offering period (i.e., the purchase date) represents an option and, therefore, the ESPP is a compensatory plan under this guidance.

The fair value of each purchase right under the ESPP was calculated as the sum of its components, which includes the discount, a six-month call option, and a six-month put option. The call and put options were valued using the Black-Scholes option pricing model. Stock-based compensation expense is recognized ratably over the respective offering period.

### Note 16: Income Taxes

The components of income before income taxes consist of the following:

	Year Ended December 31,		
	2021	2020	2019
Domestic	\$ (14,544)	\$ 61,470	\$ 61,691
International	107,873	106,150	66,418
Income before income taxes	<u>\$ 93,329</u>	<u>\$ 167,620</u>	<u>\$ 128,109</u>

The (provision) benefit for income taxes consists of the following:

	Year Ended December 31,		
	2021	2020	2019
Current:			
Federal	\$ 770	\$ (11,094)	\$ (7,696)
State	163	(3,597)	(2,486)
Foreign	(17,230)	(7,688)	(12,824)
	<u>(16,297)</u>	<u>(22,379)</u>	<u>(23,006)</u>
Deferred:			
Federal	15,182	(5,194)	(2,389)
State	3,660	(1,272)	(412)
Foreign	903	(9,780)	2,069
	<u>19,745</u>	<u>(16,246)</u>	<u>(732)</u>
Benefit (provision) for income taxes	<u>\$ 3,448</u>	<u>\$ (38,625)</u>	<u>\$ (23,738)</u>



A reconciliation of the U.S. statutory federal income tax rate to the Company's effective income tax rate is as follows:

	Year Ended December 31,		
	2021	2020	2019
Federal statutory rate	21.0 %	21.0 %	21.0 %
State income taxes, net of federal benefit	(2.7)	2.9	2.0
Stock-based compensation	(52.5)	(5.2)	(2.3)
Non-deductible officer compensation	36.6	4.6	—
Tax credits	(6.1)	(2.1)	(3.6)
Transaction costs	3.9	—	—
Foreign tax rate differential	(1.1)	(2.0)	(2.8)
Permanent book/tax differences	(1.0)	(0.6)	0.2
Income tax reserves	0.1	(0.5)	0.9
Expenses associated with IPO	—	3.3	—
Net tax on foreign earnings (GILTI/FDII/FTC)	—	0.5	6.1
Other	(1.9)	1.1	(3.0)
Effective income tax rate	<u>(3.7)%</u>	<u>23.0 %</u>	<u>18.5 %</u>

The following is a summary of the significant components of the Company's deferred tax assets and liabilities:

	December 31,	
	2021	2020
Deferred tax assets:		
Accrued compensation	\$ 39,125	\$ 31,580
Net operating loss ("NOL") and credit carryforwards	28,698	7,573
Intangible assets	19,942	283
Capped call options and 163(j) interest disallowance	15,682	—
Lease liabilities	10,540	10,466
Other accruals not currently deductible	2,006	346
Allowance for doubtful accounts	918	382
Other comprehensive income	354	431
Other	1,497	138
Total deferred tax assets	<u>118,762</u>	<u>51,199</u>
Less: Valuation allowance	(1,899)	(1,207)
Net deferred tax assets	<u>116,863</u>	<u>49,992</u>
Deferred tax liabilities:		
Intangible assets including goodwill	(90,258)	—
Operating lease right-of-use assets	(10,196)	(10,070)
Deferred revenues	(3,421)	(7,257)
Prepaid expenses	(2,739)	(2,301)
Unrealized gains and losses	(2,387)	—
Property and equipment	(1,500)	(1,989)
Total deferred tax liabilities	<u>(110,501)</u>	<u>(21,617)</u>
Net deferred tax assets (liabilities)	<u>\$ 6,362</u>	<u>\$ 28,375</u>

As of December 31, 2021, the U.S. federal NOL carryforwards with a future benefit of \$8,518 can be carried forward indefinitely and the remaining U.S. federal NOL of \$19 expires in 2037. The U.S. federal credit carryforward of \$2,974 expires in 2041. The foreign tax credit carryforward of \$224 expires in 2031. The Company's state NOL carryforwards and state credit carryforwards with a future benefit of \$1,934 expire in 2026 through 2041. The remaining state NOL carryforward of \$208 have indefinite expirations. In addition, the Company has foreign NOL carryforwards with a future benefit of \$12,788 (net of a \$67 valuation allowance), which predominately have indefinite expirations. The Canadian credit carryforward of \$2,033 expires in 2030 through 2040.

