

The Agile Aerospace and Defense Enterprise



Navigating a Changing Environment

Market Situation

The Agile Enterprise

Business Priorities

SAP Innovations

Globalization, the world economy, and shrinking defense budgets conspire to disrupt the aerospace and defense landscape. Leading aerospace and defense firms must rise to meet these challenges, streamlining their operations while continuing to innovate.

Now more than ever, it is clear that change is coming to the aerospace and defense industry. From defense contractors anticipating significant budget cuts to commercial airframe manufacturers preparing to scale up due to massive backlogs, companies must operate with increased precision, flexibility, and speed.

Charting a course that leads to efficiency gains is critical. Indeed, the imperative to improve the core disciplines of designing, building, and selling products certainly remains. However, today's aerospace and defense firms also need to seize opportunities in the service and aftermarket space internationally, perhaps even including new markets that have been entirely unexplored.

So responding rapidly to an ever-changing world is key, and ensuring you have the platform that enables innovative ideas to be brought to market quickly is a given.

Find out how leading aerospace and defense companies take advantage of SAP technology and solutions to power their growth. Join the family: become a best-run aerospace and defense company.



The Agile Aerospace and Defense Enterprise

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SAP Innovations

Precision, flexibility, and speed allow you to do the following.

Increase Market Capture and Create New Solutions

Leading aerospace and defense firms use engineering know-how to develop innovative products.

Execute on Time and Within Budget

In today's environment, flawless execution is a must.

Develop a Responsive Ecosystem

A responsive network is needed to create complex products.

Best-Run Aerospace and Defense



The ability to capitalize on emerging opportunities coupled with responsive operations drives competitive advantage in today's changing aerospace and defense industry.

Priorities for Best-Run Companies

Market Situation

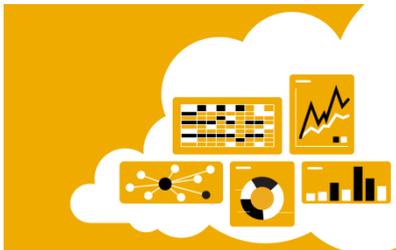
The Agile Enterprise

Business Priorities

SAP Innovations

Best-run aerospace and defense companies meet the needs of demanding customers while responding to the evolving requirements of global markets by focusing on key imperatives.

- Business Capture and Program Delivery
- Designing and Building Complex Products
- Responsive Supply Network
- Aftermarket Services
- Human Resources
- Finance
- Procurement
- Information Technology
- Technology and Platform



Understanding the value drivers for each of these priorities is key to executing as a best-run aerospace and defense company.



SAP Innovations

Market Situation

The Agile Enterprise

Business Priorities

SAP Innovations

From high-flying aircraft to advanced avionics, cutting-edge technology is at the heart of the aerospace and defense industry. Learn how SAP technology can not only streamline your existing operations but also allow you to create entirely new solutions.

Aerospace and defense companies are saturated with data from deep supply chains, complex engineering processes, and even the sensors and intelligence products they themselves build. Breakthrough in-memory solutions, along with advanced analytics, turn this data into actionable information available at any level of granularity. Visualization further exploits this data by transforming it into an intuitive format that supports new levels of productivity. Mobile solutions instantly deliver the most relevant information anytime, anywhere.

The same technologies can unlock totally new streams of revenue. Embedding SAP technology such as the SAP HANA platform into your products allows you to create lightning-fast command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) applications and innovative solutions that optimize maintenance, provide for cybersecurity, and detect fraud, waste, and abuse.

Finally, as IT transforms from a support function to a strategic driver, new cloud-based solutions offer low-cost, low-risk deployment while providing flexibility, scalability, and full integration across business processes.



Aerospace and Defense Value Map

SAP Solutions

Program Delivery

Complex Products

Responsive Supply Network

Aftermarket Services

Human Resources

Finance

Procurement

Information Technology

Technology and Platform

SAP solutions address key requirements for the agile aerospace and defense enterprise.

	Business Capture and Program Delivery		Designing and Building Complex Products		Responsive Supply Network		Aftermarket Services		
	Collaborative Sales Force Automation		Product Development and Compliance		Sales, Inventory, and Operations Planning		MRO Services and Lifecycle Support		
	Government Contracting		Embedded Systems Technology		Collaborative Supply Planning		Service Parts Management		
	Program Management		Project Manufacturing for Complex Assembly		Supply Chain Execution		Equipment Visibility and Performance		
	B2B Commerce		Operational Excellence		Supply Chain Monitoring				
Human Resources	Core Human Resources and Payroll		Talent Management		Time and Attendance Management		Workforce Planning and Analytics		
Finance	Financial Planning and Analysis		Accounting and Financial Close		Treasury and Financial Risk Management		Collaborative Finance Operations		Enterprise Risk and Compliance Management
Procurement	Strategic Sourcing and Supplier Management		Procure to Pay		Regulated and Complex Procurement		Business Network Extensions for Procure to Pay		
Information Technology	Application Lifecycle Management		IT Infrastructure Management		IT Portfolio and Project Management		IT Service Management		IT Strategy and Governance
Technology and Platform	Big Data	Real-Time Enterprise	Real-Time Analytics	Enterprise Mobility	Enterprise Information Management	Application Integration	Cloud Solutions	3D Business Visualization	



