

Industry Executive Overview
SAP for Aerospace and Defense

Executive
Summary

SAP Solutions

SAP Innovations

References

Contact Us

The Agile Aerospace and Defense Enterprise



© 2013 SAP AG

Navigating the Changing Aerospace and Defense Environment

Market Situation

The Agile Aerospace and Defense Enterprise

Business Priorities

Transformation Through Technology Innovation

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

Market Situation

The Agile Aerospace and Defense Enterprise

Business Priorities

Transformation Through
Technology Innovation

SAP Innovations

Precision, flexibility, and speed allow you to:

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.

Best-Run Aerospace and Defense Company Priorities

Market Situation

The Agile Aerospace and
Defense Enterprise

Business Priorities

Transformation Through
Technology Innovation

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:

- Managing Complex Customer Programs
- Designing and Building Complex Products
- Responsive Supply Networks
- Aftermarket Services
- People and Talent
- Finance
- Procurement
- IT Management
- Technology Solutions



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



Business Transformation Through Technology Innovation

Market Situation

The Agile Aerospace and
Defense Enterprise

Business Priorities

**Transformation Through
Technology Innovation**

SAP Innovations

Revenue growth and profit are no longer sufficient benchmarks for success. In today's economy, companies need to stand out in crowded and highly competitive markets. The pace of business is relentless, where today's innovation becomes tomorrow's status quo. Organizations that embrace technology can transform to gain a significant advantage rapidly over the competition.

For over 40 years, SAP's innovations have helped companies transform and achieve the goals they never thought possible – making more-informed decisions and innovating to lead in new markets. SAP enables the real-time enterprise, empowers new experiences, and unwires the business.

Enable the Real-Time Enterprise

SAP's integrated, real-time analytical, predictive, and in-memory database solutions improve the business value of your information and optimize business outcomes.

Empower New Experiences

The SAP software solutions allow you to deliver simple, elegant, real-time applications rapidly across any device, with the superior consumer-grade experience users have come to expect.

Unwire the Business

Connect with your customers, partners, and employees efficiently and securely with a market-leading mobile platform and device management technologies from SAP.



Technology and Business Innovation

Market Situation

The Agile Aerospace and
Defense Enterprise

Business Priorities

Transformation Through
Technology Innovation

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. **SAP 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

SAP solutions enable the agile aerospace and defense enterprise.

