

CSC AND AMC DEPLOY ONE OF THE ARMY'S NEWEST RELIABLE WEAPONS: LOGISTICS MODERNIZATION

Applying Experience. Delivering Results.

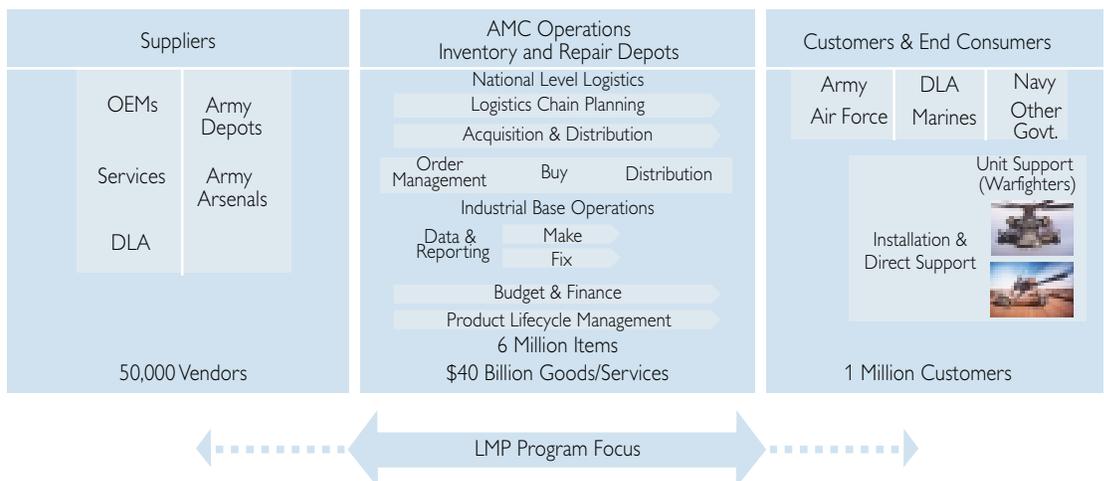
Would Wal-Mart or General Electric's supply chain be what they are today if they were constrained by a loosely knit collection of over 2,000 distinct applications, many of which were decades old? Even more importantly, what if every stock-out meant that a soldier in the field was going into battle without the equipment, materials, or weapons needed to perform and survive?

That is exactly the situation the U.S. Army Materiel Command (AMC) faced in its mission to:

Provide superior technology, acquisition support, and logistics to ensure dominant land force capability for soldiers, the United States, and our allies.

AMC's supply chain is one of the largest and most complex in the world. Like a large multinational conglomerate, AMC manages over \$40 billion in goods and services across its diverse consumable and repairable product portfolio. Its \$33 billion in munitions stockpiles and \$7 billion in secondary items are supplied by more than 50,000 vendors. AMC's supply chain shares characteristics of both Wal-Mart's high-volume consumables supply chain and General Electric's industrial product manufacturing and repair overhaul supply chain. Like Wal-Mart's supply chain offering customers approximately 100,000 items through 3,000 stores in nine countries, AMC serves a diverse worldwide retail customer base of one million Army customers at more than 1,000 dynamic locations in 38 countries and manages a portfolio of six million items. If you wear U.S. Army green, you're an AMC customer. During the course of an average year, these customers place more than eight million orders.

U.S. ARMY LOGISTICS CHAIN



LMP will create a common logistics and financial picture for AMC. This will enable the Command to have a single, authoritative view of material and financial resources, which will allow us to manage at a velocity that is necessary to meet warfighter needs. I envision that it will ultimately enable us to keep pace with the ever-increasing speed of change.

—Sue Baker, Principal Deputy, G-3, AMC

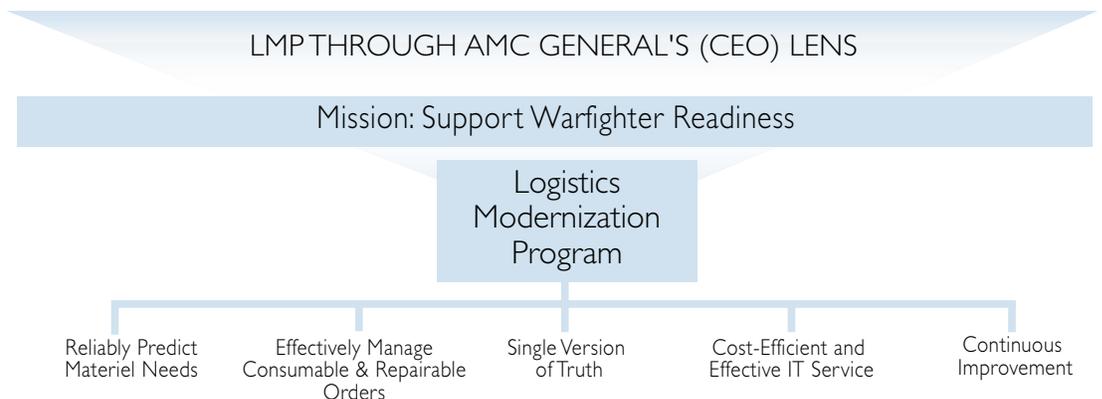
While General Electric’s industrial supply chain manufactures and services complex products in 100 countries with cost of goods sold of \$38 billion annually, AMC’s Industrial Base Operations through its network of depots makes, maintains, and repairs enormously complex durable goods, such as overhauling the Blackhawk helicopter with its 70,000 components worldwide. At any given moment, thousands of orders are being processed, thousands of shipments are in transit, hundreds of tanks and helicopter components are being refurbished. New and refurbished inventory worth billions of dollars is being moved into and out of inventory management centers and an industrial complex of depots, arsenals, and plants. However, the key difference, according to AMC Commanding General Paul J. Kern, is that “AMC is the lifeblood of the Army. Soldiers will live or die, succeed or fail, based on how well we execute our mission.” For AMC, this mission is all about ensuring the right material is in the right place in the right quantity at a moment’s notice.

As generals throughout the ages have discovered, an army is only as good as its supply chain. As the preeminent military force in the world today, the U.S. Army teamed with Computer Sciences Corporation (CSC) to build and deliver a preeminent logistics support solution. In 1999, CSC and AMC formed an innovative long-term partnership to deliver AMC’s Logistics Modernization Program (LMP), which is setting the logistics enterprise foundation for the Army to

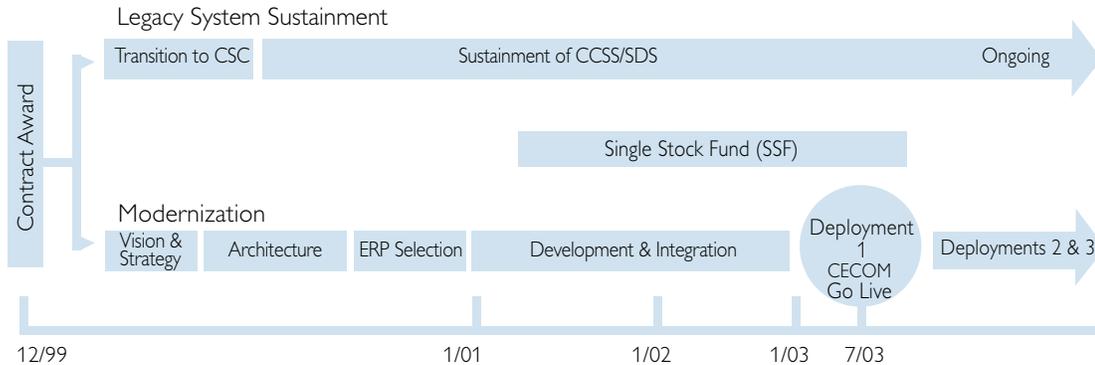
provide a critical common logistics operating picture. LMP delivers success to AMC’s mission of supporting warfighter readiness through five key program objects.

