



Colorado Government Association of Information Technology

CALL FOR AWARDS OF EXCELLENCE

At the Spring 2018 Conference in Aspen, we will be continuing our annual “**CGAIT AWARDS OF EXCELLENCE**” program that will recognize the annual achievements of member agencies in subject matter where their innovative application of new service delivery techniques and/or leading edge technologies has resulted in improved 1) community relationships 2) internal / external service delivery and/or 3) organizational efficiencies. We are looking for examples of outstanding work by our member organizations and agencies in any of the following categories:

- Providing exceptional customer service to citizens and / or colleagues
- Enhancing public-facing communications and services
- Improving internal operations within your agency

A single overall “**EXCELLENCE**” winner will be chosen by the members of the CGAIT Board and Spring Conference Committee based upon award applications submitted by interested member agencies. The winning agency will be notified prior to the conference and will be extended an opportunity to share their accomplishment in front of the entire CGAIT membership during a special 30 minute session. While it will be up to the winning agency to identify their presenter(s), this session is a great potential opportunity for winning agency staff members to receive recognition for their efforts.

During the Excellence Award winner’s conference presentation session, it is intended that the presenting agency have approximately 20 minutes to share information concerning their specific winning initiative including 1) outlining fundamentals of project intent and particulars 2) resulting benefits recognized to date 3) unique challenges or other considerations associated with project implementation. Additionally, hopefully time is available for interactive audience Q&A.

Submissions (see the response form below) should be sent via email to CGAIT Vice-Chair Scott Lingle at scott.lingle@eaglecounty.us no later than 5:00 pm on Friday, April 13th, 2018.

Category: Providing exceptional customer service to citizens and / or colleagues

Project/Initiative Name: FAST Filing Application Rewrite

Agency Name: City of Westminster

Submitter’s First Name: Lori

Professional Title: Software Engineer

Email Address: lgardner@cityofwestminster.us

Phone Number: 303-658-2055

Public Information Officer (aka Communication Director) Name: Joe Reid

Public Information Officer Email Address: jreid@cityofwestminster.us

Brief Description of the Project/Initiative and its benefits:

Executive Summary *(Please provide an executive summary of project concept and desired outcome suitable for posting on a website. Description should be limited to 300 words):*

We were tasked with rewriting our aging public-facing online sales tax filing and payment application (FAST Filing). While the existing application got the job done, it was created almost 20 years ago using older technologies by a developer who has since retired from the city. Therefore, it was difficult to maintain and enhance with additional features. In addition, the existing application's payment processing was handled in-house, resulting in lost interest revenue and making the city responsible for PCI compliance with credit card payments. The desired outcome was to replace the existing application with a new application that could outsource payment processing, make it user and mobile friendly, provide additional payment options and features to taxpayers, utilize newer technologies that are more secure, enhance the ability to maintain and improve, provide increased sales tax revenue, match the city's new branding, and integrate directly with our in-house developed Sales Tax application.

Project Duration *(How long did the project take to complete from concepts through implementation? How long has the solution been in use?):*

The application rewrite from conception through implementation took approximately two years, working on the project simultaneously with competing priorities. Release Candidate 1 of the application went live on March 1st, 2018. As of April 12th, 2018, more than 1400 returns totaling over \$2,600,000 in sales tax revenue have been filed through the new application. Release Candidate 2, currently slated to go live in the fourth quarter of 2018, will include an administration portal to provide Sales Tax staff access to backend functionality. Further development is ongoing and we will continue to add features to the application.

