

Autodesk Accelerate 2015: Getting Down to Business

CIMdata Commentary

Key takeaways:

- *Autodesk's second Accelerate event reiterated their take on the "Future of Making Things," acknowledging revolutions in means of production, demands, and the nature of products themselves*
- *During the event, Autodesk announced their acquisition of SeeControl, an Internet of Things (IoT) platform, a move that will help their customers respond to the IoT trend*
- *Their vision for Autodesk's product innovation platform revolves around meeting these challenges head-on for the benefit of their varied customers*

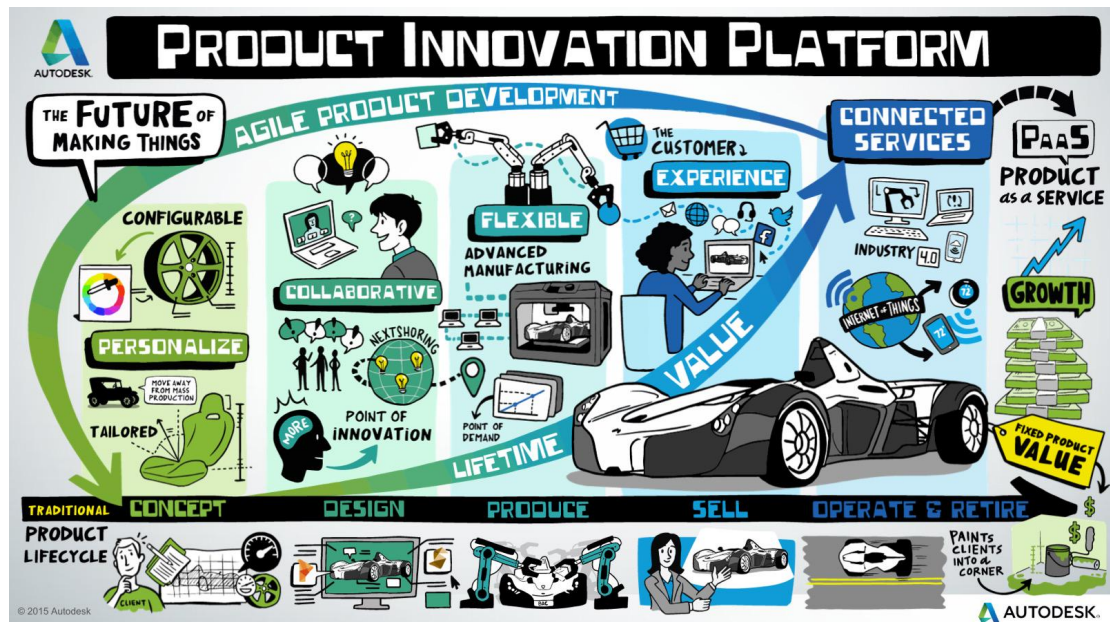
On September 1 and 2 Autodesk held their second Accelerate conference at the World Trade Center in Boston's Seaport District. This new, bigger venue was necessary with attendance up by about 50% over the first event in 2014. Accelerate focuses on Autodesk PLM 360, their entry into the cloud product lifecycle management (PLM) market. Announced in late 2011, PLM 360 has steadily gained customers and is one of the pillars of their "360" portfolio, the number attached to their commercial cloud offerings.

In the opening keynote, Mr. Scott Reese, Autodesk's VP for Cloud Platforms, expanded on Autodesk's message from Autodesk University in December 2014: the future of product development is being rewritten by trends in the means of production, demand for products, and in the nature of those products themselves. Product markets are full of companies that exemplify the first trend. You no longer have to build a large factory and make other significant capital investments to get a product to market. Value chains have evolved to use new collaboration technologies, 3D printing/additive manufacturing, and flexible manufacturing to help new businesses ramp up quickly and rapidly adapt to customer demands once they get to market. The company believes their investments in their Spark open platform for building 3D printing applications and Ember additive manufacturing reference architecture will help them understand and leverage this trend for the benefit of their customers. The changing and expanding demands of consumers are also well documented in the market. Baby boomers were brand loyal and cost conscious. The following generations are less brand loyal, and are often looking for products that speak to them (like the Apple iPhone) or, in many cases, are made just for them. Today's manufacturing environment is helping many companies reach the mass customization vision, truly enabling them to address markets of a single consumer. Finally, the products themselves are changing. Just about any product today can be smart (containing electronics and software) and they are increasingly connected. It is not just about styling and mechanical design. Companies need to master skills in electronics and software design and delivery to survive in this new world. These smart, connected products have great potential to transform companies and product development itself. For example, product designers have long yearned for real-time usage data to understand their customers more deeply and modify their products accordingly. The Internet of Things promises to deliver this information, and Autodesk's acquisition of SeeControl, an IoT platform company, adds this capability to their product development and manufacturing solution portfolio. (Of course many early IoT adopters are collecting reams of data and not doing much with it, but that is another issue.) The other big way that products are changing is in the materials used in their construction. Materials science is evolving to support this need and in the not-too-distant future, designers