Business Capture and Program Delivery

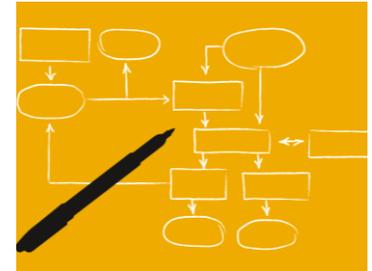
SAP Solutions

Program Delivery

Priorities

SAP Solutions

Program managers face the daunting challenge of managing a web of partners, suppliers, customers, and internal resources to deliver increasingly complex products and services on time and within budget.



Today's aerospace and defense products are characterized by rapidly changing technology, greater integration, advanced materials, and new methods of manufacturing. In short, aerospace and defense products are complex, and programs that build and sustain them involve risk and uncertainty.

At the same time, customer demands for quality and on-time performance have not diminished. And if you can't deliver, someone else will. New competitors are entering almost every segment of the aerospace and defense sector.

The central challenge, then, is finding new ways to manage product complexity while balancing high customer expectations. Better insight into program performance – operational, contractual, and financial – is one way for program managers to gain an edge. Indeed, technology that turns a wealth of raw data into actionable insight can help programs deliver products on time and within budget – and ultimately, stay ahead of the competition.

22%

Higher new-product revenue (as a percent of total revenue) when the program team has access to dashboards to view project execution metrics

Source: SAP Performance Benchmarking



Business Capture and Program Delivery

SAP Solutions

Program Delivery

Priorities

SAP Solutions

27%

Shorter time to market where formal procedures are used to inform parties of prototype and ramp-up prerequisites, progress, and results

Source: SAP Performance Benchmarking

Sharpen operational insight and boost program performance.

Plan, execute, and monitor every aspect of the program while staying compliant with the needs of key stakeholders.

Collaborative Sales Force Automation

Establish flexible, customer-facing processes to effectively understand, influence, and sell to commercial and government customers.

Government Contracting

Collect and track costs, manage project revenue, and smoothly integrate project data with contracts and billing.

Program Management

Access timely, consistent information on program performance, perform earned value analysis, and analyze trends to proactively address issues and risks.

Business-to-Business Commerce

Align your business to your customers with a modern multichannel commerce solution.

Benefits

- Higher-value contracts
- Improved customer satisfaction
- On-time delivery performance
- Higher sales revenue
- Better risk visibility
- Compliance with contracts



Designing and Building Complex Products

SAP Solutions

Complex Products

Priorities

SAP Solutions

Aerospace and defense manufacturers create some of the world's most sophisticated machines. It is no wonder that one of their focal points is synchronizing complex engineering, manufacturing, and supply chain processes to provide a smooth production cycle.



More demanding customers, compressed production schedules, and stricter government regulations all create an imperative for aerospace and defense companies to operate with speed and flexibility.

An efficient manufacturer accomplishes this by aligning stakeholders across engineering and manufacturing to create an integrated team that swiftly responds to shifting requirements and demand signals.

As aerospace and defense firms look to sharpen their production skills, they simultaneously search for new technology to innovate around. As traditional sources of revenue dry up in this challenging climate, successful companies will turn to key areas such as cybersecurity, intelligence, and IT services. There they will apply existing design and manufacturing skills to create entirely new products that leverage the latest in IT such as the advances SAP has made in enterprise mobility, in-memory computing, analytics, and visualization.

35%

Higher operating margin when phase gate decisions are made by a cross-functional team including finance, marketing, engineering, and manufacturing

Source: SAP Performance Benchmarking



Designing and Building Complex Products

SAP Solutions

Complex Products

Priorities

SAP Solutions

Design and build complex systems on time and within budget.

Leverage industry best practices and the latest technology innovations from SAP to build complex aerospace and defense systems that drive top-line growth and improve profitability.

Product Development and Compliance

Enhance product development through improved engineering collaboration and a robust handover process to manufacturing.

Embedded Systems Technology

Drive top-line growth with new breakthrough IT solutions that leverage mobile, in-memory, analytics, and visualization technologies from SAP.

Project Manufacturing for Complex Assembly

Improve manufacturing operations with a comprehensive project manufacturing process enhanced by 3D product visualization and mobile technology.

Operational Excellence

Improve performance, quality, and sustainability of critical facilities and equipment with a fully integrated enterprise solution.

