Bentley Q3 2023 Earnings Call Transcript

Eric Boyer: Good morning and thank you for joining Bentley Systems' Q3 2023 operating results.

I'm Eric Boyer, Bentley's Investor Relations Officer.

On the webcast today, we have Bentley Systems' Chief Executive Officer Greg Bentley, Chief Operating Officer Nicholas Cumins, and Chief Financial Officer Werner Andre.

This webcast includes forward-looking statements, made as of November 7, 2023, regarding the future results of operations and financial position, business strategy and plans, and objectives for future operations of Bentley Systems, Incorporated.

All such statements made in or contained during this webcast, other than statements of historical fact, are forward-looking statements.

This webcast will be available for replay on Bentley Systems' Investor Relations website at investors.bentley.com on November 8, 2023.

After our presentation, we will conclude with Q&A. And with that, let me introduce the CEO of Bentley Systems, Greg Bentley.

Greg Bentley: Good morning and, of course, thanks to each of you for your interest and investment in BSY. In our agenda, I start by interpreting directions within our quarterly operating results.

Each quarter, a natural KPI headline is our ARR growth – year-over-year business performance.

While in 23Q3 that nominally ticked down to the 12.5% midpoint of our financial outlook for the year, this, nonetheless, represents continuity in our strong growth momentum, given puts and takes specific to this quarter, which I will explain.

And we are likewise steadily tracking to our planned annual gains in operating margins and cashflows.

Leading the way, even among more broadly strong market conditions this quarter, is the public works/utilities infrastructure sector in the U.S.

With almost half of our ARR here, this mainstay, in effect, serves as the governor on our underlying flywheel. U.S. public works/utilities continues to benefit from the fundamental expansion, emerging finally beyond transportation, of Infrastructure Investment and Jobs Act funding.

This quarter's ACEC survey of U.S. engineering firms across all sectors reports a medium current backlog of 11 months, reflecting an engineering resource capacity gap.

Even more pertinent for digital workflow investments – expectations for a year from now, across economic sentiment, anticipate an even stronger market for engineering firms throughout next year that will result in yet higher backlogs.

When ACEC asked this time about the lack of qualified workers, you see there was strong agreement that an engineering resource capacity gap is already constraining engineering firms from growing to meet this backlog of work.

Another indicator of this engineering resource capacity gap is that the average duration that our applications are used in a workday has continually increased, now by 23 minutes per day since before the pandemic. We will shortly come back to count these workdays.

As Nicholas will report firsthand, the capacity gap is motivating infrastructure engineering organizations everywhere to, more than ever, prioritize going digital.

And with the resulting demand broadly pervasive across infrastructure sectors and global regions, our net revenue retention, the trailing indicator for growth in existing accounts, remains at its sustained high level.

So then, what's up – or rather down – with year-over-year ARR growth, as of this most recent quarter-end?

Well, a plurality of ARR is now under our E365 program for our largest accounts.

And in Q323, this E365 proportion of course continued to grow, both through accretion within existing E365 accounts, and by accounts that spend over $100K per year in ARR, hence we consider to be E365 prospects rather than SMB, upgrading to E365 from our SELECT subscription program. Under E365, we charge accounts for our ProjectWise and AssetWise enterprise collaboration systems based on the total number of users, or assets, respectively, in a quarter. But the majority of our E365 charges are for daily consumption of our applications, which consumption occurs substantially on the weekday workdays during a quarter.

A year ago, 22Q3 had a calendar with 66 weekdays.

But 23Q3's calendar ended with a weekend day and began with two weekend days that were followed by effectively two holidays in the U.S. rather than one holiday last year.

Now, even though half of our business in the U.S., holidays aren't universal, so even setting aside the comparative effect of that four-day weekend, if we just count all weekdays as workdays, 23Q3's E365 consumption year-over-year comparison suffers as a result of having had one less weekday/workday than 22Q3.

Moreover, because we annualize E365 ARR by multiplying the trailing quarter's consumption by four, 23Q3's year-over-year ARR growth was negatively impacted by effectively losing four weekday/workdays of E365 consumption.

But as you can also see here, this phenomenon will normalize here during 23Q4, as both years' fourth quarters, and the full years, have the same weekday counts.

Now, our overall ARR growth of course comes not only from net retention and accretion for our existing accounts – increasingly through E365 as we have been discussing – but also from new logos, which for 23Q3 again accounted for 3% of our ARR growth.

New logos of course tend to start as SMB. We have become confident in being able to grow our SMB business at least as fast as we grow E365 for our enterprise accounts, and in 23Q3, SMB growth was faster.

By virtue of our own investments in going digital, our Virtuosity inside sales group, focused on SMB, is continually getting better at digital engagement. The net quarterly ARR additions from our Virtuoso subscriptions continue to compound. In 23Q3, Virtuoso subscriptions again attracted over 700 further new logos.

But in addition to subscriptions, our SMB sales group also offers perpetual licenses, largely for differentiation in appealing to prospects who don't have that choice from our principal competitor.

This strategy is succeeding. During 23Q3 we added almost 300 incremental new logos through perpetual license sales. And as you see, overall, we saw in 23Q3 an unprecedented year-over-year upsurge in purchasers who chose perpetual licenses rather than subscriptions.

We have generally expected this in China, here broken out, as we pivot there intentionally towards localization. As a result, while our overall new business and revenue in China did increase sequentially and year-over-year, ARR there continued its expected resultant decline.