will not only have to worry about defining a product’s features and functions, they will have to also consider the design of materials specific to that application as part of their product development trade-offs. This is already occurring in additive manufacturing, and is extending to other manufacturing processes. Autodesk is just one of the PLM solution providers making significant investments to meet this materials trend head on.

Accelerate 2015 featured a number of Autodesk PLM 360 customers who shared their varied PLM journeys. Mr. Neill Briggs, Director of Product Development at Briggs Automotive Company (BAC) Ltd. delivered one of the most exciting presentations, illustrating how BAC is using Autodesk solutions to build a “bespoke” supercar, essentially a road-legal, single passenger open-air race car that can leave Ferrari’s, Corvette’s, and other high performance cars in the dust. You can have this vehicle, with it’s custom molded cockpit and steering wheel and your tailored driving togs for a mere \$250,000. The seat and steering wheel are produced through a mixture of additive and subtractive manufacturing. Materials are critical since the vehicle has no roof and is open to the environment. To design and build these cars, BAC is using a range of Autodesk solutions, including Sketchbook Pro, Alias, Inventor, computational fluid dynamics (CFD), and now PLM 360. Even though the company is only making 50 cars per year, they still have all the same product development issues faced by large automotive OEMs. Working in partnership with the city of Liverpool and Liverpool University, BAC is building these cars in a small facility in Liverpool across the street from Jaguar Land Rover (JLR). Mr. Briggs invited any member of the audience to visit when in the neighborhood, and one could see many people making the mental calculations to determine how best to do just that. For their next car, they have added VRED and Maya to their design process to allow prospective customers to walk around and experience their “virtual” car.

One interesting and valuable technique Autodesk re-used in this event was having a sketch artist graphically depict the talks and their themes in real-time during the presentations. While a number of these very detailed graphics were developed over the two-day event, the figure below provides a useful summary of the trends discussed, and how Autodesk will address them.



Autodesk’s Vision for their Product Innovation Platform

The graphic draws a nice contrast between traditional product development, and the tools and processes needed to thrive in this new product innovation future. CIMdata has been promoting the need for PLM to evolve to better support product innovation in the context of company strategy and operations. PLM is at the core of this new product innovation platform (PIP). Autodesk has adopted this PIP idea and the graphic does an excellent job of showing how processes, tools, and value chain relationships must evolve to make product development more agile, and to deliver lifetime value to customers

There were many more customer presentations, too many to summarize here. Having attended both events, this year's Accelerate had a different feel, moving from the excitement of the first Accelerate conference and the actions of early adopters of PLM 360. This year the presentations and discussions were also more business focused, looking at the desired business outcomes and how best to get there. This is natural, of course, as a product matures and its customers try to build on their early successes. Many of the presentations highlighted that customers were early in their PLM journey, with major decisions still to come and implementations evolving and expanding. Most were outgrowing their previous reliance on Microsoft Excel to manage workflows and BOMs and newly experiencing the impact of PLM capabilities. A customer panel showed that these early adopters are not shy in demanding better support and new functionality from Autodesk to meet their PLM objectives, something the company seems ready and willing to rapidly supply.

In closing the event, Mr. Jared Sund, Autodesk's Senior Manager PLM Product Management gave attendees a sneak peek at future PLM 360 capabilities and enhancements. He led with the announcement that PLM 360 Enterprise will provide customers' third-party users free access. However his emphasis was on Autodesk's plans for extending CAD data management (PDM) to the cloud as well as its ability to manage multi-CAD data and collaboration.

In conclusion, the Autodesk Accelerate event brought together customers, analysts, and the Autodesk team to celebrate their customers' success with PLM 360. The company sees PLM 360 as core to their product innovation platform vision, enabling companies to meet the evolving product development future. Autodesk's investments in 3D printing, materials, and now IoT are positioning the company to empower their customers and support the "radical collaboration" necessary to bring successful products to market more quickly, and to evolve them rapidly to meet existing and new requirements. All PLM solution providers must address these trends and most are making similar investments. Helping customers manage this increasingly complex environment is the challenge, and Autodesk's legacy of democratization of such technology will be put to the test in this brave new world.

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.