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Greg Bentley, CEO Bentley Systems, Inc. (BSY)

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<<Joe Vruwink, Analyst, Robert W. Baird>>

Okay. I think we can get started. Hi, everyone. I'm Joe Vruwink from the vertical software team at Baird. It's a great time for infrastructure. So it's a great time to hear from Bentley Systems, the leader in civil infrastructure software. With us from the company today, we have Greg Bentley, CEO; and in the audience, is Eric Boyer from Investor Relations. This is going to be a fireside chat format, so we'll have Q&A in a moment, but I want to turn it over to Greg for an introduction to Bentley.

<<Greg Bentley, Chief Executive Officer>>

Joe, many thanks for inviting us, and thanks to each of you for your interest. Bentley Systems was founded by five Bentley brothers almost 40 years ago. And since then, we've applied ourselves to becoming most comprehensively the infrastructure engineering software company. And we think that brings a certain stability and predictability, boring this steadiness maybe that would be reflected our investment characteristics. We think, if anything, we have conditioned ourselves to make decisions to benefit long term, this has been a long term, and we invite your consideration of our investment characteristics.

Part of the steadiness perhaps is provided by our end markets. We define infrastructure as that which is constructed in the world, and it underlies our economies and our environment, at the same time. This is a map of our ARR showing the extent in each of the sectors and subsectors of infrastructure in public works and utilities and respectively, within that, we think we're #1 there, but also in the sub-sectors of roads and bridges and rail and transit, water and wastewater, electrical grids and in resources for mining and environmental modeling.

And our outlook for this year, we do an annual financial outlook as usual, commit and endeavor to increase our operating margins. We measure that, including stock-based compensation at 26% this year, and we generate sufficient capital to fund our programmatic acquisition program, a modest dividend or repurchase of – to offset stock-based compensation and to be well prepared for other opportunities. Over to your questions Joe.

<<Joe Vruwink, Analyst, Robert W. Baird>>

Okay. Very good. I should say, if anyone in the audience has a question, you can e-mail us at session2@rwbaird.com, and I'll moderate those from iPad. Maybe please to begin, just as a way of introduction, I thought you went into an interesting anecdote on the last earnings call of how a

big project delivery firm, and we can use the ENR top 500, but a firm that is responsible for the design and delivery of a project, they certainly bill customers for their work. And then, you shared some detail on just your component of those billings. Maybe, we can go through that math again, and also talk about what you're typically doing. So, when we think about an engineer working in their trade, how is Bentley involved in those tasks?

<<Greg Bentley, Chief Executive Officer>>

Well, Joe, in these 40 years of trying to be as comprehensive as we can be in software and cloud services for civil engineering, structural engineering, geotechnical engineering of infrastructure, we've become important and comprehensive in turn for the largest engineering firms in the world. Those are the ENR top design firms. And what I showed is that together, they represent about a quarter of our \$1 billion-plus ARR. And for most of those firms, we have become their largest vendor. So, we have a significant share of their wallet, if you like.

But, when you break it down, they're using our desktop modeling and simulation applications and our project-wise collaboration environment to share their work, virtualize across the world. On the – within an engineering hour that they would, on average, bill at \$150, it turns out that on average, they spend with us on our applications \$1.41 and another \$0.39 on the project-wise collaboration environment, which you can sort of recognize is less in relation to the cost of the engineer or their billing hour than in other aspects of engineering, if you like, and product engineering that's part of R&D or EDA, it would be a multiple of that.

So we think we had considerable upside and headroom, not so much to increase our prices for the same functionality, but to upsell the – that engineer to use more specialized products for their work, and we have those more specialized products. And you might say, well, why aren't they using them already? And in general, these top engineering firms in the world have been billing their hours, time and materials. That's been their business model in the bulk of their business, and they haven't been nearly as incentivized to get more productive and improve the quality of those hours, as they are now.

When infrastructure is the consensus priority for the world and their work is important for resilience and adaptation and energy – transition energy, security, there's no civil or structural or geotechnical engineer in the world that isn't as BSY busy, as they could possibly be and going digital and as a result, the, I think, enduring priority and we see lots of opportunity to – for them to substitute more technology for labor and do a better job and get into their big backlogs and resume being able to bid new work and so forth.

<<Joe Vruwink, Analyst, Robert W. Baird>>

So just on this topic and labor constraints, certainly being an issue. I think, every engineering company would like to hire more engineers than they can find. This brings us to what's kind of happening around the world. And I posed the question to you that stimulus as a driver, but you kind of content no, it's not just stimulus if you look at the imperatives around resiliency, we have

assets that are failing, energy independent. So there's a lot of different things going around. Maybe just a focus on what opening here in the States, in last quarter, you kind of acknowledge that you're finally seeing some of the scope of the IIA, the Infrastructure Act in the U.S. driving more activity. In this case, it's transportation activity. And then your products, related products like MicroStation, OpenRoads, these two are seeing more activity. If you just play this out, what else would you imagine you're talking about kind of this year, next year as you think about the scope of work that you kind of know needs to get done just based on the backlog visibility your customers already have?