The LMP solution embraces a holistic approach in a single system of wide coverage that supports collaborative planning at all five AMC command levels, while enhancing operational decision making through real-time logistics situational awareness.

AMC’s modernization path required new, unique ways of doing business to support warfighter readiness in a cost-effective manner. Consequently, AMC simultaneously outsourced its noncore information technology (IT) competencies to CSC and formed a long-term 12-year modernization partnership with CSC. Furthermore, CSC is delivering the modernized supply chain solution via an application service provider (ASP) model, which enables AMC to buy a service rather than manage technology. LMP’s application strategy moves AMC away from thousands of disintegrated point solution applications to a single commercial off-the shelf (COTS) Defense Industry Solution. This standard SAP system enables AMC to keep pace with new commercial and defense capabilities, thus ensuring future system adaptability and responsiveness. It is a highly cost-effective approach that leverages private-sector investment, enables ongoing adoption of best commercial and federal practices, and establishes a foundation for



LMP ROAD MAP & TIMELINE



expansion into other related logistics and business areas. Furthermore, this innovative contract focuses on continuous improvement, with key business improvement metrics built into rigorous Service Level Agreements (SLAs) for everything from supply chain performance to system performance.

AMC's Modernization Imperatives

Just as a commercial corporation's supply chain solutions must continually adapt to changes in customer needs and competitive threats, AMC's supply chain solutions faced similar operating and environmental challenges. With the end of the Cold War came a deemphasis on large, heavy forces and sustained power projection. Instead, the focus became a force that used technology, speed, and precision as strategic weapons.

The old strategy was to create large stockpiles of supplies at strategic locations, what the Army called 'Iron Mountains,'" says Sam Chappell, a CSC director and 30-year veteran Army logistician. "Though this strategy made needed supplies available to warfighters, it was highly inefficient and extremely costly, and it still did not furnish warfighters with the strategic information needed to plan as effectively as possible before missions.

Army Vision 2020, the blueprint for the Army's contributions to the operational concepts identified in Joint Vision 2020, addresses the 21st

century warfighter challenges with two fundamental tenets that provide the basis for the LMP: focused logistics and information superiority.

- **Focused Logistics.** This is the fusion of information, logistics, and transportation technologies to provide rapid crisis response, to track and shift assets even while en route, and to deliver tailored logistics packages and sustainment directly at the strategic, operational, and tactical level of operations.
- **Information Superiority.** This is the capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same.

The technological underpinnings of Army Vision 2020's tenets could not be fulfilled with AMC's existing supply chain technology strategy and technology solutions. When relying on outmoded logistics systems and business processes, data sharing was not feasible, and timely, rapid decision making was limited.

Thirty years ago, no single logistics technology existed to track and manage the massive operation the Army required. To achieve basic functionality, AMC developed the Commodity Command Standard System (CCSS) and the Standard Depot System (SDS). The imperatives for a new technology strategy and solutions were clear; the 30-year-old, unwieldy mainframe applications would need to be replaced with adaptable commercial off-the-shelf technology.

Over the years, AMC developed over 2,200 bridge and unique legacy applications, making the systems extremely complex and costly to maintain. And because most of the applications were stovepiped, sharing information across the systems was not feasible.

—Larry Asch, Deputy LMP Director for Business and Operations, AMC

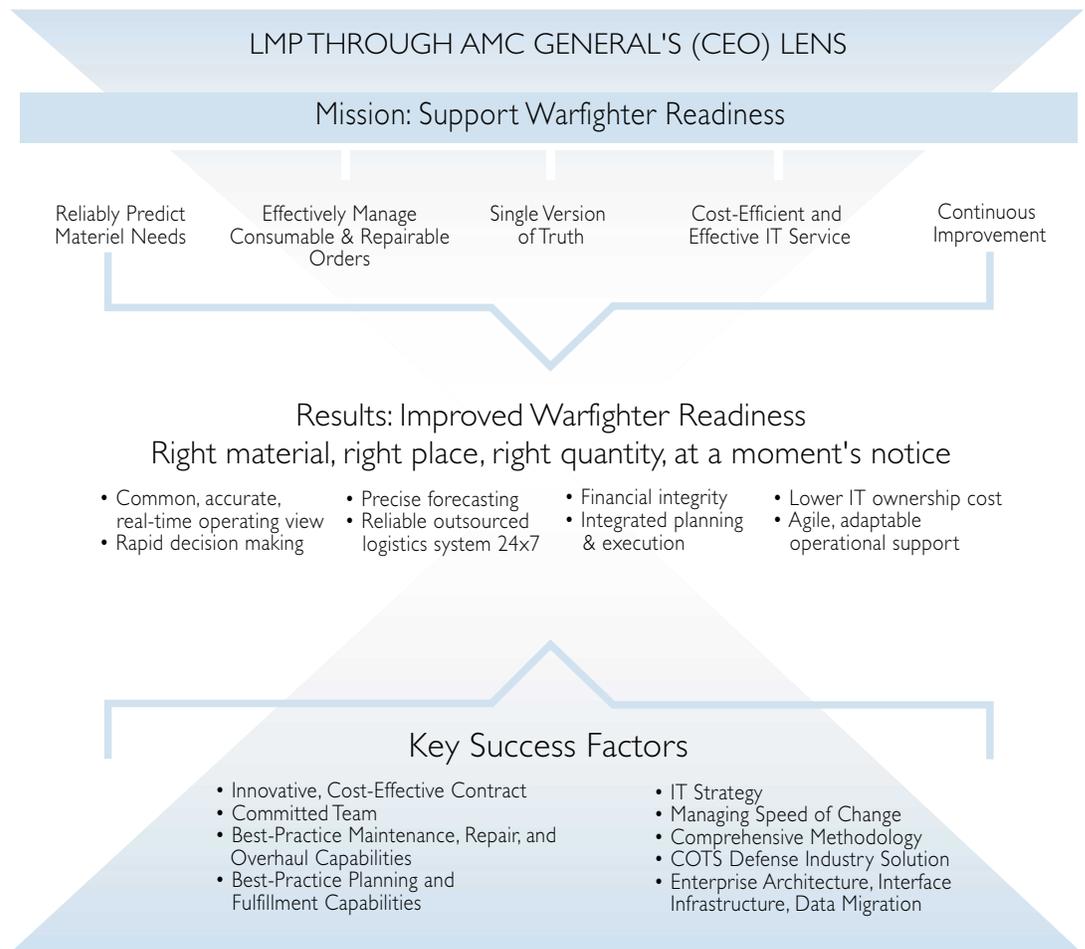
The Army was clear in its intent to modernize AMC’s logistics system, but had to contend with significant budgetary constraints and looming staff retirement risks. AMC consists of over 96 percent civilians—half of them will be ready for retirement in five years, so the CSC partnership would need to both mitigate retirement risks and position the new technology as a tool for recruiting new resources. The budgetary issues became harder to overcome based on the fact that the standing threat of the Cold War era was over. The current threat was less defined but certainly no less lethal.