In fact, the 97% of our business excluding China did maintain its highest level of year-over-year ARR growth.

To summarize the business directions of 23Q3, in light of these puts and takes, I was pleased with our strong year-over-year ARR growth rate notwithstanding its slight decline compared to last quarter, in light of the combination of the E365 consumption workday anomaly, and the observed transition to license purchases.

For significant corporate developments, I start with our annual *Year in Infrastructure* conference, where I entitled my keynote presentation "Going Digital Towards Infrastructure Intelligence."

We gathered physically in Singapore last month with our *Going Digital* Awards competition finalists, chosen by juries of independent professionals, and we had there over 120 members of the world's infrastructure media, and we livestreamed from there. I think *Year in Infrastructure* is the best available means to understand the fundamentals of our business on the ground, but the time zone made even virtual attendance difficult. So, Investor Relations Officer Eric Boyer attended and has compiled a video of the two edited keynotes and other conference highlights, which is now available for you on our Investor Relations website.

The global nature of the *Year in Infrastructure* was signified by the provenance of the 36 finalists chosen from the 300-plus nominees in 51 countries. Once again this year, the region with the most finalists was Asia ex-China, with a prolific concentration of digital advancements. I referenced many examples from our host country Singapore, leading the way to infrastructure intelligence.

In a world with a widening infrastructure engineering resource capacity gap, to me the most significant headline comes from our having asked each nominee, this year for the first time, to quantify their project engineering savings from going digital. For those finalists where this could be calculated as a percentage, the median was 18%. This underscores the importance and potential of our BSY-busy work, and of the *Year in Infrastructure* conference, to help promulgate these digital workflow advancements, which can make a difference of such magnitude.

As an indication of good traction from such efforts toward making all projects as good as the best projects: while in the past we have reported on digital twin progress among the finalists only, I find it encouraging that this year among all the 300-plus nominated projects, fully 28% credit reality modeling, our iTwin Capture software for creating engineering-grade as-operated 3D models, generally from drone surveying, as the context for digital twins.

And likewise, our SYNCHRO 4D construction modeling is now credited by fully 17% of all 300-plus nominated projects. Given that virtually all design modeling and simulation is already performed in 3D, we believe that seamlessly incorporating 4D simulation inevitably underlies

the future of construction, while also delivering the digital twin building blocks for infrastructure intelligence during the lifecycle of resilient asset operations.

And while it is encouraging that this year, 64% of finalists credit our iTwin Platform for any or all of such digital twin advancements, I think it's even more significant for iTwin now to be credited by fully 35% of all 300-plus nominated projects.

Indeed, the iTwin Platform and schema commonality across our Bentley Infrastructure Cloud enables infrastructure engineering data to compound in value throughout project and asset lifecycles. As to the extent of this potential value, we estimate that our ProjectWise users are currently accumulating over 100 million new unique digital components per month for their future benefit.

While Nicholas will next talk about how generative AI will yet further compound the value for an account of their data in ProjectWise – for instance through copilot training and reuse of their data across their new projects – at *Year in Infrastructure* I highlighted several infrastructure intelligence strategies already being showcased by finalists there.

In the forefront of compounding value from accumulating data is bp, subject of this press release last week.

To our knowledge, bp's deployment of AssetWise Asset Lifecycle Information Management, now underway globally after its 2019 implementation in the North Sea, becomes the industrial infrastructure sector's only initiative to leverage the same cloud-based central information store across all projects and operations.

Where otherwise the unfortunate norm is for separate enterprise systems to remain disconnected, bp's infrastructure engineering data can compound in value from projects through operations, with AssetWise Reliability working to optimize inspections, minimize maintenance costs, increase availability, and to improve safety and risk management.

At $106 billion of net infrastructure value, bp is No. 33 among the just-released 2023 Bentley Infrastructure 500 Top Owners rankings, available at the link here. As I believe our greatest ongoing growth opportunities are in digital twin advancements for operations and maintenance, it is gratifying to report that our current revenue runrate from serving 359 of these 500 2023 Top Owners increased by over 20% from the comparable revenue runrate for 2022.

And while fully half of our revenue runrate is now from infrastructure owner-operators in general, our revenue runrate from just these 500 Top Owners, who like bp have the most to gain

from compounding the value of their engineering data through infrastructure digital twins, now exceeds 20% of our overall total.

Speaking of rankings, the annual ARC league tables for engineering design tools this year acknowledged BSY's No. 1 leadership not only in these infrastructure subsectors, which they track individually, but now also for owner-operators in total. To me, that means we're on the right track towards ROI from infrastructure intelligence.

Finally, I am glad to report, since last quarter, two programmatic acquisitions. While even more immaterial financially than most others, each of these is significant strategically.

Our iTwin Ventures approach has adapted to view the changed venture capital valuation environment opportunistically. Rather than a typical VC multitude of small stakes, we are now open to outright acquisitions of earlier-stage companies that can become significant within our digital twin ecosystem.

Blyncsy, our first acquisition in what I call asset analytics, applies AI to crowd-sourced data to detect for roadway operators immediate maintenance conditions, such as obstructions, quality of lane divider paint, and/or actual vs. planned construction zones.

We will have more to say next year about consolidating asset analytics opportunities – to go beyond our primary current business model, which charges primarily per user, to incrementally monetize digital twin subscriptions per asset, and, for instance, per mile, as does Blyncsy.

