J3 Consulting
We find the WHY

Empowering the USDA's IT Transformation and NRCS Systems Modernization Quality

ABOUT THE CLIENT

USDA

The U.S. Department of Agriculture (USDA) is made up of 29 agencies and offices with nearly 100,000 employees who serve the American people at more than 4,500 locations across the country and abroad. The USDA's Natural Resources Conservation Services (NRCS), part of the Farm Production and Conservation Business Center (FPAC), delivers conservation solutions so agricultural producers can protect natural resources and feed a growing world.

Challenges in a Complex Environment

Government agencies like the USDA are under constant pressure to streamline operations, cut costs, and improve service delivery. Modernization efforts are often complex and require both expert support and specialized guidance. That's where J3 Consulting stepped in.

NRCS sought a partner that could provide robust **System Engineering Technical Assistance (SETA)** services to meet these challenges. They needed a partner who could not only **manage IT system modernization software** quality but also deliver comprehensive solutions across multiple technical disciplines such as project management, systems integration, IT security, and more.
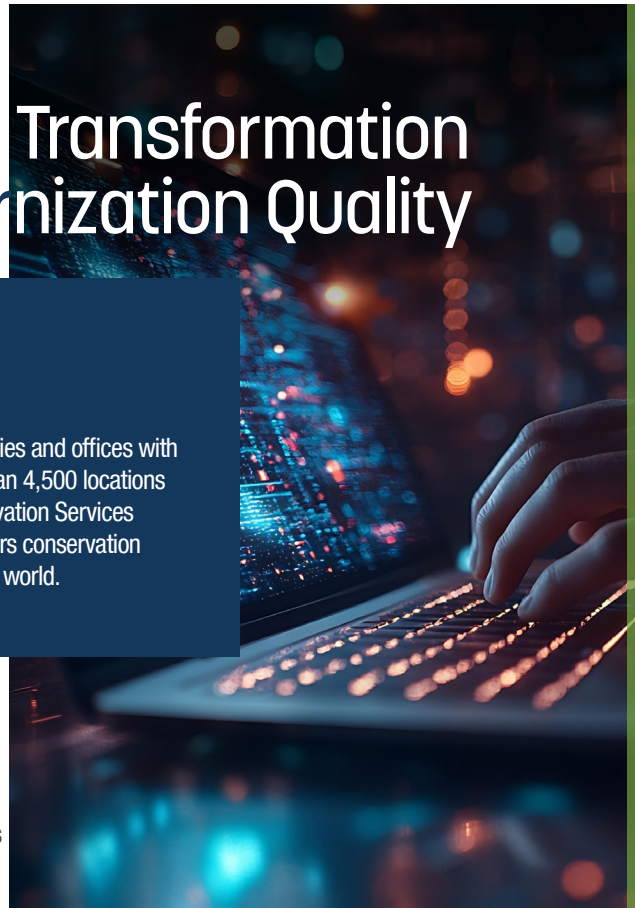
SOLUTION

Tailored Expertise for Software Quality

J3 was chosen for its proven ability to deliver comprehensive SETA services, specifically tailored to NRCS's needs to transiiton from waterfall to principles of the Scales Agile Framework (SAFe). The long standing partnerhsip extended to over 7 years, delivering a combination of SAFe practices, robust data analytics, and proactive project oversight, J3 empowered NRCS leadership to maximize the impact of their IT system modernization efforts by improving software quality and improving contractor business value to NRCS.

APPROACH

J3's approach was multifaceted, encompassing key services such as:

▶ **Performance Management:** J3 monitored contractor execution, including contractor adherence to the NRCS System Development Life Cycle (SDLC), ensuring that all projects worked cohesively toward the overarching vision of the Conservation Delivery System Initiative (CDSI).

▶ **Agile Project Management:** J3's implementation of Agile Performance and Quality Analysis (APQA) allowed for data-driven insights into program progress, ensuring that key performance indicators (KPIs) were tracked and adjustments could be made as necessary. In addition, SETA testing, and code review services, hybrid Agile/Waterfall projects, as well as Scaled Agile projects utilizing the Portfolio SAFe configuration were implemented.

▶ **Independent Verification and Validation (IV&V):** J3 assessed software quality, system integration, and DevOps pipeline maturity, identifying areas for improvement and ensuring quality assurance across all NRCS projects.

