

ATTACHMENT D

Study Report - Defining Parcel Data Value Study

November 21, 2011

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2010 NSDI CAP Grant - Category 5 Award

Executive Summary

The intention of this survey is providing supplemental information specifically related to parcel data to Professor Bryson's "Defining Values" research. The results help to gain more insight into actual uses and values of regional shared parcel data and establish clearer issues for quantitative approaches to identify uses and values in this project and afterwards. This emphasis arises from discussions with advisors to the QPV project following the realization that existing accounting, documentation, and ROI methods fail to offer insights into the value arising in the use of data.

Relationship to Original QPV Study Objectives

From the partial results resulting in the GITA ROI study (Section B, main report) conducted for MetroGIS by W4Sight and subsequent discussions with the advisory team³, we know that strong evidence of value arising from the sharing of geographic information is crucial to policy makers. We have discussed the benefits of having more specific information about actual uses and values. The Defining Values research that Prof. Bryson is undertaking considers the matter of value from policy makers' perspectives and will also cover some aspects of actual uses and values. This complementary Defining Parcel Data Value survey supplements Professor Bryson's Defining Values research to gain more insight into actual uses and values arising in the use of regional parcel data. Further, it helps establish clearer understanding of the role of parcel data in spatial business needs as an input for future discussions about parcel data sharing. These results also hold relevance for broader discussions about all eight MetroGIS endorsed regional datasets.

Survey Method and Organization

The anonymous survey (Exhibit 1) consists of 17 questions on the use and value of MetroGIS parcel data to support functions of their respective organizations. All current licensees of the MetroGIS Parcel Data were invited to participate by email, with a follow-up email sent two weeks after the initial email. If the recipient knew of other individuals (both within and outside the organization) using the parcel data set they were encouraged to forward the invitation message to them. 44 respondents completed the on line survey which was developed and managed using SurveyMonkey. Another 7 respondents started the survey but did not answer all questions. The following discussion considers responses to individual questions. An assessment of completion rates and other factors follows an overview of the survey and presentation of responses.

The survey includes questions related to three issues:

- 1) The first part of the survey raises questions about the individual's background, role, and the sector of the agency/company they work for.

- 2) The second part of the survey includes questions about the use of parcel data sets. What is the frequency of access? Do you process the data further? How frequently is it used? Do you share it within the organization? Do you share it outside the organization? Which business needs does parcel data help fulfill? What proportion of the organization's work involves parcel data?
- 3) The concluding section consists of questions dealing with if and how they are able to assess value (of using data produced by others to their organization) through qualitative and quantitative measures.

Overview of Responses

To understand the characteristics of respondents, the survey began with several generic questions. These responses can aid the interpretation of the results and put them into context with the larger population of GIS users and developers in the Metro area. Of the respondents 65% completed a bachelor's degree, 47% completed a masters degree, and 14% a PhD. ESRI training had been completed by 26% of all respondents. Interesting is the almost perfect split between people who completed degrees with GIS emphasis and those without (51% and 49% respectively). About 42% work in technical areas and roughly 1/3 work as analysts and 1/3 works in management. Of all respondents, 9% indicated they are programmers. The majority of the respondents work for regional

