IT Modernization at the MCC

A Holistic Approach
Agile, DevSecOps, and Data Analytics at the MCC

The Millennium Challenge Corporation (MCC) is a small federal agency that makes a big impact through foreign aid to developing nations. Like other agencies of their size, they need to make the most of limited resources. This challenge is heightened for IT at the MCC because their mission emphasizes data-driven decision-making to objectively show where and how foreign aid investments should be and are made.

MCC identified that they could generate these insights by improving existing applications to be more user-centric, integrated with each other, and aligned with enterprise strategy. MCC initiated the Digital Services group and brought in TCG to accelerate the agency's work at a lower cost. Working with MCC, TCG has developed:

- MIS: an integrated grants management system used across 34 countries and 50 country programs

- MCC Performance Management System: used to support agency mission and staff performance assessments

- Country Scorecards: a data collection, analysis, visualization, and reporting tool that helps MCC's experts make decisions on foreign aid investments

- MCC's Intranet: a crucial tool for a globally distributed workforce

So how did MCC modernize its operations and accelerate their mission?

Agile Transformation

TCG introduced Agile development practices to the MCC, coaching MCC leaders on Agile best practices, ensuring that Agile adoption resulted in business value, and facilitating organizational buy-in.

TCG leveraged Agile to support key MCC applications and processes, such as Country Selection. Through our Agile framework on this project, we incorporated MCC's domain experts' insights and needs into the design and development of a new, dynamic application. This replaced a laborious, manual process with a streamlined system that automates the updating and reporting of data needed for informed decision making.

Developing Dynamic, Responsive Applications

How MCC selects countries for investment is based on data drawn from the World Bank, International Monetary Fund, and many other sources. The decisions MCC makes are only credible because of the transparency and objectivity that are demonstrated throughout the process. MCC creates scorecards for 81 countries annually. This previously required significant manual intervention to import and clean data, generate static reports for review, and adjust the system (called "Selection") each time new information was loaded or decisions made.

> **MCC Contracting Officer**
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> *"TCG has brought numerous software development teams to MCC that have performed exceptionally. Initially, they were brought to MCC to fix [an] application, which they did successfully by restructuring the codebase, developing a new user interface after conducting a user experience review, and leading MCC's Agile transformation. After this initial success, TCG rebuilt two mission-critical applications for MCC and is continuing to develop these and other applications, as well as implement a data warehouse and analytics program. The TCG-led Agile transformation was very successful and MCC has continued to invest in software development support from TCG to meet critical agency needs."*

TCG moved this process into a dynamic application that performed large-volume data management, improved error-handling, automated data cleaning, eased customization, and enhanced maintainability. Selection 2.0 provides a web-API access point for multiple users, and enables efficient production of Congressional reports and scorecards. Key elements of our Agile approach include:

- **Supporting the Federal Product Owner's** participation in Sprint planning, reviewing goals, and providing continual feedback into development priorities and activities.

- **Ensuring user requirements** match development goals and technical approach through rigorous user testing

- **Quickly adding and prioritizing new requirements** to development when data sources or score calculations change.

- **Rapidly capturing feedback on new functionalities** from users through multiple UAT deployments during the sprint.

The Selection 2.0 application is now dynamic, accurate, and always available, giving MCC leaders the data they need, when they need it, to make informed decisions through a transparent process. This transparency

lends the agency significant credibility in the foreign aid community. For example, MCC is now consistently at the top of the Aid Transparency Index, coming in the top five globally and number 1 in the US. The Scorecards themselves are used by aid organizations across the world to drive their own funding decisions, meaning that MCC's work is exponentially more impactful than before. TCG's Agile approach delivers business value that extends to stakeholders well beyond our immediate clients.

DevSecOps

Like many Federal agencies, responsibilities for development and operations and maintenance at MCC were distributed across different vendors. This slowed down deployment of applications, and the security requirements were not always considered early. Extra effort was needed to keep all the separated parties in the loop.

TCG worked with MCC staff and staff from other vendors to enhance collaboration on the development pipeline, implementing DevSecOps tools and practices such as CI/CD tools, a security vulnerability dashboard, and regular touchpoints with operations and security.

Moreover, this was accomplished without a major overhaul to the existing tech stack. We scaled the pipeline to the needs of the agency, prioritizing high value areas for improvement and integrating near-neighbor technologies on an iterative basis. By repurposing existing IT investments in a more dynamic approach to application development and management, MCC saved time and money while improving customer's experience and satisfaction with the delivered capabilities.

Enabling Data-Driven Decision Making

The MCC relies on high quality data and analytics to make decisions on grants, track the outcomes of grant programs, and ensure that a maximum of funding is available by minimizing operational expenses. The TCG team powers MCC's data-driven decision making in key ways:

- **Centralized grant evaluations**: MCC measures the impact of its programs through evaluations. The Evaluation Pipeline application tracks evaluation status, milestones, risks, and key contract information. The application replaced cumbersome spreadsheets, reduced the opportunity for user error, increased efficiency, and serves as the central database for analysis and reporting on all Evaluation data. Today, all of MCC's evaluation activities are orchestrated through one application that serves stakeholders across the enterprise.

- **Objective economic rate of return data**: The Econ application captures Economic Rate of Return (ERR) and Beneficiary Analysis (BA) program data for each project and activity grouping.

- **Automated progress reporting**: Program indicators provide timely, high-quality data about whether a program is proceeding as planned. The Indicator Tagging application helped users categorize key performance indicators (KPIs) and automate progress reporting. As well as aiding internal analysis, users can add external notes to each indicator, to provide context to the public and help them filter on criteria not available in MCC MIS.

- **A single source for enterprise intelligence and insights**: The Data Warehouse is the central repository of data from across the MCC enterprise, integrated to enable data analysis and reporting. This includes transparency index data, Approved ITTs, Financial Targets, Program Dates, MIS, Threshold, Evaluation, and CLM data.

To ensure that the data from these and other applications is easily accessible to inform decisions, TCG's Data Analytics Team developed a data visualization tool that gives users access to the data via an API endpoint/URL using PowerBI or Excel to build reports and visualizations.

Conclusion

For foreign aid to be effective, agency leaders need up-to-date data, filtered, and formatted in a way that is easy to understand and use. To provide the maximum amount of aid, organizations need to be as efficient as possible. And, to establish trust with stakeholders overseas, they need a high level of transparency. Through our Agile and DevSecOps approach, low-code solutions, and advanced approach to data analytics and visualizations, TCG has supported the MCC in transforming their use of technology for greater efficiencies, transparency, and data-driven decision making.

Work With Us

To learn more about how TCG can support programs at your agency contact,

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