2017 Performance Highlights

Founded in 1984, Bentley Systems has more than 3,500 colleagues in over 50 countries. Bentley is a global leader in providing engineers, architects, geospatial professionals, constructors, and owner-operators with comprehensive software solutions for advancing the design, construction, and operations of infrastructure.

- On track to surpass annual revenue runrate of $700 million during 2018
- Constant currency Annual Recurring Revenue (ARR) grew 11% (constant currency revenue grew 5% reflecting planned decrease in traditional professional services)
- ARR reached 83% of revenue (93% of revenue recognized ratably)
- Sustained 98% subscription retention rate
- Achieved revenue runrate growth of approximately 20% or more for regions including China and Africa
- Achieved revenue runrate growth of approximately 20% or more for brands including ProjectWise, OpenRoads, ContextCapture, AECOsim Building Designer, OpenPlant, OpenUtilities, Navigator, and LumenRT
- Increased net colleague headcount by approximately 200
- Since 2012 invested over $1 billion in R&D and acquisitions
- Entered into new bank credit facility, increased to $500 million reflecting record levels of operating cash flow
- Siemens’ cumulative purchases of secondary (non-voting) shares from colleagues and retirees on NASDAQ Private Market resulted in its ownership of 9% of fully diluted shares
During project delivery, the practice of industrializing BIM can improve predictability, performance, and outcomes by using—and reusing—ready-made digital components from concept to completion, adding more engineering content earlier in the design process, for better, more informed design decisions. Applying industrial UAVs to continuously survey existing conditions of a project and provide engineering-ready digital context throughout planning, design, and construction, the BIM process can be further industrialized, by automating both surveying and construction workflows, and providing visibility into the path of construction, virtually.

Digital engineering models represent an accumulated intelligence—the “digital DNA”—developed throughout the design/engineering process. Leveraging digital DNA in both construction and operations is made possible by aligning that data in a connected data environment (CDE) to be securely accessible for reuse by relevant stakeholders. The digital components and digital context within the CDE can be geo-coordinated for immersive visibility into project delivery and asset performance, leading to more informed decision making and improved outcomes.

Information mobility is fundamental to realizing the benefits of “Going Digital”—reflecting the reuse of information throughout the design-build-operate lifecycle for infrastructure projects and assets, and, as important, it enables data generated by one software application to be used by another application for cross-discipline workflows.
In digital workflows, data captured or created for one purpose is accessed by computer programs for other purposes, saving time, minimizing rework, and improving data quality over the asset lifecycle. Digital workflows can also converge the work of different disciplines for additional advancements within project delivery and asset performance.
In 2017, Bentley introduced new ProjectWise CONNECT Edition cloud services, powered by Microsoft Azure. The Azure-based services complement ProjectWise Design Integration services (deployed on-premises, as a cloud service, or in any hybrid combination) for work-sharing across collaborating engineering teams. With the shared Azure platform, project delivery organizations using both ProjectWise CONNECT Edition’s new “365 Services” and Microsoft Office 365 benefit from digital workflows between their engineering work processes and enterprise productivity tools.

Learn more: www.bentley.com/ProjectWise.

New ProjectWise CONNECT Edition cloud services for comprehensive project delivery include:

- Deliverables Management to create, send, and receive transmittals, submittals, and RFIs
- Issues Resolution to submit, manage, and resolve issues
- Field Data Management for configurable, forms-based data collection
- Project Performance Dashboards for insight into project progress
- Share to securely share project information
- Construction Management for contract, cost, change, and risk management

AssetWise CONNECT Edition leverages a connected data environment to facilitate the interoperation of multiple data sources across IT, OT, and ET domains, for improved decision support and proactive maintenance of infrastructure assets. The AssetWise platform uniquely federates the contexts within which asset information can be effectively managed across the infrastructure lifecycle, to comprehensively support functions that improve asset performance.

Learn more: www.bentley.com/AssetWise.

At the Year in Infrastructure 2017 Conference, Bentley introduced the iModel 2.0 cloud platform and the iModelHub cloud service to accelerate “going digital” for its users of ProjectWise Design Integration services. Taking advantage of Microsoft Azure cloud services, the addition of iModelHub to ProjectWise fully enables a connected project – synchronizing all checked-in project changes, and automatically updating a project iModel for continuous design reviews that highlight progress and risks in digital workflows across disciplines.

iModelHub journals all project changes on a timeline, and notifies project participants, based on their ProjectWise workflow configuration, about the availability of relevant changes. Participants can choose to synchronize to and from timeline milestones, and can visualize, summarize, analyze, and interpret the impact of ongoing changes. By distributing and synchronizing copies of iModels anywhere, the iModel 2.0 cloud platform is designed to support reliable and asynchronous project visibility. Therefore, project delivery and work packaging can dependably and accountability “industrialize” BIM, supported by the tracking and management of constant change through design and construction workflows, and immersive design review and visibility into ongoing project and site status.

