

Accelerate. Collaborate. Empower. Aras ACE 2021

CIMdata Commentary

Key takeaways:

- *To have a successful digital transformation journey flexibility and resiliency are critical characteristics for the company and its PLM-enabling solutions.*
- *The Scalable Agile Framework (SAFe) methodology is paying great dividends at Aras enabling them to produce better software faster and helping to flesh out their end-to-end digital thread.*
- *The latest Aras Innovator release is fully containerized and DevOps-enabled on Microsoft Azure.*
- *Aras customers from a wide range of industries such as automotive, aerospace & defense, high tech, food products, nuclear, and even banking delivered interesting presentations at ACE 2021 that are available for replay.*

CIMdata attended the annual Aras customer event, ACE 2021, held virtually on April 19th through the 21st.¹ The three half-days agenda had 5 parallel tracks in addition to the keynote track. The tracks included presentations from customers, partners, and the Aras team. Over 2,700 people attended live and if you missed it, [replays are available](#).²

CEO Keynote

Mr. Peter Schroer, CEO and founder of Aras noted that the 2020 ACE event was canceled due to COVID, a big disappointment as it was Aras' 20th anniversary. Mr. Schroer promised a big anniversary party at the next face-to-face event. His keynote focused on the difficulties of executing digital transformation, citing a McKinsey study³ that found 70% of transformation projects fail rising to 80% for digital transformation projects and only 16% deliver measurable improvements. His point was that due the acceleration of data and connectivity, organizations cannot afford to continue to make decisions like chess masters but need to empower their people to experiment and continuously transform. He then quoted Helmuth von Moltke the Elder, a 19th-century Prussian field marshal who stated, "No good plan survives first contact with the enemy." The point is you have to be agile and flexible in order to be successful when taking on a complex endeavor, something Aras has focused on from its inception. Mr. Schroer also noted that not all impacts on a plan are negative, noting that the broad adoption of collaboration tools such as Zoom helped save the day during the pandemic. CIMdata believes that PLM also played a significant role in enabling work-from-home, and the lessons learned will drive significant improvements in PLM-related processes and technologies.

On the topic of cloud PLM, an important subject at this year's ACE event, Mr. Schroer said he doesn't believe cloud PLM is ready for complex processes and products, but it is improving rapidly and noted Aras' recent SaaS release will support the same customizability that is supported on-premises. CIMdata sees a lot of interest in the cloud, and movement to the cloud is starting to become material to the financial reporting of the PLM solution providers. We are looking forward to hearing more about Aras' take and to see it in action.

¹ Research for this commentary was partially supported by Aras.

² <https://events.aras.com/ace2021>

³ <https://www.gregverdino.com/2020-digital-transformation-dies/>

Near the close of his session, Mr. Schroer announced that GI Partners, a private investment firm, bought out earlier investors and invested a significant sum to accelerate Aras' growth. More information is available in the [highlight](#)⁴ CIMdata published.

Product News

Mr. John Sperling, Senior Vice President Product Management, delivered his annual review of Aras' development efforts over the past year. He opened by discussing the Aras public roadmap and how it relates to the Scalable Agile Framework⁵ initiative Aras introduced at [ACE 2019](#).⁶ Aras has published its roadmap for many years but switching to SAFe required reworking the publication process. Figure 1 shows how the roadmap is derived from the Aras SAFe environment. The roadmap contains live data representing what has been released, what is being developed, and when it will be released. This is a great way for customers to understand where their requirements fit within Aras' priorities and also gives them the knowledge to lobby Aras to adjust its' priorities.

