Agenda – Standing Policy Committee on Innovation and Economic Development – July 7, 2022

REPORTS

Item No. 3 Opportunities from COVID-19 for the Innovation and Technology Department

WINNIPEG PUBLIC SERVICE RECOMMENDATION:

1. That this report be received as information.

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On May 11, 2022, the Standing Policy Committee on Innovation and Economic Development directed the Winnipeg Public Service to report back within 60 days on:

1. The specific changes that have been made, the financial and service delivery rationale for keeping those changes, specific implementations that aren't going to be maintained going forward, and the corresponding data to corroborate the above.

2. That the report include information on how the department is working to overcome any resistance or hesitancy to introducing innovation / change within departments, and highlight departments that are embracing innovation.

EXECUTIVE POLICY COMMITTEE DECISION:

On March 16, 2022, the Executive Policy Committee concurred in the recommendation of the City Centre Community Committee, with the following amendment:

1. That Departments be directed to report to Standing Committees regarding potential operational opportunities that improve service resulting from the experiences of Covid-19.

COMMUNITY COMMITTEE RECOMMENDATION:

On February 28, 2022, the City Centre Community Committee passed the following motion:

WHEREAS there is public interest in consideration of the lifting of public health orders impact on City services;

AND WHEREAS there is a need to plan for the return to work, in person services, use of libraries and arenas, Winnipeg Transit and other City services that have been restricted due to Covid-19 health orders;

AND WHEREAS providing a plan will give Winnipeggers an idea of what to expect going forward and to plan accordingly;

DECISION MAKING HISTORY (continued):

COMMUNITY COMMITTEE RECOMMENDATION (continued):

THEREFORE BE IT RESOLVED:

1. That the Chief Administrative Officer be directed to provide a six-month reopening plan for City facilities and services including time-lines, health guidelines, capacity limits and changes to service delivery options to be explored within 60 days.

2. Departments report to Standing Committees regarding potential operational opportunities that improve service resulting from the experiences of Covid-19.

ADMINISTRATIVE REPORT

Title: Opportunities from COVID-19 for the Innovation and Technology Department

Critical Path: Standing Policy Committee on Innovation and Economic Development

AUTHORIZATION

Author	Department Head	CFO	CAO
T. Gooch	T. Gooch	N/A	M. Jack

EXECUTIVE SUMMARY

In March 2020, the Province of Manitoba issued public health orders, in response to the COVID-19 pandemic, which closed many businesses and government services and directed employers to require as many employees to work remotely as possible.

Over the course of the following two years, the Innovation and Technology (IT) Department made changes to its delivery of services to staff in response to the pandemic and public health measures, many of which provide ongoing public value and will be permanently maintained. These changes fall into four categories, representing better ways of working:

- Communications
- Digital Customer Service
- Process Improvement
- Distributed and Mobile Work

This report describes which of these changes are continuing, with the financial and service delivery rationale, and supporting data. This report also describes the Department's results in developing change management capabilities, and a coordinated governance and management approach to delivering on the City's strategic plans for the Innovation, Transformation, and Technology service across all departments. Last, this report highlights recent notable innovations benefiting from these efforts, organized by the sponsoring department.

This report concludes that management and staff in all departments are actively engaged in innovation and continuous improvement to produce increased public value through an improved customer experience, more effective and efficient service delivery, better communications, and an ever-increasing culture of innovation and learning for the City of Winnipeg.

RECOMMENDATIONS

1. That this report be received as information.

REASON FOR THE REPORT

On May 11, 2022, in relation to operational service improvements made in response to COVID-19, the Standing Policy Committee on Innovation and Economic Development directed the Winnipeg Public Service to report back within 60 days on:

1. The specific changes that have been made, the financial and service delivery rationale for keeping those changes, specific implementations that aren't going to be maintained going forward, and the corresponding data to corroborate the above.

2. That the report include information on how the department is working to overcome any resistance or hesitancy to introducing innovation / change within departments, and highlight departments that are embracing innovation.

