

Solution Overview

SAP for Aerospace and Defense

Executive
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Complex
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Managing Complex Aerospace and Defense Customer Programs



Mastering Complex Programs

Growing Complexity

Delivering on the Promise

Profitable Programs

SAP Innovations

Successfully delivering aerospace and defense (A&D) programs is more challenging than ever. Program managers are faced with managing a web of partners, suppliers, and internal resources to deliver complex products and services on time, on budget, with the transparency and accuracy demanded by the program stakeholders.

The challenges facing program managers aren't getting any easier.

Today's products are increasingly complex. Rapidly changing technology, greater integration, new materials, increasing responsibilities throughout the supply chain, and new methods of manufacturing are all factors driving complexity, uncertainty, and risk into the programs that design, build, and sustain those products.

Although customers are demanding increasingly sophisticated products, their tolerance for delays, overruns, quality problems, and costly sustainment models is disappearing. And if you can't deliver, someone else will. New competitors are entering almost every segment of the A&D sector.

Unfortunately, with more complexity comes more and more data. And along with it comes the need for the program manager to be able to make sense of it all – turning that data into actionable information that can be used to deliver on time, on budget, and stay ahead of the competition.



Maximizing Success and Profitability

Growing Complexity

Delivering on the Promise

Profitable Programs

SAP Innovations

Today's best-run A&D programs equip the program managers to plan and execute all aspects of a program – from capturing new business through design, manufacturing, and aftermarket support. They intelligently exploit available technology to connect all pieces of programs together so managers can plan, execute, and deliver.

To successfully master a highly complex and dynamic A&D program, you must be able to plan, execute, and monitor every aspect and comply with the needs of key stakeholders.

You need a robust and comprehensive system that covers all of the bases for evaluating, capturing, planning, and executing your complex program. A comprehensive system lets you plan and direct the execution of every element of the program, whether it is a people-intensive engineering development project, a manufacturing program to build and test complex A&D products, or an aftermarket program to maintain, rebuild, or upgrade such products.

In each case you have to accurately and efficiently collect and process the data required to maintain oversight on progress, produce comprehensive customer invoices, and manage contractual obligations.

Best-run A&D firms master complex programs every day. They recognize the need to satisfy customer requirements by keeping on top of the thousands of tasks required to successfully deliver on program goals.

Maintaining the Competitive Edge

Growing Complexity

Delivering on the Promise

Profitable Programs

SAP Innovations

61%

Higher new product revenue when companies communicate product portfolio goals downward through the organization, and measure and report results

Source: SAP Performance Benchmarking

The stakes are high. Your opportunity is no longer just to win business and deliver a product or service. Competitive differentiation means delivering the programs you win on time, on budget, and on quality – consistently and profitably. So you have a chance to do business with that customer again.

Being a competitive A&D company requires you to understand and execute across the entire value chain – from understanding and influencing your potential customers to managing complex programs through their entire lifecycle.

A&D has a very diverse constituency including end consumers, airlines, legislators, and defense agencies. You must be able to segment, interact, and control vastly different customer-facing processes, and so flexibility and agility are key.

But understanding your customers and markets is just the beginning. Being competitive means carefully selecting which business to pursue based on a combination of factors including profitability, required investment, and risk.

Once you've selected and won the business, you now have to execute. This requires the ability to plan, execute, and monitor a wide variety of programs. Superior execution requires that program managers have excellent visibility into all risk factors and proactively keep the program on track.

Finally, competitive A&D companies must provide the reporting that goes along with the program, including accurate and proper invoices, compliant cost reporting, and compliant earned value reporting.



SAP Innovations

Growing Complexity

Delivering on the Promise

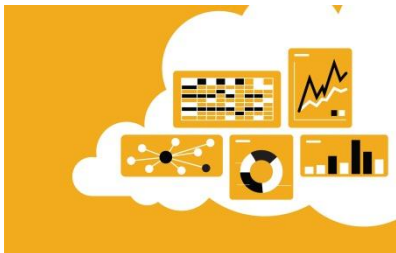
Profitable Programs

SAP Innovations

From high-flying aircraft with advanced avionics to high-tech IT solutions, cutting-edge technology is at the heart of the A&D industry. SAP technology can streamline your operations and facilitate the creation of entirely new solutions.

A&D companies are saturated with data from complex and long-running programs, deep supply chains, and even the sensors and intelligence products they themselves build. Breakthrough in-memory computing 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 elevates your enterprise to new levels of productivity. Finally, mobile solutions from SAP instantly deliver the most relevant information where it's needed in the organization.

