

Carey Mann: Good morning, everyone, and thank you for joining us for Bentley Systems' Q1 2022 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, Chief Financial Officer Werner Andre, Chief Operating Officer Nicholas Cumins, and Chief Investment 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 operating 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. After the presentation, we will then conclude with Q&A. And with that, let me introduce the CEO of Bentley Systems, Greg Bentley.

**Greg Bentley:** Good morning, as the case may be, and thanks to each of you for your interest. Our operating results presentation will follow are now standard sequence. I will now briefly cover tone of business, and will be back after Nicholas for commentary about corporate developments.

When we last met, it was already March, but much has happened in the world since then. Our 22Q1 operating results signify BSY's overall resilience, but with significant developments to remark upon, which we will do briskly today. This includes not only the war between Russia and Ukraine, but also related effects that I term "counter globalism" impacting our business as a U.S. company in China.

These developments, and our responses to date, will be covered today, as to Russia, by our Chief Operating Officer Nicholas Cumins, based in Europe, and as to China, by our Chief Investment Officer David Hollister and colleague Chris Liew. Chris was, until this year, our territory executive for North Asia, within which he helped grow greater China to reach 5% of our business. He's now heading "glocalization" initiatives for BSY investments.

Net of these 22Q1 ARR impacts in Russia and China, and incremental to year-over-year constant currency ARR growth of 15% from platform acquisitions Seequent and Power Line Systems, you will also hear shortly from head of PLS Otto Lynch our business performance year-over-year constant currency ARR growth was 12%. And net recurring revenue retention, also in constant currency, for the trailing year was 108%.



I consider these operating results to, thus, reflect some degree of overperformance globally with respect to post-pandemic seasonal expectations, when excluding China and Russia. In light of this resilience, which will be the subject of my review of corporate developments in a few minutes, we haven't changed our general expectations since, in March, we provided our financial outlook for the full year 2022.

This slide, which has become a fixture since the second half of 2020, is a reminder of the recurrent drag on our business from the industrial portion of the industrial/resources infrastructure sector. So, it's great to report now that industrial usage has finally turned around in the right direction, although still far from the pre-pandemic levels against which our directional colors are benchmarked.

You will likely have heard plausible arguments that industrial Capex is now being kickstarted, even in Western countries, by new imperatives for energy security. We are now positioned resiliently for immediate accretion in ARR and revenue from these upticks in usage and application mix. And in 2022 Q1, we continued our measured pace of account upgrades to E365 and especially to foster ARR growth through E365's embedded success services.

After so long during which EPCs, bogged down with industrial Capex stagnation, have significantly stifled overall E365 ARR growth, during 22Q1, they finally resumed some new business, although still at a slower rate than the mainstream of E365 accounts. Such continued EPC invigoration throughout 2022 would contribute an upward inflection from 2021's growth, serving to offset the detrimental aspects of this year's geopolitical upheavals, which are actually creating opportunities for EPCs.

Turning from enterprise to SMB, which, as we showed last quarter, was more significant than ever in 2021's new business, Virtuosity continued its rapid growth, seasonally adjusted. During 2022 Q1, about 60% of Virtuosity's new business was in 600-plus new names for BSY. In 2022 Q1, new names—that is, not by acquisition—represented 3 percentage points within our 12% core ARR growth, a high watermark for us.

Our internal term "new business" measures primarily ARR growth, subject to some mildly ranging weightings across different commercial offerings, as I have reviewed in the past. All of our quota carriers and their territorial executives share new business incentives, and new business is now the basis for our management team's annual and long-term equity incentives. So, each quarter, Nicholas will focus his operational perspectives on new business developments by region and product brands. Over to Nicholas.

Nicholas Cumins: Thank you, Greg.

From a regional standpoint, our new business continued to accelerate in the Middle East, as well as in Australia and New Zealand, as indicated in Q4. Our new business also accelerated in India,



benefiting from renewed investment infrastructure, including industrial, and bounced back in Southeast Asia, in particular with engineering firms.

Our new business slowed down notably in Europe from a year earlier, mainly due to lower consumption growth in our E365 accounts, reflecting the general economic conditions in the region impacting infrastructure investments with a shortage of labor, raw construction material, and increased energy costs.

We mentioned in March that Russia represented about 1% of our global ARR. We decided to pause marketing and sales in Russia in light of the war in Ukraine, effectively halting our new business. We also continued to strictly apply export controls and restrictions impacting our existing ARR.

For instance, all oil and gas accounts are already under sanctions, representing 10% of our ARR in Russia. We are expecting more sanctions and other restrictions to impact the remainder of our ARR, and have, therefore, decided to reduce our deemed recurring ARR substantially to reflect this, as Werner will quantify. David will cover China in his section.

From a product standpoint, our new business accelerated in electric utilities, especially with our recent acquisition of PLS and SPIDA for transmission and distribution, as well as in water utilities with OpenFlows, our product line for water infrastructure.

Our new business also accelerated with OpenRoads, our design and modeling application for roads, as well as STAAD, our main simulation application for structural analysis.

A key pillar of our product strategy is to drive engineering excellence. The acquisition of ADINA exemplifies this. ADINA was founded in 1986 by Dr. Klaus-Jurgen Bathe, a world-renowned professor at MIT who literally wrote the book on finite element analysis. We are delighted to welcome to Bentley Dr. Bathe and his dream team of Ph.Ds. with deep scientific and technical expertise.

Historically, ADINA has been primarily commercialized in a process and industrial analysis context. However, it is highly regarded by infrastructure engineers as the industry standard to study the response of infrastructure in detail. We see opportunity to leverage ADINA in the analysis workflows of infrastructure engineers by offering the possibility to extend almost every application in our engineering simulation portfolio with nonlinear analysis and advanced simulation capabilities.

