



CITY OF PORTLAND INNOVATION PROGRAM

PROJECT STATUS SUMMARY REPORT

Fiscal Year Funding Provided: 2013-2014

Background

In the spring of 2013, the Portland City Council voted to approve the Innovation Fund, an initiative to designate \$1 million in Special Appropriation funds to invest in some of the City's most promising innovative ideas. That fall, Council appointed five distinguished members of the community to serve as the Innovation Task Force, which would oversee the project recommendation process.

The Task Force met on four occasions, discussed the concept of innovation, and arrived at the criteria by which they should recommend project proposals to Council.

In March of 2014, the Task Force narrowed down the 23 proposals initially received to the seven it found most promising, and recommended them to Council for funding through the Innovation Fund.

Language from Resolution 37060 as amended, presented to Council on March 12, 2014, codified Council's intent to fund the following projects:

NOW, THEREFORE, BE IT RESOLVED, that Council intends to appropriate \$871,000 in one-time funding in the FY 2013-14 Spring Budget Monitoring Process to the bureaus, projects and amounts, as follows:

- *Portland Fire and Rescue, Pulse Point, \$108,000*
- *Portland Housing Bureau, XML Data Sharing, \$48,000*
- *Office of Management and Finance, Revenue Tax Information Exchange, \$295,000*
- *Portland Development Commission, Early Adopter Program, \$80,000*
- *Bureau of Planning and Sustainability, Updated LiDAR Data, \$90,000*
- *Bureau of Transportation, Capital Construction Coordination, \$250,000*

Per Resolution 37060 as amended, the bureaus receiving funding are required to submit reports for each project, covering project status, timeline updates, progress against milestones, expenditures to date, and post-implementation requirements. This project summary report contains status reports for the six projects funded in fiscal year 2013-14 that went forward to implementation.

Upon conclusion of the project, bureaus will submit a close-out report documenting the actual budget used for the project and project outcomes, both positive and negative. The report will highlight the lessons learned and the applicability of the project outcomes to other areas of the City.

In the inaugural year of the Innovation Fund, the process to approve and fund projects included a partnership between Portland State University (PSU) Center for Public Service and the City through the City Budget Office. The established intergovernmental agreement (City Contract #30003764) was for up to \$60,000. This partnership was to ensure the effective implementation of these projects, but also put the projects through post-implementation evaluations and performance assessments. Bureaus receiving funding were expected to collaborate with PSU's team to improve proposals and identify new opportunities for innovation, with the goal of creating a culture in our City government that values creative solutions to challenging problems.

The PSU contract concluded with a workshop for City elected officials, bureau directors and other leaders in September 2014. The Innovation Fund management then transferred to the Office of Management and Finance (OMF). The OMF Business Operations Division prepared this report and is conducting FY 2014-15 Innovation Fund proposal and project activities.

Innovation Fund Purpose

The fiscal year 2013-14 Innovation Fund goals are threefold:

1. Create efficiencies in how the City does business
2. Encourage bureau leaders to think creatively and bring forth good ideas
3. Better serve Portland residents

The opportunity the Innovation Fund provides is meant to challenge the City to think creatively, take risks, and identify solutions that fall outside of “business as usual.” The City has limited resources and many needs, but investing in innovative ideas will lead to long-term success as managers and employees are encouraged to cultivate a culture that applies innovative thinking to both routine obstacles and large challenges.

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PulsePoint Mobile Application

Project Lead	Merrill Gonterman, Portland Fire & Rescue (PF&R) Special Operations
Lead Bureau	Portland Fire & Rescue
Key Partners & Collaborators	Bureau of Technology Services (BTS), Bureau of Emergency Communication (BOEC)
Project Sponsors	None

Project Finances

Allocated:	\$108,000
Expenditures to-date:	\$341.00

Project Summary

This project is the implementation of a mobile application (app) called PulsePoint, intended use by those trained in CPR. When the app is activated, the user will be alerted of situations that require CPR intervention when the user is within 300 feet of the 911 emergency location.

The project has had challenges. Originally, the plan was to have the PulsePoint app access information directly from the computer-aided dispatch system (CAD) instead of from a server, thus saving the City the cost of a new server (~\$15,000 upfront and \$7,100 annually). The PulsePoint vendor, FirstOnScene, assured the project team that the draw on the CAD system would be minimal and would not slow down its operation. Obviously slowing down the speed at which the dispatch computer operates would not be acceptable.