These same technologies represent an opportunity to unlock totally new streams of revenue. Integrating your products with the SAP HANA platform 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.



Fulfill Your Customer's Needs

Complex Customer Programs

Engage Customers

Integrate Planning,
Execution

Identify/Mitigate Problems

Achieve Government
Compliance

To increase competitiveness and maintain profitability, A&D firms must master core competencies in engaging their customers, managing contracts, and managing complex programs.



Influence and Engage Customers

To win business you must understand a wide variety of stakeholders and influence their decisions.



Integrate Planning and Execution

It is crucial to comprehensively plan and efficiently orchestrate and execute every aspect of your program.



Identify and Mitigate Problems

In executing complex programs, you must have tools to quickly identify, mitigate, and resolve problems of many kinds.



Achieve Government Compliance

Government customers require compliance with contractual and regulatory requirements. Complying efficiently can make all the difference.

Influence and Engage Stakeholders

Complex Customer
Programs

Engage Customers

Integrate Planning,
Execution

Identify/Mitigate Problems

Achieve Government
Compliance

38%

Bigger pipeline as a multiple
of quota for top-quartile
organizations compared to
average organizations

Source: SAP Performance
Benchmarking

Ensuring maximum influence and engagement with your customers requires you to bring people, processes, and technology together in a way that aligns with everyone involved in making purchasing decisions.



In A&D today you need nimble marketing and lobbying capabilities and the ability to focus on diverse stakeholders and react quickly to changing conditions.

Improve organizational collaboration to align marketing with the field, external agencies, and partners. Save money by better managing sales and marketing content and assets.

Sales success today requires that you move from tactical selling to strategic selling, where you quickly zero in on the most valuable accounts and deals.

Strategic sellers effortlessly harness sales best practices by quickly identifying and collaborating with subject matter experts. They can source winning content at the right time and in the right context for each deal.

With these capabilities, strategic sellers become trusted advisors who can steer sales by engaging in fact-based, insight-rich conversations with their customers.

They can demonstrate an intimate knowledge of their customers' business and present a clear road map for moving forward.

Integrate Planning and Execution

Complex Customer
Programs

Engage Customers

**Integrate Planning,
Execution**

Identify/Mitigate Problems

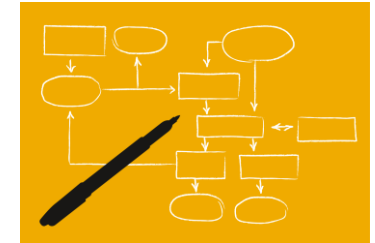
Achieve Government
Compliance

11%

More new products meet
revenue targets when
documented criteria to
evaluate, prioritize, and
finalize product requirements
are used

Source: SAP Performance
Benchmarking

Best-run A&D companies strategically evaluate new business opportunities and ideas for new products and services; perform planning to develop, produce, and sustain those products; and execute those plans in a comprehensive, integrated way. This is how they manage programs to ensure profitable results.



Determining the best path forward with limited resources is always a challenge. To make the most of what you have, leverage a formal methodology to manage your portfolio of opportunities and choose opportunities that align with corporate strategy.

Selecting the right path is the first step, and developing comprehensive plans is the next. You must be able to develop plans to use your resources in a feasible manner whether you are leveraging your people, production facilities, or purchased materials and services. An understanding of planned costs and revenues across the schedule of the project is crucial to understanding the profitability potential and cash flow impact of the initiative.

Even the best-laid plans don't build or maintain the product or deliver the service – that's where integrated execution comes in. Initiating purchases, production, and maintenance orders ensures alignment with your intentions – and that you can track progress, time, and costs.

Identify and Mitigate Problems

Complex Customer
Programs

Engage Customers

Integrate Planning,
Execution

Identify/Mitigate Problems

Achieve Government
Compliance

15-20%

Improved program
management efficiency when
SAP software is used

Source: SAP Performance
Benchmarking

Thousands of tasks; hundreds of people, suppliers, and partners; scores of production, material, and maintenance orders – what could go wrong? Mastering complex programs requires you to be able to quickly find and resolve problems and take actions to keep things on track.



A&D customers are very demanding. They expect results, on time and on budget – not delays and overruns.

To make sure those things don't happen, and with so much to keep track of, A&D program managers need superior visibility into what is going on within and around their program.

Having the ability to understand the progress and status of tasks, and the related costs, is an absolute requirement.

Beyond that, program managers need the ability to quickly zero in on the emerging and potential problems in design and development, production, procurement, and aftermarket activities that can impact the cost and schedule of the program in the future. That way they can mitigate problems before they jeopardize the overall performance of the program.