Last quarter, I discussed this year's capital-market-induced slowdown in exploration for new mines, and its impact on Seequent. While this pause in new mines continued during 23Q3, Seequent, which depends more on continuous operating and expansion of existing mines, is still growing faster than BSY as a whole, though less fast now than our other platform acquisition, Power Line Systems.

A source of greater balance and resilience for Seequent is our comprehensive agenda to expand the role of subsurface modeling for civil and environmental infrastructure, which for Seequent is now growing as fast as their mining mainstay.

To further this, we announced at *Year in Infrastructure* the pending acquisition of Flow State Solutions, extending Seequent's market-leading geothermal comprehensiveness to the simulation of geothermal reservoirs, wellbores, and surface networks. Like Seequent itself, Flow State Solutions is based in New Zealand, where geothermal already accounts for almost 20% of power production.

And now from these quarterly directions and developments, over to Nicholas, for more complete operational perspectives on 23Q3.

Thanks.

Nicholas Cumins: Thank you, Greg.

The engineering resource capacity gap is indeed top of mind. Two weeks ago, I attended a CEO summit for top engineering firms organized by AEC Advisors. There were two takeaways relevant for this conversation. First, firms recognize their role in solving the world's biggest problems. Infrastructure is key to support economic growth, ensure energy security, and address climate change. Second, firms cannot find enough engineers to do this important work, and they are looking for solutions. Software is how they will drive efficiency, as one engineering firm CEO said during a panel conversation.

This is a great summary of our current market conditions.

Let's start with infrastructure sectors.

The trends remained broadly in-line with Q2. ARR growth was once again led by public works and utilities. The sector continues to benefit from large infrastructure investments around the world, and we expect this to be the case for years to come.

ARR growth in resources remained above company average. Seequent, with its core business in mining, performed as expected. As discussed last quarter, we see less funding available to finance new exploration projects. However, Seequent is used throughout the mining value chain, and is well positioned to help mining companies be more efficient when under margin pressure.

ARR growth in industrial softened somewhat, in particular with EPCs in India and Southeast Asia focused on energy projects, after many quarters of rapid expansion.

The commercial and facilities sector remained flat.

Moving on to regions.

Americas performed well, once again led by North America, with more federal money from IIJA being spent on a greater variety of infrastructure in the U.S. and given our strong momentum with the state departments of transportation. Our growth rate with DOTs has increased by 50% year-overyear – all the more impressive given that these departments increasingly outsource work to their ecosystem of engineering services firms.

EMEA's growth continued to benefit from public funding for projects across transportation, water, and energy. Some of these projects were finalists at *Year in Infrastructure*. We are also growing with engineering firms who are expanding their reach outside their home country due to the strong demand environment in the broader region.

In Asia Pacific, the main growth drivers were Australia and India. In the region, transportation and water continue to be strong performers. China continued to weigh down broader ARR growth given the preference there for perpetual licenses.

Returning to the departments of transportation in the U.S.

We are partnering with the DOTs in new ways, both to help them secure funding, and help them in going digital across their respective ecosystems.

We are squarely in year two of the IIJA's implementation, and new and increased funding streams are available for DOTs to take advantage of. For example, we helped 13 departments apply for federal Advanced Digital Construction Management Systems grants, which can fund software purchases. We believe these efforts will help strengthen our momentum next year as these grants get awarded.

Despite the new funding, the DOTs are also impacted by engineering resource capacity constraints, which create an exciting opportunity for us to help them drive efficiency. For example, we partnered with AASHTO, a nonprofit organization of all U.S. state DOTs, to support digital delivery across their value chain, including streamlined design-to-construction processes.

Overall, we are excited about the expanding opportunities with the DOTs, and our increasing role as a trusted partner.

Regarding products, the main growth drivers are also in line with the previous quarter. We had noticeable growth with our civil engineering applications OpenRoads and OpenBridge, our structural engineering applications STAAD and SACS, as well as PLS for electrical transmission structures. We're also seeing continued success with our OpenFlows water modeling application, which is becoming a go-to product for water infrastructure around the world.

As Greg mentioned, 2023 was a groundbreaking year for infrastructure intelligence. We have been impressed by the progress made by infrastructure organizations in leveraging data to improve project delivery and asset performance, as exemplified by the *Going Digital* Awards finalists.

If data is the obvious foundation of infrastructure intelligence, digital twins are the building blocks.

Digital twins are used to unlock engineering data from files, so that it can be analyzed, reused across projects, enriched with operational and enterprise data, and mobilized across the infrastructure lifecycle.

Because of the power of digital twins, we are evolving our entire product portfolio to leverage iTwin, our digital twin platform, to accelerate infrastructure intelligence.

At *Year in Infrastructure* last year, we launched Bentley Infrastructure Cloud, including ProjectWise powered by iTwin.

This year, we announced that we're bringing iTwin to Bentley Open applications, starting with the next release of MicroStation, for systematic use of digital twins in the design phase of the infrastructure lifecycle. This will enable users to collaborate in real time, evaluate the impact of changes more seamlessly, and significantly reduce rework and errors, resulting in better designs,faster.

When we talk about infrastructure intelligence, we of course think about the significant role that artificial intelligence can play in improving project delivery and asset performance.

AI was an important topic at the *Year in Infrastructure*, and it was top of mind for the engineering firm CEOs I met two weeks ago. They seek opportunities to use AI to increase exponentially the efficiency and effectiveness of their engineers.

As I mentioned last quarter, Bentley is not new to AI. We already use AI in our software for asset monitoring, and we see huge potential for generative AI during the design phase of the infrastructure lifecycle. We believe generative AI will empower, not replace, infrastructure engineers.