Further, at its May 18, 2022 meeting, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Infrastructure Renewal and Public Works:

1. That the Winnipeg Public Service be directed to provide written reports to all Standing Committees in 60 days on potential operational opportunities that improve service resulting from the experiences of COVID-19.

IMPLICATIONS OF THE RECOMMENDATIONS

There are no implications to receiving this report as information.

HISTORY/DISCUSSION

Background

In March 2020, the Province of Manitoba issued public health orders in response to the COVID-19 pandemic that interrupted many businesses and government services and encouraged employers to require as many employees to work remotely as possible. Over the course of the following two years, health orders were regularly adjusted in response to the progress of the virus and the ability of the healthcare system to respond.

With high vaccination rates and an increasing ability for the healthcare system to respond to COVID-19 infections, the Province of Manitoba relaxed most public health orders in early 2022, enabling most businesses and government services to restore pre-pandemic service delivery approaches.

Over the course of this two-year period, the Innovation and Technology (IT) Department made changes to delivery of its services to staff in response to the pandemic and public health measures, many of which provide ongoing public value and will be maintained. These changes fall into four categories representing better ways of working – Communications, Digital Customer Service, Process Improvement, and Distributed and Mobile Work.

Better Ways of Working - Communications:

In March 2020, The IT Department deployed Microsoft Teams to approximately 250 IT staff and 2,400 total staff across the City. Microsoft Teams is a market-leading application providing rich web-conferencing, chat and text messaging, screen sharing, and file sharing capabilities. Approximately 1,800 staff were forced to work remotely due to public health orders, and would have been much less effective without the ability to securely share documents, web conference, and communicate with coworkers.

Department-specific data is not available from the reporting tool, but the following table illustrates the rapid adoption and extensive use of this tool across the City in 2020 and 2021.

Transaction	2019 Volume	2020 Volume	2021 Volume
Unique employees using Teams*	0	2,400+	2,400+
Teams Meetings	0	46,238	76,418
Chat/post messages	0	2,659,389	3,989,916
Meeting participants	0	63,233	109,185

* Teams was deployed in March 2020

The data indicates that staff have become more proficient with Teams with training and time, and have increased their use and reliance on the tool.

Analysis of the time, travel, and meeting expenses saved through the use of Teams is confounded by lack of a pre-2020 baseline and by the complexity of assessing how and where employees work. An example speculation based on assumptions that 90% of these meetings would have been in-person, 30% of them would have required an average 20 minutes of travel time, and the average attendance is 3 people at an hourly cost of $50/hour, produces an annual savings in travel time of $1.0M. This is a conservative speculation of the total efficiency benefit to the City, which would include additional unquantified savings in time efficiency and travel costs.

Qualitatively, management and knowledge workers report additional increased productivity from:

- Easier logistics of booking meetings without needing to find boardrooms or schedule travel time and increased accurate communication of availability in calendars.
- Increased attendance and participation in internal training.
- Less expensive and more convenient participation in external training without travel requirements.
- Less time lost before and after meetings, and around breaks.
- The ability to more effectively collaborate during meetings – accessing information as it's being presented, collaboratively editing documents, commenting in the meeting chat, and coordinating with staff outside the meeting.

Applications such as Teams and Zoom have become fundamental for knowledge workers in all businesses and public sector organizations for internal and external communications, and a capital project was approved in the 2022 budget to deploy Office 365 subscriptions, including Teams, to all City staff with an email address.

Better Ways of Working – Digital Customer Service

In March 2020, demand for IT service from staff increased suddenly and dramatically, as staff transitioned to working remotely without a pre-existing remote work program or tools. Many staff did not have appropriate technology tools at the time, and the City had insufficient capacity for web-conferencing, secure remote access, and laptops. The IT Department expanded the use of the online IT Service Desk forms for staff to submit tickets online requesting equipment and support to transition to remote work, which enabled faster and better service to hundreds of impacted staff. The Department also learned that the online self-service channel was not well-designed to support staff with password and external access issues, and saw the use of online self-service decreasing, even while overall reliance and use of the IT Service Desk by phone or email grew in the early days of the public health orders. The Department also observed that some service requests were avoided with peer support readily available through Teams.

