

Service Business Plan



Service Name Geographic Information and Mapping

Service Lead Name Andrew Maas

Service Lead Title Manager of Infrastructure and Data

Service Description

An internal service to provide orthoimagery services, land records management, 3-D visualization, title searching and topographic mapping.

Strategic Alignment with Vision to Focus Plan

Supporting sustainable infrastructure and a resilient environment

Delivering customer centric services with a focus on efficiency

Service Goals

To improve both community and staff engagement by enhancing the functionality of our corporate spatial data and mapping tools to allow our customers to gain better insight into City data.

Incorporate and support the use of GIS technology to enhance service delivery across other service areas.

To communicate our plans for our service and engage with our internal and external customers to better understand their needs and improve the user experience.

Current State

Customers & Their Expectations

This service is delivered to:

City staff, Council, external agencies and the general public.

Geographic Information and Mapping Service customers expect:

- Efficient access to data and map production services
- Timely response to issues and requests
- Convenient project support
- Complete, accurate and consistent data delivered cost-effectively
- Knowledgeable staff

Existing Service Delivery

This service is responsible for:

- Creating, acquiring, maintaining, coordinating and distributing geospatial data

	<ul style="list-style-type: none"> • Providing project coordination and support services to enhance business processes • Researching potential investments in geospatial data and technology • Developing new map applications and integration tools to enhance business processes at the City • Providing customer support for property-related enquiries • Providing mapping and support services for the Emergency Operations Committee • Open data and online mapping application management • Managing department-related documents, including plans and reports • Custom map production and plotting services for City staff and the public • Creating awareness and promoting the use of technology
Existing Customer Engagement Tools / Methods	In-person meetings with staff; website feedback; by phone (via dedicated line); email; surveys; open data portal; internal work shops and events; training sessions
Is this Service Provincially Legislated?	No N/A
For this Service are there Approved Service Standards?	No N/A

Programs

Property/Land Information Service	<p>Provides and maintains property record data in corporate systems.</p> <p>Reviews municipal addressing and ownership information.</p> <p>Contracts and/or carries out data collection assignments.</p> <p>Provides Engineering-related records management support.</p>
Spatial Data Management and Analysis	<p>Develops and maintains data as an asset.</p> <p>Creates and/or licenses, maintains, documents and shares a variety of data.</p> <p>Supports core applications and performs spatial analysis for better business and strategic decisions.</p> <p>Provides data support and technical expertise during implementation of technology.</p>
Map Production Service	<p>Creates, presents and publishes graphics, charts or maps to meet specific customer requirements.</p> <p>Provides equipment support and print materials.</p>
Corporate GIS Advocacy	<p>Provides leadership in solution recommendations for mapping and open data and technical support in the development of these recommendations to enhance decision making and integration with other City applications.</p>

Open Data

Ensure the City is providing open data at no cost to allow for transparency, accountability, sharing of knowledge and information with the hope that this will lead to collaboration and innovation for the benefit of citizens, businesses and visitors.

Recent Continuous Improvement Initiatives

In 2019, participated in the development of an internal web GIS portal (GIS@Work) providing a one-stop location for staff to find all mapping related applications, documents and information about corporate GIS data.

In 2019 the service continued to implement further quality assurance and data integrity scripts to analyze and report on data in our GIS system. These tools help us to identify and correct errors/omissions helping to mitigate risk due to these errors.

In 2019 the service participated in the design and implementation of a new mapping application called 'Explore Burlington'. This application took advantage of new technology to provide the public with a more intuitive way to discover City of Burlington parks, facilities, sports fields, playgrounds, downtown parking and trees.

In 2019, the service designed and implemented a new permits mapping application that allows the public and staff to view many of the City's permits that have been issued to understand better, at a glance, what is happening in the City.

In 2018 the service implemented quality assurance and data integrity scripting tools to analyze and report on data in our GIS system. These tools helped us to identify and correct errors/omissions helping to mitigate risk due to these errors.