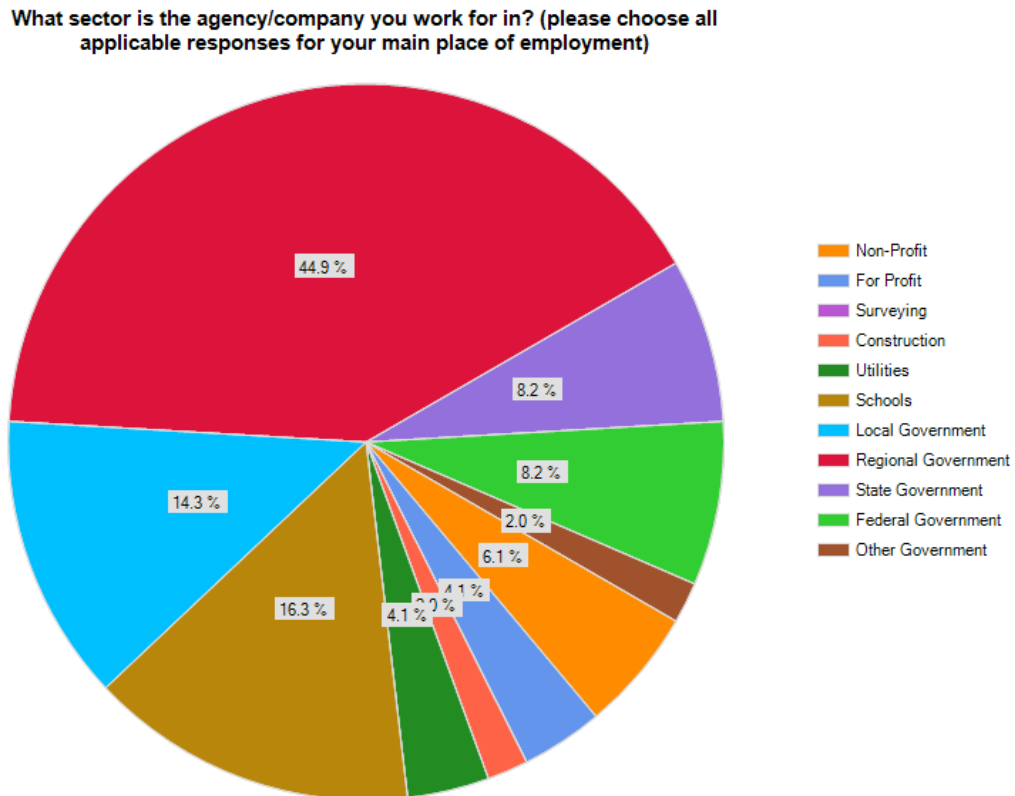
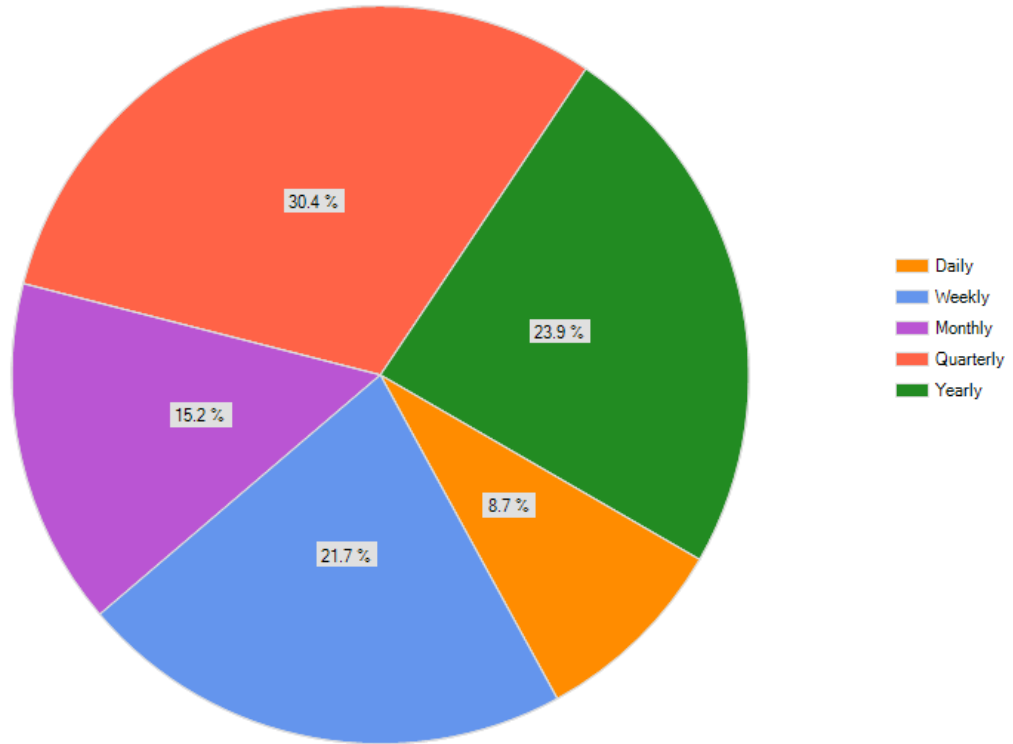


Figure 1: Sectors represented in survey responses

What is the frequency of your access of parcel data from MetroGIS?
(including updates in the last years)



How frequently is it the data used in your organization?

