CITY OF PHILADELPHIA

Strategic Plan for the Office of Innovation & Technology

2024-2025

Office of
Innovation & Technology

Introduction

This strategic planning document is designed to maintain the momentum and focus of the Office of Innovation and Technology (OIT) throughout the mayoral transition and beyond. Recognizing the potential challenges that arise during such transitions, the plan identifies a carefully chosen set of strategies to ensure key operational objectives continue and OIT continues to facilitate critical improvements in its fundamental operations.

The plan is not intended to serve as an exhaustive guide, but rather a focused and time bound roadmap that ensures organizational stability while also making improvements in key areas of OIT's operations over the next year. The plan can also contribute to shaping the foundation of the next mayor's public interest technology and innovation agenda. OIT should consider the strategic pillars in this plan as the basis for any additional planning, programs, and projects developed either within individual units or across the organization, and our organization should prioritize the strategies and actions in this plan over the next 12-24 months.

Our Process

To better understand what's working well in OIT versus what needs improvement, we developed a short survey based on the categories from our service catalog to assess strengths and challenges across the enterprise. This survey was shared with departmental partners and customers to complete, and data results were summarized to identify several key topical areas. Those topics were then developed further by OIT's Executive Management Team into five strategic pillars and served as the basis of two strategic planning workshops conducted by OIT in Spring 2023. During these workshops, leaders from OIT central services and departmental IT leadership generated actionable strategies and priorities that aligned with each pillar. The strategic plan document itself presents the five topical pillars and supports each with strategies and action items. We have classified action items into two potential time frames – near term and longer term – with near term addressing the pending mayoral transition and calendar year 2024 and long term addressing beyond calendar year 2024.

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Security and Data Protection

Security at a network level, as well as our ability to ensure secure and efficient data integration, continues to require an ever-expanding focus as the City works to modernize business platforms and workflows. To address this challenge, OIT has successfully increased the capacity of its Information Security Group and can increasingly address technology security challenges across the organization. Two areas of focus in support of this pillar include the cross-departmental governance and consumption of data, while the second supports increased training and education in the areas of IT security and data privacy.

Strategy 1:1

Enhance methods for enterprise data governance and integration.

OIT's successful DataBridge program, the City's central data sharing and integration ecosystem, will be the focus of efforts to prepare for increased data integration needs over the next several years. To best support City business processes and workflows, OIT plans to update and modernize its DataBridge platform (DataBridge 2.0) and supplement the broader data integration ecosystem with an IPaaS (Integrated Platform as a Service) tool. IPaaS will allow for improved security and develop standards for the integration of departmental data.

Action

SHORT-TERM - Involve departments for participation in IPaaS planning and develop use cases for business requirements and implementation.

LONG-TERM - Launch Databridge 2.0 to better automate data, identify and correct errors more quickly, and provision services across more City operations.

Strategy 1:2

Expand outreach and education efforts around security and data privacy.

OIT has, over the last several years, developed a series of required training courses for City employees, including HIPAA security and basic principles of cybersecurity. For the City to remain current with the ever-evolving cybersecurity landscape as well as address growing challenges with data privacy, two additional areas require attention: 1) data privacy and the challenges emerging technology presents, and 2) phishing attacks that target specific departments. Over the next year, OIT will develop additional training and targeted outreach to address data privacy and phishing.

Action

SHORT-TERM - Develop tailored education and training specifically for departments experiencing regular and targeted phishing attacks (e.g., Finance, City Commissioners, Police).

LONG-TERM - Collaborate with the Law Department's Privacy Unit and external experts to identify risks to data privacy arising from emerging technology (e.g., data collection on forms, Internet of Things devices, generative AI, chatbots, etc.) and develop policies to mitigate those risks.

Digital Equity and Resident Services

Public sector technology offices are increasingly leading efforts in Public Interest Technology. This work can include a focus on digital equity and inclusion for residents, such as increasing the ability for them to access the internet and ensuring they have the technology device required to use it. It may also include the provision of digital tools, applications, and websites that help residents interact online with the City and its services. Areas of focus supporting this pillar include a focus on investing in, promoting, and supporting digital service development, developing single sign-on capabilities to enhance user experience, and deploying a holistic offering of digital services to our residents.

Strategy 2:1

Develop and implement a service roadmap to enhance delivery of resident-facing applications and digital services on Phila.gov with a focus on improving and streamlining processes.