In 2018 the service implemented tools to maintain road closure information in our corporate GIS system. Utilizing our cloud GIS service, this information was then shared with the Waze application allowing live updates of our road closures (construction, events etc) to be shared with drivers who use the Waze application.

In 2018, through the use of the Enterprise Advantage program, a mobile mapping solution was implemented to support Fire services in their trucks. The mapping solution replaced paper map books (used solely for backup now) and provides relevant, up to date GIS data to give Fire services locational intelligence in their trucks.

In 2018, the service implemented many new mapping applications for the public and staff enhancing the quality of the Navigate Burlington GIS landing page. Some of these enhancements included Leaf Collection, Road Closure and Election support.

Environmental Considerations

By providing online mapping resources, both mapping applications and open data, the service is providing information that can be viewed without the need to print maps. Moving away from hardcopy mapping and realizing the benefit of integrated mapping solutions that allow our users to visualize and analyze data online using their phone or desktop saves users a trip to cityhall and/or hardcopy printing.

Emerging Opportunities and Anticipated Risks

Emerging Opportunities

The internal and public services are increasingly aware that tools exist to visualize, analyze and enrich the data they own. Using these tools will help achieve efficiencies, communicate information, engage citizens and generally support more informed decisions.

There are opportunities to build upon our existing geospatial datasets by developing new internal applications and coordination of data acquisition/data collection projects.

The role of the Geographic Information and Mapping service can be expanded beyond traditional uses within Capital Works, City Building and Roads, Parks and Forestry. The service can be used to support a variety of government functions and provide the opportunity to minimize costs and maximize benefits for the City's investments.

Anticipated Risks

Resource usage will increase with the growing number of corporate systems, applications and datasets.

Data integrity and reliability poses a risk due to the increasing volume of data being managed. The data supports a wide range of business applications, which are used to make important business and strategic decisions.

Customers have come to expect near real-time access to data, which will require new systems and processes. The Information Technology Service will be depended on to provide the support necessary to use new innovative technologies and assist with process improvements.

Enterprise Risk Considerations

Service Initiatives	Target Completion
Enhance and improve the internal use of GIS by providing a GIS Portal for staff as a one-stop shop for all of their GIS applications and tools. In conjunction with the portal implementation, conduct a best practices review of the Burlington GIS Centre looking to take advantage of improved web technology.	Dec 2019
Continue to develop an awareness in City services of the opportunities to power the services through locational intelligence offered by maps and applications. Leverage GIS in corporate projects such as CRM, EAMS and BI.	Dec 2019
Implement a field asset data collection and inspection program to support the Asset Management service. Access to technology and real-time data in the field will improve efficiencies and the accuracy and reliability of data.	Apr 2020
Further develop the quality assurance plan to ensure data integrity and manage risk due to errors. Make use of FME server to automate scripts currently used for data integrity checks. Areas to review include accuracy in both position and attribute, age of data and errors caused through processing of data.	Jun 2020

