

# Aras Innovator 11: Making Collaboration Flow, Visually

## *CIMdata Commentary*

### *Key takeaways:*

- *PLM technology advancement and greater focus on real world use cases are making collaboration easier and more secure*
- *Enterprises are trying to enable more freeform input and communication during the product lifecycle to improve their products and services while new software technologies and mobile devices are making it easier for a much wider range of stakeholders to participate*
- *Aras' HTML5-based Visual Collaboration capability deeply embeds functionality in the PLM platform for secure threaded discussions and for view and markup of many formats including 3D, 2D, Microsoft Office and other data types at no additional charge*
- *The Aras Flow application for Microsoft Windows 8.1 tablet devices combines change management with social discussions within the context of the product structure as well as touch-enabled visual collaboration*

## **Collaboration in the Enterprise**

Collaboration technology used in the enterprise has evolved dramatically over the last decade. Files stored on shared drives and email used to dominate the landscape. While a huge improvement over paper documents, meetings, and phone calls, this was still disconnected, disjointed, lacking context, and not secure. Enterprise solutions such as ERP and document management operated as disconnected silos that focused on released or production information, ignoring work in process (WIP), and provided limited process modeling capability. Websites were primarily oriented for consumption, either with static HTML pages or, at best, basic forms that used simple backend scripts. Product data management (PDM) solutions address some of the issues with collaboration by supporting WIP and process modeling, but computing and licensing requirements limited broad deployment.

Today we've had an explosion in communication and collaboration technology supported by PLM-enabling technology. In addition to desktop and laptop computers, mobile devices including tablets and smartphones supporting a myriad of software tools have enabled data sharing and collaboration and many new ways to communicate. Web-based access to enterprise solutions has expanded access across more of the enterprise and PLM solutions have helped to connect disparate product information sources, and manage product related processes. While the improvement has been significant, the downside is there are too many tools with too many different interfaces leading to disorganization and a poor experience for end users, especially business users who are not CAD savvy.

Within product development-related organizations, much of the effort has been focused on 3D collaboration, including attempts to eliminate drawings by embedding annotations directly on the 3D model. While today's data viewing technology works well, and is a great improvement over the past, it is still a point solution. There is no easy way to integrate 3D geometry with text, drawings, schematics, specifications, and Microsoft Office. The net result is that

communication is still spread across multiple disconnected channels and tools, resulting in barriers between different disciplines (e.g. mechanical, electronics, software) and business functions such as engineering, manufacturing, quality, procurement, and others. These barriers are particularly evident when attempting to collaborate across the extended enterprise with suppliers and customers as is required in today's business environment.

Many companies are turning to PDF to address these issues. PDF is ubiquitous, and the format is an open ISO standard capable of providing a foundation to make complex product data accessible across the enterprise. Specifically, 3D PDF with PRC (Product Representation Compact) is a highly compressed 3D file format with accurate geometry that can be used to embed 3D data in a PDF file. The PDF format is more versatile than many other 3D-only formats because it can support compound documents containing text, 2D, and 3D data and the contents can easily be re-purposed and used elsewhere. The PDF format lowers the barriers of entry, enabling 3D along with 2D, Microsoft Office, and other data types to be extended further into the organization without the need for proprietary formats or specialized viewers thereby improving collaboration across an organization.

Aras' latest release, Aras Innovator 11 has added capabilities to capture ad hoc product discussions visually and textually within the context of the product structure.

## **Aras Innovator Visual Collaboration, Aggregating Data for Decisions**

For some time Aras has been a disruptor within the PLM space both with its technology and with its business model. Aras Innovator is a modern platform based on an architecture that's flexible, scalable, and resilient. The model-based service oriented architecture (SOA) makes customization easy and readily supports upward compatibility even when heavily customized. CIMdata explored this topic in detail in an [earlier commentary](#).<sup>1</sup> From the beginning, Aras has focused on solving difficult PLM-related problems such as complex configuration management, global product development, EBOM/MBOM integration, and cross-discipline engineering of systems. Their enterprise open source approach allows anyone to download the product and use it in full production without cost for many PLM use cases and processes. Aras makes their money from optional SaaS subscriptions which provide security updates, support, upgrades, and access to additional functionality. Aras' technology enables them to offer no charge upgrades to subscribers, a unique offering that competitors have not matched.

