iBASEt Excelerate 2017: The Digital Thread in Action

LNS research

iBASEt was kind enough to invite me to their 2017 Excelerate conference in sunny and beautiful Dana Point, California. Since the last Excelerate in fall 2015, our first impression is one of a much more mature company and confidence in following the chosen path for growth: The Digital Thread in Aerospace and Defense (A&D).
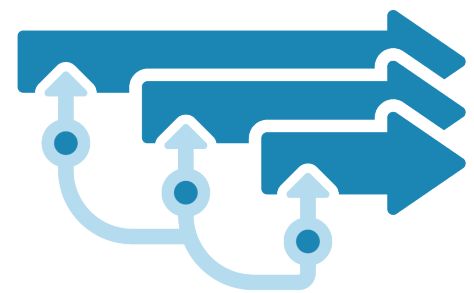
Concentrating on What You Know: A&D

In previous years, iBASEt had put considerable emphasis on the suitability of Solumina, its MOM solution, for a number of complex discrete vertical markets. While LNS Research believes in MOM diversity, it is never quite as easy to move into new markets as some would suggest. This year, the emphasis was firmly on A&D. Indeed, one or two customers presenting at the conference made some interesting comments about workflow and business process implementation that pleasantly surprised us. First, let's consider the traditional approach.

Many Solumina deployments have considerable customizations to make the product fit the customer's current work practices. This causes significant anguish, and plenty of time and money, when upgrading to new versions of Solumina. The need to re-implement customized functions to match the new version can be a strong disincentive to upgrading. However, things are looking up. iBASEt has done two things that directly address this issue. Firstly, they have taken many customizations from varying A&D customers and have incorporated them into the newest release of Solumina, G8. While aggregated functionality might not exactly fit a specific need, the benefits of avoiding future upgrade woes encourage customers to go with the new standard functionality.
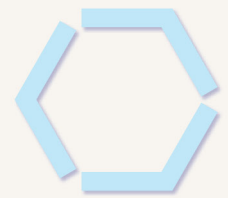
The second move is more fundamental and demonstrates iBASEt's understanding of, and acceptance in, the A&D industry. Customers, especially those who are coming from paper-based manufacturing practices, are choosing to alter their work practices to fit into standard Solumina functionality rather than trying to make Solumina fit the old way of doing things. This approach is new for customers and is mostly undertaken by those going straight to the new G8 version that has more standard work practices built into the product than previous versions.

This approach deserves our praise; with your differences is a great way of making projects fail; accepting that you change how things are done to get better automation support is hard to accept but will almost always make life more convenient in the long run.

DIGITAL TRANSFORMATION FRAMEWORK by LNS Research describes a systematic approach to simultaneous and interconnected digital initiatives, in order to manage transformation across all levels and functions of the organization.

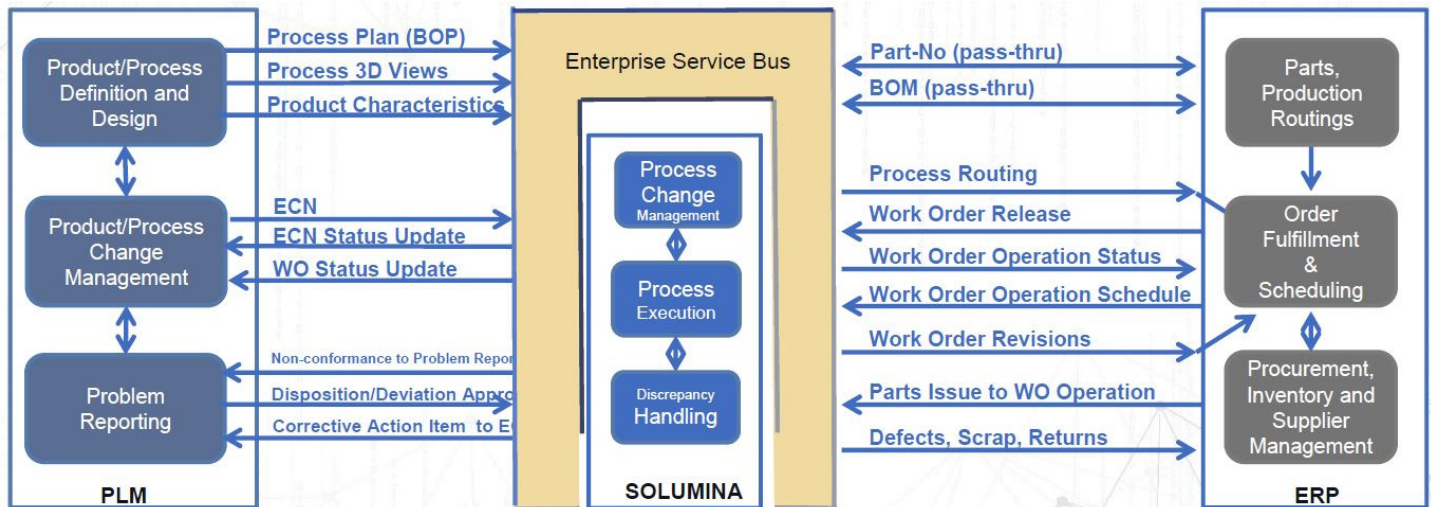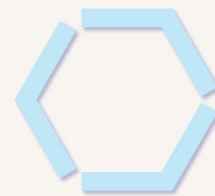*Click to learn more about the* **Digital Transformation Framework**