The City's investment in the teams that build and develop Phila.gov and resident-facing applications is crucial for ensuring widespread access to vital information and services for all Philadelphians. The Digital Service and Software Engineering teams meet residents where they are - considering factors like legal status, languages spoken, internet access, literacy and digital literacy levels, and other specific needs. By incorporating more user-based testing and leveraging existing analytics, the teams now approach service delivery in a more concrete, data-driven manner. OIT's ability to conduct much of its digital service development in-house ensures continuity and sustainability, and a comprehensive roadmap will support ongoing development and maintenance of these applications.

Action

SHORT-TERM - Roll-out guidelines and a program for storing and accessing data and sensitive information collected by phila.gov forms. That data can then be used for reporting, sharing for analysis, and/or long-term retention requirements.

SHORT-TERM - Develop a plan to provide accessible and easy to understand information about how OIT delivers digital services via forms, applications, maps, dashboards to departments, businesses, and residents. New outreach methods may include the service catalog, intranet, newsletter, social media posts, Phila.gov blogs, and public presentations.

Strategy 2:2

Accelerate implementation of Single Sign-On (SSO) to enhance both cyber security and ease of use and access with resident-facing City applications.

Developing a secure and standardized approach for residents to engage with government strengthens trust and makes often complicated interactions with City services more accessible. Unifying our approach to usernames and passwords across all City-owned applications (i.e., login.Phila.gov) makes the resident experience with technology and City services more seamless. Future applications will incorporate resident-facing Single Sign-On capability, and an additional benefit is easing the administrative access of City staff to these same applications by allowing them to use the same credentials as they would for other City resources.

Action

SHORT-TERM - Develop a plan and timeline for completion of internal-facing City applications (staff only) Single Sign-On.

SHORT-TERM - Develop a plan and timeline for completion of resident and business-facing Single Sign-On that will integrate usernames and passwords across City applications.

LONG-TERM - Implement Single Sign-On for internal-facing City applications.

LONG-TERM - Implement resident and business-facing Single Sign-On that will integrate usernames and passwords across City applications.

Strategy 2:3

Conduct outreach and advocate with the new mayoral administration to prioritize improvements to service delivery and digital user-experiences for residents and businesses.

Over the last five years, OIT has steadily developed its capacity to provide resident-facing digital services. Often referred to as public technology, these digital services may come in the form of public-facing applications for City services, internet connectivity and device access, and new sensor-based technologies that offer residents a different interaction with their city. This kind of public-facing technology remains a relatively new direction for public sector technology offices, but it will continue to develop and expand as a new function of government. OIT is well-prepared to address these public technology initiatives and should assume the new mayoral administration will quickly recognize the value and importance of public technology work led by the City. In anticipation of an increased demand for this work, OIT will focus on new ways to help departments as they focus on technology improvements and help new leadership understand the web and application standards and rationale for them that have been carefully developed over the last few years.

Action

SHORT-TERM - Increase outreach, awareness, and use of Innovation Consulting services to departments on business process redesign, team building, communication, and strategy and program development.

SHORT-TERM - Conduct outreach and education about enterprise standards and reusable templates for Phila. gov, web applications, and mapping applications. New employees will need to understand the thoughtful and deliberate development of the City's online presence that ensures accessibility and strong user experience.

Modernization and Efficiency

OIT has focused on creating a modern, efficient, and nimble organization over the last several years, but there remain other parts that need to be addressed. Like other technology organizations, OIT is particularly challenged to find, hire, and keep skilled employees. Several strategies included in the Modernization and Efficiency pillar support enhancing and further developing our human resource processes to better attract technology employees to the public sector. Another strategy supports the development and deployment of better metrics and other measures of performance management that can help us become a more efficient organization. The final strategy discusses ways of improving the processes we use to manage our hardware and software assets to better distribute them across City departments and manage them more efficiently.

Strategy 3:1

Develop a recruitment strategy and process for OIT hiring.

The City of Philadelphia and its technology office specifically have long been challenged with recruiting as a proactive process of seeking and identifying skilled and qualified employees. Human Resource positions are traditionally allocated to fulfill the transactional responsibilities of the hiring process such as posting positions, seeking budget approvals, and onboarding employees rather than support a more proactive approach to finding the right employees to hire. As a result of this and other factors, OIT often struggles to fill open positions that require specific skill sets that are often in demand across all sectors such as security, network, and platform engineering. To address this challenge, OIT will develop a comprehensive recruiting strategy that will focus on improving the way we find employees.