13%

Shorter time to market when new development projects use a documented process that clearly describes all steps from concept to product launch

Source: SAP Performance Benchmarking

Benefits

- Increase IT solution revenue
- Reduce time to market
- Boost on-time delivery rates
- Reduce program risk and cost
- Improve product quality
- Increase plant health and safety



Responsive Supply Network

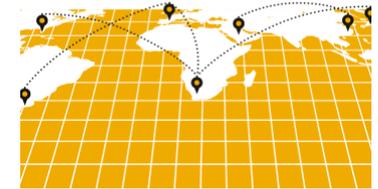
SAP Solutions

Responsive Supply Network

Priorities

SAP Solutions

Aerospace and defense firms find themselves constituent to global, multitier business networks that have grown in complexity to all-time highs. Best-run aerospace and defense firms effectively collaborate within this network, optimizing supply plans to stay cost-effective.



Given current market forces, supply chain agility and responsiveness will play a key role in determining winners and losers in the aerospace and defense industry.

Indeed, commercial aerospace OEMs must rapidly scale their supply chains for the rebound, while defense-oriented programs look toward cost savings and risk mitigation strategies, preparing for a potential downturn.

In either case, manufacturers must focus on integrating their supply chains, developing a global business model in which critical suppliers become strategic partners who share both risks and rewards.

Clearly, understanding risk and performance drivers earlier and more accurately is vital. Companies with strong insight into their supplier network and the ability to orchestrate its actors will be best equipped to react to changes and ultimately drive operational excellence.

24%

Lower engineer-to-order fulfillment lead time where concurrent material and capacity constraint plan is generated multiple times in a day

Source: SAP Performance Benchmarking



Responsive Supply Network

SAP Solutions

Responsive Supply Network

Priorities

SAP Solutions

5%

Higher on-time delivery performance when production and supply are monitored in real time across the supplier network

Source: SAP Performance Benchmarking

Drive down cost and risk in global supply networks.

Instant visibility into key supply chain parameters allows you to detect risks and streamline operations to increase customer satisfaction and maximize profitability.

Sales, Inventory, and Operations Planning

Integrate processes for sales, inventory, and operations planning to enable collaborative decision making across the enterprise.

Collaborative Supply Planning

Use integrated planning to improve customer service and lower inventory levels. Match demand and supply intelligently, and use collaborative applications to heighten visibility and coordination.

Supply Chain Execution

Deliver the right part to the right place at the right time. Streamline logistics processes and comply with global standards such as International Traffic in Arms Regulations (ITAR).

Supply Chain Monitoring

Provide visibility into all aspects of the supply chain, from operational key performance indicators (KPIs) to spend analytics and supplier risk.

Benefits

- Improve customer satisfaction
- Improve lead times
- Reduce total supply chain cost
- Increase resiliency
- Optimize inventory
- Comply with key regulations



Aftermarket Services

SAP Solutions

Aftermarket Services

Priorities

SAP Solutions

Competing in the aftermarket has never been more challenging for aerospace and defense manufacturers. Profitable growth requires differentiation from competitive offerings and highly efficient operations to keep costs low.



18%

Less unplanned downtime for organizations adopting a preventive and predictive maintenance approach, compared to those adopting a reactive approach

Source: SAP Performance Benchmarking

In an environment where defense contractors are being asked to cut costs and commercial manufacturers are stretched to their production limits, the commercial and aerospace and defense market segments couldn't be more different. Despite these differences, the aftermarket services business remains strategic for both segments due to its potential for profitability and future growth.

On the defense side, with new program starts down and equipment staying in service longer, there will be a need for more maintenance and upgrade service contracts since older equipment will naturally require more maintenance and eventually upgrade to new technologies.

On the commercial side, operator margins will remain tight even with the delivery of new, more fuel-efficient aircraft. Tremendous efficiency in the delivery of parts and services is a must to achieve even single-digit margins in this segment.

Aftermarket Services

SAP Solutions

Aftermarket Services

Priorities

SAP Solutions

Profitably deliver maintenance services and spare parts.

Streamline maintenance operations and enhance customer interaction and fulfillment with comprehensive service delivery solutions.

MRO Services and Lifecycle Support

Provide for operator safety and service profitability by integrating customer service; maintenance, repair, and overhaul (MRO) services; and supply chains. Raise technician productivity with mobile and product visualization technology.

Service Parts Management

Increase fill rates while cutting inventory with fully integrated service parts planning and execution.

Equipment Visibility and Performance

Reduce maintenance costs while increasing equipment reliability through data mining, predictive analysis, and maintenance optimization with SAP HANA.

29%

Lower annual service and maintenance costs where all facilities track the same KPIs to measure comparable performance

Source: SAP Performance Benchmarking

Benefits

- Make service delivery profitable
- Improve customer satisfaction
- Use equipment cost-effectively
- Make parts inventory visible
- Increase supply chain efficiency
- Align planning and fulfillment



Human Resources

SAP Solutions

Human Resources

Priorities

SAP Solutions

Talent is a true competitive advantage today and critical when aligning business strategy and execution. Best-run organizations achieve profitable growth by leveraging their talent and out-innovating the competition.



