Enterprise Product Record: Oracle's Digital Thread

CIMdata Commentary

Key takeaways:

- *Oracle Corporation is fully committed to the cloud, and is generating strong growth and an increasing percentage of total revenues from the cloud*
- *Oracle PLM Cloud is evolving rapidly to fully enable the enterprise product record, demonstrating Oracle's growing support for a "digital thread"*
- *The Applications Unlimited philosophy informs their product development strategy and plans, and provides flexibility for customers to move to the cloud when they are ready*
- *Oracle is extending their portfolio to support both the Internet of Things (IoT) and advanced analytics, key elements of Industry 4.0 and digitalization*

CIMdata attended the Oracle Modern Supply Chain Experience 2016 in San Jose, California on February 13-15, 2017. The Oracle Modern Supply Chain Experience is a business meeting focused on market influencers and decision makers with presentations by Oracle, customers, and selected partners. Over 3,000 people attended from around the world.

Oracle's investments and acquisitions clearly signal their commitment to the cloud. Their cloud results are an increasing percentage of their total revenues, as seen in their recent earnings announcement, trumpeted as their first quarter over US$1 billion in cloud revenues.[1] In their fiscal 2017 Q3, Oracle's cloud revenue increased 81% in US$ year-over-year (YoY) and is now about 10% of Oracle's total revenue. (Some points of reference: SAP's cloud revenue for calendar year 2016 was about €3 billion[2] of €22.07 total revenue, or 13.6%; Salesforce's 2016 revenue was US$6.67 billion, all cloud-based.[3])

Given this strategic shift, the question for Oracle is when its full PLM functionality will be available on the cloud. Based on the discussion at the event, the answer is increasingly "now." Oracle's vision has always been broad, covering not only development, but extending to the entire value chain. Figure 1 highlights their support for front-end innovation through the commercialization process. In fact, the company's first cloud solutions addressed the

Figure 1—Oracle Offers Integrated Solutions that Span from Innovation to Commercialization

[1] http://investor.oracle.com/financial-news/financial-news-details/2016/Q2-SAAS-AND-PAAS-CLOUD-REVENUES-UP-81-AND-UP-89-IN-NON-GAAP-CONSTANT-CURRENCY/default.aspx

[2] http://www.sap.com/docs/download/investors/2016/sap-2016-q4_presentation.pdf

[3] http://investor.salesforce.com/about-us/investor/investor-news/investor-news-details/2016/Salesforce-Announces-Fiscal-2016-Fourth-Quarter-and-Full-Year-Results/default.aspx

bookends of this cycle, with Oracle Innovation Management Cloud and Oracle Product Hub Cloud bracketing the "Develop" segment of Figure 1. Historically Oracle supported "Develop" with Oracle Agile PLM, and still does. The solution is alive and well and Oracle is delivering on its roadmap, as delineated in their Applications Unlimited pledge. This philosophy also informs their PLM migration strategy. On-premise Agile PLM customers can stay there as long as they like, and move to the cloud when it makes sense for them. Of course, Oracle makes it enticing to move by putting new features and enhanced support for their enterprise product record vision in their cloud offerings. At the same time, Oracle Product Development Cloud, described as having a somewhat different user interface than Product Hub Cloud but using the same data model, is the solution that Oracle continues to expand to cover (and exceed) the use cases needed for Oracle Agile PLM implementations. For example, their R12 release added document management; while both R12 and R13 include quality management enhancements. Oracle is also adopting a tile-based, key process indicator (KPI) based user interface, helping users quickly identify issues and drill down as necessary, as shown in Figure 2. Mr. John Kelley, Oracle VP PLM Products, spoke about internal customer surveys showing that 33% of customers were considering (or were already on) the cloud last year. The figure this year is 51%. Sales cycles can be very long in PLM, but the strong intent is a great sign.

The advent of smart, connected products is pushing Oracle to respond to cover a much broader value chain. They have existing strengths in manufacturing with the Oracle E-Business suite and service lifecycle management (SLM) applications like enterprise asset management (EAM) and field services from their 2014 acquisition of TOA Technologies.