Action

SHORT-TERM - Create a working group to develop and implement a recruitment strategy.

SHORT-TERM - Update current remote work policies and procedures to address new challenges and further codify hybrid work as a benefit to recruitment and retention.

SHORT-TERM - Identify a budget allocation for recruitment events and job board postings.

SHORT-TERM - Revise and standardize OIT job description templates across the organization and re-evaluate skills and educational requirements for entry level positions.

SHORT-TERM - Create resume bank of quality applicants that can be used for future OIT positions.

LONG-TERM - Develop intentional pathways in partnership with universities to create a talent pipeline for OIT positions.

Strategy 3:2

Streamline the organizational hiring process and make it more candidate centric.

Although the recruiting function and the positions that support it have long been uncommon in the public sector, OIT has established well-functioning processes to support transactional responsibilities for hiring employees. Improvements can be made in several key areas, however, including the way we interact and communicate with job candidates as well as our method of onboarding candidates after they have been hired. OIT believes that by improving the experience potential employees have with their employer, even before they are hired, will establish a stronger and more trusted employer/employee relationship, and as a result good employees will stay longer. Streamlining the hiring process across all OIT units will reduce bureaucratic inefficiencies, expedite onboarding, and contribute to a more cohesive organizational structure.

Action

SHORT-TERM - Create guidance and update existing documentation about hiring, including interview best practices and communication with candidates.

SHORT-TERM - Develop a more streamlined and engaging onboarding process by completing more documents electronically and establishing in-person touchpoints for new employees and managers.

SHORT-TERM - Allocate relocation/ moving expense funds to high-level, hard-to-fill positions in FY25 operating budget.

Strategy 3:3

Develop and implement a retention strategy.

Keeping good employees has also been a challenge in public sector technology offices. Without an organized approach to skill development and promotional paths, employees' ability to positively develop their careers will slow and they will look elsewhere. In recent years, OIT has established a sound process for moving good employees into higher roles by developing career ladders through the organization. Now we will focus on a more organized training and professional development process that will help employees continue to develop skills in parallel with promotional opportunities. Similarly, we will strive to improve the relationships between managers/teams/employees by developing new ways for managers to interact with their employees and offer them feedback.

Action

SHORT-TERM - Establish guidelines for how OIT can enhance professional development and training opportunities, including preparation of team training goals and manager accountability for meeting those goals.

SHORT-TERM - Identify and dedicate funding for technical training and certificate programs and request funds in FY25 operating budget.

LONG-TERM - Standardize processes for manager/team engagement, including performance feedback and regular check-ins to support employee development and growth.

Strategy 3:4

Use existing metrics and identify new ones to more comprehensively address organizational performance improvement

Meaningful performance improvement for an organization requires thoughtful development and analysis of metrics. Initial metrics may indicate the need for clear changes to the organization and contribute to the creation of a culture of ongoing performance improvement. OIT has developed many of those metrics but is now able to collaboratively develop additional measures for the organization that can help maintain continual performance improvement. Establishing cross-functional teams to explore key processes for which OIT already collects usage data will help develop these additional metrics and ultimately help us better meet the needs of our departmental partners.

Action

SHORT-TERM - Review statistics on Support Center tickets, including change management and IT project intake/review, on a regular basis and discuss performance at monthly IT Leadership and Executive Management Team meetings.

SHORT-TERM - Identify a small set of key performance measures and set goals for improvement, starting first with change control, procurement requests, and project intake/gates.

SHORT-TERM - Address performance improvement and development of metrics by creating cross-functional workgroups to resolve workflow and process inefficiencies.

Modernization and Efficiency

Strategy 3:5

Improve management of hardware and software assets.

Asset management is a process that most IT organizations struggle to do well. Particularly with a partially decentralized IT structure, hardware assets become more challenging to record and manage across departments. Software adds another layer of complexity for organizational asset management because it involves many different licensing models and presents potential security vulnerabilities. An organization must know what assets it has purchased, which of those have been deployed and to whom, their status, and how they impact OIT's information security threat framework. OIT will undertake several initiatives to improve its overall tracking of assets and supporting processes, while also working with the Information Security Group to understand how assets fit into a broader risk framework.