Fire made it clear to the FirstOnScene that slowdowns would not be acceptable. FirstOnScene was asked to include a built-in monitor for the application to pause PulsePoint if a slowdown in CAD began. PulsePoint would then resume once CAD was back at normal operation. As PulsePoint began running on the test CAD system, there was a significant draw that resulted in a slowdown. Ultimately, BOEC, Versaterra (designer of CAD), PF&R, and BTS were unconvinced that PulsePoint could operate directly with CAD without the potential for slowdowns existing.

As a result, the project team decided its best option was to purchase a server to act as a buffer between CAD and the PulsePoint app. CAD would feed information to the server, where PulsePoint could access it, while PulsePoint could not penetrate beyond the server, thus eliminating its influence on CAD speeds.

On November 7, 2014 the project team had a phone conference with all the different teams that would be needed to build and implement a new server between PulsePoint and CAD. The server was set up and made ready for the lead programmer, who would be available by the middle of December to write final code establishing a link between PulsePoint and CAD. Nearly half of the programming and components are in place. Once the programmer is finished setting up the server, the "go live" process is anticipated to be quick.

Activities for the PulsePoint project were delayed from August 2014 to October 2014 by the implementation of a new version of CAD. PulsePoint testing started and stopped on October 20th. On November 7th the project team had a phone conference with all the different teams needed to build and implement a new server and get PulsePoint the necessary access. BOEC is in the process of upgrading their records management system that is tied to CAD. That project makes the City programmer needed to write the code for PulsePoint unavailable until December 12, 2014. The new server is in process of being set up and when the programmer is available, it should be in place. Because the testing process with PulsePoint had already started, nearly half of the programming and components are already in place. Once the new server and programming are done, go live should be the end of March 2015.

Successes & Lessons Learned

Projects involving multiple bureaus need to have an in-depth discussion about all known details before approving and embarking on said project.

Next Steps

The next steps for PulsePoint implementation involve finalizing the communication of the application with the CAD information. A considerable amount of work has taken place since November 1st by PF&R, BTS, FirstOnScene and BOEC, to create an environment that can easily and securely access the required Cardiac Event CAD Data and transmit it to PulsePoint in a timely manner. With testing finalized and performance measures validated, migration to production can be expedited. The following are the anticipated timelines for project completion:

1. **January, 2015**
 - Complete the build of a dedicated PulsePoint server (PFBAPP2) located in the BOEC DMZ for secure access
 - Test and validate PulsePoint response under new server to ensure communication within agreed upon specifications
2. **February, 2015**
 - Migrate PulsePoint to production by taking existing server installation and test using live data
 - PF&R will then execute coordinated communication to public regarding new feature, function and purpose of the capability
3. **March, 2015**
 - Pulse Point in full operation under established relationship and FirstOnScene conducting full support

Comments

None

XML Data Sharing Pilot Program

Project Lead	Antoinette Pietka, Portland Housing Bureau (PHB)
Lead Bureau	Portland Housing Bureau
Key Partners & Collaborators	Impact Northwest, Cascade Property Management, Affinity Property Management, Income Property Management
Project Sponsors	Leslie Goodlow, Traci Manning

Project Finances

Allocated:	\$48,000
Expenditures to-date:	\$40,000

Project Summary

The goal of this project was to develop and pilot an XML data sharing program that permitted Bureau partners to export data from their own internal information management systems and upload data into PHB databases. The intent of the project was to greatly reduce the data entry burden of PHB partnering agencies while improving the quality and amount of data received by PHB, and ultimately providing better program performance information to guide decision-making.

The project focused on two groups of PHB partners. Property management companies that manage PHB regulated housing are required to regularly report extensive income and demographic information on the residents of affordable housing. Before the implementation of the XML data sharing pilot program, these agencies were reporting information to PHB in one source format (a Microsoft Excel spreadsheet) as well as hand-entering tenant data into a PHB web-based database. The pilot program created an XML tool to map the Excel spreadsheet data into a prescribed XML schema. PHB and agency users are now able to automatically upload the mapped data into PHB's web-based database using the vendor's XML upload tool. This phase of the pilot project is complete and has eliminated hundreds of hours of duplicate data entry by the many property management companies that currently report to PHB.

