

**3DEXPERIENCE®**

# AEROSPACE & DEFENSE **BUILD TO OPERATE**

Digital precision throughout production



## HOW DO YOU INCREASE MANUFACTURING EFFICIENCY TO REACH OPTIMAL PRODUCTION RATES?

Directly linked to the growth in commercial aviation, aerospace manufacturers' focus continues to be on lean manufacturing methods that promote fast ramp up to optimal manufacturing rates. The **Build to Operate** Industry Solution Experience accelerates meeting production targets and increases manufacturing capacity. The solution offers aerospace Original Equipment Manufacturers (OEMs) and large suppliers the ability to implement lean practices and meet demand without sacrificing either quality or schedule.

### **BUILD THE FUTURE FACTORY TODAY**

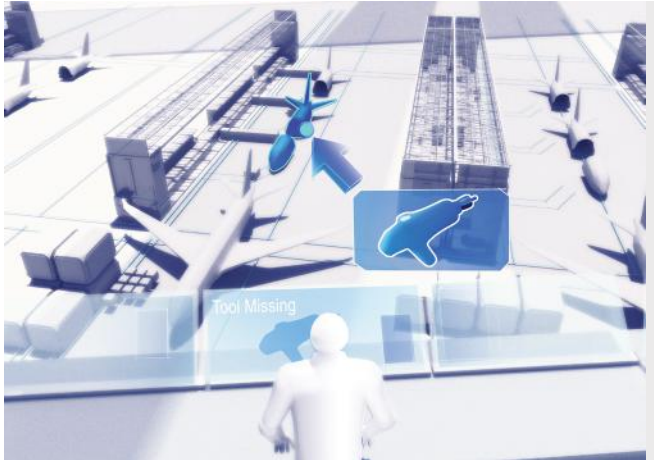
Over the next decades, airline fleet modernization and aircraft retirement will continue to feed the growth of commercial aviation. This drives the need for continuous improvement (of new and existing production lines); requiring a solution to deliver the future factory capable of driving these efficiencies, today.

### **IMPROVE GLOBAL MANUFACTURING**

For aerospace and defense companies, **Build to Operate**, based on DELMIA Apriso, offers manufacturing operations management (MOM) capabilities to monitor, control and

validate all aspects of manufacturing with digital precision ranging from replicable processes and production sequences, to the flow of deliverables throughout their supply chain—on a global scale.

By receiving all required data through the Internet of Things (IoT), plant managers can view, control and execute automated manufacturing operations in real time. This capability allows manufacturers to manage global material supplies, logistics execution and production operations for one site and then execute across all sites. Visibility into operations (both within a single plant and across all plants) results in better alignment with business performance targets.



With **Build to Operate**, manufacturing management's real-time view of plant status significantly improves their control of manufacturing operations.

### EXPAND FACTORY AUTOMATION

Now plant engineers can implement new composites, electronics, methods and other innovations in your manufacturing operations while ensuring replicable processes, optimized production sequences to ensure first time quality across all sites.

Having the ability to enforce complete procedural control during build allows faster improvements and provides a sustainable lean manufacturing system. Features like automated verification and procedural enforcement means work is performed only by qualified individuals, in the correct order and with collection of all required data. Sites with a new or multi-lingual labor force acclimate faster using 3D work instructions perfected in mature operations. Delivering these work instructions at the right time decreases cycle times.

**Build to Operate** eliminates most material shortages by synchronizing materials across functions (e.g., fabrication, assembly, sub-assembly, final assembly, and shipping).

### REPLICATE QUALITY

The complexity of delivering contracted quality performance levels multiplies exponentially when managing extended supply chain partners. **Build to Operate** affords full insight into manufacturing data allows manufacturers to identify root causes of failure and adjust processes in real-time as conditions change. Manufacturers can minimize risk of installing defective components with full traceability of supplier 'as-built' data. This real-time traceability enables quick containment and disposition of quality issues. Unified engineering and change management provides suppliers and contract manufacturers' visibility to engineering change orders (ECOs) for faster response and reduces the amount of "out of specification" materials from being shipped. These insights translate into improved quality across the supply chain.

### CREATE A LEAN PAPERLESS FACTORY

**Build to Operate** offers precise paperless synchronization of production, material, quality and labor processes while delivering real-time visibility and control across all supply chain. Solution highlights include:

- Closed-loop visibility of all manufacturing operations, to assess risks and implement mitigation procedures;
- Global deployment of lean manufacturing processes, including line automation performance and failure information that can be reviewed in a virtual "replay" and analytics environment; resulting improvements can be implemented globally across all sites;
- Real-time KPIs provide instant visibility on all levels—productivity, plant, line, station, cell and individual—for continuous improvement.

With **Build to Operate**, manufacturers can accelerate the production ramp up of new lines and increase the efficiency of existing production lines through 'future factory' innovations available today.

**For more information on Build to Operate, visit our website: [www.3ds.com/industries/aerospace-defense/build-to-operate/](http://www.3ds.com/industries/aerospace-defense/build-to-operate/)**

## Our 3DEXPERIENCE® platform powers our brand applications, serving 12 industries, and provides a rich portfolio of industry solution experiences.

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