LMP Deployment One—AMC and CSC Deliver Results

During the 2003 Independence Day holiday, the first deployment of AMC’s logistics moderniza-

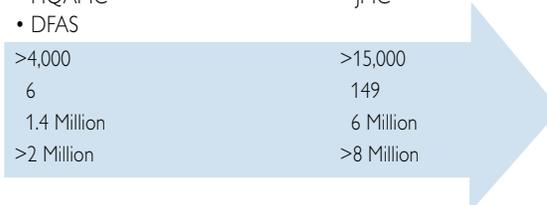
tion went live. On July 2, 2003, LMP processed its first requisition for a radio shipped to a unit at Camp New Jersey, Kuwait. On July 7, LMP was made fully available to the community of 4,300 users across six locations. The initial release serves business functions at the Communications-Electronics Command (CECOM); AMC Headquarters; Tobyhanna, PA, Army Depot; the Army Security Assistance Command; AMC-related Defense Finance and Accounting Service; and the Communications Security (COMSEC) Logistics Support Activity (CLSA) at Fort Huachuca, AZ.

This new high-performing supply chain solution, based on products from SAP’s R/3 Defense Industry Solution, rivals the capabilities and reliability found in the world’s best commercial supply chain systems. The common, accurate, real-time



LMP DEPLOYMENT OVERVIEW

	Deployment 1	Deployment 2	Deployment 3
	<ul style="list-style-type: none"> • CECOM • HQAMC • DFAS 	<ul style="list-style-type: none"> • AMCOM 	<ul style="list-style-type: none"> • TACOM • JMC
Users	>4,000		>15,000
Fixed Locations	6		149
Items	1.4 Million		6 Million
Annual Requisitions	>2 Million		>8 Million



operating view is the key to rapid decision making. LMP provides the first integrated maintenance, repair, and overhaul (MRO) planning and execution solution. Planners can now iteratively forecast and plan over one million material needs in real time, and plan and execute complex repair/maintenance orders utilizing planning rules tailored to material demand frequency, unit value, and mortality rates. Planners now have a single source of data for making reliable material commitments via a sophisticated global inventory visibility and available-to-promise capability. A snapshot of the operational statistics helps tell the story:

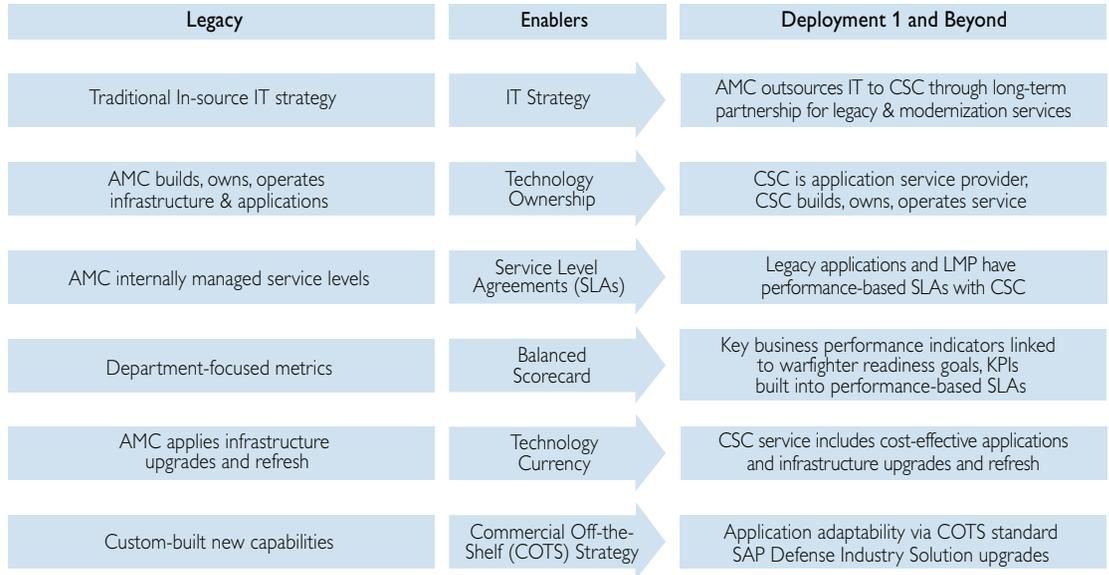
- On the first day of full customer requisition processing, LMP processed a staggering 200,000-plus sales order/requisition transactions within a 10-hour period—a workload that would have taken several days to process using the legacy system
- Processing high-priority backorders took less than a few hours for a process that historically would have taken 4 or 5 days
- LMP processes an average of 65,000 sales order transactions daily
- Within its first 3 months of operation, LMP established a reliability track record of 99.99 percent system availability 24 hours a day, 7 days a week
- LMP is delivered to users as an application service via a standard desktop Web browser

CSC's LMP solution also delivers financial transaction integrity via SAP's integrated financial

modules, and LMP is becoming Federal Financial Management Improvement Act (FFMIA)–compliant. Information security is also ensured as LMP nears completion of Defense Information Technology Security Certification and Accreditation Process (DITSCAP) certification. Through a multiyear effort, CSC led the enormous task of creating the new vision and then designing, developing, and delivering LMP's first deployment. The scale of the effort particularly comes to light in complex areas such as interfaces and data migration. Unraveling 2,200 unique legacy applications, Team CSC's reengineering of the interface architecture required over one million hours to redesign, develop, and test the new solution. In the first deployment, LMP replaced some 2,000 AMC legacy applications. In short, by living up to system volume, capability, and reliability expectations, LMP system acceptance and user confidence have taken hold, and AMC is realizing results.

AMC's formula for successful transformation requires the best commercially available supply chain technology, new ways of contracting for long-term, results-focused partnerships, and the right team of dedicated, passionate professionals. The LMP Team's human factor is a high-performing team of AMC personnel and Team CSC. Team CSC comprises outstanding performers including SAP and former AMC personnel, and over 100 specialized subcontractors led by CSC program managers. The adage "you are only as good as your team" is indeed true. The driving force behind LMP's immense, pressure-filled mission is the LMP Team and its

INNOVATIVE, COST-EFFECTIVE CONTRACT



belief that “soldiers will live or die, succeed or fail based on how well we execute our mission.”

