[BEGINNING OF Bentley Systems Incorporated (BSY) fireside chat _Piper Sandler Conf _09102024mp3]

All right. We can go ahead and get started. Hello. My name is Clarke Jeffries. I'm a software analyst here at Piper Sandler. Very pleased to have Greg Bentley, executive chair and co-founder of Bentley Systems here. Thank you for making the trip to Nashville.

Glad to be part of it. Thanks to each of you for [INAUDIBLE]

All right, perfect. So, let's maybe start about the ethos of Bentley Systems. You know, what is the company all about? Who are your customers? And what's the problem you're solving in the market?

Well, we are the infrastructure engineering software company. To me it means we're the quartermaster, we supply the tools for civil and structural geotechnical engineers. The problems they work on are the capacity and resilience of the world's infrastructure, in particular the horizontal networks of infrastructure and our economy and our environment depend on those networks, and we are, we think, the leader in the world in software for roads and bridges, rail and transit, water and wastewater, resources and mining and [cross talk]

Maybe -- Let's make sure [fixing mic] --

Testing. 1, 2, 3. Testing.

Can you move it up a little bit?

[CROSSTALK]

Yeah, perfect.

Perfect.

Testing again. [?1, 2, 3.?]

That's better.

Yeah.

So, you know, well, congratulations on 40 years. You know, in celebration of that 40th anniversary of the company, maybe you can talk about building a 40-year business -- building a billion-dollar ARR business, growing double digits organically, with a -- you know, a track record of margin expansion. You know, what are the elements that, you know, were -- the ingredients to build that kind of business?

Well, over 40 years, consistency has made a difference, and I think that's been -- our consistency, fortunately, has been -- has corresponded to the longevity of infrastructure projects. The -- forever the life cycle of infrastructure assets and the fact that infrastructure engineers have built their careers if they can to a set of tools that they get to use that are better and better. So, staying the course has corresponded to where we're creating opportunities.

Yeah, absolutely. It's fantastic. So, well, you know, with, you know, 40 years of operations and over a billion of ARR -- ARR, I'm sure that -- the product set has evolved over time and expanded significantly. You know, maybe we can walk through the functional areas the company addresses with its products today, what that really looks like. You know, I get a question a lot from people that are maybe not familiar with the industry. You know, what tasks and functions does an engineer use the system for? You know, where are they living each day, in the software?

Well, we started with the modeling in 2D and then 3D and engineers and then the -- and that's still about half of our business [INAUDIBLE]. Then the simulation [INAUDIBLE] of which they work out [UNINTELLIGIBLE] of the infrastructure solution. And then we added cloud services for project delivery collaboration and information management for -- [INAUDIBLE] in doing that we've come to be the most comprehensive supplier for infrastructure and engineering organizations, just cumulatively over that 40 years. The -- they benefit by having consistent tools where the data compounds the value across disciplines involved in projects and over the life cycle of the assets, and it's -- we are the largest supplier to most of these organizations. There are over 150 of our accounts who spend over a million dollars per year with us and another 750 that spend over $250,000 a year for us, so comprehensive across all of those aspects has become our differentiator.

Yeah. Absolutely. And, you know, we touched on this, but, you know, in this marketplace, you know, why does a large engineering firm go with Bentley? You know, they -- there are options in terms of CAD and modeling. But, you know, what are the facts in infrastructure engineering that leads to, you know, sector leadership and their choice to pick you and --

Well, if their -- to the extent their work is for horizontal infrastructure: networks, roads and bridges, rail and transit, water and wastewater, utility grids, we have the most advanced and most comprehensive solutions that improve the quality of their work and compound their value over time.

Yeah, specific to the type of work that they're doing, and that specificity is helpful. So, you know, let's maybe talk about product vision. You know, I think it's been interesting, to look at the way that you frame the evolution of modeling software in this space. There's -- you know, a march of progress from 2D blueprinting software to CAD 3D software, and those 3D software tools eventually are going to evolve into something that looks like a digital twin as we call it today. So, you know, wondering if you could talk about the pockets of the market that are getting close to having that adoption of digital twins, that next stage of where the software will go? Where's the most appetite?