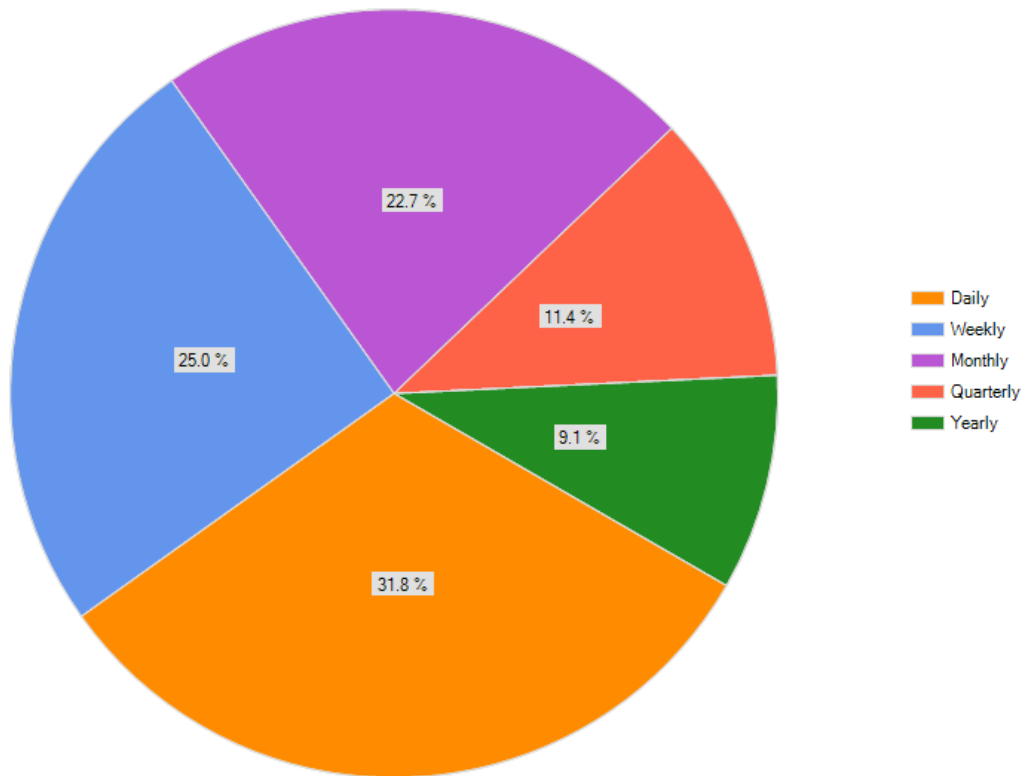


Figure 2: Access and use of parcel data

government agencies, followed by school districts and local government. No surveyors responded to the survey (see figure 1).

The results suggest an interesting finding related to the use and value of the regional parcel data: parcel data is important; it's used everywhere but remains a small part of the data people use regularly. The frequency of access suggests a broad range of regional parcel data use. Most respondents receive parcel data quarterly (30%) followed by yearly (24%) and weekly (22%). A smaller number access the data monthly or daily. Interesting to note is that 73% of the respondents process the data themselves. Staff process the data in most other cases, although some respondents indicate a state agency, students, or also no processing whatsoever occurs. In terms of the frequency of use, parcel data is used very frequently (see figure 2), suggesting wide-spread significance. Almost 32% of the respondents use the data daily; 78% use the data at least monthly. Although most respondents process the data themselves, an almost equal number (67%) share the parcel data within their organization and 25% share data or derivative products (maps, tables) outside the organization. The survey lacked questions to determine details of these activities.

The value of parcel data is related to activities that require information or visualizations of areas. The majority of respondents (45%) use the parcel data for business activities involving land use and/or planning. An smaller number of respondents (11%) use the data for education or business purposes. Surveying and E-911 work were additional uses. Several people failed to indicate clear business uses in their response, stating simply that parcel data is important. Interestingly, parcel data for almost 70% of the respondents makes up less than 30% of the data they work with. In fact, 30% of the respondents indicate their use of parcel data constitutes less than 10% of the data used by their organization and group works with.

In summary, the regional parcel dataset is important, yet is just a small portion of data used by respondents. Questions asking to assign a monetary value to the use of parcel data and the confidence in the estimation of value shed some insight. First, there are some caveats. Many respondents indicate they cannot assign a monetary value to their use of regional parcel data. An almost equally large group however, indicates the value is substantial. Most responses to the question about the value indicated they could not assign a value. The majority of responses position (see Figure 3) the regional parcel data as at least a 'necessary' data set for their business activities. In other words, parcel data holds considerable monetary value for around 38% of the respondents. Most respondents are confident in the category of value they selected to answer this question. And what is that value? Some respondents assessed value and confidence by considering the uses and roles of regional parcel data in business activities, even considering the time spent processing parcel data. Others used a comparison strategy, basing their assessment of value on the cost of acquiring parcel data from other countries. Other respondents found regional parcel data is essential and therefore invaluable. Finally, some respondents simply guessed at the value.

Can you assign a monetary value to your use of parcel data?