Non-profit organizations that provide homeless services are the second group of partnering agencies targeted by the XML data sharing pilot program. This phase of the data pilot project is currently underway and nearing completion. PHB has partnered with Impact Northwest, a non-profit organization providing housing and homeless services in Multnomah County. PHB is working with a programmer to map Impact Northwest's source data to a prescribed XML schema and then upload data at agreed upon intervals using the vendor XML upload tool. It is expected that this tool will eliminate the need for long hours of staff training as well as relieve the data entry burden currently placed on Impact Northwest. This phase of the XML data sharing project is also scalable and the process developed with Impact Northwest can be used to deploy XML data sharing with other PHB non-profit partners.

Successes & Lessons Learned

In large part, this innovation project has been successful because we started small — one data source at a time — and developed processes and tools that could quickly scale up and be used with multiple agencies. Starting small allowed us to learn from our mistakes early on, and gave us time to learn and adjust the project to achieve our goals.

While XML is a great boon to public and private agencies needing to share data across software environments, PHB learned that it is not without its challenges. PHB has found that someone — PHB staff, or other standard-setter — must reconcile the differences between data sources and the destination web-based databases in order for data to be shared. Data reconciliation needs to overcome possible technical challenges as well as differences

in semantics. In the two pilot groups we discovered many opportunities for agencies to use different formats and terms to describe the same attributes. Staff have worked as integrators to determine if it is possible to use a particular attribute for a particular purpose.

These challenges, while serious, have not been great enough to outweigh the benefits of implementing XML data sharing. We have been astounded at the efficiencies gained through the XML upload tool. Hundreds of hours of duplicate data entry have been eliminated. For the bureau, an unexpected benefit of the pilot program is that more efficient data collection tools free up staff time and capacity for data analysis and reporting.

Next Steps

The next steps for the remainder of fiscal year 2014-15 are to:

1. Complete the data mapping and testing process with Impact Northwest, formalize their data upload process, and evaluate the data sharing pilot project's overall performance and potential for scalability. PHB anticipates that their work with Impact Northwest will be complete in the spring of 2015.
2. After completion of this final phase of the project the bureau will evaluate the pilot project against its original proposed outcome of improving data quality and completeness by a minimum of 25% for each participating agency.

Comments

PHB greatly appreciates the opportunity to participate in the Mayor's Innovation Fund. The pilot project is succeeding and has allowed partners to easily upload data into PHB systems, while eliminating hours of cumbersome data entry. The bureau has submitted a second innovation project proposal, intended to build on the successes of this project. The proposed project, "Data Sharing with Faith-Based Nonprofits to End Homelessness," will couple the specialized care and commitment provided by faith-based organizations serving the homeless with City services and housing resources.

Revenue Tax Information Exchange

Project Lead	Jennifer McFarland, IRS Liaison, Bureau of Revenue & Financial Services (BRFS)
Lead Bureau	Bureau of Revenue & Financial Services (BRFS), Revenue Division
Key Partners & Collaborators	IRS, Bureau of Technology Services (BTS)
Project Sponsors	Thomas Lannom, Revenue Division Director, Terri Williams, Deputy Director

Project Finances

Allocated:	\$295,000
Expenditures to-date:	\$165,707

Project Summary

The purpose of the Revenue Tax Information Exchange project is to enter into a data exchange agreement with the IRS, creating an IRS Data Exchange Program which will administer compliance with IRS regulations stipulated in the agreement. Having an information exchange with the IRS will provide the Bureau of Revenue & Financial Services, Revenue Division (Revenue) with local taxpayer information, assisting in the administration and collection of local income taxes. The three primary benefits expected from this project are as follows:

1. A substantial reduction in tax filing burden
2. A significant increase in compliance with all local income taxes, and
3. A reduction of Revenue administrative burden

The IRS Governmental Liaison Data Exchange Program (GLDEP) requirements are detailed in IRS Publication 1075, the Internal Revenue Code, the Internal Revenue Manual and several National Institute of Standards and Technology (NIST) documents. Entry into the program required the Revenue Division and IRS to reach agreement on three documents:

1. Safeguards Security Report (SSR)
2. Basic Agreement
3. GLDEP Need and Use Justification

Revenue achieved the first milestone – entry in GLDEP – in August 2014, positioning Revenue to receive IRS data beginning in February 2015, the earliest date allowed by the IRS. Initial financial results of Revenue's 2015 IRS data exchange agreement will be realized as early as April 2015, and continue well into FY 2015-2016. Revenue believes that in addition to substantial one-time business income tax revenues, increased compliance of accounts associated with IRS data will result in ongoing revenues between \$1.8 and \$4.5 million.

