

**Carey Mann:** Good morning, everyone. And thank you for joining us for Bentley Systems' Q1 2021 Operating Results webcast. I'm Carey Mann, Bentley's VP of Investor Relations. On the webcast today, we have Bentley Systems' chief executive officer Greg Bentley and chief financial officer David Hollister. Before we begin, allow me to provide a disclaimer regarding forward-looking statements. This webcast, including the question and answer portion of the webcast, may include forward-looking statements related to the expected future results for our company and are, therefore, forward-looking statements.

Our actual results may differ materially from our projections due to a number of risks and uncertainties. The risks and uncertainties that forward-looking statements are subject to are described in our earnings release and other SEC filings. Today's remarks will also include references to non-GAAP financial measures. Additional information, including reconciliation between non-GAAP financial information to the GAAP financial information, is provided in the press release and supplemental slide presentation.

This webcast will be available for replay on Bentley Systems investor relations website at investors.bentley.com. Greg will begin by reviewing business developments and our progress over the last quarter. David will then take you through a review of the financial results. We will then conclude with Q&A. With that, let me introduce the CEO of Bentley Systems, Greg Bentley.

Greg Bentley: Good morning, as the case may be.

As in each of these quarterly operating results discussions, this being our third, I will start by reviewing the tone of business from perspectives behind and beyond the reported financial numbers, and then will put in context our acquisitions and other corporate developments. Our CFO David Hollister will follow to explain the reported figures—including where arcane accounting rules obscure our otherwise straightforward business progress. And then, we look forward to your questions.

In both of the previous quarterly reporting occasions, we presented annual outlooks, respectively for 2020 and 2021, and explained our ongoing medium-term initiatives. In reporting on 21Q1, we are adhering to the financial outlook for this year that you've already digested. There's particularly no need to go over those numbers again, as we expect the Seequent acquisition to close during the remainder of this quarter. So, when we report on 21Q2, we will update our 2021 financial outlook, as acquisitions will have accordingly become financially significant rather than merely, as we say, "programmatic."



That's a reminder that even after our March 2 report on 20Q4, we saw most of you again on March 12, when we announced Seequent. In the short time since then, there have simply been no changes in the directional business trends since that last update. The same observations still apply equally, so I will not repeat them. Our first two quarters as a public company spanned choppy periods during 2020, which were each unique, but 20Q1 represented relatively unremarkable continuity.

In general, each year's first calendar quarter appears undramatic for us in terms of business volume, primarily because of the seasonal pattern of scheduled annual contract renewals, as David will quantify. Some differences this year, from the usual first quarter, are worth remarking upon.

Upgrades to E365, where we always bill an estimate annually in advance, from ELS, where we have sometimes billed quarterly, contributed to our disproportionately high operating cash flows this past quarter.

And underlying our 21Q1 P/L numbers, beyond the largely offsetting commercial model nuances, which we will next go through at length, most of our colleagues and our users have remained locked down from office work. The related cost savings account primarily for our inordinately high profitability in the quarter, which can serve to increase our confidence in meeting our full-year 2021 operating margin outlook. But quite apart from expected economic recovery and/or expected public-policy stimulus to infrastructure activity, it is my observation and belief that a return to in-person work environments within our accounts and within our salesforce will also increase new business growth in enterprise-level opportunities, especially for ProjectWise, AssetWise, and iTwin cloud services.

Otherwise, this year's first quarter does reflect our usual seasonality. As confidence throughout our sector increases, I would like to explain the reasons that mere expectations of post-pandemic usage increases don't tend to contribute yet to our revenues nor ARR through 21Q1.

Under our ELS commercial program, where our ARR and revenue is fixed for the coming year, only a renewal can provide an accretion opportunity, and there don't happen to be many ELS renewals during a first quarter. The ELS renewal is a function of the trailing 12 months of usage, specifically the second-highest such month for each product, so the 2020 trough in usage would weigh down renewal accretion throughout 2021. To have more immediate revenue and ARR upside from upward trends in enterprise utilization is one reason we have been promoting steady upgrades from ELS to the E365 program, and more on that in a moment.



Our SELECT commercial program covers all perpetual licenses owned by subscribers, to which they, of course, can add at any time. But, given our preference for subscription licensing, we have consciously reduced the incentive for SELECT subscribers to purchase incremental perpetual licenses. SELECT coverage entitles subscribers to pool their licenses for fuller utilization, but they are able—unless they configure otherwise—to exceed their license pools as their needs grow, in which case we charge them for term licenses only to the extent and for the period of such overuse.

So, that takes us back to E365, where we charge per application per day, administered quarterly in arrears, and increasingly subject to collared ranges, which we've mutually agreed with accounts to balance risks. As we've made clear, since mid-2020, this has generally worked against us—in revenue and ARR—mainly because of the continuing lapses in the workloads of industrial EPCs.

New upgrades to E365 from ELS—generally upon annual renewals—can add to ARR even before usage increases because we implicitly charge more than we otherwise would per application-day to compensate us for the cost of our embedded Success colleague resources. Embedding those Success Plans are our primary motivation for preferring E365, since our experience is that they accelerate usage growth, and application mix accretion, all else being equal.

And, here is where we finally have a glimmer of momentum from anticipated growth in infrastructure engineering. We think expectations for post-COVID recovery are increasing the interest of ELS accounts in E365 because they want this expert assistance—so that by going digital, they can expand their productivity faster than increasing their staffs, as they resume their own business growth. So, all-considered, E365 is ultimately win-win, notwithstanding the lingering pandemic volatility.

And in our now-familiar comparisons of application usage versus a year earlier, the baseline 20Q1 period was, of course, a hybrid, different in each region, of pre-pandemic normal and, eventually, locked down. Overall, usage of our applications was flat versus a year earlier, but not surprisingly trending ahead by quarter-end.

By infrastructure sector, the picture hasn't changed from our March report, with slight decline year-over-year in the commercial/facilities sector, the greater decline in the industrial/resources sector, and continued slight increases in our public works and utilities mainstay.



