toronto public library

**STAFF REPORT
ACTION REQUIRED**

Digital Strategy 2020-2024

Date:	January 25, 2021
To:	Toronto Public Library Board
From:	City Librarian

SUMMARY

The purpose of this report is to request the Toronto Public Library Board's approval of the 2020-2024 Digital Strategy and 2021 Action Plan. It is also to provide an update on the 2020 Action Plan and set the future reporting process.

Modernization driven by data & technology is a key enabler in Toronto Public Library's (TPL) 2020-2024 Strategic Plan. To ensure staff and customers are provided with the right combination of technologies and supports to meet their evolving needs, a Digital Strategy is required. TPL's Digital Strategy defines a shared vision, course of action, and required investments to enable the priorities set out in TPL's 2020-2024 Strategic Plan. The 2020-2024 Digital Strategy will deliver exceptional digital value and experiences by achieving the following goals:

- TPL will have a vibrant digital presence that provides dynamic online services and physical spaces that are digitally advanced;
- There will be consistent, personalized experiences across and between service touchpoints, driving customer satisfaction and anticipating changing expectations;
- TPL will have a digitally-enabled workplace that improves ways of working, raises employee engagement and agility, and provides a consistent and positive employee experience;
- Data will be accessible, information will be meaningful and actionable, and analytics will be a core capability of the organization; and
- TPL will have a secure, integrated, scalable technology environment that can enable the library's current and future priorities.

Over the next 4 years, the Digital Strategy will guide TPL's digital reinvention journey to optimize our data and technology environment and set the stage for future transformation.

RECOMMENDATIONS

The City Librarian recommends that the Toronto Public Library Board:

1. Approves TPL's 2020-2024 Digital Strategy as described in Attachments 1 and 2;
2. Receives for information TPL's Digital Strategy Action Plans as described in Attachment 3;
3. Receives for information the Gartner Engagement Executive Summary as described in Attachment 4; and
4. Directs staff to provide an annual update on the progress of the Digital Strategy action plans.

FINANCIAL IMPACT

The Digital Strategy, including the 2021 Action Plan, is funded by TPL's operating and capital budgets, and the City staff recommended TPL 2021 budgets are currently under review at the City. The operating budget for the Information Technology Services division is approximately $16.7 million gross, including 67 full time equivalents, which represents approximately 8% of the TPL gross budget. For the capital budget, there are three main multi-year projects that contribute to the strategic plan execution roadmap, technology replacement strategy and digital strategy with 10-year funding for: Technology Asset Management Program ($57.1 million); Service Modernization and Transformation ($13.8 million); Digital Experience ($15.0 million). The technology capital projects represent 20% of TPL's gross capital budget.

To support digital services modernization, a new IT functional and organizational operating model was developed to support the Digital Strategy with a three-year implementation starting in 2021. Included in the City staff recommended TPL 2021 operating budget is an increase of $0.389 million net ($0.476 million gross), including 13.0 FTEs in 2021. The costs associated with this new operating model are mostly offset by reallocations of existing budget and an increase in permanently-hired staff, an approach which is not only less expensive but also builds and retains knowledge and expertise within the organization. Future year impact of this digital services modernization includes increases of $0.490 million net ($0.519 million gross) in 2022, including 4.0 FTEs, and $0.391 million net and gross in 2023, including 3.0 FTEs.

Future actions that may be identified for implementation in future years to support the Digital Strategy will be included in budget submissions for those years.

The Director, Finance & Treasurer has reviewed this Financial Impact Statement and agrees with it.

DECISION HISTORY

At the November 25, 2019 meeting, the Library Board approved the 2020-2024 Strategic Plan Overview as recommended by the Strategic Planning Steering Committee. https://www.torontopubliclibrary.ca/content/about-the-library/pdfs/board/meetings/2020/feb24/14-2020-2024-strat-plan-strategy-map-and-balanced-scorecard-combined-revised.pdf

COMMENTS

Digital Strategy Development

Development of TPL's Digital Strategy began in January 2020 but was delayed due to COVID-19 response and recovery efforts. Work resumed in June 2020 and Gartner Inc., a global research and advisory firm, was engaged to support the development of the Digital Strategy Assessment & Action Plan to help TPL:

* build a long-term digital strategy by assessing its infrastructure, services, and community needs to support continued technology investment;
* facilitate an environment that allows for a consistent customer experience across channels of engagement, driving customer satisfaction and meeting changing expectations of service delivery;
* identify activities and processes that need to be transformed to provide better services for customers;
* identify activities, processes, and technologies to create a diverse, connected digital workplace that will improve and simplify daily activities of front-line staff; and
* support TPL's Strategic Plan 2020-2024.

Gartner leveraged industry best practices and conducted a number of assessments, workshops and interviews to provide TPL with the following deliverables:
* IT Score Assessment Report
* Current State Assessment Report
* Future State Recommendations Report
* Knowledge Transfer Report

Gartner confirmed TPL to be at a Level 1 (Initial) Digital Maturity and reinforced that IT Maturity is an essential component of TPL's digital maturity. (It should be noted that digital maturity is typically low to modest in over 80% of government services organizations.) Essential to improving TPL's digital maturity and overall success are redesigned or new functional capabilities and innovation, speed and agility. So Gartner recommended that the focus of TPL's Digital journey be on optimization and setting the stage for transformation. Optimization includes improving employee productivity, creating a better customer experience, and increasing revenue and/or value-producing business opportunities. To do so, Gartner recommended that TPL focus on building, maturing and augmenting IT capabilities; evolving to a service-optimizing operating model; and building a modern digital business technology platform. Gartner concluded that over a four-year period, TPL could reasonably expect to attain a combination of medium and high maturity and successfully enable its 2020-2024 Strategic Plan. Additional information is available in Attachment 4: Gartner Engagement Executive Summary.

TPL accepted Gartner's assessments and recommendations and have used them as key inputs to the development of its 2020-2024 Digital Strategy. The final document in Attachment 4 has been developed in consultation with TPL staff, aligned with TPL's Strategic Plan execution roadmap, and has been approved by TPL's leadership team.

TPL's 2020-2024 Digital Strategy

To enable an innovative, efficient library system to better inform, engage and connect Toronto and its residents, and to build success, resilience and well-being for the city and its communities, the 2020-2024 Digital Strategy is focused on achieving the following:

- *Our ambition:* To deliver exceptional digital value and experiences;
- *Our commitment:* To provide staff and customers with the right combination of technologies and supports; and
- *Our approach*: To create a modern, connected and sustainable data and technology environment that is transformation-ready.

To achieve this, TPL's digital strategic focuses on five priority areas, with associated goals and key activities:

1.0 <u>Digital Services and Spaces</u>

Goal: TPL has a vibrant digital presence that provides dynamic online services and physical spaces that are digitally advanced.

Key activities:
- Enable the delivery of more digital services to meet customer demands.
- Deliver new innovative technologies to maximize the use of online and digital channels.
- Explore opportunities to provide more immersive experiences using interactive and augmented reality technologies.
- Leverage planned renovations/rebuilds to blend the physical and digital spaces by deploying smart building, wayfinding and service solutions.

2.0 <u>Unified Customer Experience</u>

Goal: Consistent, personalized experiences across and between service touchpoints, driving customer satisfaction and anticipating changing expectations.

Key activities:
- Apply human-centered and inclusive design to amplify the voice of the customer and support the full range of human diversity.
- Develop an easy-to-use digital customer experience platform that enables convenient and responsive access to TPL's services and collections.
- Deliver services that offer customers choice and flexibility across all TPL channels.
- Explore opportunities to leverage data and technology to create unique and targeted experiences based on customer choices and behaviours.

3.0 <u>Connected Workplace</u>

Goal: A digitally-enabled workplace that improves ways of working, raises employee engagement and agility, and provides a consistent and positive employee experience.

Key activities:
- Deliver an integrated suite of technologies to enable effective employee collaboration, productivity and communications.
- Provide technology and supports to equip a mobile workforce whether in branches, in the community or at home.
- Automate and streamline core work flows to increase the efficiency, effectiveness and speed of operations.

- Cultivate a "Digital by Default" culture and enable digital dexterity to support employees in embracing data and technology to achieve better outcomes.

4.0 Data-informed Decisions

Goal: Data is accessible, information is meaningful and actionable, and analytics is a core capability of the organization.

