

Montana State Library Stakeholder and Interested Party Survey Synopsis

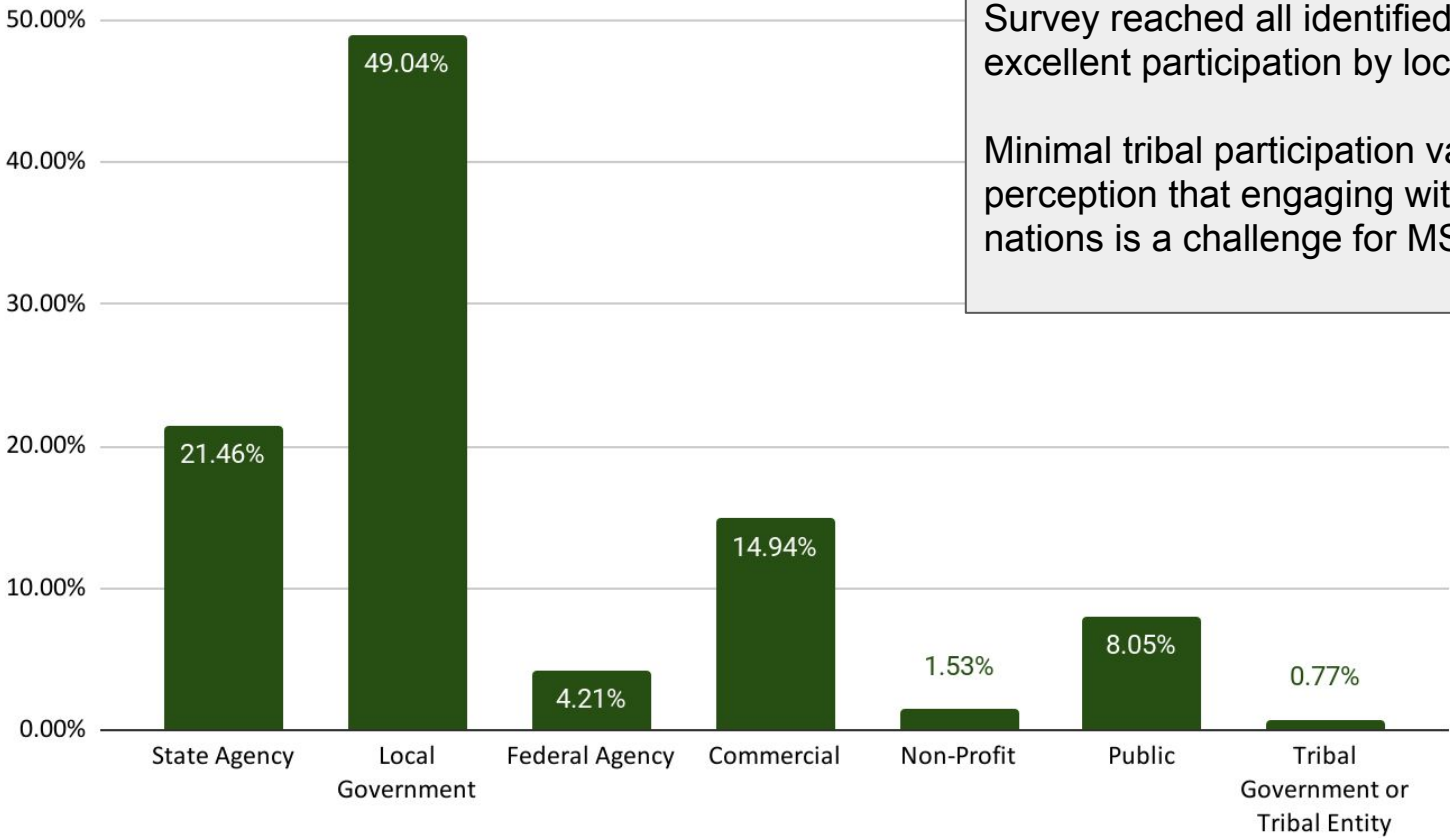
June 18th, 2021



Introduction

The following slides represent a summary of the survey results for the MSL GIS stakeholder community. Full “raw” results are also being delivered to the MSL project team. The comments herein do not represent deep analysis of the findings but identify the beginnings of ideas/issues/patterns/questions that will be explored more fully during the stakeholder interviews and workshops. These survey results inform the final SWOT analysis that will be delivered upon completion of information gathering.