But here is another cut on application usage, which is consistent with the overall hypothesis we have been expressing: project delivery accounts, engineering and/or construction contractors, now have slightly lower application usage than in 20Q1, while owner-operator accounts have higher application usage now. For another perspective, we have acknowledged that among both contractors and owners, our accounts who spend under \$100,000 per year with us—let's call them "SMB" accounts—aggregated together, presently fall way short of the base of a pyramid. Focusing on this SMB opportunity is one of our growth initiatives for the 2020s, and where I'd like to report some headway today.

To start with, in terms of their application usage trends, the larger accounts' usage is slightly lower than a year ago. I think that's because almost all of the industrial/resources sectors' work, being inherently of large scale, is performed by these large accounts. Conversely, the application usage of our SMB accounts has increased appreciably over the past year. Even more notably, even though SMB accounts represent only about a third of our revenues, in 21Q1, about twothirds of our new business growth occurred within SMB accounts.

As to our overall new business growth, perpetual license sales were not particularly strong, but term licenses tended to more than make up for this, from our standpoint. Though revenue in the quarter suffered somewhat as a result, you may recall that the quota-plan weightings that I showed last time institutionalize our preference for subscriptions.

Our Virtuosity initiative is now scaled up to offer "Virtuoso" subscriptions, which include expert assistance, as well as software licensing, via low-touch e-commerce. Our channel partners are each important, even though they collectively contribute only 8% of our revenue. But while our peers rely primarily on channel partners to reach SMB accounts, more than three-quarters of our new business growth in SMB accounts is generated directly through "inside sales." While we consider that we have much more to improve in self-service, Virtuosity has brought us over 1,000 new SMB accounts since its inception less than a year ago. For yet more competitive differentiation, we have recently determined to add to Virtuosity's offerings perpetual licenses, combined with Virtuoso expert assistance.

We just announced another initiative to also "go broad" in reaching students—future infrastructure professionals. Phasing in geographically throughout the world during 2021, our new "learning licenses" are now available at no charge, including for schools and faculties, as well as students. Many investors have pointed out that this strategy has worked successfully for our competitors. We believe that, over time, this broad promotion to attract and reach our future users will help us to increase our brand recognition and reception, especially in SMBs—will also help our accounts' recruiting. Our new higher profile and our investment in self-service



fulfillment now makes this "democratization" of Bentley Education feasible and important for BSY, as well as for infrastructure constituencies at large. The Bentley Education Program will cost us most of our revenue from universities, but we have factored that into our financial outlook for 2021, as one of the investments, such as for SMB generally, that will pay off in higher growth over the longer term.

By product line, subscription growth from a year earlier was led in 21Q1 by ProjectWise, asset and network performance—which also had the strongest new business growth quarter—our civil design applications, and our PLAXIS geotechnical offerings, boding well for our forthcoming Seequent consolidation.

By way of geographies, in subscription growth over the past year, Russia was a standout, Europe—including the U.K.—has rebounded notably, by contrast to the Middle East, which is still bottoming out. Greater China is back to great growth year-over-year, although each new year starts slowly there, and the U.S. has been growing solidly.

In short, we regard 21Q1 as quite satisfactory, in the context of our expectations for the full year 2021, as it is further emerging.

To put our corporate developments in the broadest perspective, we believe that our initiatives to advance infrastructure digital twins can uniquely improve both global economies and environments—far beyond the usual connotation of "ESG," and reaching substantively toward the U.N. Sustainable Development Goals. I refer to our potential for "ES(D)G."

So, far beyond merely reducing our environmental footprint, we can, and should, especially prioritize BSY's ES(D)G "handprint." As investors are appropriately requesting, we are working on many ways to help track improvements and to give credit to infrastructure engineers' efforts, innovations, and results in going digital to accelerate ES(D)G progress, particularly in relation to those Sustainable Development Goals to which we can best help our infrastructure engineering users to contribute.

This month, *Fast Company* announced that our project with Microsoft for the city of Dublin's digital twin project, to make a virtue of necessity in pandemic resilience, was a finalist in its 2021 competition for World Changing Ideas in the Spaces, Places, and Cities category. This project, combining our OpenCities applications with Teams and Azure, is one of our joint initiatives that Microsoft CEO Satya Nadella spoke about at our *Year in Infrastructure 2020* Conference.



At Microsoft's annual Developer Conference "Ignite," during this past quarter, this keynote speaker showed our initiative together for increasingly autonomous bridge inspections, applying and advancing mixed reality. Because a generational opportunity on the scale of digital twins "takes an ecosystem," Microsoft was instrumental in formation, last year, of the broad Digital Twin Consortium, and continues to work with us directly in the particular case of infrastructure digital twins.

NVIDIA is another ecosystem partner, leveraging its Omniverse visualization environment. NVIDIA CEO Jensen Huang highlighted the collaboration with BSY, for integration of our iTwin platform, at their GTC Conference last month.

We are particularly enthused about our corporate developments year-to-date in 2021, and I would like to explain the rationale for, and significance to us of, the acquisitions we've announced since we were last together.

Our captive digital integrator Cohesive Companies added Ontracks Consulting, and its 60-plus colleagues—primarily in Alberta, Canada—for yet more comprehensive critical mass across capabilities and geographies. The Cohesive Companies are increasingly profitable leaders in implementation services for IBM's MAXIMO, for our AssetWise asset performance solutions, and, ultimately, for digital twins in these infrastructure enterprise environments.

Construction management differs in India, and elsewhere in Southeast Asia, because of the region's distinctive labor economics, but going digital is nonetheless a priority for meeting the burgeoning and backlogged infrastructure demand there. To take advantage, our Acceleration Initiatives group added the 30 experienced colleagues of Nadhi Information Technologies to bootstrap new opportunities for our growing SYNCHRO construction modeling software and cloud offerings throughout Southeast Asia, and, ultimately, to export construction digital twin integration services more globally.

Our vision and plan, which is on track, though obviously still in early days, is for our iTwin platform to enable and underlie digital twins for all infrastructure asset types. To break this ground with powerful examples, our Acceleration Initiatives group selectively enters into internal incubation, combined with external joint ventures—because it takes an ecosystem—to put together complete iTwin-powered solutions, which prove and inform the platform's advancements and fitness for purpose. An important announcement during 21Q1 was the release of OpenTower iQ, a comprehensive solution, which is being stress-tested in live adoption for infrastructure digital twins of the world's communications towers.