For organizational growth and an agile response to business change, organizations must give people the knowledge and technology to facilitate innovation.

Organizations that quickly respond with the right talent in the right places will have a unique advantage in the marketplace.

They must also move into new markets, adapting to local practices and tapping the right local talent. In addition, they must identify and retain new talent acquired through mergers and acquisitions.

32%

Less employee turnover by using analysis of workforce data to design, implement, and monitor workforce optimization strategies

Source: SAP Performance Benchmarking



Human Resources

SAP Solutions

Human Resources

Priorities

SAP Solutions

Enter the new world of work.

Enable growth and sustainability by coupling global capabilities, integration, and real-time insight with choice in the way HR processes and services are delivered.

Core Human Resources and Payroll

Consolidate HR and payroll processes on a common global platform for better workforce data and legal compliance.

Talent Management

Improve strategic alignment, increase productivity, and accelerate results by identifying, developing, motivating, and retaining talent.

Time and Attendance Management

Streamline time management processes to enhance resource effectiveness and visibility into, and control over, labor costs.

Workforce Planning and Analytics

Identify and analyze talent gaps, and streamline workforce planning for efficient and effective management of workforce demand and supply.

38%

Lower costs for HR organizations with a high degree of internal integration compared to organizations with a fragmented HR environment

Source: SAP Performance Benchmarking

Benefits

- Align people to organizational strategies
- Support global expansion into new markets
- Improve productivity and engagement
- Provide real-time insight into business needs



Finance

SAP Solutions

Finance

Priorities

SAP Solutions

CFOs implement best practices to strike a balance between sound stewardship and value creation while walking the fine line between entrepreneurship and caution. At the same time, they need to view the right information, whether it's the big picture, exacting detail, or somewhere in between.



During one of the most difficult and volatile economies of modern times, financial organizations are struggling to achieve excellence.

On a daily basis, they encounter persistent challenges, such as ongoing market instability, ever-changing regulations, and increasing pressure on margins. Plus, the speed of financial operations is accelerating, requiring access to insight on the go – anytime and anywhere.

Finance executives are tasked with cutting costs and providing insight into the financial impact of decisions. To achieve these goals in this high-pressure environment, finance organizations must rely on best practices that help them achieve excellence and drive business results.

With the right solutions, finance organizations can excel and become a strategic advisor to the entire business. They can help ensure regulatory compliance and effective risk management, outperform financial objectives, create sustainable value, and deliver superior service at reduced cost.

3x

Lower finance cost as a percentage of revenue for top-quartile organizations versus bottom-quartile organizations

Source: SAP Performance Benchmarking



Finance

SAP Solutions

Finance

Priorities

SAP Solutions

76%

Higher operating margins, where financial systems provide historical and forward-looking views into financial and operational performance

Source: SAP Performance Benchmarking

Excel with best practices that facilitate 360-degree processes.

In the face of sustained market volatility, increasingly complex regulatory requirements, and growing pressure on margins, financial organizations must enable their staff to collaborate more efficiently and use business insight more effectively.

Financial Planning and Analysis

Define and execute organizational strategies, manage financial plans and forecasts, and increase profitability.

Accounting and Financial Close

Deliver a fast, accurate, compliant close and regulatory disclosures with less cost and effort.

Treasury and Financial Risk Management

Achieve greater insight and control over complex processes for managing cash, liquidity, and risk.

Collaborative Finance Operations

Automate transactional processes to improve efficiency, effectiveness, collaboration, and service at lower costs.

Enterprise Risk and Compliance Management

Protect revenue and optimize financial performance with risk and compliance management.

Benefits

- Provide forward-looking insights
- Deliver accurate financial data
- Enhance efficiency at lower cost
- Help ensure regulatory compliance



Procurement

SAP Solutions

Procurement

Priorities

SAP Solutions

While companies often focus on revenue, procurement savings can increase profits with far higher impact. The key to maximizing procurement's success in this critical role is to deliver consistent quality, savings, and compliance over time. That calls for innovative solutions that boost efficiency and insight.



Procurement leaders set a baseline for success by implementing best practices, excelling in category expertise, and working with key stakeholders on cost-control programs.

While savings is always a priority, new objectives have emerged as well. Procurement must manage supplier risk and performance, improve process efficiency, drive innovation, and ensure sustainability practices.

You need solutions that give you the tools to cut costs as well as add value. These tools need to support processes including spend

analysis, sourcing, contract management, operational procurement, services procurement, supplier information, risk and performance management, and invoice management. At the same time, procurement plays a role in helping finance optimize the company's cash position through discount management programs.

These tools, when connected to and facilitated by an unparalleled collaborative business network, drive real-time insight and efficiency that can only be delivered through the "power of many."

