WEB MAPPING ROADMAP 2023-2026

York Region

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ROADMAP ON A PAGE

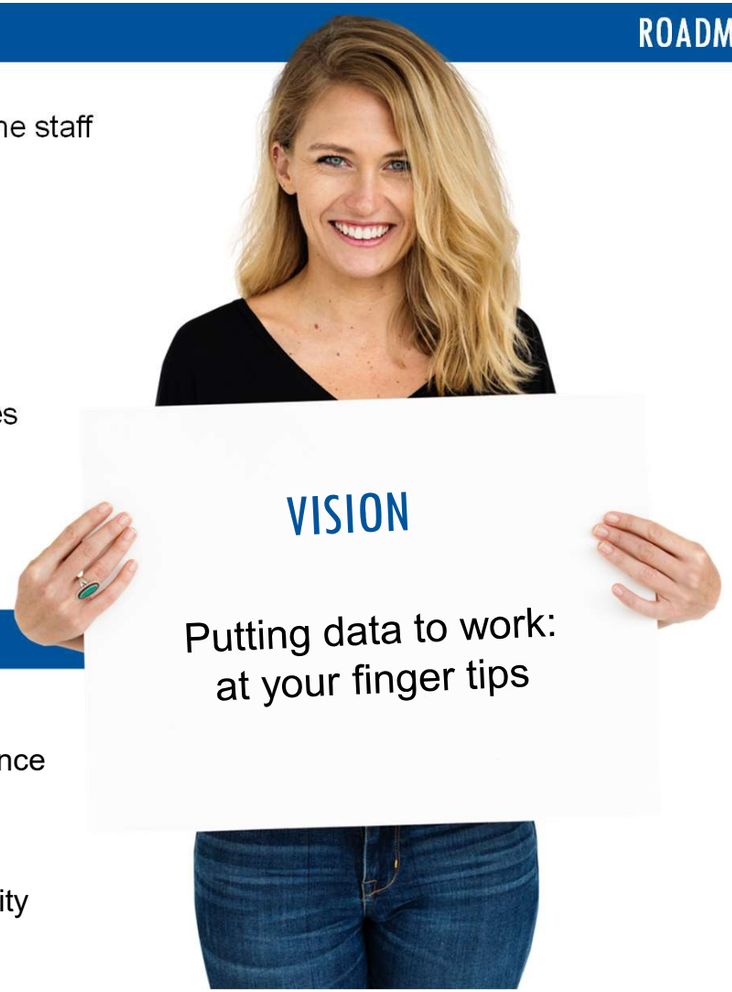
WEB MAPPING ROADMAP | 2023-2026

FOCUS AREAS

- Self-Service and Customer Experience
- Access and Data Sharing
- Talent and Communication
- Operations and Sustainability

OBJECTIVES

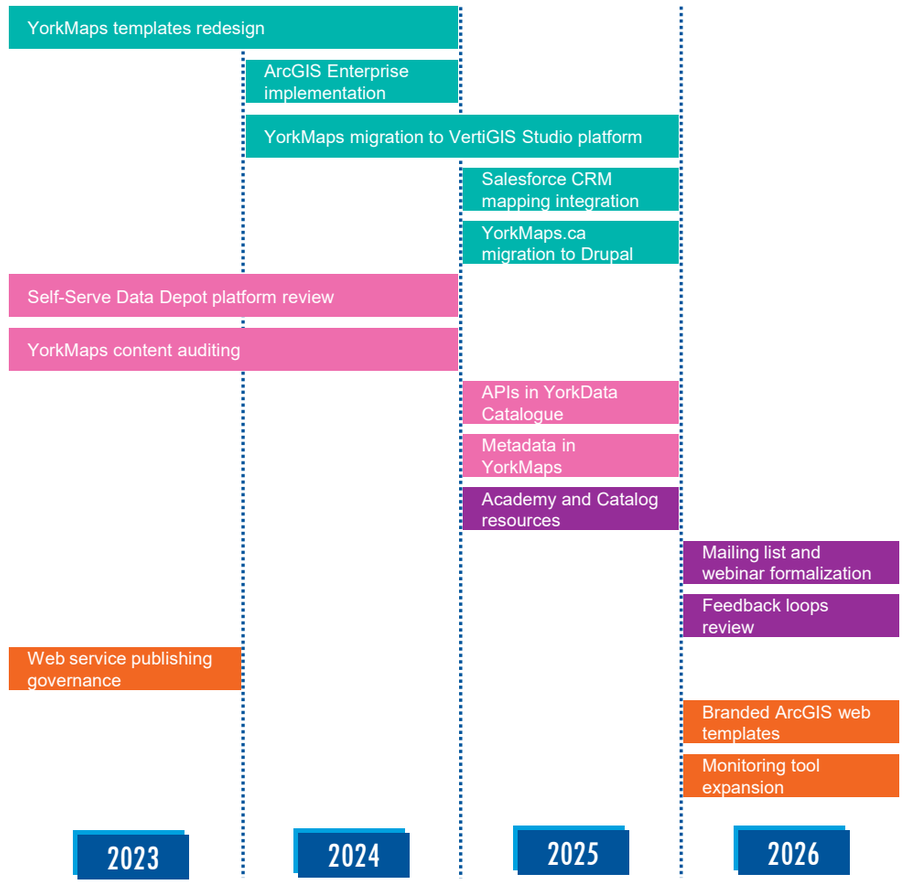
- Advance self-serve mapping and analytics for front-line staff
- Deliver a modern and personalized user experience
- Integrate advanced visualization capabilities
- Expand web-based data collection and editing
- Increase integration with business systems
- Revitalize trust in web mapping data and systems
- Increase data and information discoverability
- Introduce new learning and development opportunities
- Increase two-way public communication
- Reinforce a federated service delivery model
- Streamline maintenance processes