The following table illustrates the increase in IT Service Desk tickets, decline in online submission, and use of online requests for remote working equipment:

Transaction	2019 Volume	2020 Volume	2021 Volume
Total IT Service Desk Service Requests	32,809	34,817	33,339
Online IT Service Desk Service Requests	11,664	10,387	11,587
Technology Equipment Online Requests	0	474	284

The data shows an increase in demand for service and equipment and corresponding decrease in online self-service in the early days of the pandemic, followed by a return to normal levels in both. It also highlights the potential for increased online self-service going forward.

IT staff also supported other departments with their customer service transitions from in-person to online self-service as the preferred channel in a multi-channel delivery mode, by enabling increased online water billing and meter reporting, permit applications, recreation registrations, customer service inquiries, and more.

The following table illustrates the increase in online customer self-service for a few key online customer service transactions:

Transaction	2019 Volume	2020 Volume	2021 Volume
Online Water Meter Read Submissions*	67,015	114,714	142,584
Online Leisure Registrations**	89%	97%	96%
Online Planning, Property and Development Permit Applications	22,903	25,456	28,810
Online Customer Service Inquiries***	2,084	2,144	6,401

*Water meter read submissions listed are from March to February of each year.
**Overall leisure registrations were reduced by over 50% due to facility closures in 2020, with fully recovery in 2021.
*** Several new online inquiry forms were added in 2021 as a response to COVID-19.

The data shows rapid uptake of online self-service during the pandemic, and indicates ongoing demand for this channel going forward.

Online customer self-service through portals, apps, and forms not only improves the customer experience by offering choice of delivery channel and faster response, it also reduces customer support costs by reducing contact-centre calls, as well as paper processing and data entry time associated with paper forms.

IT Management is in the project planning phase to replace the legacy IT Service Desk software with a modern IT Service Management platform, including a more robust online staff service channel and delivered on a Software-as-a-Service model, with anticipated improvements in staff experience and more efficient IT Service Desk operation. The Department is also enabling customer experience digitalization programs and projects in all other departments to reduce operating costs, improve customer service, and increase service resiliency.

Better Ways of Working – Process Improvement

With most knowledge workers moving to remote work in an unplanned way in March 2020, many business processes were disrupted in unexpected ways. Many City business processes were based on legacy concepts of paper-based forms, physical routing, and in-person service as the only delivery channel or as a primary delivery channel with limited use of digital tools.

The Department rapidly deployed tools and training to transition business processes to digital workflows when staff were suddenly no longer co-located with access to printers and scanners. Tool provision included installation of portable document format (PDF) editing software and training included instruction on electronically authorizing and routing PDFs and Microsoft Word documents.

In the urgency of responding to public health orders, detailed records were not kept on how many processes were digitalized, but we can measure the impact in part by examining the reduced use of printing and paper across the City's print fleet. Each printed page avoided represents not only the direct cost savings of the printer, consumables, and maintenance, but also time savings of staff queuing at multi-function devices to scan and print, expediency of documents moving from desk-to-desk and department-to-department, and reduced environmental impact.

Reduced printing is a highly relevant proxy measure for process improvement and time savings across the Public Service. The following table illustrates the reduction in printing across the City fleet, as well as high volume printing from 2019 to 2021:

Transaction	**2019 Volume**	**2020 Volume**	**2021 Volume**
Fleet Print Impressions	11.7M	8.7M	7.5M
High-Volume Print Impressions	7.8M	6.4M	5.2M

This reduction represents an annual savings of $77K in direct costs for fleet print hardware, maintenance, and consumables, and $42K in direct costs for high-volume print consumables and maintenance. The time saved and service responsiveness is expected to be worth considerably more, and would require work-time studies to estimate.

The Public Service highlights the work of the Legal Services Department in evaluating and updating administrative standards and processes to ensure electronic signatures and other authorizations are legally-binding and defensible in the justice system.