MEASURING SUCCESS

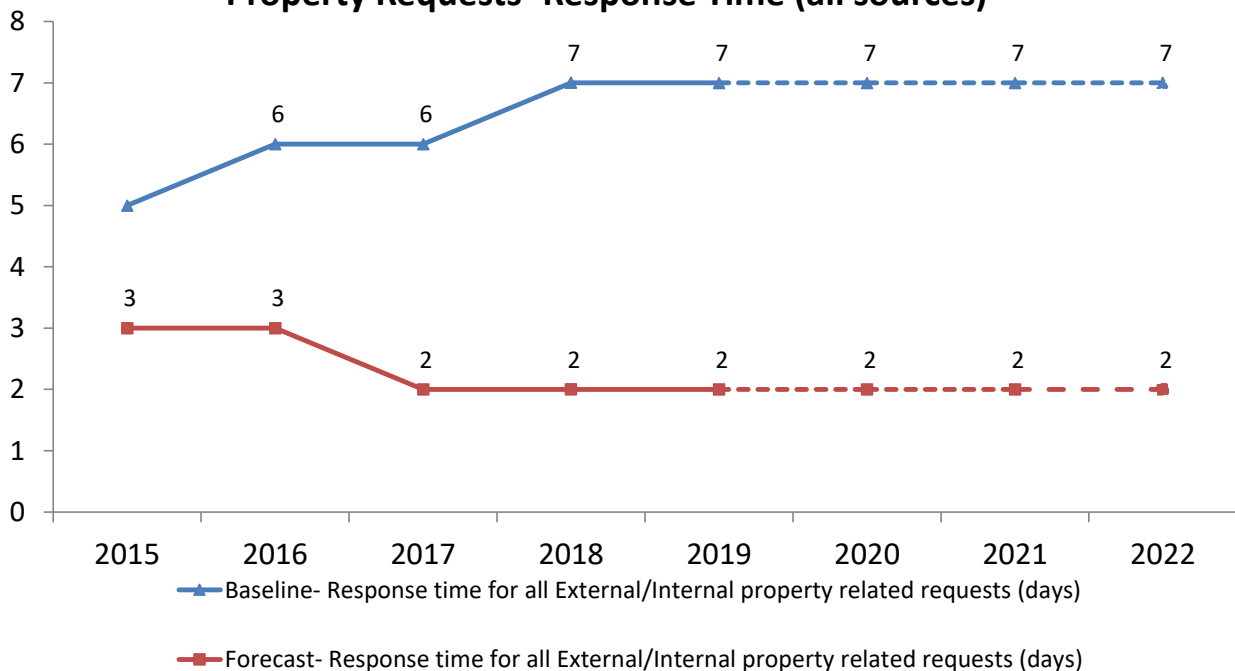
How much did we do?

Performance Measurement	2015 Actual	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Forecast	2021 Forecast	2022 Forecast
Total number of Property-related Requests for Information	357	543	472	411	576	580	580	580
Total number of mapping/data requests processed	650	431	364	222	320	300	280	280
Number of Datasets Utilized	223	231	242	254	266	300	320	320

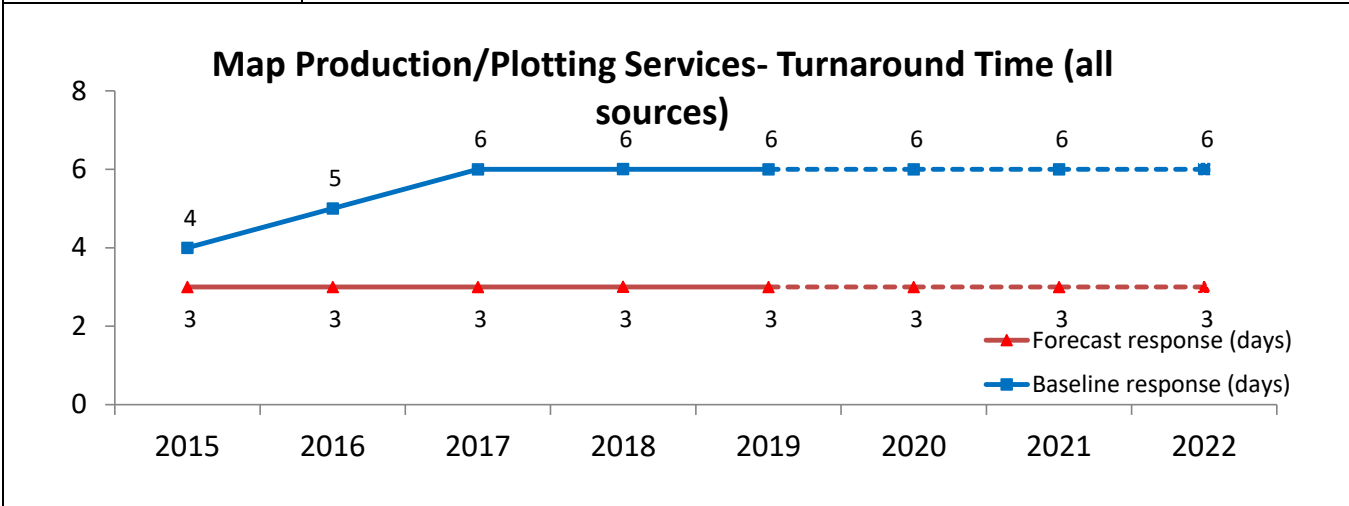
How well did we do it?