Clarke, the advancement is from using modeling and simulation, the work of the civil structure geotechnical engineers, only once when the project is delivered and then never opening those files again to where there will be an evergreen digital twin. The relevance of the modeling and simulation continues to maintain the fitness for purpose, the resilience of the infrastructure, and to optimize its maintenance over time. So, the digital twin opportunity is to continue to get value from the work of the engineers, through cloud services, and a digital twin, of course, always needs to correspond to the operating realities, so you need to re-survey with drones and imagery, and so forth, as we now do. So those things have all come together to make the digital twin an opportunity now. It is, however, the case that it's been adopted in pockets so far. One pocket would be Asia, actually, which isn't held back by traditional work processes and where they simply need to get the benefits soonest, and they've been open-minded to complete digital twin approaches. Another pocket is where infrastructures owned by private capital, such as communication tower codes, now, that are owned by public companies. Perhaps some of the folks here have investments there. And then finally in construction, 4D modeling of the construction process, is another pocket. But most of the digital twin opportunity beyond those pockets lies ahead still.

Yeah, certainly interesting. I think, you know, in talking about this space, there is maybe an underappreciated -- how much of the cost would be over the lifetime of the asset, not on the creation of the asset, and so this idea of having some sort of common thread, from creation of the asset, to continue operation, and not having that information lost, is very important. You know, maybe we can talk about the inverse of -- you know, the parts that maybe we'll see big progress within five years or 10 years, but they're -- they're the sort of hard nuts to crack in terms of getting to, you know, real evolution of the software or the adoption of digital twins. You know, where's the earliest parts and what's the limitation?

Well, all the benefits occur over -- all the benefits of infrastructure occur over the operating life cycle, so the digital twin advantage is for the owner-operators, but it can be a slow process to evangelize those life-cycle benefits, especially to public owners of infrastructure. What has accelerated this, actually, is the buzz around AI, and even public owners of infrastructure have understood that they have a lot of data valuable -- engineering data -- the question has become: how can AI help me? And we have an opportunity now, thanks to AI, for instant-on digital twins, that, for instance, can use crowd-sourced data even. An example, we call this, asset analytics, this instant-on digital twin opportunity where roadway operators can use our AI that we apply to crowd-sourced imagery -- from dash cams, actually. Our AI filters can recognize situations that require maintenance: bent guardrails along roadways or when does the paint -- pavement markings need to be repainted to be reflective enough for the cars to stay in their lanes, a new federal requirement, and so forth, and here we can have digital twins the next day, thanks to AI. And demand for that, because of the understanding, that all of these enterprises should be taking advantage of AI. So we're breaking through to -- thanks to the acceleration that AI provides.

Yeah, yeah, reduced implementation costs reduces, sort of, the opportunity costs of saying no and see the value more immediately.

Ultimately, you do want to include all of the modeling and simulation details in the digital twin. The advantage there is for existing infrastructure, if you can monitor conditions with IOT sensors and then re-run the modeling and simulation to make sure they're still safe, and if you bring in the -- along with that ET and OT, the IT -- the information about what maintenance has been done, you can reassess what maintenance is optimally sufficient. And yet keep the infrastructure safe and spend less on maintenance by virtue of the digital twin.

Yeah. So we've talked about the -- you know, a lot of the reasons why the purchaser goes with your solution, the, sort of, incremental product opportunities that will happen long term, but, you know, 40 years in operation, a very, very high account retention, you know, what continues to drive the double-digit growth? What's incrementally, you know, the biggest drivers of growth? You know, I -- [?in?] surprised every -- earnings that you're adding this many logos as you are, and you have, you know, 10 straight quarters of 600 new logos. So, what do those new customers look like to the company, why might these firms not have been a customer before?

Well, Clarke, first, the bulk of our ARR growth will come from our existing accounts, and there we're a factor of production for their project throughput and their asset performance, but they have bigger backlogs than ever, and there's a resource capacity gap. There aren't more civil engineers and structural engineers and geotechnical engineers nor are they in school. So going digital is the