An Innovative, Cost-Effective Contract

The desired foundation for any contractual agreement is a commitment vehicle that reflects the interests of all parties and reinforces the mutual commitment to results. AMC’s modernization path required unique new ways of doing business to support warfighter readiness in a cost-effective manner, prompting performance-based-results incentives and rigorous SLAs.

To focus on results and reduce transformation risk, CSC has responsibility for both legacy solutions and new solutions development. The modernized ASP-delivered supply chain solution, enabling AMC to buy a service rather than manage technology, is a radical shift in IT strategy. In essence, it demonstrates government adoption of a commercial outsourcing and application service provider model.

The scope includes managing IT infrastructure, managing applications and licenses, operating legacy systems, and outsourcing legacy system

staff. This unique contract ensured that two of the Army’s primary concerns were met: First, the contract is cost-effective because it leveraged current legacy system operation funds to initiate the modernization. Second, the Army mitigated legacy system operational risks by having CSC take responsibility for legacy system services.

The modernization contract is also innovative and cost-effective in its continuous improvement features. CSC’s Balanced Scorecard ProcessSM keeps our enterprise focused on AMC’s goals and results. The service embraces a comprehensive set of performance-based service level agreements, and incentives are tied to both legacy system sustainment and to modernization performance improvements that drive results in:

- Quality of service
- System performance
- Supply chain performance

Results are impressive. For example, CSC’s service level performance agreements did not incur a “red” status during the crucial Deployment 1 stabilization period. Legacy system customer satisfaction results have consistently achieved perform-

ance targets, and problem report resolution metrics have exceeded targets in every performance period. SLAs include key supply chain performance indicators such as decreasing logistics response time and increasing perfect order fulfillment numbers. Indicators are clearly pointing to improvement in order cycle times, material commitment reliability, and financial planning and tracking. Transformation of this scale—akin to changing a high volume consumables supply chain (think Wal-Mart) and a complex industrial repair supply chain (think General Electric)—is occurring for AMC without any major disruption to legacy operations or to the new supply chain solution.

In total, Team CSC’s LMP partnership and innovative contract characteristics have enabled cost-effective and results-focused IT and transformation strategies. LMP is positioned for continuous improvement, adaptability, and scalability. This will happen through standard upgrades to the SAP R/3 Defense Industry Solution, standard hardware capacity upgrades, and greater levels of supply chain performance driven by the CSC-AMC partnership’s focus on key business improvement metrics.

Committed Team

The complexity of any enterprise transformation program requires strong and multifaceted leadership. This implies a commitment on the part of

the leader to go beyond being a good manager and also become a reliable partner. Building a productive partnership with the client and every subcontractor team member is incumbent upon the lead contractor. For AMC’s LMP, CSC has provided the core resources for this very large and complex program, as well as the foundation for thought leadership and innovation. Currently, over 60 percent of program resources are CSC employees. Experienced CSC program managers lead the effort, integrate subcontractor skills, and combine their efforts seamlessly with ours. Many senior positions have an AMC manager assigned to ensure coverage of all program aspects.

Having led and managed large-scale transformation programs over many years, CSC understands the nuances of tailoring program organizations to focus on business goals and results. For LMP, we included a Program and Business Architecture Office and an Organizational Architecture Office to ensure that both business solution and organizational change management have appropriate focus.

Best Practice Planning and Fulfillment Capabilities

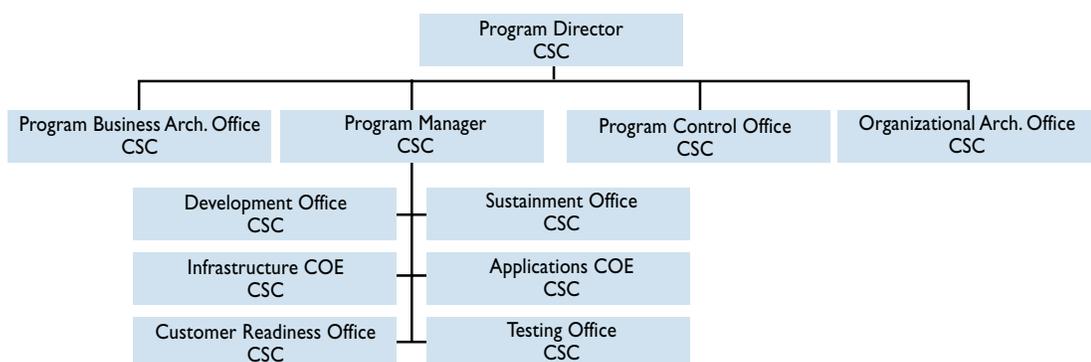
Leveraging new planning and fulfillment capabilities to achieve greater levels of supply chain performance is ultimately one of the keys to delivering improved warfighter readiness.

When fully implemented at all five AMC Commands, more than 15,000 users will have

LMP is an unprecedented ‘partnership’ between AMC and CSC. It continues to prove how government and CSC can work jointly throughout a program’s lifecycle to ensure achievement — from concept to development to deployment. This combination allowed for the best industry approaches to be matched to or integrated into a military business requirement and process. In fact, LMP’s success is a direct result of our partnering relationship.

—Paul Capelli, LMP Program Director, AMC

COMMITTED TEAM



access to the LMP solution, and the system will process over 8 million requisition transactions annually. Integrated planning and fulfillment is a keystone of LMP’s vision for this new high-performing supply chain system that rivals the capabilities and reliability of the world’s most successful commercial supply chain systems.

In simple form, the closed-loop planning cycle can be viewed as a four-step process:

1. Build demand forecast plan
2. Calculate supply plan (a.k.a. MRP)
3. Determine fulfillment execution activities
4. Adjust plan as conditions change

The process currently runs in monthly cycles with ambitions to move to weekly cycles to further improve responsiveness to changes. The demand and supply planning activities are managed through exception/alert features to leverage the planners’ knowledge on the most critical items. The integrated planning and execution process ultimately increases readiness while requiring fewer inventory and spending available funds only where needed.

The effects of adopting new planning capabilities are evident in the daily work of key AMC personnel, such as Item Managers.

BEST PRACTICE PLANNING AND FULFILLMENT CAPABILITIES

Legacy	Enabler	Deployment 1 and Beyond
Disintegrated, partially integrated reorder point planning	Advanced Planning & MRP	Integrated time phase demand, supply, budget, execution plans
Multiple instances of master data in separate systems	Single Source of Data	Single cross-command master data in a single integrated system
Global plans not directly linked to site-specific plans	Advanced Planning	Site-specific plans integrated into global plans: fast, iterative replanning
Mathematical models, summary rules, parameters	Advanced Planning	Weapons system readiness, planning rules, parameters tailored to material
Average monthly demand value	Demand Planning	Causal factor forecast integrated to supply planning and simulation
Single-plan cycle, experience-based reactive alterations	Exception Management	Iterative planning cycle utilizing alerts and exception messages
Fragmented, not easily reconciled transactions	Enterprise System	Real-time budgeting cycle/constraints linked to transaction processing
Global, unable to provide promise date	Global Commitments	ATP Global, time phased promising
History-based inventory distribution plan	Advanced Planning	Foward-looking supply plan with balanced inventory across network
Local view of priorities	Rules-Based System	Exception management
Multiple Command ownership and view of inventory	Single Stock Fund (SSF)	Single ownership and view of inventory