Performance Measurement	Property Requests- Response Time (all sources)
Story behind the data	<p>Property requests relate to City and privately owned land. The source of these requests can be internal or external. Requests typically fall into four categories: cadastral (surveys, plans, easements), addressing, deemed street width verification, or servicing.</p> <p>The amount of investigation required for each request varies. Requests are increasingly complex, and often rely on input from other service areas (Corporate Legal, Development Review) or external agencies (Teranet, etc). As a result, the response time is steadily increasing. Utilizing the ITS Service desk tool, the service is effectively handling and prioritizing any requests received improving response time and customer satisfaction.</p>

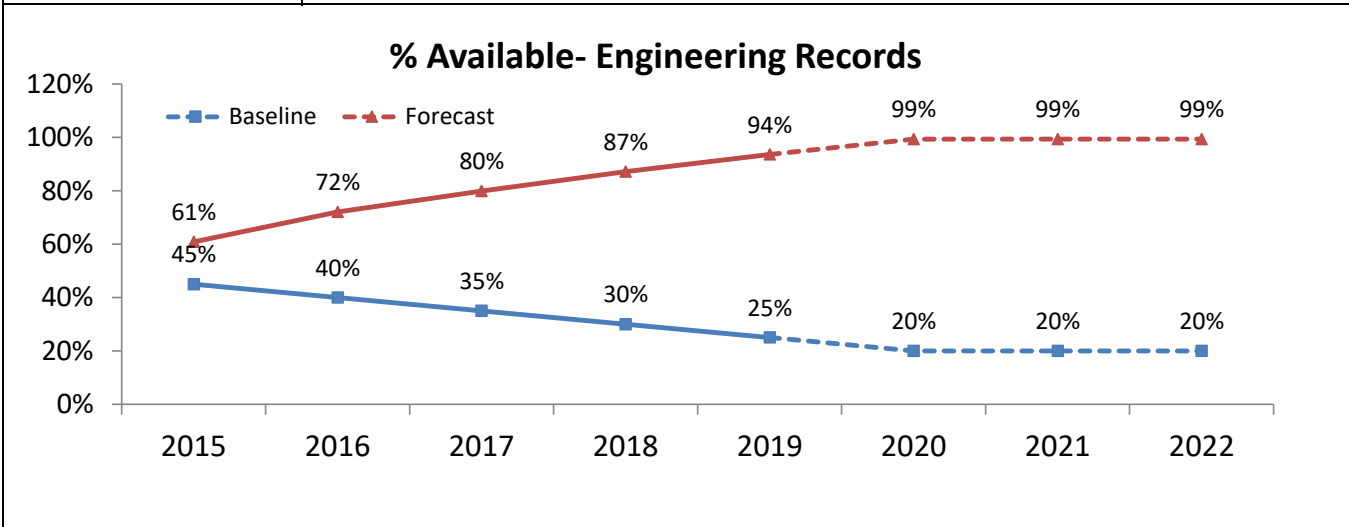
Property Requests- Response Time (all sources)



Performance Measurement	Map Production/Plotting Services- Turnaround Time (all sources)
Story behind the data	The service area receives several hundred unique requests each year for custom graphics, charts and maps. Requests that require detailed map production typically take multiple hours of dedicated time and effort. Plotting equipment and resources are essential to carry out this function, so equipment downtime can result in production delays. The number of mapping and plotting requests is expected to continue to increase however, the service is now providing, through improved GIS software, some tools (dashboards, online applications) that allow the user to self serve and alleviates some of the pressure on staff.