Some transactions can change the aggregate ownership of certain stockholders, which could cause a shift in the ownership of the Company, which pursuant to Internal Revenue Code ("IRC") Section 382 could then limit on an annual basis the Company's ability to utilize its U.S. federal NOL carryforwards (and possibly its state NOL carryforwards as well). If that occurred, the Company's NOL carryforwards would continue to be available to offset taxable income and tax liabilities in future years (until such NOL carryforwards are either used or expire) subject to any IRC Section 382 annual limitation.

The Company regularly assesses the need for a valuation allowance against its deferred tax assets by considering both positive and negative evidence related to whether it is more likely than not that the deferred tax assets will be realized. In evaluating the need for a valuation allowance, the Company considers a cumulative loss in recent years as a significant piece of negative evidence.

As of December 31, 2021 and 2020, the Company has recorded a valuation allowance against its net deferred tax assets of \$1,899 and \$1,207, respectively. The valuation allowance is principally related to the losses from a joint venture for which the Company has determined that realization is not more likely than not.

On December 22, 2017, the U.S. Tax Cuts and Jobs Act (the "JOBS Act") was enacted. The JOBS Act requires certain Global Intangible Low-Taxed Income ("GILTI") earned by a controlled foreign corporation ("CFC") to be included in the gross income of the CFC's U.S. shareholder. The Company has elected the "period cost method" and treats taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred. The JOBS Act allows a U.S. corporation a deduction equal to a certain percentage of its foreign-derived intangible income ("FDII"). The Company estimated the impact of the GILTI tax and FDII deduction in determining its 2019 annual effective tax rate that is reflected in its provision for income taxes for the year ended December 31, 2019.

As of December 31, 2021, the Company has accumulated undistributed earnings generated by its foreign subsidiaries of approximately \$440,838, of which \$272,242 was subject to the one-time transition tax on foreign earnings required by the JOBS Act and the tax on GILTI. Subsequent to December 31, 2021, the Company repatriated \$100,000 and intends to repatriate an additional \$50,000 of undistributed previously taxed earnings generated by its foreign subsidiaries as of December 31, 2021, to the U.S. The repatriation will be used to fund a portion of the acquisition of Power Line Systems (see Note 4). The Company expects future U.S. cash generation will be sufficient to meet future U.S. cash needs. The Company intends to indefinitely reinvest the remaining undistributed earnings, as well as future earnings from its foreign subsidiaries, in order to fund its international operations and acquisitions. The Company has not provided for any additional outside basis difference inherent in its foreign subsidiaries, as these amounts continue to be indefinitely reinvested in foreign operations. Determining the amount of unrecognized deferred tax liability related to any additional outside basis difference in these entities is not practicable.

In accordance with the indefinite reversal criteria, the foreign currency translation adjustments recorded in other comprehensive (loss) income related to the foreign currency translations have not been tax effected.

The following is a reconciliation of the total amounts of unrecognized tax benefits:

	Year Ended December 31,		
	2021	2020	2019
Unrecognized tax benefit, beginning of year	\$ 1,223	\$ 1,763	\$ 638
Tax positions related to prior years:			
Additions	160	1,436	1,222
Reductions	(42)	(1,723)	(86)
Lapse of statute of limitations	(10)	(253)	(11)
Unrecognized tax benefit, end of year	<u>\$ 1,331</u>	<u>\$ 1,223</u>	<u>\$ 1,763</u>

The amount of unrecognized tax benefits as of December 31, 2021, 2020, and 2019 was \$1,331, \$1,223, and \$1,763, respectively, of which \$1,273, \$1,175, and \$1,733, respectively, would impact the Company's effective tax rate if recognized. Interest expense and penalties related to income taxes resulted in an increase (decrease) of income tax expense of \$101, \$(20), and \$101 for the year ended December 31, 2021, 2020, and 2019, respectively. Interest expense and penalties are included in *Benefit (provision) for income taxes* in the consolidated statements of operations. Accrued interest and penalties as of December 31, 2021 and 2020 totaled \$373 and \$272, respectively. The Company records the amount of uncertain taxes expected to be paid in the next 12 months as a current liability and records the remaining amount in *Other liabilities* in the consolidated balance sheets.