BEST PRACTICE MAINTENANCE, REPAIR, AND OVERHAUL

Legacy	Enablers	Deployment 1 and Beyond
Invisible local schedules	Product Lifecycle Management	Fabrication/repair project visibility, BOM Integrity in plan and schedule
Consumption-based spare parts planning, disintegrated budgeting & schedule	MRO Planning	Mortality rate driven planning integrated to budgets and work order schedule
Single level consumption based plan	Advance Planning & MRP	Multi-level BOM-driven dependent planning
History based inventory distribution plan	Supply Planning Network	Linked supply and distribution network plan Balance inventory across network
Components pushed through system, buffer inventories	Shop Floor Control	'Pull' to assembly schedule, real-time work orders and parts availability

- Interactive forecast result analyses that historically took weeks are completed in minutes
- Inventory visibility into more than 50,000 CECOM-managed items
- LMP's real-time global Available To Promise (gATP) functionality, when used with the Army's asset search matrix and protection levels, allows users to quickly search, locate, and order needed items from any of AMC's more than 1,000 sites
- In the past it would have taken AMC a minimum of 1 day to locate a part in its global inventory, but the same task can now be accomplished in a matter of seconds

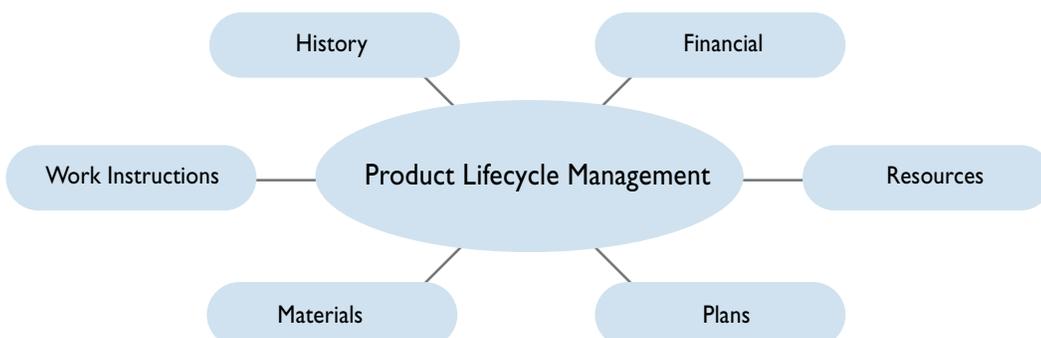
Formally measuring the key indicators of LMP's planning and fulfillment improvement and driving for continuous improvement are fundamental principles of the modernization program. Key performance metrics, such as order processing cycle times, perfect order performance, and inventory levels, are captured and reported via a balanced scorecard, which keeps the enterprise directed toward its goals.

Best Practice Maintenance, Repair, and Overhaul Capabilities

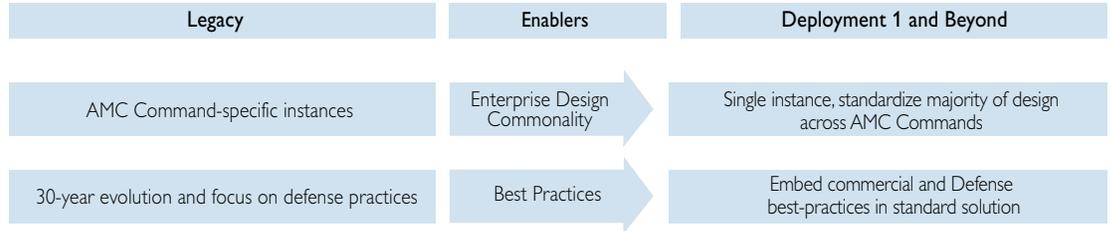
In MRO supply chains, being able to predict, plan, and manage asset MRO programs is a necessity. Team CSC's understanding of the complexities of MRO, knowledge of drivers for MRO success, and application of commercial and defense best

The SSF is a critical step along the way to fulfilling LMP's objective of providing a single, accurate data source for global Available to Promise to make reliable material commitments. SSF is a business process that has torn down the financial and inventory walls that existed between the traditional retail and wholesale components of our internal Army logistics chain for spare and repair parts. It was fully implemented in 2003, and it is now how we do business. Ultimately, as LMP matures it will make SSF procedures more effective and efficient.

—Sue Baker, Principal Deputy, G-3, AMC



COMPREHENSIVE METHODOLOGY



The real skill in reengineering the business processes of a large government organization is to effectively assess all its business needs and to pinpoint all its specific requirements. Only after we understood AMC's business and knew precisely what its unique needs and challenges were, did we even begin to consider technology options.

—Sheri Thureen, LMP Program Manager, CSC

practices have been crucial to LMP's results. In fact, AMC's LMP is the first comprehensive and integrated MRO planning and execution system.

AMC's supply chain for MRO, known as Industrial Base Operations (IBO), has a particularly complex mission. Through its network of depots, IBO makes, maintains, and repairs enormously complex durable goods, such as overhaul of the Blackhawk helicopter with its 70,000 components. Because AMC's MRO challenges had not been institutionalized into a standardized technology solution previously, CSC worked with SAP's Defense Industry Solution to craft a first-of-its-kind, integrated MRO planning and execution solution. CSC's LMP modernization solution for MRO planning required capabilities for tracking and servicing items as well as resource planning and budgeting for MRO projects.

IBO is not a commercial endeavor, but it has the requirement to maximize budget dollars for projects. Historically, only a material reorder point planning algorithm existed, and significant challenges remained regarding the tracking and management of project cost. In the first deployment, this single system began managing 14,500 MRO projects and 13,000 work orders, and in the

first 4 days captured 700,000 labor hours to track the cost. The results are dramatic:

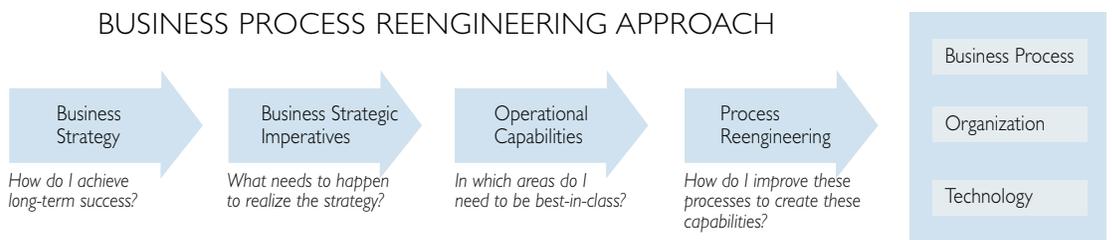
- Improved management of global suppliers of overhaul, manufacture, and remanufacture services
- Integrated repair project lifecycle management to plan, budget, and execute projects
- Project visibility across MRO enterprise
- Critical data integrity and inventory management via single-source, multilevel bills of material

The LMP Team's intimate knowledge of government and military operations made it possible to collaborate closely with SAP to build integrated MRO planning and execution into the standard SAP Defense Industry Solution. The success of this CSC solution is proven by SAP's decision to include the MRO module in its standard solution.