ADINA will help engineers analyze, with greater precision, the impact of events that induced nonlinear or otherwise extreme response in built infrastructure, such as hurricane-force winds, storm surge, earthquakes, blasts, and extreme temperatures.

Back to you, Greg.



**Greg B:** Thank you, Nicholas. Moving now from new business, I will focus this quarter's review of corporate developments on the makeup of our ARR, the growth of which depends on new business. While in 2022 Q1, there turned out to be unanticipated developments, which set back certain territories significantly, BSY as a whole demonstrated resilience, which, to me, was fully satisfactory.

As other potential macro uncertainties seem to loom now, I think it is timely to consider the extent to which our corporate developments over the past two-plus years have improved not only our top line growth rates, but also our predictability and resilience. During the last two years, corresponding not only to our debut as a public company but also to the pandemic, our initiatives to reinvest pandemic savings have—and, I think, enduringly—increased our growth rates of new business, ARR, and revenue while adhering to our steadfast commitment to steady annual improvements in our normalized operating margins. To start with enterprise new business, compared to the pre-pandemic early days of our 365 program for our largest accounts, today, much more of our ARR resets are based on daily consumption rather than lagging annually.

However, during this period we have also institutionalized collars on E365 contracts to reasonably constrain ARR volatility. But most significantly, through E365 expansion, we can consistently and constantly benefit from the usage growth and application mix accretion, which our enterprise success blueprints for new workflows and *going digital* are advancing. As I reviewed last quarter, we can now quantify the improved new business and ARR growth rates, which result under E365. And as I showed earlier, we are steadily upgrading more midsized enterprise accounts to E365, as we add success force capacity with headroom for years of further momentum.

But next, our other new focus since 2019 on the SMB segment also provides ongoing upside opportunities that don't depend on market growth. In March, we reported on independent market research, indicating then that in at least these large economies, the number of infrastructure engineers in SMB firms actually exceeds those in engineering firms of enterprise scale, despite SMB being a much smaller portion of our own business. As we have also reinvested pandemicera savings into SMB-targeted Virtuosity quota carriers, and now towards their digital experience, I believe we are now gaining market share in SMB and, thus, overall.

But beyond these initiatives since 2019 for faster growth in enterprise and SMB, there are other respects in which our cumulative corporate developments have, at the same time, reinforced our resilience to macro-level fluctuations. Over the period since 2019, our business growth by geography has served to somewhat reduce our proportion of ARR in Europe, the subject of more pronounced economic concerns at present. But in general, across all geographies and behind the scene within the macro geographies in this breakdown, Seequent mining and resource footprint



has contributed diversification by being concentrated in relatively undeveloped mineral-intensive areas—Latin America, Western Canada, Africa, Australia, New Zealand—balancing infrastructure intensity in cities.

Most significantly as to diversification, recall that we took to heart the lessons of the financial crisis, which sharply curtailed Capex projects, and since 2009, our major priority in R&D and portfolio development has been to complete our comprehensiveness across the full infrastructure asset lifecycle by integrating support of maintenance and operations, thus setting the stage for evergreen infrastructure digital twins, uniquely spanning Capex and Opex through reality modeling and our iTwin platform cloud services. Consider that our ARR balance between Capex contractors and Opex-minded owner-operators looked like this prior to the pandemic. In the resulting industrial downturn, even in this industrial infrastructure sector, Opex actually increased as a priority, with owner-operators needing to increase productivity of their existing assets, including through digital twins. We are well positioned to take advantage by virtue of our increasingly strong leadership positions, according to ARC Advisory Group's research, in software and cloud services for infrastructure asset reliability. And this contributed to our reporting in March that from 2019 to 2021, our run rate for the largest Opex owner-operators, the Bentley Infrastructure 500, grew by 19%, compared to the 12% run rate growth for the largest in Capex, the ENR top design firms. This advertent emphasis on owner-operators and Opex has helped improve our balance in favor of owner-operators, where all the value of infrastructure is generated, and, accordingly, has increased the cyclical resilience of our business now. Opex is arguably countercyclical.

But in corporate developments led by acquisitions, we have also, since 2019, very significantly fortified our cyclical resilience with respect to infrastructure sectors. The relative cyclical vulnerability of these sectors was confirmed during these last two years, during which industrial/resources has shown relatively the largest exposure to Capex disruptions, followed by commercial/facilities, while public works/utilities, as we have seen, tends to verge on being countercyclical, given government fiscal policy commitments in the form of multiyear infrastructure investment programs.

Fast forwarding to the present, these diverging growth rates, and especially our platform acquisitions of Seequent and PLS, have considerably improved our own cyclical resilience. With somewhat less ARR proportion in the Capex-sensitive commercial/facilities sector, significantly greater ARR proportion in the more evergreen public works/utilities sector, and, with now, a substantial ARR proportion accelerated by the Seequent acquisition in a newly delineated resources sector, comprising mining, renewable energy, and the subsurface environment.



As a result, the underlying core disciplines, including structural and geoprofessional, have lower volatility corresponding to this overall mix. This leaves a much smaller ARR proportion exposed to industrial Capex volatility. However, about half of our ARR in the industrial sector is for the more resilient Opex, and it now seems plausible that the Capex rebound for energy security is likely to increase and endure foreseeably.

Finally, along with our ARR mix having become much more resilient than ever, these two years of corporate developments have positioned us much better than ever to take fuller advantage of the fastest growing opportunities for *going digital* and infrastructure engineering, which I described in March as corresponding to the world's ES(D)G priorities. And that starts with mobility digital twins, consolidating our long-standing leading competitive comprehensiveness in civil engineering and horizontal infrastructure. And environmental digital twins anchored by our Seequent platform acquisition supplementing our leading water and wastewater infrastructure momentum. And with the Power Line Systems platform acquisition increasing our leading comprehensiveness for integrated networks across energy transmission, substations, distribution, and communications for grid digital twins.