The ownership and management of communications towers have rapidly been consolidated into global or regional specialized and often publicly traded "towercos." In addition to, in effect, being responsible for the pace of "going digital" in the world at large through 5G additions to existing towers, the towercos have themselves declared, and are acting upon, their own priorities for going digital in their capital programs and operations. In what I believe is a harbinger for the widespread future, they are urgently demanding digital twins, literally, in their proliferating RFIs and RFPs for the purpose—not for experimentation through limited pilots, but in production for their full fleets to assure safety, quality, and compliance, as they competitively increase capacity and its utilization, including for the 5G fit-out race.

I would like to bring this development to your full attention, because I think this current developing case study for communications tower digital twins presages the adoption cycle for infrastructure twins in all infrastructure asset types, in turn. We intend to learn a lot from it. As we have explained, in our definition, and in our experience to date, infrastructure digital twins necessarily combine three essential characteristics and enabling technologies. Let's consider how OpenTower iQ illustrates this.

As we just saw, to be a twin of the physical asset, the 3D reality must be captured for intuitive immersive navigation. For communication towers, as for most infrastructure assets, only drone/UAV surveys can do this safely and relatively continuously during operations. In the case of communications towers—which are often on roofs, as well as free-standing—the needed digital context includes the surrounding terrain to enable the engineering of sightlines and accessibility. Centimeter, or even millimeter, accuracy is possible. Machine learning creates and subsequently improves the stored flight paths for each tower.

But the first operations towercos want performed on their tower digital twins is their "inventory"—applying machine learning upon the 3D reality mesh and 2D imagery to recognize and classify the placement of equipment from their digital component libraries, including their serial numbers, as applicable. Among the purposes for this intelligent veracity, this then enables the engineering modeling of structural integrity, wind loading, electromagnetic fields, and, hence, the capacity for additional revenue generation, so the tower digital twins continually increase ROI.

And of course, the towercos' digital twin objectives include automated inspection, through machine learning and AI, for corrosion, breakage, and installation and vegetation problems. Far beyond what's possible from merely static imagery, the evergreen digital chronology maintained over the tower's history, through change synchronization of both repeated surveys and

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engineering updates, provides the fidelity to confidently identify trending maintenance issues and to prescribe recommended interventions.

So, the compelling benefits of infrastructure digital twins, as in the forerunner case of communications towers, depend on converging their reality, veracity, and fidelity, as OpenTower iQ does. Another way to describe this convergence to enliven digital twins is that the cloud services at the "heart," if you like, needed to maintain the digital chronology of the synchronized changes, and to provide intuitive mixed-reality environment for immersive visualization and semantically aligned analytics visibility, are IT technologies. And this term appropriately connotes as well integration with enterprise transaction systems, typically SAP and MAXIMO, for instance, for maintenance records.

But for communications towers, as for all infrastructure digital twins, the greatest value comes from the engineering modeling, which captures and sustains the semantic understanding and relationships between their functioning digital components. For communication towers, as for most of infrastructure, construction never ends, as continued adaptation for resilience and fitness for purpose is vital. By virtue of the digital twin, the design-validated engineering simulations and tradeoffs can be continuously applied to the ever-changing, as-operated asset. No matter its reality and fidelity, an evergreen digital twin is only as useful as its evergreen "ET," engineering technologies, which happen to be our competitive mainstay at BSY. To interject a commercial message: we do not need to worry about even our much larger ecosystem partners, such as those I've named, going it alone—because as they learn about infrastructure digital twins they realize that our ET provides the indispensable substantive frame of reference—"if I only had a brain."

However, let us consider the sources of digital context, having established that photogrammetry and scanning from UAVs are essential for our communications towers' examples. But these surveying modalities are just a special case of operational technologies, "OT," and a tower digital twin also makes good use of what we would all know as "IoT" inputs, such as sensors for real-time conditions of radiation, wind, seismic activity, and/or water—if I only had a nervous system.

This convergence of ET, IT, and OT—in and through an infrastructure digital twin—is what is required to realize the full potential of analytics, leveraging machine learning and AI, to advance infrastructure by going digital.

Here, the potential contribution of an ecosystem comes to mind again, as—of awareness to investors, I am sure—so much attention and investment has been cumulatively attracted to the Industrial Internet of Things. We believe IoT could add comparable value—as that which has



merited such investment—to infrastructure, but that it takes a digital twin, with its intrinsic ET and IT, making sense of what would otherwise be IoT data overload, to make this breakthrough broadly worthwhile. In fact, one could say that the combination makes an infrastructure digital twin indeed a living digital twin.

That's the infrastructure IoT opportunity opened up by our acquisitions, announced last month, of sensemetrics and Vista Data Vision. Though these bring us only about 40 new colleagues, we consider them the leading experts, furthest up the learning curves, in closing the gap between infrastructure assets and the existing IoT ecosystem of sensor devices, and edge connectivity solutions and data environments, such as Azure IoT and Siemens' MindSphere. Rather than duplicating existing ecosystem capabilities, our priority with infrastructure IoT is extending our iTwin platform so that every infrastructure digital twin can add appropriate connections to sensor instrumentation and data management with, what I think of as, "drag and drop" simplicity. sensemetrics, from its outset, has been uniquely focused on cloud-based platform standardization for the sensor categories and device providers pertinent to infrastructure environmental monitoring, and Vista Data Vision has literally pioneered the leading-edge infrastructure IoT applications.

As a pure software and cloud services vendor, we at BSY do not have intentions to be in the businesses of proprietary infrastructure asset data, nor proprietary analytics, nor aggregate benchmarking acting upon such data—though we very much aspire to be the digital twin cloud platform provider supporting these activities. Our ideal is for our engineering and project delivery accounts to become the digital integrators and analytics proprietors for the owner-operator accounts. The engineering firms' future depend on introducing such recurring-revenue business models, where they would be paid for the value of outcomes rather than for their hours of input. While creating and curating infrastructure digital twins are, to them, a conceptually appealing opportunity, our iTwin platform progress within engineering firms has been constrained by slow development of business cases.