Learn more: www.imodelhub.com.

Automating Change Synchronization, Digital Alignment, and Immersive Visibility: iModel 2.0 and iModelHub

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Our iModelHub cloud service provides the solution for many infrastructure engineering challenges where BIM modeling has created the potential for advancement, but where information misalignment has limited its value. Indeed, we have engineered the iModel 2.0 cloud platform to instill digital alignment, change-based accountability and synchronization, and immersive visibility as its core tenants. The value of this change-based visualization will prove so indispensable, I predict most organizations will never want to do another project without it.

– Keith Bentley, Bentley Co-founder and Chief Technology Officer
Bentley Systems is undertaking to cooperate with other significant participants in the infrastructure asset supply chain to accelerate benefits from going digital. The parties work together to assure that their respective cloud services uniquely federate and interoperate for productive digital workflows.

**Digital Co-venturing**

In his keynote at Bentley’s Year in Infrastructure 2017 Conference, Helmuth Ludwig, Global Head of Information Technology for Siemens, discussed the companies’ shared contributions towards digital workflows and digital cities. He provided an update on the various projects underway, including Siemens’ approach to integrating and digitalizing the entire customer value chain, and the business value is crucial to success.

Microsoft’s Head of Azure Cloud Compute, Corey Sanders, presented a guest keynote at The Year in Infrastructure 2017 Conference titled, “Cloud Enabled Digital Transformation.” Sanders stressed the importance of choosing and harnessing the correct technologies for business needs amidst continual technology innovations. He noted that the ongoing ability to build successful technology solutions and practices to drive digital transformation and business value is crucial to success, and how organizations can advance by the companies’ jointly developed cloud services to automate the flow of information among surveying, in which UAVs can capture the engineering-reality context for better design decisions, and GPS-enabled machine-controlled construction equipment in the field that can read the 3D engineering model for accurate, automated grading.

At the Year in Infrastructure 2017 press conference, Topcon Positioning Systems’ CEO, Ray O’Connor, announced the creation, in collaboration with Bentley, of the Constructionengineering Academy, to promote digital workflows to streamline construction processes and improve project delivery. The Constructionengineering Academy, which will be offered in several locations around the world, will base its curriculum around the workflows made possible by the companies’ jointly developed cloud services to automate the flow of information among surveying, in which UAVs can capture the engineering-reality context, civil engineering applications that can reference that reality context for better design decisions, and GPS-enabled machine-controlled construction equipment in the field that can read the 3D engineering model for accurate, automated grading.

Microsoft executives participated in Bentley’s press conference, which kicked off the Year in Infrastructure 2017 and in other discussions and panels throughout the conference.

In addition to developing new services and applications based on extensive in-house domain expertise, acquisitions serve to extend the reach of Bentley’s comprehensive modeling environment, while integrating new capabilities of specialized engineering, and bridging historical gaps in engineering workflows.

**Acquisitions**

**Acquisition of SYNCHRO Software Extends Digital Workflows for Infrastructure Project Delivery Through 4D Construction Modeling**

With the acquisition of SYNCHRO Software, leader in 4D construction modeling software for scheduling and project management, Bentley broadens its ProjectWise construction offerings. By incorporating SYNCHRO 4D construction modeling through Bentley’s ProjectWise Connected Data Environment, infrastructure project delivery can now benefit from unprecedented workflow advancements, as traditionally disconnected workflows become digital workflows. By synchronizing changes from BIM, schedule, and/or field conditions, SYNCHRO provides visibility into project data and design, and the construction sequence over time, making it quick and easy to communicate and analyze the impact of changes on the entire project delivery process. SYNCHRO users can compare construction strategy alternatives—even in design and bid processes—and evaluate the feasibility and efficiency of different scenarios, gaining insights into the best possible construction outcomes.

**Bentley Augments Design Offerings with LEGION’S Pedestrian Simulation Technology**

The acquisition of LEGION’S pedestrian simulation technology augments Bentley’s design offerings with capabilities which enable designers to design, test, and validate comparative simulations around pedestrian traffic flows including interaction with physical obstacles, vehicles, and other pedestrians, and for evacuations of public spaces, for example, train stations, to determine the best designs. Using the simulation tools with Bentley’s AECOsim Building Designer and forthcoming AECOsim Station Designer offerings, designers and engineers can include pedestrian traffic in their conceptioneering—an iterative modeling and analysis workflow which enables comparison and evaluation of numerous design alternatives.