BTS has been a key partner throughout the process. The IRS mandates that data is received electronically in an environment that meets NIST security controls. The SSR requires technological expertise specific to the City's environment, and BTS provided Revenue with a team of experts to develop and document the technological specifications to ensure the environment is IRS-compliant.

Currently, Revenue and BTS are finalizing several project areas:

1. Division/BTS Service Level Agreement for IRS support services
2. Configuration baselines and supporting documentation
3. Procedures to align with businesses processes
4. Trainings for authorized personnel detailing IRS policies and procedures

Revenue has extended the project timeline for data processing systems to ensure it can achieve the next milestone – receiving IRS data in February 2015. Extending the deadline gives Revenue more time to develop an application to process and store data while also granting BTS more time to finalize the hardware and software that will house the application.

It is expected the project will finish implementation and transition into ongoing operations in April 2015. Revenue and BTS have submitted a budget proposal for future funding.

Successes & Lessons Learned

Project

The project realized its first major success on May 29, 2014, with the successful submission of the IRS SSR, a nearly 300-page document with supporting policies detailing how Revenue and its key service providers (e.g., BTS) intend to meet IRS compliance requirements. The feedback from the IRS is that Revenue's report was one of the most detailed and complete SSRs received by the IRS. As a result, the IRS accepted the SSR as certification that Revenue would adequately protect federal tax information a full month earlier than expected. Revenue moved through the final IRS GLDEP requirements, including reaching agreement on how Revenue and the IRS will work together, before the August 31, 2014 deadline for entry into the 2015 GLDEP.

Early project planning successes – particularly while drafting the SSR – created several learning opportunities for Revenue and BTS. Seeking compliant approaches to meet IRS requirements necessitated comprehensive reviews of division and BTS policies and procedures. Additionally, Revenue surveyed other jurisdictions, seeking advice on how to achieve IRS compliance. These efforts served to not only reinforce the City's tax administration and technology approaches but also provided an array of ideas and options for Revenue and BTS to consider in the future.

When project implementation began on June 2, 2014, Revenue and BTS quickly realized the complexities of complying with both IRS requirements and City policies. After the project transitioned from the theoretical SSR writing phase and into the nuts-and-bolts of following City best practices for project implementation, Revenue and BTS realized that some of its earlier assumptions were incorrect and that both organizations needed to collaboratively adapt to ensure project success. Revenue and BTS believe that the changes made in approaches and support structures since the original SSR submittal have strengthened Revenue's IRS compliance – now and in the future. Revenue and BTS are continuing to learn from each other and fostering a relationship that will lead to a successful February 2015 launch with many opportunities to optimize approaches in the future.

Innovation

On the face of it, entering into a data exchange with the IRS is not innovative – several federal, state and local entities have longstanding GLDEP agreements already in place; however, for Portland businesses and citizens affected by Revenue's tax administration services, Revenue's IRS data exchange agreement provides several opportunities for innovation¹.

1. Revenue is currently implementing strategies to innovate its service delivery, including approaches that will result in a reduction in the tax filing burden for local taxpayers. Revenue and BTS undertook a full policy and procedure review, and augmented by continual lessons learned throughout the implementation process, this review has resulted in several process improvements and policy innovations.
2. This fall, Revenue updated its access policy and procedures by installing iPads at the front and back doors to make it easier for guests to sign in and out. Customer feedback has been very positive and these procedures will extend to the IRS Data Exchange Program.
3. In 2015, Revenue will begin offering online training for the IRS Data Exchange Program using CityLearner, which will streamline staff time and modernize how Revenue meets IRS training monitoring requirements.

¹ Use of the terms service delivery innovation, administrative innovation, policy innovation, and systemic innovation were taken from the "City of Portland Innovation Fund: Innovation Definition and FAQ" handout.