Comprehensive Methodology

CSC's proprietary CatalystSM methodology enables CSC to address large-scale transformation via a holistic approach that ensures all aspects of the transformation are addressed.

BUSINESS PROCESS REENGINEERING APPROACH



LMP demonstrates a strong commitment to reengineer processes using a combination of commercial and DoD best practices. In addition, the methodology principles promote simplification and standardization of solution design across AMC’s multiple commands. These principles minimize rework in subsequent deployments and lower total cost of ownership.

Guided by Catalyst, the modernization journey began with a comprehensive understanding and definition of requirements and business needs. Subsequently, the LMP Team initiated design of the LMP solution. Scenarios were developed for every business process, and best practices were incorporated. This became the foundation of LMP’s new business processes and technology solution and, likewise, SAP’s standardized Defense Industry Solution. The magnitude and diversity of AMC’s multiple Commands and services required a phased deployment strategy. The vast majority of system functionality was designed and installed during the initial deployment. Subsequent deployments will provide additional capability and extended Command scope. CSC’s standardization of design across all AMC Commands leads to less rework in subsequent releases and lower costs for AMC.

IT Strategy

Organizations embarking on enterprise transformation recognize that IT strategy must be anchored to the underlying business strategy and business imperatives. A business-connected IT strategy is crucial to enabling the transformation program goals. CSC and AMC have embraced this approach in their IT strategy for the landmark LMP. Specifically, LMP’s IT strategy enables the goals of cost-effective and efficient IT service and industry-leading supply chain capabilities through components such as IT outsourcing, ASP solution delivery model, and COTS standardized technology applications.

AMC’s first significant wave of change came via outsourcing the software sustainment of CCSS and SDS to CSC. During this process, 205 Central Design Activities (CDA) federal technology employees at two AMC sites (Chambersburg, PA, and St. Louis, MO) and contractor personnel were transferred to CSC. As often occurs with outsourcing, implementing a new standard of IT service triggered job security anxiety and system performance skepticism.

Employee transition concerns were addressed by CSC’s ‘soft landing’ process. The key components of Team CSC’s strategy are processes that will ensure a soft landing for all Government

My husband and I are happy we made the decision to become part of CSC. The transition to Team CSC has been good for both of us. We have viewed the transition to becoming CSC employees as an opportunity to enhance our abilities. The Team CSC mentoring process enabled me to expand my job skills and work activities. One of the assets we brought is our knowledge of AMC’s culture and business processes, which has given us a great baseline for success and has assisted Team CSC in moving AMC toward the LMP solution.

—Eileen Miller, 30-year AMC veteran

IT STRATEGY

Legacy	Enablers	Deployment 1 and Beyond
Traditional in-source IT strategy	IT Strategy	AMC outsources IT to CSC in a long-term partnership for legacy and modernization services
AMC builds, owns, operates infrastructure and applications	Technology Ownership	CSC is Application Service Provider (ASP), CSC builds, owns, operates service
Application and function-specific, dated technology	Staff Skills	Cross-functional, transportable cross-command, current technology
Thousands of custom point applications	COTS Strategy	Single commercial off-the-shelf standard SAP Defense Industry Solution

Team CSC established and defined repeatable processes for maintaining equipment and software, then trained the newly transitioned employees in those processes. During the first 2 years of the contract, these improvements saved approximately \$8 million, which we were then able to reinvest in the modernization effort.

—Chris Colen, LMP Program Director, CSC

employees and the smooth transfer of their skills, knowledge, and expertise, while maintaining uninterrupted business functions throughout the transition period. Enabling factors of CSC’s soft landing process are:

- Communication awareness
- Training
- Counseling
- Benefit packages

Through open communications and reassuring transition methods, our program has developed into one of the most effective and efficient in the industry, providing valuable continuity and knowledge-based benefits to our outsourcing clients.

CSC’s IT outsourcing excellence quickly showed results in continuous performance-improvement metrics. Legacy system customer satisfaction results have consistently achieved performance goals, and problem report resolution metrics have exceeded targets every performance period.

Legacy system service also links to the efficiencies in the modernization strategy. The two initial Army sites also established a base for CSC primary and backup operations and helped support the transition to the new SAP-based ERP system.

AMC’s shifts in IT strategy are fundamental to the success of LMP. Its decision to outsource legacy systems to CSC has clearly delivered results via the introduction of standardized processes, methodologies, and tools, and focus on stringent performance standards.

COTS Defense Industry Solution

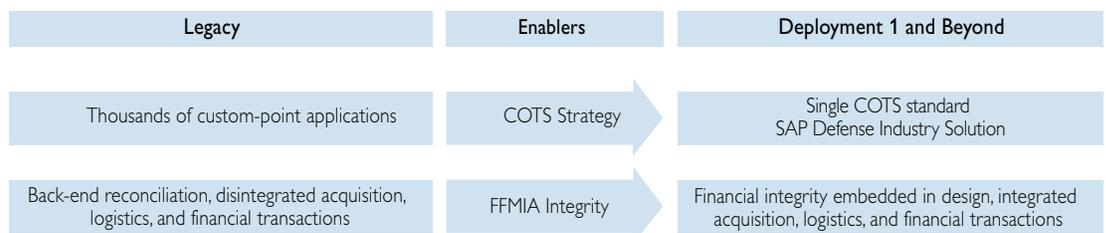
AMC and CSC recognized the value in transforming traditional custom-built IT application strategies into lower cost, adaptable, commercial off-the-shelf (COTS) strategies. In choosing this COTS approach, LMP has been able to deliver a proven solution that ensures future system adaptability, responsiveness, and lower total cost of ownership.

LMP’s application strategy moves AMC away from thousands of disintegrated point solution applications to a single COTS SAP R/3 Defense Industry Solution. The CSC-led design team focused on four guiding principles in the first deployment of LMP:

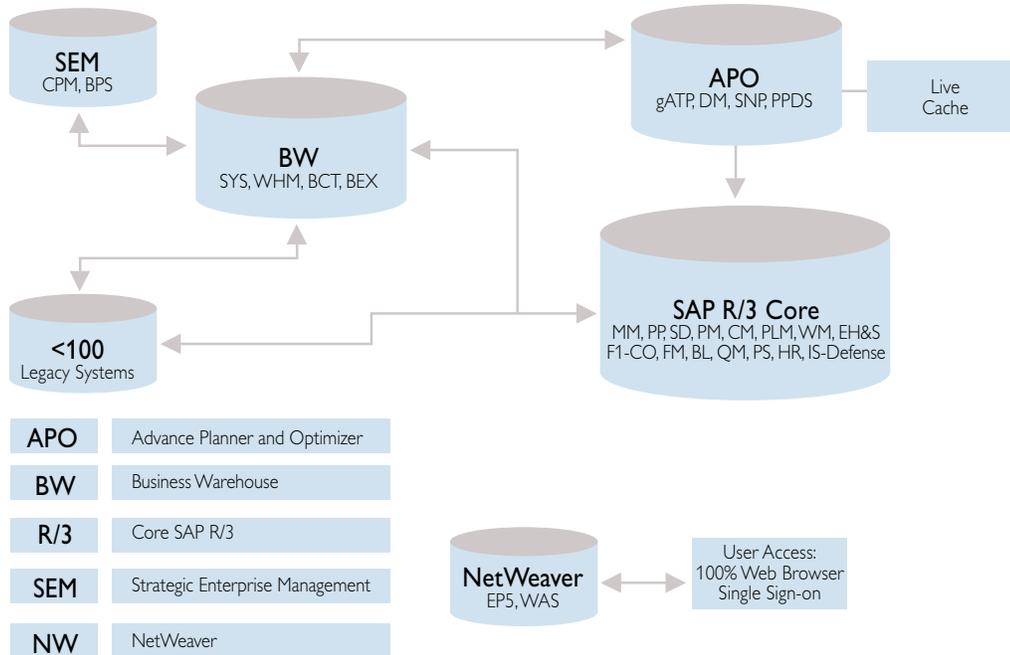
- Design in commonality across AMC’s commands so that the first deployment represented the bulk of system capability
- Adopt commercial and defense best practices, particularly those areas that have the greatest impact on performance
- Align AMC’s business processes to the proven COTS solution
- Design and build-in Federal Financial Management Improvement Act (FFMIA) compliance

LMP’s first deployment of the Defense Industry Solution replaced some 2,000 AMC custom legacy applications. After determining that an SAP solution offered the best “out-of-the-box” fit, the

COTS DEFENSE INDUSTRY SOLUTION



LMP SAP ARCHITECTURE



LMP's SAP solution components give it the distinction of being the largest fully integrated supply chain MRO solution in the world.

—Ed Farler, LMP
Program Architect, CSC

challenges to build an operational solution were formidable. Team CSC entered uncharted ground for applying commercial applications to government operations, including functional challenges such as:

- Army forecasting and cost-justification reports to Congress that must follow stringent General Accounting Office (GAO) requirements
- Long-term detailed material and maintenance planning, 7-year horizon
- Army's need to track items that need servicing
- Legacy of disintegrated acquisition, financial, and logistics systems, often presenting record-balancing challenges

CSC was determined not to travel the path of building customized applications, and instead moved forward with a commitment to develop a merged Public Sector and Aerospace and Defense

Industry Solution. This solution resulted in the first integrated planning and execution MRO solution in the worldwide defense community. The proof of its power is that it has now become a standard part of future SAP releases. This standard SAP system enables LMP to keep pace with new commercial and defense capabilities via standard upgrades.

The SAP solution components include everything from Sales and Distribution, Materials Management, Production Planning, and Financials, to Advance Planner and Optimizer modules such as Demand Planning, Supply Network Planning, and Global Available-to-Promise.

The integrated SAP components combined with best business practices have also dramatically improved financial reporting integrity and transaction traceability. Team CSC's adherence to design principles of cross-command commonality and aligning AMC's business processes to SAP's commercial and defense best practices will drive

results in both the short and long term. LMP’s commitment to a standard SAP Defense Industry Solution has positioned AMC for low-cost continuous improvement, adaptability, and scalability through standard upgrades to our innovative solution.

Enterprise Architecture, Interface Infrastructure, and Data Migration

The backbone of any enterprise transformation solution must be a robust, homogeneous architecture that not only has an easy-to-use interface and smooth data migration capabilities, but is also highly reliable and upgradeable. Migration from AMC’s unwieldy, disintegrated 30-year-old system architecture to a single integrated ERP architecture was daunting, but necessary for LMP’s pursuit of seamless integration, adaptability, and scalability.

At the heart of CSC’s LMP solution is the undoing of an enormously complex mainframe-based logistics system architecture woven together via thousands of unique legacy applications and batch processing interfaces.

Through the multiyear modernization effort, CSC led the enormous task of reengineering the system architecture into a greatly simplified and homoge-

neous system. It is fast, reliable, easily accessible via user-friendly features, and also readily scalable, which lowers operating costs.

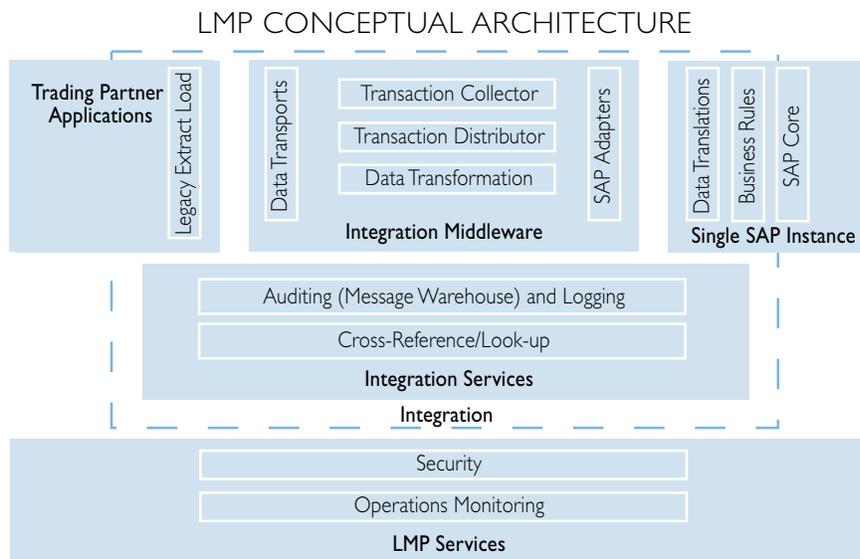
Evidence of the new architecture strengths was immediately visible in LMP Deployment 1, Day 1, when the new system processed a staggering 200,000-plus sales order/requisition transactions within 10 hours. Processing high-priority backorders took less than a few hours, and an average 65,000 sales order transactions were processed daily—all with 99.99% system availability. Service Level Performance Agreements did not incur a “red” status during the crucial stabilization period.

CSC’s recognition of the strategic and tactical importance of data migration is a key ingredient to effecting change. Specifically, the definition of LMP’s 50 to 60 key data objects was critical to realizing the vision of a single actionable source of data. The scale and complexity of the data migration work in Deployment 1 was enormous, requiring approximately 200,000 hours over a year and a half. The first deployment contained 1.3 million national stock numbers.

- Transactional data loads of more than 10 million records were transferred to SAP

ENTERPRISE ARCHITECTURE, INTERFACE INFRASTRUCTURE, DATA MIGRATION

Legacy	Enablers	Deployment 1 and Beyond
30-year-old mainframe-based applications and architecture; 2,200 unique disintegrated applications	Enterprise Architecture	Homogenous, fully redundant, scalable, nonintrusive access to service via Web browser and ease of single sign-on
Multiple instances and definitions of master data	Data Strategy Model	SAP’s one integrated database to support all AMC Commands; single actionable, reliable source of data
Multiple points of entry, decentralized	Security	Security follows DITSCAP security requirements, centralized management
Point-to-point batch interfaces	Enterprise Application Integration (EAI)	COTS EAI interface infrastructure, single interface engine connecting all systems to SAP HUB
Mainframe batch, downtime windows	Performance	CSC service provides fast, real-time response and 24x7 reliability



- An additional 20 million records were transferred to the APO system and 215 million records loaded into BW. Total transferred data exceeded 245 million records
- Sixty million demand-characteristic combinations were created and transferred

Team CSC’s reengineering of the interface architecture unraveled 2,200 unique legacy applications and required over 1 million hours to redesign, develop, and test. The new EAI interface infrastructure provides a single interface engine connecting all systems to the SAP hub, retaining more than 250 interfaces between LMP and legacy applications.

