Large Federal Agency Leverages IV&V to Achieve Quality Delivery for Critical Modernization Initiative

Capgemini Government Solutions provides Independent Verification and Validation (IV&V) services to a large US federal agency in support of its application systems modernization

The Situation

A US federal government agency is pursuing significant modernization of aging departmental and agency program application systems. This modernization of the enterprise resource planning (ERP) system landscape is transforming business processes and technology to address challenges and opportunities in the rapidly changing federal environment. The initiative is being implemented using SAP AG's Systems, Applications and Products in Data Processing (SAP), which the agency has mandated for ERP implementations.

The agency intends to transform its operations by streamlining business processes, replacing obsolete technology and consolidating disparate local systems into a public-facing web-based enterprise-wide system. The system integrates customer self-service, financial management, and other business processes within a framework that is fully compliant with federal regulations. This effort is being implemented in four phases, and encompasses the full system development life cycle.

It is vital that the program is implemented successfully. Failure to do so could have an adverse impact on the US economy. Therefore, it is critically important to engage an independent vendor to provide program oversight appropriate to a high-integrity software implementation.

People matter, results count.

The Solution

Capgemini is providing independent analyses of the technical and management activities and products of the ERP program. Capgemini's IV&V team provides unbiased oversight to the program to assess whether user requirements are met (verification) and to evaluate whether the product or system is built to the required specifications (the correct solution) and meets stakeholder expectations (validation).

Utilizing our unique methodology, the IV&V team performs assessments of requirements, system development, solution architecture and design, data management, program artifacts and deliverables, test plans, test scripts and results, project schedule, performance and financial metrics, and Organizational Change Management (OCM) activities.

Unlike other vendors providing IV&V services as an audit or oversight function delivering after-action assessments and reports, Capgemini utilizes a collaborative and proactive IV&V approach to develop and implement criteria for completeness, traceability and accuracy, based on best practices and industry standards, as early as possible throughout each lifecycle phase. Using this approach the team is able to accelerate successful program performance and reduce rework by providing insight into potential issues and weaknesses up front, not after deliverables and milestones are completed. The client is extremely satisfied with the approach because the team fosters and maintains better working relationships with the Government and other program contractors enabling increased visibility into program activities allowing more in-depth assessment of program risks and overall program health. Capgemini provides feedback early and often which translates to a better quality system that is meeting stakeholder needs. IV&V empowers our clients with early insight into process deficiencies and system defects so the Government is able to make timely and informed decisions.

The Results

Capgemini has achieved trusted advisor status with the ERP program leadership and the agency's CIO by providing honest feedback on program progress. The IV&V team established excellent working relationships across the program, leading to a better quality end product. The entire ERP program team, including the System Integrator, relies on the IV&V team to provide knowledge of industry standards and how to apply them, as well as expertise in SAP, system implementation and IV&V

to drive quality throughout the lifecycle. Capgemini's early insight into process deficiencies and system defects enables the ERP program and task managers to make timely and informed decisions. The IV&V team also helps them to maintain focus on the critical path to solution deployment.

Capgemini received a customer satisfaction rating of 4.9 out of 5 and exceptional ratings on Contractor Performance Assessment Reports (CPARS). The customer recognizes the value we provide across all facets of the program (functional, technical, and programmatic) and sees direct results in program performance, ability to deliver releases on time and overall cost savings because IV&V is eliminating multiple rework cycles in all phases from development to deployment.

How the Agency and Capgemini Worked Together

The Capgemini IV&V team worked collaboratively with the agency leadership to become fully integrated with the development and program teams. This placed them in the ideal position to assist with successful program performance by providing up-front criteria for success based on best practices. Capgemini continues to provide strategic guidance and works in partnership with the agency to facilitate collaborative sessions and review deliverables. As a result of the excellent working relationships across the ERP program, Capgemini is able to increase visibility into program status and progress through in-depth assessment of program risks and overall program health.

The IV&V team developed a robust dashboard to provide the ERP leadership team and Program Management Office (PMO) with visibility into the overall health of the program. IV&V evaluations are supported by metrics, observations, program artifacts, and analyses. Graphs, color coding, and other indicators are used to provide greater visibility through visual representation of program data. A dashboard briefing is provided to the senior ERP program leadership on a bi-weekly basis and Capgemini tracks the disposition and status of findings and recommendations.