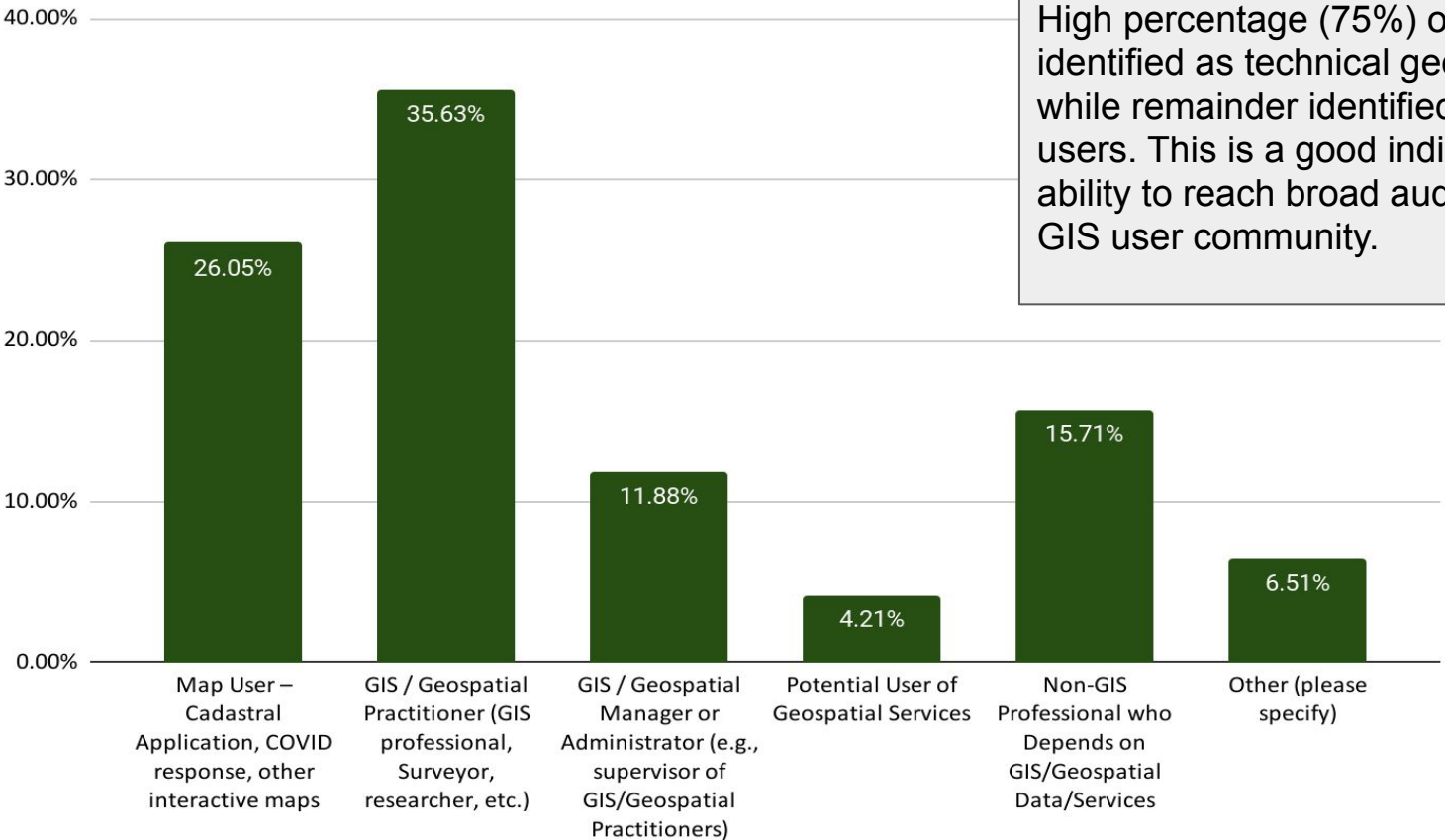
Q2: Sector



Survey reached all identified sectors with excellent participation by local government.

Minimal tribal participation validate the perception that engaging with sovereign nations is a challenge for MSL.