<<Greg Bentley, Chief Executive Officer>>

Well, the IIA, of course, is the \$1 trillion infrastructure spending in the U.S., half of it is plusing up what the federal government already had been spending on roadways and bridges, transit. And so I happened to meet two weeks ago today with the Secretary of Transportation in Washington with some other leaders. He wanted to take the pulse of the IIA on the ground and strong consensus was those funds are fully flowing now. They're not starting. There are at a full rate of flow. And he was urged if you like, to spread it out rather than speed it up at this point in time to ameliorate what would otherwise be the capacity constraints in engineering capacity on the one hand, at the outset of projects and then construction labor and materials downstream.

But there's another half of the IIA funding, which is for a new federal role in water, in broadband and grid, and that has really yet to start. There, the programs needed to be established. It's finally happening at the beginning of it in water, broadband and grid are still ahead. But to bring things up to date, there is yet further legislation now, the debt ceiling law is law is that the Fiscal Responsibility Act maybe. And that addresses what it has been a more significant obstacle even than funding in respect to grid and especially electrical transmission and distribution, other energy capacity, which is permitting. And there is attention to that in this new law. It isn't the whole of what was the mentioned permitting initiatives last year. So there's scope even for more legislation beyond this that would address specifically energy projects and permitting.

But the concern is that while there's lots of spending for renewables, including in the IRA legislation, already, there's more renewables capacity than there is transmission capacity to route that electricity to where vehicles need to be charged for instance. And, that requirement for new transmission capacity is going to be very significant for infrastructure engineering, by the way, for Bentley Systems with our Power Line Systems acquisition for transmission capacity, and that will be hastened in any case by this new legislation. So together, while the further increases in water and broadband and grid will just be starting from the IIA, hopefully, then the permitting advances will start to make a difference in major projects. And my hope and thought is that, that will sustain these opportunities for some years to come.

<<Joe Vruwink, Analyst, Robert W. Baird>>

And then, thinking about from a product standpoint, how Bentley addresses some of these things, we were talking a bit recently how a lot of current customers, might be MicroStation as the

foundational product kind of your general purpose application, but then the lead from MicroStation to a specialized application like OpenRoad and you have even more specialized applications. Can you maybe share just the uplift from an ARR standpoint? Or how do you think about monetizing? Obviously, you're enabling your customers to do more work and better work. So with that is coming a higher fee, but they make a return off of it, just how you kind of think about the upside?

<<Greg Bentley, Chief Executive Officer>>

Well, it is the case that MicroStation, our original product is for generic modeling of infrastructure projects can be used for any of them, but no one is working on a generic project. They're working on a bridge or a tunnel or a wind farm. And, we have versions of MicroStation, if you like, our open applications where the engineer is placing drainage systems or ventilation systems for tunnels or bringing to bear the subsurface conditions and funnels and foundations and so forth.

And generally, the throughput and the quality are much better in using those tools, but they don't cost \$1 or \$1.41 per hour, its a multiple of that. We say application mix accretion moving to these more specialized products and spending a higher proportion of the engineer's cost, as would be more characteristic of product engineering, let alone EDA. Those are advances we're rather confident about and are, as I say, nowhere near approaching diminishing returns on that. But going digital has become the priority, and for our accounts not only for us, for these reasons of capacity constraints. And there's no end in sight to the capacity constraints because the new engineers are not in school and the existing cohorts of civil and structural geotechnical engineers would wish to retire especially after the pandemic. So, we think that's a considerable accretion opportunity in our existing accounts.

<<Joe Vruwink, Analyst, Robert W. Baird>>

Stepping back for a second. So, the work we've been talking about and thinking about the stakeholders. There, of course, is an asset owner, which would be a state DOT in this example. We talked about the biggest design firms. And then, there's also a fairly large ecosystem of smaller firms that are in place, state-based, that spring to action. I guess, I want to focus on the two we haven't covered yet at the owner level. And this is a broader question beyond just here in the U.S., but when you think about asset owners globally that you work with, is that a different type of product? It has been picking up more share of your ARR mix. So, it seems to be the faster-growing area of business. What exactly are you doing for an owner?

<<Greg Bentley, Chief Executive Officer>>

Well, 50% of our business is with the infrastructure owners the asset-intensive organizations. The other 50% with their supply chain, the project delivery firms, the engineering or engineering and construction firms. But let me take the example here in New York City, for instance, of the MTA, the Metropolitan Transit Authority. And I'm sure, there's New Yorkers here who have an

opinion or otherwise about MTA, but they do some of their own engineering work, but the bulk of it is done by their supply chain. But they're taking a greater interest in our asset-wise product and in particular, the digital twin opportunity.

