CASE STUDY

Delivering a Large-Scale, Mission Critical Application Using Cutting-Edge Technology, DevOps, Agile, and UX

BUSINESS NEED - Our client used a decade-old system to perform thousands of audits to ensure the reliability and health of the country's economy using a legacy tool. Audits often took months or up to a year. The legacy tool was struggling to keep pace with the increasing volume of audits. The agency wanted to use a system that could automatically synchronize updated information from regulatory changes and the agency's systems of record, and to reduce labor-intensive, manual workarounds. Our client also needed to increase its auditing capacity and improve its business processes and technology systems.

OUR SOLUTION - Pyramid Systems conducted a business process re-engineering analysis, identifying gaps and obsolete process steps, and proposed opportunities for efficiencies. Our team then performed all phases of the design process, including research, analysis, interaction, and visual design. For increased system adoption business users, we led dozens of user experience design (UXD) sessions with 30+ power users from across the nation.

Using our research data, Pyramid led a full-scale, modernization project employing our agile and DevOps approach uniquely tailored for our client. We developed a scalable N-tier, platform agnostic, and cloud-ready tool with an extensible suite of applications that automate various audit processes. Since the agency's workforce regularly travels to perform audits, this tool was designed to support a mobile workforce.

Security was a critical component of the project due to the sensitivity of the data and the users' mobility; our team addressed that challenge in multiple ways. HP Fortify and Resharper were used to enforce secure coding practices. NIST 800-53 and the agency's security standards were incorporated into all phases of the project to ensure FISMA compliance. Additional security features added to the system included multi-factor authentication and end-to-end data encryption. Pyramid innovatively created a decentralized data transfer mechanism for remote sharing and secure collaboration over the internet or client's network to meet the unique needs of the agency's remote workforce.

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To ensure continued success, Pyramid employed Microsoft Team Foundation Server (TFS) as the DevOps model to orchestrate development, delivery, and continued operations and maintenance among 23 contractor teams and intersecting organizations.

RESULTS - Pyramid delivered an innovative, mission-critical, and user-friendly application currently used by 5,800 auditors nationwide. Agency personnel now perform audits in a matter of weeks instead of months. The modernized application improved data access, reporting, and accuracy; eliminated duplicative data to reduce data retrieval times from days to minutes; and significantly increased data security.

As a result of the project, the client adopted the agile and DevOps tools and techniques used by Pyramid as standards and best practices across the agency's IT division. We also built a suite of business intelligence add-ons enabling auditors to more effectively consume, manage, capture, create, share, and protect data on laptops and mobile devices.

We successfully helped multiple agencies modernize their applications to improve mission performance—let us help yours!
Contact us at info@PyramidSystems.com.