60%

Improvement in annual average savings by leveraging technology for sourcing and procurement processes

Source: SAP Performance Benchmarking



Procurement

SAP Solutions

Procurement

Priorities

SAP Solutions

55%

Lower FTEs per billion in spending for companies conducting electronic supplier collaboration on a network

Source: SAP Performance Benchmarking

Drive sustainable savings while supporting innovation.

Ensure best practices within the source-to-pay process in the cloud, while leveraging the “power of many” through network collaboration to realize greater efficiency, gain real-time insights, and achieve true procurement excellence.

Strategic Sourcing and Supplier Management

Find new suppliers through the Ariba Network, and manage these relationships through supplier management solutions. Identify and act on sourcing opportunities, and create favorable, low-risk supply contracts.

Procure to Pay

Realize savings with compliant, user-friendly, self-service procurement; services procurement; and plan-driven procurement. Collaborating on the Ariba Network makes catalog management, purchase order collaboration, and invoice-related transactions even more efficient.

Regulated and Complex Procurement

Drive procurement efficiency while maintaining compliance with government regulations and security standards.

Business Network Extensions for Procure to Pay

Leverage the Ariba Network even further to drive advanced invoice automation and exception management. Manage cash by taking advantage of dynamic discounting opportunities.

Benefits

- Optimize spend under management
- Increase average annual savings
- Cut FTEs per billion in spend
- Drive innovation with suppliers
- Reduce cost and risk
- Accelerate turnaround



Information Technology

SAP Solutions

Information Technology

Priorities

SAP Solutions

Business enterprises should forge strategic business partnerships with their IT organizations by aligning goals. And business-oriented IT should maximize efficiency and responsiveness by running IT like a business.



Research shows that lines of business want to ascertain the value of their IT investments, which means that IT organizations no longer decide alone which IT projects to fund.

The challenge is that IT management is often seen as just running the technical landscape. To become more relevant to an enterprise, IT needs to reposition itself to run like a business.

SAP offers an integrated portfolio of solutions to do just that. New technologies like mobile, in-memory, and cloud computing generate value to a business in an unprecedented way.

However, these new technologies also make IT landscapes more complex, requiring more tools to manage them. By leveraging SAP solutions along with following best practices – CIOs, CEOs, other executives, management, and employees can tap into and help ensure efficiency, continuity, and responsiveness, making IT more strategic to the business.

Information Technology

SAP Solutions

Information Technology

Priorities

SAP Solutions

Evaluate and control risk, enable flexibility and scale, control and optimize costs, and maximize strategic value.

Promote business continuity, drive efficiency, and increase IT responsiveness to business objectives – with IT management solutions designed for any size business.

Application Lifecycle
Management

Use application lifecycle management best practices, methods, and services based on the Information Technology Infrastructure Library (ITIL).

IT Infrastructure
Management

Monitor all network assets to integrate infrastructure and application lifecycles.

IT Portfolio and
Project Management

Manage projects and align the portfolio to drive innovation efficiency.

IT Service
Management

Align service-desk operations with service-level agreements (SLAs), resolve SLA incidents fast, and adopt ITIL best practices to meet evolving business goals.

IT Strategy and
Governance

Track IT costs and risks and map risk and compliance activities to business impact.

Benefits

- Better align IT to business strategy
- Shorten IT delivery and business cycles
- Maximize return on IT
- Reduce system upgrade and operation costs
- Lower risk mitigation cost and revenue loss
- Reduce critical business system downtime



Technology and Platform

SAP Solutions

Technology and Platform

Priorities

SAP Solutions

Technology solutions can make the difference between surviving and thriving. And businesses know that they need to innovate to drive transformation. Technology and platform solutions from SAP enable quick adoption of cutting-edge technology to run the business better and faster with agility and innovation.



Users expect to run a real-time business with collective insights from real-time analytics for better decision making, prioritization, forecasting and modeling of outcomes, and access to applications from the latest mobile devices. They demand that these capabilities seamlessly integrate with their favorite social platforms, allowing cross-stakeholder collaboration.

At the same time, data volumes are exploding while the window for capitalizing on opportunities is shrinking. Users must be empowered with information from real-time applications available securely on any device. And developers need a platform to innovate faster.

SAP enables the real-time enterprise with an innovative data platform to power a new class of real-time analytics and applications that give businesses a true competitive advantage. Companies can harness the value of Big Data while improving governance with timely, trusted, and consistent information.

Plus, SAP provides a comprehensive set of cloud solutions, including line-of-business applications as well as social and business network collaboration. The SAP HANA Cloud Platform enables customers to build new apps or extend and customize existing ones with managed and subscription-based services.

Technology and Platform

SAP Solutions

Technology and Platform

Priorities

SAP Solutions

Drive transformation and help the business thrive with technology.

Technology and platform solutions from SAP enable the real-time enterprise by unleashing the power of collective insights, empowering developers to innovate, and unwiring the business.