INDUSTRY TRENDS

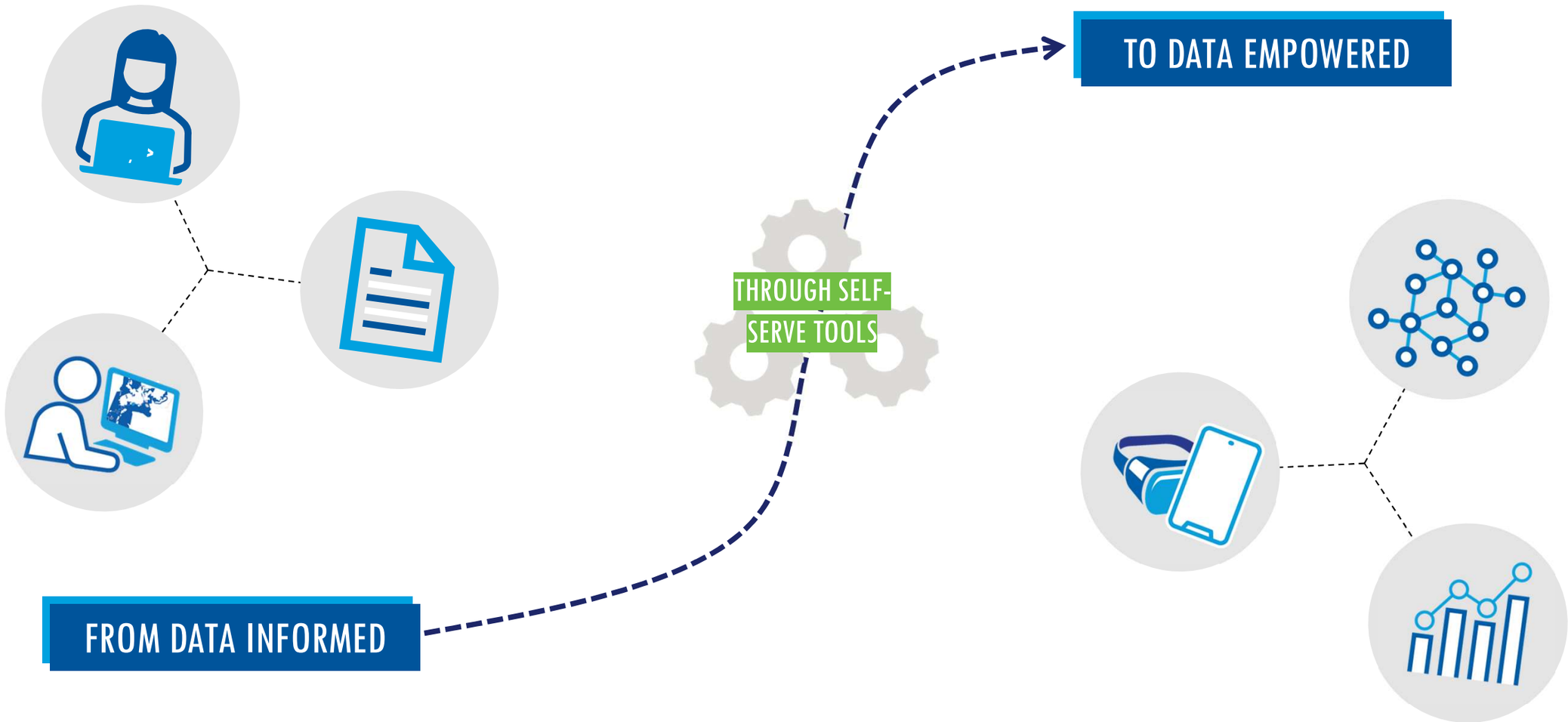
- Multiexperience
- Artificial Intelligence
- Data Collection
- Expanded Reality

ROADMAP OF PRIORITY PROJECTS



WHY A ROADMAP MATTERS

CHANGING LANDSCAPE



WEB MAPPING AS A PRODUCT

1. Accountability and stewardship
2. Customer and outcome focused
3. Feedback loops and continuous improvement
4. A culture of experimentation
5. Prioritization frameworks
6. Performance and metrics

WEB MAPPING STAKEHOLDERS

Product/Program Manager

System Administrator

Application Administrator

Solution Architect

Public Site Administrator

Data Publisher

Dashboard Creator

Application Steward

Application Creator

Solution Integrator

Staff

Public (G2C, G2B, G2G) *

Partner

* G2C: Government to Consumer, G2B: Government to Business, G2G: Government to Government