With our iTwin platform now the entry point for infrastructure IoT, and vice versa, we can now offer every engineering firm an immediate opportunity, without their incurring substantial software development risks, to offer ongoing environmental monitoring services for every infrastructure asset they have delivered. Their expertise and resourcefulness is needed to determine what and how to instrument, and how to configure triggers and recommendations from real-time inputs through iTwin-powered digital twins—to make the most of our joint ET-engineering models and simulations, which they've created with our applications or with the many others that our iTwin platform supports.



A case in point is Schnabel Engineering, a leader in the geotechnical engineering of dams and tunnels, ranked number 203 among the ENR Top 500 Design Firms. Their proprietary infrastructure monitoring service (IMS) cloud platform is enabled by sensemetrics, improving Schnabel's business at the same time as we, together, improve environmental sustainability.

And now, a well-known case in point for the "priceless" importance of critical infrastructure monitoring is at the Oroville Dam in California, which was in danger of breach in recent years, and where HDR Engineering was a finalist in our 2020 *Going Digital* awards for their 3D seepage and stability analysis. The Oroville Dam owner, California Department of Water Resources, has standardized on sensemetrics solutions for its dams, and across its supply chain of local and global engineering firms—with the attendant opportunity for us to iTwin-power this broad new opportunity to increase infrastructure safety and environmental resilience.

For subsurface digital twins, deepened by our pending acquisition of Seequent, it happens that, of course, UAVs, cameras, and laser scanners don't function underground, where these serious environmental risks originate. So, sensors and infrastructure IoT will be instrumental in further accelerating subsurface digital twins, through new iTwin-powered environmental applications, such as these examples.

Now, anticipating potential questions: it's too soon to speak knowledgeably about the causes of last week's catastrophic collapse of an elevated transit section, effectively a bridge, in Mexico City. But, subsurface conditions may have been a factor. In any case, this underscores the ES(D)G potential, or imperative, for infrastructure digital twins and infrastructure IoT in averting such failures.

A relevant demonstration of what's becoming practical for this purpose of broadly propagating critical infrastructure IoT is this special recognition-awarded 2020 *Year in Infrastructure* project in Korea. You can find this on page 17 of your *2020 Infrastructure Yearbook*. It met the challenge of a \$10,000 budget limit to instrument a typical highway bridge by combining video and affordable sensors, for OT, with BSY applications for ET.

I think governments need to bear in mind these vulnerabilities in existing infrastructure when allocating funding for new infrastructure investment programs, as the U.S. is now debating. Notwithstanding whatever can be afforded for incremental capacity projects, it is clearly essential to extend the lifetime of existing infrastructure assets, while improving their adaptability, including energy transitions, to sustain fitness for purpose and increasing their environmental resilience. The most advantageous and far-sighted investments would prioritize infrastructure digital twins, enabling infrastructure IoT, for existing assets.



An immediate opportunity is for mobility digital twins, where we at BSY are already a world leader in traffic simulation, but which we can timely advance through our recent acquisition of INRO. Rather than utilizing mobility modeling only for new capital project planning, mobility digital twins should work continuously and comprehensively to maximize throughput of existing transportation networks. Our ET for mobility digital twins already includes LEGION for leading pedestrian simulation, and CUBE for metropolitan planning. Now, INRO—and its 35 colleagues headquartered in Montreal, Canada—bring us Emme simulation for world-leading, multi-modal simulation of transit and roadways together, and Dynameq for dynamic simulations at the level of individual vehicles. An example of what can then be enabled with continuous IoT traffic inputs, is better dynamic optimization of urban congestion pricing, whose time has come now, even in the U.S.

So, now, over to David to review our financial results.

**David Hollister:** Thank you, Greg. And good morning, everyone. I'm going to jump right in, starting with revenues.

Our first quarter revenues of \$222 million grew 14% over the same quarter last year. Of course, most of that growth comes from subscriptions, which represent 85% of our revenues, and grew 10.5% over the prior year. Very little of that subscription growth comes from acquisitions, and a little over 4% of that subscription growth comes from the currency tailwinds of a weaker U.S. dollar on average this year, relative to the same period last year. As Greg mentioned, several product lines led that subscription growth, with each of ProjectWise, asset and network performance, civil, and geotechnical noted as standouts.

Our perpetual licenses revenues, which are now less than 5% of our total revenues, declined by about \$700,000, likely influenced by the ongoing progression of our various subscription offerings, including term licenses and Virtuosity subscriptions.

Our professional services revenues, now about 10% of our total revenues, increased by \$10.1 million or 74% over the same quarter last year. Effectively, all of this was stimulated by acquisitions concluded throughout 2020, and fully informed our full year 2021 guidance previously shared. Our recent first quarter 2021 acquisition of Ontracks did not contribute materially to 2021 Q1 results, nor do we consider it material to our expected full-year 2021 results. Our acquired digital integrator businesses are growing even since we acquired them, hence technically, there is some organic growth here, which in effect, I am classifying as acquisition growth.



So, I'll offer a further comment on our services revenues and recent acquisitions. We obviously don't have an ambition to become a professional services business. That said, these digital integrator service business acquisitions have brought scale to our existing services offerings and are profitable, as you will note a favorable trend and, finally, positive services margins on the face of our income statement. To have the benefits of scale, capability, and profitability from these acquisitions, while also addressing our underlying primary strategic objectives of digital twin software pull-through, and a learning curve for digital twin integrator ecosystem, is a compelling combination, we think.

I'm presenting here on the right a reminder of our full-year 2021 revenue outlook, as was provided during our year-end 2020 earnings call. You'll recall we provided a range of \$895 to \$920 million for revenues, representing growth of 11.7% to 14.8%. We believe our Q1 performance firmly supports our full-year outlook.

Our last 12-month recurring revenues—which include primarily our subscription revenues, but also will include certain services revenues delivered under contractually recurring success plans—increased by 10.7%. This is supported by our recurring revenue retention rate of 107%, which is reflected here on a rev rec 606 basis in 2021, as we are now required to present. The preceding data points on this chart are based on 605 rev rec. Had we presented this metric on a 605 basis for Q1 2021, it would be slightly better, but would still round down to 107%. To further quantify the new account growth that Greg highlighted, new accounts contributed 3% of our year-over-year quarterly revenue growth, which is growth occurring in addition to these recurring revenue retention metrics. Obviously, we're not excessively losing accounts, as you can see by the consistent 98% account retention metric. But, there is an observable modest decline in existing account growth, clearly influenced by largely-pre-pandemic Q1 2020 dropping out of the metric, which is tending to be offset by new account growth and some observable momentum from our SMB initiatives that we've discussed at length.