consensus priority now to meet those requirements, and the point of departure is that our accounts on average spend less than $2 per hour on our offerings, an hour for which the engineer is worth $150, and the software is what makes that hour valuable. So there's lots of upside to use more specialized products, and we have those more specialized products. So that will still be the bulk of our ARR growth, but it is the case that a new opportunity since going public has been with SMB, smaller accounts. We are 92 percent direct in our revenue mix, and have been, and so we focused almost exclusively on these enterprise accounts, such as I mentioned earlier. But, half of infrastructure engineers work in firms with 50 or fewer engineers, and we were relatively neglecting those. So with our IPO -- for the first time we introduced the very first e-commerce, and a new group of inside sales, and of course during the pandemic, all sales were inside anyway, and we found a tremendous market opportunity in these smaller firms through digital enablement, and that has grown to be 3 and now 4 percent of our ARR growth, 3 and 4 points of ARR from SMB prospects, new names. It's as if when we reached them, they said, well, if you're making it that easy, I will try driving a Bentley, and it turns out the -- that the products are the same products as the larger firms used, and we're now reaching, if you like, a market twice as large.

Yeah. Do you find that those -- you're also seeing, you know, those smaller firms -- you being able to grow [?within?] at a faster rate than the enterprises, just maybe background information on how that's -- this market works. Do you see a lot of graduation of those firms, or is there just an overwhelming amount serviced by the large players?

Well, over these past three years, it's still a little early to judge that, but I do find it a reasonable hypothesis, that when they start with individual subscriptions that can grow at a faster rate, given many of their firms are new to us and have as many as 50 engineers.

Yeah. So maybe let's talk about the owners of [?business?]. I've always found it very interesting that 50 percent of the business is the owners rather than the construction firms and how we typically think about, you know, the architect, the engineer, whoever's breaking ground. You have a substantial portion of the business that is the ongoing owner and operator of the asset. So, you know, maybe we can talk about how did that come to be. Is that a fairly natural journey? And, you know, going forward, what are the big priorities of the owner-operator business?

Well, Clarke, the owner-operators of infrastructure had already been self-performing the project work for their smaller projects. And so, in most cases, we already have been an incumbent with our modeling and simulation applications and project-wise to some degree. But, the opportunity in digital twins is all for the owner-operators. Now we would like to enlist the engineering firms to be the digital integrators of the data and add their own analytics to our offerings for

serving better the owner-operators, but we -- it has helped us to be incumbent and established there as a trusted vendor, and owner-operators have been our focus since 2009 of our own investment and R&D and our -- the significant digital twin opportunity for the future.

Yeah. So, you know, maybe we can talk about infrastructure spending. I mean, it -- you know, looking at market forecasts, you know, it seems that all the governments of the world have decided that they can't operate societies without significant investment in infrastructure, so there is a backdrop of prominent infrastructure stimulus programs globally. You know, how much does Bentley benefit when infrastructure spending is strong? And where are we at today in some of those stimulus programs actually materializing in downstream economics and downstream business?

Well, our software is a factor of production for all of that infrastructure investment. And, as I say, there are, on the one hand, higher backlogs now than ever. The imperative, of course, is not so much the demands of governments but of constituents of infrastructure who want resilience. We need to extend the life of our infrastructure in general. It needs to adapt to changing climate; we need to be changing the energy mix, and so forth. That's the work of civil and structural and geotechnical engineers -- the geotechnical engineers work below the ground on the environmental aspects. It's worthwhile investment -- necessary investment -- you used to hear the word stimulus attached to infrastructure; that's -- we understand even in the United States the importance of infrastructure for our quality of life -- and I think we can understand that it will only become a greater requirement as our infrastructure otherwise continues to age and where digital twins can help us maintain the fitness for purpose and resilience.

Yeah. So, you know, there's certainly developed economies where there's this extension of the life and there's an investment in maintaining these assets, but in terms of the net new, there's incredible opportunity in some of these developing economies, and it's such a large portion of the infrastructure. Spending is going to come from a couple of regions in APAC. So, maybe we can talk about your current business in APAC, how confident you are, you'll be able to address these markets that represent such a large portion of the incremental infrastructure spending over the next 10 years.

