



Executive Brief

# Bracing for change in the A&D industry

How modernizing business systems can help A&D organizations seize opportunities in commercial aviation



Modernizing business systems will allow A&D organizations to:

- Gain business agility
- Meet industry-specific requirements
- Improve decision making
- Grow revenue

## Be ready to do business in the commercial aviation market

Defense contractors are bracing for unprecedented changes. The days of cushy, cost-plus contracts that reward inefficiency are long gone, and sequestration-level budget cuts have sharply reduced US Department of Defense (DOD) spending. In its 2015 budget request, the [US DOD projected that defense spending cuts for 2012 through 2021 will exceed \\$1 trillion](#). While this projection might be exaggerated, there's no denying that there will be significant reductions in revenue streams for all organizations in the defense industry—no matter where they fall in the supply chain.

On the other hand, the global commercial aviation market is growing. A [Deloitte report attributes this growth](#) to the “accelerated replacement cycle of obsolete aircraft with next-generation fuel-efficient aircraft, as well as the continued increases in passenger travel demand.” In addition, Deloitte estimates that there will be a 5% increase in air passenger travel over the next 20 years.

This growth in the commercial aviation market is creating an opportunity for aerospace and defense (A&D) manufacturers and suppliers, and aftermarket parts and service providers to move into new regions and markets, and bid on new contracts for subassemblies, parts, and services.

Unfortunately, many A&D organizations are woefully unprepared for operating in the world of commercial business because they've spent decades following the extremely rigid—and very different—business practices laid out by the Federal Acquisition Regulation (FAR) system. This type of business model lacks the flexibility the commercial market demands, such as being to able quickly respond to changing business needs, regulations, and requirements. This creates functional challenges for A&D organizations trying to do business in the commercial aviation market. For instance, a [KPMG study](#) that polled senior A&D manufacturing executives found that “57% of A&D respondents said they were having challenges with supplier performance,” and 49% reported having challenges “related to achieving information and material visibility across the extended supply chain.”

And if an A&D organization's business processes aren't ready for the commercial market then the business systems that drive those processes are also likely not

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ready for prime time. According to KPMG, A&D organizations are finding that their business systems lack the necessary functionality to compete in the commercial aviation market:

“29% [of respondents] said that their IT systems were inadequate for their supply chain visibility, planning, and execution needs; 43% said that a lack of mature technology was creating obstacles to communicating data across the supply chain; an almost equal number (45%) said that they did not think their top-tier suppliers' technology was sophisticated enough to share real-time capacity and demand data.”

The challenges don't stop there. According to an [Accenture survey](#) of A&D engineering executives, A&D organizations “cite the lack of a single system of record (45%) and of integration between engineering functions (39%) as the most common challenges around engineering product configuration and design management.” Accenture further reports that “other challenges highlighted by survey respondents included a lack of traceability from requirements to product design and lack of collaboration with external suppliers.”

Many of these challenges stem from the use of isolated, legacy business systems that don't support modern, commercial business processes. This ultimately means that these obsolete business systems can be the biggest factor preventing A&D organizations from taking on new business.

So before an A&D organization can even consider competing in the commercial aviation market, it needs to update its business systems to support the commercial market's business processes. Let's take a look at how modernizing business systems can help position A&D organizations to take advantage of the growing commercial aviation market.

## Gain business agility

Today's commercial business processes require immediate access to information from anywhere across the organization, the tools to act on that information, and the ability to seamlessly adjust business practices as circumstances demand. To some, this might sound like the opposite of how the isolated and regimented systems of defense contractors have been operating for years now. According to Rob Barrett, managing director of supply chain & operations at KPMG, [one critical area that suffers from siloed systems is supply chain management](#):

“Many of the larger organizations, where the different lines of business contract separately, are starting to struggle with an increasingly fragmented view of supplier performance because there is often no ‘aggregation’ layer where the organization can achieve a full view of the supplier relationship. In today’s data-driven business environment, you simply can’t manage a complex global supply chain without leveraging technology.”