Complex Customer Programs

Building Complex Products

Responsive Supply Network

Aftermarket Services

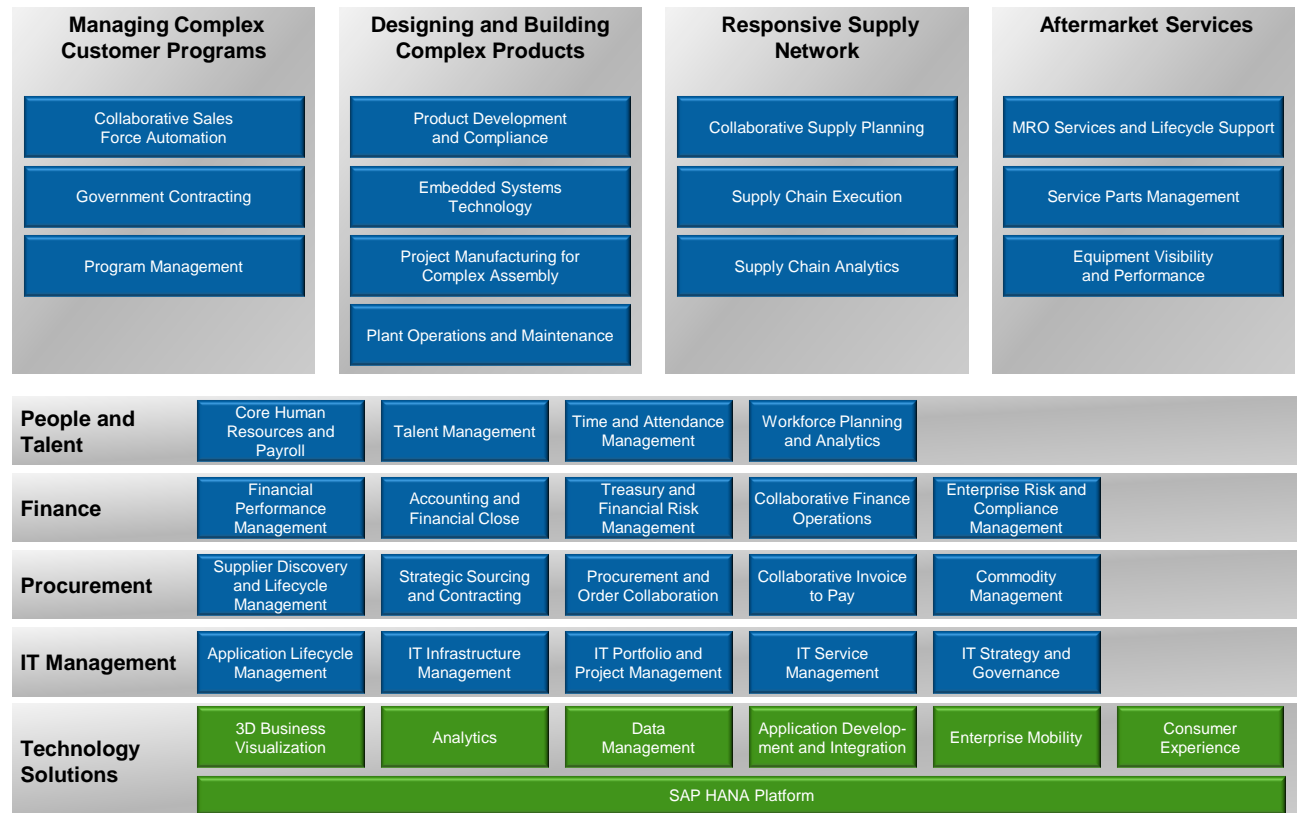
People and Talent

Finance

Procurement

IT Management

Technology Solutions



Managing Complex Customer Programs

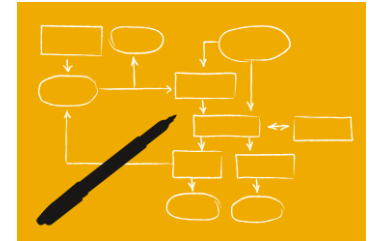
SAP Solutions

Complex Customer Programs

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, 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 program team has
access to dashboards to view
project execution metrics

Source: SAP Performance
Benchmarking



Managing Complex Customer Programs

SAP Solutions

Complex Customer Programs

Priorities

SAP Solutions

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.

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

Benefits

- Higher-value aerospace and defense contracts
- Improved customer satisfaction
- Better on-time delivery performance
- Improved on-budget record
- Better program performance and risk visibility
- Compliance with contractual obligations



Complex Products – Design and Build

SAP Solutions

Building 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



Complex Products – Design and Build

SAP Solutions

Building 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 capabilities.

Plant Operations and Maintenance

Improve performance from critical facilities and equipment with a fully integrated enterprise asset management 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 groundbreaking IT solution revenue
- Reduce time to market
- Boost production and on-time delivery rates
- Reduce program risk and cost
- Improve product quality



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

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.

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 Analytics

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

5%

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

Source: SAP Performance Benchmarking

Benefits

- Improve customer satisfaction
- Improve on-time deliveries and lead times
- Reduce total supply chain cost
- Increase resiliency and cut cost of change
- Optimize inventory and turnaround
- Stay compliant 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.



In an environment where defense contractors are being asked to cut costs and commercial manufacturers are stretched to their production limits, the commercial and defense 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 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.

