

SAP Customer Success Story Defense and Security



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Captain Itay Segal, Business Intelligence Manager,
Logistics and Medical Branch of the Israel Defense Forces

AT A GLANCE

Organization

- Name: Israel Defense Forces – logistics and medical branch
- Industry: Defense and security
- Web site: dover.idf.il/idf/english

Challenges and Opportunities

- Increase IT agility and responsiveness
- Consolidate and streamline heterogeneous IT technologies, protect investment in legacy systems
- Increase flexibility of business processes

Objectives

- Embrace an enterprise service-oriented architecture (enterprise SOA) infrastructure, minimizing deployment of new technology and maximizing existing resources
- Develop reusable components (services) for each new application
- Meet business requirements with rapid-deployment applications

SAP® Solutions and Services

- SAP NetWeaver® technology platform for its development infrastructure functionality
- SAP NetWeaver Visual Composer tool
- Web Dynpro development environment
- Training and strategic support from SAP NetWeaver advisory office
- Technical support from SAP Labs

Implementation Highlights

- Rapid development of 3 new user-friendly applications
- Transparent integration with existing information systems
- Highly visible project with positive developer and end-user response

Why SAP

- Existing commitment to SAP NetWeaver
- SAP NetWeaver support for enterprise SOA vision
- Proven technical support and service, rapid time to ROI

Benefits

- Evolution of current IT landscape into strategic environment for business change
- Efficient, cost-effective creation of new applications and reuse of existing software components via enterprise SOA
- New services for sales order and outbound delivery handling and improved information for decision support – all incorporated into a single application
- Reduced time to process materials management transactions from 9 hours to 2 hours
- Inventory level forecasting for materials resource planning in SAP® ERP application
- New insights created from existing business intelligence data, distributed to a wider base of users
- Streamlined business processes
- Rapid development of business-critical applications, creating service satisfaction for users

Existing Environment

- SAP ERP
- SAP NetWeaver including the SAP NetWeaver Portal, SAP NetWeaver Exchange Infrastructure, and SAP NetWeaver Business Intelligence components
- Legacy systems and applications

ISRAEL DEFENSE FORCES – LOGISTICS AND MEDICAL BRANCH

Built on SAP NetWeaver®, Enterprise SOA Initiative Reduces Costs, Increases IT Responsiveness, and Enhances Innovative Service

Defending the Past, Building for the Future

Delivering responsive IT service to users is particularly challenging in large organizations with established legacy business systems. With a diverse collection of hardware, platforms, and technologies, the logistics and medical branch (LMB) of the Israel Defense Forces (IDF) found it increasingly difficult to maintain and tightly integrate its applications and business processes. These technical challenges compromised the organization's ability to efficiently meet user requests, deploy new capabilities, and provide responsive service. To more effectively serve a large number of geographically distributed users, the organization began considering an enterprise service-oriented architecture (enterprise SOA) approach that could help make business processes more flexible and efficient.

“We have many legacy systems, most of which are based on mainframe technologies,” explains Captain Itay Segal, business intelligence manager at LMB. “We are currently moving to phase out all of the legacy systems, but in such a large organization you cannot change everything at once.” To protect LMB's investment in these systems while increasing IT responsiveness and agility, the agency deployed an enterprise SOA approach based on the SAP NetWeaver® technology platform.

SAP NetWeaver serves as the foundation for enterprise SOA, helping IDF evolve its current IT landscape into a strategic environment that drives business change. SAP helps organizations like IDF adopt an enterprise SOA that includes enterprise services, which can be



quickly assembled to compose new applications and enable business processes. With enterprise SOA, organizations can improve reusability of software components and become more agile in responding to change.

Building on an existing SAP NetWeaver technology platform and development infrastructure, LMB quickly began building new applications and delivering analytic capabilities. In only a few months, the development team created new applications using the enterprise SOA approach and reused components from the initial applications in subsequent projects. These first projects saved significant development resources and allowed the organization to deliver business-critical capabilities quickly. “The SAP NetWeaver solutions have provided a lot of value to our customers,” says Segal. “The solutions help the IT team do things we could not have done with the old monolithic applications.”