Q6: Which of the following best describes the role in which you are responding to this survey?

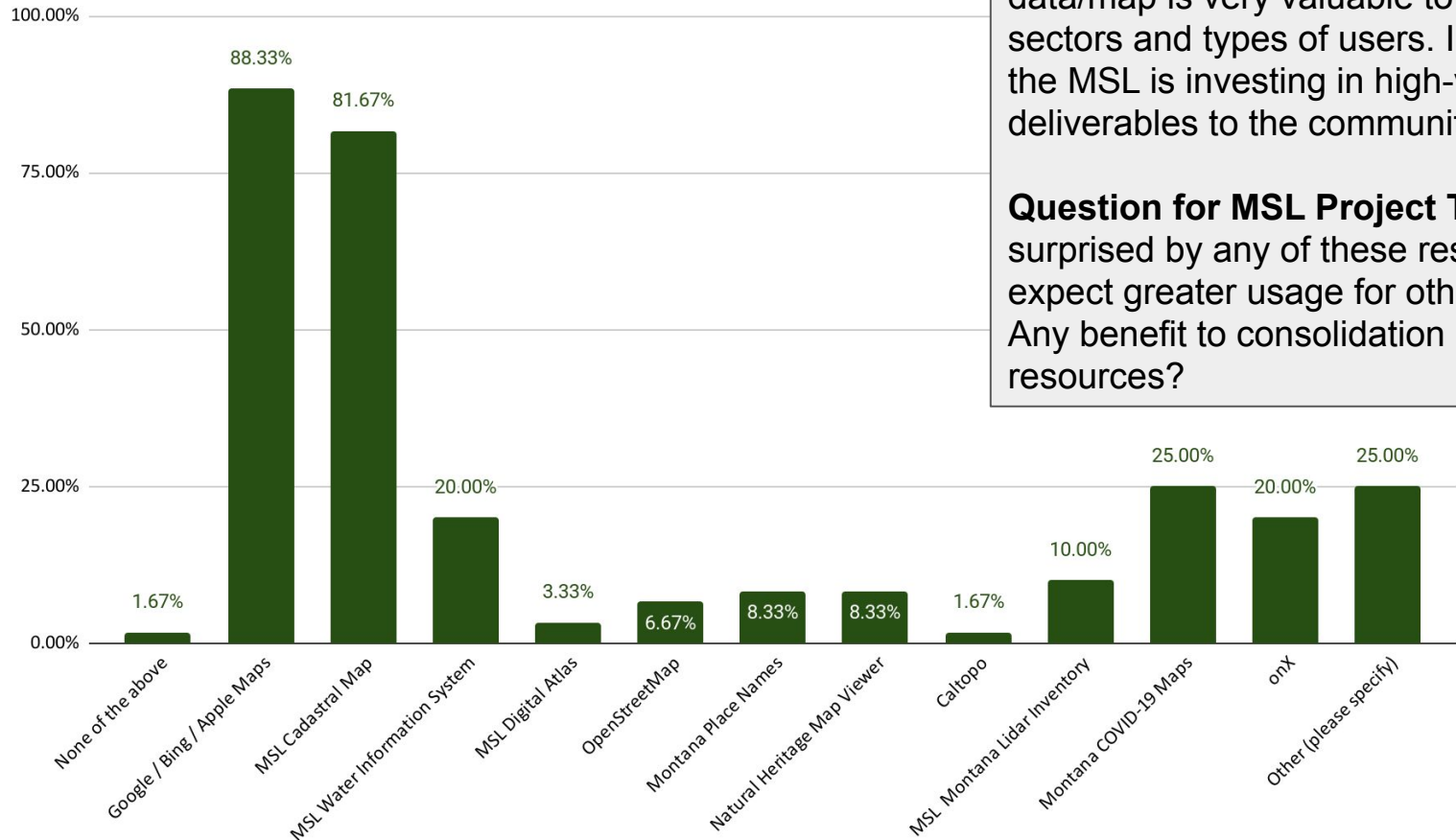


High percentage (75%) of respondents identified as technical geospatial users, while remainder identified as general map users. This is a good indication of MSL's ability to reach broad audience beyond core GIS user community.



Questions 8 through 16 were answered by non-technical map users.

