

# Aras ACE 2017–The Rise of the Platform

## CIMdata Commentary

Key takeaways:

- *Aras is positioned as a platform that implements digital threads to enable digital twins and digital transformations to support lifecycles of complex systems of systems.*
- *Aras announced the release of, or updates to, several major applications and supporting frameworks including: Technical Documentation (Tech Docs), Quality Management System (QMS), and Manufacturing Process Planning (MPP). They also previewed new solutions to support Extended Classification and Variant Management.*
- *Tony Affuso, former CEO of Siemens PLM Software, is now on the Aras Board of Directors.*
- *Aras continues to invest in its PLM Community, with support for GitHub and the formation of Aras Labs.*

CIMdata attended the annual Aras customer event, ACE 2017, held in Nashville TN March 21<sup>st</sup> through 23<sup>rd</sup>. The two and one-half day agenda had up to five parallel tracks that included Demonstration, Business, Applications, and Deployment. The attendees included a mix of company management, end users, system administrators, and solution developers from small to large industrial companies, technical and implementation partners, industry and financial analysts, and academics.

On Monday, March 20<sup>th</sup> Aras hosted a technical track for developers looking to connect to and interact with the Aras development team and their peers in other companies, and a track for Aras partners where strategy, messaging, partner issues, and tips were reviewed.

## Aras' Business Update

Mr. Peter Schroer, founder and CEO of Aras, delivered his keynote, noting that Aras' revenue continues to grow at high double digit rates: 60% in 2014, 70% in 2015, 60% in 2016, and forecasted to be 50% in 2017. Aras currently has about 210 employees and Mr. Schroer stated that they are continuing to add staff globally to support their rapid growth.

## The Aras Innovator Platform

Most of Mr. Schroer's keynote was focused on platforms, a topic that CIMdata believes is key to the future of PLM and successful manufacturing enterprises. Aras is still a relatively small company but since changing their business model to focus on enterprise open source in 2007 the Aras platform shown in Figure 2 has grown significantly. Figure 1 shows what the application suite looked like in 2007.

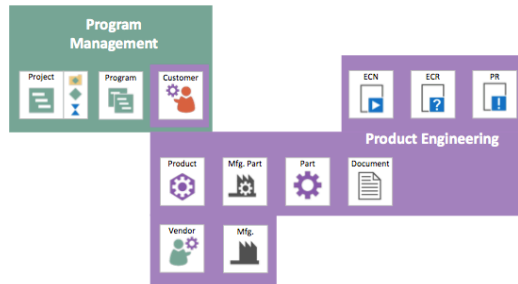


Figure 1—Aras Applications Circa 2007

Over the years, CIMdata had commented that Aras had a strong vision but was slow to realize it. That is no longer true. Aras has made steady, even accelerating, progress in building out their platform. Aras’ service layer and modeling engine are designed to enable applications to be built by configuring data, logic, process, and user interface into a tailored, company-specific solution that is [upgradable, even when extensively customized](#).<sup>1</sup> Mr. Schroer’s view is that this architecture enables Aras and its customers and partners to create optimized solutions quickly, in a more cost-effective manner than other PLM solution providers. CIMdata is currently evaluating the breadth and depth of the platform and plans to publish the results of that evaluation later this year.



Figure 2—The Aras Innovator Platform Stack Today

Mr. John Sperling, Vice President of Product Management, provided an overview of new solutions and enhancements. A key point he made in his presentation was deploying “business Applications within a common platform is the best way to achieve the connectivity

<sup>1</sup> See: <http://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/551-aras-innovator-redefining-customization-upgrades-commentary>

necessary to support traceability for the digital thread.” Aras defines a digital twin as the complete configuration and related artifacts that describe the product as produced or maintained. To better enable companies to create the digital twin, Aras provides integrated support for most common ECAD and MCAD tools, is working with IBM and Airbus to implement an ALM reference architecture using OSLC, and is partnering with system modeling supplier No Magic to support SysML.

Mr. Sperling also reviewed newly released solutions for Manufacturing Process Planning (MPP) and Quality. As the manufacturing process plan is built, items in the EBOM are consumed and single or multiple MBOMs are produced. Since the data resides on the common Aras platform, the impact of a change on the EBOM, process plan, and MBOM can be easily identified and assessed. CIMdata sees this as a great example of the power of using a product innovation platform to support PLM.

The Quality Systems solution complements the Quality Planning solution released in January 2016. It adds reactive quality capabilities including CAPA, quality events, and quality analysis capabilities. The combination of these two solutions is known as QMS, and according to Mr. Sperling leverages capabilities from the Tech Docs solution that was released with Quality Planning as well as the other underlying Aras platform services and solutions.

