SOLIDWORKS 2017: An Expanding Platform for Innovation

CIMdata Commentary

Key takeaways:

- *The SOLIDWORKS 2017 launch highlighted the continued evolution of the SOLIDWORKS portfolio to support developing smart, connected products*
- *This release expands support for multi-CAD and synchronous collaboration, essential capabilities for customers to optimize participation in their value chains*
- *Companies of all sizes need full lifecycle support from their solution providers, and SOLIDWORKS is focused on delivering right sized, right packaged offerings to their customers*

On September 19-20 2016 Dassault Systèmes convened their SOLIDWORKS 2017 launch event in the shadow of Gillette Stadium, the home of the New England Patriots, about 20 miles from their Waltham, MA headquarters. In the recent past, this launch event was a small gathering for press and analysts, but has now grown into a major customer event, with nearly 160 customer representatives on site, and another 2,000+ users attending online.

Mr. Gian Paolo Bassi, SOLIDWORKS' CEO, kicked off the event by describing SOLIDWORKS 2017 as providing "the power you need to drive innovation." In his talk, power meant a couple things. Devices are becoming more powerful, and increasingly smart and connected, which means users need new solutions to help them keep up. As importantly to Mr. Bassi, he also referred to the power of our imagination, but also the courage to invent the future. We live in a complex world, claimed Mr. Bassi, with challenges from all sides. Technology can help us solve many of those problems, if we have the imagination and strength of will to bring those solutions to fruition.

Of course, SOLIDWORKS' customers need to innovate, but innovation is key to SOLIDWORKS as well. Mr. Bassi stated that the company needs to delight their customers through innovation. According to Mr. Bassi, a key to providing innovative capabilities is platform thinking. He went on to state that many successful companies are based on platforms, with Google and Facebook cited as two prime examples. These two examples are important because networks are a reality in value delivery and both companies rely on networks and network effects for their success. They also share another attribute with SOLIDWORKS: all of their customers need a powerful, secure collaboration platform to support their networks. Even as he was making the platform argument, Mr. Bassi expressed his satisfaction that SOLIDWORKS was a "Swiss army knife" for product development, used in applications from medical devices to architecture. But meeting all of the varied requirements across those applications requires a product with both power and flexibility, and according to Mr. Bassi, SOLIDWORKS is investing more in those areas. He wants solutions to be "a few clicks away," and believes they can replicate their success of having done that with simulation tools and data and process management. But Mr. Bassi realizes that their future solutions will be dedicated to some tough problems that are often difficult to solve. This will require his team to offer solutions with more focused packaging than in the past. This packaging is critical because while small companies have the same product development issues as large ones, they often lack the capacity and budget to assimilate overly complex offerings.

Figure 1—The SOLIDWORKS Portfolio Spans The Lifecycle
(Courtesy of SOLIDWORKS)

Today, SOLIDWORKS offers a wide range of solutions, as shown in Figure 1. These offerings are a mix of SOLIDWORKS' native solutions, those that leverage the **3D**EXPERIENCE Platform that is the basis for Dassault Systèmes' broader PLM vision, other Dassault Systèmes offerings (e.g., 3DVIA Composer), and key partner offerings. One very interesting partner example was Xometry, which provides a free product cost management (PCM) solution embedded in SOLIDWORKS, which links to Xometry's contract manufacturer network. Cost your parts and Xometry will match you with the right manufacturer to meet your requirements. SOLIDWORKS also uses a partner, Xively, for supporting Internet of Things (IoT) applications.[1] The other way that SOLIDWORKS must innovate is in creating new licensing and engagement mechanisms, and these were evident during the presentations.

Mr. Kishore Boyalakuntla, Brand UX Leader and Product Portfolio Management Senior Director, made the big reveal of SOLIDWORKS 2017 during his Road Map session. SOLIDWORKS 2017 was described as a bundle of desktop functionality and online services available to subscribers (i.e., paying maintenance). There are too many SOLIDWORKS 2017 features to cover in a short commentary, but the launch announcement,[2] launch site,[3] and SOLIDWORKS blog[4] provide more details. The paragraphs that follow cover some highlights.