Guided by the vision of a single Army Logistics Enterprise Architecture, Team CSC established a solid technical foundation with the CECOM deployment. The separation of logistics and financial systems was bridged, multiple instances of legacy applications with different data for the same items are being eliminated, and the culture shift of data quality ownership was launched. SAP system performance and reliability ratings have promoted system acceptance and user confidence.

Managing Speed of Change

CSC’s deep experience with large-scale modernization programs for government and business has taught us that few things are as critical as gauging customer readiness for change—and then managing the introduction of new technologies, tools, and processes to match that pace. We understand that molding and creating pervasive change within any organization must be carefully paced throughout the transformation development and implementation phases.

Team CSC’s LMP deployment reflected all the challenges of change in an environment where roles and skills in the legacy system were perfected over the course of 30 years. Learning new technology, terminology, processes, tools, and activities had to be introduced over numerous sessions. New work habits had to be molded by anchoring old to new. This vital molding and creating change intensified during a 3-month training period and remained intense during the LMP stabilization period.

CSC and AMC’s joint commitment to molding and creating change at the proper speed started with team leadership, particularly through dedication to a comprehensive communication program. The scale and magnitude of change in LMP

Transformation is about change, but it is much more than that...how we mold and create change, not just respond to change, is the essence of transformation.

—General Paul Kern, U.S. Army Materiel Command Transformation White Paper July 2003

required CSC to structure an innovative user-training program consisting of five primary levels:

1. Awareness
2. Preparation
3. SAP Concepts and Terms
4. Detailed Training and Integrated Scenarios
5. Business Workshops

Team CSC also developed a comprehensive Web-based Learning Management System to reach the widespread, multiple-command AMC user community. Over a 3-month period, approximately 4,000 users were trained through more than 1,000 classes and 12,000 seats in this large-scale training effort.

Following the smooth cutover weekend for LMP Deployment 1, Team CSC rallied to the support activity, which was crucial to building confidence through the first tentative weeks of operation. The resilient AMC staff showed again why they are the “lifeline of the Army,” and heavy use of field support teams and centralized support teams quickly stabilized the operating environment. Throughout the stabilization period, key indicators such as problem reports per user, problem resolution time, and customer satisfaction were closely monitored for out-of-norm conditions and stayed out of the red zone. The LMP Team conducted a thorough evaluation of lessons learned and quickly applied those lessons to the training and support program so that LMP would continue to improve in subsequent deployments. Team CSC embraces the notion that change occurs on a continuum. Every organization absorbs and tolerates change at a different speed.

The Bottom Line—Supporting Warfighter Readiness

The July 2003 LMP deployment for CECOM was a massive step forward in fulfilling the Army’s supply chain vision. LMP is a weapon, supporting warfighter readiness. For the requisitioner at Baghdad International who needs a CECOM-supplied radio, it is a transparent weapon. The user simply sees the result of LMP in the form of reliable material commitments. For the AMC item manager and repair project manager, LMP is their new Web browser-accessible weapon. For AMC material managers this is critical, because any disruption can mean potential loss of life, not just material flow disruption. With this critical difference, AMC material managers depend, just like material managers in a large multinational conglomerate, on key supply chain capabilities to fulfill their mission:

- Common, accurate, real-time operating view
- Rapid decision making
- Precise forecasting
- Integrated planning and execution

These capabilities, delivered via CSC’s service, dramatically improve AMC’s reliability of having the right material in the right place in the right quantity at a moment’s notice. The LMP service has been reliable from its first day of operation, providing 99.99% availability 24 hours a day, 7 days a week. CSC’s parallel effort to sustain the legacy systems has been equally reliable.

LMP is positioned for continuous improvement, adaptability, and scalability. This will happen through standard upgrades to the SAP R/3 Defense Industry Solution, standard hardware capacity upgrades, and greater levels of supply chain performance driven by the CSC-AMC partnership focus on key business improvement metrics. Indicators are clearly pointing to improvement in order cycle times, material

commitment reliability, and financial planning and tracking. Bottom line—transformation of this scale and complexity, akin to changing a Wal-Mart–like consumables supply chain and General Electric–like complex industrial repair supply chain, is occurring without any major disruption. For AMC’s “business,” LMP is simply a superior combination of people, processes, and technology.

World dynamics have changed dramatically since the end of the Cold War, and AMC must also change to meet the challenges of supporting the U.S. Army in its Vision 2020. Speed is a characteristic that must be inherent within any support system for U.S. forces to be successful in the new world dynamics. As the largest segment of those forces, the Army knows that it must transform to meet these challenges.

The U.S. Army is greatly strengthening its arsenal with Team CSC’s deployment of the LMP, but the transformation has just begun, as Secretary of Defense Donald H. Rumsfeld stated in the Department of Defense Transformation Planning Guidance:

There will be no moment at which the Department is transformed. Transformation is a continuous, ongoing process.

The Army is being asked to respond quickly to a wide range of humanitarian, peacekeeping, and warfighting missions around the world. A more agile and responsive logistics system is the backbone of a more agile and responsive military. That is why logistics modernization is one of the Army’s critical new weapons.

—General Paul J. Kern,
Commanding General, AMC

Computer Sciences Corporation

Federal Sector

3170 Fairview Park Drive
Falls Church, VA 22042
+1.703.876.1000

Worldwide CSC Headquarters

The Americas

2100 East Grand Avenue
El Segundo, California 90245
United States
+1.310.615.0311

Europe, Middle East, Africa

Royal Pavilion
Wellesley Road
Aldershot, Hampshire GU11 1PZ
United Kingdom
+44(0)1252.534000

Australia

26 Talavera Road
Macquarie Park, NSW 2113
Australia
+61(0)29034.3000

Asia

139 Cecil Street
#08-00 Cecil House
Singapore 069539
Republic of Singapore
+65.6221.9095

About CSC

Computer Sciences Corporation helps clients achieve strategic goals and profit from the use of information technology.

With the broadest range of capabilities, CSC offers clients the solutions they need to manage complexity, focus on core businesses, collaborate with partners and clients, and improve operations.

CSC makes a special point of understanding its clients and provides experts with real-world experience to work with them. CSC is vendor-independent, delivering solutions that best meet each client's unique requirements.

For more than 40 years, clients in industries and governments worldwide have trusted CSC with their business process and information systems outsourcing, systems integration and consulting needs.

The company trades on the New York Stock Exchange under the symbol "CSC."