Consider our own software engineers use GitHub Copilot, a generative AI tool, to assist with development by generating routine or basic code, documentation, automated test cases, and more. We envision a comparable copilot for infrastructure engineers, which can take on mundane and time-consuming tasks during the design process, so that engineers can focus on higher-value activities.

At the *Year in Infrastructure*, we presented our approach to generative AI for infrastructure engineering, beginning with an AI agent that assists engineers in further optimizing site layouts by leveraging designs and data from their previous projects. We also showed how generative AI can be applied to minimize time spent on project documentation by automating drawing

production with fit-for-purpose annotations. Capabilities like this can improve engineers' productivity and their overall work experience, both being essential in light of the engineering resource capacity gap.

Of course, to train generative AI models, you need data. And we have a responsibility to our users to be very explicit about our approach to their data.

We presented our commitment to data stewardship at *Year in Infrastructure*. While we are committed to help our users derive ever more value from the engineering data they secure in Bentley Infrastructure Cloud, including maximizing its potential for generative AI, we are also clear that they retain all access and control over it. Our users' data is their data, always. They get to decide how to use it to train AI for their benefit.

One last thought. For infrastructure engineering, as proven by our software engineering experience, the results will be better, not weaker, from accounts' reuse of their own project data, rather than the least common denominator of unknown engineering data that would be somehow aggregated.

With that said, I will now hand over to Werner for details of our financial results.

Werner Andre: Thank you, Nicholas.

We are pleased with another strong quarter.

Total revenues for the third quarter were $307 million, up 14% year-over-year, or 11% in constant currency. Year to date, total revenues grew 13% on a reported and constant currency basis.

Subscription revenues for the quarter grew 15% year-over-year, or 12% in constant currency, and represented 88% of our total revenues. Year to date, subscription revenues grew 14% on a reported and constant currency basis. The onboarding of Power Line Systems at the end of January 2022 accounts for approximately half a percentage point of this year-to-date improvement. Our E365 and SMB initiatives continue to be solid contributors to our subscription revenues growth.

Perpetual license revenues for the third quarter grew 26%, or 23% in constant currency. Year to date, perpetual license revenues grew 6% on a reported and constant currency basis.

Even though perpetual license sales make up only 4% of total revenues, and will certainly remain small relative to our recurring revenues, they are likely to become more significant to us, as they

did in 23Q3. This is particularly true for SMB, where they serve as a competitive differentiator helping us to attract new logos, and in China, due to local preferences.

Our professional services revenues remained essentially flat for the quarter. Year to date, services revenues grew 6%, or 8% in constant currency, and benefited from the acquisition of Vetasi, which we acquired within our Cohesive digital integrator group in 22Q4.

Moving on to our recurring revenue performance.

Our last 12-months recurring revenues increased by 13% year-over-year, or by 14% in constant currency. The acquisition of Power Line Systems contributed about 1 percentage point.

Our last 12-months constant currency account retention rate rounded down to 97% from 98%, as a result of exiting Russia mid-2022.

Our constant currency recurring revenues net retention rate remained at 110%, led by continued accretion within our E365 consumption-based commercial model.

We ended Q3 with ARR of $1.125 billion at quarter-end spot rates.

As discussed by Nicholas, our ARR growth trends by infrastructure sectors remained broadly inline with the previous quarter, led by public works and utilities, resources performed just above the company overall, industrial growth softened somewhat, and commercial and facilities remained flat.

Our E365 and SMB growth initiatives remained the key growth contributors.

On a constant currency basis, our trailing 12-months ARR growth rate was 12.5% year-over-year, and 2.6% on a sequential quarterly basis. When compared to the third quarter last year, and when compared to historic seasonality, 23Q3 was impacted by one less weekday. This negatively impacted the annualization of our consumption-based E365 revenues, which is based on the current quarter's consumption times four. As the fourth quarter and the full year 2022 and 2023 have the same number of weekdays, there will be no impact from this on our full year ARR growth, but this calendar anomaly has caused 23Q3 ARR growth to be slightly lower in proportion to the full year, when compared to our historic seasonality. The quarter was also impacted by continued headwinds in China, and a greater preference there, but also in SMB elsewhere for perpetual licenses.

As a reminder, Q4 remains for us the biggest contract renewal quarter of the year, and thereby represents the quarter with our biggest ARR growth opportunity.

Our GAAP operating income was $74 million for the third quarter, and $193 million year-to-date.

We have previously explained the impact on our GAAP operating results from amortization of purchased intangibles, deferred compensation plan liability revaluations, and acquisition expenses.

Moving on to adjusted operating income with stock-based-compensation expense, our primary profitability and margin performance measure starting this year. Adjusted operating income with stock-based compensation expense was $86 million for Q3, up $19 million or 29% year-over-year, with a margin of 28.2%, up 330 basis points. Year to date, our adjusted operating income with stock-based-compensation expense was $250 million, up $41 million or 19%, with a margin of 27.2%, up 140 basis points.

Q3 was a strong margin quarter for us. In Q4, we expect to see relatively higher Opex, compared to Q3, mainly caused by incremental promotional activities, and IT system implementation cost associated with our ERP system. We remain on track to deliver on our full year margin outlook of approximately 26%.

With respect to liquidity, our operating cash flow was $73 million for the quarter, and $330 million year-to-date, up $92 million or 38%.