A significant KPI for us is our annual recurring revenue or ARR, which has grown by 10% over the same period in the prior year. Of this growth, 9% is organic and 1% is the result of the various programmatic acquisitions we've concluded in the last year and this year to date. Our ARR growth is seasonal and has a high correlation to contract renewal dates throughout the year. Sequential ARR growth metrics are consternated by the meaningful seasonality patterns in our ARR growth. And I'll speak more on seasonality in a moment.

Our GAAP operating income was \$55.6 million for the first quarter of 2021, up 21% relative to the same quarter last year. As you know, there is a bunch of noise in the GAAP results, which we



endeavor to filter and to provide more meaningful commentary and analysis via adjusted EBITDA, which grew 43% over the prior year to \$82.8 million. This yields an adjusted EBITDA margin slightly better than 37%. I went to some lengths to explain our recent history and full-year 2021 EBITDA margin outlook during our call last quarter, and I encourage you to revisit that. Our margin performance for Q1 2021 is strong, and I again admonish that it is unusually strong due to pandemic-related cost savings that continue to accrue to our benefit. Although compensation levels and incentive plan payouts are returning to normal for 2021, there are seasonal patterns to this expense recognition, which I will discuss. Further, our travel savings continue to be significant. We are resolved and committed to re-investing such savings, going forward, into growth: that being people, go-to-market investments, and acquisitions. In summary, our profitability and margin performance was strong in Q1, but we expect some level of reversion based on reinvestment plans ahead. Thus, I am reminding you of our full-year 2021 performance targets, which we are not yet prepared to adjust.

As you can see here, our GAAP operating cash flows are up over 80% for both the first quarter 2021 relative to 2020, and for the trailing twelve months then ended. We've consistently presented our business model as highly cash flow efficient, with a conversion ratio of adjusted EBITDA to cash flow in the 85% to 90% range. However, recent and current cash flows are particularly strong and unusual. As I've mentioned, we don't have appreciable multi-year contracts, so there are no upfront multi-year windfalls. However, the conversion of certain ELS contracts with quarterly payment cycles into E365 contracts—where we seek to collect, as a deposit, the estimated consumption for a full year at the outset of the contract—has accelerated our cash flows. Further, continued expansion of our term license program—where we also seek to collect and maintain a year of consumption on deposit in the form of a CSS—has also generated stronger cash flows. As these programs grow, their cash flows outpace the historical usage and resulting revenue recognition. We are focused and efficient on cash flow, but I don't represent the current bulge in performance to be long-term sustainable.

As a quick review of what we discussed in our last call, during our Q1 2021, we successfully executed some substantial financing transactions. The results of both our newly secured \$850 million senior secured revolving credit facility, and our \$690 million convertible notes issuance, and related capped calls, are now reflected in our financial results and position as of March 31, 2021. All of this was undertaken to avail of a receptive market and to enhance our capital structure for continued growth, and notably, to position us to potentially pursue acquisitions of a larger scale, as we subsequently did with Seequent. As of the end of March, our net debt was \$103 million, and net debt total leverage was quite low at 0.4 times. Cash on hand and full revolving credit availability position us well to conclude the Seequent acquisition and the cash purchase price of \$900 million, and to support our ongoing investment for growth and quarterly



dividends. Initial leverage after Seequent is still estimated to be well below four times, and our long-term total net debt leverage target continues to be ideally in the two-to-three times range. In lieu of quarterly guidance, I thought it would be helpful to offer some commentary on our seasonality. It is historically, and still the case, that perpetual licenses are most prominent towards the end of our year. You just heard Greg mention that China, although delivering a solid Q1, typically has a stronger last half of the year for us. It is also the case that, relative to other geographies, perpetual licenses in China remain a more prominent commercial choice for users.

The new, for us in 2019, 606 revenue recognition standards introduce some quirkiness, as Greg sometimes references. Essentially, any of our ELS contracts that renew and bill annually require upfront revenue recognition of approximately 80% of the contract value, with the remaining 20% recognized ratably over the year. This upfront revenue recognition skew is more impactful in each year's first and fourth quarters for us. I highlight here the directional pattern of our quarterly revenues for the last several years, which reflect this trend. Although it could be somewhat masked by the growth in services from acquisitions, we should all expect the same general pattern this year. That's not backing off of our outlook, which I will address in a moment—just educating as to normal and expected intra-year volatility, due to accounting rules.

Also, on the issue of accounting quirks. As we convert annually billed ELS subscriptions into E365 subscriptions, we leave behind that upfront revenue recognition and introduce a rev rec pattern that follows the actual consumption of the software and more closely approximates a ratable pattern throughout the year. But when we do that, we compare apples to oranges when looking back to compare year-over-year revenue. For example, an ELS that renewed and booked upfront revenue of 85% in Q1 2020 and then converted to an E365 in, say, Q1 2021 will reflect only a single quarter of consumption measured revenue recognition in that initial Q1 2021 period. Of course, then in subsequent quarters the year-over-year comparison reflects a full quarter in the current year, compared to only 5% of the contract recognition during the same quarter of the prior year. Analysis of these dynamics is complicated given the ongoing migration from ELS to E365. To date, the effects have been not worth much mention. I will comment now, however, that in this particular Q1 2021, had the portfolio of our converted E365 contracts been normalized for the aforementioned skewing effect, our subscription revenues would have reflected 2% greater year-over year-growth. We don't get overly excited about it; it will all normalize. And we are just as happy to leave the lumpy ELS upfront recognition behind as we continue our E365 migration.

I teased before that our ARR growth follows a seasonal pattern, which is impacted by the timing of normal annual renewal cycles of our subscription contracts. Historically, the approximate average pattern of ARR growth in a given year presents as 10% of the growth in our Q1, then



25% of our growth in each of the second and third quarters, then a heavy fourth quarter of renewals, which yield 40% of our annual ARR growth. This seasonality is likely to temper going forward, as more annual ELS contracts renewing in Q4 become E365 contracts, which effectively renew each quarter and get reflected in ARR throughout the year.