Key activities:
- Structure and manage data as a strategic asset to ensure it is protected and fit for analytics use.
- Automate reporting to support performance measurement.
- Provide self-serve technology and supports for staff to run queries and get whatever data they need to make timely decisions.
- Explore opportunities to enhance our Open Data platform and analysis tools to enable broader use, and to support informational, educational, professional and/or civic engagement interests.

5.0 Adaptive Technology Foundation

Goal: Provide a secure, integrated, scalable technology environment that can enable TPL's current and future priorities.

Key Activities:
- Raise the maturity of IT functions so that the organization can effectively support TPL's digital aspirations.
- Improve access to technology for staff and customers.
- Rationalize and optimize legacy technologies to reduce cost, improve performance, facilitate integration and increase user adoption and satisfaction.
- Adopt a modern security approach to improve cybersecurity and TPL's overall security position.
- Enable better communications between systems to amplify customer and employee voices and support co-operative partnerships.
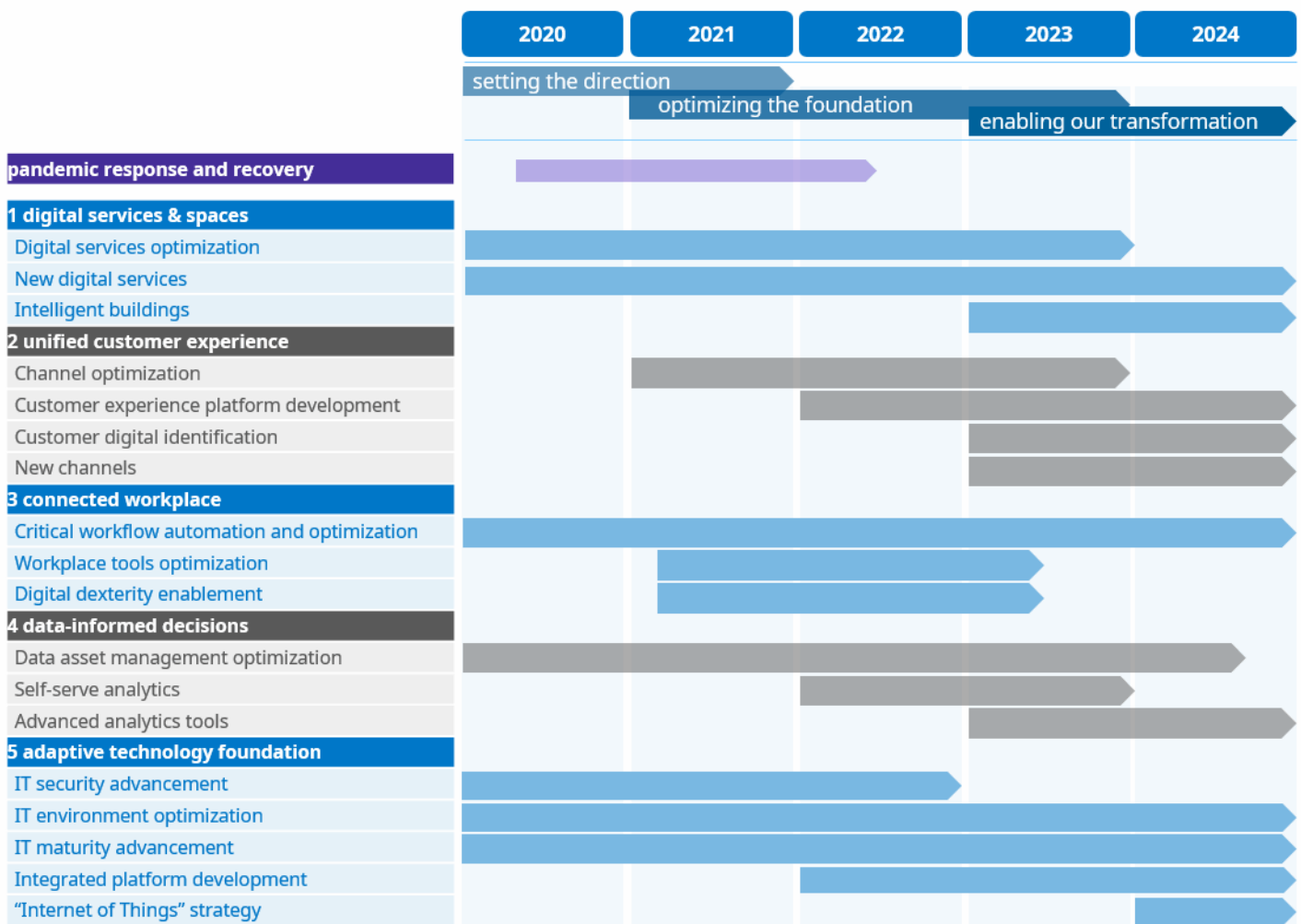
Pandemic Response and Recovery

The Digital Strategy roadmap and action plans have been developed and are executed within the context of TPL's ongoing COVID-19 pandemic response and recovery planning and operations.

A journey of reinvention, enabled by the digital strategy, is anticipated to follow three phases that will overlap over the course of the strategic plan:

- **Phase 1: Setting Direction** establishes a unified digital direction, informed by assessment and leading practice.

- **Phase 2: Optimizing the Foundation** strengthens TPL's digital and IT capabilities, processes and technologies to enable reinvention.

- **Phase 3: Enabling our Transformation** invests in new technologies and capabilities to exceed customer expectations and enable innovation and growth.

Guiding principles have been developed to ensure that, throughout this journey, there is a consistent approach to the execution and decision-making of the Digital Strategy.

The roadmap for the Digital Strategy identifies key activities planned over the next five years:

	2020	2021	2022	2023	2024

setting the direction
optimizing the foundation
enabling our transformation

pandemic response and recovery

1 digital services & spaces
Digital services optimization
New digital services
Intelligent buildings

2 unified customer experience
Channel optimization
Customer experience platform development
Customer digital identification
New channels

3 connected workplace
Critical workflow automation and optimization
Workplace tools optimization
Digital dexterity enablement

4 data-informed decisions
Data asset management optimization
Self-serve analytics
Advanced analytics tools

5 adaptive technology foundation
IT security advancement
IT environment optimization
IT maturity advancement
Integrated platform development
"Internet of Things" strategy

Success of the Digital Strategy will be measured as per the relevant indicators identified in TPL's Enterprise Balanced Scorecard. As part of the annual Balanced Scorecard review, measures related to the Digital Strategy will be revised and added to ensure that they are meaningful and indicative of the progress and outcomes being achieved.

By executing on the proposed Digital Strategy, TPL is confident that it can provide exceptional value and experiences to staff and customers by ensuring they have the right combination of technologies and supports to meet evolving needs. Most importantly, it will enable the priorities identified in TPL's 2020-2024 Strategic Plan and build a secure, reliable, scalable data and technology foundation that can evolve with TPL's future growth and transformation aspirations.

Attachments 1 and 2 describe the 2020-2024 Digital Strategy.

TPL's Digital Strategy Action Plans

On a go-forward basis, a more detailed action plan of initiatives will be developed and presented on an annual basis to support the Digital Strategy roadmap.

2020 Action Plan

2020 was a transition year where a majority of the focus was on assessments to support the development of the Digital Strategy and ensuring alignment with the 2020-24 Strategic Plan and Strategic Plan execution roadmap. The following is a list of initiatives that were undertaken to advance the Digital Strategy in 2020.

Priority Area	Initiatives	Update
1 digital services & spaces		
New digital services	Enable Digital Access Card*	Registration launched in September for people who live in Toronto. Phase 2 is currently being scoped.
	Enable Self-Checkout*	75+ branches complete. Paused due to capacity limitations.
	Enable Point-of-Sale*	Paused due to capacity limitations.
	Modernize TPL's Digital Archive*	Scheduled to go live in Q2 2021.
4 data-informed decisions		
Data asset management optimization	Data and analytics program design	Develop a program to enable informed decision-making by evolving data asset management, business intelligence and analytics practices.

5 adaptive technology foundation		
IT security advancement	IT security, risk and governance program design	Resumed when manager was hired. Framework developed. Action plan created and being refined.
IT environment optimization	Computing devices review and persona modelling and plan development	Assessment complete. Personas and plan developed. Will resume when lead is hired.
IT maturity advancement	IT maturity assessment and plan	Assessment complete and plan developed. Will resume when lead is hired.
	Operating model design and implementation	Operating model design complete. Hiring in progress. Departmental changes made. City 2021 Operating Budget request submitted to support model implementation.
	Documentation improvement	Documentation framework complete. Documentation inventory complete. Documentation in development – will move to operations.