According to Mr. Boyalakuntla, the new release incudes 520 enhancements, many requested by SOLIDWORKS customers, including 250 in mechanical CAD and 105 in their electrical offerings (which he described as "a baby, growing fast"). With this move to smart, connected products for manufacturers of all sizes electrical and electronics support is crucial. While it was not a focus of the event, their partnership with Altium offers their customers access to a leading electronic design automation (EDA) tool integrated with SOLIDWORKS.[5] Supplementing the desktop applications are a set of SOLIDWORKS 2017 subscription services that will be updated and enhanced during 2017, some online and some on-premise:

- Visualize Standard—Based on the Bunkspeed offerings from the RTT acquisition, SOLIDWORKS Visualize is an on-premise offering that helps users create high quality renderings that the launch event audience had trouble

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[1] http://blogs.solidworks.com/solidworksblog/2016/02/solidworks-ecosystem-designing-connected-products.html?xtmc=xively&xtcr=3
[2] http://www.3ds.com/press-releases/single/dassault-systemes-introduces-solidworks-2017/
[3] https://www.solidworks.com/launch/index.htm?
[4] http://blogs.solidworks.com/solidworksblog/2016/09/solidworks-2017-launch-event-recap.html
[5] http://www.altium.com/company/newsroom/press-releases/altium-announces-new-pcb-design-tool-integrated-solidworks

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distinguishing from photos. SOLIDWORKS Visualize Professional offers more advanced animation and network rendering capabilities.[6] CIMdata believes that bringing technology from the Dassault Systèmes portfolio to SOLIDWORKS and their channel is an excellent way to enhance the overall offering with lower cost and risk to the SOLIDWORKS brand.

- 3DPartSupply—Most designs use a high percentage of catalog parts and rightfully so, since this can reduce risk and cost. 3DPartSupply is an integrated SOLIDWORKS online tool that lets you create shapes and then search the Traceparts and 3DContentCentral on-line catalogs for matching parts.

- 3DDrive—Many companies use services like Dropbox to share valuable intellectual property (if they aren't simply emailing it over the open Internet). Leveraging the **3D**EXPERIENCE platform, 3DDrive helps users manage and securely collaborate on content online.

- MySolidWorks—The official community of SOLIDWORKS users offers a variety of resources, including over 1,000 tutorials. This site, powered by NETVIBES and EXALEAD from Dassault Systèmes, provides access to most of SOLIDWORKS' online services, and makes it easy to get help from peers, SOLIDWORKS, and their value-added reseller (VAR) partners.

- Streaming—A MySolidWorks offering is the platform for streaming services. In his session, Mr. Suchit Jain, VP of Strategy and Business Development for SOLIDWORKS, spoke about a recent beta test of a streaming version of SOLIDWORKS that had over 500 users participate in a one-hour trial that yielded some useful feedback, both pro and con.

Another important capability is support for other MCAD file formats. According to SOLIDWORKS, about 60% of their customers get MCAD data in formats other than SOLIDWORKS. Their 3D Interconnect offering highlighted at the event provides "seamless" incorporation of MCAD data from multiple sources, including Solid Edge and NX from Siemens PLM Software, Pro/ENGINEER and Creo from PTC, Autodesk Inventor, and Dassault Systèmes CATIA V5. 3D Interconnect also includes "intelligent change" functionality that SOLIDWORKS claims will understand MCAD model changes and update the non-native data used for the multi-CAD application. Their customers with multi-CAD requirements were applauding these capabilities during the launch session. CIMdata agrees that multi-CAD is an essential capability for supporting today's complex global value chains.

In conclusion, companies of all sizes need full lifecycle support from their solution providers, and SOLIDWORKS is focused on delivering right sized, right packaged offerings to their varied customers. Woven into the launch event presentations were videos and some live testimonials from lone innovators, startups, and larger SOLIDWORKS customers that highlighted how both SOLIDWORKS the company and their offerings were committed to giving this wide rage of customers the power to innovate. This includes supporting their 1.3 million active DraftSight (2D CAD) users, over 10 million college students trained on their solutions, and over 60 business accelerators/incubators growing the next generations of customers, to name just a few elements of the SOLIDWORKS ecosystem. SOLIDWORKS WORLD is known for an enthusiastic customer base, and with the warm reception of this newly expanded launch event the company is providing yet another forum for their fan base to view and applaud SOLIDWORKS' evolution. CIMdata believes that the company has made strong moves to support the development of smart, connected products and their "Swiss

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[6] http://files.solidworks.com/pdf/SW2016_Visualize_DS_ENU.pdf

army knife" solution has been broadly used to great success. With these announcements it will probably find some new applications not even anticipated by the SOLIDWORKS team.

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