Prompted by these improvements, the Department recently completed an assessment of the fleet of City-wide printers and recommended decommissioning 80 of 511 (16%) printers in the fleet. This reduction in the print fleet will produce financial savings from 2025 forward, when the contract for print hardware, consumables, and maintenance is renegotiated.

The Innovation and Technology Department is maintaining the existing digital workflow tools and training, and is expanding digital records and workflow management capabilities through a series of projects for all departments funded by the Enterprise Content Management capital program fund, now rebadged as the Digital Records and Workflow Program.

Better Ways of Working – Distributed and Mobile Work

The Innovation and Technology Department is made up of approximately 250 staff distributed across over 10 designated work locations throughout the City. When COVID-19 public health orders required approximately 180 (72%) of these staff to work remotely, IT management rapidly adapted best-practice management and communication methods for distributed teams including:

- Embracing a collaboration platform including audio, video, chat, and secure remote file-sharing (Microsoft Teams).
- Intentional communication through scheduled one-on-one and team meetings.
- Increased written communication in shared documents and team chat channels.
- Swarming as a problem-solving solution, where a problem is posed to an internal forum for assistance from other parts of the organization.
- Increased cross-departmental collaboration with rich web-conferencing communication between workgroups.

The Department also learned that some elements of technology service delivery were at risk of service failure. Capacity for secure access to files and systems from outside the City network was insufficient. Availability of mobile devices including laptops, tablets, and smartphones was insufficient. The City had underinvested in modern capabilities in these areas and, when the risk of business disruption materialized, was less prepared than it could have been. To ensure service resiliency going forward, the Department will design services for a distributed and mobile workforce with the requirement that staff can securely access most information and systems from any location. This requires applications and data to be secured in addition to networks, and leads to a more effective workforce, improved service resiliency and improved cybersecurity.

The Department has also learned that collaboration across departments and with external partners is improved by these practices. Multiple departments in multiple locations, along with contractors, vendors, and other parts of the public sector from across the province, the country, and the world can engage fully in meetings, shared filing systems, real-time collaborative creation and editing, asynchronous communications, and better decision-making on the City's biggest problems and opportunities.

The Office365 implementation project currently underway is a key step in the direction of modernizing the City of Winnipeg's distributed and mobile work capabilities for improved collaboration within teams, across departments, and with external partners, through budget-neutral reallocation of existing resources.

Managing Change

The Innovation and Technology Department's mission is to support innovation and continuous improvement of City services and processes through well-designed data and technologies. A key factor in fulfilling this mission is the Department's ability to enable management across the City to implement effective organizational change.

Over the past year, the Department has developed its change management capabilities through:

- Change management training for approximately 45 staff, representing 18% of the Innovation and Technology staff who support services and departments across the City.
- Recruiting the Department's first full-time contracted Organizational Change Manager, supporting the full portfolio of Innovation and Technology projects and project teams with change management expertise, guidance, and advisory services.
- Making Innovation Program funds available to develop future ongoing training in change management practices.
- Standardizing project management methods for central IT to require a change management plan, among other enhanced standards for effective project management.
- Developing a community of practice for change agents and champions across all departments.

The Innovation and Technology Department has also developed a coordinated and collaborative practice for governance and management of innovation and technology-related change across the City. This coordinated service delivery approach is an essential foundation for effective change management, because it creates shared goals and objectives with clear accountability and responsibilities for decision-making, consensus-building, and conflict resolution. The Department has:

- Updated the administrative standard for governance of Innovation and Technology, documenting roles and responsibilities of line-of-service departments, central IT, and the relationships between department heads and IT managers.
- Established the City's first Innovation and Technology Steering Committee to provide cross-departmental senior management oversight of investments in Innovation and Technology, Enterprise Architecture and Strategic Planning, and Information and Technology Risk Management.
- Developed and communicated an Innovation and Technology Strategic Plan for 2022 – 2024, including principles for management of IT and shared objectives for innovation and continual improvement of the Innovation, Transformation, and Technology service across all departments.