Well, we're fully scaled out after 40 years everywhere in the world and well positioned to take advantage. As I mentioned, in pockets, Southeast Asia, for instance, is moving faster than anyone in the world to take advantage of digital twins. In China, infrastructure is very important, but we face geopolitical challenges there. We have had a successful business in China, which at one time, was 5 percent of our ARR. It's down to about half of that now because the Chinese are averse to subscriptions with American companies for critical infrastructure. We've engineered around that and have high hopes for the future,

because fully 30 percent of the world's infrastructure's engineering is done in China, but it will take some while to get to that potential. We think it will happen, but today the countries of India, Malaysia, Indonesia, Australia are where digital twins are growing fastest. And by the way, projects there help to quantify -- last year the finalists in our Going Digital Awards competition achieved 18 percent savings of project effort by going digital, and we'll be updating that this year at our year-end infrastructure conference next month, but yes, we're very well positioned and glad to be taking advantage of those opportunities in the developing world especially.

Yeah, excellent. Maybe we can talk about the factor of production, you know, the, sort of, mechanics of monetization and how to get usage to match to the demand of an engineer's time and the billable hours. One of these lar- -- initiatives of the company has been Enterprise 365 -- is -- you know, 43 percent of the ARR -- can you maybe talk about that offering, why you pursued it, and, you know, at over $500 million of ARR growing 20 percent plus -- you know, what's the -- what's been the success story of that monetization effort?

Well, enterprise subscriptions have been our focus for a long time. The E365 program is a few years old, and we jumped all the way to pure consumption to charging per application per day. And of course that avoids issues of shelfware or otherwise. It's fair to us and to the account, both, but when we -- and the account likes it by the way because the engineering firms are able to be reimbursed for their software cost because they're clients. The owner-operators know it improves the quality of their project, but they can't be reimbursed unless they can substantiate what they're doing and paying for each day. We like E365 because when we calculated the daily price for our applications, we added in a factor to cover our cost of providing our thousand experienced civil and structural geotechnical engineers. We [?say?] a success force that are dedicated to the accounts to help them explore and implement new digital workflows every quarter that increases their consumption -- to everyone's satisfaction because it increases their productivity as well. And that's their priority at this point in time. So our -- we call it application mix accretion, the opportunity for our users to use more specialized products. Each hour is growing and is a component of our ARR growth that will continue to increase, we think.

Yeah, I think it's fascinating because it's certainly -- there's a utilization issue with an annual [?C-PACE?] license, I think, for a lot of models, and we're trying to think about, in the world of AI, what monetization model might emerge, and this seems like a -- an early step to considering better aligning utilization to, you know, the number of users. Any other things that you're seeing that show the industry is ready to think about something else besides [?C-PACE?]?

Yes. Beyond our existing, reliable, growing business for serving the users of our tools, our asset analytics initiative, we monetize by charging per asset. So, per cell

tower per year for the digital twin, we get three digits, and there's 3 million cell towers outside China, and all of these tower [?cos?] are going to have digital twins within the next couple of years. I mentioned roadway miles as an example earlier. We charge per roadway mile per year. So it's an incremental revenue stream beyond what we charge for users per application per day, and I think ultimately because it has to do with improving the throughput and operations and maintenance, it can be as large or larger business over time.

Yeah. Perfect. [CROSSTALK]

All incremental, however, not a replacement for --

Yeah, yeah --

-- for our existing --

-- it certainly -- and it's only these two, sort of, initial sectors that you're exploring today, you know, the cell towers and the roads, they'll be --

They set the stage.

Yeah, set the stage for other categories. You know, maybe here in the last minute, what are you most excited about, going into the next year? You know, 2025, 41 years, what are you most excited about?

Well, our new generational leadership, our new C-level folks are all in their 40s. We've changed, for instance, our acquisition priorities from traditionally being interested in acquiring more mature companies to younger companies. And we announced just Friday a very significant acquisition of Cesium, which is a household name for those who are doing 3D geospatial immersive environments, for instance, for infrastructure digital twins. This is about 50 folks who have -- who are helping tens of thousands of developers on an open-source model all the way through enterprises like Komatsu, the second-largest equipment supplier in the world who are using Cesium for modeling their Smart Construction Earthworks. So it's a natural combination with what we do with engineering models, with sub-surface models, and putting that all together for digital twins. Accelerating what I mentioned earlier in --

Right.

-- asset analytics.

Yeah, stitching fabric for this, kind of, next stage of digital twins. Complete division.

Exciting. Here's to 2025.

Yeah. Yeah, absolutely. Well, Greg, thank you very much for joining us.

Thank you, Clarke. Thank you, all.