*Strategic Plan Execution Roadmap Initiative

See Attachment 3: Digital Strategy 2020 and 2021 Action Plans for additional details on timelines.

2021 Action Plan

In addition to continuing with the in-progress initiatives outlined in the 2020 Action Plan, the following are 2021 action plan initiatives:

Priority Area	Initiatives	Description
1 digital services & spaces		
Digital services optimization	Enable AODA compliance*	Ensure all digital products and assets meet AODA requirements.
New digital services	Enable programming modernization*	Automate the following business capabilities to support programming, learning, Reserve a Computer, spaces as a service, and MAP pass distribution: • Customer and staff identification and authentication • Program and event delivery and administration • Room and asset book and administration
2 unified customer experience		
Channel optimization	email channel optimization	Review process and technology for customer email communications and make improvements.
3 connected workplace		
Critical workflow automation and optimization	Enable public service incident management*	Automate Rules of Conduct incident reporting, investigations, management, and analysis.
Workplace tools optimization	Enable staff productivity, communications and collaboration*	Review processes and technologies and look for opportunities to consolidate and improve. Add functionalities such as Chat, file sharing, etc. Migrate staff intranet (ShareTPL) to new platform.
	Enable remote work *	Reassess and align process and technology to support new remote work policies.
Digital dexterity enablement	Digital enablement program design	Develop a program to support adoption and use of digital technologies. Includes ongoing upskilling.

4 data-informed decisions		
Data asset management optimization	Data and analytics program implementation	Implement the program to enable data asset management, business intelligence and analytics.
	Data architecture review and redesign	Reassess data hub architecture based on program definition and make required changes.
	Data asset acquisition and disclosure strategy	Develop standard processes to bring in 3rd party data assets and support Open Data practices.
	Data collection automation	Standardize a tool to collect data.
	Data quality management optimization	Improve processes and reassess data quality solution based on program definition and make required changes.
5 adaptive technology foundation		
IT security advancement	IT security, risk and governance program implementation	Implement the program to increase IT security posture.
IT environment optimization	Computing devices plan implementation	Implement personas and improvement changes.
	Print devices assessment and plan	Develop strategy, review current environment and develop improvement plan.
	Applications rationalization and roadmap	Conduct technical and fitness tests. Determine disposition and create multi-year roadmaps.
	Cloud migration plan	Develop plan to move applications identified through rationalization to the Cloud.
	Enterprise architecture program design	Formalize an enterprise architecture program with standard framework, accountabilities and processes.
	IT infrastructure review and redesign	3rd party assessment to develop conceptual design and roadmap.
	Telecommunications review and redesign	3rd party assessment to develop conceptual design and roadmap.
IT maturity advancement	Advancement plan implementation	Implement Gartner recommendations to improve IT maturity.

*Strategic Plan Execution Roadmap Initiative

See Attachment 3: Digital Strategy 2020 and 2021 Action Plans for additional details on timelines.

Reporting Process

Staff will conduct quarterly internal reviews to understand progress on the Digital Strategy and determine actions needed to remove roadblocks, adjust pace, manage resources, etc. Twice a year, progress will be reported to the Board and to all TPL employees as part of the Balanced Scorecard reporting process. Reporting on the outcomes of the action plan and presentation of the subsequent year action plan will be done annually in the first quarter.

CONTACT

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SIGNATURE

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Vickery Bowles
City Librarian

ATTACHMENTS

Attachment 1: 2020-2024 Digital Strategy at a Glance
Attachment 2: 2020-2024 Digital Strategy
Attachment 3: Digital Strategy 2020 and 2021 Action Plan
Attachment 4: Gartner Engagement Executive Summary

tpl's digital strategy

our ambition

To deliver exceptional digital value & experiences

our committment

To provide our staff and customers with the right combination of technologies and supports

our approach

To create a modern, connected and sustainable data and technology environment that is transformation-ready

our focus

1 digital services & spaces

TPL has a vibrant digital presence that provides dynamic online services and physical spaces that are digitally advanced.

2 unified customer experience

Consistent, personalized experiences across and between service touchpoints, driving customer satisfaction and anticipating changing expectations.

3 connected workplace

A digitally-enabled workplace that improves ways of working, raises employee engagement and agility, and provides a consistent and positive employee experience.

4 data-informed decisions

Data is accessible, information is meaningful and actionable, and analytics is a core capability of the organization.

5 adaptive technology foundation

A secure, integrated, scalable technology environment that can enable TPL's current and future priorities.

guiding principles

be **customer-centric**

ensure **security & privacy**

strive for **equity & inclusion**

be **collaborative**

manage **risk**

build for **sustainability & scalability**

encourage **innovation & creativity**

our journey of reinvention

| 2020 | 2021 | 2022 | 2023 | 2024 |

setting the direction

establish a unified digital direction, informed by assessment and leading practice

optimizing the foundation

strengthen our capabilities, processes and technologies to enable reinvention

enabling our transformation

invest in new technologies and capabilities to exceed customer expectations and enable innovation and growth

Digital Strategy 2020-2024
a journey of reinvention

Toronto Public Library Board
January 25, 2021

our ambition	our commitment	our approach
To deliver **exceptional digital value & experiences**	To provide our staff and customers with **the right combination of technologies and supports**	To create a **modern, connected and sustainable** data and technology environment that is transformation-ready

the change that will achieve this

today   **with TPL's digital strategy**

| mostly "physical" in-branch services   →   **1** digital services & spaces

| unconnected customer access points   →   **2** unified customer experience

| organizational siloes   →   **3** connected workplace

| unusable data   →   **4** data-informed decisions

| multiple outdated standalone technologies   →   **5** adaptive technology foundation

tpl:

1 digital services & spaces

today

- Services primarily designed for in-branch delivery
- Digital presence is static
- Renovations/rebuilds not leveraging technology advancements
- Digital is an afterthought

→ TPL has a vibrant digital presence that provides dynamic online services and physical spaces that are digitally advanced.

key activities

- Enable the delivery of more digital services to meet customer demands
- Deliver new innovative technologies to maximize the use of online and digital channels
- Explore opportunities to provide more immersive experiences using interactive and augmented reality technologies
- Leverage planned renovation/rebuild to blend the physical and digital spaces by deploying smart building, wayfinding and service solutions

strategic objectives enabled
1.1 Spaces as a Service program
1.3 Online & Digital Service (Tier 4) Reimagined
2.1 Access to Technology & Digital Literacy strategy
3.1 Workforce Development Strategy

tpl:

2 unified customer experience

today

- Voice of customer is survey based

- Customer interactions are primarily transactional

- Customer journey is not seamless

- Customer digital expectations & behaviours are rapidly changing

Consistent, personalized experiences across and between service touchpoints, driving customer satisfaction and anticipating changing expectations.

key activities

- Apply human-centered and inclusive design to amplify the voice of the customer and support the full range of human diversity.

- Develop an easy-to-use digital customer experience platform that enables convenient and responsive access to the TPL's services & collections.

- Deliver services that offer customers choice and flexibility, across all TPL channels.

- Explore opportunities to leverage data and technology to create unique and targeted experiences based on customer choices and behaviours.

strategic objectives enabled
6.22   Modernize Customer Experience

tpl:

3 connected workplace

today

- High number of manual processes
- No consistent channels for communication and collaboration
- Little focus on workflow and staff experience improvements
- Tools and technologies support only static, onsite work
- Varying degrees of digital uptake and adoption; pace of innovation and ability to pivot is slow

A digitally-enabled workplace that improves ways of working, raises employee engagement and agility, and provides a consistent and positive employee experience.

key activities

- Deliver an integrated suite of technologies to enable effective employee collaboration, productivity and communications.

- Provide technology and supports to equip a mobile workforce whether in branches, in the community or at home.

- Automate and streamline core work flows to increase the efficiency, effectiveness and speed of operations.