The Company is subject to income tax in the U.S., as well as numerous state and foreign jurisdictions. The Company's U.S. consolidated federal income tax returns for years 2018 through 2021 remain subject to examination by the Internal Revenue Service. The Company is currently under audit in the U.K. for 2018. The Company's 2018 through 2021 tax years remain subject to examination by the Irish Revenue Commissioners for Irish tax purposes. In addition, the Company is under audit in various other foreign taxing jurisdictions that are not material to the consolidated financial statements.

#### Note 17: Fair Value of Financial Instruments

##### *Derivatives Not Designated As Hedging Instrument*

On March 31, 2020, the Company entered into an interest rate swap with a notional amount of \$200,000 and a ten-year term to reduce the interest rate risk associated with the Company's Credit Facility. The interest rate swap is not designated as a hedging instrument for accounting purposes. The Company accounts for the interest rate swap as either an asset or a liability in the consolidated balance sheets and carries the derivative at fair value.

The following is a summary of the interest rate swap activity:

	Year Ended December 31,		Recognized in Consolidated Statements of Operations
	2021	2020	
Interest rate swap:			
Gain from change in fair value	\$ 9,770	\$ 347	<i>Other income (expense), net</i>
Payments	1,270	696	<i>Interest expense, net</i>

## ***Fair Value***

The Company applies the provisions of FASB ASC Topic 820, *Fair Value Measurement*, for fair value measurements of financial assets and financial liabilities and for fair value measurements of non-financial items that are recognized or disclosed at fair value in the consolidated financial statements.

The Company's financial instruments include cash equivalents, account receivables, certain other assets, accounts payable, accruals, certain other current and long-term liabilities, and long-term debt.

The following methods and assumptions were used by the Company in estimating its fair value disclosures for financial instruments as of December 31, 2021 and 2020:

*Current assets and current liabilities* — In general, the carrying amounts reported on the Company's consolidated balance sheets for current assets and current liabilities approximate their fair values due to the short-term nature of those instruments.

*Acquisition contingent consideration* — The fair value of these liabilities is based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. The valuation of contingent consideration uses assumptions the Company believes would be made by a market participant.

*Interest rate swap* — The fair value of the Company's interest rate swap is measured based on the implied forward rates from the U.S. Dollar one-month LIBOR yield curve and are classified as Level 2 within the fair value hierarchy.

*Long-term debt* — The fair value of the Company's borrowings under its Credit Facility approximated its carrying value based upon discounted cash flows at current market rates for instruments with similar remaining terms. The Company considers these valuation inputs to be Level 2 inputs in the fair value hierarchy. The estimated fair value of the 2026 Notes and 2027 Notes was \$720,284 and \$531,915, respectively, as of December 31, 2021 based on quoted market prices of the Company's instrument in markets that are not active and are classified as Level 2 within the fair value hierarchy. Considerable judgment is necessary to interpret the market data and develop estimates of fair values. Accordingly, the estimates presented are not necessarily indicative of the amounts at which these instruments could be purchased, sold, or settled.

*Deferred compensation plan liabilities* — The fair value of deferred compensation plan liabilities, including the liability classified phantom investments in the DCP, are marked to market at the end of each reporting period.

A financial asset or liability classification is determined based on the lowest level input that is significant to the fair value measurement. The fair value hierarchy consists of the following three levels:

Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 inputs are quoted prices for similar assets and liabilities in active markets or inputs that are observable for the asset or liability, either directly or indirectly through market corroboration, for substantially the full term of the financial instrument.

Level 3 inputs are unobservable inputs based on management's own assumptions used to measure assets and liabilities at fair value.

