



GMI Report Series:

# Geospatial Collaboration & Engagement

# The Geospatial Maturity Index

In 2018, PSD launched the Geospatial Maturity Index (GMI) – a survey designed to benchmark the maturity of an organization’s GIS (geographic information system) program. 146 public sector organizations completed the inaugural survey and in July 2018, the Top 25 GIS Programs in Canada were announced. Since then, an additional 72 organizations have completed the survey – both in the United States and Canada. The additional entries have provided even more insight to inform our GMI Report Series. This three-part series uses the GMI survey results to uncover trends and patterns in organizational geospatial maturity.

This report is the third installment of the Report Series and will focus on the Impact section of the survey. Thus far, the Report Series has covered both the Readiness and Implementation sections of the survey, outlined in the reports [“Geospatial Governance & Capacity”](#) and [“Geospatial Data & Technology”](#), respectively. The findings of the reports have established the widespread recognition of the need for a GIS team among public sector organizations, alongside the importance of aligning GIS data work with strategic goals and plans. Garnering buy-in for a GIS program was a top of concern in the Implementation report, in which respondents noted the importance of providing quantifiable efficiency gains and cost savings of implementing a GIS program. Ultimately, with greater GIS buy-in comes enhanced GIS program maturity. In this report, key findings from the Impact section of the survey will be discussed, exploring trends in collaboration and engagement.



The Impact section of the Geospatial Maturity Index measures to what extent an organization has defined its goals related to its GIS program and is able to measure the impact of its geospatial initiatives.

## Report Highlights

- The majority of respondents reported that there is not a standardized process for business units to provide input and feedback to the GIS department to ensure that GIS projects are contributing to departmental objectives
- Organizations have various types of partnerships related to GIS data work and include partnerships that combine and or share data sets with different governments, external organizations, and academic institutions
- Although 85 percent of respondents stated that geospatial data is guiding decision making outside of the GIS branch or department, cross-departmental collaboration and senior-management engagement predominantly takes place on an ad hoc basis
- The biggest challenges related to GIS work reported by organizations were a lack of resources and funding

## Collaboration

### Input and Feedback

The first question of the Impact section, question 59, asked, “Is there a standardized process through which your business units provide regular input and feedback to the GIS department to ensure that GIS projects are contributing to departmental objectives?” The majority of organizations (58%) reported that they do not have a standardized process in which to provide feedback. However, respondents also commented that although not standardized, input and feedback is collected. For example, some organizations, including those of Niagara Region and the Township of Woolwich, reported the use of surveys and or emails to garner feedback and input. Despite these processes not being standardized, they do represent an effort to collect input and feedback, exemplifying that organizations are pursuing mechanisms to solicit input and feedback to enhance their GIS projects.

As GIS data and programming has the potential to support every department and service area in an organization, cross-departmental feedback for the GIS team is essential. If GIS implementation or adoption is inadequate, input and feedback are instrumental in addressing these shortfalls and can strengthen GIS maturity altogether.

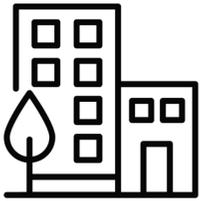
Of interest is the use of working groups dedicated to input and feedback of GIS work. The cities of Oshawa, Victoria, and Welland all reported the creation of working groups that, once up and running, will discuss and engage with regular GIS feedback. Collecting input can take many forms and should encourage organizations to be creative and adopt a process that best suits their organization’s needs and GIS structure.

## Partnerships

Question 63 asked survey respondents to share the partnerships that their GIS team engages with, both formally and informally. Respondents' answers varied and provided a robust list of partnership opportunities for GIS teams. Partnership types included:



- **Partnerships with government:** respondents reported partnerships with neighbouring or lower-tier municipalities. For example, the City of Surrey stated, “We have a formal partnership with a neighbouring municipality (White Rock) in which we developed their map system and manage it for them for a small fee.”



- **Partnerships with external organizations:** this type of partnership includes collaboration with conservation authorities, provincial agencies, and utility organizations. Popular among this type of partnership is data sharing with local utility companies; the City of Saskatoon reported a Data Sharing Initiative with SaskEnergy and likewise, the City of Prince George shares GIS Data with BC Hydro. Respondents also reported partnerships that involved the creation of working groups. For example, both Strathcona County and Niagara Region reported the development of consortium's, namely the Regional Consortium for GIS Imagery Acquisition and Niagara Region Open Data Consortium.



- **Partnerships with academic institutions:** partnership with academic institutions was a commonly reported form of partnership among respondents. To provide an example of this kind of partnership, the City of Cornwall partnered with Algonquin College to hire GIS Coop Students from the school's GIS Program.