- Cultivate a "Digital by Default" culture and enable digital dexterity to support employees in embracing data and technology to achieve better outcomes.

strategic objectives enabled
5.1   Modernize Employee Experience
5.2   Modern Workplace

tpl:

4 data-informed decisions

today

- Poor data quality & lack of metadata
- Analytics skillset is centralized
- Analysis primarily focused on what has happened
- Insights not actioned
- Value of data not realized

Data is accessible, information is meaningful and actionable, and analytics is a core capability of the organization.

key activities

- Structure and manage data as a strategic asset to ensure it is protected and fit for analytics use.

- Automate reporting to support performance measurement.

- Provide self-serve technology and supports for staff to run queries and get whatever data they need to make timely decisions.

- Explore opportunities to enhance TPL's Open Data platform and analysis tools to enable broader use, and to support informational, educational, professional and/or civic engagement interests.

strategic objectives enabled
6.4 Evaluation & Accountability Practices

5 adaptive technology foundation

today

- Legacy environment of disparate and duplicated technologies that don't communicate with each other
- IT environment not aligned with current & future program needs
- Low maturity of IT capabilities; increased cybersecurity threats
- Don't fully realize data and technology partnership opportunities

A secure, integrated, scalable technology environment that can enable TPL's current and future priorities.

key activities

- Raise the maturity of IT functions so that the organization can effectively support TPL's digital aspirations.

- Improve access to technology for staff and customers.

- Rationalize and optimize legacy technologies to reduce cost, improve performance, facilitate integration and increase user adoption & satisfaction.

- Adopt a modern security approach to improve cybersecurity and TPL's overall security position.

- Enable better communications between systems to amplify customer and employee voices and support co-operative partnerships.

strategic objectives enabled

6.22 Modernize Data and Technology Environment

our journey of reinvention

guiding principles

- be **customer-centric**
- ensure **security & privacy**
- strive for **equity & inclusion**
- be **collaborative**
- manage **risk**
- build for **sustainability & scalability**
- encourage **innovation & creativity**

2020	2021	2022	2023	2024

setting the direction

establish a unified digital direction, informed by assessment and leading practice

optimizing the foundation

strengthen our capabilities, processes and technologies to enable reinvention

enabling our transformation

invest in new technologies and capabilities to exceed customer expectations and enable innovation and growth

digital strategy roadmap

	2020	2021	2022	2023	2024

setting the direction

optimizing the foundation

enabling our transformation

pandemic response and recovery

1 digital services & spaces

Digital services optimization

New digital services

Intelligent buildings

2 unified customer experience

Channel optimization

Customer experience platform development

Customer digital identification

New channels

3 connected workplace

Critical workflow automation and optimization

Workplace tools optimization

Digital dexterity enablement

4 data-informed decisions

Data asset management optimization

Self-serve analytics

Advanced analytics tools

5 adaptive technology foundation

IT security advancement

IT environment optimization

IT maturity advancement

Integrated platform development

"Internet of Things" strategy

the digital strategy scorecard

focus area	2021 measure (KPI)
1 digital services & spaces	# of digital initiatives completed # of new digital services
2 unified customer experience	# of digital initiatives completed # of online visits customer satisfaction with digital services
3 connected workplace	# of digital initiatives completed
4 data-informed decisions	# of digital initiatives completed # of automated reports
5 adaptive technology foundation	# of digital initiatives completed data & technology maturity score cyber security risk mitigation

tpl:

Digital Strategy 2020-2024
2020 and 2021 action plans

Toronto Public Library Board
January 25, 2021

tpl: toronto public library

digital strategy 2020 action plan

		Q1	Q2	Q3	Q4
pandemic response and recovery					
Digital Strategy Development					
Current State Assessment					
Future State Recommendations					
Document Development & Approval					
1 digital services & spaces					
New digital services	Enable Digital Access Card*				
	Enable Self-Checkout*				
	Enable Point-of-Sale*				
	Modernize TPL's Digital Archive*				
2 unified customer experience					
3 connected workplace					
4 data-informed decisions					
Data asset management optimization	Data and analytics program design				
5 adaptive technology foundation					
IT security advancement	IT security, risk and governance program design				
IT environment optimization	Computing devices review and persona modelling and Plan Development				
IT maturity advancement	IT maturity assessment and plan				
	Operating model design and implementation				
	Documentation improvement				

*Strategic Plan Execution Roadmap Initiative

digital strategy 2021 action plan

	Q1	Q2	Q3	Q4
pandemic response and recovery	████████████████████████			
1 digital services & spaces				
Digital services optimization — Enable AODA compliance*		████████████████████		
New digital services — Enable programming modernization*		████████████████████		
2 unified customer experience				
Channel optimization — Optimize TPL's eMail channel	████████████████████████			
3 connected workplace				
Critical workflow automation & optimization — Enable incident management*	████████████████████████			
Workplace tools optimization — Enable staff productivity, communications and collaboration*		████████████████████		
Enable remote work *		████████████████████		
Digital dexterity enablement — Design digital enablement program		████████████████████		
4 data-informed decisions				
Data asset management optimization — Implement data and analytics program	████████████████████████			
Review and redesign data architecture	████████████			
Develop data asset acquisition and disclosure strategy			████████████	
Automate data collection	████████████			
Optimize data quality management	████████████████			
5 adaptive technology foundation				
IT security advancement — Implement IT security, risk & governance program	████████████████████████			
IT environment optimization — Implement computing devices plan	████████████████			
Assess and develop plan for print devices		████████████		
Develop an applications rationalization & optimization roadmap	████████████████			
Develop Cloud migration plan			████████████	
Develop enterprise architecture program	████████████			
Review and redesign IT infrastructure	████████████			
Review and redesign telecommunications	████████████			
IT maturity advancement — Implement IT Maturity advancement plan	████████████████████████			

Gartner Engagement Executive Summary
Current State Assessment &
Future State Findings

Toronto Public Library Board
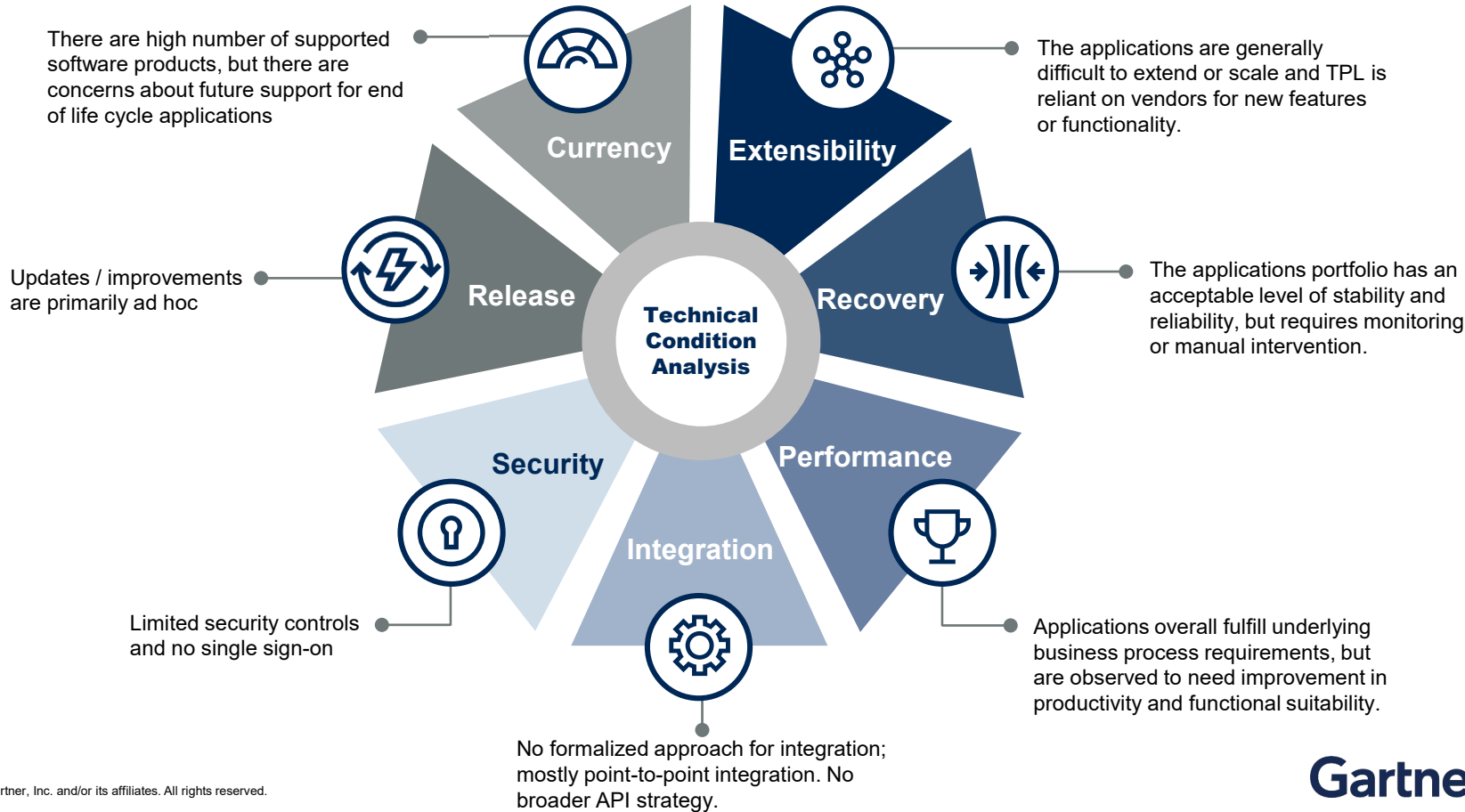January 25, 2021