HOW THE ROADMAP WAS CREATED

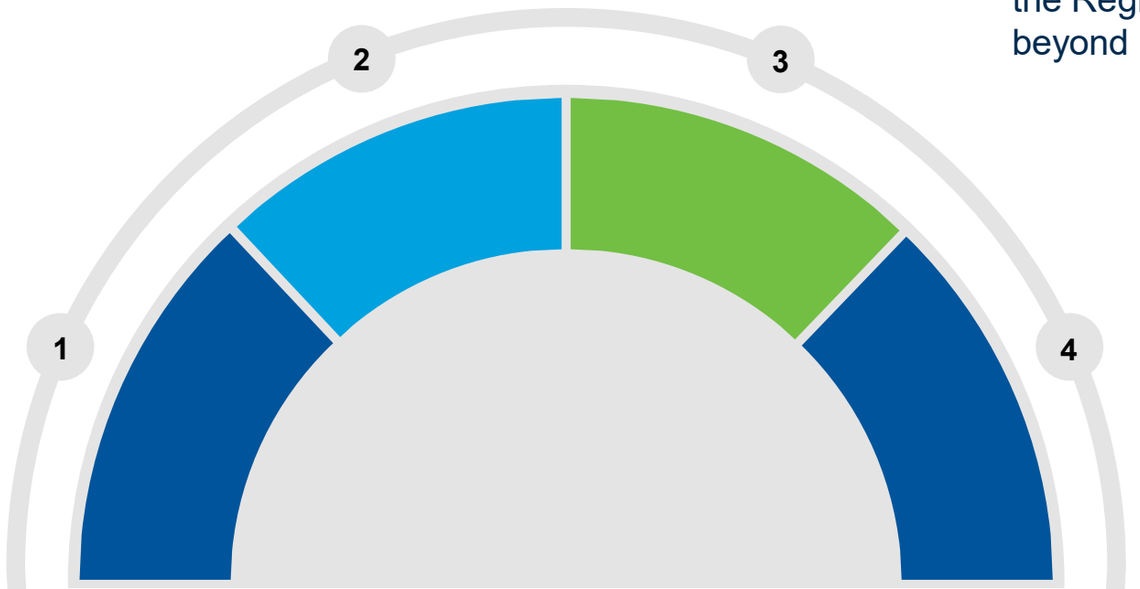
APPROACH

BEST PRACTICES

The roadmap incorporates industry best practices and trends

COLLABORATIVE

The roadmap was developed with stakeholders across the Region and beyond



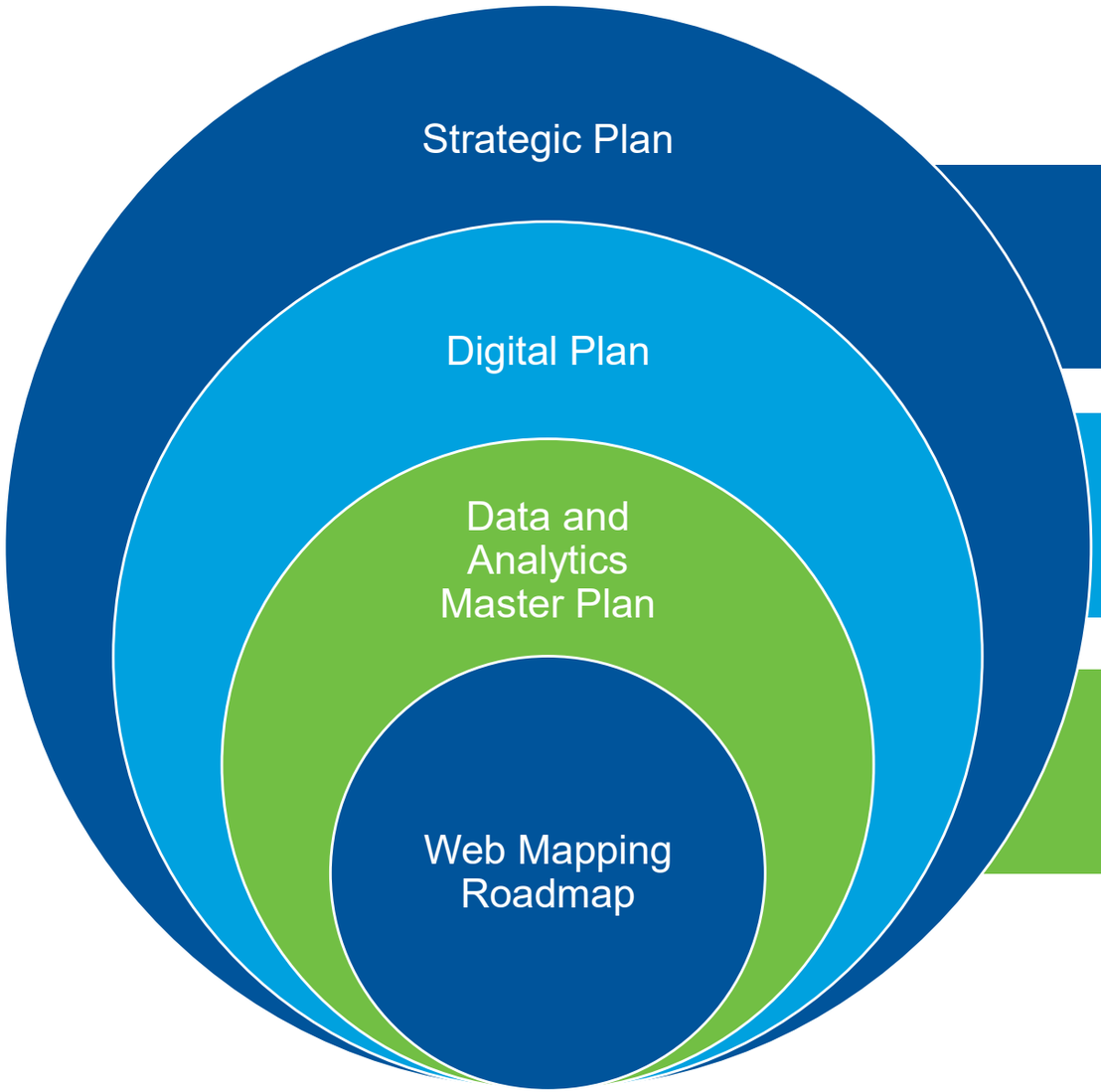
OUTCOME-FOCUSED

The roadmap prioritizes actions that deliver value to the Region

ALIGNED

The roadmap aligns with Corporate plans and initiatives

ALIGNMENT



WEB MAPPING SUPPORTS…

Delivery of trusted and efficient services
Improved public confidence
Program areas advancing their priorities

A digital-first workplace
Digital Academy expansion
Implementation of digital standards

A data-informed culture
Increased access to trusted and timely data
Self-serve data and analytics

WHERE THE INDUSTRY IS GOING

MULTIEXPERIENCE

PERSONALIZED

Simplified and tailored experiences and insights

INTERACTIVE

Making data and information more interesting, understandable, and relatable

ANY DEVICE

Expand access to different digital technologies and therefore to a wider community

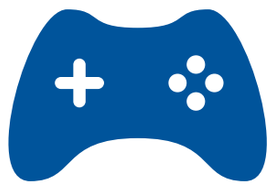
DATA COLLECTION

SENSORS & LIVE DATA

Sensors can capture data from movement, vision, feel, hearing, and even smell

DIGITAL DATA COLLECTION

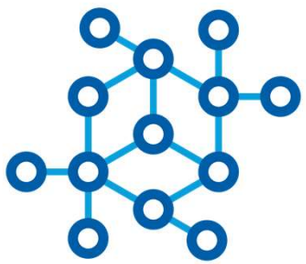
Moving away from paper, to mobile phones, to image and voice driven collection



GAMIFICATION

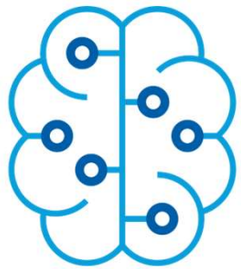
Engage the community and collect crowdsourced data at the same time

ARTIFICIAL INTELLIGENCE



AUTOMATION

Automating tasks, machine learning, and assistive systems



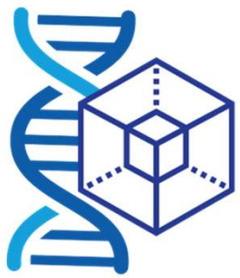
EXPERIENCE

Humanizing data and interpreting needs

DATA

Processing and mining data to improve accuracy

EXPANDED REALITY

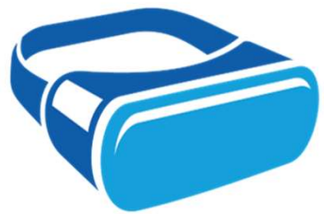


DIGITAL TWINS

Virtual models designed to accurately reflect physical objects

DIGITAL ASSETS

Virtual assets are being recognized as real assets – no longer treated as a copy



IMMERSION

It is predicted that partial immersion technology will dominate over the next 20 years