Achieve Government Compliance

Complex Customer
Programs

Engage Customers

Integrate Planning,
Execution

Identify/Mitigate Problems

**Achieve Government
Compliance**

20%

Less in compliance costs for
companies that implement
software designed to support
government requirements

Source: SAP Performance
Benchmarking

Managing complex programs is a big challenge. But managing complex programs for a U.S. federal government customer is even tougher because there is a whole new set of compliance requirements to manage.

Navigating the labyrinth of government regulations is a difficult business problem. If you fail to achieve approved-business-system status, your program will be unfavorably impacted in many ways. In the best case, instead of focusing on achieving the goals of your program, you can be saddled with continual audits, spend time developing corrective actions, and have your cash flow impacted by withholds. In the worst case, failing to achieve approved systems can lead to significant disadvantages when competing for future business and even disbarment from contracting with the government.

Best-run A&D companies tackle this complex issue by combining well-thought-out policies and procedures with IT systems that include the required functionality and outputs that can align with the requirements of the FAR/DFARS and Cost Accounting Standards (CAS) without locking in the entire business into operating under the more intensive policies and processes focused on government compliance.



Managing Complex Aerospace and Defense Customer Programs Value Map

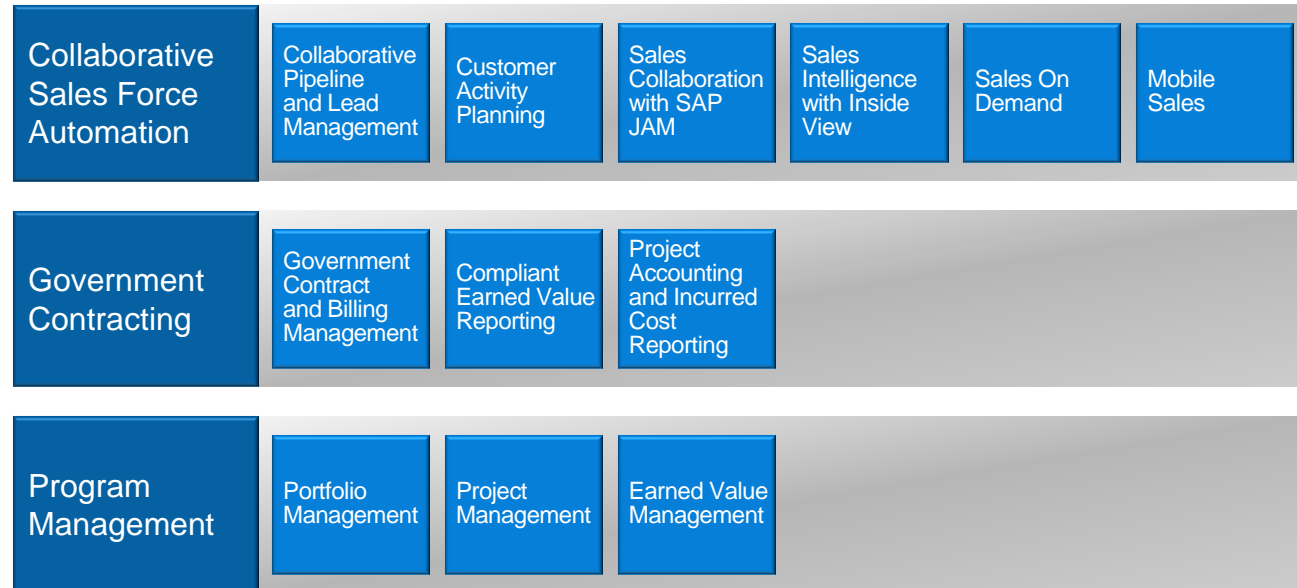
SAP Solutions

Sales Force Automation

Government Contracting

Program Management

SAP solutions address key requirements of managing complex programs in A&D.



Collaborative Sales Force Automation

SAP Solutions

Sales Force Automation

Government Contracting

Program Management

Streamline core sales force automation processes.

An effective approach to sales force automation should span the full operational scope of the sales organization – including account, opportunity, pipeline, and quotation management. SAP covers all the bases with a range of mobile and collaborative solutions built by SAP and its partners.



Collaborative
Pipeline and Lead
Management

Streamline selling processes, accelerate buying decisions, and improve pipeline predictability.

Customer Activity
Planning

Empower your salespeople to plan visits and manage activities more efficiently than ever before.

Sales
Collaboration with
SAP JAM

Bring together internal and external teams without access to the SAP Customer Relationship Management (SAP CRM) application.

Sales Intelligence
with Inside View

Provide sales reps with fast and easy access to sales data through an intuitive user interface.