tpl: toronto public library

The current state assessment confirmed TPL to be at a Level 1 (Initial) Digital Maturity

Each digital maturity level presented unique, varied capabilities according to TPL's business drivers and policy objectives. This model assisted in confirming that TPL's current priorities are setting TPL on a sustainable path for long-range digital optimization.

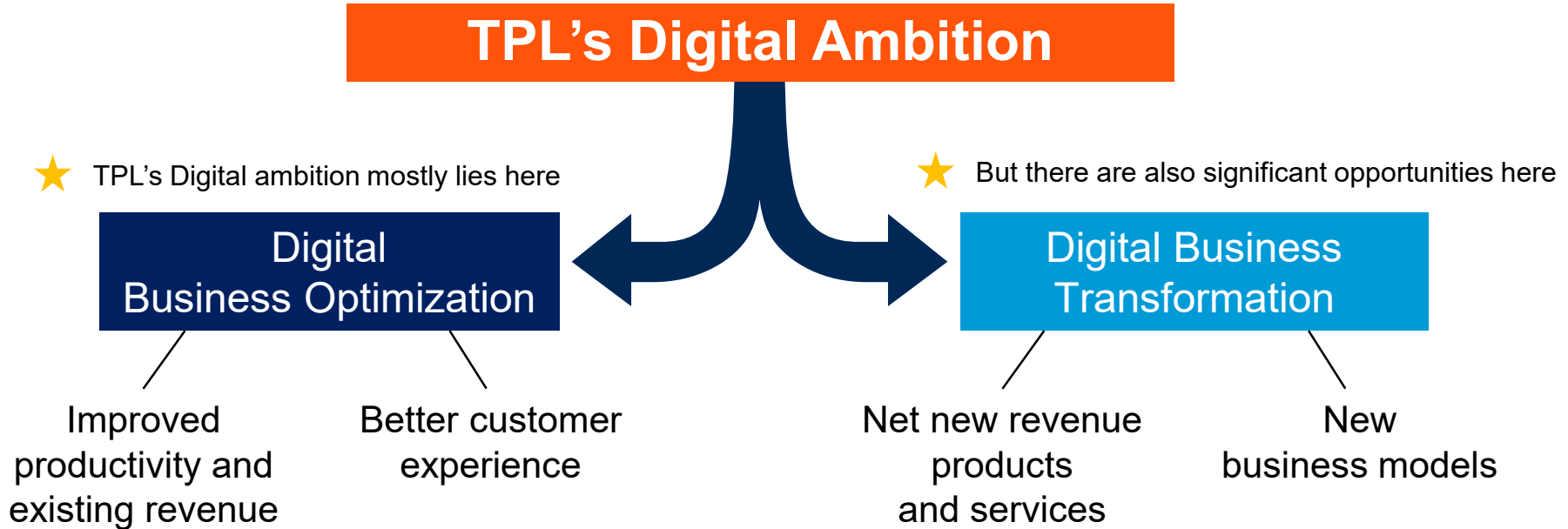| Maturity Level	E-Government 01 Initial	Open 02 Developing	Data-Centric 03 Defined	Fully Digital 04 Managed	Smart 05 Optimizing
Value Focus	Compliance	Transparency	Constituent Value	Insight-Driven Transformation	Sustainability
Service Model	Reactive	Intermediated	Proactive	Embedded	Predictive
Platform	IT-Centric	Customer-Centric	Data-Centric	Thing-Centric	Ecosystem-Centric
Ecosystem	Government-Centric	Service Co-Creation	Aware	Engaged	Evolving
Leadership	Technology	Data	Business	Information	Innovation
Technology Focus	SO Architecture	API Management	Open Any Data	Modularity	Intelligence
Key Metrics	% of Services Online	Number of Open Datasets	% Improvement in Outcomes, KPIs	% of New and Retired Services	Number of New and Service Delivery Models

Current Level Of Maturity

Digital Maturity Is **Low to Modest in ~82%** of Government Services Organizations

Gartner

TPL's application portfolio broadly exhibits low technical condition

There are high number of supported software products, but there are concerns about future support for end of life cycle applications

The applications are generally difficult to extend or scale and TPL is reliant on vendors for new features or functionality.

Updates / improvements are primarily ad hoc

The applications portfolio has an acceptable level of stability and reliability, but requires monitoring or manual intervention.

Limited security controls and no single sign-on

Applications overall fulfill underlying business process requirements, but are observed to need improvement in productivity and functional suitability.

No formalized approach for integration; mostly point-to-point integration. No broader API strategy.

Currency

Extensibility

Release

Recovery

Security

Performance
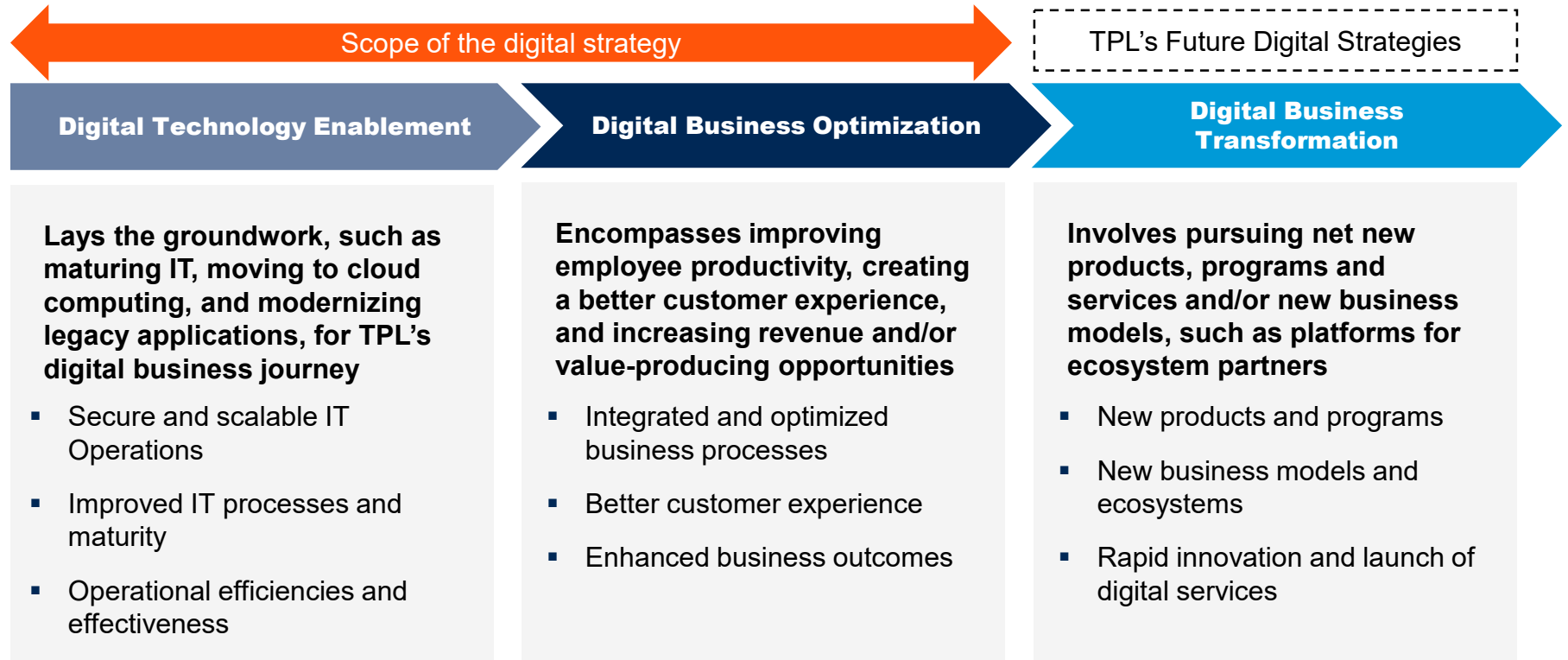
Integration

Technical Condition Analysis

Gartner

TPL's Technology and Infrastructure landscape has strengths but also gaps that may inhibit the digital strategy.