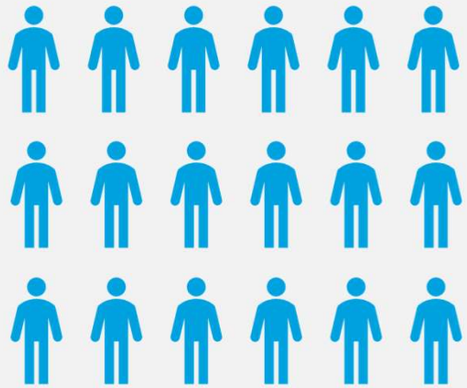
WHERE WE ARE

SELF-SERVICE AND CUSTOMER EXPERIENCE

60+
Field editors

3
Depts.

30+
Geocortex creators



180+
ArcGIS Online creators

5-7
Systems visited to close Access York case

110+ Web mapping apps

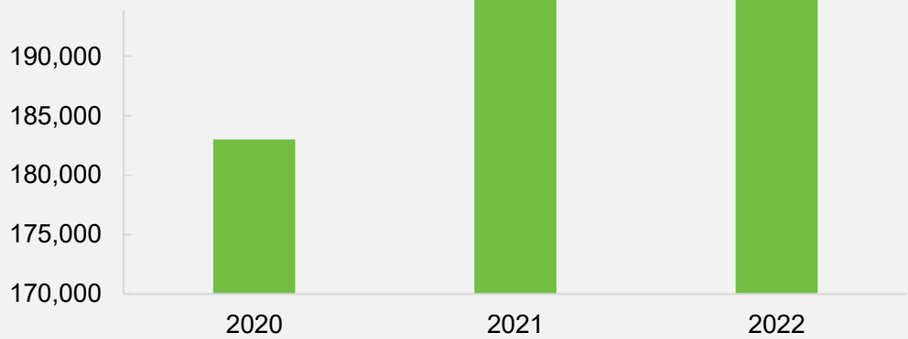
Access with mobile devices

SELF-SERVICE AND CUSTOMER EXPERIENCE - FEEDBACK

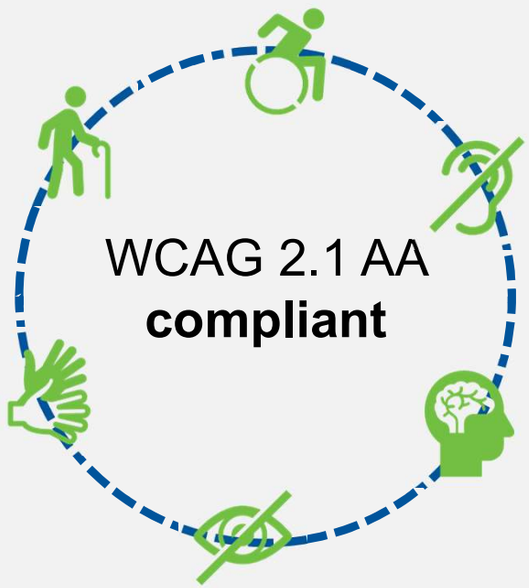
ACCESS AND DATA SHARING

400+
ArcGIS Server web services

200,000+ YorkMaps visitors in 2022



1,112
Layers in the Spatial Data Warehouse



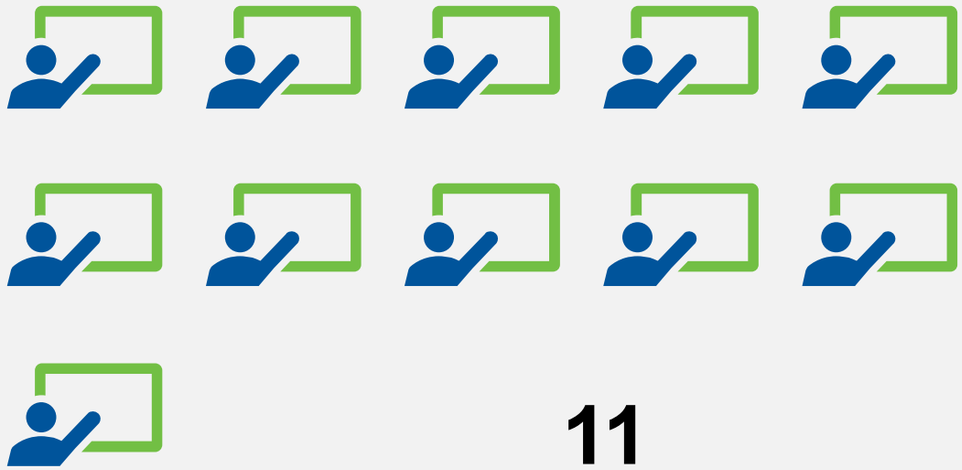
Interactive maps available **publicly**

Interactive maps display or link to **metadata**

ACCESS AND DATA SHARING - FEEDBACK

TALENT AND COMMUNICATION

5
Feedback surveys conducted



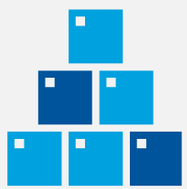
11
App demos delivered

10
Trained in Geocortex administration /year

35
GIS Community of Practice members

1.5-hour quarterly meetings

0
Toolkits available on the Digital Services Catalogue



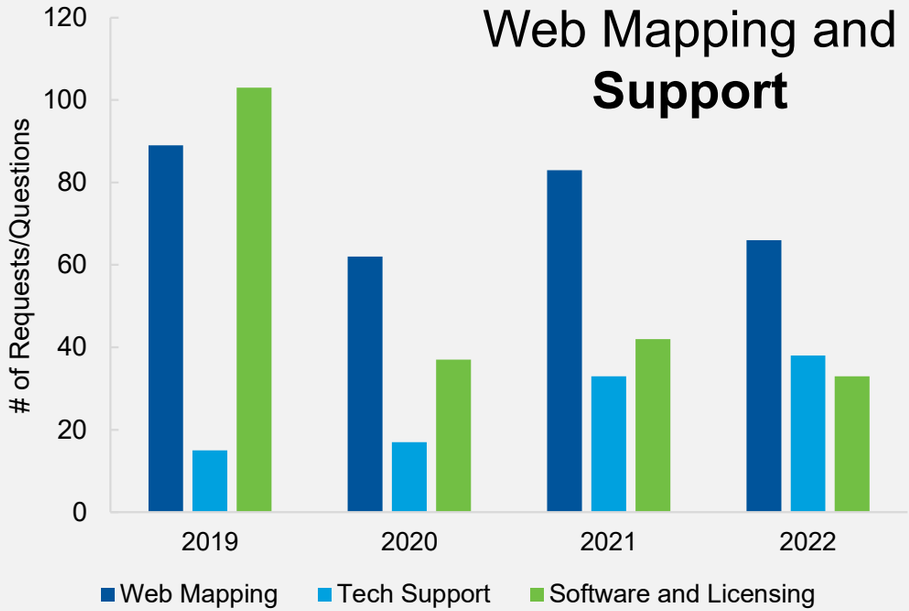
6
Maintenance emails sent

0
Live webinars Hosted

TALENT AND COMMUNICATION - FEEDBACK

OPERATIONS AND SUSTAINABILITY

2
Software Upgrades /year



45
Scripts running regularly

Interactive Maps (YorkMaps) with a **sponsor** or **steward**

4
Monitoring Dashboards

Servers

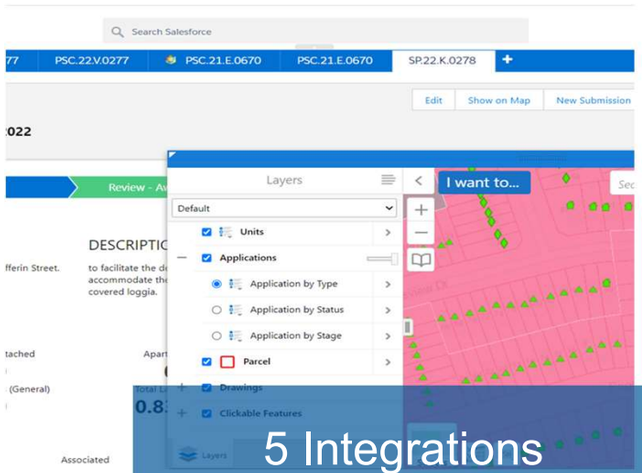
17
DEV

23
STG

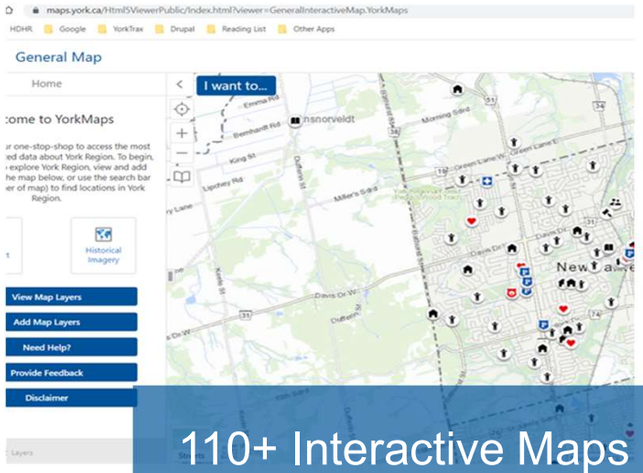
48
PROD

OPERATIONS AND SUSTAINABILITY - FEEDBACK

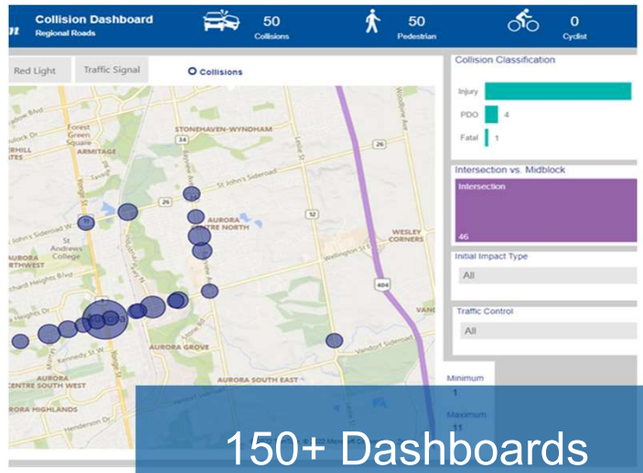
OUR SOLUTIONS



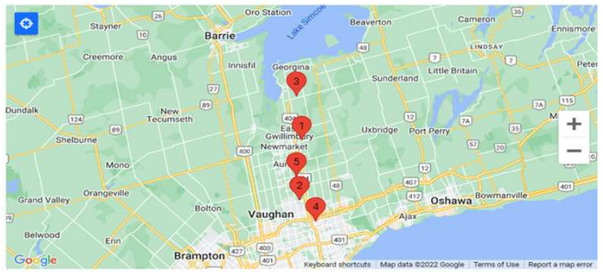
5 Integrations



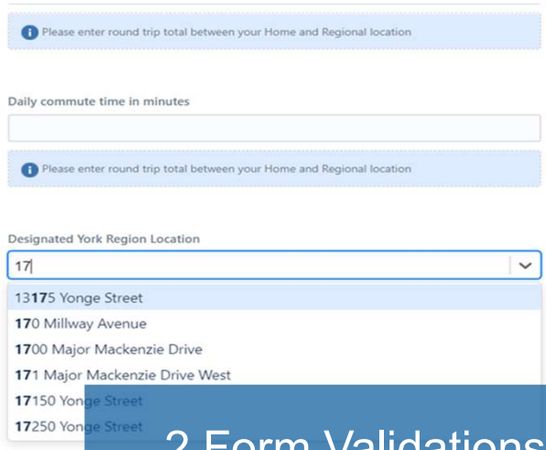
110+ Interactive Maps



150+ Dashboards



5+ Map Images



2 Form Validations

OUR STRATEGY

VISION

PUTTING DATA TO WORK: AT YOUR FINGERTIPS

FOCUS AREAS

SELF-SERVICE AND CUSTOMER EXPERIENCE

Design modern mapping experiences for customers and staff

ACCESS AND DATA SHARING

Further data discoverability, access, and sharing for all

TALENT AND COMMUNICATION

Develop customer and staff awareness, understanding, and capabilities

OPERATIONS AND SUSTAINABILITY

Streamline service delivery and maintenance processes