4. Implementation of the IRS Data Exchange Program coincided with BTS' Citywide Office 365 rollout. These technological enhancements, especially Lync and One Note, generated systemic innovations as Revenue and BTS now have more efficient ways to meet and share documents throughout project implementation.

Revenue and BTS are continually learning how to leverage existing technologies in innovative ways to meet IRS requirements. One of the early lessons learned by Revenue and BTS is that the IRS will not provide guidance on business processes or specific technology tools agencies "should" use to meet IRS requirements. Additionally, it can take weeks or months to get IRS assistance, even if the question is properly submitted to the correct office. Developing a technology solution in this heavily restricted environment presented many challenges for the project implementation team, particularly around scheduling work that has outstanding IRS questions or tasks requiring IRS action. The Revenue Division learned that deliverables requiring IRS involvement need a protracted timeline to ensure federal partners have time to meet their administrative procedures.

Next Steps

January 2015

- Completing trainings and access agreements with all employees, service providers and vendors.
- Authorizing systems and security associated with receiving IRS data extracts are compliant and ready to be deployed.

February 2015

- Receiving monthly IRS data extracts (ongoing).
 - Note: Annual and quarterly extracts are expected to arrive in FY 2015-2016.

March 2015

- Finalizing information system authorizations.
- Processing data.
- Developing online training program for IRS Data Exchange.

April 2015

- Initiating taxpayer contact based on data processing (ongoing).
- Realizing program results when Revenue begins receiving taxpayer information (ongoing).
- Reviewing and updating all IRS-related business processes, policies and procedures.

May 2015

- Preparing IRS Enrollment Year 2016 documentation (e.g., Safeguards Security Report, Governmental Liaison Data Exchange Program enrollment forms).

June 2015

- Submitting 2016 Safeguards Security Report and enrollment forms to the IRS.

Comments

Revenue would like to thank the Oregon Department of Revenue (DOR) for their ongoing assistance and advice throughout the implementation process. DOR employees Yan Kailuweit, Herman Davis and Doris Ryan-Poe provided key guidance to help Revenue complete the SSR and interpret IRS regulations. Revenue also wishes to thank the following municipalities for participating in the IRS best practices survey: Kansas City (MO), Cincinnati, Cleveland, Lexington and Louisville/Jefferson County; survey feedback was invaluable in crafting a compliant program on a tight deadline.

Revenue has also gained invaluable information by joining the Federation of Tax Administrators (FTA). FTA is free for cities to join. This organization has a fantastic relationship with the IRS and provides listservs and calls for cities and states to connect with IRS offices, including the Office of Safeguards and Data Services. FTA also holds several conferences throughout the year, including the FTA IRS Symposium, which provided invaluable contacts and information to assist Revenue and BTS with developing the IRS Data Exchange Program.

Early Adopter Program

Project Lead	Amy Nagy & Jared Wiener, Portland Development Commission (PDC)
Lead Bureau	Portland Development Commission (PDC)
Key Partners & Collaborators	Bureau of Environmental Services (BES), Bureau of Transportation (PBOT), Bureau of Planning & Sustainability (BPS), Bureau of Revenue & Financial Services (BRFS) - Office for Community Technology, Mayor's Office, Office of Management & Finance (OMF), Bureau of Technology of Services (BTS)
Project Sponsors	Patrick Quinton, Executive Director

Project Finances

Allocated:	\$80,000
Expenditures to-date:	\$20,533 (\$48,581.90 encumbered)

Project Summary

The Early Adopter Program aims to identify private sector-sourced solutions that enable City government to foster innovation and create greater efficiencies in its service delivery to residents and businesses. Portland's culture of public-private partnerships has provided mutual gain for both sectors including strengthening the local economy. PDC's proposal to the Innovation Fund outlined three primary activities that PDC would undertake to develop the program. The following provides a description of intent as well as the current status for each activity.