Big Data

Achieve tangible results on every business priority by accelerating how users acquire, analyze, act on, and apply insights continuously.

Real-Time Enterprise

Power a new class of real-time analytics and applications with an innovative data platform to give businesses a true competitive advantage.

Real-Time Analytics

Unleash collective insight through enterprise business intelligence, agile visualizations, and advanced analytics on any device and platform.

Enterprise Mobility

Deliver a platform for mobile development and security to innovate employee and consumer apps for any mobile device.

Enterprise Information Management

Maximize the value of business data – both structured and unstructured – across the organization.

Application Integration

Integrate application delivery to maximize agility across people, processes, and systems – within and beyond the SAP software landscape.

Cloud Solutions

Extend existing on-premise apps and infrastructure to enable new innovative business processes, gain greater insights, and unlock new business value.

3D Business Visualization

Integrate 3D visualization and business data across the aerospace and defense value chain.

Benefits

- Enable real-time operations
- Lower time to value
- Turn data into an enterprise asset
- Innovate customer engagement



SAP Innovations

SAP Innovations

Applications

The SAP HANA Platform

Mobile

Analytics

Cloud

80%

Of decision makers think access to the right information at the right time is critical to their business

Source: SAP Performance Benchmarking

Strong growth in commercial aerospace requires that manufacturers scale up. Meanwhile, shrinking defense budgets means defense contractors must find new sources of revenue and improve efficiency. Significant advances in technology can help the aerospace and defense industry thrive in the face of this uncertainty.



Data volume and complexity are exploding in the aerospace and defense industry due to increased use of sensors, greater complexity in products and supply chains, and stricter regulations around traceability. In-memory computing and advanced analytics technology give companies the ability to find clarity from the volumes of data. Product visualization provides a leap in productivity through the use of 3D models across the entire value chain.

Aerospace and defense is an inherently mobile industry, and mobile solutions will improve operational efficiency by transforming the way information is delivered to users. The cloud drives consumerization of technology and enables new ways to connect with the business network.

To drive growth, these same technologies can be embedded to build new solutions for defense and airline customers for maintenance optimization, protection against cybersecurity threats, intelligence insights from C4ISR applications, and detection of fraud, waste, and abuse.

SAP Business Suite powered by SAP HANA

SAP Innovations

Applications

The SAP HANA Platform

Mobile

Analytics

Cloud

SAP Business Suite software powered by SAP HANA enables aerospace and defense firms to run profitable programs based on designing, building, and servicing highly complex products. It delivers the insight and speed that impacts everything from the supply chain to manufacturing to program management.



Business Capture and Program Delivery

Monitor and analyze high volumes of financial and operational data in real time across the full aerospace and defense program lifecycle.

Designing and Building Complex Products

Support lean initiatives with root cause analysis and the ability to quickly compare planned versus actual values for scrap, lead times, and processing durations. Reduce lead time from development to product delivery by eliminating wait times for critical planning and project control transactions.

Responsive Supply Network

Decrease inventory while reducing out-of-stock situations through high-speed material planning and the ability to quickly model alternative supply scenarios. Enhance material flow by leveraging forecasts, supply projections, and stock coverage reports, accessed instantaneously.

Aftermarket Services

Improve planning and responsiveness with real-time monitoring of service operations, service levels, and resource utilization. Identify potential product failures with predictive analytics.



The SAP HANA Platform

SAP Innovations

Applications

The SAP HANA Platform

Mobile

Analytics

Cloud

68%

Greater ability to use Big Data for organizations with a well-defined, enterprise-wide, high-performance analytics strategy

Source: SAP Performance Benchmarking

Aerospace and defense IT in general is about using technology to maximize the value of the mountains of information that aerospace and defense companies collect and store. With the SAP HANA platform, aerospace and defense manufacturers can use in-memory computing to analyze business operations based on large volumes of detailed data as it develops.



Top-Line Growth

Drive growth by embedding SAP HANA into customer solutions. Better analyze real-time data to improve aircraft reliability, guard against cybersecurity threats, and detect fraud, waste, and abuse.

Business Capture and Program Delivery

Improve insight into programs with access to more timely, detailed, and accurate information. Simulate planning scenarios, analyze impact on cost and schedule, and take decisive action.

Designing and Building Complex Products

Improve products and processes by analyzing product lifecycle data. Leverage historical data in order to predict and shorten development and production ramp-up times.

Responsive Supply Network

Understand risk and performance factors faster and in more detail. Respond more profitably to supply chain trends, risks, and opportunities by simulating what-if cases and replanning rapidly.

Aftermarket Services

Deliver maintenance services and execute spare part orders profitably through data mining, predictive analysis, and optimization on the SAP HANA platform.



Mobile

SAP Innovations

Applications

The SAP HANA Platform

Mobile

Analytics

Cloud

22%

Fewer days in inventory for companies using a mobile warehouse and inventory solution

Source: SAP Performance Benchmarking

Provide the latest information where and when it is needed most to win new business, improve operational efficiency, and execute complex programs on time and within budget.