A Growing Need for Change

Founded in 1948, IDF is one of the most sophisticated fighting forces in the world. The organization relies heavily on information technology to support its ground and air forces as well as the navy. LMB provides both logistics and medical services to IDF. The IDF logistics operations include the management of resources such as food, energy, spare parts, transportation, munitions, construction, clothing, office supplies, medical supplies, and maintenance. Medical services include the management of infirmaries, hospitals, and field medical units. IDF began using information systems for logistics management in 1955 and has since built applications to manage every aspect of LMB operations. However, managing these applications across a heterogeneous collection of technologies became a challenge over time.

In 2001 the IDF executives decided to begin replacing the aging applications with an SAP® software environment. In 2004 the organization deployed the SAP ERP application and the SAP NetWeaver Exchange Infrastructure (SAP NetWeaver XI) component of the SAP NetWeaver technology platform. IDF successfully deployed the SAP NetWeaver Business Intelligence and SAP

NetWeaver Portal components the next year. With this streamlined new IT landscape, IDF was prepared to pursue its vision for enterprise SOA.

The desire for an enterprise SOA approach stemmed from two goals: user efficiency and data access. “Our landscape is a mixture of both legacy systems and our SAP ERP application,” explains Segal. “We needed an environment in which we could integrate processes so that eventually users would be able to access legacy, SAP ERP, and business intelligence data – all on one screen.”

The IT team began studying enterprise SOA concepts and technologies, creating a development environment through SAP NetWeaver, building a development team and establishing roles, and forming a development methodology. The next step was to create an enterprise SOA pilot project.

Initiating Enterprise SOA

The first project selected was a sales and delivery application for use in the LMB warehouses. In the original environment, materials managers in four geographically distributed logistics centers would confirm sales transactions in one application and then

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create an outbound delivery transaction in another. This combination of tools was difficult to use, created a painfully slow process, and often forced users to make decisions without having all of the necessary information available. In fact, most decision-support information was available only in the business intelligence solution at headquarters and was unavailable to the materials managers.



Using the SAP NetWeaver development environment, the LMB team created several enterprise SOA services that would support the new sales and distribution application. Services for handling sales orders and outbound deliveries, as well as information to support decision making, were all incorporated into a single application. Using SAP NetWeaver XI, the team exposed these Web services to the back-office systems. Materials managers who once required as many as nine hours to complete a transaction in the heterogeneous environment could now perform the same task in less than two hours.

Rapid Development Success

Having achieved this early success, IDF was ready to take on a more critical business process: forecasting inventory levels. In the organization's distributed warehouses, stock levels were monitored by a material forecasting process that was not integrated with the SAP software. In the past, the forecasting process ran on the legacy system and data was then forwarded to the SAP software. The problem with this procedure was that the warehouse managers – who don't use the SAP software and are spread out at locations across the country – never saw the forecast results for their respective warehouses. Consequently, the managers couldn't give their own input regarding the inventory-level forecasts.

Using the Web Dynpro development environment of SAP NetWeaver, the LMB IT team created an inventory-level forecasting composite application that runs the material requirements planning (MRP) process within SAP ERP. This application maintains inventory levels, calculating previous materials usage and forecasting future needs. It also creates outbound delivery orders in the legacy MRP system so that the warehouse stock is replenished automatically.

Using knowledge from LMB's enterprise SOA pilot, the development team created the application for forecasting inventory levels in less than six weeks. "This was one of our shortest development projects ever," says Segal, "compared with the four to six months it would have required using traditional development processes."

A Quiet Revolution

The second major enterprise SOA project at LMB was an e-business credit management application. Israeli military personnel receive annual credit points, which they can use to buy goods in military and civilian stores. A centralized credit authority is responsible for managing credit-point eligibility and tracking spending. LMB had considered several possibilities for updating this legacy application, including an application based on SAP NetWeaver Portal. With the knowledge gained from the first two enterprise SOA projects, however, the LMB IT team decided to create a Web-enabled application.