Lastly, just a few comments on operating expenses. We try to concentrate annual raises for our colleagues to occur as of April 1 of each year. Although significantly abated for 2020, full normalcy will return in 2021. Since approximately 80% of our cost structure is people and related support costs, annual raises are non-trivial and the effect on operating expenses in Q2, Q3, and Q4—relative to Q1—is meaningful. This is further compounded by variable incentive compensation, which is historically higher in the last half of our year. There is also a seasonality to certain of our larger promotional- and event-related costs, which are historically highest in the last half of our year. And, lastly and generally, we are growing. Those cost savings we have been almost apologizing for are being steadfastly reinvested into growth initiatives: people costs, go-to-market costs, and acquisitions.

That's a good segue into resharing here exactly what we shared last quarter related to our financial outlook for 2021. Our Q1 2021 was at least as good as we expected when we shared our guidance, but not so extraordinary that we feel compelled to modify the full-year outlook at this time for any of these metrics.

Related to Seequent, as Greg mentioned, we continue to navigate the administrative process of gaining regulatory approvals but, at this point, expect no substantive issues. We continue to anticipate a second quarter closing, subject, of course, to regulatory pace. I remind you here generally what to expect from Seequent in terms of scale and contribution. Once Seequent closes, then we will update our 2021 outlook, hopefully when we report our second quarter earnings.

And before I wrap up and we open up for questions, I am also resharing here our views on what we are targeting in our long-term financial performance. What we consider a solid Q1 is generally consistent with our views and ambitions for these targets. And we'll keep working to deliver them.

With that, Carey, I think we are now ready for any questions there may be.

Carey M: All right, everybody. We'll start with Gal Munda from Berenberg. Gal?



**Gal Munda:** So, thank you for taking my questions. And congrats on the first quarter. Greg, maybe the first question for you. What we've seen when there's an adoption of new technology in—especially in the construction-related space, like when we talked about BIM in the past—has always been helped with some of the mandates that were happening, especially across the world. And then when we think about all the use cases that we're getting now—we're talking about Mexico City most recently, we talk about Genoa, Minneapolis, and all that—do you believe that there could be a mandate that helps the adoption of digital twins in infrastructure that could be supported by the fact that all these use cases now, the accidents, are helping, and could that effectively help the adoption going forward?

**Greg B:** Well, a mandate to add digital twins for existing infrastructure would be supported by the ROI case, along with safety and resilience. The U.K.—of course, you refer to, I think, when you talk about BIM mandates—the U.K. is coming far with digital twins. But, remember that governments have a particular opportunity and responsibility when it is government-funded infrastructure. They feel—they are obliged, in fact, to going digital to help that be a better long-term investment. So, governments wouldn't have to mandate a technology preference in private investment. But for public investment, there are—and especially public investment to hasten the adaptation, energy adaptation, and safety and resilience of existing assets.

We're bringing to the attention of governments, as we can, the advantages of doing that, which largely are sharing what has worked. For instance, here in the United States, sharing what has worked in other countries. But it has to be said, there's not a track record on our part, or anyone's part, of influencing—it has a lot to do with, in the end, contracting and procurement rules. And those don't change very quickly. But it's a great opportunity, when there is new public investment, for it to be investment in extending the safe and resilient lifecycle of the infrastructure existing already.

**Gal M:** That's very helpful, yeah. That's what I was thinking because most of the investment there is coming from a public works. So, from that perspective, they could have a big influence on it. My second question is just kind of a follow-up on the transition from ELS to E365. And maybe it's the question for a combination of yourself and David.

In the previous quarters, we've said it's kind of going to take its natural path. I don't know if it's correct to think, but Q1 seems to have accelerated that a little bit more. And, you sound a little bit more open on, as well, on the transition going forward. I understand the benefits of it. But maybe if we just revisit, what would your ideal model look like in the future? Because you're probably not trying to convert all the ELS licenses, effectively, into the E365. And what would the normal outlook look like maybe in a couple of years, the way you see it?



**Greg B:** I think in a couple of years, it'll all be converted. But we were cautious to start with, because any software company venturing into charging per application per day when, previously, you were paid a fixed amount for the year would be concerned about the risk we're taking on of volatility and market activity. And guess what? That came to roost in the industrial resources portion of our—it's not a huge part of our business, but it's a large part of the E365. Not surprisingly, those firms, which know about their volatility, prefer to be on a program where their costs likewise track with their workload.

But, that's pretty much behind us now, and we wish to participate in the upside to come. And that is something we're seeing even now. And in quarters of slow renewal activity, we work hard on evangelizing and introducing the E365 upgrade to accounts that can convert, can upgrade later in the year. But we think that will continue to be a natural progression. The other thing we've adapted over the past year is we tend to have collars on the contract now, that the accounts don't mind that either, because they expect fairly rapid growth in their own consumption as the economy recovers. So, we're learning as we go. And I'm glad we didn't do it all at once so that we could factor in this learn.

**David H:** So, Gal, I wouldn't characterize Q1 as accelerated in terms of convergence. The lower-hanging fruit has been picked early. We were smarting a bit from some of that daily volatility. We learned to introduce these collars, which, by the way, about 40%, approximately, of our outstanding E365s have some form of this collar protection.

It's also the case that the pipelines of conversion that's going to go for multiple years here isn't just ELS contracts. It's the larger SELECT contracts, too, that we would love to convert as well. And we're, at this point, not even halfway through what could be the potential target of conversion into E365.

Gal M: That's very helpful. Thank you.

Carey M: Next, we'll go to Matt Hedberg from RBC.

**Matt Hedberg:** Thanks for taking my question. Greg, adding 1,000 customers in the SMB market was certainly impressive over the last year. Given that I think—I would assume a lot of them were pressured by COVID, can you talk about the durability in sort of SMB strength? And remind us how big of an opportunity longer-term—I think David said it's about 22% of revenue today—how big of an opportunity is SMB relative to your typical large enterprise focus?