▶ **Enhanced Collaboration Tools:** With the adoption of tools like Jira and Confluence, J3 enabled detailed assessments of project artifacts and streamlined communication between contractors and government staff, improving overall project execution.

Innovative Solutions and Strategic Results

A key success factor in the NRCS systems modernization project was J3's focus on data analytics and automation. By implementing advanced metrics, such as Mean Time to Deploy and Mean Time to Release, J3 provided valuable insights into the software development lifecycle, introduced innovative PowerBI Dashboards to manage dependencies between software releases from different suppliers, giving the USDA a clearer view of project progress.

J3's work didn't just stop at software quality—by integrating **Robotic Process Automation (RPA)** and **Quality Assurance Plan (QAP) Analysis**, this resulted in enhanced reporting capabilities and. improved contractor management. J3's data-driven approach also allowed for the creation of predictive models that forecasted project milestones, defect resolution trends, and even the impact of technical debt on overall project performance.

Strengthening Security and Organizational Effectiveness

A critical aspect of the modernization was ensuring the security of NRCS systems through the timely execution of Plan of Actions and Milestones (POA&M). J3's analysts conducted thorough POA&M assessments, utilizing NIST standards to ensure compliance and security across application development environments. By following the **NIST Cybersecurity Framework** and **Zero Trust principles**, J3 provided recommendatons on POA&M priority in alignment with change control processes.

Working with CDSI leadership, best practices were developed aligned with NRCS's goals. This holistic approach to modernization ensured that NRCS was not only modernizing its technology but also building internal capabilities to maintain long-term success.
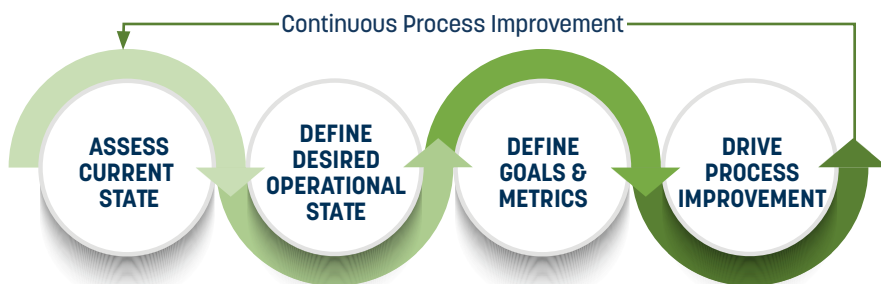
Some of the most significant outcomes include:

► Over 1,500 Pega modules and 1,000 Core Service modules assessed for code quality, ensuring a higher standard of software delivery.

► Automated models that tracked and reported defect severity, enabling better forecasting for upcoming releases.

► Development of Doneness algorithms that improved measurement of Program Increment (PI) and Release progress, enhancing project predictability and transparency.

► Demonstrated integration of Rational Work Agile Items into Microsoft Project to enable Earned Value Management (EVM) Analysis.

► Implemented innovative solutions to track and report on new development and testing / DevOps pipeline. This included implementation of Mean Time to Deploy and Mean Time to Release metrics.

> **J3 created very effective dashboards to deliver complicated information concisely. Contractor created a Project Quality Assessment Dashboard that addresses Release Management, Defect Management, Test Management, PI/Story Management, Code Quality, and Document Quality with overall Project Quality. The information provided by Contractor is easy to digest, and of great benefit to the Government. Overall, the quality of products or services during the reporting period for J3 Consulting, LLC has been Exceptional."** Allen Hunt, Contract Officer, USDA-POD

TEAM J3 OVERALL PROGRAM APPROACH

Continuous Process Improvement

ASSESS CURRENT STATE → **DEFINE DESIRED OPERATIONAL STATE** → **DEFINE GOALS & METRICS** → **DRIVE PROCESS IMPROVEMENT**

BENEFITS

Reduced Risk
Efficient & Consistent Reporting
Greater Transparency
Better Decision Making

OUTCOMES

Cost Savings
Better Project Performance
Improved Product Quality

J3's AGILE SERVICES CAPABILITIES

► Expert Safe Agile Training by Certified Coaches

► 10+ years of average Team experience (Safe Agile)

► 40+ years of industry Agile experience

► Program level Recommendations and Best Practices

► Identifying the anti-patterns at root cause of impediments

► Experienced with managing complex multivendor programs and trains

► Using advanced analytic techniques to Develop Predictive Performance and Quality Metrics

GET IN TOUCH

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