The following tables provide the financial assets and financial liabilities carried at fair value measured on a recurring basis:

December 31, 2021	Level 1	Level 2	Level 3	Total
<b>Assets:</b>				
Money market funds <sup>(1)</sup>	\$ 21	\$ —	\$ —	\$ 21
Interest rate swap <sup>(2)</sup>	—	10,117	—	10,117
<b>Total assets</b>	<b>\$ 21</b>	<b>\$ 10,117</b>	<b>\$ —</b>	<b>\$ 10,138</b>
<b>Liabilities:</b>				
Acquisition contingent consideration <sup>(3)</sup>	\$ —	\$ —	\$ 6,613	\$ 6,613
Deferred compensation plan liabilities <sup>(4)</sup>	102,199	—	—	102,199
Cash-settled equity awards <sup>(5)</sup>	353	—	—	353
<b>Total liabilities</b>	<b>\$ 102,552</b>	<b>\$ —</b>	<b>\$ 6,613</b>	<b>\$ 109,165</b>

December 31, 2020	Level 1	Level 2	Level 3	Total
<b>Assets:</b>				
Money market funds <sup>(1)</sup>	\$ 34,696	\$ —	\$ —	\$ 34,696
Interest rate swap <sup>(2)</sup>	—	347	—	347
<b>Total assets</b>	<b>\$ 34,696</b>	<b>\$ 347</b>	<b>\$ —</b>	<b>\$ 35,043</b>
<b>Liabilities:</b>				
Acquisition contingent consideration <sup>(3)</sup>	\$ —	\$ —	\$ 4,299	\$ 4,299
Deferred compensation plan liabilities <sup>(4)</sup>	2,591	—	—	2,591
Cash-settled equity awards <sup>(5)</sup>	195	—	—	195
<b>Total liabilities</b>	<b>\$ 2,786</b>	<b>\$ —</b>	<b>\$ 4,299</b>	<b>\$ 7,085</b>

(1) Included in *Cash and cash equivalents* in the consolidated balance sheets.

(2) Included in *Other assets* in the consolidated balance sheets.

(3) Included in *Other liabilities*, except for current liabilities of \$5,382 and \$2,884 as of December 31, 2021 and 2020, respectively, which are included in *Accruals and other current liabilities* in the consolidated balance sheets. Acquisition contingent consideration liability is measured at fair value and is based on significant inputs not observable in the market, which represents a Level 3 measurement within the fair value hierarchy. The valuation of contingent consideration uses assumptions the Company believes would be made by a market participant.

(4) Included in *Deferred compensation plan liabilities*, except for current liabilities of \$7,309 and \$169 as of December 31, 2021 and 2020, respectively, which are included in *Accruals and other current liabilities* in the consolidated balance sheets.

(5) Included in *Accruals and other current liabilities* in the consolidated balance sheets.

The following table is a reconciliation of the changes in fair value of the Company's financial liabilities which have been classified as Level 3 in the fair value hierarchy:

	Year Ended December 31,	
	2021	2020
Balance, beginning of year	\$ 4,299	\$ 6,599
Payments	(2,371)	(3,425)
Addition	4,544	2,380
Change in fair value	294	(1,340)
Foreign currency translation adjustments	(153)	85
Balance, end of period	<u>\$ 6,613</u>	<u>\$ 4,299</u>

The Company did not have any transfers between levels within the fair value hierarchy.

#### Note 18: Commitments and Contingencies

**Purchase Commitment** — In the normal course of business, the Company enters into various purchase commitments for goods and services. As of December 31, 2021, the non-cancelable future cash purchase commitment for services related to the cloud provisioning of the Company's software solutions was \$50,329 through May 2023. The Company expects to fully consume its contractual commitment in the ordinary course of operations.

**Operating Leases** — The Company leases certain office facilities, office equipment, and automobiles under operating leases having initial or remaining non-cancelable terms in excess of one year (see Note 8).

**Litigation** — From time to time, the Company is involved in certain legal actions arising in the ordinary course of business. In management's opinion, based upon the advice of counsel, the outcome of such actions is not expected to have a material adverse effect on the Company's future financial position, results of operations, or cash flows.

#### Note 19: Geographic Data

Revenues by geographic area are presented in Note 3. The following table presents the Company's long-lived assets (other than goodwill), net of depreciation and amortization by geographic region (see Notes 5, 6, and 8):

	December 31,	
	2021	2020
Long-lived assets:		
Americas <sup>(1)</sup>	\$ 99,500	\$ 50,306
EMEA	44,730	56,322
APAC	184,245	13,541
Total long-lived assets	<u>\$ 328,475</u>	<u>\$ 120,169</u>

(1) Americas includes the U.S., Canada, and Latin America (including the Caribbean).