My premise is that we are performing better now because we have, since 2019, improved, through corporate developments, not only our important scale economics and competitive mode as *the* infrastructure engineering software company, but also and especially, we've improved the quality and, hence, resilience of our ARR and new business, not only as to ARR by infrastructure sector and discipline, but also to review as to ARR by consumption model, and as to ARR by geography, and as to ARR by account type.

Our 2022 Q1 operating results support my conclusion that these cumulative corporate developments, since 2019, have increased our underlying intrinsic growth rate through enterprise user success and SMB penetration, have improved our resilience to macro volatility, and have accelerated our upside participation in the world consensus priorities for infrastructure engineering, the limitless mobility, environment, and grid digital twin opportunities.

I think these corporate developments are already paying off. As in 22Q1, for which we're reporting strong operating results after having absorbed and provided for unanticipated consequences of war, resulting counter globalism, and more pervasive economic concerns. Despite our enthusiasm for this demonstrated resilience, we are not going so far, under the current circumstances of more obscured visibility, as to now increase our announced financial outlook for the year 2022. And despite this year's inevitable gyrations in rates of inflation and effects, I regard that our standing annual outlook should primarily be interpreted in relatively constant real—or unit terms, as economists would say—abstracting from these noisy nominal fluctuations.



So, now for an update as to our BSY investments, over to Chief Investment Officer David Hollister and colleagues, who will, in turn, hand over to Chief Financial Officer Werner Andre, and then your questions. Thanks.

**David Hollister:** Thank you, Greg. I will quickly review some topical highlights related to our BSY investments activities.

On the topic of acquisitions, our year-to-date progress notably includes PLS as a platform acquisition, which we'll discuss in some depth, as well as ADINA, a programmatic acquisition we completed last month.

Nicholas has just shared why we're excited to add ADINA to our portfolio. It's a textbook example of our programmatic acquisition strategy. It brings us relatively little historical revenue, but the tech and talent that we onboard—call that accelerated R&D, if you will—brings us future commercial opportunity, strengthens our product portfolio, and deepens our account relationships.

I'd like to take a minute to talk about China. Growth in Asia, including and in particular China, has been a priority growth strategy for us for many years. While greater China still represents less than 5% of our revenues, until recently, our growth rate in China has been a positive outlier for us.

As you've heard on this call, that star has lost a bit of shine, and in fact, our revenue in China actually declined in the first quarter of 2022, relative to the same quarter last year. That said, we remain considerably invested and interested in infrastructure opportunities in China.

We've always been forthright about the challenges to succeeding in China, which can require customizing solutions or creating new solutions first and specifically for the Chinese market, as well as the preclusion from provisioning cloud solutions and challenges to navigating data residency restrictions, and even a preference for accommodating commercial model and licensing uniqueness. It is the case that we've enjoyed the most success in China where we've adapted our solutions specifically for China, tailored our commercial model, and accommodated more flexible licensing and provisioning.

Recently, China's domestic policies are becoming increasingly challenging, and you'll hear more about that momentarily. All of these considerations together have led us to incrementally approach some of our growth in China through joint ventures. We've just announced the first of those, where we are a one-third partner in a JV with three trusted channel partners we call



Beijing TGGX, which will go to market with a China-specific streamlined version of our ProjectWise design integration solution.

The economics for Bentley Systems include technology royalties, profit sharing the JV, and expected pull-through synergies for other Bentley solutions.

I'd now like us to hear from Chris Liew, who recently transitioned from his role as our top commercial executive in China, to now being our SVP, leading our acceleration initiatives in China.

**Chris Liew:** Thank you, David. As David alluded, our growth in China has been hampered by a few headwinds, namely a preference by state-owned enterprises, design institutes, and the ecosystem to use software developed by local companies and commercial models, including licensing and on premise versus cloud that don't necessarily follow traditional practices.

I have had the privilege of running Bentley China for over a decade and have seen the widespread adoption of our desktop applications and project collaboration products, namely ProjectWise. Through the use of trusted partners working alongside our own sales team, we were able to seat the market, resulting in some of the largest projects in the world using Bentley software, like the Ezhou SF Express air cargo terminal, which is the FedEx equivalent. Beijing-Tibet high-speed rail design and construction, digital city development of Shanghai Economic Zone in Shenzhen, southern China, many of which won our YII awards, a pinnacle achievement in our industry.

However, the current state of the market portends the usage of locally produced software, where the court is domestically developed, controllable, and autonomous. In many cases, special budgets are being apportioned to create domestic solutions or name infrastructure projects, with reliance of foreign software projected to decrease by 20% in the coming years.

Thus, we have created a JV with three of our most trusted channel partners to build a low-cost solution for project collaboration. ProjectWise, which is our design integration and work-in-progress solution, is the glue which binds all of Bentley applications along with third-party vendor apps.

By creating a local version of ProjectWise for China, called iLink, we not only assured the concerns of being a foreign software company, but we can expand the reach of our user base to include non-engineers, like owners, estimators, and financial persons who need access to project information.



Since a lot of these non-engineers use other local products in their workflow, such as WeChat DingDing (which is a Zoom or Teams equivalent), Baidu Cloud Storage (like Dropbox), the JV will create integrations with these tools and services as part of their offering. All pricing and licensing will also be controlled by the JV to allow for local flexibility.

This localization of ProjectWise, and soon other of our technologies, for the Chinese market through joint ventures will create new opportunities while simultaneously abating attrition from customers looking for a local solution. Thank you.

**David H:** Thanks, Chris. And now on to PLS, which has hit the ground running for us, contributing, quite favorably, to our February and March results since the acquisition on January 31—and in fact, is exceeding our expectations.

Since onboarding the initial PLS ARR, it has grown impressively over just the two months through March 31<sup>st</sup>, including into new names, into developing geographies, and with our new PLS grid solution. We ended March with ARR growth over the prior year of 25%.