Data Centre

- Load balancing and high availability infrastructure is in place for the on-premises data centre.
- There is no secondary data centre for disaster recovery fail over.
- Backups and recovery procedures are in place though there are no SLAs or recovery point/recovery time objectives currently defined.

Cloud

- MS Office 365 and ancillary cloud services are being used.
- A minor player is more extensively used for web cloud hosting and ad hoc use of a major Cloud vendor.
- There is no coherent strategy or migration plan for cloud adoption.

Security

- There is no multifactor authentication in place for internal or customer facing systems and accounts and passwords are often internally shared across users.
- Intrusion prevention, detection and monitoring functions are in place.
- Not all applications are up-to-date, and may contain vulnerabilities.

Integration

- System interoperability is mostly limited to simple point-to-point integrations.
- There is no middleware layer or integration platform in place.
- There are multiple integration types between systems, and few standards.

Management Tools

- Data centre and network health monitoring is in place.
- Virtual Machines are used to manage infrastructure, but VM management is generally a manual process.
- There are tools in place to automate and monitor processes and systems, services, issues and system backups

Devices

- Staff desktops are tightly controlled and managed.
- There is a proliferation of mobile devices and IT assets, and management of these devices could be improved.
- There a limited replacement budget and life cycle for IT assets and devices.

Network

- The network has strong redundancy and resiliency designs in place.
- There is a shared network between external customers and internal users.
- The perimeter of the network is monitored.

IAM

- There are few single-sign-on (SSO) capabilities and this is mainly accomplished through common credentials rather than modern SSO features.
- Simple proxy authentication is used to provide access to external partner solutions.

Gartner

TPL's ultimate Digital Ambition is to pursue both Digital Business Optimization and Digital Business Transformation

TPL's Digital Ambition

★ TPL's Digital ambition mostly lies here

★ But there are also significant opportunities here

Digital Business Optimization

Digital Business Transformation

Improved productivity and existing revenue

Better customer experience

Net new revenue products and services
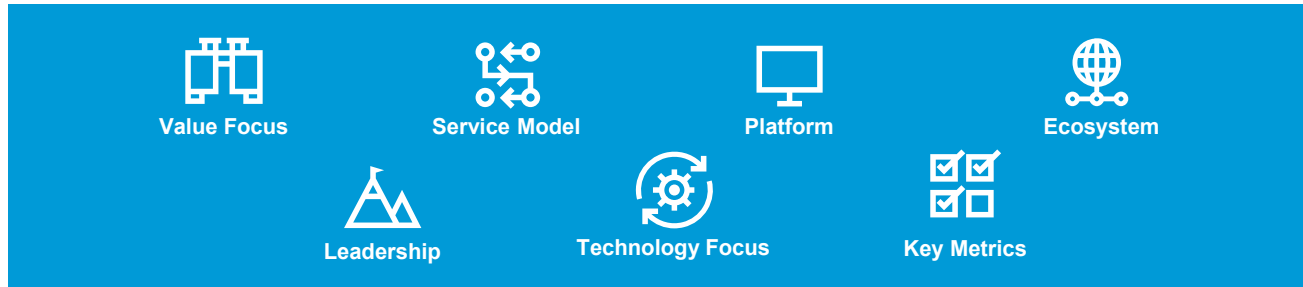
New business models

Gartner

However, in the next four years, TPL will be embarking on Digital Journey toward Digital Optimization and to set the stage for Digital Transformation

Scope of the digital strategy

TPL's Future Digital Strategies

Digital Technology Enablement

Digital Business Optimization

Digital Business Transformation

Lays the groundwork, such as maturing IT, moving to cloud computing, and modernizing legacy applications, for TPL's digital business journey

- Secure and scalable IT Operations
- Improved IT processes and maturity
- Operational efficiencies and effectiveness

Encompasses improving employee productivity, creating a better customer experience, and increasing revenue and/or value-producing opportunities

- Integrated and optimized business processes
- Better customer experience
- Enhanced business outcomes

Involves pursuing net new products, programs and services and/or new business models, such as platforms for ecosystem partners

- New products and programs
- New business models and ecosystems
- Rapid innovation and launch of digital services

Gartner

IT maturity is an essential component of TPL's digital maturity

Adoption of digital business principles will be placing new demands on the ITS department, requiring redesigned or new functional capabilities and making innovation, speed and agility essential to TPL's digital success.
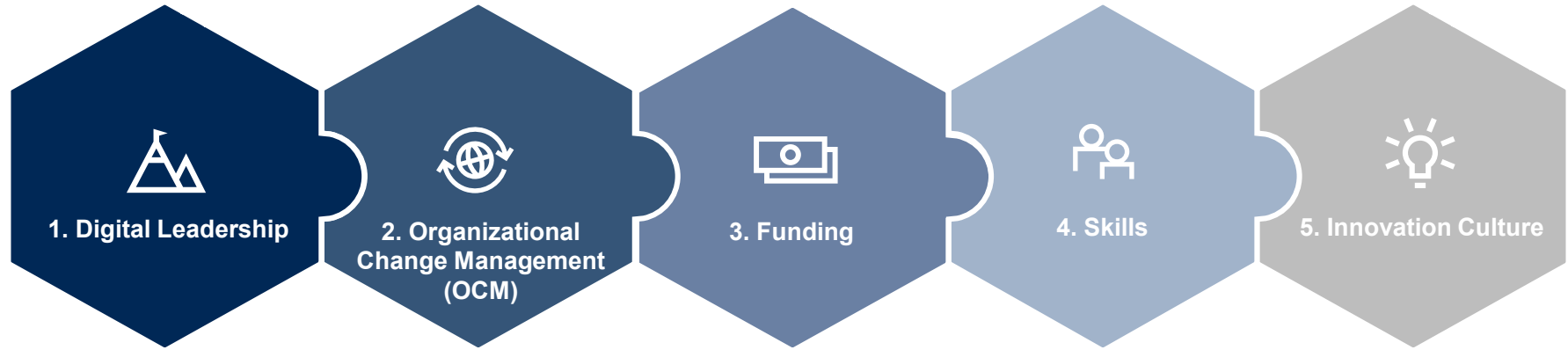

Digital Maturity

Value Focus · Service Model · Platform · Ecosystem · Leadership · Technology Focus · Key Metrics

IT Maturity

Vendor Management · Sourcing & Procurement · Data & Analytics · Security & Risk · Identity & Access Management · Infrastructure & Operations · Enterprise Architecture & Technology Innovation · Business Continuity Management · Applications · Privacy · Program & Portfolio Management

Gartner

Attainment of future state requires sustained execution over next four years and special attention to these critical success factors

1. Digital Leadership

2. Organizational Change Management (OCM)

3. Funding

4. Skills

5. Innovation Culture

1. Digital Leadership

- **Digital dexterity** needs to be developed broadly across TPL's leadership and within the workforce
- TPL's **digital vision** should be executed in an integrated manner across all business units

2. Organizational Change Management (OCM)

- OCM should include the development and implementation of a **communications plan**, **working groups** and **governance mechanisms**
- Digital optimization benefits need to be clearly communicated to business directors in order to ensure their **buy-in and support**

3. Funding

- Full funding must be committed and allocated toward TPL's digital strategy initiatives to include **required staff, tools, solutions and service optimization efforts**
- Develop and **fund Mode 2 ITS initiatives to support business capabilities** that will enable TPL to achieve its strategic goals