**Note 20: Interest Expense, Net**

Interest expense, net is comprised of the following:

	Year Ended December 31,		
	2021	2020	2019
Interest expense (see Note 10)	\$ (12,797)	\$ (7,913)	\$ (9,731)
Interest income	306	437	1,532
Interest expense, net	<u>\$ (12,491)</u>	<u>\$ (7,476)</u>	<u>\$ (8,199)</u>

**Note 21: Other Income (Expense), Net**

Other income (expense), net is comprised of the following:

	Year Ended December 31,		
	2021	2020	2019
Foreign exchange gain (loss) <sup>(1)</sup>	\$ 827	\$ 22,919	\$ (5,591)
Other income, net <sup>(2)</sup>	10,404	2,027	34
Total other income (expense), net	<u>\$ 11,231</u>	<u>\$ 24,946</u>	<u>\$ (5,557)</u>

(1) Foreign exchange gain (loss) is primarily attributable to foreign currency translation derived primarily from U.S. Dollar denominated cash and cash equivalents, account receivables, and intercompany balances held by foreign subsidiaries. Intercompany finance transactions denominated in U.S. Dollars resulted in unrealized foreign exchange (losses) gains of \$(779), \$22,310, and \$(5,270) for the years ended December 31, 2021, 2020, and 2019, respectively.

(2) For the year ended December 31, 2021, other income, net includes a gain from the change in fair value of the Company's interest rate swap of \$9,770 (see Note 17). For the year ended December 31, 2020, other income, net includes a gain from the change in fair value of the Company's interest rate swap of \$347 (see Note 17) and a gain from the change in fair value of acquisition contingent consideration of \$1,340.

## Note 22: Realignment Costs

During the third quarter of 2020, the Company initiated a strategic realignment program in order to better serve the Company's users and to better align resources with the evolving needs of the business (the "2020 Program"). The Company incurred realignment costs of \$10,046 for the year ended December 31, 2020 related to the aforementioned program, which represents termination benefits for colleagues whose positions were eliminated. The 2020 Program activities have been broadly implemented across the Company's various businesses with substantially all actions completed in mid-2021.

Accruals and other current liabilities in the consolidated balance sheets included amounts related to the realignment activities as follows:

Balance, December 31, 2019	\$	491
Realignment costs		10,022
Payments		(4,542)
Adjustments <sup>(1)</sup>		269
Balance, December 31, 2020		6,240
Payments		(5,814)
Adjustments <sup>(1)</sup>		(291)
Balance, December 31, 2021	\$	135

(1) Adjustments includes foreign currency translation.

Realignment costs by expense classification were as follows:

	Year Ended December 31, 2020
Cost of revenues:	
Cost of subscriptions and licenses	\$ 42
Cost of services	1,422
Total cost of revenues	1,464
Operating expenses:	
Research and development	848
Selling and marketing	5,945
General and administrative	1,765
Total operating expenses	8,558
Total realignment costs	\$ 10,022



**Note 23: Net Income Per Share**

The Company issues certain performance-based RSUs determined to be participating securities because holders of such shares have non-forfeitable dividend rights in the event of the Company's declaration of a dividend for common shares. As of December 31, 2021, 2020, and 2019, there were 96,683, 149,754, and 321,126 participating securities outstanding, respectively.

Undistributed net income allocated to participating securities are subtracted from net income in determining basic net income attributable to common stockholders. Basic net income per share is computed by dividing basic net income attributable to common stockholders by the weighted average number of shares, inclusive of undistributed shares held in the DCP as phantom shares of the Company's Class B Common Stock.

For the Company's diluted net income per share numerator, interest expense, net of tax, attributable to the conversion of the convertible senior notes is added back to basic net income attributable to common stockholders. For the Company's diluted net income per share denominator, the basic weighted average number of shares is adjusted by the effect of dilutive securities, including awards under the Company's equity compensation plans and ESPP, and by the dilutive effect of the assumed conversion of the convertible senior notes. Diluted net income per share attributable to common stockholders is computed by dividing diluted net income attributable to common stockholders by the weighted average number of fully diluted common shares.