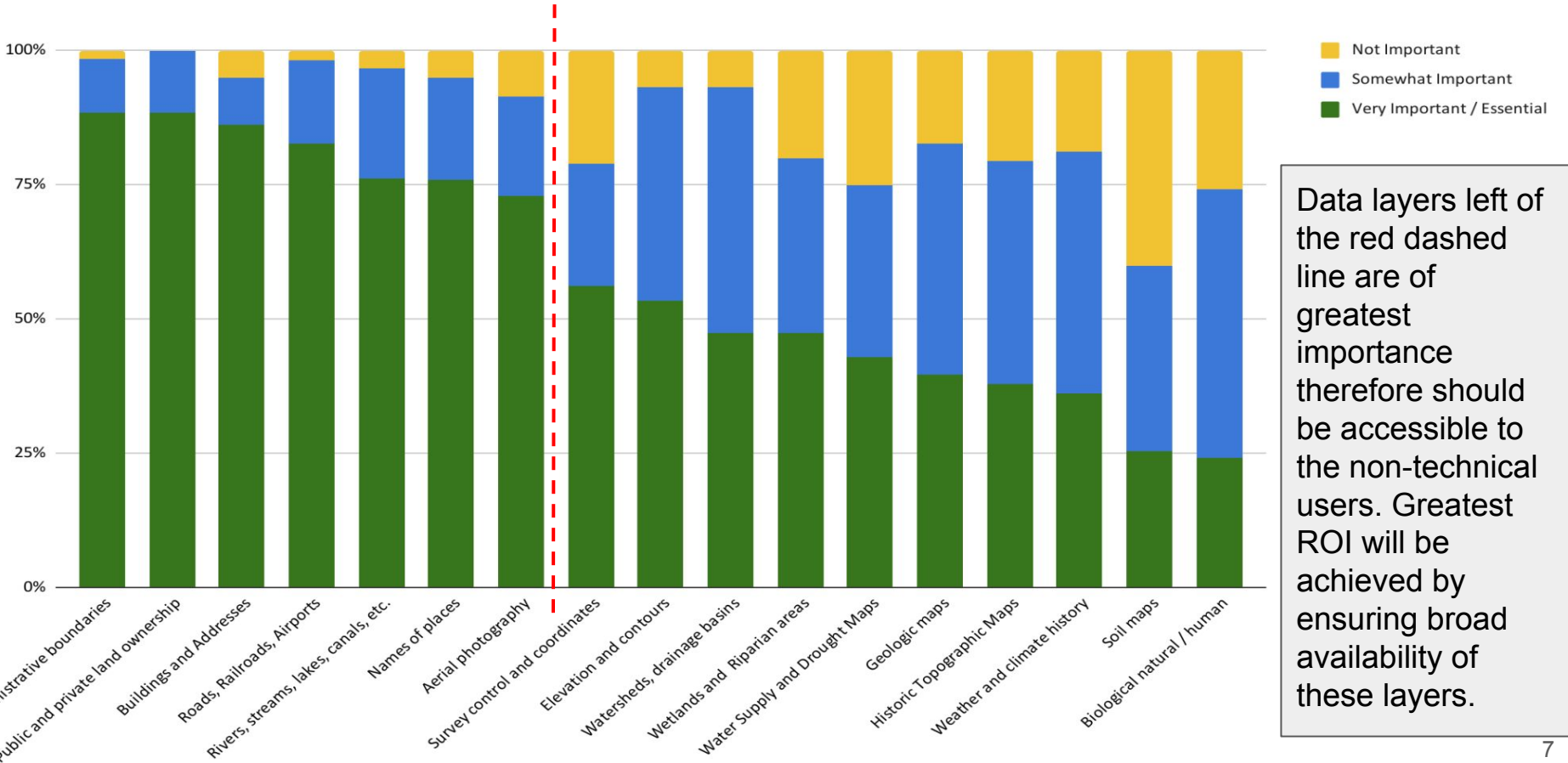
Q8: What online maps do you use regularly?



Results clearly indicate that cadastral data/map is very valuable to nearly all sectors and types of users. Indication that the MSL is investing in high-value deliverables to the community.

Question for MSL Project Team: Are you surprised by any of these results? Did you expect greater usage for other online maps? Any benefit to consolidation of mapping resources?