Year-to-date operating cash flows benefited from an increased focus on working capital management, as well as timing. Due to these factors, we expect this year's cash flow from operations to convert from adjusted EBITDA at a rate of 85% to 90%, up from our previous estimate of approximately 80%.

As previously discussed, our business model produces reliable and efficient cash flows over a trailing 12-months period, but with some variability between quarters due to timing. Prospectively, we estimate that our conversion rate of adjusted EBITDA to cash flow from operations will be approximately 80% over future trailing 12-months periods.

Year to date through Q3, along with providing sufficiently for our growth initiatives, we paid $44 million in dividends, we spent about $58 million on de facto share repurchases to offset dilution from stock-based-compensation, and we repaid $196 million of bank debt.

As of the end of Q3, our net senior debt leverage was 0.7 times, and, including our 2026 and 2027 convertible notes fully as debt, our net debt leverage was 3.7 times. We are very comfortable with our capital structure as it stands today. We continued our strong deleveraging trajectory this quarter, delevering 1.0 times adjusted EBITDA since the beginning of the year.

With no debt maturing over the next two years and our strong free cash flow generation profile, we expect to organically delever and to increase our balance sheet strength over this period, all while maintaining our programmatic M&A cadence, our dividend, and share repurchases to offset dilution from stock-based compensation. And from a rates exposure perspective, approximately 90% of our debt is protected from rising interest rates, through either very low fixed coupon interest on our convertible notes, or our $200 million interest rate swap, expiring in 2030. So, the key message is we're very comfortable with our current leverage, maturity profile, and interest rate exposure. But, of course, we continually evaluate ways to optimize as conditions change.

Given our strong year-to-date and considerations for Q4, we are not changing our financial outlook, except we are increasing the range for this year's cash flow from operations, as mentioned before.

With regards to foreign exchange rates, on a year-to-date basis, the U.S. dollar has weakened relative to the exchange rates assumed in our 2023 annual financial outlook, resulting in approximately $6 million of incremental revenues from currency. Based on the most recent USD strength, if end-of-October exchange rates would prevail throughout the remainder of the year, our Q4 GAAP revenues would be negatively impacted by approximately $1 million, relative to the exchange rates assumed in our 2023 financial outlook.

And with that, I think we are ready for Q&A. Over to Eric. Thank you.

ERIC B: Thanks, Werner. In order to get to everyone's questions today, we ask that you limit yourselves to just one. Our first question comes from Matthew Hedberg from RBC.

MATTHEW HEDBERG: All right. Thanks, guys. I think you can hear me OK.

GREG B: Yes.

MATTHEW H: Thanks for all the commentary on the call. I was just kind of curious. It sounds like a consistent outlook this year. I know there's a lot of investors that are kind of wondering about some of the major trends, including IIJA.

It's probably too early to think about next year, but if you were kind of helping us with some of the major building blocks for growth next year, is it consistent with '23? Are there things that you're particularly excited about, maybe China joint ventures ramping, just sort of, any help you can kind of think about next year would be certainly helpful. Thanks, guys.

GREG B: Well, the fourth quarter is going to inform our view of next year. And of course, we'll have our annual outlook guidance after the fourth quarter. Much happens for us in the fourth

quarter. It's been almost 3/8 of our ARR renews, and even on E365, there are negotiations about floors and caps, especially that consume the quarter we're in just now.

But generally, thinking of next year, our business at large is not that volatile, and there is considerable visibility in what we do. Now, I suppose the exception that proves that rule is new mining exploration, which this year has had a downturn. But it is a minority of what we do, even in mining.

Things to be excited about for next year include the continued expansion of IIJA. It's now in water, and also there's been grid funding now for grid improvements. There also needs to be permitting. That is yet to happen. But it will happen, we think, during the coming year. Those are things to be excited about.

Things that are complicated are China. So much of that new business happens in the fourth quarter. And the joint ventures are slowly coming on, but more significantly, we continue to have E365 – or excuse me – to continue to have ARR accretion in China, but sometimes it's now in favor of perpetual licenses.

So, we're going to have to balance that out, and maybe looking at next year, we have to factor in that not all new business is going to be new ARR subscriptions. But generally, that which we depend most upon doesn't change very fast and is rather favorable momentum, more so now than ever.

ERIC B: Thanks, Matt. Next question comes from Joe Vruwink from Robert Baird.

JOE VRUWINK: Thank you for the time today. Two related questions on ARR performance in the quarter. Do you have a sense of where ARR growth and net retention would be, if you just applied this quarter's application usage rates across a normal amount of working days?

And then part B, of the question, I want to make sure I heard this right. So ARR growth outside of China remained at year-to-date highs. It sounds like industrial markets maybe softened relative to the trend. So, is the correct interpretation that public works and the Americas actually improved a bit sequentially?

GREG B: I think that is the correct interpretation, and as to industrial, those are very large EPCs on very large projects that are very production-oriented and maybe especially sensitive to this calendar phenomenon. And to go back to that, there isn't quite a simple calculation to answer your questions and to explain, on the one hand, under E365 ProjectWise, which is our single-largest dollar program, is not counted on usage days. It's any usage in the quarter creates a charge for ProjectWise.

It's always been that way. AssetWise is based on asset count. And then even for the applications, there are a lot of floors and caps that are binding at any point in time. And the calendar volatility can cause the caps and floors to come into play in a dynamic way. Then we have some contracts where the usage-based pricing is in bands. We do that for government contracting and so forth.