**Bentley Integrates Geotechnical Engineering within Digital Workflows through Acquisitions of PLAXIS and SoilVision**

In 2018, Bentley announced the acquisition of PLAXIS, the leading provider of geotechnical software, and SoilVision, a soil engineering software provider. The acquired technologies make Bentley a complete source for geotechnical professionals’ digital workflows and extend BIM advancements to the subsurface engineering of all infrastructure projects. Through Bentley’s comprehensive modeling environment, PLAXIS and SoilVision’s applications will integrate with Bentley’s structural applications (STAAD, RAM, and SACS) for unprecedented geo-structural engineering performance.
Bentley Institute advances the infrastructure professions by encouraging and supporting Bentley users’ ambitions in going digital. Its initiatives attract and advance infrastructure professionals, and future professionals, through continuous learning about technology solutions, as well as project delivery and asset performance best practices.

**Digital Advancement Academies**
Bentley Institute partners with industry organizations, project delivery firms, and owner-operators to advance project delivery and asset performance best practices through the Digital Advancement Academies. Examples include:

- **BIM Advancement Academy** – provides a knowledge base and acts as a catalyst for project collaborators to advance BIM processes and technology, developing a legacy of best practices and innovation for successful project outcomes.
- **Construction Academy** – drives the adoption of best practices including Advanced Work Packaging, WorkFace Planning, Total Access Management, and Systems Completion.
- **Constructioneering Academy, in partnership with Topcon Positioning Group** – provides opportunities for learning best practices in constructioneering, a process of managing and integrating survey, engineering, and construction data to streamline construction workflows and improve project delivery.

Learn more: www.bentley.com/services.

**Future Professionals Program**
Bentley Institute’s Future Professionals Program offers access to more than 50 Bentley software applications and a wide range of learning materials to help students gain hands-on experience with the software used by infrastructure professionals worldwide. Students can test their skills through participation in various design competitions.

Learn more: www.bentley.com/academic.

**Digital Advancement Research**
The Digital Advancement Research Team collaborates with government, university, and industry visionaries to demonstrate innovative solutions for the future infrastructure needs.

**Bentley Institute Press**
The Bentley Institute Press publishes textbooks and professional reference works dedicated to the needs of the educational and infrastructure communities. Available in print and e-book format, the publications share Bentley’s years of expertise in infrastructure disciplines.

To browse available titles: www.bentley.com/books.

**Continuous Learning**
Learning opportunities are also available through the Product Training Partner Program, on-demand courses, live virtual training, conferences, webinars, special interest groups, and more.

Learn more: www.bentley.com/learn.

Since its inception, Bentley Systems and its colleagues have embraced a culture of being good neighbors, offering assistance, and “giving back” to communities in need throughout the world.

**Worldwide Corporate Giving**
Through corporate giving, Bentley Systems strives to make a positive impact for people around the world. Bentley provides financial support for global and local organizations like Water for People, Engineers Without Borders, The Hunger Project, Habitat for Humanity, The United Way, and many others. These organizations help to provide people around the world in need with basic human necessities like food, water, and shelter.

**Support for STEM Programs**
Bentley supports science, technology, engineering and mathematics (STEM) efforts around the globe. Bentley’s approach to giving covers educational programs such as the Future City Competition, MATHCOUNTS, SMART Competition, TechGirls, and more. These programs help to encourage, educate, and empower students to explore the engineering world.

In addition, Bentley supports STEM education for students around the world by making annual corporate STEM grant funds available on behalf of every Bentley colleague. Colleagues can allocate these grants to the specific STEM programs of their choosing within their communities.

**Colleague Involvement**
Along with providing financial contributions, Bentley colleagues are encouraged to personally serve charitable and educational organizations in day-to-day operations and in leadership roles. Colleagues can be found in classrooms, on governing boards and speaker panels, participating in charitable activities and events in their communities, and in one-on-one situations making personal and lifelong impacts on the people and communities around them.

**Sustainability**
In an effort to manage its corporate footprint, Bentley Systems gauges and strives for efficiency in its business practices including corporate travel, colleague commuting, and energy use for its many offices around the world.

Bentley’s office locations in the U.S. are equipped with electric vehicle charging stations, offering convenient recharging for colleagues who commute with electric vehicles. Additionally, investments in virtual meeting technology continue to reduce required travel time for many Bentley colleagues.

**Bentley Institute Press**

Bentley Institute Press publications. Plain Language BIM, by Iain Miskimmin

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