4. Skills

- An understanding of the **technical skills and business capabilities** present within ITS relating to IT and digital strategy will need to be developed
- As skills are not available within TPL immediately, continue to **use consultants or other professional services support**

5. Innovation Culture

- **Innovation goals** should be built into TPL's strategic execution plan
- Regularly **track and identify technology shifts and upcoming solutions** outside of public library industry that will have a secondary effect on TPL's digital business goals
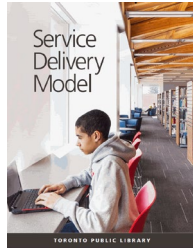
Gartner

Digital Strategy 2020-2024
a journey of reinvention
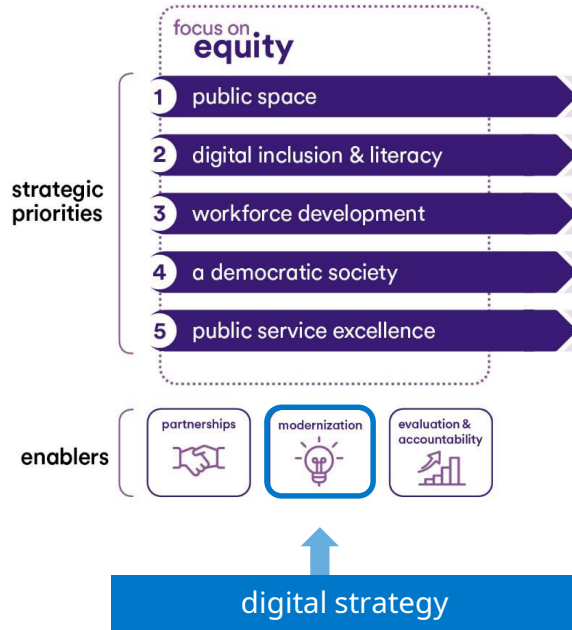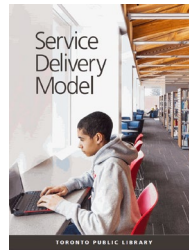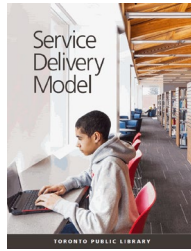
Toronto Public Library Board
January 25, 2021

tpl: toronto public library

tpl: vital to toronto
building success, resilience and well-being for our city

Toronto Public Library
strategic plan 2020–2024

tpl.ca

Service Delivery Model
TORONTO PUBLIC LIBRARY

focus on equity

strategic priorities

1. public space
2. digital inclusion & literacy
3. workforce development
4. a democratic society
5. public service excellence

enablers

partnerships

modernization

evaluation & accountability

spaces

collections

programs

staff

technology

tpl channels

branch

community

digital

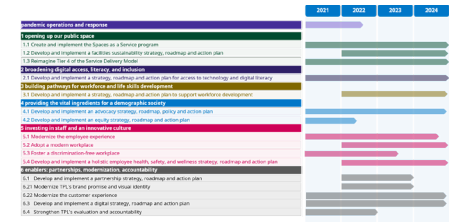**strategic priorities**

focus on **equity**

1. public space
2. digital inclusion & literacy
3. workforce development
4. a democratic society
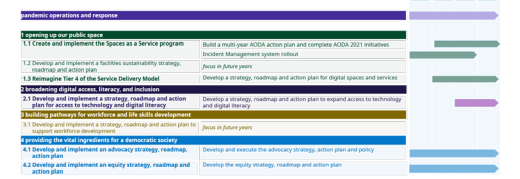5. public service excellence

enablers

partnerships

modernization

evaluation & accountability

digital strategy

Service Delivery Model

TORONTO PUBLIC LIBRARY

spaces · collections · programs · staff · technology

tpl channels

branch

community

digital

strategic priorities

focus on **equity**

1. public space
2. digital inclusion & literacy
3. workforce development
4. a democratic society
5. public service excellence

enablers
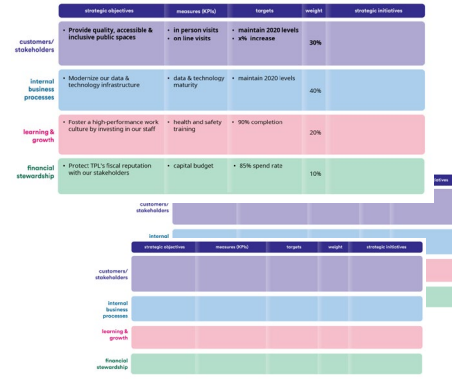- partnerships
- modernization
- evaluation & accountability

Service Delivery Model

TORONTO PUBLIC LIBRARY

spaces · collections · programs · staff · technology

tpl channels
- branch
- community
- digital

digital strategy

our ambition	our commitment	our approach
To deliver **exceptional digital value & experiences**	To provide our staff and customers with **the right combination of technologies and supports**	To create a **modern, connected and sustainable** data and technology environment that is transformation-ready

the change that will achieve this

today

with TPL's digital strategy

| mostly "physical" in-branch services → **1** digital services & spaces

| unconnected customer access points → **2** unified customer experience

| organizational siloes → **3** connected workplace

| unusable data → **4** data-informed decisions

| multiple outdated standalone technologies → **5** adaptive technology foundation

tpl:

1 digital services & spaces

today

- Services primarily designed for in-branch delivery

- Digital presence is static

- Renovations/rebuilds not leveraging technology advancements

- Digital is an afterthought

TPL has a vibrant digital presence that provides dynamic online services and physical spaces that are digitally advanced.

key activities

- Enable the delivery of more digital services to meet customer demands

- Deliver new innovative technologies to maximize the use of online and digital channels

- Explore opportunities to provide more immersive experiences using interactive and augmented reality technologies

- Leverage planned renovation/rebuild to blend the physical and digital spaces by deploying smart building, wayfinding and service solutions

strategic objectives enabled
1.1 Spaces as a Service program
1.3 Online & Digital Service (Tier 4) Reimagined
2.1 Access to Technology & Digital Literacy strategy
3.1 Workforce Development Strategy

2 unified customer experience

today

- Voice of customer is survey based
- Customer interactions are primarily transactional
- Customer journey is not seamless
- Customer digital expectations & behaviours are rapidly changing

Consistent, personalized experiences across and between service touchpoints, driving customer satisfaction and anticipating changing expectations.

key activities

- Apply human-centered and inclusive design to amplify the voice of the customer and support the full range of human diversity.

- Develop an easy-to-use digital customer experience platform that enables convenient and responsive access to the TPL's services & collections.

- Deliver services that offer customers choice and flexibility, across all TPL channels.

- Explore opportunities to leverage data and technology to create unique and targeted experiences based on customer choices and behaviours.

strategic objectives enabled
6.22   Modernize Customer Experience

tpl:

3 connected workplace

today

- High number of manual processes

- No consistent channels for communication and collaboration

- Little focus on workflow and staff experience improvements

- Tools and technologies support only static, onsite work

- Varying degrees of digital uptake and adoption; pace of innovation and ability to pivot is slow

A digitally-enabled workplace that improves ways of working, raises employee engagement and agility, and provides a consistent and positive employee experience.

key activities

- Deliver an integrated suite of technologies to enable effective employee collaboration, productivity and communications.

- Provide technology and supports to equip a mobile workforce whether in branches, in the community or at home.

- Automate and streamline core work flows to increase the efficiency, effectiveness and speed of operations.

- Cultivate a "Digital by Default" culture and enable digital dexterity to support employees in embracing data and technology to achieve better outcomes.

strategic objectives enabled
5.1 Modernize Employee Experience
5.2 Modern Workplace

tpl:

4 data-informed decisions

today

- Poor data quality & lack of metadata
- Analytics skillset is centralized
- Analysis primarily focused on what has happened
- Insights not actioned
- Value of data not realized

→ Data is accessible, information is meaningful and actionable, and analytics is a core capability of the organization.

key activities

- Structure and manage data as a strategic asset to ensure it is protected and fit for analytics use.

- Automate reporting to support performance measurement.

- Provide self-serve technology and supports for staff to run queries and get whatever data they need to make timely decisions.

