

Client

National Institutes of Health (NIH) National Institute on Aging (NIA)

Overview

National Institute on Aging (NIA) is tasked with understanding what leads to healthy aging and conducting research to understand what leads to disease and disability in aging populations. NIA is one of the 27 Institutes and centers of the National Institutes Of Health (NIH). NIA's mission is to leverage science to understand the effects of aging and promote healthy and active lifestyles as we age. In an effort to fulfill the Institute's mission, the Extramural Division within NIA is responsible for funding research and training activities at universities, hospitals, medical centers, and other public and private organizations nationwide. To meet the needs of the Extramural Division, LCG provided development support on systems for extramural programs providing funding and grants in the areas of research and training. LCG has proven successful in maintaining various grant-related systems, as well as developing new systems to better support information processing, integration and implementation.

Challenge

Each year NIA manages thousands of grant requests for funding. Their Extramural Division needed a system to evaluate the grants at various stages from receipt to award and onto tracking. The old system challenged users with the following:

- Three different monolithic systems were the basis for the old system, making it difficult to manage, update and use,
- It did not cater to all the stages of the grant evaluation process which lead to added manual work using custom Excel spreadsheets across six different internal divisions resulting in data mismatch, inconsistent representations, and long hours spent on consolidating the data from the various data sources,
- The system lacked capabilities to audit user actions to ensure accountability, and
- MS Excel spreadsheets and MS Access were being used leading to unsecured data, data redundancy, versioning, lack of data consistency and integrity, limited data storage capabilities, and limited backup and archiving.

To address these challenges, NIA required an efficient and secure web-based solution for managing the existing Extramural grant funding process providing access to all stakeholders.

Solution

LCG addressed NIA's challenges by developing a Section 508 compliant, web-based solution consisting of a suite of four modules, each focused on a specific phase in the grants management process. This solution is called the Aging Data Administration Management System (ADAMS.Net) and consists of:

- Central Administration System (CAS), an administration portal for all ADAMS applications,
- Coding on Demand System (CODSys) used for coding grants with program class codes (PCCs),
- Intent to Pay (ITP) to provide funding allocations and grant categorization into various pay types such as discretionary, set-aside, etc., and
- Research Portfolio Reporting and Tracking System (NIARPTS) used for assigning research categories to grants and generating reports.

Business Value

LCG enhanced NIA's ability to manage and have greater insight into Extramural Grant funding dollars through all stages of the grant evaluation process. This resulted in greater data accuracy and a streamlined grants management process.



This solution uses the latest .NET technology, integrating with enterprise-level database management systems to provide a unified, modern, user-friendly interface for grants management.

The ADAMS.Net suite of applications incorporates a centralized access page for login into for all 4 modules. It also supports integration with enterprise systems, such as Single Sign-On (SSO) and IMAPC II, to provide a seamless user experience when logging in and interacting with the system. ADAMS.Net enhances the user experience by minimizing the need to deal with the backend complexity of integrating and using data and functionality from other enterprise systems. This allows the users to focus on the business side of the grants management process.

LCG helped streamline the Extramural Grant process by making use of a Service Oriented Architecture (SOA) which provides a secure, efficient way to automate grant coding and management processes. We delivered a modular solution providing users with a phased release of capabilities. To improve the ability to share data, each module was designed using a provider/consumer model. This enables real time data sharing, which in turn helps the Institute better understand the science of the grants. We assured the system was flexible to accommodate user requests without disruption of operations and too reduce the time spent on data collection, representation, and manipulation.

Result

As a result of our development efforts, LCG was awarded the 2008 NIA Director's Award in recognition of its successes in streamlining and improving the grants management process at NIA.

LCG enhanced the NIA's ability to manage and have greater insight into Extramural grant funding dollars throughout all stages of the grant evaluation process. This resulted in more accurate data and streamlined grants management processes. The modular design and reuse of code enabled LCG to develop ADAMS.Net at a lower cost to the NIA and with a quicker turnaround time. The Institute can now view, edit, and report detailed information about grants through a unified interface—all while easily exporting to other formats. Implementation of ADAMS.Net delivers increased efficiency, greater security, ensured integrity, and data consistency to the Extramural Division.

Benefits to the NIA include:

- Real time access to data and a consistent data representation reduced the time spent on creating a funding list from approximately two months to one week.
- Ability to share information centrally allowed provided users to determine whether or not to fund a grant within a matter of days rather than weeks.
- Enforcement of the Institute business rules reduced the number of grants lost in the process and ensured that the system was auditable.
- Ability to generate reports submitted to the Institute's director, NIH director and Congress with the click of a button.
- Ability to track committed funds so that the Institute's finance office has an accurate accounting of funds left over and available for new grant awards.