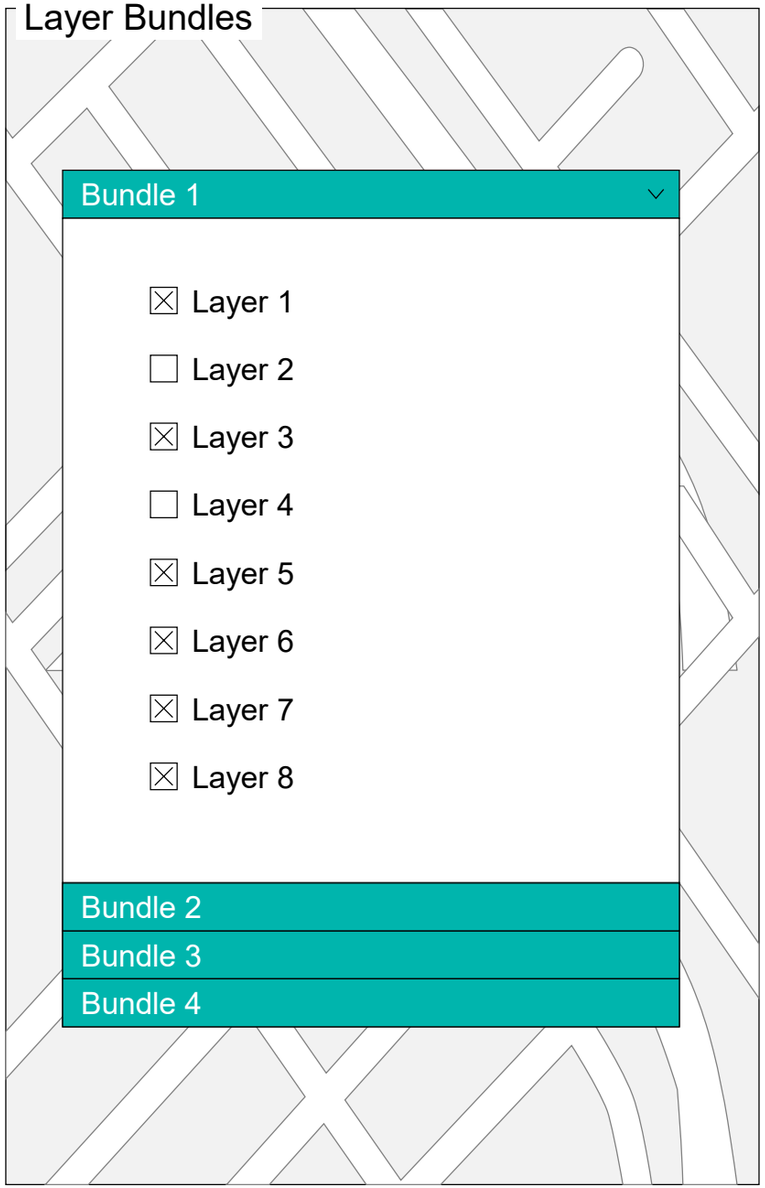
SELF-SERVICE AND CUSTOMER EXPERIENCE

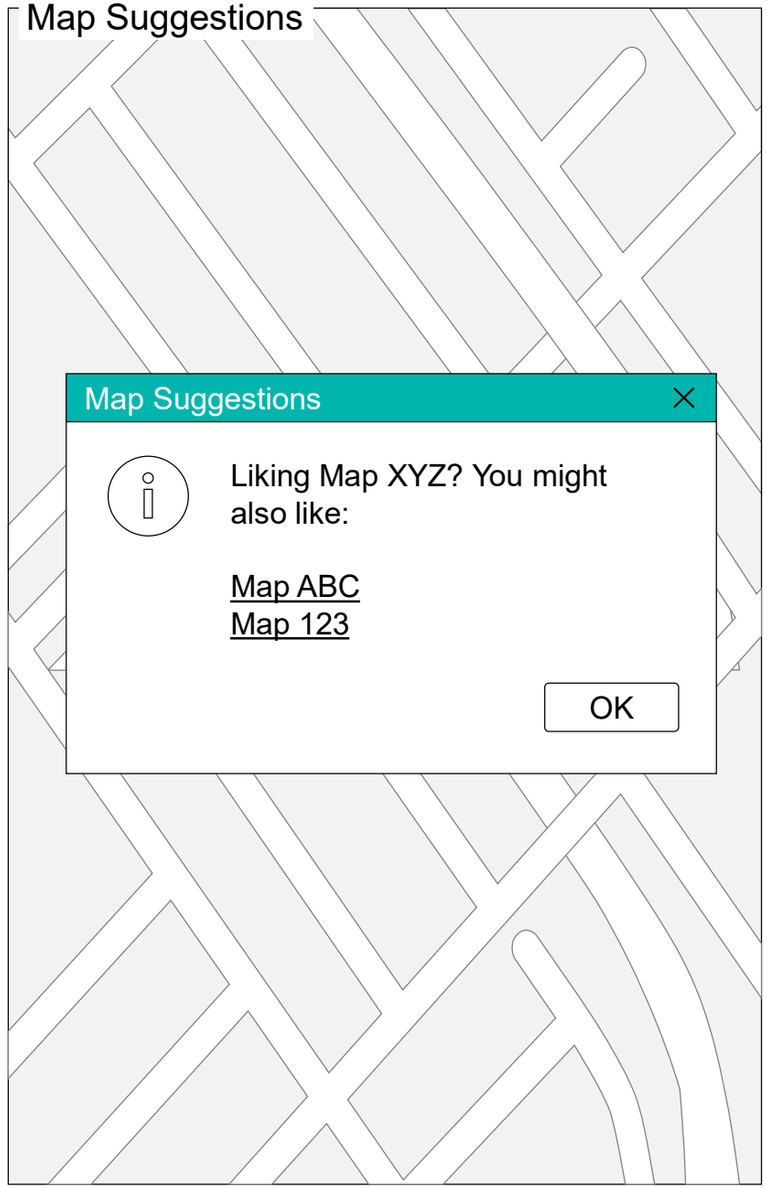
Objective	Action	Outcome	Measure
Advance self-serve mapping and analytics for front-line staff	Simplify the mobile web mapping experience	Staff can focus on the task at hand while in the field	↓ time spent on mapping activities in the field
	Introduce simple analytical tools to all web mapping platforms	Analytics and visualization tools are accessible to all staff, regardless of role or experience	↑ # analytics tools available to all staff
	Improve search and query tools	Data is quickly and easily findable for decision making	↓ requests for custom search and query tools
	Identify and implement common mapping requests to be converted to self-serve tools	Time is freed up for GIS Power Users to focus on more advanced data and analytics work	↑ # of common mapping requests available as self-serve tools
	Launch a web map co-designed with Access York	Access York staff have single source for location-based data, contributing to faster case resolution	Launched and used by Access York staff ↑ speed of location-based data capture
Deliver a modern and personalized user experience	Introduce map symbol scaling	Increased readability of map symbols	↓ negative feedback from end users related to map symbols
	Pilot map/layer/template personalization	Greater insight gained on end users, boosting satisfaction and driving usage	↓ questions and negative feedback from end users related to finding relevant content
	Implement ArcGIS Enterprise	Reduced license costs and seamless management of spatial datasets in interactive mapping systems	↓ # of ArcGIS Online licensed users
	Migrate YorkMaps.ca to Drupal MyPortal and York.ca	Interactive maps conveniently discoverable where staff, partners, and the public are already visiting	↑ YorkMaps hits from Drupal platforms
	Migrate YorkMaps to VertiGIS Studio	New features and functionality available through innovative and modern technology	↑ # of YorkMaps sites available on VertiGIS Studio ↑ # new features available to end users