18%

Lower unplanned downtime for organizations adopting preventive/predictive maintenance approach, compared to those adopting reactive approach

Source: SAP Performance Benchmarking

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.



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 on SAP HANA.

29%

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

Source: SAP Performance Benchmarking

Benefits

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



People and Talent

SAP Solutions

People and Talent

Priorities

SAP Solutions

The aerospace and defense workforce is changing. With a wave of employees nearing retirement, a new generation of engineers, production workers, and managers must emerge. Best-run aerospace and defense companies must be successful in managing this critical transition.



The ability to attract, develop, and retain a highly skilled, experienced, motivated workforce is one of the greatest assets an aerospace and defense company can cultivate.

The impending exit of baby boomers will leave companies with an urgent need to replenish their ranks. Meanwhile, a shortage of candidates with science, technology, engineering, and math training makes it difficult to identify individuals with the skill set needed for cutting-edge work.

A powerful and flexible HR system can be an important ally in fighting “brain drain” in aerospace and defense. Talent management – goal management, succession, compensation, recruiting, workforce planning, and learning – helps you grow and develop your base. Meanwhile, core functions such as payroll, benefits, and time and attendance allow your workforce to operate smoothly.

The result? Comprehensive solutions for all your tactical and strategic people needs.

32%

Lower employee turnover where organizations have a workforce optimization strategy based on workforce data analysis

Source: SAP Performance Benchmarking



People and Talent

SAP Solutions

People and Talent

Priorities

SAP Solutions

Fight “brain drain” in aerospace and defense.

Provide a people-centric experience and boost productivity by connecting people to processes and insights that grow and develop your workforce.

Core Human
Resources and
Payroll

Automate processes to support the entire employee lifecycle from hire to retire for a global workforce.

Talent
Management

Improve retention, satisfaction, and performance with integrated talent management, either on-premise or in the cloud.

Time and
Attendance
Management

Get best workforce performance through optimized attendance management, schedules, and time data.

Workforce
Planning and
Analytics

Harness the power of “Big Data” to improve business execution. Get real-time insight into your workforce – on-premise or in the cloud – to better predict and plan for employee demands, improve KPIs, and more.

24%

Higher HR productivity – more employees supported per HR FTE – with automated reporting

Source: SAP Performance Benchmarking

Benefits

- Reduced employee turnover
- Improved employee engagement
- Alignment of people and business strategy
- Higher revenue per full-time equivalent (FTE)
- Reduced HR cost per employee and more



Finance

SAP Solutions

Finance

Priorities

SAP Solutions

Driving value from a portfolio of aerospace and defense programs means managing the top line, the bottom line, and everything in between. Every facet of the best-run aerospace and defense enterprise requires input, transparency, and oversight from finance.



Know your business intimately across product, organizational, and geographic dimensions. Assess and manage key factors influencing cost and delivering profitability. Achieve clarity of insight for business decision makers to take the right action at the right time, and to quickly adjust course as conditions change.

Meet and exceed the highest of customer expectations. Respond to complex global, regional and local requirements. Know you're achieving and maintaining the highest possible safety and compliance standards.

Know your exact cash position at all times, and make better treasury decisions based on rock-solid liquidity planning. Mitigate financial risks and provide transparency to all key business functions.

All these imperatives come together: Winning performance requires actionable insight from consistent, transparent, scalable, and fully compliant financial systems and processes.

14%

Lower forecast cycle times when planning-measuring-simulation is a continuous process based on recent insights from functions and regions

Source: SAP Performance Benchmarking



Finance

SAP Solutions

Finance

Priorities

SAP Solutions

14%

Fewer days to close quarterly books when the financial system supports internal and external accounting requirements

Source: SAP Performance Benchmarking

Stellar financial performance.

Enable a comprehensive, real-time view of enterprise performance – both operational and financial – while mitigating risk and managing compliance.

Financial Performance Management

Define, execute, and measure the impact of business strategy. Improve corporate performance and control spending.