Requirements Validation
Capgemini's IV&V team performed a comprehensive analysis of requirements, business processes, and process models to understand specific gaps in requirements completeness. We collaborated directly with the Business Process Owners (BPOs) and conducted a requirements workshop to help them understand the Institute of Electrical and Electronics Engineers (IEEE) standard for requirements enabling them to meet all required criteria for requirements completeness, including testability, and to ensure traceability from requirements to design. As a result of the IV&V team's work requirements that were incomplete, ambiguous, and lacking prioritization were complete, traceable, and ready to be tested. The team accelerated the process of requirements

elicitation and finalization and reduced cost and prevented schedule slippage. Capgemini enabled successful completion of the requirements stage gate and entry into design phase and significantly reduced risk to testing and downstream lifecycle phases. In addition, the team established the requirements completeness standard for the program and established a Capability Maturity Model Integration (CMMI) compliant repeatable process.

Program Status Visibility
Capgemini manages check points throughout the ERP lifecycle to promote visibility into program oversight activities and ensure open and objective communication. Any findings of gaps and weaknesses are communicated early to the government and program teams to enable real-time corrective action and decision making. As a result of Capgemini's efforts, the ERP program adheres to quality best practices and industry standards and remains in compliance with federal and agency regulations throughout the first phase of the implementation.

Today, Capgemini continues to facilitate informed decision making and the effective use of governance bodies, such as the change control board. The IV&V team provides the government with assurance of program readiness to transition from one lifecycle phase to the next. The IV&V process is reducing re-work across the program by providing up-front success criteria and enabling more effective risk mitigation to contain cost over spend and schedule delays.

Capgemini provided early evidence of its ability to enhance quality and meet schedule specifications. Prior to the initiation of the IV&V project, every planning deliverable submitted by the System Integrator was rejected. Capgemini quickly scheduled and facilitated working sessions to come to consensus on how to improve quality. The System Integrator received approval to proceed through an important review that had been denied due to perceived shortcomings. Capgemini worked with the government to define a process whereby IV&V provides early support for all program deliverables, resulting in first-time acceptance by the government for deliverables through the first phase of the implementation.

Program Health Dashboards
Capgemini IV&V assesses critical components of the ERP program and incorporates findings and recommendations into program health dashboards. These are then presented to the senior program leadership on a bi-weekly basis. Capgemini provides analyses of schedule activity, task completion and status of critical milestones; updates on program risks and issues, and the status of IV&V findings and recommendations. A clear view of program health and discussions on risk mitigation actions help to reduce the impact to the program's cost, schedule and performance. Capgemini empowers ERP program leadership with early insight into program challenges, process deficiencies and system defects. This supports informed and timely decision making, which has increased the government's ability to deliver the program on-time and on-budget. Capgemini helps the program focus on critical path

activities and accelerate and reduce rework with insight into potential issues and weaknesses up front, not after deliverables and milestones are completed. Capgemini provides a clear and realistic roadmap to address key program gaps and weaknesses.

Capgemini tools drive collaboration and innovation
Capgemini utilized its Rapid Design and Visualization (RDV), TMap test methodology and proprietary Accelerated Solutions Environment (ASE) to drive collaboration and innovation across the ERP program. The use of RDV during the requirements elicitation process accelerated requirements definition and validation through participative design sessions with ERP Business Process Owners. This resulted in rapid system prototyping. Use of the TMap methodology to assess ERP software testing and validate the integrity of the testing and test results provided the government with assurance that the system was ready to be deployed to production. Capgemini conducted an ERP program ASE focused on deployment and release strategy for the system, resulting in a firm strategy for deploying the ERP system to the end users over the coming years.

Capgemini US
Public Sector

Approved by

Nancy Meiers,
Principal, IV&V Practice Lead
Capgemini Government Solutions, LLC

About Capgemini

With more than 125,000 people in 44 countries, Capgemini is one of the world's foremost providers of consulting, technology and outsourcing services. The Group reported 2012 global revenues of USD 13.7 billion.

Together with its clients, Capgemini creates and delivers business and technology solutions that fit their needs and drive the results they want. A deeply multicultural organization, Capgemini has developed its own way of working, the Collaborative Business Experience™, and draws on Rightshore®, its worldwide delivery model.

About Capgemini Government Solutions

Capgemini US Public Sector leverages decades of experience as a leading global provider of consulting, technology and outsourcing services to local, state and federal clients. Capgemini is the experienced alternative that works collaboratively with government organizations to help improve the quality of services delivered to America's citizens. These include mission-critical engagements with key federal clients such as the departments of Defense, Homeland Security, Justice, Agriculture and Treasury, as well as municipalities and states such as, Texas, Ohio, Nevada and Georgia. Our 9,500 US based employees with years of knowledge and experience in this market, and our Government Solutions subsidiary headquartered in Reston, Virginia, solve complex challenges and deliver innovative solutions and services on time and on budget.

Learn more about us at

www.capgemini.com

For more information on this project, please contact:
success.story@capgemini.com