So, if I describe that a bit, the terrific opportunity there, we're aware, unfortunately, of train derailments, not only the catastrophe in India last week, which had to do with the condition of the rails, not the rolling stock. But in Pennsylvania, we had a toxic derailment, it's maintenance of the tracks that determines that. And, there would be maintenance guidelines. It's expensive. You need to stop the train. So this would pertain to the metro here to the subway. The digital twin opportunity is the same. If you can bring to bear the ET, the engineering technologies, the modeling and simulation, the physical reality of the engineering design, including the subsurface conditions, but consider the OT, the operational technologies, the sensors. And in this case of rail, its used to be geometry cars on a train that would record the deflections and the maximum speed. But now, it's devices like a cell phone that are crowd sourcing, if you like, on the trains.

But then, if you look at the IT, so that's the ET, the IT and the OT – the OT. The IT is the maintenance history. You can learn that you don't need to do guideline maintenance, if you attend to what has worked and use machine learning across the fleet of – or real estate, you can do less maintenance, but keep it safer by doing only the necessary maintenance that the digital twin will inform you of. And that's a way in which Singapore, for example, has 5x fewer outages on its subway, since it began using our digital twin for this approach. And the MTA in New York is well along to applying itself towards doing that. It has a long way to go to catch up in the world, but these are important.

The digital twin opportunity for owners is also an opportunity for the engineering firms, if we go back there because their better business model in the future rather than merely selling their hours in CapEx would be to be the creators and curators of digital twins and specialized analytics and AI that they'll create using our digital twin, iTwin platform that we'll help them with so that they provide the digital integrator services to the owner operators.

They're already as an engineering firm that's the engineer of record for each of the assets for the MTA, for instance, here in New York and everyone can win, including the digital twins for existing infrastructure costing less than zero, when you consider how it can improve the maintenance and yet avoid problems. So another example, maybe I'll conclude with as far as owners is in Italy, where the bridge collapsed in Genoa and was a winner in our going digital awards for the digital twin approach, with which they replace the bridge in less than two years. That same firm that did that work has now been awarded a contract to implement digital twins for the other 143 bridges in Italy, which likewise are similarly at risk to make sure there isn't such a catastrophe. So, those things are getting the attention of owner operators in the world.

<<Joe Vruwink, Analyst, Robert W. Baird>>

And then, to finish up on the other end of the spectrum, the small firm SMB, generally speaking. And it's here where I think Bentley has done some new things, creative things. You've always

been a very, let's say, enterprise focused, direct selling efforts. But since you've been public, new logos have contributed anywhere from 2 to 4 percentage points of incremental growth. So, what is it about that opportunity that I guess you now appreciate and what are you doing to better capture it than might have been the case over most of your history?

<<Greg Bentley, Chief Executive Officer>>

Well, going public in 2020 didn't alone make us grow faster, but I do acknowledge that it caused us to, if you like, sit up straighter and say, what are we relatively neglecting in terms of opportunities that we owe to our shareholders, including ourselves. And there are as many engineers, infrastructure engineers working in firms with 50 or fewer engineers than there – there are as many of those as work in the larger firms, but we had only focused on direct sales, we're 92% direct and going to market. And we said we can do better at marketing, and we especially should bring our solutions to the attention of the engineers and smaller firms.

And so, we began with an inside sales, direct engagement, digital engagement, where we can in smaller firms and that has resulted in the new logos that you described. I am surprised myself at this level of opportunity. And the way I put it is that we think our products are well reputed an engineer and a smaller firm would recognize Bentley and perhaps say not sure a Bentley is for me. But, what we say, we have a subscription that includes expert assistance and so forth. And the take-up has been beyond what I would have imagined and SMB is not quite yet a quarter of our business, but we think has – the experiment has been very – has established that we need to focus there as well.

You mentioned the Departments of Transportation and as busy as they are, they've exhausted the extent that their traditional supply chain, the engineering consultancies that do the bulk of their work can't take on anything more. And they need to expand their catchment to put to work the smaller firms, the smaller civil engineering firms who in the past have primarily done site civil engineering work, rather than transportation civil engineering work, and they're not familiar with our products and our opportunity for us. So at the same time as the DoTs facing political pressure with all this IJIA money and as busy as the engineers are, how are we helping the smaller firms, the disadvantaged firms? And so, they're opening up their supply chain in that respect. That will be an opportunity for us as well as our competitors.

<<Joe Vruwink, Analyst, Robert W. Baird>>

So that's new pertaining to go-to-market, something else that's relatively new a pertaining commercial model. I think, Bentley, actually, over its history has been fairly progressive. I think there was a subscription transition of a sort dating back to the mid-1990s. And more recently, this has entailed consumption arrangements and not just consumption, but you talked about success members. So you're also offering a level of expert service in addition, but I think there's a logic in doing this. Maybe we can talk about E365 because it is unique relative to your peer group, and why you ultimately view this as best for customers but also something that would benefit your financial results?