## Engagement

### Awareness

The impact of an organization's GIS program is largely determinant upon its awareness across the organization, and subsequently, the implementation and use of GIS data. Significantly, 85 percent of respondents stated that managers outside of the GIS department are using geospatial data to guide decision-making. This demonstrates how instrumental GIS data work is to departments in their own capacity. Despite this, 39 percent of respondents reported that cross-departmental collaboration only takes place in an ad-hoc manner, followed by 22 percent reporting collaboration taking place on a monthly basis (see chart 1). The majority of collaboration is done through individual stakeholder meetings (70%), followed by management meetings (51%), and GIS committees (29%).

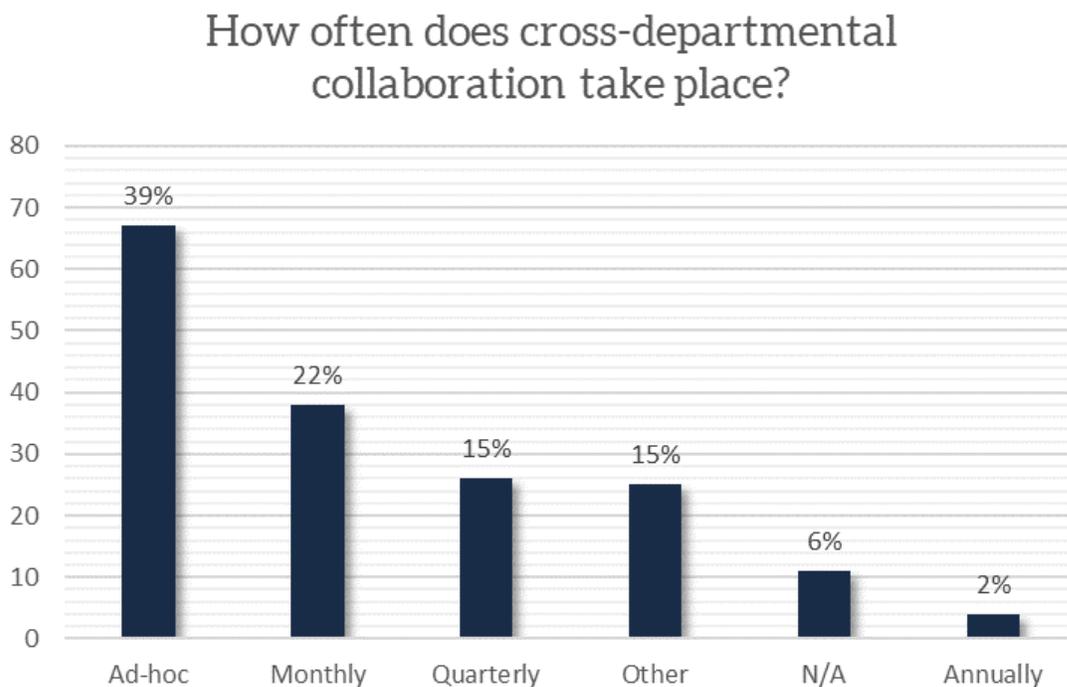


Chart 1. Cross-Departmental Collaboration

Likewise, a majority of respondents reported that GIS engagement with senior management to secure buy-in also takes place in an ad hoc manner (56%). Only 12 percent of respondents reported engagement on a monthly basis between the GIS branch and senior management, followed by ten percent on a quarterly basis and eight percent on an annual basis (see Chart 2). Of those that reported “Other”, many municipalities stated that little to no engagement takes place.