Certainly, that's a pace likely to at least deliver our previously provided guidance for PLS's contribution of \$30 million in first-year subscription revenue, of which \$27 million we expect to occur in this calendar year 2022, given the closing on January 31<sup>st</sup>.

Of course, it's only two months, but momentum is strong. PLS continues to generate a very high margin contribution, which we're reinvesting into Bentley Systems' growth initiatives, including into our grid integration group strategies.

Before I turn this over to Werner for more on our results overall, I'd like to share how PLS is leveraging a receptive macro environment, integrating with SPIDA for distribution, and accelerating growth, including internationally. And who better to comment on this than Otto Lynch, the longtime CEO of PLS and who now leads PLS for Bentley Systems?

Otto Lynch: The electric grid infrastructure is in the middle of a perfect storm. Like most infrastructure, our electric grids are dated. Far too many structures in our grids are more than 50 years old and are well past their life expectancies, as evidenced by many and costly failures. At the same time, much of our grids were designed using archaic engineering practices that are no longer valid today. We have a much better understanding now of how to properly design wood, tubular steel, concrete, fiberglass, and lattice steel structures that are used in our grids.

Additionally, climate change is punishing our grids, with temperatures, wind, ice, and other modern meteorological events. And those loadings were not anticipated in their original designs. This is leading to failures in our grids in even relatively mild weather events. Concurrently, we



are seeing a shift in generation sources from fossil fuels to renewable energy, such as wind and solar. These are incremental demands in our grids. We can't mothball a coal plant in Pennsylvania and build a wind farm or solar farm in its exact place.

Finally, the general public's expectation of reliable, always-on electricity has increased. All of these issues combined mean that we are in the midst of rewiring America. We are required to rebuild old infrastructure to today's engineering practices and weather events, often known as storm hardening. We have to add additional infrastructure to shift the generation from its new source to where the electricity is needed. We need to provide more reliable electricity and assured internet services.

Over 93% of the electric outages in America were on the distribution side of our grids. We have worked hard with the American Society of Civil Engineers over the past few decades in developing standards and practices that are being successfully deployed in the transmission industry. We now need to apply the same standards and practices on the distribution side of our grids.

Bentley's grid solutions, notably PLS for transmission and SPIDA for distribution, are the perfect solution to this perfect storm for our electric grids. Our recently released PLS grid brings all of this together with grid-wide analytics and digital twin solutions. And this problem is not unique to just the U.S.—it's a worldwide situation. The combination of PLS and SPIDA, together with Bentley's global footprint and investment commitment, make global expansion a particularly attractive opportunity.

One final event providing yet further opportunity—the Federal Energy Regulatory Commission has just issued Order 881, requiring transmission facility owners to consider seasonal and time-of-day changes on their line ratings. PLS is uniquely positioned to assist utilities in providing these mandated answers to FERC. I believe we are now going to hear from Werner about Bentley's numbers for the quarter.

**Werner Andre:** Thank you, David and Otto, and good morning, everyone. We are off to a strong start into 2022, and we are very pleased with our resilient results for the first quarter. I'll start with our revenue performance. Our total revenues for the first quarter are \$275.5 million and grew 24% over the prior year.

Most of that growth comes from subscriptions, which now comprise approximately 88% of our revenues and grew 28% over 21Q1. The acquisition of Seequent and Power Line Systems onboarded 18% of growth, foreign currency headwinds offset 4%, and, therefore, our business performance, inclusive of the organic performance of our platform acquisitions, comprises 14%



of subscription growth on a constant currency basis. Our perpetual license revenues, which now represent approximately 4% of our total revenues, are relatively flat in absolute terms and continue to reflect the preferences for subscription offerings.

Our professional service revenues are approximately 9% of total revenues and increased by 3% over 21Q1 on a constant currency basis. Within our services business, we see continued growth from our investment into the Cohesive digital integrator businesses, partly offset by the shift and redeployment of our traditional and more episodic service business to support recurring success services embedded in our E365 subscription offerings. I'm presenting here on the right the reminder of a full year 2022 revenue outlook, as was provided during our year-end 2021 operating results call. With a range of \$1 billion, \$110 million, to \$1 billion, \$140 million representing GAAP revenue growth of 15% to 18%.

Overall, our Q1 revenue performance was consistent with our expectations and our financial outlook. Most notable are our platform acquisition Seequent and PLS, for the first two months since acquisition, are showing very strong business momentum and growth rates, with solid contributions in new business and our business performance. In March, in response to the Russia-Ukraine war, we announced the suspension of new business in Russia and Belarus.

While the impact, including sanctions, on overall revenue performance during Q1 was minimal, we reduced our related ARR by 5 million, representing an approximately 50% decrease in estimated recurrence of business in both countries, as we do expect the corresponding impact on revenues in the remainder of 2022. On the vexed front, our 2022 outlook is based on current exchange rates when issued in March. So, while our Q1 revenue performance was negatively impacted by currency headwinds of about 4%, such headwinds were already factored into our 2022 outlook.

Moving on to recurring revenue performance. Our last 12 months recurring revenues increased by 25% and now comprise 87% of our total revenues. The mid-year 2021 onboarding of Seequent and the onboarding of PLS during Q1 contributed about 13 percentage points to this improvement. Our deep and long-standing relationships with our council, again, proven with our 98% account retention rate and with our constant currency recurring revenue and net retention rate of 108%. New accounts contributed 3 percentage points of our quarterly year-over-year recurring revenue growth, which is growth in addition to the recurring revenue retention metrics.

On a constant currency basis, our ARR is at 27% over the same point in time last year, with business performance accounting for 12% of growth and 15% coming from the onboarding of our platform acquisitions. The unexpectedly high attrition in Russia, which I mentioned before, impacted our ARR growth rate by approximately half a percentage point. As we illustrated



during our 21Q4 operating results call, our ARR growth rate, in comparison to the rate of the previous years, is impacted by the pandemic-induced dip during 2020.