Accounting and Financial Close

Streamline processes and increase governance for financial accounting, closing, and disclosures to make them faster, more accurate, and less costly.

Treasury and Financial Risk Management

Know your cash position and improve your investments. Safeguard operations from risks and focus on performance.

Collaborative Finance Operations

Manage spend, optimize resources, and streamline operations.

Enterprise Risk and Compliance Management

Manage risk and compliance to protect revenue and optimize financial performance.

Benefits

- Real-time insight into business performance
- Optimized cash and liquidity management
- Fewer bad debts
- Shorter time to close and reduced process cost
- Reduced risk of noncompliance



Procurement

SAP Solutions

Procurement

Priorities

SAP Solutions

The key to maximizing procurement excellence is to deliver consistent quality, savings, and compliance over time.



30.4%

Higher average annual savings overall for organizations operating a single, integrated procurement system

Source: SAP Performance Benchmarking

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, supporting processes including spend analysis, sourcing, contract management, operational procurement, commodity management,

supplier information management, and risk and performance management – available both on-premise and in the cloud.

These tools, when coupled with an unparalleled collaborative business network, drive real-time insight and efficiency that can only be delivered through the power of “many.”

Procurement

SAP Solutions

Procurement

Priorities

SAP Solutions

Drive sustainable savings while supporting innovation.

Help ensure best practices in the source-to-pay process, on-premise or in the cloud, while leveraging the power of network collaboration for efficiency and insights.

Supplier Discovery and Lifecycle Management

Find new suppliers through the Ariba Network, and manage these relationships through supplier management solutions.

Strategic Sourcing and Contracting

Identify and act on sourcing opportunities, and create favorable, low-risk supply contracts.

Procurement and Order Collaboration

Realize savings with compliant, user-friendly self-service procurement. Collaborating on the Ariba Network makes transactions more efficient.

Collaborative Invoice to Pay

Drive invoice automation and exception management with available dynamic discounting on the Ariba Network.

Commodity Management

Manage commodity purchasing and risk with an integrated process.

55%

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

Source: SAP Performance Benchmarking

Benefits

- Optimize spend under management
- Increase average annual savings
- Decrease FTE per billion in spend
- Drive innovation with suppliers
- Reduce cost and risk with faster turnaround



IT Management

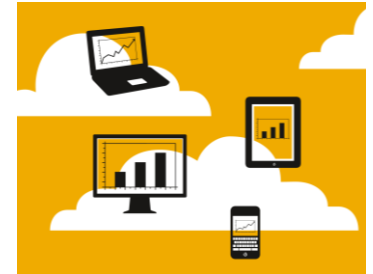
SAP Solutions

IT Management

Priorities

SAP Solutions

Business enterprises should forge strategic business partnerships with their IT organizations by aligning goals. Business-oriented IT management is all about maximizing efficiency and responsiveness by running IT like a business.



Lines of business want to ascertain the value of their IT investments. 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 unprecedented ways.

However, these new technologies also make IT landscapes more complex, requiring more tools to manage them. By leveraging SAP solutions 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.

25%

More IT projects generate positive ROI for organizations with joint business and IT leadership

Source: SAP Performance Benchmarking



IT Management

SAP Solutions

IT Management

Priorities

SAP Solutions

Evaluate and control risk. Help ensure flexibility and scale. Control and optimize costs. Maximize strategic value.

Help ensure business continuity, drive efficiency, increase IT responsiveness to business objectives – with IT management solutions designed for businesses of any size.

Application Lifecycle Management

Use application lifecycle management best practices, methods, and services based on IT infrastructure library (ITIL).

IT Infrastructure Management

Monitor all network assets to drive integrated infrastructure and application lifecycle.

IT Portfolio and Project Management

Align the portfolio and manage projects to drive innovation efficiently.

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 risk, and map risks and compliance activities to business impact.