### Frequency of senior management meetings to build awareness and corporate buy-in

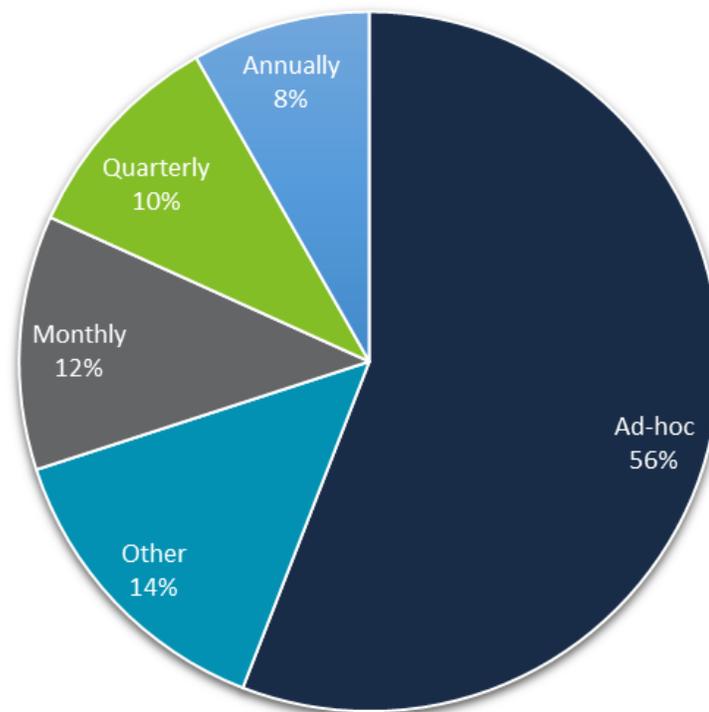


Chart 2. Senior Management Engagement

Senior management buy-in is fundamental to the success of a GIS branch; without it, the legitimacy of GIS work is jeopardized and thus, GIS maturity and growth may be limited. It is therefore important that the GIS branch engages with senior management to build awareness and corporate buy-in for an organization's GIS program.

One such way to ensure greater engagement is provided by a City of Hamilton example. The City noted that although the GIS branch doesn't currently engage with senior management directly, engagement between the two parties will be addressed in a forthcoming Communications Plan.

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**“The progress of an organization is fueled by its people. Ensuring that training is offered to build maturity and incentive innovation is key to a GIS program’s growth. 89 percent of respondents reported that training is provided to internal users, and many respondents noted that this training is done in person and in a classroom setting.”**

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## Communications Plan

A GIS Communications Plan refers to a plan that governs how a department or team is to communicate and raise awareness around GIS products, processes and services. 60 percent of respondents noted that a Communications Plan has not yet been implemented. As exemplified by the City of Hamilton, creating a Communications Plan is a way in which an organization can solidify the expectation that the GIS branch engage with senior management to build awareness and corporate buy-in for its GIS program. Even more, it can also help encourage and facilitate collaboration across departments.

## Challenges

Question 75 asked survey respondents about the biggest challenges facing their organizations related to GIS. It was of no surprise that most organizations are faced with similar challenges. One organization stated: “limited resources to support [the] growing need for GIS within the organization,” echoed by another organization, “[there is a] need for more staff, but not having the funds to hire.” Similarly, multiple respondents noted the challenge of keeping different departments and the public aware of data that is available to them. Although plans and policies are not sweeping solutions to all problems, they do serve as a mechanism to encourage greater engagement. Only twelve percent of survey respondents reported having a GIS-related policy in place within the organization, while 40 percent noted that workflow methodology is in place and 39 percent reported having no policy at all. Creating a GIS Policy that is passed by Council and aligned with your Strategic Plan can help encourage more resources to be dedicated to GIS work, while also securing senior management buy-in. Likewise, developing a Communications Plan can help ensure greater awareness of GIS data and its functions across departments and by residents.

## Moving Forward

Ensuring that innovation and excellence is continuously re-examined and considered is a cornerstone to enhancing the proficiency of a GIS branch and increasing its impact. Question 72 of the survey asked, “How does your GIS Branch maintain a culture of innovation and excellence?” Attending conferences, webinars, and user groups were common responses among respondents. Moreover, central to most respondents was the importance of development and training. As Stark County, Ohio, stated:

**“We encourage staff utilize roughly 1/5 of their time for research and development/training. To ensure that one person’s successes get translated to the rest of our staff, we hold team meetings every other week. By promoting a team atmosphere, individuals can build and learn off of one another at a more rapid pace. We also encourage creative freedom. Given that consumer technologies constantly change consumer expectations, we try to remain as close to the bleeding edge as possible/feasible. It is inherently important to each of our staff to exceed expectations of not only the public, but other internal staff as well. That innate desire is often what causes us to utilize the latest and greatest to ensure we make the best use of technology.”**

The progress of an organization is fueled by its people. Ensuring that training is offered to build maturity and incentive innovation is key to a GIS program’s growth. 89 percent of respondents reported that training is provided to internal users, and many respondents noted that this training is done in person and in a classroom setting. To enhance GIS maturity, organizations should seek to provide more training to external users; only 27 percent reported that training is currently provided to external users. This training may include community information sessions or workshops for designated community partners.

## Conclusion

This Report Series has demonstrated that the maturity of a GIS branch and its GIS program are impacted by a variety of different factors. The time, resources, and commitment that a GIS branch requires to grow and have an impact is substantial. As organizations move forward with GIS program development, PSD will continue to serve as a resource to strengthen GIS capacity both via the GMI benchmarking tool – through the completion of the [2019 GMI Survey](#) – and as an ongoing resource for GIS insight and knowledge sharing. Utilize this Report Series, as well as the GMI Webinar Series, to determine ways to enhance your organization’s GIS maturity. We are privileged to be a part of the GIS community and look forward to meeting with GMI Survey participants at conferences and user groups throughout the year. PSD will be announcing the results of the 2019 GMI Survey in November 2019. We are excited to see how organizations have grown in their GIS maturity and encourage you all to continue to be stewards of GIS program excellence.

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