Action

SHORT-TERM - Partner with the Information Security Group (ISG) to determine how asset management fits into the larger risk framework and leverage already-existing support tools and processes.

SHORT-TERM - Review hardware and software assets semi-annually with relevant stakeholders/partners as part of an improved asset management process.

LONG-TERM - Initiate project to select an asset management tool for hardware and software that can integrate with the newly selected IT service management solution.

Foundational Infrastructure and Processes

With a sound foundation of technology infrastructure and well-functioning processes, cities can adapt more quickly to the continually changing needs of their business departments. These foundational elements will also serve OIT well over the next year as we transition to a new mayoral administration and a changing set of priorities as they relate to technology. For this pillar, our strategies focus on developing guidelines and standards for integrating applications and data with our network, improving our process for evaluating and guiding cross-departmental and "smart city" technology initiatives, and establishing an ownership model for enterprise technology products and platforms.

Strategy 4:1

Develop predictable and reliable standards for integrating new systems with our existing network environment.

OIT has already defined and adopted a series of standards that support the adoption and implementation of new technology. Our next step is to revise these standards with the further goal of making them reusable and extensible for other technology needs that may arise so we can avoid developing an entirely new solution each time. One early successful example of this reusable and extensible technology is the Finder application that is now used across departments and allows web users to search and locate facilities or services. To better facilitate the City-wide adoption of these new technology standards, OIT will also ensure its IT project intake/review process incorporates them as required.

Action

LONG-TERM - Draft a first set of six standards based on recent use cases and lessons learned.

LONG-TERM - Incorporate the first set of standards into the IT project intake/review process and refine them based on participant and stakeholder feedback.

Strategy 4:2

Establish a discovery environment and adapt the Gates process for smart city and other technology pilot projects.

Some of OIT's project-based work, and particularly that implemented within the Smart City team, relies on a pilot-based model to test new technologies that can potentially offer benefit to the City and its departments. This pilot-based testing may generate initiatives that increase efficiency (Smart Trash Collection), collect metrics to inform policy (Smart Block PHL), or enhance City services (Smart Loading Zones). One challenge with these pilot-based initiatives is they often test new, leading-edge technologies that can strain traditional project evaluation and implementation processes with the unknown. To better support the testing of these new technologies before they are fully implemented, OIT plans to improve its processes for testing new technologies and offer a stable and secure environment for the early stages of these pilot-based initiatives.

Action

SHORT-TERM - Create a discovery environment that will permit the development and testing of new technologies.

SHORT-TERM - Refine OIT's process to better accommodate new technologies being developed for departments in partnership with OIT's Smart City team.

Strategy 4:3

Refine IT project intake/review process to improve ease of use, transparency, communication, and speed of project intake.

Governance is a critical element in consistently evolving and maturing public sector technology, and OIT's project intake/review process serves as a key method for supporting other departments as they plan and implement projects. The IT project intake/review process serves as OIT's opportunity to identify risks and recommend enterprise technologies. This process must continually evolve to keep pace with technological change, ensure standards and best practices are followed, and keep departmental stakeholders informed and updated. OIT will undertake several initiatives to improve its IT project intake/review process, with a particular focus paid to communication and project expediency.

Action

SHORT-TERM - Identify a project management tool and/or tracker to increase visibility on project status and have details located centrally.

SHORT-TERM - Redevelop project review process to prioritize review time on high risk and high impact projects.

LONG-TERM - Recommend a prioritization process for IT projects that includes other departments so that funding requirements are more accurately reflected in the City's operating and capital budgets.

Strategy 4:4

Establish ownership roles and responsibilities for enterprise products and platforms provided by OIT.

To support a more consistent, predictable, and reliable delivery of the City's enterprise shared services, OIT needs to develop more clarity about platform and product ownership. By clarifying and assigning ownership roles as needed, OIT can better focus resources on providing and maintaining IT services that support our shared platforms. OIT will address platform/product ownership by first developing a model for lifecycle management and testing it for adoption and expansion.

Action

SHORT-TERM - Develop a framework for managing the lifecycle of a product/platform that can be implemented by the designated owner or team within OIT.

SHORT-TERM - Test and refine this model on the portfolio of the Chief Technology Officer and expand its adoption.