38%

Lower IT operating costs with consolidated single solution/platform landscape

Source: SAP Performance Benchmarking

Benefits

- Better alignment of IT to business strategy
- Shorter IT delivery and business cycles
- Lower ratio of IT budget: profits/IT upkeep
- Reduced system upgrade and operation costs
- Lower cost of risk mitigation/revenue loss
- Lower downtime of critical business systems



Technology Solutions

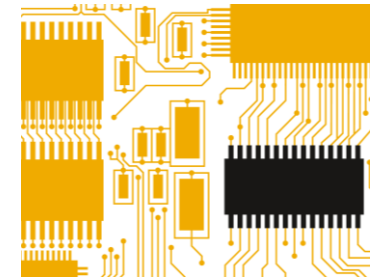
SAP Solutions

Technology Solutions

Priorities

SAP Solutions

Businesses must transform themselves through technology innovation. Organizations that succeed will improve the value of information, empower new user experiences, and innovate with customers, partners, and employees.



4

“Cloud, social networking, mobility and the strategic use of information are the four forces that combine to create a new era of computing and new opportunities for business.”

Source: Gartner, “SAP Is Driving Analytics, Cloud and Mobility in the Nexus of Forces,” Donald Feinberg, August 24, 2012

As users become savvier they begin to expect real-time insights, visual ways of learning, predictive analysis, and access to applications from mobile devices. They expect these capabilities to seamlessly integrate with their favorite platforms.

Data volumes are exploding while the window to capitalize on opportunities is shrinking. Users must be empowered with information available in an entirely new class of real-time applications. Developers must have a platform to innovate faster than ever before.

Technology solutions can make the difference between surviving and thriving. Businesses must drive transformation through the innovative use of technology. Organizations that thrive will enable the real-time enterprise to improve the value of information, empower new developer and user experiences, and unwire their businesses to innovate with customers, partners, and employees.

Technology Solutions

SAP Solutions

Technology Solutions

Priorities

SAP Solutions

20%

“Through 2015, organizations integrating high-value, diverse, new information types and sources into a coherent information management infrastructure will outperform their industry peers financially by more than 20%.”

Source: Gartner, “Hype Cycle for Information Infrastructure, 2012,” Michael Blechar, July 31, 2012

Technologies to drive change and help your business thrive.

SAP software enables the real-time enterprise, empowers new experiences, and unwires the business.

3D Business
Visualization

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

Analytics

Increase the value of data with real-time predictive analytics and business intelligence.

Data Management

Manage critical data with scalability, trust, and unmatched performance.

Application Development
and Integration

Develop and integrate scalable, secure applications in a mobile world for collaborative business.

Enterprise Mobility

Unwire your business ecosystem with proven mobile solutions.

Consumer Experience

Use real-time, consumer-grade software to increase productivity.

SAP HANA Platform

Streamline applications, analytics, and planning on a single in-memory platform.

Benefits

- Operate your business in real time
- Turn data into an enterprise asset
- Reduce time to market



SAP Innovations

SAP Innovations

Applications

SAP HANA

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 demands that manufacturers scale up. Meanwhile, shrinking defense budgets mean 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 aerospace and defense 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

SAP HANA

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.



Manage Complex Customer Programs

In real time, monitor and analyze high volumes of financial and operational data across the full aerospace and defense program lifecycle.

Complex Products – Design and Build

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.

SAP HANA

SAP Innovations

Applications

SAP HANA

Mobile

Analytics

Cloud

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.

Manage Complex Customer Programs

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.

Complex Products – Design and Build

Improve product and process 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 rapidly simulating and replanning “what-if”.

Aftermarket Services

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

68%

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

Source: SAP Performance Benchmarking



Mobile

SAP Innovations

Applications

SAP HANA

Mobile

Analytics

Cloud

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.



22%

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

Source: SAP Performance Benchmarking

Manage Complex Customer Programs

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

Complex Products – Design and Build

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

SAP HANA

Mobile

Analytics

Cloud

26%

Higher inventory turns with
warehouse analytics from
SAP

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.