So, for all these reasons, it isn't quite as simple a calculation as you might think it could be. But we can say that without the change in – without having one fewer day than last year, without having the bulge in perpetual licenses, if instead they'd been the usual mix, and without the attrition in China, if we didn't have any of those three things, then there wouldn't have been a reduction in our indicated ARR growth for the quarter.

ERIC B: Thanks, Joe. Next question comes from Kristen Owen from Oppenheimer.

KRISTEN OWEN: Great. Thank you for taking the question. I wanted to ask specifically about this bp announcement, the AssetWise project – how we should think about that as a blueprint for this migration or increased penetration with asset owners and those owner-operators versus sort of the Capex cycle. Just help us unpack the remote asset monitoring opportunity, recurring revenue sources, and the development of that type of agreement. Thank you.

GREG B: I think you have that exactly right. Imagine how important it is for bp and its history to get right the access to engineering information over the operation's lifecycle of assets. So very smart people and very smart data scientists made very good long-term decisions about their approach to this over time.

And it really is unique that they have agreed on a system and a data model and a schema that they can use both during their Capex, and they have a huge Capex program, and their operations. It really is unique to share that data model for engineering information, and it has enabled AssetWise to be extended to AssetWise Reliability for, as you say, inspection and corrosion management, and so forth.

I think it's more important than anyone to bp, and they have, as you know, in industrial, we do not have the footprint we have elsewhere. So, I think it's really important that bp is leading the way in what we call infrastructure intelligence – using the engineering information for not only safety, but reliability, uptime, and so forth.

It's a down-to-earth application of that that is now propounded throughout bp and really is a model. Generally, industrials are ahead of public works and utilities, and I think this is a respect of it that you're seeing with this bp announcement.

ERIC B: Thanks, Kristen. The next question comes from Jason Celino from KeyBanc.

JASON CELINO: You know, one of your competitors has been pretty vocal about the studies and partnerships they've been doing with different DOTs. Greg or Nicholas, can you tell us about this partnership with AASHTO? I think that's how you say it. Is there any revenue opportunity, or is it more about influence?

NICHOLAS C: AASHTO is a nonprofit organization working with all the DOTs in the U.S. The partnership we're doing with them goes beyond a study. It is about integration of our software with a software that they own actually called AASHTOWare, which is managed by Infotech.

And in order to enable true digital delivery, meaning data flowing freely from one system to another, from AASHTOWare, from OpenRoads, from ProjectWise, from SYNCHRO, and from one phase of the infrastructure lifecycle to the next. From design to construction, which is hugely exciting, because we see that as a big growth opportunity for Bentley going forward. We're very strong when it comes to design. We're going into construction with the DOTs in particular, as they're embracing digital delivery across design and construction.

GREG B: This will have a bearing on most projects.

JASON C: OK. Great, thank you.

ERIC B: Next question comes from Michael Funk from Bank of America.

MICHAEL FUNK: Hey, guys. Good morning. How are you?

GREG B: Cheers, Michael.

MICHAEL F: Yeah, I'm having trouble with the mute button there. I apologize. So, Greg, you mentioned a bit about IIJA, some of the funding starting to flow through. I think, specifically, you mentioned now in water grid funding, still not permitting in that area. But can you help us quantify this based on the amount of funds for different projects where you feel you have relative strength – obviously, in those two areas, you do – and the modeling you've done in the potential uplift to ARR from those projects coming online during 2024 and 2025?

And then related question: you also spoke a lot about iTwin from the call. Appreciate the commentary there. How much potential lift ARR do you believe that iTwins could provide the next 12 months?

GREG B: Well, first on IIJA, of course, the transportation funding had been flowing. It doesn't increase, it just continues to flow for the next three and four years. The other programs had to be put in place, and that's still not complete, but it is finally – for water, for grid, it's kind of hit and miss, but some of it has begun, subject, however, to permitting for – you don't need just money, but also permits, to do a new transmission capacity. So that is yet to happen.

As far as quantifying the grid opportunity, the International Energy Association has done a good paper during the past quarter that estimates that what's spent on transmission and distribution needs to double over a period of time, globally, to accomplish everything that's required for electrification. I don't mean to say that I predict it will, necessarily, double, but it will grow a lot. And that is the reason to say that our opportunity in grid, especially, can multiply. But generally, there is the capacity constraints at the same time. So, I believe it will be a continued ramp in the right direction, and we saw that this quarter and year so far in North America. For iTwin, let me ask Nicholas.

NICHOLAS C: iTwin is our platform for digital twins, infrastructure digital twins. And as a platform, it is leveraged more and more across our product portfolio. This relates to a more fundamental evolution going on where we, as a industry, overall, if you want, we're going from file-based to data-centric workflows. The technology we're using to do this is digital twin. What it means is all of our products, over time, will adopt iTwin as a platform.

Last year, we announced Bentley Infrastructure Cloud, which is a combination of ProjectWise, SYNCHRO, AssetWise to be powered by iTwin. And this year, at YII, we announced that our Open applications – the first one being MicroStation – we're going to also leverage iTwin going forward. What I mean by this is iTwin is not a discrete product category. If you're trying to put a ARR number to it, it's actually our overall growth as a company, which will be based on iTwin, as our entire product portfolio is more and more powered by iTwin.

ERIC B: Thanks.

MICHAEL F: Thank you for that.

ERIC B: Our next question comes from Matthew Broome from Mizuho.

MATTHEW BROOME: So, Greg, you mentioned positive survey results, but could you maybe talk about how you found customer sentiment in recent months, based on your conversations? What are their concerns and their main pain points?

