

Siemens Spotlight on Innovation 2019

CIMdata Highlight

On May 22, 2019, CIMdata attended Siemens Spotlight on Innovation 2019 at the Dr. Phillips Center for the Performing Arts in Orlando, FL. The Phillips Center is a Siemens smart building technology partner¹ and is a showcase for various Siemens offerings. During the meeting Siemens claimed it had over 4,000 employees working in the greater Orlando area. During the morning of the one-day event, Siemens conducted a briefing for analysts while the afternoon session included several presentations that highlighted how users of Siemens technology and applications are developing and delivering innovative solutions to many diverse problems.

In the morning session, Raj Batra, President of Siemens Digital Industries (DI) USA, described the 5 DI business units: Software, Factory Automation, Motion Control, Customer Services, and Process Automation. He stated that each of these businesses has either a number 1 or number 2 position in their market. Mr. Batra said Siemens continues to verticalize their business to better leverage their domain expertise and global knowledge to support enterprise digitalization and the integration of software and automation within their customers—more and more of whom want to use manufacturing as a competitive weapon where time to market and first mover advantage continue to be most important.

Mr. Jim Rusk, CTO Digital Industries Software group, described how Product Lifecycle Management (PLM) is a critical component of how they deliver information to their customers and is key to creating a closed-loop digital twin. According to Mr. Rusk, Siemens, powered by a series of strategic acquisitions, is not just focused on PLM software but on delivering a broad range of solutions and technologies (e.g., IoT, MindSphere, etc.) that enable companies to gather a full range of in-service product data and create comprehensive feedback loops between the manufacturing, operational, service, and engineering domains. Mr. Rusk claimed that Siemens has grown their business substantially, both organically and through several critical acquisitions. He further stated that they are embedding generative engineering into their tools, going beyond topology optimization, and linking generative technology with artificial intelligence (AI) and other domains.

Dr. Norbert Gaus, Siemens Corporate Technology, responsible for driving digitalization across Siemens, discussed three areas of importance. 1) Financially, companies need to know how to secure their brownfield investments as part of their IoT strategy; 2) With new smart, connected products there will be more and more communicating among products to support autonomous (systems of systems); and 3) From a research perspective, everything is centered on the digital twin, e.g., how to design products and factories, how to engineer them, and how to operate the products and the factory. Companies will need to model the product in very different ways but have to be consistent in how things are defined—and stay consistent over time. Finally, these twins will drive applications that feed forward and feed back to the lifecycle.

Next up, Ms. Barbara Humpton, CEO Siemens US, listed their 5 focused business areas: Gas & Power, Smart Infrastructure, Digital Industries (the bread and butter of Siemens), Renewable Energy, and Healthcare. She stated that Siemens, in business since 1847, has been involved in every Industry evolution (1.0, 2.0, etc.) and continues to help define Industry 4.0. According to Ms. Humpton, Siemens has increased its R&D spending 10% over the previous year (to \$1.4 billion). She claimed that Siemens has donated over \$3 billion in hardware and software to US

¹ <https://news.usa.siemens.biz/press-release/building-technologies/siemens-and-orlandos-dr-phillips-center-performing-arts-expand-s>

schools in the last several years. She also described programs Siemens US has in place to help US veterans receive free PLM training as they transition to civilian life.²

In the first afternoon session, Mr. Mouse McCoy, CEO of HackRod, described how they designed and 3D printed a new motorcycle in two weeks, a new vehicle assembled for the first time at the event. Mr. McCoy also discussed their work with Oak Ridge Laboratories to 3D print a fuel tank with a new combination of materials never used before.

In a great illustration of Siemens STEM outreach, Ms. Ashley Kimbel, an 18-year old high school student from Huntsville, Alabama, described how she designed a prosthetic foot using Siemens tools (mainly the Solid Edge portfolio). Her exciting work landed her a spot on the Today Show and she also had a day in her honor in Huntsville. CIMdata thinks this is a great example of how a dedicated person can use PLM tools to make a positive difference for people's lives.

Mr. Bharat Amin, Newport News Shipbuilding CIO, described how the shipyard was using Siemens tools to improve their ability to design and manufacture aircraft carriers and submarines. In lessons learned, Mr. Amin listed the five things he believes are essential to allow disruption:

1. Nurture trust and relationships
2. Cut through bureaucracy
3. Go against the grain
4. Have an entrepreneurial spirit
5. Be willing to take risks

The afternoon closed with two panels in which several industry leaders described the impact of technology on their businesses and how they were addressing the issues that impact was having on their companies.

The day's events, while short, were another great illustration of the breadth of Siemens reach in many dimensions. They have been a big part of every Industry evolution, including being a key member of the advisory panel to the German government that helped define the Industry 4.0 vision and initiatives. They partner readily with educational institutions, their many industrial customers, and on state-of-the-art buildings like the Dr. Phillips Center. It is this breadth of reach and depth of resources that has really helped Siemens Digital Industries excel in the global PLM market. CIMdata expects this synergy to continue for years to come.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at <http://www.CIMdata.com> or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.

² See CIMdata's highlight: <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/12090-siemens-us-making-a-difference-for-america-s-veterans-highlight>