Except with respect to voting and conversion, the rights of the holders of the Company's Class A Common Stock and the Company's Class B Common Stock are identical. Each class of shares has the same rights to dividends and allocation of income (loss) and, therefore, net income per share would not differ under the two-class method.

The details of basic and diluted net income per share are as follows:

	Year Ended December 31,		
	2021	2020	2019
<b>Numerator:</b>			
Net income	\$ 93,192	\$ 126,521	\$ 103,096
Less: Net income attributable to participating securities	(9)	(234)	(8)
Net income attributable to Class A and Class B common stockholders, basic	93,183	126,287	103,088
Add: Interest expense, net of tax, attributable to assumed conversion of convertible senior notes	—	—	—
Net income attributable to Class A and Class B common stockholders, diluted	\$ 93,183	\$ 126,287	\$ 103,088
<b>Denominator:</b>			
Weighted average shares, basic	305,711,345	289,863,272	284,625,642
Dilutive effect of stock options, restricted stock, and RSUs	8,791,084	9,507,857	9,171,065
Dilutive effect of ESPP	108,385	—	—
Dilutive effect of assumed conversion of convertible senior notes	—	—	—
Weighted average shares, diluted	314,610,814	299,371,129	293,796,707
Net income per share, basic	\$ 0.30	\$ 0.44	\$ 0.36
Net income per share, diluted	\$ 0.30	\$ 0.42	\$ 0.35

The following potential common shares were excluded from the calculation of diluted net income per share attributable to common stockholders because their effect would have been anti-dilutive for the periods presented:

	Year Ended December 31,		
	2021	2020	2019
Stock options, restricted stock, and RSUs	150,017	—	—
Convertible senior notes	13,474,580	—	—
Total anti-dilutive securities	13,624,597	—	—

AMENDMENT NO. 1

TO THE

**BENTLEY SYSTEMS, INCORPORATED  
2020 OMNIBUS INCENTIVE PLAN**

**WHEREAS**, Bentley Systems, Incorporated (the “Company”) maintains the Bentley Systems, Incorporated 2020 Omnibus Incentive Plan (the “Plan”);

**WHEREAS**, the Company desires to amend the Plan to remove the automatic increase to the Absolute Share Limit (as defined in the Plan) set forth in Section 5(b) of the Plan; and

**WHEREAS**, Section 12(a) of the Plan provides that, subject to certain inapplicable limitations, the Board may amend the Plan from time to time;

**NOW, THEREFORE**, effective as of December 31, 2021, Section 5(b) of the Plan is hereby amended and restated in its entirety to read as follows:

“**Share Reserve and Limits.** Awards granted under the Plan shall be subject to the following limitations: (i) subject to Section 11 of the Plan, no more than 25,000,000 shares of Class B Common Stock (the “**Absolute Share Limit**”) shall be available for Awards under the Plan; (ii) subject to Section 11 of the Plan, no more than the number of shares of Class B Common Stock equal to 25,000,000 may be issued in the aggregate pursuant to the exercise of Incentive Stock Options granted under the Plan; and (iii) during a single fiscal year, each Non-Employee Director shall be granted a number of shares of Class B Common Stock subject to Awards, taken together with any cash fees paid to such Non-Employee Director during such fiscal year, equal to (A) a total value of \$1,000,000 (calculating the value of any such Awards based on the grant date fair value of such Awards for financial reporting purposes) or (B) such lower amount as determined by the Board prior to the Date of Grant, either as part of the Company’s Non-Employee Director compensation program or as otherwise determined by the Board in the event of any change to such Non-Employee Director’s compensation program or for any particular period of service. To the extent the Board makes a determination pursuant to clause (iii)(B) above with respect to any year of service, such determination shall in no event be applicable to any subsequent year of service without a further determination by the Board in respect of such subsequent year of service.”

**IN WITNESS WHEREOF**, the Company has caused this Amendment No. 1 to be executed this 31<sup>st</sup> day of December, 2021.