Sales On Demand

Enrich your accounts, leads, contacts, and opportunities with insight from both traditional data sources and social media.

Mobile Sales

Enjoy online and offline mobile access to sales force data to make every moment count.

7.9%

Higher revenue per employee
for organizations with higher
percent of users with mobile
CRM access

Source: SAP Performance
Benchmarking



Government Contracting

SAP Solutions

Sales Force Automation

Government Contracting

Program Management

Comply with government contracting rules and regulations.

Establish approved business systems. Leverage focused solutions for contracting, earned value, and government accounting, designed with flexibility, efficiency, and compliance in mind.



Government Contract and Billing Management

Help ensure compliant billing and management of government contracts including contract modifications; cost plus, fixed price, and time and materials (T&M) types; complex rate; fee and withholds; and ACRNs.

Compliant Earned Value Reporting

Report earned value with compliant contract performance report formats, including electronic reporting compliant with the integrated program management report, data item description (IPMR-DID).

Project Accounting and Incurred Cost Reporting

Establish CAS-compliant government accounting with complex rate structures and retroactive adjustments, and accurately account for allowable and unallowable costs for both direct and indirect cost. Generate compliant incurred cost submissions.

20%

Less in unbilled receivables when using software designed for government contracting, plus an improvement of 15% in days sales outstanding

Source: SAP Performance Benchmarking

Program Management

SAP Solutions

Sales Force Automation

Government Contracting

Program Management

Select, plan, and deliver complex programs for customers.

Evaluate opportunities to develop concepts into products. Optimize project management processes. Effectively design, deliver, and sustain complex A&D products and services.



Portfolio Management

Manage and monitor project portfolio performance throughout the complete lifecycle.

Project Management

Control the planning and execution of projects by integrating enterprise resource planning functions for insight into cost, time, scope, and quality performance at each stage of product development, build, and sustainment.

Earned Value Management

Establish project baselines, track and report progress, analyze variances, and generate comprehensive completion estimates. Tightly manage baseline change and change approvals.

13%

Shorter time to market for new products when companies manage development projects from concept to product launch via a documented process

Source: SAP Performance Benchmarking



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

The growth in commercial aerospace demands that manufacturers scale to meet customer requirements, while shrinking defense budgets mean that defense contractors must find new sources of revenue and pursue efficiency. Technology can help the A&D industry thrive in this challenging environment.



A&D companies are saturated with data from long-running programs, 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 elevates your enterprise to new levels of productivity. Finally, mobile solutions instantly deliver the most relevant information anytime, anywhere.

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 companies to better execute complex, long-running programs. Insight-driven program management allows business users to make critical decisions based on near-real-time information.



Project Management

Project Management

By using SAP HANA for project management, you can view even the largest projects using project builder functionality, making adjustments quickly and efficiently. Run results analysis and progress analysis in real time for better and faster insight. Detect deviations in cost, time, resources, and quality quicker – enabling more timely and effective corrective actions to help ensure your project stays on track.

Project Accounting

Project Accounting

Accelerate reporting on large volumes of project financial data with predefined reports across multiple project-focused use cases. Rapidly calculate project financial information such as the impact of retroactive indirect rate adjustments. Run complex project financial simulations to better support timely decision making, and make more accurate and timely forecasts and estimates. Provide internal and external stakeholders with unparalleled transparency and visibility into project financial information at any level of detail.

SAP HANA

SAP Innovations

Applications

SAP HANA

Mobile

Analytics

Cloud

68%

Better use of Big Data in organizations with well-defined, high-performance analytics strategies enterprise-wide

Source: SAP Performance Benchmarking

Project-related logistics and financial processes often have a high degree of complexity, especially when the projects are large and long-running. There must be capacity for processing large volumes of project-related data and documents, maintaining full, real-time transparency at the same time.



Program Management

Program Management

When executing large, long-running, and complex projects, organizations typically need to manage huge amounts of project-related data and documents. If data volumes result in longer wait times, progress slows. Low transparency causes any deviations – in costs, time, resources, or quality – to appear too late in the process, ultimately affecting project profitability.

Government Contracting

Government Contracting

By handling large data volumes faster, the SAP HANA platform enables companies to accelerate their project-related business processes throughout the complete project lifecycle. SAP HANA also improves project transparency. It provides real-time, 360-degree insight into relevant logistics and financial data, from high-level analysis down to line item reports. This in turn improves process efficiency and productivity, reduces project failure rates, and enables transparency in your compliance efforts. The end result is greater overall profitability across all projects.