Our GAAP operating income was \$56.6 million for 22Q1, up 2% from 21Q1. The 22Q1 GAAP results reflect rather substantial incremental charges for acquisition expenses related to PLS, incremental amortization from purchased intangibles, primarily relating to our Seequent and PLS acquisition, and incremental non-cash stock-based compensation, partially offset by a market-to-market gain from the revaluation of our deferred compensation plan liabilities. On the right, our adjusted EBITDA metric normalizes for such accounting.

With year-to-year growth in our adjusted EBITDA of 18%, this reflects an adjusted EBITDA margin of 35%. And now with travel and promotional activities returning to new normal levels, our Q1 EBITDA margin is fully line with our expectations for the first quarter, which is typically a higher margin quarter for us due to Opex seasonality. With regards to Opex, I will add that we did take a Q1 charge of approximately \$1 million to de-risk our working capital assets associated with our business in Russia. And I do want to remind you of our seasonal pattern of expense allocation. We concentrate our annual raises for colleagues to occur as of April 1 of each year. And since approximately 80% of our cost structure is people and related support costs, annual raises have a significant impact on our operating expenses in Q2, 3, and 4, relative to Q1. This is further compounded by variable incentive compensation, as well as our larger promotional and event-related costs, which are historically highest in the second half of the year.

That said, we are on track to deliver our 33% adjusted EBITDA margin target for 2022, which reflects our commitment to an annual expansion of our adjusted operating margins of about 100 basis points, normalized for unexpected pandemic savings that occurred in 2020 and to a lesser extent in 2021.

I'd also like to comment on our income tax rate, which is 5% for Q1 and benefited from significant discrete windfall tax benefits, primarily associated with distributions from our deferred compensation plan, net of the impact from office or compensation limitation provisions. These discrete tax benefits correlate with the timing of distributions and are also impacted by our share price at the time of distributions. For the full year, we continue to expect an income tax rate of closer to 15%.

Moving on to liquidity. Our Q1 GAAP operating cash flows of \$101.7 million are strong, representing a cash conversion ratio from adjusted EBITDA of 104% and includes payments of acquisition-related expenses of \$10 million. When we compare our cash flows with the prior period, I want to remark that our cash flows in 21Q1 were atypically strong. As we remarked throughout last year, the unusually strong cash flows were aided by significant increases in



customer deposits under our E365 subscription program and associated program conversions. And 21Q1 is, therefore, an unusual basis for comparison.

Similarly, our last 12 months' operating cash flows of \$257 million are facing a strong comparative basis, further compounded by the fact that accelerated collections in 21Q1 resulted in relatively lower collections in 21Q2. These cash flows are also burdened by payments of acquisition-related expenses for our platform acquisitions of \$27 million and an increase in income tax payments inclusive of prepayments of \$16 million.

Our business remains highly cash flow efficient. And while there's short term volatility due to timing, we continue to expect the conversion ratio of adjusted EBITDA to operating cash flow on average in the 85% to 90% range, primarily due to the predominantly annual nature of our contractual relationships.

As we presented before, we completed the acquisition of Power Line Systems at the end of January 2022 for a cash consideration of approximately \$696 million net of cash acquired and inclusive of future tax benefits from a tax-deductible step up in basis, which we present value at \$90 million. We use available cash and borrowings under our bank credit facility to fund the transaction.

In 22Q1, we spent approximately \$35 million for de-facto share repurchases associated with stock-based compensation and to offset the dilution from such compensation. However, for the remainder of 2022, we have planned to significantly reduce our share repurchases and earmark our free cash flow after funding programmatic acquisitions to deliver.

With regards to capital allocation, our Net Debt Senior Leverage was 1.4 times as of March 31, 2022, down from the 1.6 times as of December 31, 2021, which I presented during our year-end 2021 operating results call on a pro-forma basis and under consideration of pro-forma adjustments to reflect the financing of the acquisition of PLS. When including as indebtedness our 2026 and 2027 convertible notes, which proceeds were dedicated to fund our creative platform acquisitions, our Net Debt Leverage was 4.9 times as of the end of March.

Lastly, I want to point out that while interest rates are rising, approximately 75% of our debt is protected from changes to interest rates through either highly favorable coupon interest on our convertible debt or our \$200 million interest rate swap, which contributed \$12 million market-to-market valuation gain to our other income during 22Q1. And with that, I'm handing it over to Carey for questions.

Carey M: We'll start with Joe Vruwink from Baird.



**Joe Vruwink:** Ah, great. Hi, everyone. Is the right way to think about performance in the quarter 12% was the organic business performance, and then was the combination of Russia and China about 200 basis points? I guess my question is compared to your guidance, did you start the year maybe closer to 14%? And if that's true, can we just walk through maybe some of the upside drivers relative to the 11.5% to 13.5% forecast you presented?

**Greg B:** Well, I'm going to ask Werner to go through the quarter-by-quarter way that the full year outlook came about. I don't think that Russia and China together are 200 basis points, but they're at least half that. Over to you, Werner.

**Werner A:** Yeah, that's right. So, for Russia, for Q1, the impact was actually pretty de minimis. It was an impact on ARR, which we took down by 5 million, and similarly the same reduction we had for China ARR, which was like a total of 1% drag on our ARR growth rate.

On the impact on revenues for Q1 was the minimis also for Russia. There was a slight reduction to Q1 last year. But it's more on a prospective basis because there's no recurrent assumed for certain agreements.

And in China, it's predominantly related to ProjectWise, where you had worked, David. And yeah, talk through, like, what we do with the joint venture to counter that. And in Russia, we also will see that there is—we assume that, based on the recurrence probability, that there will be some impact on revenues for the remainder of the year. But the impact on the quarter was not that significant.