GREG B: Well, Nicholas has just been with the CEOs at the conference he described. I might ask him. He's had those firsthand meetings. In general, they are very excited and enticed by the

possibilities of generative AI in helping to enable their work to get more efficient. But they're very aware that they have valuable data at stake there, and that they never fail to bring that up. And it's appropriately so, I think.

What we're saying is their data should benefit only them, but that will be sufficient and is what they really want. But, Nicholas, over to you, perhaps, to help.

NICHOLAS C: Indeed, very top of mind is, on their side, how much demand there is for infrastructure and how important is their role, by the way, in designing, building, delivering that infrastructure to address so many of the world's problems, but at the same time, how much constraint there are in terms of engineering resource capacity. By the way, we heard it from the CEO of the top engineering firms we met a couple of weeks ago in Arizona, but we hear it across the regions. The engineering resource capacity gap is just getting deeper. I heard that, for example, in India, now, we're starting to be constrained in terms of engineering capacity when it comes to very advanced engineering for offshore platforms, for example, or high-speed rail.

So, this is a global problem, and they all understand that the way for them to be able to bridge the capacity gap is by going digital. So, of course, software plays a big role. And in that context, indeed, they're very interested in AI. I was surprised that in every conversation we had with infrastructure engineering firms' CEOs two weeks ago, AI came up as a topic in every conversation. It is very much top of mind. They're looking at it as an opportunity to increase the productivity, the efficiency, the effectiveness of their engineers as a step function.

ERIC B: Thanks, Matthew. The next question comes from Joshua Tilton from Wolfe Research.

JOSHUA TILTON: Hey, guys, can you hear me?

GREG B: Yes.

JOSHUA T: All right, great. I actually want to just sneak in a two-parter on the infrastructure bill funding. The first is a follow up to an earlier question. And it's, you talked about funding for a wider array of projects that's coming online. We had transportation. Now we're going to have water and other things coming.

So, the question is, is it fair to assume that the tailwind to growth from the infrastructure bill will be greater next year than it was this year because you have more projects? And the second part is, on the other side of that, are you guys maybe seeing a dynamic where the current interest rate environment is maybe eating away at some of the excitement around the infrastructure bill relative to when it was passed initially?

GREG B: Well, I think it is the case that there not only is the expansion of the IIJA to the other areas beyond transportation grid, and broadband, and water, there also are now a variety of these grant programs, Nicholas mentioned one of them, which is another vehicle to get some funding. But the base load in transportation is going to continue. And these others will come on.

I want to go to the interest rate question because, fundamentally, while not much of our work in the scheme of things is privately financed, that is the case with new mine exploration. And new mine exploration does turn out to be sensitive to capital market constraints to do with interest rates and other aspects. And that has turned down during this year in a way that couldn't have been anticipated.

The thing is that, on the other hand, existing mines need to run at full capacity. There's no lack of demand for that. And where the costs are sunk for the new infrastructure and so forth, it makes economic sense to go full tilt there. And we have a lot to help with in respect of that. I'll mention also in terms of private funding is industrial sector. And we do talk about that having gotten a little softer.

But again, I think we can't say that that's a trend because it might have to do with the number of days in the quarter and the consumption aspect of that, which, by the way, is even more pronounced in India, where they had more holidays during Q3. So, we're not calling that a trend yet necessarily.

Something very interesting that isn't quite to do with interest rates, but is purchasing behavior, where monitoring is preference for perpetual licenses. And you would say, how does that make sense, to lay out money upfront when interest rates are higher? Well, there could be concern about future economic conditions. And some SMB businesses, apparently, anecdotally say, while things are going well and we can fund it, let's buy the perpetual license.

In China, I'm afraid it's a different phenomenon. It probably is geopolitical anxiety that's leading to some bigger deals than we've seen ever before become perpetual license deals because they don't want to take a chance with continued subscriptions, perhaps, under threats of possible sanctions. So, it's a complicated world in that respect. So, we see on the margin these impacts of interest rates. But it doesn't affect very much public works, and utilities, and our other domains.

ERIC B: Thanks for the questions. Next question comes from Warren Meyers from Griffin Securities.

WARREN MEYERS: Thank you, guys, for having me. I'm obviously in for Jay. Just a quick one. With respect to the multiple industry solutions you announced at your recent infrastructure

conference, how would you rank those in terms of potential materiality to product and/or services, revenues, or margins in 2024 and beyond? Kind of a multipart, one question there.

GREG B: I'm going to ask – oh, I'm sorry. Go ahead. You had another part to it. Go ahead.

WARREN M: No, go. That's basically it.

GREG B: Well, I'm going to ask Nicholas to help quantify. But this notion that the bulk of our opportunity is for operations and maintenance, so infrastructure intelligence, compounding the value, that is where the economic value occurs and the opportunity for analytics for AI, generally. And one of the earlier questions, we referred to that in what bp is doing.

WARREN M: Yes.

GREG B: So, we're packaging that up. So go ahead, Nicholas. Yes.

NICHOLAS C: Yes, as you know, our business is roughly half-half between engineering firms – owner-operators. But when we look at what owner-operators are using for the most part, it is also software related to the design phase of the infrastructure lifecycle. So, we think one of the big growth opportunities for the company is the software for the operations phase of the infrastructure lifecycle. And this is indeed what these industry solutions are all about.