Mobile

SAP Innovations

Applications

SAP HANA

Mobile

Analytics

Cloud

24%

Higher operating margins
when enterprise mobility is
embedded in all business
processes

Source: SAP Performance
Benchmarking

Mobile access to sales and project information enables teams to collaborate on sales deals and review progress of their projects while on the road. Mobile solutions provide the latest information where and when it is needed most to improve operational efficiency and customer satisfaction.



Collaborative
Sales Force
Automation

A Mobile Suite for Sales

Make more effective decisions on the fly with mobile access to key customer, market, and enterprise information. Use your favorite mobile device to handle tasks such as expense entry and approvals. Speed up the sales cycle by creating quotes and orders on the go. Easily manage leads, appointments, tasks, calls, and e-mail correspondence.

Project
Management

Mobile Project Information

Mobile access to project and portfolio information is becoming more important. Employees working at a construction site or visiting a customer to discuss the project plan can't wait until they are back at the desk to retrieve the latest progress reports or updated cost-tracking status. With the latest project information on mobile devices, project managers can easily access key information and use it for fact-based decisions at the time and place they really need it.

Project Time Recording

Project team members can use mobile apps to record the amount of time they work on a project, while visiting the customer or operating in the field. The ability to report back task completion in a timely manner leads to better reporting quality and up-to-date status information.

Analytics

Achieve up-to-the-minute visibility into key project-related performance indicators across every facet of the program with real-time monitoring, root-cause analysis, risk mitigation, predictive modeling, and optimization.



SAP Innovations

Applications

SAP HANA

Mobile

Analytics

Cloud

20%

Higher revenue per employee in organizations that use information to identify strategic and competitive advantages

Source: SAP Performance Benchmarking

Program
Management

Product Development

Gain insights into development health by accessing a combination of project analytics and product-related information. Analytical application directly embedded in portfolio management enables frequent reviews of the overall development project portfolio performance.

Resource Management

Dedicated analytical applications provide insight into the overall demand for project portfolio resources, and enable comparison against the quantities available. At the individual project level, analytics enable managers to identify understaffed projects and find solutions using powerful search tools that reveal the availability of needed skill sets at project locations.

Government
Contracting

Earned Value

Embedded analytics provide insight and support analysis of project performance. View S-curves, track cost performance, and schedule performance indices; compare performance from period to period or version to version.

Cloud

SAP Innovations

Applications

SAP HANA

Mobile

Analytics

Cloud

66%

Of businesses expect greater flexibility and agility to be a source of business advantage from cloud computing

Source: SAP Performance Benchmarking

Best-run sales organizations deploy cloud solutions to create flexible global sales networks that can quickly scale and integrate to enable sales processes end to end.



Collaborative
Sales Force
Automation

Sales On Demand

Go beyond traditional sales force automation with easy-to-use, next-generation mobile software that helps you sell more effectively. Harness the collective intelligence of the entire sales organization through social collaboration. Stay informed with less effort through real-time, cost-effective access to back-office systems.

Customer Co-Innovation

Best-Run Customers

Leading US Defense
Contractor

Global Security and
Aerospace Company

Why SAP?

9 out of 10

Of the TOP 10 World's Most
Admired A&D companies
are members of the SAP
Executive Advisory Council
for A&D

Source: SAP Performance
Benchmarking

SAP co-innovates with leading A&D 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 A&D companies come together to discuss new business innovation technology requirements and to share best practices on how to drive competitive advantage.

In addition to the Aerospace and Defense Executive Advisory Council, SAP is leveraging the SAP User Group for Airlines (SUGAIR) and the Americas' SAP Users' Group (ASUG) to drive co-innovation for A&D around topics such as aftermarket services, manufacturing, and government contracting.

Co-innovation Partners.

The A&D ecosystem comprises consulting and integration partners as well as value-added co-innovators and developers.



A Leading US Defense Contractor

Best-Run Customers

Leading US Defense
Contractor

Global Security and
Aerospace Company

Why SAP?

This customer 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



A Global Security and Aerospace Company

Best-Run Customers

Leading US Defense
Contractor

**Global Security and
Aerospace Company**

Why SAP?

This leading A&D 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



Why SAP?

Best-Run Customers

Leading US Defense
Contractor

Global Security and
Aerospace Company

Why SAP?

SAP solutions enable the agile A&D 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 A&D industry. From program management to manufacturing to aftermarket services, SAP can help A&D 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 A&D

The world's leading A&D companies, across every segment of the industry throughout the world, continue to rely on SAP to enable every aspect of their business to be consumer-driven.



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 >>](http://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.

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[Visit scn.sap.com >>](http://scn.sap.com)



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