Using several services from the pilot project, the organization developed a complex credit management application that draws information from various parts of SAP ERP. For example, the human capital management functionality in the software provides data about credit-point eligibility and point balances for personnel. IDF soldiers can access their point balance at self-serve kiosks. Using Web Dynpro, the IT team was able to provide users from the credit authority and military stores, as well as LMB managers, with portal-based access to data about credit usage, retail operations, and business analytics. In addition, the application draws data from the materials management functionality in SAP ERP to help retail managers at the military stores manage inventory more efficiently.

This application is expected to go live soon. "For users, this application will be a quiet revolution," says Segal. "The new system is much more user-friendly for both soldiers and business users. In the military stores, the application gives retail managers much more insight into store operations, inventory levels, and sales patterns. This is a real benefit for our retail operations."

Powerful Analytics Support Decision Making

As LMB became more adept at using its SAP solutions, the organization began considering how it could deploy the powerful analytics functionality of SAP NetWeaver to its advantage. The agency wanted to provide managers with intuitive business intelligence, and it sought to generate reports that could present a holistic view of operations to other users. In addition, the organization wanted users to have access to generate real-time, on-line information from back-office operational systems.

LMB deployed the SAP xApp™ Analytics composite application that provides warehouse-related information including not only a historical workload view of sales order, shipment, and line-item data, but also a stock analysis that shows the movement of parts through each warehouse.

In addition, LMB used the SAP NetWeaver Visual Composer tool to create two customized SAP xApp Analytics composite applications. The first is an application for managing materials that provides a comprehensive view of inventory stock, material orders, and missing inventory. LMB plans to customize this report eventually to display role-specific information. The second is a plant performance application that creates reports on issues such as inventory levels, storage, and distribution by plant.

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Eventually, technically sophisticated users will be able to use SAP NetWeaver Visual Composer to develop their own reports.

With SAP Solutions, No IT Bottlenecks

Together, the SAP solutions have helped LMB’s IT team provide more responsive service. “With SAP NetWeaver Visual Composer, we can develop applications quickly and deploy them even faster,” says Segal. “This is really a breakthrough in application development for our users.”

LMB did not conduct a return on investment analysis before launching its enterprise SOA initiative. However, Segal is convinced that the SAP solutions have delivered tremendous value. “Return on investment is very important in a defense organization because resources and funding are limited,” Segal explains. “I can say that our investment allows us to do things much faster than before, which lets us be more responsive to user requests.”

Because requests are addressed quickly, users are now eager to propose more new capabilities. “The users ask for what they want,” says Segal. “After users make a request, they can see our results – as soon as later that day or early the next day. They are very receptive to this process. Because we build applications with SAP NetWeaver Visual Composer, IT is not the bottleneck any more.”

In launching its enterprise SOA approach, the LMB team has learned many lessons. Rather than being just a new tool, Segal says, enterprise SOA is an approach that requires new technology, work processes, and development skills. “Experience has taught us that the adoption of enterprise SOA should be done gradually,” Segal says. “In this way, enterprise SOA will provide long-term benefits to the organization.”

SAP NetWeaver: The Foundation for Enterprise SOA

In the future, LMB plans to expand its use of the technology to even more mission-critical applications. The next application will support large-scale production and maintenance units within IDF. “As we become more experienced with enterprise SOA development, our projects are becoming much more complex,” says Segal. “Each one is a magnitude of order larger in its scope. If I were not confident in this technology, I wouldn’t dream of using it for our core business processes.”

In addition, LMB is pleased with the value provided by SAP. “SAP gave us great technology and a great business system,” Segal states. “They have also provided us with much-needed assistance in the early projects. Today, we can stand on our own two feet and continue with greater enterprise SOA projects because of the assistance given by SAP.”

To other organizations that are just beginning with enterprise SOA initiatives, Segal offers advice. “Early technology issues can be overcome,” he says. “People should not be afraid of using enterprise SOA technologies or of jumping on the SAP NetWeaver bandwagon. SAP delivered much benefit for us and I believe that other organizations could benefit as well.”