1. **Develop a platform by identifying current city innovation activities:** The platform would be a tool to facilitate an informal exchange between city bureaus and local companies on project opportunities and solution offerings.
 - a. PDC has entered into a contract with a local company, Switchboard, to develop an online platform to connect the private sector with City of Portland opportunities. It is currently in a private beta test and populated with sample problem statements.
2. **Convene an Advisory Committee of City bureau staff:** The advisory committee will discuss Operations & Maintenance and capital needs, opportunities, challenges, and best practices.
 - a. PDC convened monthly meetings that were attended by six other bureaus and the Mayor's Office. Key activities from these meetings include:
 - i. Demonstrating the early adopter model via real life case studies including Lucid Energy / City of Portland and Globe Sherpa / TriMet.
 - ii. Identification of bureau problem statements that could be solved with a private sector product or service.
 - iii. Testing the Switchboard tool by posting sample problem statements on the platform.
 - iv. Discussing existing barriers within bureaus that prevent staff's ability to pursue innovative strategies.
 - v. Identification of two bureaus that are currently best positioned to pursue projects.
3. **Review known local technology products and services:** PDC served as a conduit to various industry clusters and identified the software and clean tech industries as being key targets to partner with City bureaus. PDC engaged with ten private sector companies or individuals, and executed on two project partnerships to benefit PDC and the company. Following is a brief description of the Early Adopter partnerships formed:
 - a. PDC entered into a contract with Switchboard to develop the technology solution for the Early Adopter program. Switchboard developed a tool that lets users ask for what they need and

offer what you have within a trusted community. The solution met PDC's standards and came in at less than half the initial budget.

- b. PDC made its procurement data more open and accessible so the public facing information could be easily used by third parties. As a result the developer behind <http://www.pdxprocurementsearch.com/> (an aggregator of local procurement opportunities) is better able to call upon PDC's data.

In addition to the three primary activities, PDC began to identify ways in which 'early adopter opportunities' could be identified and leveraged including matchmaking between a company and bureau as well as through partnership opportunities such as Intergovernmental Agreements (IGAs). Following are two examples of those strategies:

1. **Matchmaking:** Introduced PBOT to a concept that has the potential to significantly lower the costs and increase the data gathered from bike counters.
 - a. This is an especially usual technique to facilitate these interactions. The Bureau Advisory Board provided valuable feedback on this point and as a result we have pivoted our focus from this program primarily relying on online communication to creating more face-to-face opportunities between the public and private sector.

2. **IGA:** PDC entered into an IGA with PBOT to use the early adopter program to address five challenges within the bureau.

PDC laid out an aggressive timeline in its Innovation Fund proposal. After gathering input from the Advisory Committee, it was clear that in order to deliver a complete program the timeline would need to be stretched beyond the single calendar year.

PDC continues to work on two of the project milestones: convene industry for input and the public launch of the program. PDC is hosting an event for private sector firms to introduce the program and online platform in early January 2015. The launch date is set for late February/early March 2015.

Successes & Lessons Learned

Successes

- Convened and maintained an Advisory Board consisting of six other city bureaus and the Mayor's office.
- Developed an online platform to push out city bureau problem statements while giving private sector firms an opportunity to respond with service and product solutions.
- Developed two projects that are either in or moving toward testing phase.
- Established five new bureau-industry discussions that otherwise would not have occurred.
- Came in under budget.

Lessons Learned

- City staff is in a good position to provide problem statements ripe for private sector solutions. However, a number of barriers preclude them from seizing opportunities including: empowerment, time, and budget.
- Bureaus are accustomed to purchasing products and services needed. The concept of meeting with members of the private sector to weigh in on problem-solving strategies is not widely practiced and would likely require a significant change in bureau culture. Consulting with the private sector before moving forward with purchasing can have positive impacts on timeline, costs, and quality.
- While city staff indicated interested in pursuing this alternative approach where appropriate, they cited inflexibility of staff work plans, budget authority, and decision-making power as barriers.
- The City has significant opportunities to leverage its assets and realize financial return should staff be allowed to pursue avenues for activating vacant or under-utilized sites.
- The City has a number of redundancies including conflicting infrastructure schedules and overlapping services that if streamlined via an early adopter intervention, could lower costs, increase efficiencies, and improve service delivery.