**Greg B:** Well, I think, for the potential of it, one can look at our competitor, Autodesk, because I think that's the mainstay of their business. I wish I had otherwise knowledge about the distribution of infrastructure engineers and the size of the firms they work in. But I'll say we're encouraged. I would have thought it would've taken us much longer to add 1,000 new SMB accounts. But, of course, the products they need are the same products.

I don't, by the way, think it had much to do with COVID. Because with COVID, you'd like collaboration in ProjectWise. But ProjectWise is not the offering for SMB accounts. These are individual applications. They are practitioners, they're smaller firms, or, in some cases, may be sole practitioners in infrastructure engineering. And, we just haven't tried to find them before, or have them find us. And, we are certainly encouraged that it's not only a large number of accounts, but can be a substantial portion of the business. We're sure of that when we look across the fence at the greener grass in our competitive landscape and where our strategy is different—because we're focusing on inside sales, on efficient e-commerce, on self-service, on connecting up with this expert assistance, which is virtually delivered and machine learned and so forth. It's something great for us to work on. But it's also, I think, going to be quantitatively significant. We can now, for the first time, say that.

**Matthew H:** Oh, thanks. I'll keep it there for the sake of time, though. Thanks for the answer, Greg.

Carey M: All right. Next, we'll go to Jason Celino from KeyBanc.

**Jason Celino:** Thanks for taking my question. Maybe—so digital twins—big opportunity, albeit relatively early. Aside from the straightforward financial metrics, how should investors measure the pace of progress here?

**Greg B:** Well, it's a reason I promote our yearbook. This is where accounts nominate their own projects for *Going Digital* awards. And increasingly, it's more and more of a digital twin approach. I grant that's qualitative in assessing that, but it provides great case studies for others to look at and be encouraged from and learn from.

But I think this ecosystem is helping when you have NVIDIA and Microsoft—recall their Ignite conference showed the bridge inspection case in point that will be on all of our minds now with actual bridge failures. But it's creating mindshare among owners that they would expect to have a digital twin. And that's an opportunity they can't fulfill for themselves. They need an ecosystem to do that.



It's the future of infrastructure engineers to not be working on rote things that can be automated but to be working on analytics that is enabled by the data that comes out of silos and goes together. So, where problems have multiple causes, you can put them together in a digital twin. You can add the sensor real-time inputs and avoid these problems. But to talk about extending the life usefully and safely, it's what most engineers will be working on for most of the future. And promoting cases—you can see that I am working on that myself to get the word out.

**Jason C:** Okay, great. And then, maybe just one quick one. We've seen a number of these smart [INAUDIBLE] so far this year, in addition to obviously Seequent. But, how should we think about the near-term pace of your M&A strategy going forward?

Greg B: David, I'll ask you to take that one.

**David H:** Yeah. So, it's been a busy first quarter. And we've still got a pipeline. I wouldn't expect us to keep up the pace in the second and third and fourth quarters that we've had in the first four months to date. But they're still out there, Jason. This is still part of our normal development of our portfolio. Do we spend multiple years to develop it, or can you fill that gap and that white space more efficiently with an acquisition? And it's still part of our strategy, and still part of how we're going to grow. But in terms of pace, we can't keep up that first quarter pace. Just bandwidth—we're pretty disciplined about integration, as you know. And we've got some work to do with all that we've taken on so far this year.

Jason C: Okay. Excellent. Thank you.

Carey M: Next, we'll go to Joe Vruwink from Baird.

**Joe Vruwink:** Oh, great. Hi, everyone. I thought it was interesting—I think I heard this right— that AssetWise was actually the strongest area for new business growth in the quarter. Any particular solutions within the broader kind of category that were better than others? Or maybe certain subsectors that showed greater incremental demand for AssetWise in the quarter?

**Greg B:** Well, rail is the subject of investment programs across Europe and Asia. We have particularly strong offerings there. Roadway, we're bringing together mobility digital twins and asset performance. I think most of that opportunity is still ahead for us.

And in industrial, you do have owner-operators spending more to make their existing assets more efficient and adding on our solutions to their enterprise environments for asset reliability. I



mention that third, but it isn't—it's new capital projects that are curtailed in industrial end resources, not better utilization and resilience of existing investment.

**Joe V:** Okay. That's great. And then just final one for me. The constant currency ARR growth picking up relative to what had been the case in three, two, and four Q, just to make sure I understand that slight acceleration. Is that really the E365 upgrades that are doing it? And then, can you just maybe relate the 10% growth in 1Q. I think the guide for the year was eight to 10, so starting out at the high end. I would have maybe thought the comps get easier in the back half. So, you're starting at a good point. Maybe you can just talk about how you would expect the year to progress relative to starting at 10% constant currency growth.

**David H:** Okay, so Joe, it is the case that any uplift we get on conversion in the E365 does accrue to ARR, as does the 1,000 new accounts we've taken on board, which are largely subscriptions, accrue to ARR. So, all that helps, as does usage, as does modest pricing, et cetera, et cetera. And it always has.

In terms of 10% year-over-year growth in the first quarter, even compared to a largely prepandemic first quarter of 2020, it's a good sign. But remember, when I described the pattern of our ARR growth in the year, it's 10%, 25%, 25%, and it's a big fourth quarter at 40%. Do I wish I'd had that 10% in the fourth quarter? Yeah, but that's still in front of us. But the 10% growth as of the first quarter is a good sign. And we'll take it.

Joe V: Great. Thank you.

Carey M: Next, we'll go to Matt Broome from Mizuho.

**Matt Broome:** Oh, great. Thanks very much. Hi, Greg and David. So, it looks like you recently raised pricing on Virtuosity across most product lines, from what we can tell. Have you similarly raised prices across your enterprise-focused plans? And going forward, how are you thinking about pricing, particularly in terms of contributing to your longer-term revenue growth target of 10% a year?

**Greg B:** I would say, for Virtuosity, on the learning curve, that follows its own cycle. The Virtuosity subscription includes these expert assistance keys, which are literally people who are embedded and so forth. And we may be getting experience in how they're utilized and so forth. Otherwise, we do adjust for escalation once per year. And David, I think that takes effect with renewals that start in the second quarter. Is that right, calendar-wise?



David H: Correct. That's correct.