Real-time access to current and accurate data across an organization provides decision makers with critical information in other areas as well, such as program and project execution. It also helps foster [“collaboration and coordination within design engineering, across functional boundaries,”](#) according to Accenture. This helps give A&D organizations greater visibility into product data, and allows them to make better use of that product data.

Looking beyond data visibility, A&D organizations can gain even further agility by embracing cloud technology. Not only does cloud technology allow organizations to [“spend less time and money managing IT, and more time focused on their real priority—growth,”](#) it also allows organizations to implement new systems much more quickly. When an organization puts its business systems in the cloud, it eliminates all the internal IT infrastructure and associated overhead. Cloud technology also makes it much easier for organizations to easily support new locations globally, without having to depend on local IT resources. [According to cloud computing expert, Rick Blaisdell, the advantages of cloud-based ERP solutions for manufacturing include:](#)

- Minimized initial investment
- Minimized technical staff implication
- Increased ROI of the ERP application investment
- Increased scalability

**With the right business systems in place, A&D organizations can gain the agility, speed, and access to relevant information they need to take advantage of growth opportunities in the commercial aviation market, meet their business objectives, lower costs, and grow revenue.**

This last point—increased scalability—often gets the least attention, but is perhaps the most important factor that A&D organizations need to consider. By its very nature, cloud technology facilitates an infrastructure that is much more open to change and has the flexibility to stay current with the latest technologies. This means that A&D organizations can easily scale resources and implement business process changes—whether these changes are from growth or the result of industry transformations. These are especially important skill sets for defense contractors to have as they make the transition to doing business in the commercial aviation market.

## Meet industry-specific requirements

No industry’s business practices remain stagnant. The shift to more commercially accepted business practices in the A&D industry is a perfect example of this. Whether systems are on-premise, in the cloud, or exist in hybrid environments, A&D organizations need business systems that are designed to meet the specific needs of their industry. These systems need to be able to manage the highly complex, multi-step (and often multi-location), made-to-order (MTO), and engineered-to-order (ETO) manufacturing processes. They also must permit close internal collaboration between multiple departments, as well as foster external collaboration with customers and suppliers.

These systems must also have the flexibility to quickly adjust to the inevitable changes in the industry—whether they come from changes in business practices, customer requirements, or regulatory oversight. And they need to do this without requiring time-consuming and costly customizations.

## Maintenance, repair, and operations opportunities

One huge revenue opportunity for A&D organizations is in maintenance, repair, and overhaul (MRO) services. With an A&D-specific system for MRO services, organizations can optimize the utilization of materials, tools, and personnel, so they can forecast, plan, and procure more effectively. Beyond managing core repair and overhaul operations, such a system can also help organizations provide additional services such as engineering management, exchange programs, maintenance programs, modifications, upgrades, and warranty follow-up.

## Improve decision making

Because of the changes taking place in the defense industry, decision makers are going to be faced with some difficult choices, and they'll need access to the right business information—such as project and contract performance, and statistical process control—in order to help drive and support their decisions. With seamless access to this level of information, A&D organizations can make better decisions to take advantage of opportunities to increase revenue and lower costs.

A modern system that's designed specifically for the A&D industry that also includes robust, real-time business intelligence (BI) functionality, can give A&D organizations immediate access to the tools they need to efficiently monitor costs, processes, and workflows for ongoing projects. The right tools empower A&D organizations to streamline and accelerate the processes of gathering,

analyzing, and reporting key business information. Depending on an organization's specific needs, these BI tools might include capabilities for:

- Financial and operational reporting and analysis
- Dashboards
- Planning
- Budgeting
- Forecasting
- Role-based analytics
- Data mining

And by integrating a BI solution with existing systems, A&D organizations can gain a single source of the truth that gives them access to historical information and allows them to perform more accurate forecasting.

## Grow revenue

The unprecedented paradigm shift in the defense industry is forcing defense contractors to either change how they do business or simply close up shop and go out of business—there is no middle ground here. But instead of a burden, A&D organizations should look at this as an opportunity. With the right business systems in place, A&D organizations can gain the agility, speed, and access to relevant information they need to forge a path that allows them to take advantage of the growing opportunities in the commercial market, meet their business objectives, lower costs, and grow revenue.



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