	Research and implement performance best practices and enhancements	End users experience faster loading times, resulting in improved experience and satisfaction	↓ negative feedback from end users related to performance

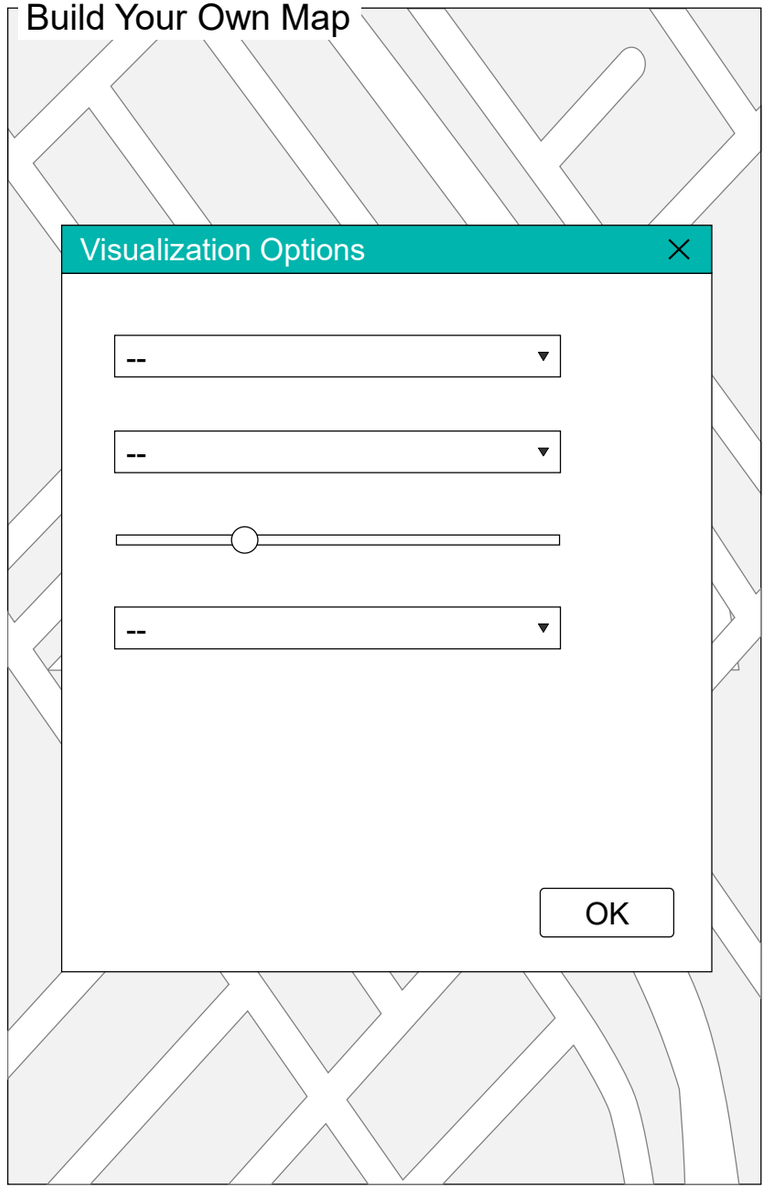
SELF-SERVICE AND CUSTOMER EXPERIENCE

Objective	Action	Outcome	Measure
Integrate advanced visualization capabilities	Incorporate and visualize time aware data	More easily visualize change over time	↑ # of datasets visualized with time awareness/history
	Support expanded visualization of near real time data	Ability to make decisions at the “speed of business” and quickly detect and mitigate issues	↑ # of datasets visualized in near real time
	Increase visibility of Google Street View integration in YorkMaps	Increased awareness of Google Street View, frequently requested by end users	↑ Google Street View usage
	Pilot small-scale extended reality use case	Better understanding of opportunities and challenges of extended reality and how it may be used in the future.	↑ used of augmented and/or virtual reality technologies
Expand web-based data collection and editing	Identify datasets appropriate for online editing and develop a proof of concept	Business units maintain their own data, freeing up GIS Power Users to focus on more advanced data and analytics work	↑ # of datasets edited online
	Implement offline data collection using VertiGIS Studio Mobile	Data is collected and edited in the field across York Region, regardless of mobile connectivity	↑ # of datasets collected and inspected offline in the field
	Introduce named editor tracking for all feature services using ArcGIS Enterprise	Editor tracking metadata captured during all data collection and editing	↑ tracking of editing metadata
Increase integration with business systems	Create and pilot developer guide for API integration	Developers and system integrators can easily learn about and use location-based APIs	↑ # of staff using web services
	Integrate with work order systems	Authoritative spatial data and automation integrated into more business systems	↑ # of web services used in business systems