Business Capture and Program Delivery

Provide around-the-clock access to KPIs and workflow to help program managers monitor and react quickly to disruptive events.

Designing and Building Complex Products

Make shop-floor workers more efficient by giving them the most relevant information at the point of production. Enable operators to manage work orders, quality processes, inventory, and scheduling.

Responsive Supply Network

Let operations managers monitor KPIs and status across performance dimensions and have flexible and timely access to deliveries, inventory, invoices, and more.

Aftermarket Services

Increase product uptime, airworthiness, and asset utilization with a more responsive workforce. Eliminate manual processes and reduce the risk of costly errors when servicing mission-critical aerospace and defense products.

Analytics

SAP Innovations

Applications

The SAP HANA Platform

Mobile

Analytics

Cloud

26%

Higher inventory turns with
warehouse analytics

Source: SAP Performance
Benchmarking

Provide up-to-the-minute visibility to KPIs across every facet of business operations, enabling real-time monitoring, root cause analysis, risk mitigation, predictive modeling, and optimization to help you run a more intelligent aerospace and defense business.



Business Capture and Program Delivery

Enable program managers to make timely and informed decisions by monitoring current program performance and earned value, determining root cause, and anticipating future performance through predictive analysis.

Designing and Building Complex Products

Support lean and Six Sigma initiatives with analysis capabilities to cut waste and improve quality.

Responsive Supply Network

Measure and analyze performance and risk factors of multitier supply chains to reduce risk and enable a more responsive supply chain.

Aftermarket Services

Improve contract performance by monitoring and analyzing current program performance against contract terms. Improve aircraft reliability through predictive maintenance analysis.

Cloud

SAP Innovations

Applications

The SAP HANA Platform

Mobile

Analytics

Cloud

85%

Of companies believe cloud will have a major impact on their organization through efficiencies, innovation, or competitive differentiation

Source: SAP Performance Benchmarking

The speed and flexibility offered by cloud computing is creating new opportunities for best-run aerospace and defense companies. Cloud solutions from SAP and SAP HANA Cloud Platform allow companies to build differentiating solutions at the point of engagement – establishing nimble global business networks.



Business Capture and Program Delivery

Build a nimble and flexible sales organization and manage accounts, enable team collaboration, and monitor sales results with flexible and sales execution for a low total cost of ownership.

Human Resources

Improve retention, satisfaction, and performance with integrated talent management available in the cloud. Develop future leaders for your company. **successfactors**
An SAP Company

Procurement

Through Ariba Inc., an SAP company, connect to the world's largest Web-based business commerce network anywhere, at any time, from any application or device, to buy, sell, and manage cash more efficiently. Enable rapid time to value and maximize savings by automating and streamlining the strategic source-to-contract process. Measure and analyze performance and risk factors of multitier supply chains in the cloud to reduce risk and enable a more responsive supply chain with the SAP Supplier InfoNet solution, a business network intelligence approach that goes beyond typical supplier management and spend analysis applications. **ARIBA**
An SAP Company



Best-Run Customers

Best-Run Customers

The best-run aerospace and defense organizations rely on SAP.

Bombardier

Global Aerospace Company

Our customers represent 79% of global Fortune 500 companies and 85% of the top 100 most-valued brands in the world.

U.S. Defense Contractor

SAP can reach more than 97% of the world's wireless subscribers through text messaging.

Northrop Grumman

SAP HANA can increase analysis speed by more than 10,000 times, equal to walking from California to New York in six minutes.

Why SAP?

SAP enables more than 17 million people to work from anywhere through the cloud.

Our customers fly more than 1.6 billion of the world's passengers.



Customer Co-Innovation

Best-Run Customers

Bombardier

Global Aerospace Company

U.S. Defense Contractor

Northrop Grumman

Why SAP?

SAP co-innovates with leading aerospace and defense companies to drive industry priorities. These include managing business capture and program delivery, designing and building complex products, maintaining a responsive supply chain, and delivering aftermarket services.

Executive Advisory Council and User Groups

Executives of top aerospace and defense companies meet regularly in the Executive Advisory Council, the SAP User Group for Airlines (SUGAIR), and Americas' SAP Users' Group (ASUG) to discuss innovation, technology, and best practices.

Co-Innovation Partners

The aerospace and defense ecosystem comprises consulting and integration partners as well as value-added co-innovators and developers.



BOMBARDIER

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Why SAP?

Montreal-based Bombardier Aerospace had pressures in its parts logistics organization with rising inventory levels and unpredictable demand. To stay on top of its game, it improved its repair and replacement service for returned parts. SAP Business Suite software assisted, providing insight into inventory levels.

Bombardier needed to gain insight into unpredictable and sporadic demand from a multitude of sources, to operate effectively within a dynamic and uncertain environment. Its key objectives were to introduce end-to-end, closed-loop planning and execution, increase service levels and fleet availability, and reduce the growth rate of the service parts inventory.