- Explore opportunities to enhance TPL's Open Data platform and analysis tools to enable broader use, and to support informational, educational, professional and/or civic engagement interests.

strategic objectives enabled

6.4 Evaluation & Accountability Practices

tpl:

5 adaptive technology foundation

today

- Legacy environment of disparate and duplicated technologies that don't communicate with each other

- IT environment not aligned with current & future program needs

- Low maturity of IT capabilities; increased cybersecurity threats

- Don't fully realize data and technology partnership opportunities

A secure, integrated, scalable technology environment that can enable TPL's current and future priorities.

key activities

- Raise the maturity of IT functions so that the organization can effectively support TPL's digital aspirations.

- Improve access to technology for staff and customers.

- Rationalize and optimize legacy technologies to reduce cost, improve performance, facilitate integration and increase user adoption & satisfaction.

- Adopt a modern security approach to improve cybersecurity and TPL's overall security position.

- Enable better communications between systems to amplify customer and employee voices and support co-operative partnerships.

strategic objectives enabled
6.22 Modernize Data and Technology Environment

our journey of reinvention

guiding principles

- be **customer-centric**
- ensure **security & privacy**
- strive for **equity & inclusion**
- be **collaborative**
- manage **risk**
- build for **sustainability & scalability**
- encourage **innovation & creativity**

2020	2021	2022	2023	2024

setting the direction

establish a unified digital direction, informed by assessment and leading practice

optimizing the foundation

strengthen our capabilities, processes and technologies to enable reinvention

enabling our transformation

invest in new technologies and capabilities to exceed customer expectations and enable innovation and growth

digital strategy roadmap

	2020	2021	2022	2023	2024

setting the direction

optimizing the foundation

enabling our transformation

pandemic response and recovery

1 digital services & spaces

Digital services optimization

New digital services

Intelligent buildings

2 unified customer experience

Channel optimization

Customer experience platform development

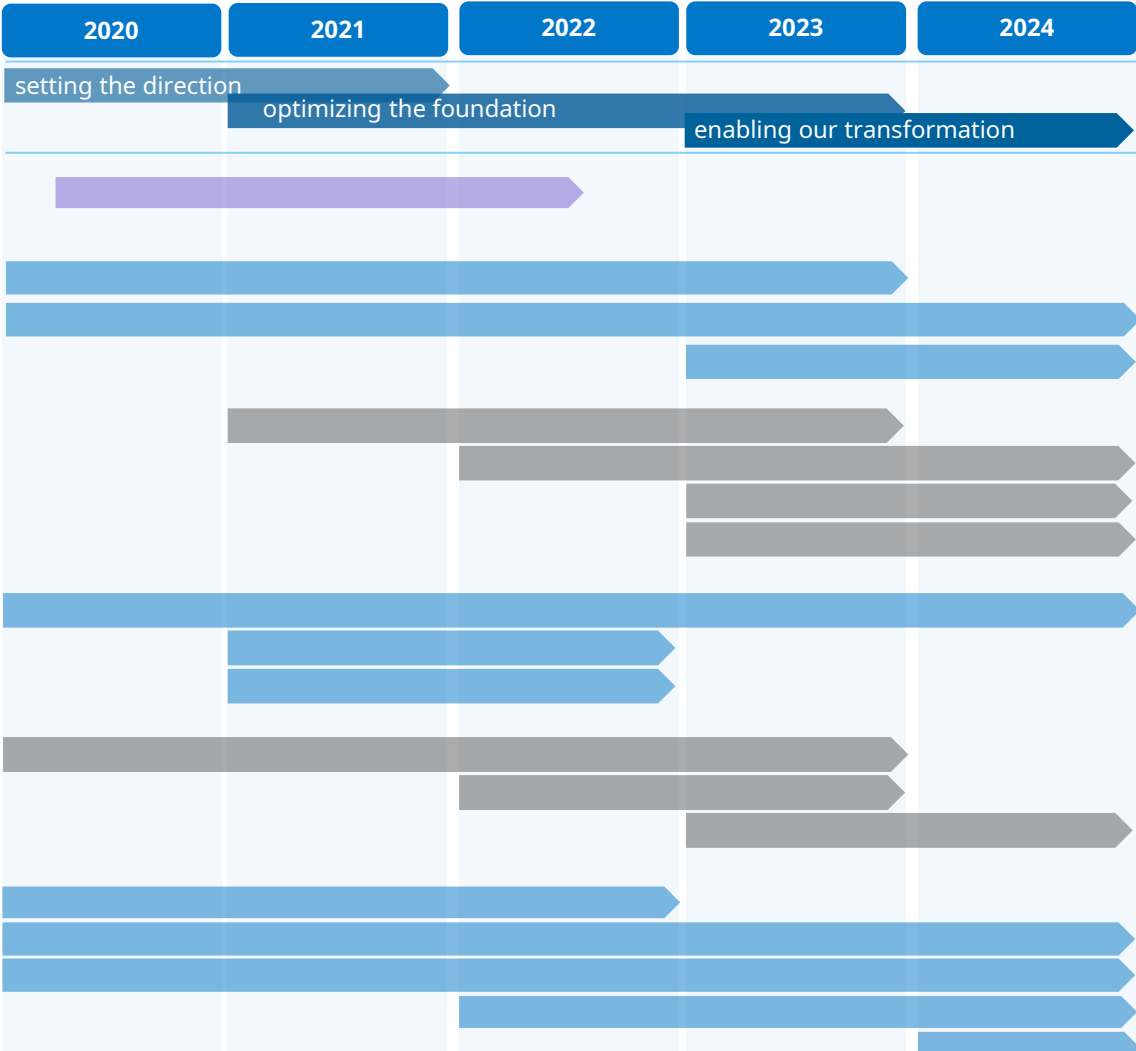Customer digital identification

New channels

3 connected workplace

Critical workflow automation and optimization

Workplace tools optimization

Digital dexterity enablement

4 data-informed decisions

Data asset management optimization

Self-serve analytics

Advanced analytics tools

5 adaptive technology foundation

IT security advancement

IT environment optimization

IT maturity advancement

Integrated platform development

"Internet of Things" strategy

measuring our success
the digital strategy scorecard

focus area	2021 measure (KPI)
1 digital services & spaces	# of digital initiatives completed # of new digital services
2 unified customer experience	# of digital initiatives completed # of online visits customer satisfaction with digital services
3 connected workplace	# of digital initiatives completed
4 data-informed decisions	# of digital initiatives completed # of automated reports
5 adaptive technology foundation	# of digital initiatives completed data & technology maturity score cyber security risk mitigation

tpl:

Digital Strategy 2020-2024
2020 and 2021 action plans

digital strategy 2020 action plan

		Q1	Q2	Q3	Q4

pandemic response and recovery

Digital Strategy Development
- Current State Assessment
- Future State Recommendations
- Document Development & Approval

1 digital services & spaces

New digital services	Enable Digital Access Card*
	Enable Self-Checkout*
	Enable Point-of-Sale*
	Modernize TPL's Digital Archive*

2 unified customer experience

3 connected workplace

4 data-informed decisions

| Data asset management optimization | Data and analytics program design |

5 adaptive technology foundation

IT security advancement	IT security, risk and governance program design
IT environment optimization	Computing devices review and persona modelling and Plan Development
IT maturity advancement	IT maturity assessment and plan
	Operating model design and implementation
	Documentation improvement

*Strategic Plan Execution Roadmap Initiative

digital strategy 2021 action plan

		Q1	Q2	Q3	Q4
pandemic response and recovery					
1 digital services & spaces					
Digital services optimization	Enable AODA compliance*				
New digital services	Enable programming modernization*				
2 unified customer experience					
Channel optimization	Optimize TPL's eMail channel				
3 connected workplace					
Critical workflow automation & optimization	Enable incident management*				
Workplace tools optimization	Enable staff productivity, communications and collaboration*				
	Enable remote work *				
Digital dexterity enablement	Design digital enablement program				
4 data-informed decisions					
Data asset management optimization	Implement data and analytics program				
	Review and redesign data architecture				
	Develop data asset acquisition and disclosure strategy				
	Automate data collection				
	Optimize data quality management				
5 adaptive technology foundation					
IT security advancement	Implement IT security, risk & governance program				
IT environment optimization	Implement computing devices plan				
	Assess and develop plan for print devices				
	Develop an applications rationalization & optimization roadmap				
	Develop Cloud migration plan				
	Develop enterprise architecture program				
	Review and redesign IT infrastructure				
	Review and redesign telecommunications				
IT maturity advancement	Implement IT Maturity advancement plan				