Problem Set *(What problem were you trying to solve? Describe the relevant issue the project or solution was designed to address. Description should be limited to 600 words):*

As mentioned in the Executive Summary above, the majority of the problems we were attempting to solve were directly attributed to the fact that the application we were rewriting was developed 20 years ago with the limited technologies that were available at that time. These outdated technologies were not mobile friendly and were less stable, less secure and difficult to maintain, enhance and troubleshoot. Because the original application relied upon nightly scheduled tasks to transfer data between the application and our sales tax system, it was a day behind our sales tax system. This timing problem made it difficult to assist taxpayers with issues on the same day. The reliance on scheduled tasks also introduced multiple points of failure. In addition, the lack of true integration necessitated that duplicate business logic be contained in both the application and the sales tax system, which contributed to the already present difficulties enhancing, maintaining and troubleshooting the application, and it increased the potential to introduce bugs when making changes.

The original application only offered the tax payer the option to pay via ACH debit and payment processing was handled in-house. As a service to our taxpayers, we wanted to be able

to offer them more payment options. Handling payment processing in-house placed the burden of PCI compliance on the city. In-house payment processing also led to lost interest revenue. Since tax payments for returns filed online were debited from the taxpayers account one business day following the due date, whenever the settlement/payment date fell on a Friday (a non-working day for city employees) or on a city, but non-banking holiday, the settlement did not occur until the next city working day, resulting in lost interest revenue for the city.

Lastly, the city recently hired an outside consultant to revamp the city's branding and color scheme, and incorporated these into the city's newly redesigned public website. The original application did not align with this new branding. The City desired all public-facing web applications have a cohesive appearance with our new branding and public website.

Project Implementation Details *(What did you actually do? Describe the project or solution that was implemented. Include hardware/software that may have been involved. Description should be limited to 600 words.):*

Our initial step was to form a FAST Filing rewrite team, which was comprised of key members in the IT and Sales Tax departments. This group met regularly to establish requirements for the new application and to identify and prioritize the functionality to be included in Release Candidate 1. This group also completed preliminary testing of the application. This group still meets and will continue to meet regularly to discuss issues and prioritize future development tasks.

Rocket Software, the vendor for our sales tax system platform, offers a host of toolsets to assist with integration. Once we had a general idea of the desired functionality, we reached out to Rocket to assist in determining the tools that would provide us with an integrated, robust and stable solution that was easy to develop, maintain, enhance and troubleshoot. After several discussions and demonstrations with their superb technical staff, we elected to use their U2 RESTful Web Services Developer tool, which allowed us to use existing code/subroutines to create RESTful web services the new application would consume to get data from and write data to our sales tax system. We also purchased connection pooling licenses from Rocket so that in the event the number of users accessing the new application at same time exceeded our connection license limit, the request would be queued instead of rejected, and therefore transparent to the user.

Next, because we were satisfied with their product and service, the team decided to piggyback on a contract already in place with Paymentus, a 3rd party payment processor currently in use by the city to allow residents to make online utility bill payments. The rewrite team worked closely with Paymentus to define requirements, integrate the new application with their payment processing system, establish back end reconciliation processes, and perform user acceptance testing in a development environment provided by Paymentus. Paymentus also trained city staff to use their Payment Dashboard, which allows authorized staff to view real time activity, cancel payments and download reports for reconciliation.

Lastly, the team created a test plan and performed initial application testing. After correcting issues discovered during this initial testing, we reached out to city employees to form a testing group comprised of members that had varying degrees of exposure to the previous application and the online sales tax filing process. Issues discovered were corrected and re-tested prior to launch. Although we were confident in the application, due to the fact that we were dealing with a complete overhaul and several new technologies and integrations, the team was pleased that the launch of the application went more smoothly than expected with only a few minor issues. The testing group was instrumental in the successful launch and our ability to release an intuitive and error free product for our taxpayers.

The application runs on an existing, public-facing server running Windows Server and IIS as the web server. The new application was written in ASP.NET, utilizing the Bootstrap framework for the front end and Microsoft SQL server for the back end database. The application is integrated with our in-house developed sales tax system running on the Universe U2 platform installed on a Windows Server. Rocket's RESTful Web Services Developer was used to create the RESTful web services consumed by the new application.