SELF-SERVICE AND CUSTOMER EXPERIENCE – SPOTLIGHT







ACCESS AND DATA SHARING

Objective	Action	Outcome	Measure
Revitalize trust in web mapping data and systems	Provide access to metadata and maintenance schedules from all web maps	End users are provided with more context around the datasets they are accessing	↑ positive feedback from end users regarding trust of datasets
	Assess YorkMaps content for reach, impact, optimization, and maintenance	Continue to serve valuable and relevant content to staff, partners, and the public	↑ usage of YorkMaps
	Explore web-based options for sharing datasets externally	Large datasets are easily shared with approved organizations	↑ understanding of options for sharing datasets externally
Increase data and information discoverability	Amplify web service discoverability	Developers and system integrators can easily access and use location-based web services	↑ use of location-based web services
	Remodel API architecture	Improved reusability, scalability, and performance of location-based APIs	↓ duplication of data within web services ↑ use within business systems
	Incorporate more datasets into web mapping applications	More data accessible to support decision making	↑ # of datasets available in web mapping applications

ACCESS AND DATA SHARING – SPOTLIGHT

API Catalogue

Name

Phasellus quis elit ullamcorper, rhoncus urna non, scelerisque mi. Vestibulum pharetra faucibus gravida. In hac habitasse platea dictumst.

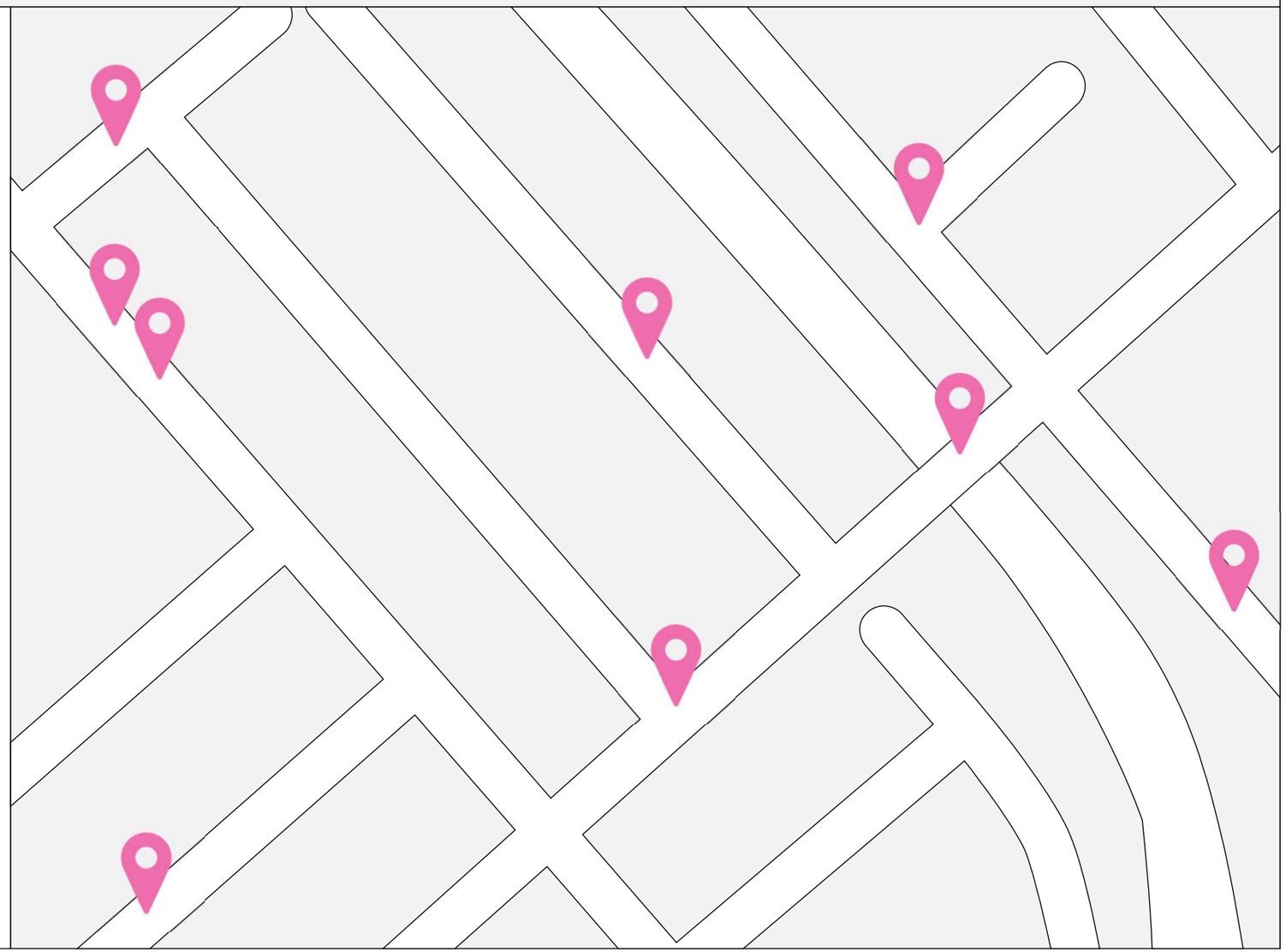
Metadata

Phasellus quis elit ullamcorper, rhoncus urna non, scelerisque mi. Vestibulum pharetra faucibus gravida. In hac habitasse platea dictumst.

Where is this API Used?