**Greg B:** In revenue, it was in ARR that the impact occurred because we, in effect, wrote down the ARR because we don't regard that it can recur, unfortunately.

Joe V: OK.

**Werner A:** On the margin, we took only \$1 million expense to de-risk the working capital in Russia.

Joe V: OK. The second question: when you start to appreciate the strength out of PLS in the quarter growing by 25%, I think that's quite a bit faster than maybe the original assumption. Does that in any way—just exposure to utilities and thinking about how infrastructure investment is likely to unfold across your other subsectors—does the strength there in any way inform of you about how the rest of the year might play out? I know OpenRoads was good. Water was also good. Is it a leading indicator of any sort of how the rest of the year might go?



**Greg B:** Well, do keep in mind the 25% that David referenced is a year-over-year growth and is just a small sample from which we don't feel we know the business well enough to extrapolate, if you see what I mean, from two months. But the phenomena Otto talked about, which are the reasons that attracted us to this integrated grid opportunity and to PLS, we think are very real. I mean, it's a sure bet that growth rate will inflect especially as we can globalize what has been Power Line Systems' historical focus on the U.S. but proven suitability for other geographies as well. How long that will take we can't say, but I certainly think there's upside opportunity in this grid digital twin opportunity this year for sure.

**David H:** I would just add just in terms of a directional indicator, also our SPIDA business, which we've owned for a few months longer than PLS, is performing percentage-wise much smaller than PLS but percentage-wise even better than PLS. So, the distribution and transmission grid opportunity together seems to have some momentum.

Joe V: Great. Thank you very much.

Carey M: We'll next go to Matt Hedberg from RBC.

**Matt Hedberg:** Oh, hey, guys. Can you hear me OK?

Greg B: Yes, Matt.

Matt H: Hey, thanks for the time and the prepared remarks. Greg, you know, I really appreciated your comment on the prepared remarks suggesting the business is far more resilient even than around the IPO given some of your vertical distribution and new businesses. I'm wondering, though, as a point of reference, can you talk about how Bentley performed during maybe prior downturns, obviously recognizing that there's more sort of recurring and durable this time, but just some sort of frame of reference on prior economic downturns?

**Greg B:** Well, there are two that come to mind, and David Hollister last year would show these when we were introducing ourselves as a company. In the great financial crisis in 2009, our revenues went down by 10%. I happen to recall that being mostly FX, but our recurring revenue managed to stay the same at that time. But it took all the air out of new license sales, which were a greater proportion—still not a very large proportion but of our revenue then than now. And that's when, as we say, we decided we have to be in the operations and maintenance, the Opex lifecycle, which we are much more so these days, as I showed quantitatively.

The next downturn that comes to mind, it comes to mind because it was when we filed to go public in 2014, and it mainly had to do with volatility in oil prices and the industrial sector,



which has all of these gyrations. The point is the other sectors, commercial and facilities, is also economically volatile but it's industrial that is especially, and that set us back considerably.

So, the point is, we haven't shrunk in that business, but we've grown everything else rather determinedly. And if there was a downturn in 2020, it was only for us in this industrial 10% or so, which I think gives us confidence to say that the other sectors are more resilient. Commercial and facilities, another 10%, went down but not as much. I don't think it's going to go up as much either as public works and utilities, going forward.

**David H:** The only other thing I would add that we learned during these—and demonstrated during those—prior downturns was again just a visibility and control over our cost structure. We continued to deliver the EBITDA and improved EBITDA margins even in those downturns.

**Greg B:** Yes, our head-cost alignment model is calibrated twice per month against our current ARR book and including the ARR from consumption of our E365. So, we tend not to be able to be surprised very much when it comes to sustaining our margins. Who's next?

Carey M: We'll go to Matthew Broome from Mizuho.

Matthew Broome: Hi. Can you hear me?

Greg B: Now, yes, please.

**Matthew B:** Great. OK, hi, guys. So, I guess firstly just curious, how is linearity during the quarter in terms of the underlying fundamental demand and pipeline growth? Was March sort of relatively stronger than January, or how did that go?

**Greg B:** Let me ask Nicholas if you have an impression about that as it might compare to other quarters and other first quarters. I don't.

**Nicholas C:** I will say quite similar to what we've seen before. It is not the linear that I would like to see. I think there's still a lot that is back loaded. We would like to start to see that spread better throughout the quarter.

**Greg B:** And of course, we were talking to you in mid-March or March 11<sup>th</sup> or so. Of course, we weren't talking about the first quarter at the time, but a lot of the disruptions occurred after that but did impact the first quarter, when it comes to the counter-globalism aspect especially.

**Matthew B:** Right, and actually, I guess on that and specifically in China, do you expect the environment to continue to deteriorate, and what's your outlook there? And to what extent and



what kind of timeline do you expect your new JV to sort of counter those kind of geopolitical headwinds?

**Greg B:** I'm afraid it can deteriorate further, and when we talk about counter globalism, I'm not describing something endemic in the world. It's between the U.S. and China. And it's not only on the Chinese side, of course, it's on the U.S. side that we're discouraging bilateral trade, I'm afraid.

So, I have talked in the past over the past year about getting ready for this—I've heard the word and I like it—"glocalization" that we're doing in China. We aren't just starting. We're just announcing these joint ventures that we've been incubating for a while. But unfortunately, they will take considerable time to come to market because they're just being formed. The parties are contributing people, as well as capital, but I'm afraid that the deterioration can come faster than the remedy. But the remedy, to have indigenous Chinese solutions that generate revenue and ARR for us, is a rather permanent solution.

I hope—it's incremental. We're not going to discontinue anything we're doing as Bentley, the American entity, in China, Bentley China—the Chinese part of it, but it's regarded as American. I believe, such is the opportunity in China, we can still grow Bentley China. But to realize the opportunity, we need to do these incremental "glocalization" things. Do you want to add anything to that, Nicholas?

