



## Back to Basics: Ensure Quality and Supply Readiness Before Product Launch

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Manufacturers struggling with new product launch often point to supply chain planning problems as a major issue. Digging deeper, it's apparent that poor manufacturing yield at product launch is a common root cause.

**The Bottom Line:** To ensure supply readiness during new product launch, manufacturers must go back to quality basics and make sure that new designs can be manufactured to the maximum yield.

**What It Means:** A recent AMR Research survey indicated poor quality as a top reason for New Product Development and Launch (NPDL) failures. Another result of quality problems is the inaccurate supply chain planning due to the unpredictable variation introduced by poor product yield. As manufacturers deploy Product Lifecycle Management (PLM), a major benefit is improved quality and the downstream improvements in supply planning and customer satisfaction.

Some items to consider to ensure manufacturing and supply process readiness at product launch include the following:

- **Digital simulation**—Digital Mock-Up (DMU) in discrete manufacturing and formulation in process manufacturing allows fast iterations of design simulations. DMU is available from **PTC**, **Dassault**, and **UGS**, while **Formation Systems**, **IMS**, and **Prodika** deliver formulation applications.
- **First part inspection**—This is a time-intensive process that is often a bottleneck. **Powerway** has streamlined the Automotive Advanced Product Quality Planning (APQP) process, while **Cohesia** has helped Aerospace with first article inspection.
- **Process planning**—Communication breakdown between design and manufacturing is a common cause of poor yield. **CIMx** will configure unique work instructions, while **Tecnomatix** (recently acquired by UGS), **Dassault's DELMIA**, and **PolyPlan** simulate complex manufacturing processes.
- **Program dashboard**—Management visibility to task completion and outstanding risks ensures expedient response to issues. **Aras** has delivered an APQP dashboard, while **IDE**, **MatrixOne**, **Centric**, and **Agile** provide various degrees of program visibility.
- **Corrective action**—Closing the loop between manufacturing and engineering as non-conformances occur. **Visiprise** is deploying in Aerospace with UGS, while **IQS**, **Pilgrim**, and **Tip Technologies** focus squarely on industry-specific quality management.

While a start, this list is not an end-all to ensuring Six Sigma-level process capabilities at product launch. Visibility to one source of data, collaboration, and communication provided by PLM vendors above as well as **Microsoft**, **Arena**, and **think3** all contribute to improved quality.

**Conclusion:** Demand-Driven Supply Networks (DDSNs) depend on reducing variability to ensure consistent response and supply planning. Improve the responsiveness of new product launches by taking steps to make sure designs are manufacturable before ramping supply chains to production volumes.