Beyond MES: The Digital Thread

As we mentioned above, iBASEt has focused on A&D; with its expertise and acceptance in the industry, the opportunity to expand within the industry is clear. The approach has been to broaden the offerings and provide integration capabilities from design to service. iBASEt market this as the Digital Thread that links design, through process design to manufacturing and finally Maintenance, Repair, and Overhaul (MRO), all served by integrated quality.

Most A&D companies use advanced PLM systems to develop their products. One output is an Engineering Bill of Materials (eBOM) that needs to be converted into a Manufacturing Bill of Materials (mBOM) for use by the MES system and business systems, such as MRP and purchasing. iBASEt uses its digital thread to digitally link the BOMs and all other data required to manufacture the product. It provides a complete view of the product from concept to in-service support. The iBASEt model puts Solumina in the center with PLM on one side and ERP on the other. The bus allows full data transfer between the various systems, and it provides pre-defined interfaces for most of the popular PLM and ERP systems.

The model is a practical one that will allow customers to integrate gradually. The starting point is using the eBOM for change management and then automating the sending of changes from PLM to Solumina. After that, defining mBOM from eBOM through automated tools (provided by PLM vendors) starts to deliver real value; the conversion from engineering to manufacturing is a source of many process definition mistakes. From this point, you can start to access all information from engineering (3D models, photos, instructions) to enhance the build process with modern solutions such as augmented reality, based on the current design
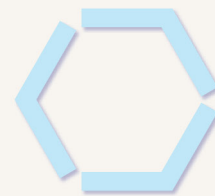
information.

Looking Forward

In this brief post, we cannot hope to cover everything that iBASEt offers or will offer. A few things we liked were:

- Ever tighter integration with PLM – vital in A&D and something that iBASEt is clearly prioritizing.

- The all new Manufacturing Intelligence product – although we think iBASEt should consider modeling this on IoT analytics capabilities that are already available from many third parties. Keeping up with the rapid rate of change in analytics will be difficult.

- MRO support. Today many MRO organizations use Solumina to support major repair projects on complex products. We will watch with interest as the integration between "As built" and "As maintained" extends across the lifecycle of a product. A good example is a civil aircraft that can be repaired anywhere yet needs to continue fully as "As maintained" data – a real challenge.

- The gentle move towards Smart Manufacturing. At the last conference, there was considerable hype about the IoT and Smart Manufacturing. This time the audience was probably more aware, but not ready to move to a fully connected world. We will be interested in watching the convergence of iBASEt's Digital Thread and new IIoT platforms.

In summary, this was an excellent conference that clearly positions iBASEt at the forefront of large A&D MES projects. Many of the major defense industry suppliers were present, often with substantial teams, and eight presented about their projects. Two of those had just gone live in the last few weeks. We commend them on making the decision to present before go live data! That shows confidence.

LNS Research believes that iBASEt has the potential to continue its growth in A&D, particularly with expanded offerings in MRO and quality systems (Something barely covered at the conference). We watch with interest moves in other markets, something that the expanded leadership team will, we believe, deliver.

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