**Greg B:** And it is a usual escalation, which is related to cost of living. Maybe it's a little higher than that. But it's not an extraordinary program for us.

**Matt B:** Okay. And then, I'm just curious, how did your partnerships with the likes of Microsoft, Siemens, and Topcon perform during the quarter?

**Greg B:** Well, with Siemens, we created a lot of new cloud services over the past couple of years, and now the focus is on go to market for them. In the case of Topcon, it's largely to do with our Digital Construction Works joint venture that has a considerable footprint in the industrial space, so that has slowed that down somewhat and we're diversifying it a bit.

With Microsoft, there are a number of different initiatives that have us and Microsoft pretty excited and occupied. One of them is ProjectWise 365, which is the instant-on ProjectWise, which could be an entry point for SMB. I don't think it has been quite yet, that's why I answered the earlier question that that's mainly applications. But with Microsoft, the Microsoft Store is going to be part of that, and so forth. We're both interested in this SMB potential, and the integration of Teams with ProjectWise, especially, is something we'll be talking about for quite a while.

Matthew B: Okay, excellent Thanks very much.

Carey M: And finally, we'll go to Brian Essex from Goldman Sachs.

**Brian Essex:** Hey, thank you very much. Thank you for taking the question and a nice set of results. I was wonder if first I could dig into, I know obviously subscription revenue growth contributed nicely in the quarter, but services revenue growth also accounted for a couple hundred basis points. Could we maybe unpack that a little bit and maybe understand a little better what the implications are for that for the rest of the year on the growth of the business and what's going on there, particularly because also nicely had positive gross margin with the business?

**David H:** Yeah, thanks, Brian. So, yeah, the growth in services year-over-year for the quarter was like 74%. And almost all of it—look, we're pretty transparent about it because it's so material in services—almost all of it is from the 2020 acquisitions that we made. Back in the middle of the second quarter last year, we acquired Cohesive. Then, in the fourth quarter, we acquired PCSG and SRO. All of those are these digital integrator services businesses. And, those



fully informed the guidance outlook that we gave. We obviously knew we had those on board, and they are part of that guidance outlook that we've given. And, yeah, absolutely, we're really pleased with their contribution to margin. They bought us some scale, and they've turned our services business profitable. They're well-run professional services businesses, whereas historically, that has not been our business. So, there are some learnings we've brought on board that are also helping the margin performance.

Of course, it's a bit of a mixed shift overall right because they're never going to have software margins. But that's not the goal. The goal is the strategic element of it, which is to create that pull-through of digital twin software and then stimulate this ecosystem of digital integrators out there and light the way for that.

**Brian E:** All right, that's helpful. Maybe to follow up, Greg, you know, last year, we saw a bit of an impact from oil and gas industry, and I was wondering if maybe you could pull on your experience now that gas prices are coming back the other way and spiking up. Any inference that we might have on the performance oil and gas industry in the macro-environment there and how that might drive incremental usage of your platform, particularly going through this year?

**Greg B:** Well, as I say, there's not been a slowdown in performance at existing asset performance and reliability initiatives. In fact, those are moving toward digital twins, and digital twin is the terminology used by the majors there in their strategy for improving their efficiency of their existing assets.

But on the capital projects side, it's more to do with energy transition opportunities. And I mentioned the example last time of our offshore structural software, primarily used for fossilbased platforms but now, it's used for wind power platforms, which is a big enough opportunity that it actually has resumed growing well.

So, infrastructure engineers are always going to be busy when there is a need for transitions and so forth. However, sometimes it takes time for projects to start up and make up for the lapses in workloads.

**Brian E:** Historically, have you seen, when gas prices are high like this, an increase in conversations with regard to alternative asset projects?

**Greg B:** I think that that conversation is committed and it's going to go on forever. I don't think there's any cyclical hitches to energy transition. It has everyone's full attention and prioritization, and it's fun to work on.



Carey M: So, apologies to Brad. We'll go to Brad-unless you have a follow on?

David H: No, Carey, I was just going to make sure you got to Brad. He had his hand raised.

Carey M: Yeah.

**Brad Sills:** Oh, great. Hey, guys, thanks so much for taking my question here and squeezing me in. I wanted to double-click a little bit on your comments on strength in China. If we could drill into that a little bit, is that business representative of the subsectors that you see in the rest of the business? In other words, is there a more weighting towards public works versus industrial over there? Are there any segments that you're seeing greater strength in China, or is it pretty representative of the broader business?

**Greg B:** It may not be quite representative, but I think it's more accidental and institutional than it is some larger pattern. We do well in state-owned enterprises and their design institutes for rail and road and cities. We have some penetration in metal industries. We do well in electric grid and substations, are starting to do better in water. But I don't think it is a public versus private. It just has to do with, probably, good salespeople, good reference accounts, and so forth.

But one, maybe, concluding thing to say about getting back to better business in China is they resumed in-person work sooner. And I want to reiterate my belief that all of our businesses are going to improve with in-person work, and that we have that ahead in the rest of the world now, based on the empirical observation about the pace of business in China.

**Brad S:** Great, thanks so much, Greg. And then one more if I may, please. Earlier in the call, you cited some uptick in E365 consumption on some renewals, I believe. And I think your explanation was anticipation of a broader infrastructure spend coming with perhaps a bill. What are you hearing from customers with regard to that?

**Greg B:** So, you know, I'm glad you asked about that. It's not that consumption is up yet that I was referring to. It is that interest in converting to E365 from ELS is up because accounts that will otherwise face their ELS renewal are saying we'd like the success plan aspect of E365, so that you can embed people helping us in going digital, so that we can do more work faster without taking on people faster.

But that's not the same thing as consumption in the existing E365 book, which continues to follow the pattern of green for public works and utilities, yellow—almost green—in commercial



and facilities, and red still for industrial and resources. There is just nothing those folks can do to bring back projects much sooner. They'll be entering into energy transition projects, but they have to sell that work to get everyone busy.

In general, the big EPCs are talking about expecting bringing back their furloughed employees and so forth. I think that's looking better as well, but they're already on E365.

Brad S: Thanks so much, Greg.

Greg B: Thank you very much for your attention. Cheers.

Carey M: Thanks, everybody.