**Nicholas C:** I will say that, yeah, I mean, it's—clearly, the JV is going to help us level the playing field with respect to the local providers. But we're not slowing down our efforts to reenergize the core business we have over there, including with ProjectWise with state-owned enterprises and design institutes. I think this issue we've had over there for a couple of years is the fact that those companies are not amicable to cloud services. They really want the software to run on premises. And because of that, many of our innovations, our new capabilities, were not available to them. So, we are going to deliver these capabilities on an on-premise basis in China through a core team to re-energize that.

**Greg B:** And of course, this is only the first joint venture. There are others in the works that we'll be announcing during the balance of the year.

Matthew B: OK, perfect. Thanks, guys.

Carey M: We'll next go to Jason Celino.

Jason Celino: Can you hear me?



Greg B: Yes.

**Jason C:** Oh, perfect. OK, so, I understand the cautious tone on macro and the changing political backdrop, but when we think about your core infrastructure and market, it seems to be doing OK. Your SMB seems to be outperforming, and your PLS acquisition seems to be doing well. How would you describe your confidence in the business pipeline today versus maybe 90 days ago?

**Greg B:** Well, I think everything you just said is true. Our business depends on how busy are the world's civil and structural engineers and geoprofessionals, and what is their capacity and appetite for *going digital*. And the answer is they are so busy, their capacity is low. So, their appetite for *going digital* is high. And there's nothing in the world that can create new capacity for civil and structural and geoprofessional engineers as they're busy as they are.

So, these disruptions in the world are concerns, and, as in this quarter, they can hit us in integer proportions of ARR growth. But we think the backdrop we're observing to have some continued momentum. When we consider our financial outlook for the year, recall that there are three aspects of our financial outlook. We talk about constant currency ARR growth.

The question I'm getting to is what about FX and disruptions there? Constant currency ARR growth obviously abstracts from FX concerns. And then, we talk about adjusted EBITDA. And there, as you know, we manage our margins. And you could say, well, we manage our margins in constant currency. They would be somewhat subject to FX. But our hedge is very good. Our natural hedge is very good.

And then there is revenue, of course, and our revenue financial outlook should be regarded as subject to foreign exchange. But when we've considered this, one day, the dollar index went down by a percent. In the next two days, it went up by a percent and a half. So, we just have to say please understand that our financial outlook is in real economic terms, and you'll have to do your own adjustment for the gyrations of foreign exchange.

But overall, in fundamentals, we're observing things are pretty strong. Europe is a bit notably down in the first quarter, which doesn't seem surprising to us given what's going on there. And we hope that will be short-lived, as there's even new work to be done for energy security in Europe.

**Jason C:** OK. And then when we think about PLS, the outperformance, you can kind of attribute that to maybe before they got acquired, right? Or would you say it's from revenue synergies from being part of Bentley for two months?



**Greg B:** Tough to tease those apart. I'll ask David if he has an opinion, but the fact that PLS was a great and strong development and transmission engineering organization but hadn't focused on sales and marketing, compared to our extent of focus on that, occurs at the same time as these secular tailwinds for transmission engineering especially. And we don't purport to have had enough experience to tease those out yet. But we'll have twice the experience at one quarter from now. Go ahead, David.

**David H:** Yeah, I guess I'd have to take exception to saying it all happened before our acquisition, Jason, because what's new is the PLS grid product, yes, developed by the talented PLS team but really taken to market for the first time in the main this first quarter has contributed significantly. This is the digital twin for grid design, and we're really excited about it. We think it's going to contribute to more growth this year than even the international expansion opportunities that we can also bring to PLS.

**Greg B:** Just to clarify there. The transmission engineering products are one tower at a time, if you like. PLS grid looks across the network of transmission and can help answer questions like FERC's questions about overall capacity under varying conditions. And it's very well-timed to come to market now.

**Jason C:** OK, perfect. Thanks.

Carey M: We'll next go to Kash Rangan from Goldman.

**Kash Rangan:** Hey, congratulations on the quarter despite all the turmoil. And despite the world *going digital*, David Hollister's background has a nice analog clock with the swinging pendulum, which is a timeless reminder. Greg, as you look at the structural forces in the industry, you've certainly positioned yourself through acquisitions to be more enduring as a business model to PLS, Seequent acquisitions, et cetera.

On the cyclical front, you have lived through many a downturn before. What is it that you see on the leading edge with respect to project financing affordability, et cetera, given inflation, high rates? And on the company-specific front, as a result, are you looking to maybe pause hiring a little bit or bring in operating expenses just because we don't know certain things today that we thought we knew, what, three or four months back or so just on the flexibility side of the financial side? Thank you so much.

**Greg B:** Let me take the second question first. No company can pause hiring today because talent is so scarce. So, we have more recruiters doing more recruiting than ever. Our attrition rate



is higher but not substantially high, and we have better engagement and retention than most do. But you can't pause recruitment and hiring.

Also, we have, as I mentioned, our head cost alignment model is with respect to our ARR. But we do not put a directional lens on that. We would like to invest as much as we can in growth, including enterprise success, headcount that allows us to grow E365 because the growth rate is faster for the portion of the ARR that E365 covers. We would like to add SMB direct sales headcount as fast as we can, and we will not hold that back because we have the concern in the outlook. We will meet our margin targets because of the way we manage, but we're not looking down the road and concerned about something.