Next Steps

The Early Adopter pilot has revealed that there is a critical need for this type of program within the City of Portland. During the past nine months, PDC has uncovered numerous opportunities for collaboration between the bureaus and private sector firms. It will continue to pursue activities under this program beyond the timeline of the Innovation Fund. Key next steps identified are listed below:

- Convene private sector so the program is positioned to meet their needs
- Continue to convene the Advisory Committee and engage public sector partners as opportunities arise
- Carry out the scope of work in the PDC/PBOT IGA that includes identifying five potential challenges to present to the private sector
- Finalize the online Switchboard platform and curate problem statements
- Launch the platform for public use
- Promote successes
- Evaluate challenges and continue an iterative improvement process

Comments

PDC is grateful to the City Council for establishing the Innovation Fund and proud to be a first-round recipient. In addition, the agency appreciates the Fund is still undergoing its own development process. The following are some points for consideration among the Fund managers and City Council.

- **Innovation Fund-sponsored projects need flexibility to iterate**
The Early Adopter program has evolved since PDC began this effort in early 2014. The initial proposal was based on a Minimum Viable Product (MVP) model for determining the program's potential and to be able to pivot based on findings during the pilot. PDC described an opportunity in which city government could increase efficiency, realize cost savings, and improve services, by partnering with local industry. PDC spent fewer funds than we anticipated and would like to invest a portion of the remaining funds to support some of these new projects. Unfortunately, the Innovation Fund is not currently structured to allow monies to be spent in a different manner than initially proposed, even if those expenditures would support the original goals and objectives of the proposal (without receiving City Council approval).
- **Public promotion of the Innovation Fund and recipients**
City Council should be applauded for encouraging innovation within city bureaus. The initial unveiling of the Innovation Fund created a pathway for bureaus to think differently about service delivery. It would be beneficial for the Innovation Fund and grant recipients if the Mayor, City Council, and the Innovation Fund Manager identify ways to promote the Innovation Fund, its projects and provide updates throughout the year. Ownership by city leadership will raise the Innovation Fund's profile of all projects in its portfolio. Public support will benefit individual projects, raise the importance of new thinking amongst city staff, and will further leverage the City of Portland's reputation as a lead innovator.
- **Tap into civically-minded thought leaders from the private sector**
PDC partnered with various thought leaders from the private sector to shape the program's development. The agency was seeking advisement from members outside of the public sector who approach innovation in a different way than the city. PDC found this collaboration to be incredibly insightful, allowing it to gain support from a diverse set of stakeholders and save on costs.

Updated LiDAR Data

Project Lead	Kevin Martin (BPS), Mark Liebe (BES), Mitch Vanderperren (BTS), Paul Couey (Metro)
Lead Bureau	Bureau of Planning & Sustainability (BPS)
Key Partners & Collaborators	Bureau of Environmental Services (BES), CGIS, Metro, State Department of Geology and Mineral Industries (DOGAMI), regional jurisdictions
Project Sponsors	Bureau of Planning & Sustainability, Bureau of Environmental Services, Bureau Technology Services, Metro

Project Finances

Allocated:	\$90,000
Expenditures to-date:	\$90,000

Project Summary

This project helped fund a summer 2014 regional LiDAR (Light Detection and Ranging) flight to update the City's current LiDAR data, which dates from 2004, 2005, and 2007. The project is a partnership between the City of Portland, Metro, the State of Oregon, and all jurisdictions within the urban growth boundary (~18). In addition to LiDAR, the vendor also collected 3" resolution multispectral aerial imagery.

The new LiDAR and imagery data was collected in August 2014, about a month behind the original schedule. The vendor is currently processing the data to transform to real-world coordinates, remove anomalies and correct topographic distortions in the imagery (orthorectification). The data will be distributed in several phases to DOGAMI over the next several months. DOGAMI will further process the data (i.e., hydro-flattening to remove data inconsistencies over water), and then prepare for distribution to the various jurisdictional partners. They expect to begin distributing the data in February of 2015, with Portland receiving a complete set of new LiDAR point clouds, elevation models and imagery by the end of May. This is about 5 months later than originally anticipated, though we did greatly expand the original coverage area right before the flight by adding the Bull Run watershed.

Successes & Lessons Learned

Led by Metro, organizing all project partners to create and fund the contract was a huge effort that was instrumental to the flight happening during the ideal summer window. We hope to build on this regional partnership moving forward. One idea that is currently being considered is each partner jurisdiction entering into a five year contract with Metro to fund regular aerial imagery and LiDAR data collection, so that the costs are predictable year-to-year and spread out over the five year period.