Departmental Innovation

Management and staff in all departments are highly engaged in continuous improvement and innovation to produce public value with effective and efficient investment in City services. All departments are participating in and benefitting from coordinated City-wide efforts to increase the City's capabilities in delivery of systemic, sustainable positive change for citizens.

Recent examples of departments embracing innovation include the following complete or in-progress initiatives:

- Community Services
    - Arena Digital Displays – improve public communications and revenue opportunities in arenas.
    - People-Counting Technology – align investments in facilities with better data on facility use.
    - By-law Enforcement Modernization – pilot mobile application and modernized management application for by-law enforcement staff.
    - Online Bike Auction – enable online auctions fully in 2020 and 2021.
    - Digital Divide - explore with internet service providers, technology companies, and other governments opportunities to partner on programs that increase accessibility of free or low-cost internet service and technology equipment by low-income residents, with a priority on Indigenous children, youth and families.
    - Digital Records and Workflow projects - replace existing manual processes (such as grants management, business licensing, space booking) with digital records and workflows.
    - LeisureOnline Upgrade - make registering for Leisure Guide programs through smart phones easier.
    - Online library memberships – enable online registration, so customers could access and enjoy the digital library services while facilities were closed.
    - QR Code Contact tracing – enable contact tracing for use of facilities, and consider alternative use for the QR codes going forward, such as for program promotion, collecting public feedback and service evaluation to improve programs and services.

- Corporate Departments
    - Accounts Payable Workflow Digitalization - eliminate the need to physically shuttle documents around the City, permitting quicker processing, more timely payments to vendors and real-time tracking of invoice payment status.
    - Indigenous Accords Database - enable individuals and organizations to sign up as a partner to the City of Winnipeg Indigenous Accord.
    - Investment Planning Automation – automate the investment planning processes, including reporting and investment modeling.
    - Diversity Dashboard – put information in the hands of key decision-makers to promote a diverse, equitable, and inclusive public service.
    - Legal Case Management Digitalization – provide legal case management to enhance systems and processes for efficiency.
    - Office365 – provide a foundational collaboration and communications platform for office management.
    - Web Content Management System – manage and host the winnipeg.ca website on a modern managed platform, enabling staff to edit their own pages and reducing the costs of custom web development.

- Records Information System (RIS) Administration Modernization – automate processing, tracking and distribution of Administrative Reports.
- Job Classification Process Digitalization – automate and track job classification processes.
- Procurement Process Digitalization – automate the purchase order request and integrate with financial systems.
- Online Customer Service Forms – enhance online service options with additional forms for common service requests.

- Fire Paramedic Service
  - Computer Assisted Dispatch – modernization of dispatch capabilities including addition of vehicle area networking, mobile data terminals including routing and incident details for all Fire and Emergency Medical Service units, modernized station alerting with voice announcements, renovation of the 911 centre, and foundation technology for future Next-Generation 911 implementation.
  - Business intelligence and data visualization – improve management decision-making with real-time situational awareness and visibility, historical incident data, groundwork for predictive modelling, and a mobile application.
  - Modernized Fire Inspection management software – modernize this application, allowing for on-premise, real-time documentation of inspection details.

- Planning, Property, and Development
  - Mobile Inspection App - enable inspectors to enter results digitally immediately, reducing paper management and data-entry, and improving workload management for field workers.
  - Processing Timeline Reporting – alert stakeholders of pending breach of processing timeline.
  - Development Permits and Building Permits – phase and separate development and building permit applications.
  - Digital Customer services - enhance Online Payment tracking system for front line workers working remotely.
  - Contractor Online Trust Account - allow trade contractors to deposit money, add subcontractors, allow subcontractors to pay from the account and check balances.
  - Online Golf Reservation - increase the self-service capability for managing golf events reservation, payment and wait-list by allowing citizens to reserve, pay and be added to wait-list online.

- Public Works
  - Work Management System Expansion – expand the departments' use of digital work management records and work orders.
  - Digitalization of Records and Workflows – implement electronic workflows and records in Underground Structures and other divisions of the Department.