Let me go to your question about finance interest rates and financing. That was certainly, you might even say, a no interest rate—in 2009, no project could be financed at any interest rate. And that caused us to change our relative balance between Capex, which was everything then, to Opex—now is a significant portion of our business but also in favor of publicly financed projects, which have this countercyclical aspect. And then on the privately financed projects, interest rates, you would say, are relatively high, compared to where they were in the past couple of years. But they're still relatively low compared to where they've been then and—

**Kash R:** Yep, that's a good point.

**Greg B:** —for projects. And especially for energy security, the projects don't seem to be speculative at this point but necessary. So, we just say visibility is a little obscured when things can come along and change what you think about a year as a whole in terms of predictability. But I can hardly imagine a business that's more predictable than ours the way we manage it and what we're sensitive to and not.

**Kash R:** Got it. A quick thought on competition: any changes with respect to Autodesk and Dassault. And I'll wind up. Thank you so much.

**Greg B:** No, I don't think so. You know, Autodesk focuses on construction, which has to do with infrastructure. Infrastructure has to do with construction, but construction is intrinsically more cyclically vulnerable to supply chain and labor issues and so forth than is our sort of evergreen lifecycle, focusing on design and operations and maintenance by contrast to Autodesk with construction and Dassault continues not to be a factor in much of what we do.

And see, that's not to denigrate Dassault, they have a terrific business in discrete manufacturing and so forth. But we just don't—our paths don't often cross, now. Did for a while in China, but not any longer. Do you want to add anything to that, Nicholas?



**Nicholas C:** No, nothing to add.

Greg B: Thank you.

Carey M: We'll next go to Jay Vleeschhouwer from Griffin.

Jay Vleeschhouwer: Thank you. Good morning.

For Greg and Nicholas first. As the scope of your business has evolved—broadened that is—and your end markets, could you comment on how your software engineering infrastructure or processes have evolved or might yet have to evolve—your DevOps, if you will? And as the output to product development, how are you thinking about future changes to your product release cadence and/or product packaging and configuration model? And then a follow-up. Thank you.

**Greg B:** So, I'm going to ask Nicholas mainly to comment. I'll just say that was the point he made in China, rather quickly, that much of our development now is in the cloud capabilities. Every desktop software user has access to our cloud capabilities, and especially now through the iTwin platform that we're working hard to embed and incorporate across our product range. Except in China, it's rather moot because they don't have access to and—they're not inclined to take advantage of cloud capabilities. Over to you, Nicholas.

**Nicholas C:** The main change in the way we're working is exactly what Greg explained. It's the fact that an increasing percentage of our revenue is coming from cloud services. And even with our desktop products, we provide cloud qualities to these products by complementing them with cloud services or being able to release new capabilities on a more frequent basis.

So that's the main reason why we're changing. We have been changing the way we've been working within our organization for the past few years, more than the companies—or the fact that we've extended our portfolio and we've acquired more companies. Now, the companies we acquire are either on the desktop side of the house, like ADINA, or there will be a combination of desktop and cloud. And when they fall in, when they join, then we harmonize the way we work together with the cloud services and then with those desktop products.

**Jay V:** OK. Thank you for that. You mentioned earlier that PLS could be thought of as a kind of digital twin for the grid. Could you comment more broadly on your digital twin business in the quarter in terms of pilots or production deployments that you saw or what you were anticipating for the rest of the year?



And Nicholas, you recall that back in December, when we spoke about digital twins, you referenced a variety of use cases. Here, half a year later, what are you seeing in terms of perhaps the two or three use cases for digital twins becoming most common?

**Greg B:** I'll just remark first that the digital twin, in addition to being comprehensive across the lifecycle and bringing together ET and IT and OT that from any part of the lifecycle to maintain fitness for purpose for an infrastructure asset, the digital twin stuff we do is also the same iTwin platform for our whole portfolio. So, it helps for coherence across products as well.

And an example, when you mentioned PLS, PLS have been desktop applications, but PLS grid should be part of a digital twin cloud solution that includes the reality modeling and the infrastructure IoT. So, PLS doesn't bring us an integrated grid. It brings the transmission aspect and the PLS grid product to look across transmission assets to a transmission grid to an integrated grid, which integrated grid should include substations and distribution as well, our existing products.

So, when we say PLS is a platform acquisition, doesn't bring us a platform, but it completes what our platform can now make comprehensive across the grid. Over to you, Nicholas.

**Nicholas C:** Yeah. When we think of our digital twin business, we think primarily of the iTwin platform and then the different products we have, the solutions we have, that leverage the different platform capabilities. But a platform is also used more and more by third-party organizations, whether they are software vendors or they're engineering firms, to create their own products and solution.

So, from a business standpoint, Q1—in terms of, of course, when we look at how much revenue came from the platform itself from the products that are powered by the iTwin platform—it is very much in line with what I've commented on for the previous quarter, and the previous year actually, which is a healthy growth, right? The trajectory remains strong, strong growth.

Now, from a product standpoint, digital twins is still at the heart of our regional product investments. When we think of our desktop products, as I was explaining right before and I talked about cloud qualities, many of these complementary services that act as extensions of these desktop products are increasingly powered by data and platform. For example, one thing we're going to release in a couple of months for OpenRoads, which is one of the products that grew quite nicely in Q1, will be a model validation service, which is powered by the iTwin platform itself, right?



Now, you were asking about use cases and that we see we're getting traction. Well, we are covering more and more use cases ourselves, and our ecosystem is covering more and more use cases. We launched in Q1 a new digital twin solution for the storm and wastewater network. So, we had one for the potable water network and now, we launched a new one for the storm and wastewater network. And we see, really, a lot of traction in water utilities for digital twin solutions, very much like we were explaining for the utility whether there is quite a bit of traction. We see utility companies interested in digital twin solutions that help them integrate all sorts of data coming from different systems like strata, et cetera, and then be able to run operational analytics and simulations analysis on it.

Greg B: Thank you. And Carey, I know you want us to wrap up.

Carey M: With that, we'll end the call. Thank you, everybody, and we'll see you next quarter.

Greg B: Cheers. Thank you.

Nicholas C: Thank you.