BENTLEY SYSTEMS, INCORPORATED

By: /s/ David Shaman \_\_\_\_\_  
David Shaman  
Chief Legal Officer

## SUBSIDIARIES OF BENTLEY SYSTEMS, INCORPORATED

AS OF DECEMBER 31, 2021

Name of Subsidiary	Jurisdiction of Incorporation or Organization
AarhusGeosoftware ApS	Denmark
Bentley Canada Inc.	Ontario
Bentley Engineering Software Systems (Shanghai) Co. Ltd.	China
Bentley Engineering Software Systems (Shanghai) Co. Ltd.-Dalian Branch	China
Bentley Engineering Software Systems (Shanghai) Co., Limited - Xi'an Branch	China
Bentley Engineering Software Systems (Shanghai) Co., Ltd.-Beijing Branch	China
Bentley Software International, Ltd.	Ireland
Bentley Software Solutions Philippines Inc.	Philippines
Bentley Software, Inc.	Delaware
Bentley Systems (Beijing) Co., Ltd	China
Bentley Systems (Beijing) Co., Ltd-Guangzhou Branch	China
Bentley Systems (Malaysia) Sdn. Bhd.	Malaysia
Bentley Systems (New Zealand) Limited	New Zealand
Bentley Systems (UK) Ltd	United Kingdom
Bentley Systems AG	Switzerland
Bentley Systems Austria GmbH	Austria
Bentley Systems Aviation, LLC	Pennsylvania
Bentley Systems Brasil Ltda.	Brazil
Bentley Systems Co. Ltd.	Japan
Bentley Systems Coop Holdings, LLC	Delaware
Bentley Systems CR s.r.o.	Czech Republic
Bentley Systems de Mexico SA de CV	Mexico
Bentley Systems Europe B.V.	The Netherlands
Bentley Systems Europe B.V. Filialas	Lithuania
Bentley Systems Europe B.V. Jordan	Jordan
Bentley Systems Europe B.V.-Dubai Branch	Dubai
Bentley Systems Finland Oy	Finland
Bentley Systems France S.a.r.l.	France
Bentley Systems Germany GmbH	Germany
Bentley Systems Hong Kong Ltd.	Hong Kong
Bentley Systems Iberica S.A.	Spain
Bentley Systems India Private Limited	India
Bentley Systems International Development Limited	Ireland
Bentley Systems International Holdings, Inc.	Delaware
Bentley Systems International Limited	Ireland
Bentley Systems International Limited - Portuguese Branch	Portugal

<b>Name of Subsidiary</b>	<b>Jurisdiction of Incorporation or Organization</b>
Bentley Systems International Limited - Slovakia Branch	Slovakia
Bentley Systems International Limited - Chilean Branch	Chile
Bentley Systems International Limited - Qatar Branch	Qatar
Bentley Systems International Limited - Saudi Branch	Saudi Arabia
Bentley Systems Italia S.r.l.	Italy
Bentley Systems Korea Inc.	Korea
Bentley Systems Netherlands B.V.	The Netherlands
Bentley Systems Pakistan (Pvt.) Ltd.	Pakistan
Bentley Systems Polska Sp z o.o.	Poland
Bentley Systems Pty. Ltd.	Australia
Bentley Systems Romania S.R.L.	Romania
Bentley Systems Russia (OOO)	Russian Federation
Bentley Systems Scandinavia A/S	Denmark
Bentley Systems Scandinavia NUF	Norway
Bentley Systems Singapore Pte. Ltd.	Singapore
Bentley Systems Software Solutions LLC Turkey (Bentley Systems Yazılım Çözümleri Limited Şirketi)	Turkey
Bentley Systems Solutions B.V.B.A	Belgium
Bentley Systems South Africa (Pty) Ltd.	South Africa
Bentley Systems Sweden AB	Sweden
Bentley Systems, Incorporated, Taiwan	Taiwan
BSI Holding GmbH	Austria
BSI Holdings B.V.	The Netherlands
BSI Holdings Pty. Ltd.	Australia
BSI International Holdings Coöperatief U.A.	The Netherlands
Business Collaborator Limited	England
Citilabs Asia PTE LTD.	Singapore
Citilabs Inc.	Delaware
Cohesive Solutions, LLC	Georgia
Digital Water Works Incorporated	Delaware
E7 Pty Ltd	Australia
E7 Site Inc.	Delaware
Ennova Pty Ltd	Australia
E-ON Software SARL	France
Geoslope International Ltd	Canada
Geosoft Africa (Pty) Limited	South Africa
Geosoft Australia Pty Ltd	Australia
Geosoft Europe Limited	England and Wales
Geosoft Inc.	Canada
Geosoft Latinoamerica Ltda	Brazil
Geosoft USA Holdings Inc.	Delaware