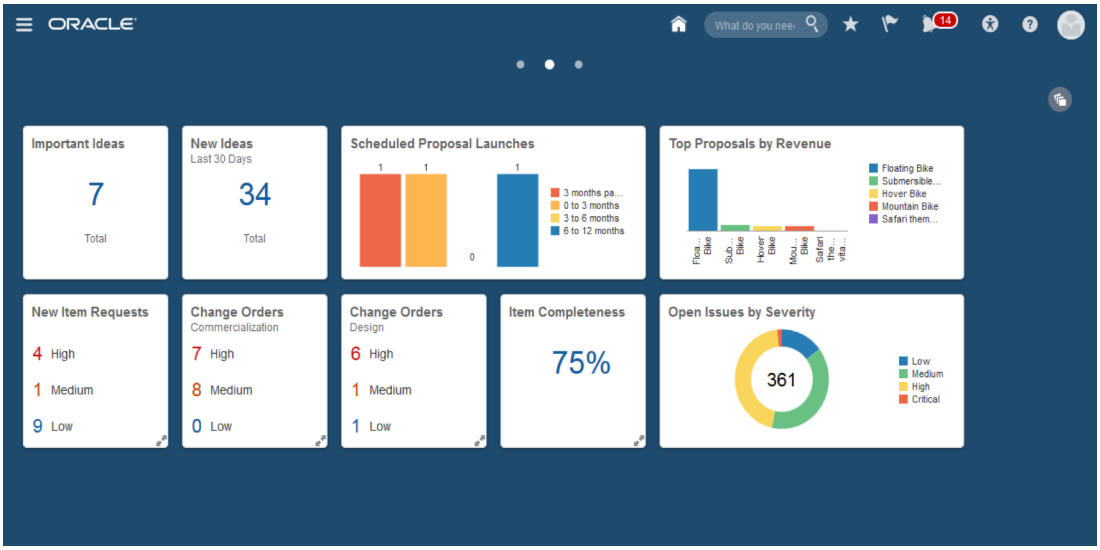

Figure 2—KPIs in Focus in Tile-Based UI

The Oracle Modern Supply Chain Experience included sessions on their new Oracle IoT applications for asset monitoring, production monitoring, fleet monitoring, and the connected worker. These applications are all built on a common platform—the IoT cloud service they launched last year.[4] Oracle stated that these solutions are available as both Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS). These solutions are part of Oracle's support for their "digital twin," which they described as including:

[4] http://www.prnewswire.com/news-releases/oracle-unveils-its-next-generation-cloud-strategy-intelligent-applications-300329912.html

- The Virtual Twin—a device virtualization, a software representation of an asset
- The Predictive Twin—a predictive model of the asset that helps model future state and asset behaviors
- Twin Projections—projects the asset's state and any predictive insights back into business applications; of course, business applications are a huge strength for Oracle against most other PLM competitors

The presentation highlighted the seamless environment claimed for the Oracle-native applications, but upon further questioning they also claimed support for more heterogeneous IoT solution environments using the Oracle Integration Cloud Service. CIMdata applauds this move, and is looking forward to seeing how Oracle's PLM customers leverage these capabilities. Oracle is also investing in advanced analytics and machine learning, claiming to be taking a different approach from other competitors like SAP and IBM in their "Adaptive Intelligent Apps" that are intended to "Turn Big Data into Better Decisions." This area is vital for leveraging the seas of structured and unstructured data from enterprise systems, sensors, the social Web, and other sources. Some claim that data is the new oil, and all serious competitors will need significant "refinery" capacity to use it effectively.

This commentary only scratches the surface of the event content, and the portfolio offered by Oracle and the many partners on the show floor. Based on the information provided at the event, Oracle has made significant progress toward their long-term PLM vision in the last year, and the expansion areas in IoT and analytics, among many others, look good and are essential for thriving in a world of smart, connected products. With 51% of Oracle's PLM customers looking at the cloud, or already there, the forecast is indeed bright for this next generation of cloud-based PLM offerings. CIMdata looks forward to hearing compelling customer implementation stories at next year's event.

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.