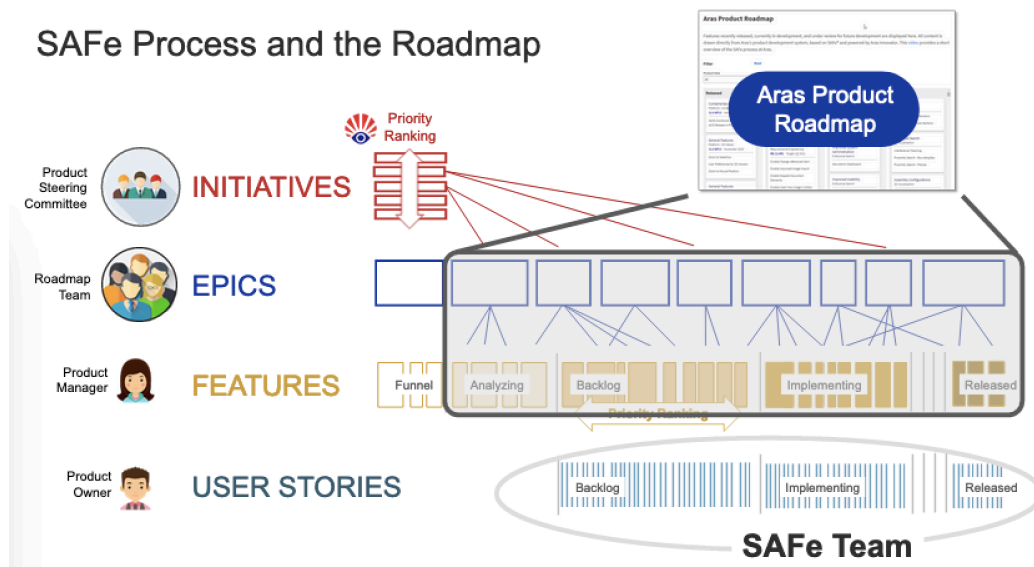


Figure 1—Aras' Approach to SAFe and How the Roadmap is Derived

The biggest news announced by Mr. Sperling was Aras Innovator Container Deployment (AICD). AICD uses the latest containerization, orchestration, and cloud-native technologies to run more efficiently in the cloud. In support of this announcement Aras also updated its subscription program. Historically Aras had two classes of licenses: subscribers who paid the annual subscription to receive licensed content, hotline support, training, and upgrades; and open users that had to DIY everything from the free download. Aras now offers three classes of licenses: Enterprise, Standard, and Free.

The Free download or open release is just as it was before: anyone can download, install, and run in production without any support. Capabilities where Aras uses licensed code such as visualization are not included in the free release. The Standard version can run in the customer's cloud or on-premises and has an optional DevOps capability that integrates modern

⁴ <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/15537-gi-partners-announces-major-investment-in-aras-corporation-taking-enterprise-open-source-to-the-next-level-highlight>

⁵ <https://www.scaledagileframework.com>

⁶ <https://www.cimdata.com/en/resources/complimentary-reports-research/commentaries/item/12101-innovate-transcend-realize-aras-ace-2019-commentary>

agile development processes with the Aras Innovator deployment. The Enterprise version is SaaS, includes the DevOps capability, and runs in the Aras Cloud built on Microsoft Azure. In a later presentation Ms. Lopa Subramanian, VP Product Definition, described AICD in more detail as presented in Figure 2. Currently Aras Enterprise only runs on Microsoft’s Azure cloud platform, but an AWS version is being developed. The standard and free releases run in virtual machines on AWS and Azure. Enterprise uses multiple containers orchestrated by Kubernetes. One interesting point is that Aras is running a mix of Linux and Windows containers but is working to move all the containers to Linux for the Aras Innovator 14 release to minimize operating cost and maximize performance.

According to Aras, the Free, Standard, and Enterprise versions run the same version of Aras Innovator software and customizations are fully upward-compatible across the versions. Enterprise users will be able to fully configure the cloud-native solution and Aras will still provide upgrades. CIMdata is confident that Aras’ experience with providing upgrades for on-premises subscribers will directly translate to the cloud-native Enterprise version.

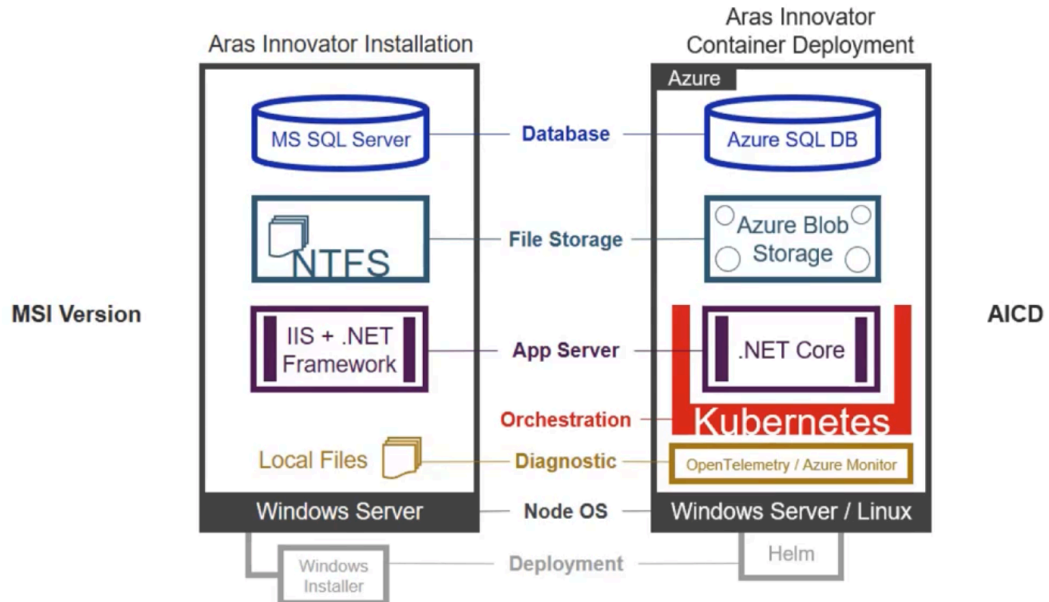


Figure 2 – Aras Microsoft Installer (MSI) Version vs. AICD Architecture

Mr. Sperling covered many topics, but configurators is an area CIMdata has been following closely since our 2018 in-depth research on the topic. Many of our clients have legacy and custom configurators to support their configure-to-order businesses. Often the configurator is only linked to ERP and disconnected from product data. The Aras configurator is a web service that allows variability and product definition to be managed on a single platform. Variability can be defined in all structures on the platform. Consolidating product configuration information on a single platform allows variability to be managed as an element of the product rather than externally which should improve product quality. Currently Aras customers need to configure their own variant application, but an out-of-the-box solution is on the roadmap and slated for release in the first half of 2022.