Mr. Rob McAveney, Chief Architect, talked about the Aras vision and roadmap. A critical component of the vision is full lifecycle traceability as shown in Figure 3. The EBOM to MBOM transformation and traceability capabilities previously reviewed by CIMdata<sup>2</sup> demonstrate how Aras Innovator provides the services to support configuration traceability across multiple structures. CIMdata is looking forward to seeing the end-to-end capability built out. Mr. McAveney gave an example of supporting change impact analysis on all the as-maintained configurations of a jet fighter to illustrate the scale of capability available with Aras.

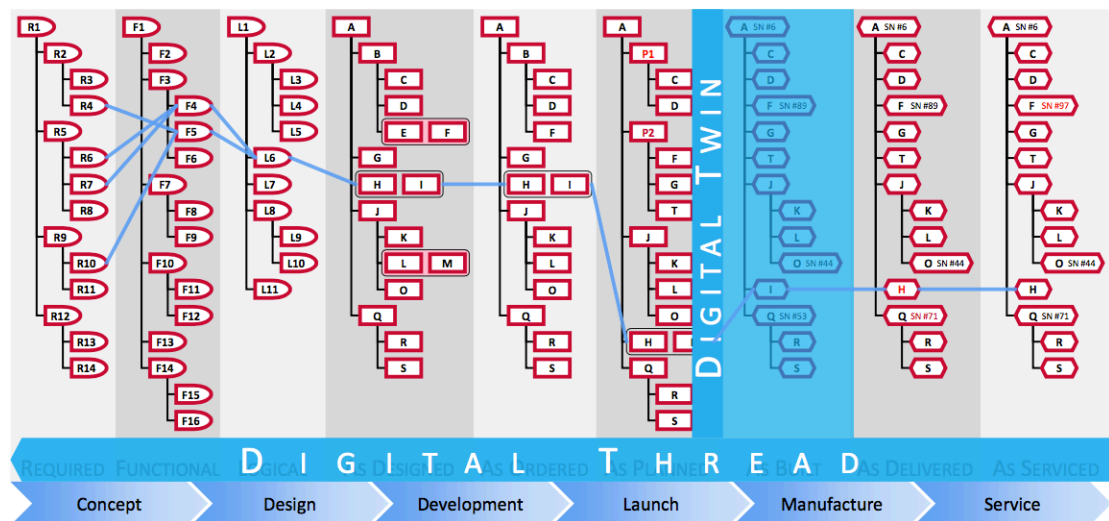


Figure 3—Full Lifecycle Traceability for Digital Threads and Capturing a Digital Twin

Another interesting point Mr. McAveney made was Aras’ intent to support MES. He included several screen shots and diagrams to show how that support would be provided. CIMdata is looking forward to seeing how this MES support develops and is implemented.

<sup>2</sup> See: <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/6840-extending-the-digital-thread-with-integrated-manufacturing-process-planning-commentary-target=>

## An Old Face in a New Place

In what CIMdata believes is an exciting and very positive event for Aras, the company announced that Mr. Anthony (Tony) J. Affuso, a long-time PLM industry visionary and leader, was joining the Aras Board of Directors. Formerly the CEO of Siemens PLM Software, Mr. Affuso was the CEO of PLM industry leader UGS for more than 20 years, where he led the growth of UGS to more than one billion dollars in annual revenues and the successful merger into Siemens AG. In addition to his board role with Aras, Mr. Affuso, serves on the Board of Directors of Symbotic, where he was formerly CEO of the start-up robotics automation company.

Mr. Affuso said, “I was attracted to Aras because of their disruptive technology, open-source customer engagement model, and the fact that their technology has recently been selected over their competitors by several of the world’s leading engineering and manufacturing companies. Additionally, I have been equally impressed with Aras’ customer-first mentality—a culture that I have always passionately believed in and one that I see across the Aras team.”

Mr. Peter Schroer said, “Tony brings a depth of customer knowledge and insight that is just unmatched in the industry. He has seen PLM evolve from the early days of mechanical CAD to the systems engineering era that Aras enables. As a board member, he will play a key role guiding our course and deepening our connections as we continue to redefine the industry’s expectations of PLM.”

CIMdata believes that Mr. Affuso’s insights and in-depth knowledge and experience of PLM is an excellent addition for Aras.

## Customers and Partners

CIMdata recently published a highlight<sup>3</sup> describing recent Aras sales wins.