    - Parking Authority Management Platform – modernize the management of the Winnipeg Parking Authority with an upgraded software platform.
    - Mobile Field Workers and Applications – provide mobile applications to allow secure access to data for field workers including Tree Inventory; Insect Control Field Inspection, Litter Bins collection; Snow Clearing Progress, etc.
    - OpenStreetMaps Module - embed geospatial functionality in desktop applications.
    - Parking Authority Accessible Vehicle Reservation Service - introduce a mobile app for a new taxi reservation service focusing on accessible vehicles.
    - Fleet Management Agency Automated Vehicle Locator Cellular Provisioning – improve costs, billing management, and provisioning with third party service delivery.
    - Fleet Management Agency Vehicle for Hire Web Application – digitalize the vehicle-for-hire inspection process with a web app.
    - Fleet Management Agency Real-time Vehicle Operations Analytics – pilot integration of vehicle locator with vehicle electronics to collect location based operational data in real-time for insect foggers, salt and sand spreaders, etc.
    - Fleet Management Agency Vehicle Locator Operations Management – use vehicle location data to manage assignment and track progress of operational activities for mowers.

- Transit
    - On-Request Transit – allow Transit riders to book immediate, point-to-point trips in select service areas, replacing the legacy system.
    - Timeslip Digitalization – replace the paper-based process for submitting timeslips with a web-based, mobile-friendly process.
    - Transit App – replace two legacy websites with a new app for schedules, maps, and trip planning.
    - Dynamic Sign-up – expand the sign-up process to allow bus operators to pick work for multiple service levels to allow Transit to adjust its service levels quickly over the course of the pandemic.
    - Transit Plus Eligibility Management Digitalization – digitalize the current paper-based system for determining eligibility of applicants for the Transit Plus service.
    - Predictive Maintenance Pilot – pilot a system that uses AI-based predictive analytics to schedule preventative maintenance activities to reduce out-of-service time for buses.

- Water and Waste
    - MyUtility Customer Portal – enhance customer experience to allow them to easily set-up recycling, garbage and waste collection reminders, report missed recycling, garbage and yard waste collections, and request pickups for extra garbage and/or large items.

- Workflow and Document Management – standardize process compliance and increase efficiency in Vacancy Management, Investment Planning, and Security Incident Reports.
- Digital Enhancement for Field Employees – further digitally enhance Water and Waste plant and field staff's business processes, such as Time and Vacation Management, No Water/Frozen Water Service Requests, and Hazardous Material Tracking.
- Lawyer Gateway Enhancements - expand the accessibility of our lawyer gateway portal to facilitate legal activities for water customers.

Conclusion

Management and staff in all departments are actively engaged in innovation and continuous improvement to produce increased public value through an improved customer experience, more effective and efficient service delivery, better communications, and culture of innovation and learning for the City of Winnipeg.

FINANCIAL IMPACT

Financial Impact Statement Date: June 3, 2022

Project Name:

Opportunities from COVID-19 for the Innovation and Technology Department

COMMENTS:

There are no financial implications in receiving this report as information.

Jocelyn Peters - June 3, 2022

Jocelyn Peters, CPA, CGA
Manager of Finance & Administration (Campus)
Corporate Finance Department

CONSULTATION

This Report has been prepared in consultation with:

- Community Services
- Customer Service and Communications
- Fire Paramedic Service
- Planning, Property and Development
- Public Works
- Transit
- Water and Waste

OURWINNIPEG POLICY ALIGNMENT

1.4 Integrated Knowledge and Resources - Coordinate inter-departmental systems, projects, and resources, making the best use of internal and external expertise to better understand service needs, find the most appropriate solutions, optimize resources, and maximize community outcomes.

1.5 Evidence-Informed Decisions - Invest in data and technology in order to support objective, evidence-informed decision-making; support open government and open data principles for collection and sharing; help coordinate records and information management; and improve process efficiency, results-based service delivery and accountability.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

N/A

SUBMITTED BY

Department: Innovation and Technology
Division: Office of the Director
Prepared by: T. Gooch
Date: June 7, 2022
File No: N/A

Attachments: N/A