Manage Complex Customer Programs

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

Complex Products – Design and Build

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

Responsive Supply Networks

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

SAP HANA

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 applications from SAP and the open SAP HANA Cloud platform allow companies to build differentiating solutions at the point of engagement – establishing nimble global business networks.



Manage Complex Customer Programs

Build a nimble and flexible sales organization and manage accounts, enable team collaboration, and monitor sales results with flexible and low TCO sales execution.

People and Talent

Improve retention, satisfaction, and performance with integrated talent management available in the cloud. Develop future leaders for your 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.



Customer Co-Innovation

Best-Run Customers

Bombardier

Global Security and
Aerospace Company

Leading U.S. Defense
Contractor

Northrop Grumman

Why SAP?

9 out of Top 10

World's Most Admired Aerospace
and Defense companies are
members of the SAP Executive
Advisory Council for Aerospace
and Defense

Source: SAP Performance
Benchmarking

SAP co-innovates with leading aerospace and defense companies to drive industry priorities. These include managing complex customer programs, 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 SAP Executive Advisory Council, the SAP User Group for Airlines (SUGAIR), and Americas' SAP Users' Group (ASUG) regarding 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

Best-Run Customers

Bombardier

Global Security and
Aerospace Company

Leading U.S. Defense
Contractor

Northrop Grumman

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 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 SAP Service Parts Planning 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

Provide a single
integrated platform
for engineering,
customer service,
and supply chain
operations

Best-Run Customers

Bombardier

**Global Security and
Aerospace Company**

Leading U.S. Defense
Contractor

Northrop Grumman

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

Best-Run Customers

Bombardier

Global Security and
Aerospace Company

**Leading U.S. Defense
Contractor**

Northrop Grumman

Why SAP?

A leading U.S. defense contractor that 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 into 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 this 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 generating
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 – Marketing and Product Management



NORTHROP GRUMMAN

Best-Run Customers

Bombardier

Global Security and
Aerospace Company

Leading U.S. Defense
Contractor

Northrop Grumman

Why SAP?

Northrop Grumman – a world-leading defense contractor delivering 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 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 - work with up-to-date 3D graphics, not out-of-date paper manuals
- Reduce cost - reuse of graphics for multiple downstream purposes

15-20%

Improved delivery
times



Significant cost
savings over 5 years



Fewer errors,
improved accuracy

“Where SAP 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?

Best-Run Customers

Bombardier

Global Security and
Aerospace Company

Leading U.S. Defense
Contractor

Northrop Grumman

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 to 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.



Why SAP?

Best-Run Customers

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

Bombardier

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

Global Security and Aerospace Company

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

Leading U.S. Defense Contractor

SAP HANA can increase analysis speed by more than 10,000 times, equal to walking from California to New York in 6 minutes.

Northrop Grumman

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

Why SAP?

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

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. SAP’s 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.

Visit valuemanagement.sap.com >>

Go Live in Weeks

Here’s the fastest way to run your business better: Our rapid-deployment solutions. In one package, you get everything you need to be up and running quickly – including preconfigured software and implementation services – in just weeks. With a defined scope and predictable costs, there are no surprises.

Visit sap.com/solutions/rds >>

Join Your Community of Practices

Every day, SAP Community Network (SCN) changes the way that thousands of SAP users work. It lets members help one another solve problems, learn, and invent new ways to get things done – faster. Find out how to connect with people, content, and resources.

Visit scn.sap.com >>



Industry Executive Overview
SAP for Aerospace and Defense

Executive
Summary

SAP Solutions

SAP Innovations

References

Contact Us

CMP 23270 (12/12)

www.sap.com/industries



© 2013 SAP AG

© 2013 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP AG and its affiliated companies (“SAP Group”) for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.

Please see <http://www.sap.com/corporate-en/legal/copyright/index.epx#trademark> for additional trademark information and notices.

Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