A recent Aras enterprise customer win was Microsoft. Mr. Krishna Srinivasan and Mr. Boris Cononetz Jr., from Microsoft, jointly presented their experience using Aras as a platform for a PLM project to support Microsoft’s device business. This system, which Microsoft has labeled OnePDM, was deployed using an agile development process. Microsoft identified five business objectives for OnePDM:

- Accelerate design collaboration
- Establish core foundations for product data
- Maintain traceability
- Enable internal and external collaboration models
- Enable multiple manufacturing models

The results of the project were impressive—total time from project start to the initial release of a working PLM platform was fewer than eight months including migration from two legacy systems that are being retired. Since the initial release, Microsoft has built out additional functionality from a core foundation of product data management. The company is now using OnePDM to manage new hardware projects, including the recent launch of the new Microsoft Surface Pro and Surface Studio products. Microsoft highlighted several benefits from its use of Aras Innovator, including savings of several million dollars in its first two years of operation.

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<sup>3</sup> See: <http://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/7539-aras-announces-recent-wins-highlight>

Another example of Aras' customer-focused support at the event was the emphasis on the updated Aras Open PLM Community as part of the new Aras Labs. The community was mentioned by Mr. Schroer in his keynote and by Mr. Sperling in his "What's New from Aras" presentation. The importance of community was reinforced by a well-attended half-day partner-focused session before the main event, and by cards on every table at the event promoting Aras Labs and the community. Mr. Schroer highlighted the importance of community in his keynote by tying it to Aras' platform strategy. He called out three key reasons for the focus on community:

- Community is a key enabler of the platform concept
- Diverse requirements create robust platform services
- Complexity demands large community-scale solutions

Another notable customer presentation was from Mr. Mike Deutsch of Ingalls Shipbuilding, a division of Huntington Ingalls Industries based in Pascagoula, Mississippi. Ingalls employs over 11,000 people, is a major supplier of ships to the United States Navy and Coast Guard, and is the largest private employer in Mississippi. Mr. Deutsch presented how Ingalls is using Aras Innovator to enable efficiency in the shipyard while simultaneously simplifying its IT architecture and reducing cost over time.

Ingalls began their project by mapping processes, application architectures, and data architectures. This revealed a number of places where people were transforming and re-keying information from one system into another. The project team then identified 10 "big rocks" that, when addressed, would result in tangible business value.

Ingalls has highly demanding visualization needs that required capabilities beyond what Aras Innovator includes natively, and so they worked with ShipConstructor to integrate Aras with the ShipConstructor design tool and with Autodesk Navisworks. The team was able to release the initial implementation of this integration in ten months, which was faster than expected.

Ingalls has now accelerated the pace of implementation, releasing six additional sets of capabilities within the last year. They are now adopting a common process for engineering, planning, and materials across the shipyard, and are integrating Aras Innovator with AVEVA MARS ERP to enable this. Ingalls is now beginning the process of retiring a series of legacy IT tools, and expects to save millions of dollars from this effort.

## **Systems of Systems from a PLM Legend**

Professor Dr.-Ing. Martin Eigner, Chair of Virtual Product Engineering (VPE) at the Technical University of Kaiserslautern, and founder of Eigner+Partner, an early PLM solution provider that is now a part of Oracle, delivered a presentation entitled "System Lifecycle Management as a Bimodal IT Approach." Dr. Eigner covered a lot of ground in this presentation. Key points included:

- PLM needs to evolve to a systems lifecycle model that supports hierarchical structures such as traditional BOMs, as well as linear and network structures that are common in electronics and software products based on the cloud.
- The split of engineering processes between a lightweight backbone, PDM, and intelligent authoring systems with embedded data management is driving the need for a bimodal approach

- New methods of presentation such as using a graph based visualizations are critical to supporting today's products.

The net result is Dr. Eigner feels this is the only way forward to support the ever-growing product complexity and he also claimed the total cost of operations within this environment will be 20% to 30% less expensive.

## Conclusion

The Aras ACE 2017 conference was exciting. Aras has a swagger based on their growth and recent big wins in the PLM industry. While originally dismissive, their competition is starting to pay attention to Aras, and CIMdata is receiving a lot of inquiries about what Aras is doing, both from competitors and industrial companies. As it grows its customer base and scope of its solutions, Aras will have its work cut out for it to maintain its competitive position.

Aras has had a platform approach from its inception. The benefits of staying focused on expanding by building on a platform are apparent. They have developed a broad, deep product offering that solves hard problems such as complex configuration management and BOM transformation. Both long-term and new customers spoke highly of Aras' customer support, and partners validated Aras' claims about being an easy to use platform for PLM solution development. CIMdata is impressed with Aras' new solutions and the positioning they are doing with the platform.

For people who've been around PLM for a while, seeing Mr. Affuso join the board speaks very loudly and is sure to open doors at prospects around the globe. Thought-leader Dr. Martin Eigner's research gave us all a peek as to where PLM needs to evolve. The future looks promising for PLM and for Aras.

## 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.