Now, there are a bit of a dimension that cuts across because what we're doing with these industry solutions is combining different products that we already have and then adding some additional capabilities when needs be. For the most part, these industry solutions are focused on giving more intelligence around infrastructure assets themselves.

So being able to inspect remotely, being able to sense through IoT devices if anything is wrong with that infrastructure asset and triggering some preventive actions if necessary. Obviously, this is also a good use case for AI. This is where we're already using quite a bit of AI capabilities for asset analytics. So, this is not a discrete product opportunity. If you want, it's more of a long-term growth opportunity for Bentley.

WARREN M: Thank you for that.

ERIC B: Great. Thank you. Our next question comes from Blair Abernethy from Rosenblatt Securities.

BLAIR ABERNETHY: Thank you. Good morning. Just want to follow up on some of Nicholas's comments and maybe partially for Werner too – the concept of copilots as a way to help increase the productivity of infrastructure design engineers.

Where do you see yourselves first implementing that? What kind of monetization schemes are you considering? And so, what's the timing of this? Are you in preproduction at this stage, or private previews, or is this a year or two out? Just giving us a sense of when you can see this in the market.

NICHOLAS C: We are already with AI when it comes to asset operations, as I just explained. We've had capabilities there for a couple of years now. We just also made the acquisition of Blyncsy, which is also leveraging AI in order to detect what's going on around the transportation network. We are absolutely excited about the potential of AI when it comes to helping engineers in the design phase. This is very early stage as an industry overall.

We are in exploration phase. At YII we previewed what we're working on, which is when relevant for some of the engineering firms, leveraging AI as a copilot when it comes to evaluating different site layout options and leveraging AI in order to automate some production of drawings that is really just a sink of time for them right now.

The overall vision we have is AI to empower the engineers, not replace them. And we use our own experience, actually, as an analogy. Our own engineers are leveraging GitHub Copilot to be much more productive. GitHub Copilot, as I explained in the prepared remarks, is taking over all the mundane tasks so that they can really focus on high-value tasks. So, we see exactly the same for infrastructure engineers.

The potential is huge. As I mentioned, two weeks ago in every conversation with infrastructure engineering firms' CEOs, AI came up. So, the potential is huge, for sure. We all see the same. Our approach is going to be leveraging our own engineering applications to train the AI agents, not the data of our users, which is different from an approach other companies may take.

So, we will train the AI agents with our own engineering applications so that they can learn from our engineering applications, what are the engineering rules, right? And based on this, we'll be able then to suggest site layouts or components of designs of infrastructure, et cetera, going forward. And what we envision is our users will then leverage their data to fine-tune those models, those AI agents, these copilots that we'll give to them.

So, it's a quite distinct approach from what you may see in other industries, which is very adapted to our industry infrastructure and very much resonating. The idea of AI as a copilot – the idea that we train it with our own engineering applications, that we let the users decide when and if they want to use their own data to fine-tune. This is what's really resonating. We are in exploration right now, with a number of engineering firms giving us feedback, the timeline for us to deliver those capabilities will depend on that feedback.

GREG B: Blair, on monetization, I will point out indirectly when engineering firms and owners recognize the value of the data for ways in which they didn't even anticipate it could compound in value in the future – for instance, with generative AI training their own tools – ProjectWise has become our single largest product just now.

And the advantage of ProjectWise is a common schema where this data can be understood and comprehensively more valuable. So, there are ways for us to implicitly monetize on the value of engineering data without yet working out whether there will be new products or enhanced products as far as monetization.

ERIC B: Our next question comes from Clarke Jeffries from Piper Sandler.

CLARKE JEFFRIES: Hello. Thank you for taking the question. Good to see you. So, I wanted to follow up on a prior question that made me reflect. I think there are some murmurings of some of the civil construction projects being paused at the shovel-ready stage. And I think that there has been discussion of that before.

So, I wanted to pose the question like this – how much of the engineering design work will be done entirely pre-shovel-ready on the construction and how much continued engineering design work could be available after it moved to that final stage when construction on site starts to happen?

And then as a follow-up, when can the sale to the owner-operator occur when it's entirely at the specialty contractor or engineering consultant stage or somewhere during the project?

GREG B: Well, what an interesting question. And yes, it could be that in staging of projects, even those funded under IIJA, some might wait for materials costs and labor costs and so forth to balance out rather than bulge up. But that won't have, in general, the impact on the design – getting the project to being shovel-ready.

However, we're just back from *Year in Infrastructure* last month. And we're all reminded that in Asia, which leads in so much in the world – and Singapore a case in point of that, if you get a chance to watch some of the keynotes – things have moved very far toward design-build.

And very often, major projects in Asia, the owner from the start has a digital twin in mind, and it isn't something that comes along after the fact. And it really is interesting and is leading the way. We say they're leapfrogging ahead, not being constrained by traditional contracting strictures and so forth.

So, I think you'll see some examples of that in *Going Digital* Award finalists and winning projects in Asia. And that's why we remarked that, to me, it's a pleasant surprise to see that 17% of all of these 300-plus nominated projects this year use SYNCHRO.

So they're incorporating – that's a sixth of them – incorporating 4D modeling of the construction process during the design. And it's just an indication of the progress of design-build and constructability, ultimately, to improve civil project execution and take out risk and variability.

ERIC B: Thanks, Clarke.

CLARKE J: Thank you very much.

ERIC B: That concludes our call today. We thank each of you for your interest and time in Bentley Systems and look forward to updating you on our progress in coming quarters.

GREG B: Thank you.