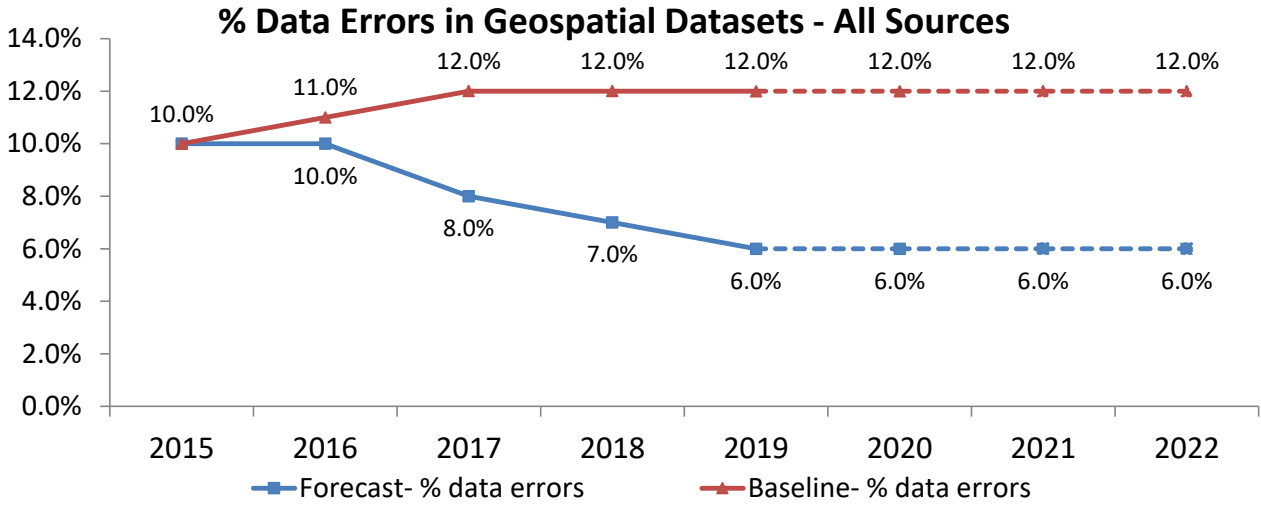
Performance Measurement	% Available- Engineering Records
Story behind the data	Engineering records consist of all plans, reports and documents that relate to capital works projects. The service uses a corporate system as the electronic records management tool for all documentation. Documents need to be up to date and accurate with as-constructed information, as they are relayed to the public, staff, external consultants, contractors and agencies. The availability of records is also seen as an essential function for Business Continuity Planning with Capital Works.



Is anyone better off?

Performance Measurement	Maximizing data integrity (% errors in Geospatial Datasets).
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<p>Story behind the data</p>	<p>Data is used to make important business and strategic decisions and therefore needs to be current and accurate.</p> <p>Errors are routinely identified through rigorous quality control checks. Errors identified by internal users have a low impact but errors identified by the public could potentially represent a more serious risk and could lead to change order, increased costs, delays or even potential risk to public safety.</p>
<p>Where do we want to go?</p>	<p>The goal is to build upon the existing quality control process to identify and correct data issues sooner. Quality control tasks will be further defined and documented. The service is employing the use of FME software to automate identification of errors and to also correct errors if possible.</p>



Performance Measurement	Percentage of satisfied web mapping users (public access to Geographic Information System data).
Story behind the data	The City implemented innovative online mapping technology with the launch of Navigate Burlington, a one-stop place for all online mapping needs. This new mapping has been well received and continues to grow with the addition of new mapping applications, open data and story maps.
Where do we want to go?	The goal is to continue to add to and improve the City's online mapping experience by continuing to embrace the technology provided by our GIS vendor. Improving service delivery by implementing online services that better meet the needs of our technology based customers.