Project Benefits *(What was the outcome? Describe the benefits realized as a result of completing the project. How far along are you at this point towards fully realizing intended benefits at this time (scale of 0% - 100%)? Description should be limited to 600 words):*

Although we are submitting this project under the category of Providing exceptional customer service to citizens and / or colleagues, it could also easily fit under the Enhancing public-facing communications and services and Improving internal operations within your agency categories as the new application provides improved customer service to our taxpayers and greatly improved and simplified internal operations related to online sales tax filing and payment.

Utilizing **newer technologies** allowed us to provide to our taxpayers a **mobile friendly** solution to file and pay their sales tax that is drastically easier to maintain, enhance and troubleshoot. We are in a better position to enhance the application to respond to taxpayers' needs and troubleshoot any issues that occur, minimizing frustration for both the taxpayer's and Sales Tax staff. In addition, **better error handling** allows us to capture backend errors that might indicate a minor issue the taxpayer is not even aware occurred. We can reach out to them to resolve any issues if necessary, providing **better customer service**. The newer technologies also provide a **more secure and stable** solution to our taxpayers.

The largest realized benefits came from integrating the new application with our sales tax system. The previous application relied on scheduled tasks to nightly generate text files that moved data from the FAST filing database to the sales tax system where the data was processed and then written back down to the FAST filing database. While this process worked for many years, it resulted in the FAST Filing application being a day behind the sales tax system. This disconnect sometimes delayed addressing issues. This process also required business rules and logic to be duplicated in the FAST filing application and the sales tax application. Due to the integration, the new application provides real time data, eliminated scheduled tasks, removed

code duplication, and utilized existing business logic in the sales tax application. The end result is a system with **reduced points of failure** that is easier to maintain, enhance and troubleshoot.

Partnering with Paymentus, our 3rd party payment processor, allowed us to not only achieve our goal to provide **more payment options** for our taxpayers, but provided additional benefits as well. The city will realize **increased interest revenue** because our payment provider has the staffing capabilities to settle payments when the settlement/payment date occurs on a date that city employees are not scheduled to work. It also **transfers responsibility for PCI compliance** to Paymentus, who, being in the payment business has the expertise and is better equipped to meet these requirements. Their handling of the bank submittal also **freed up time** previously spent processing payments by our Sales Tax staff.

A benefit that wasn't anticipated at conception was the opportunity to align the application's look and feel with the city's new branding and color scheme. This allowed us to provide a **cohesive appearance** with the new branding and the city's recently redesigned public website.

Even given all of the realized benefits listed above, we have just scratched the surface towards fully realizing the benefits of the application rewrite. We plan to continue adding features that enhance the online tax filing experience for our taxpayers and provide increased internal efficiencies well into the future.

Partnerships *(Please elaborate on any internal or external partnerships were involved or developed during the course of project implementation):*

Internally, the City's Information Technology (IT) department partnered with staff members from the City's Sales Tax division to form the FAST Filing rewrite team. The Sales Tax staff members were key in establishing requirements, providing the necessary business logic, outlining processes, conveying the needs of our taxpayers (the end users), and testing the application. Externally, the rewrite team partnered with both Rocket Software, our in-house developed sales tax system platform vendor and Paymentus, a 3rd party payment provider. The team worked closely with Rocket Software's technical staff to determine the appropriate tools to provide a stable, robust solution that would allow the new application to integrate seamlessly with our sales tax system while reusing existing code whenever possible. In addition, the team worked closely with Paymentus to define requirements, integrate the new application with their payment processing system, establish back end reconciliation processes, and perform user acceptance testing.

References *(Please provide a third-party reference who can speak from direct experience about the benefits of the project or system. Citations to any available publicly accessible information such as web sites or news releases would be great):*

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Because our taxpayers are the application's users and confidentiality provisions preclude us from identifying individual taxpayer's methods of filing, we are unable to provide relevant references among our external customer base.

The application can be accessed with the following URL:
<https://edgeapps.cityofwestminster.us/FASTFiling/Logon.aspx>