The company implemented the first global solution for spare parts planning integrated with spare parts inventory and global available-to-promise functionality for the aerospace and defense industry, entering its global service supply chain and all service parts in the SAP Supply Chain Management application, thus leveraging one strategic platform that supports planning, execution, warehousing, and collaboration needs.

“Our implementation journey with the SAP Service Parts Planning application for Aerospace and Defense has rejuvenated Bombardier’s aftermarket organization, leading to numerous process improvements and system efficiencies.”

Nishant Choudhry, Solution Advisor, Bombardier Aerospace

15%

Reduced service inventory growth



Increased service levels



Maintain optimal inventory levels in the distribution network

1

Integrated platform for engineering, customer service, and supply chain operations



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Why SAP?

This leading aerospace and defense firm leverages SAP software in a complex manufacturing environment to manage a large aircraft program.

Business processes were transformed through the implementation of SAP software to meet the challenge of effectively producing new aircraft while achieving horizontal integration. The customer was also able to retire aging high-risk systems. Supply chain solutions from SAP allow this customer to collaborate with its global supply chain partners and comply with ITAR. SAP software works as the foundation for a project-oriented manufacturing model – managing the entire program from initial contract to delivery. The company also utilizes mobile devices running the SAP Work Manager mobile app to maintain the equipment and production facilities that manufacture aircraft.

Key Benefits

- Streamlined logistics and automated global trade processes in accordance with government-controlled items
- Improved visibility into supplier actions and collaboration efficiency
- Increased shift coverage and better service-level response time

>500

Global suppliers and partners integrated online, helping the company cut costs

26%

Reduction in repair ticket backlog



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Why SAP?

A leading U.S. defense contractor provides solutions for the aerospace and defense manufacturing and aftermarket services industries.

In an environment where defense contractors are being asked to cut costs and commercial manufacturers are stretched to their production limits due to record backlogs, efficient analysis of business data is a critical capability to ensure profitability now and in the future.

Looking to dramatically improve agility and access to information, the company is now moving beyond its widely deployed SAP Business Suite software and has implemented the SAP HANA platform to perform critical analysis for 90% of its revenue base. This platform lets managers develop regional and geographic perspectives about sales and application trends and develop strategies that support growth around the world.

1000x

Faster generation of cost and profitability reports



Rapid business decisions

80

Sites deployed globally

“SAP HANA allows us to get ahead of customer needs. . . . This is clearly transformational.”

Vice President of Marketing and Product Management



NORTHROP GRUMMAN

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Bombardier

Global Aerospace Company

U.S. Defense Contractor

Northrop Grumman

Why SAP?

Northrop Grumman, a world-leading defense contractor, delivers innovative solutions that range from undersea to outer space and into cyberspace.

In the face of increasing budget pressures, Northrop Grumman needed to think and act differently to improve operational efficiency and further improve product quality. In addition to the broad deployment of SAP Business Suite software, Northrop Grumman now leverages SAP 3D Visual Enterprise applications across half of its business in support of manufacturing, training, and technical documentation.

Key Benefits

- Improve data consistency across departments and functions
- Reduce labor hours and work with up-to-date 3D graphics, not out-of-date paper manuals
- Reduce cost of reuse of graphics for multiple downstream purposes

15%–20%

Improved delivery times

\$

Significant cost savings over five years

✓

Fewer errors, improved accuracy

“Where SAP 3D Visual Enterprise is used, our delivery times have been reduced by 15%–20% due to less rework and more efficient operations.”

John Patrick Batache, Director of Lifecycle Logistics and Support,
Northrop Grumman



Why SAP?

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Why SAP?

SAP solutions enable the agile aerospace and defense enterprise to quickly respond to a dynamic marketplace and execute complex projects with speed and precision.

Comprehensive Business Solutions

SAP offers the most comprehensive portfolio of industry-tailored solutions for the aerospace and defense industry. From program management to manufacturing and aftermarket services, SAP can help aerospace and defense customers achieve excellence with integrated solutions.

Leveraging Key Breakthrough Innovations

The SAP solution portfolio is based on the industry's most innovative technology foundation, including SAP HANA, mobile solutions, analytics, and cloud solutions to enable business process optimization and efficiency at the lowest possible cost.

40 Years of Delivering Value to Aerospace and Defense

The world's leading aerospace and defense companies, across every segment of the industry throughout the world, continue to rely on SAP to enable every aspect of their business.



Find Out More About How Your Organization Can Become Best-Run

Benchmark Your Performance

Position your organization for dominance in this new economy with the business performance benchmarking program from SAP – available free to SAP customers and select prospects. The SAP benchmarking program has helped more than 3,000 organizations assess their strengths, uncover areas for improvement, and identify best practices and IT strategies that generate clear, tangible value – not someday, but today.

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