- App XYZ
- App ABC
- Map 123

How to use this API



TALENT AND COMMUNICATION

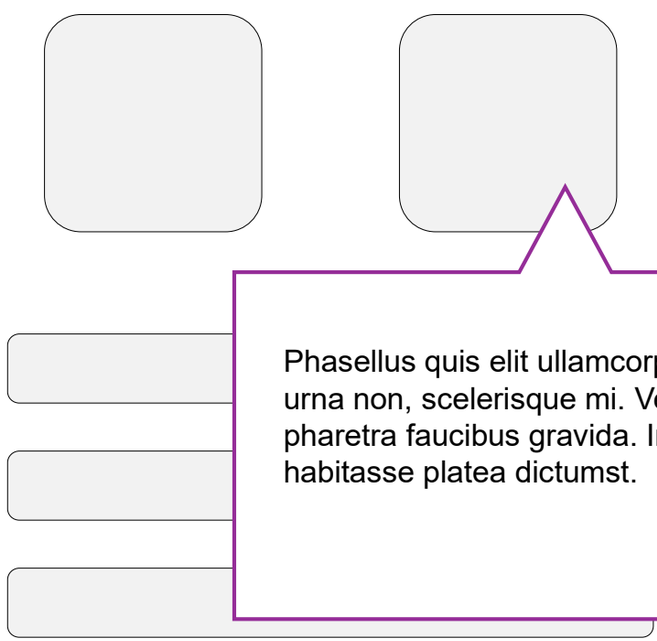
Objective	Action	Outcome	Measure
Introduce new learning and development opportunities	Develop interactive guidance proof of concept in YorkMaps and ArcGIS Online	Increased adoption and usability of web mapping technologies	↑ usage of highlighted tools
	Create interactive decision tree for web mapping technology	Web mapping creators able to identify the appropriate web mapping technology for the job to be done	↓ # of questions related to which technology to use
	Develop and integrate web mapping resources in the Digital Academy and Data Services Centre for self-directed learning	Learning resources available for support and upskilling	↑ # of web mapping resources available in the Digital Academy and Data Services Centre
	Develop persona-based training offerings, including role, department, and application specific	Tailored training that considers the learning objectives, challenges, and preferences of participants	↑ # of training offerings available through the Digital Academy
Increase two-way communication	Design and pilot a crowdsourcing and community engagement template	Consistent method of capturing community sentiment, increasing public engagement	↑ # of public individuals interacting with the Region
	Review existing and create new feedback loops	Web mapping products solve problems experienced by end users	↑ # of end user surveys, interviews, and other user engagement methods
	Formalize mailing lists and webinars for communicating enhancements and maintenance	Staff, partners, and the public are kept up to date, forming connections and promoting trust	↑ # of communications going out to end users

TALENT AND COMMUNICATION — SPOTLIGHT

Interactive Map

Welcome

Phasellus quis elit ullamcorper, rhoncus urna non, scelerisque mi. Vestibulum pharetra faucibus gravida. In hac habitasse platea dictumst.



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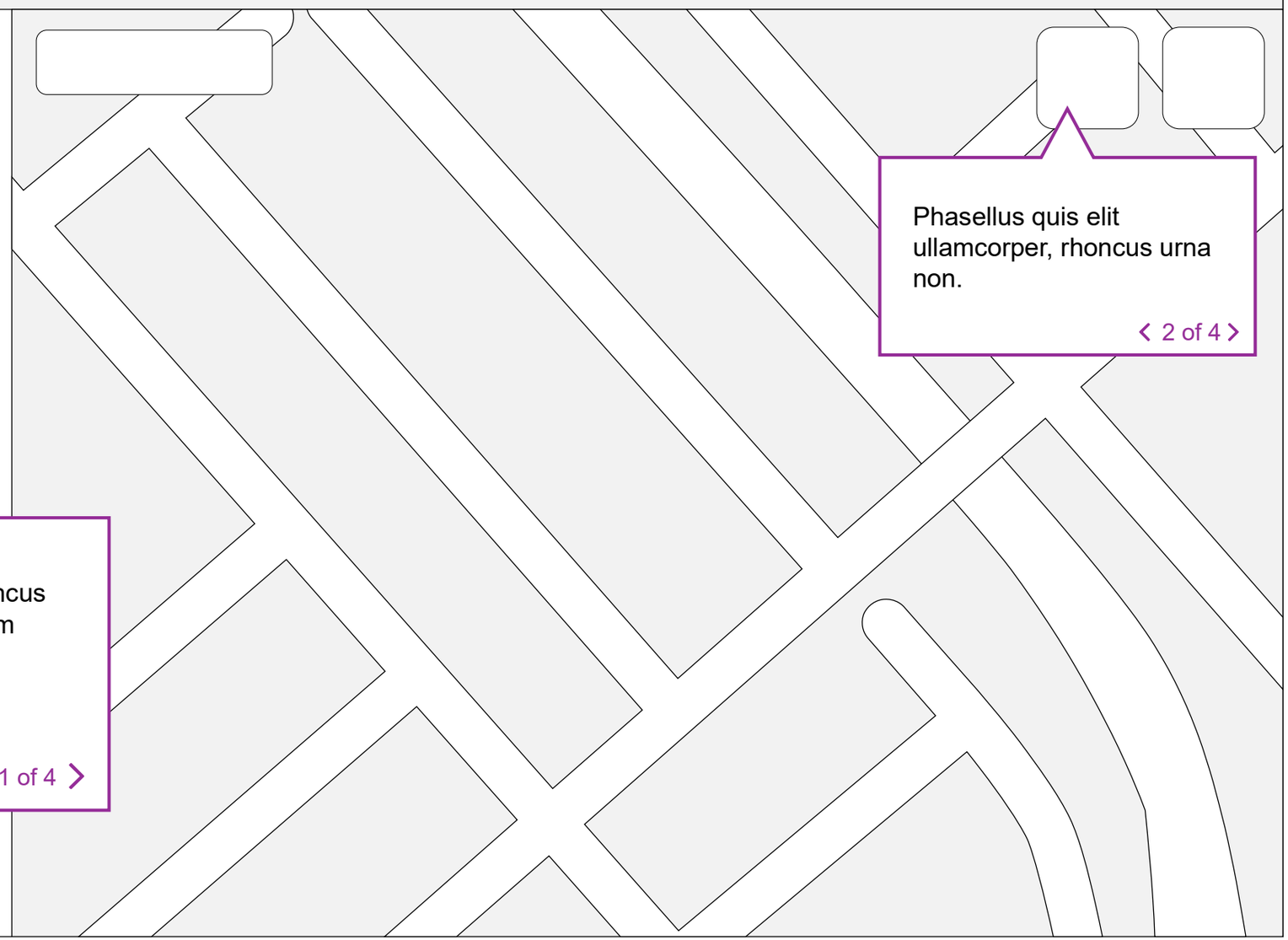

Phasellus quis elit ullamcorper, rhoncus urna non.

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OPERATIONS AND SUSTAINABILITY

Objective	Action	Outcome	Measure
Reinforce a federated service delivery model	Create and socialize RACI matrix for web mapping related activities *	Increased clarity around roles and responsibilities, communication, and engagement with stakeholders	↓ # of questions from stakeholders related to responsibilities
	Revitalize web mapping discussions in the GIS Community of Practice	New users and Power users come together to drive strategy, generate best practices, and solve problems	↑ # of agenda items related to web mapping
	Develop app templates for rapid development	Reduced app development time and consistent look and feel experience	↑ # of templates available to web mapping creators
Streamline maintenance processes	Standardize and document maintenance, auditing, information management, and industry research processes	Increased consistency, reduced errors, and focus on continuous improvement	↑ # of maintenance related documentation available for staff
	Formalize after hours system monitoring and support	Business critical web mapping applications are supported outside regular working hours	↑ # of hours offered for technical support
	Improve ability to identify impact of changing data, services, and apps	Reduced issues related to unknown linkages between data and systems	↓ # of issues caused by changing data, services, and apps
	Identify sponsor(s) and steward(s) for all web maps associated with programs	Increased accountability for web maps resulting in timely and	↑ # of sponsors and/or stewards for web maps
	Expand use of monitoring and analytics tools for use in product decisions		↑ # of dashboards created for product decisions

* RACI: Responsible, Accountable, Consulted, Informed

CONTACT

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