Aras shared the capabilities of their recently released Version 11 with CIMdata. The most significant enhancement in the release is a new capability known as Visual Collaboration that is built into the underlying platform. It contains very capable view and markup functionality that uses PDF including 3D PDF/PRC as its neutral format. In addition, Aras has added context-sensitive discussion threads linked directly to PLM objects and processes. The discussion threads can include viewables with markups in the comment stream and are embedded deep within the platform's object model using what Aras calls secure social technology. Out-of-the-box features of this capability include comment streams associated with BOMs, parts, models, drawings, documents, and the enterprise change process. Importantly, the comment streams fully respect the security model protecting intellectual property, something lacking in many other "socially conscious" applications.

Visual Collaboration is more than just a bolt-on viewer. Aras Innovator 11 has converters to automatically create 2D and 3D PDF documents from most common authoring tools including

---

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

MCAD, ECAD and Microsoft Office. Metadata, text, 2D, and 3D data can be dynamically combined to generate PDF documents. A browser-based viewing capability is embedded in the platform enabling view, measure, and markup of all data types including text, images, 2D, and 3D data. The comments and markup information are captured in the context of the product configuration and are subject to the each user's security profile. Entered text is stored in the database so it is searchable and can be included in reports. Standalone discussions are also supported. Best of all, the solution is HTML5-based meaning there is no software or plugins to install.

In keeping with the Aras philosophy of easy, resilient customization, Visual Collaboration is configurable and extensible. Commenting can be enabled or disabled at the object level. It is extensible across Aras Innovator functionality including custom forms and workflows, and can integrate with other enterprise systems because it is embedded in the platform as a core service.

Aras' subscription model provides every user with access to Visual Collaboration functionality with no extra cost. This simplifies access to data, enabling more effective communication between all stakeholders. In addition, Aras recently released a mobile tablet app, Aras Flow, for Windows 8 devices, that combines change workflow review and approval with the Visual Collaboration capabilities, including discussions with markup and commenting. Aras Flow, shown in Figure 1, supports new use cases enabled by mobile technology such as taking pictures, videos, or audio recordings of product issues on the shop floor or in the field to more accurately describe problems within the context of the product structure. It is good to see an app leveraging mobile technologies to extend the PLM solution to additional users and use cases.



Figure 1—Aras Flow, integrated with Aras Innovator 11  
(Courtesy of Aras)

## Summary

Collaboration enabling technology has progressed significantly over the past decade and is making product information more accessible to the enterprise. The open PDF format with added support for 3D visualization and accurate measurement with 3D PDF/PRC is gaining traction as a solution to many collaboration issues. Aras' latest release, Aras Innovator 11, has new capabilities to enable collaboration across the lifecycle including visualization,

secure discussions, and mobile enablement. Visual Collaboration is an easy to use feature for all types of data managed within an Aras Innovator PLM environment. It supports collaboration with traditional view and markup capabilities, while adding secure social capabilities including visual comments and threaded discussions to the product record. With appropriate permission, anyone in the extended enterprise can participate in a discussion associated with a product structure, part, model, ECO, or drawing. In addition, a new mobile tablet app, Aras Flow, fully supports Visual Collaboration enabling new use cases such as shop floor and field support access to 2D and 3D data.

Enabling visual collaboration for all PLM users with no added charges and including mobile is significant, and should help to finally capture the “why” of design intent along with other product-related decisions across the lifecycle. The underlying secure social technology is exceptional in the PLM space and CIMdata sees Aras once again disrupting the status quo.

### **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.