<<Greg Bentley, Chief Executive Officer>>

Well, we've always had on the order of 1,000 civil and structural and geotechnical engineers among our colleague ranks and the theory was that they would help our users adopt software better. But, we missed the – when SaaS companies got started and if you only generate ARR and revenue from consumption, you internalize from the start helping with adoption and expansion. And a lot was learned that we didn't take note of until we went public and brought in some executives, with experience from other public companies. We have a great management bench, but we couldn't have had public company experience.

So some of these executives coming in from comparable roles, for instance, at Autodesk helped us institutionalize this success group in the following way, when we had an enterprise subscription program where we had one fee for the year for an enterprise and entitle them to use all of our products in any quantity. And then, their renewal offer was a mark-to-market, if you like consumption, but a year lag. The large firms preferred to be built per engineer per day, which we now do because the owner-operators are willing to reimburse because they know they get a better product, better quality and more efficiency.

And so we can – they can do that now with the change to a daily consumption-based model rather than a year at a time consumption based. The reason we like the program better is we've learned to bundle into that price, our cost to cover dedicating our own experts, our civil and structural geotechnical engineers and a success team who each quarter, with each enterprise prioritize a set of blueprints for new digital workflows, for instance, and especially to gravitate to more specialized products, as I was describing, competitive displacement opportunities as well, and that's working out well for us and for our accounts with faster NRR and accretion rates.

<<Joe Vruwink, Analyst, Robert W. Baird>>

Any questions from the audience? There's a lot of advanced technology topics, AI is the big one. I think, about some of the things Nvidia has done as they're bringing together engineering insight and trying to visualize that at high fidelity. This is the Omniverse product from Nvidia. And of course, I think, just the value of data given what's happening in AI has become very relevant and topical.

I think, Bentley has direct involvement in some of these things. You were the original partner brought up on stage when Nvidia launched their offering. But as it pertains to making data more usable, I've always thought something like iTwin and the digital twin strategy has been very early for its time. How do you think, Bentley, participates in the AI topic? Do you see it changing some of the things customers use you for? Or do you see it as an incremental opportunity to kind of be a data layer or at least a helpful supplement to what is going to be needed?

<<Greg Bentley, Chief Executive Officer>>



The digital twin opportunity is all about opening up the dark data, the modeling and simulation work of the engineers has only been used one store in CapEx, but we need to extend the life of the assets for much longer and make them resilient and adaptable fit for purpose and so forth as in the case of the train derailments to keep them safe and optimize the maintenance. The iTwin platform layer semantically aligns the data from the obscure engineering formats, ours and our competitors, by the way, in an open source way. It manages the changes over time. So it's a 4D evergreen digital twin and aligns the ET with the IT and the OT for the insights that we talked about. The immersive visualization can benefit from these choices of the last mile, which now are broader with Apple headsets now to go along with what Nvidia and Microsoft and Unity and Epic bring about. But it isn't a digital twin for an infrastructure assets, if that doesn't have the engineering veracity and frame of reference, for instance, to make sense of what you can get from IoT sensors and so forth.

So it's just tremendous that here again, and industry and infrastructure, we don't have to invent these innovations like cameras and sensors and video that – and the cloud computing, horsepower that makes this all possible, we just get to apply it in these very valuable ways. And our iTwin platform layer to align and manage – and change manage, the 3D and 4D data is an example of that, that just benefits from all of this.

For our engineering firm users, the machine learning is much applied now in the computer vision when from drones because they're on the drone survey business now. They can have an as operated 3D model of all infrastructure because the drones produce video, the video of overlapping images, our software resolves the overlapping images to a reality mesh model, that can be engineered to with our applications, but machine learning is first used to recognize the digital components in an infrastructure asset, so that the existing models and drawings can be referenced to and provide that frame of reference, for instance, to optimize maintenance.

At any rate, the data is more valuable than ever, and it is recognized now that the data will be more valuable in the future in ways that we can't even anticipate. An immediate example is that most projects still start with a blank screen, and you can use AI and generative AI in the early going to find and reuse the modules that can be parameterized to produce better quality and there's just an awful lot of headroom in all of this. The data will be more valuable. Our project-wise environment, as the place that data can be maintained and aligned and federated with our comprehensive schema is a good start on that, and I think it will also be to our benefit. But, we aspire to be in an ecosystem with lots of hybrid opportunities for partners of the sort we're talking about.

<<Joe Vruwink, Analyst, Robert W. Baird>>

Great. Unfortunately, we're out of time, but please join me in thanking Greg and Bentley.