Digital Thread

An important principle at Aras is to manage all product data on their platform as a digital thread. Connecting data from concept through life creates traceability among data, a foundational capability that gets used over and over during the product lifecycle. Over the three day event

Aras gave many presentations but one group that stood out was the series of three live demonstrations that showed how an end-to-end lifecycle can be implemented. The first presentation “Systems Thinking and Design of Complex Products” was from Mr. Tim Keer, Director, Pre-Sales. He used a 3D printer model to represent a complex product with mechanical, electronic, and software items that is managed as a system. During his demonstration he interacted with the model using requirements management, the new systems architecture and simulation management applications, and used graph navigation to interact with the digital thread.

Mr. Gary Wilmot, Pre-Sales Solutions Consultant, then built on Mr. Keer’s presentation with his presentation “Collaboration to Innovate Across the Digital Thread.” In his demonstration he used a configurator to configure the product from a 150% BOM⁷ to a 100% BOM⁷ and used the visual collaboration application to show how a team can visually interrogate the model to better understand it. He also showed how the deliverables were organized in the project management application. Finally, Mr. David McDonnell, PLM Solutions Consultant, presented “Predict and Simulate the Future with Digital Twins.” Mr. McDonnell showed how a maintenance team can leverage the digital thread and digital twin to plan maintenance activities based on real-time data from the field. He showed how operational data received from serialized instances could drive and optimize maintenance based on what is happening in the field.

CIMdata found the three 30-minute presentations to be a great education on what can be accomplished with a digital thread. The scenarios were simple enough to understand but sophisticated enough to demonstrate the complexity of the problems and how Aras Innovator can solve them. We encourage you to watch the replay.

Customer Presentations

Aras centers their ACE events around customers and this event was no different. Keynotes were delivered by representatives from Toyota, Cubic, Insitu, and the U.S. Department of Defense. Additional customer presentations were delivered by SAIC, Nuscale, Nidec, Microsoft, Valley Fine Foods, Denso, Grammer AG, Sandia National Labs, Anderson, Seaspan, Caltex Oil Tools, and BNP Paribas. Most of the presentations are available on replay at no charge.

There are too many to cover in this commentary, but there was an interesting Q&A session with Mr. Bill Halliden, Manager—Technical Strategy, Planning and Operation, Toyota Motor Europe. They are using Aras Innovator to manage a smart city project. He discussed how they applied the famous Toyota Production System to PLM. At the core they focused 80% of their effort on people and processes and 20% of the time on tools. He described how they use agile to deliver 10 to 12 releases per year and went from a proof of concept to production in one year.

Ms. Stéphanie Fournier, Global Head of Business Development and Solutions at BNP Paribas, described how they were using Aras Innovator to manage banking products. Ms. Fournier was very clear that data and process management including regulatory compliance for complex banking documents is just like any other product, and a PLM solution was the right tool for her application which needed a single source of truth, strong collaboration capabilities, the ability to standardize and optimize processes, and helps ensure product integrity and reliability.

⁷ A 150% BOM is a configurable structure that contains multiple items that will work in the structure. When configuration decisions are made, the 150% BOM is resolved to a 100% BOM which contains the exact items needed to satisfy the requirements.

Conclusion

Aras ACE 2021 had significantly more attendees than ever before. The mix of presentations from Aras, industry, partners, and academics had the right balance and there was something for everyone. The Aras product continues to grow and mature and customers and Aras were excited and proud of what they have accomplished.

Aras just released a containerized version of Aras Innovator and we are looking forward to hearing from customers to understand how it performs. The ability to customize a cloud solution to the same degree as the on-premises version and to take advantage of a full DevOps environment to help manage changes on their implementation should get many customers excited.

Aras' customer focus and implementation of SAFe seems to be working well, as the product line continues to grow, and customers are happy. CIMdata is looking forward to ACE 2022 to see what's next.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design, deliver, and support innovative products and services through the identification and implementation of appropriate digital initiatives. Since its founding over thirty-five years ago, CIMdata has delivered world-class knowledge, expertise, and best-practice methods on a broad set of product lifecycle management (PLM) solutions and the digital transformation they enable. CIMdata also offers research, subscription services, publications, and education through certificate programs and 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.