In hindsight, we should have planned for more time for data processing given the size and complexity of the collection effort. That said, we will push Metro and DOGAMI to stipulate more clearly in future contracts that delays will result in financial penalty to the vendor.

Next Steps

Once Portland receives the new data, the various derivatives described in the original project proposal will begin to be generated. The initial products, in priority order and with estimated dates of final products:

May 2015

1. 1' or 2' elevation contours (though it's possible the vendor may generate contours).

June 2015

2. Willamette and Columbia Rivers top of bank, using an automated, Python-based GIS model developed by BPS that uses zoning code definitions of top of bank.

December 2015

3. Vegetation mapping using an automated image classification methodology developed and tested by BPS; uses the 3" imagery and LiDAR elevation models as inputs to identify vegetation, separate vegetation into tree canopy/non tree canopy, and (hopefully) split the canopy into evergreen/deciduous by also using 2012 leaf-off aerial imagery.

Spring 2016

4. Impervious surface mapping using a similar automated image classification workflow developed by BPS.

Several of these methodologies and products are new to the City of Portland, so we will be receiving a sample of the final LiDAR products in early 2015 to further refine and test prior to receiving the full delivery.

Comments

Despite this being a large, \$800,000 regional project, it would not have moved forward without the \$90,000 from the innovation fund. This contribution helped up bridge a funding shortfall, but more importantly it demonstrated the City of Portland's commitment to the project. This inspired other regional partners to contribute and join, as well as internal City agencies (BES to contributed \$30,000, and other agencies in the City a combined \$30,000). The project was very close to not moving forward despite years of effort to build the partnerships and funding. It was this \$90,000 that tipped the scale. All of us involved are extremely appreciative, and would like to acknowledge the importance of this innovation fund program. Thank you.

Utility Coordination Scoping

Project Lead	Christine Leon, Bill Hoffman, Kyle Chisek
Lead Bureau	Bureau of Transportation (PBOT)
Key Partners & Collaborators	Bureau of Environmental Services (BES), Portland Water Bureau (Water), Bureau of Technology Services (BTS)
Project Sponsors	Development Permitting and Transit Group

Project Finances

Allocated:	\$250,000
Expenditures to-date:	\$250,000 encumbered

Project Summary

After a lengthy consultant selection and contracting process, City Council approved the consulting contract with HDR Engineering on October 15, 2014. The consultant is 20% complete on Phase 1 of a four phase project.

- Phase 1: Inventory and Analysis.
- Phase 2: Alternatives.
- Phase 3: Evaluation.
- Phase 4: Recommendation and Scope of Work.

Phase 1 is scheduled for completion March 2015. The entire project is scheduled for completion July 2015. The “kick-off” Technical Advisory Committee (TAC) meeting was held on October 17, 2014. The TAC is comprised of senior staff from BES, Water, BTS and PBOT. All representatives expressed support for the project’s objectives and a willingness to participate in the process.

Initial “inventory and analysis” interviews have been completed for four groups within PBOT plus BES and Water. The BTS interview will take place December 8, 2014. Benchmarking right-of-way coordination systems for seven cities will begin in December; interviews with five Portland utilities will begin in January.

Successes & Lessons Learned

Although too early into the project for meaningful successes and lessons learned, the initial TAC meeting and PBOT interviews have resulted in several observations:

- There is agreement among staff that there will be benefits and cost savings from improved r-o-w coordination.
- The answer to better coordinating work in the r-o-w may be more about addressing internal business practices and organizational goals/values than about implementing new software.
- Any process to coordinate work in the r-o-w will need to cut across existing organizational silos.
- Before a system to coordinate work in the r-o-w can be fully implemented, the groups within PBOT will likely need to improve or modify their business practices regarding project development and tracking.
- By thoroughly scoping the project, PBOT is discovering that it has existing software that may be used for coordination and may not need additional software.
- PBOT has discovered several business practices that can be improved prior to external coordination that may, on their own, lead to more efficient and better outcomes.
- PBOT’s City partners have systems and practices in place that will allow them to more easily transition to a coordination system.

Next Steps

The next steps are to complete the Inventory and Analysis phase (March, 2015) and begin the Alternatives phase (February through April, 2015).

Comments

None