Technology Community Partnerships and Communication

The relationships a technology office has with its business departments and its external stakeholders in the technology community are key; only when departments and civic technology advocates believe the technology office and its employees offer a reliable path to modernization, innovation, and inclusion will they fully engage with technology initiatives. OIT has made progress over the last several years in building this trust, both internally and externally, and will continue to do so with the next mayoral administration. Our strategies that support this Partnerships and Communication pillar include developing a more robust and accessible service catalog, enhancing our methods of communication with our internal departments, and improving our training and outreach materials to departments so that they more seamlessly adopt enterprise technology standards and applications.

Strategy 5:1

Update the OIT service catalog and use it as an entry point for providing information and requesting services.

OIT provides a complex array of shared services to other City departments, and the service catalog is intended to describe OIT services in plain language. The service catalog is organized so departments can understand the support model for services they are already using while also discovering new services of interest. To ensure its relevance and utility, the service catalog is centrally maintained by OIT and will be updated on a regular basis to reflect new, changed, and decommissioned services.

Action

SHORT-TERM - Publish the service catalog with links to launch Support Center tickets and other service requests.

LONG-TERM - Edit and update the service catalog based on feedback from users to improve content and connections.

Strategy 5:2

Increase trust and satisfaction between OIT and its departmental partners and customers.

With over 50 departments across the City and a diverse array of IT needs, OIT and its cross-departmental partners require a mutual understanding of IT support, processes, and costs to maintain operations and services for Philadelphia's residents. By communicating regularly, enhancing our responsiveness, and developing collaborative communities of knowledge about common systems and practices, OIT will continue to develop and maintain trusted relationships with other departments. OIT can take several actions to further develop strong relationships with our departmental partners, and most involve creating communities of practice and arranging opportunities for learning.

Action

LONG-TERM - Develop a model for OIT units that involves open hours or clinics to resolve operational roadblocks, address challenges with initiatives, and resolve audit findings.

LONG-TERM - Create additional communities of practice (e.g., GeoXchange, DevXchange) to support the adoption of standards, best practices, and platform knowledge.

Strategy 5:3

Develop training materials and communication templates to increase adoption and use of enterprise IT applications while avoiding duplication of services, increased cost, and unanticipated technical support.

OIT should support its partner departments to the best of its ability, and that support can take several different paths. Timely and proactive communication to departments and their IT units is a critical first step and will create more opportunities for collaboration and planning between OIT and other departments. OIT should also regularly consult with departments and their IT units about shared and centrally managed IT services so that departments understand when they should use shared services and when they should take a different path. Adoption of centrally managed IT services reduces duplication of applications for similar purposes, improves the City's security position by limiting targets, and can reduce the amount of required hardware and infrastructure across the City. Finally, training materials and templates offer a way to transmit IT knowledge to departments who can then can then better plan and implement projects and initiatives independently of OIT.

Action

SHORT-TERM - Partner with Procurement and Law Departments to develop training and guidelines for information technology Requests for Proposal (RFPs) so vendors can better understand Terms and Conditions, digital design standards, data security and privacy requirements, and enterprise architecture practices.

SHORT-TERM - Identify opportunities for training and instruction on best use of applications and hardware as part of the initiative for platform and product lifecycle management.

SHORT-TERM - Begin providing network architecture and other collaborative services for departments not directly managed by OIT.

About the IT Strategic Plan Sponsors

The Office of Innovation and Technology (OIT) oversees most major technology projects for the City of Philadelphia, ensures continuity of the City's technology operations on a 24/7 basis, and finds new ways to help the public interact meaningfully with technology. OIT uses technology to help City employees do their work better and help residents get what they need from municipal government. The organization also provides leadership on digital information sharing, security, and solution architecture. OIT is led by the City's Chief Information Officer and provides the following services:

- CityGeo
- Communications
- Creative Services
- Digital Services
- Enterprise Architecture and Platform Engineering
- Finance and Administration
- Human Resources and Talent Recruitment

- Information Security
- Network Communications
- Project and Performance Management
- Public Safety Technology
- Public Technology and Innovation
- Software Engineering

The Office of the Chief Administrative Officer (CAO) works to modernize city government and improve the efficiency and effectiveness of City services. The CAO focuses on innovating and strengthening the City's administrative functions and enabling resident-facing departments to evaluate, plan, and continually improve service delivery. The following departments and functions report to the CAO:

- Department of Records
- Human Resources and Talent
- Office of Administrative Review
- Office of Innovation and Technology
- Procurement Department
- PHL Service Design Studio
- Strategic Transformation

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