<b>Name of Subsidiary</b>	<b>Jurisdiction of Incorporation or Organization</b>
Geosoft USA Research Inc.	Oregon
Imago Inc.	Delaware
INRO CONSULTANTS INC	Federally Chartered
INRO Incorporated	Delaware
INRO Software Technology (Shanghai) Ltd	China
Minalytix Inc.	Ontario
Nadhi Information Technologies Private Limited	India
ONTRACKS EAM CONSULTING LTD.	Alberta
ONTRACKS ENTERPRISES, INC.	Delaware
Orbit Geospatial Technologies NV	Belgium
Orbit GT Asia PTE. LTD	Singapore
Oxplus B.V.	The Netherlands
Plaxinvest BV	The Netherlands
Plaxis bv	The Netherlands
Professional Construction Strategies Group Limited	United Kingdom
Professional Construction Strategies Group Limited - Australia Branch	Australia
Professional Construction Strategies Group Limited - Hong Kong Branch	Hong Kong
QG Australia Pty Limited	Australia
Seequent Australia Pty Limited	Australia
Seequent Brazil Tecnologia Limitada	Brazil
Seequent Chile SpA	Chile
Seequent Holdings Limited	New Zealand
Seequent Limited	New Zealand
Seequent LLC	Russia
Seequent Peru S.A.C	Peru
Seequent Solutions Canada II Ltd.	Toronto, Ontario
Seequent Solutions Canada Limited	British Columbia & extra-provincially registered in Alberta
Seequent South Africa Pty Limited	South Africa
Seequent UK Limited	United Kingdom
Seequent USA Inc.	Colorado
Sensematics, Inc	Delaware
SPIDAWEB LLC	Ohio
SRO Solutions Holdings Limited	United Kingdom
SRO Solutions Limited	United Kingdom
Vista Data Vision ehf.	Iceland

**Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in the registration statement (No. 333-249004) on Form S-8 and registration statement (No. 333-259980) on Form S-3 of Bentley Systems, Incorporated and subsidiaries of our reports dated March 1, 2022, with respect to the consolidated balance sheets of Bentley Systems, Incorporated and subsidiaries as of December 31, 2021 and 2020, the related statements of operations, comprehensive income, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2021, and the related notes, and the effectiveness of internal control over financial reporting as of December 31, 2021, which reports appear in the December 31, 2021 annual report on Form 10-K of Bentley Systems, Incorporated.

Our report dated March 1, 2022 refers to a change in accounting principles related to the Company's adoption of ASC Topic 842, *Leases*.

/s/ KPMG LLP

Philadelphia, Pennsylvania

March 1, 2022

**Management Certification Pursuant to  
Section 302 of the Sarbanes-Oxley Act of 2002**

I, Gregory S. Bentley, certify that:

1. I have reviewed this annual report on Form 10-K of Bentley Systems, Incorporated (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 1, 2022

/s/ GREGORY S. BENTLEY

---

Gregory S. Bentley  
Chief Executive Officer  
(Principal Executive Officer)



**Management Certification Pursuant to  
Section 302 of the Sarbanes-Oxley Act of 2002**

I, Werner Andre, certify that:

1. I have reviewed this annual report on Form 10-K of Bentley Systems, Incorporated (the “registrant”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and
5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):
  - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and
  - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: March 1, 2022

/s/ WERNER ANDRE

---

Werner Andre

Chief Financial Officer and Chief Accounting Officer

(Principal Financial Officer)

**Certification of CEO and CFO Pursuant to  
18 U.S.C. Section 1350,  
as Adopted Pursuant to  
Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report of Bentley Systems, Incorporated (the "Company") on Form 10-K for the year ended December 31, 2021, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 1, 2022

/s/ GREGORY S. BENTLEY

---

Gregory S. Bentley

Chief Executive Officer

(Principal Executive Officer)

/s/ WERNER ANDRE

---

Werner Andre

Chief Financial Officer and Chief Accounting Officer

(Principal Financial Officer)