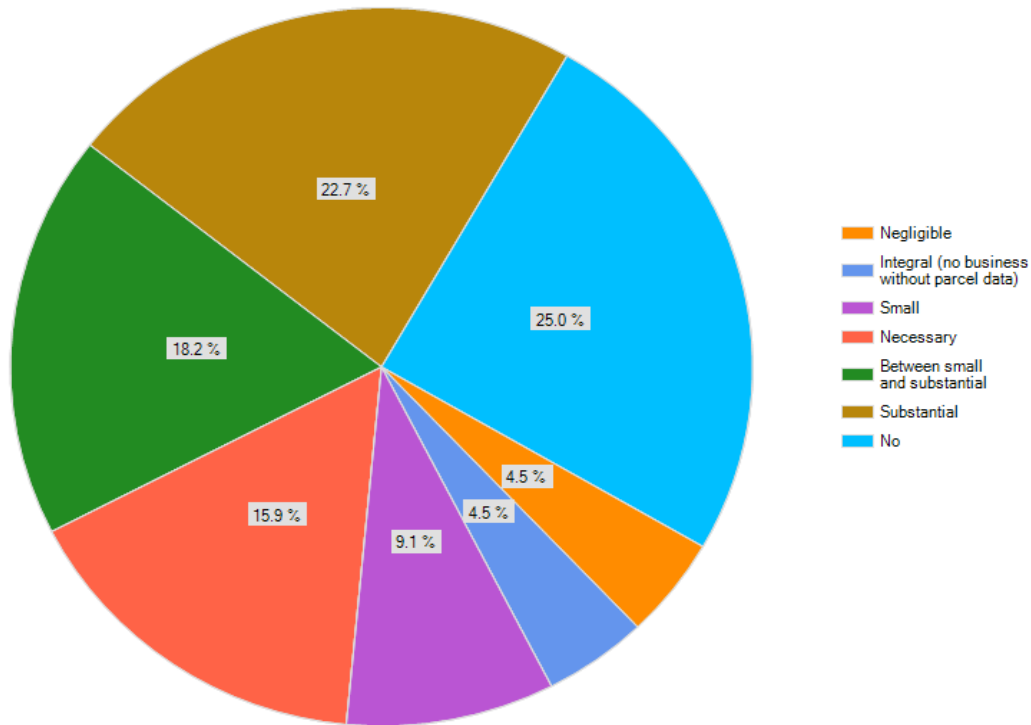


Figure 3: Estimates of regional parcel data value

In terms of the costs to access and process parcel data, most respondents indicated the cost of accessing and updating were very low and the costs of processing were as expected. Again, most were somewhat confident in their evaluation. More research would be required to determine specific monetary values.

Assessment

First, the response rate to this survey is satisfactory (30% of the contacted people fully completed a survey); a few additional respondents (3-7) actually skipped most questions. Questions involving writing and assessing contributions and confidence were systematically skipped by 13 or 14 respondents. The number of people skipping raises some concerns, but comments offered to these questions suggests that several possibilities for skipping them exist:

- staff working with GIS had better understanding of issues than the licensee completing the survey
- costs are difficult to assess because of the lack of accounting
- division of labor leads to respondents lacking insight to answer these evaluative questions

- internalization of parcel data processing effort is difficult to assess

In this regard, any detailed analysis of the survey results must reflect that individual assessments can be subjective. The corresponding limitation was considered in the de-

sign of the survey and accepted for two reasons. First, all of the revised QPV methodology lacked the collection of detailed costs and benefit information. Second, a decision was made in designing the survey to generally ask questions that could have specific quantitative responses. The lack of specific financial information in other parts of the QPV study suggests that quantitative information is elusive and requires a more nuanced survey design and methods than the QPV project anticipated and could support.

While the survey did not return specific cost/expense related information, the results suggest that benefits of shared data are considerable. While only a few of the survey respondents (8.7%) access the regional parcel data daily from Metro GIS, 31% use the regional parcel data weekly and another 25% use it weekly. Bearing in mind that the regional parcel data makes up less than 10% of the organizations work for 30.4% of the respondents, it is clear that parcel data benefits a large number of business needs in the metro community. Looking forward, a research strategy to quantify benefits can begin with these results to target detailed work process studies of users with the goal of producing generalizable results for the larger community of users.

Finally it is worth noting that 59% of the respondent received the email invitation directly from Francis Harvey, survey manager. The remainder (41%) received a forwarded email invitation. This suggests a large degree of intra-organization division of tasks involving parcel data and communication among users of regional parcel data.

Exhibit

1. List of survey questions

EXHIBIT 1

Questions for Fall 2011 Supplemental Study Defining Parcel Data Value

Questions are divided into three sections. Altogether the survey consists of 17 questions.

Background

1. Did you complete a degree with an emphasis on GIS?
2. Please indicate your academic training?
3. What is your role in your main current employment?
4. What sector is the agency/company you work for in?
5. How did you receive this survey?

Use of Parcel Data

1. What is the frequency of access of parcel data from MetroGIS?
2. Do they process this data further?
3. How frequently is it used?
4. Do they share it within the organization?
5. Do they share the data or derivative products outside the organization?
6. Which business needs does parcel data help fulfill?
7. What proportion of your organization's and group's work involves parcel data?

Value of Parcel Data

1. Can you assign a monetary value to their use of parcel data?
2. How confident are you in this value?
3. How did you determine it?
4. Can you indicate the costs of accessing and processing parcel data?
5. How confident are you in the accuracy of these costs?