## Background

A custom billing and accounts receivable system was built for the Office of Grants Administration with the Comptroller's Office in 1999. The system objective was to improve cash flow for the University, eliminate manual processing involved with billing and tracking receivables, and to improve the response time to customers. This system has been in use for the past 16 years with minimal updates to the code base and is currently used by about 15 staff at UMD.

The billing and accounts receivable system has approximately 5,000 active records and processes over $50 million dollars every month. The system shares data with the the research system and financial system. It supports the billing of cost reimbursable contracts and grants, the preparation of financial reports, and the tracking of accounts receivable due to the University for both billed and automatic payment accounts related to contracts and grants.

*"We were delighted at how quickly the team conducted the interviews and allowed users to help guide the process improvements."*

## Client Challenge

The custom built system technology has not been upgraded over time and it currently runs on a single server with limited support. The system was identified as a possible risk because the development language is no longer supported at the University and the system is critical to the University because it processes about $500 million each year. Additionally, the existing research system is currently being upgraded so University Process Innovation was asked to assess the custom tool since it shares data with existing research system and will need to integrate with the new research system.

## UPI Process Approach & Recommendations

The UPI team began this project by reviewing the original project definition and functional specifications for the billing and accounts receivable system. After that, interviews were set up with users that interact with the system, including the Research team that feeds the data into the tool, various system users, and the developer supporting the existing technology. Additional documentation about the data feeds, system functionality, recent system changes, and current challenges were gathered.

The UPI team identified system and process concerns with the billing and account receivable system and provided a process summary, swimlane diagram, existing data flow diagram and a future state data flow diagram. The obvious risks of the outdated technology and reliance on a single server were highlighted early on in the project. Some other key findings were the heavy reliance on manual data manipulation and review due to outdated data feeds using unreliable technology. Additionally, some of the key data elements were not included in any feed and required manual re-entry which introduced additional opportunities for data discrepancies. Legacy processes for account creation required unnecessary steps and the creation of physical files that are no longer needed. In general, the data sharing between the 3 key systems had not been holistically reviewed in over 15 years and that was causing a lot of unnecessary man hours, project risk, and cost to the University.

Recommendations were delivered in three main phases – immediate action items, near term changes, and a future state system overhaul. Immediate changes included changing the flow of the account creation to eliminate duplicate entry, reviewing the policies of manual data reviews which were yielding very limited findings, and stopping the creation of physical files. Near term changes included enhancing and aligning the data feeds to reduce the number of feeds and data being transferred, while also eliminating the need for manual data reviews and duplicate entry. A full assessment of the available systems and tools for billing and accounts receivable at the University with the recommendation to upgrade the full system.

## Results

The project sponsor was unaware of the extent of current data issues with the system, although she did know the technology was outdated and hadn't been upgraded over time. She took immediate action on the short term action items, began a through data assessment to identify necessary changes, and began to streamline legacy processes. The changes quickly streamlined the process and freed up many staff to participate in the strategic work necessary to identify and plan for a new long term solution.

*"We look forward to working with the team on other aspects of research administration in the future."*
- *Denise Clark, Associate Vice President for Research Administration*