Q12: What kind of information is important to you to have in an online map and how important is it to you?



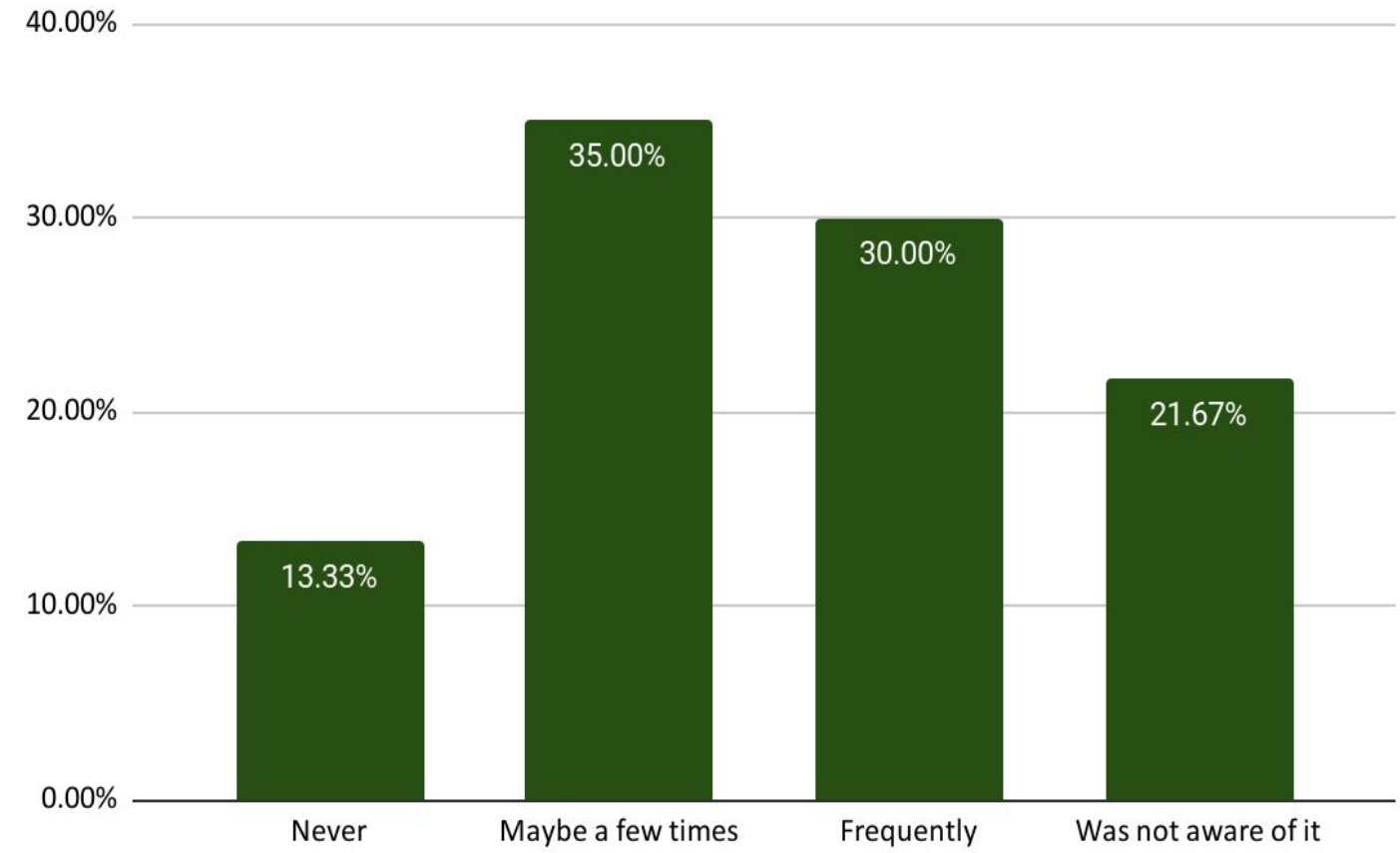
Data layers left of the red dashed line are of greatest importance therefore should be accessible to the non-technical users. Greatest ROI will be achieved by ensuring broad availability of these layers.

Q13: What other kinds of map information would you like that is not listed above?

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| Historic ownership, building history, electric, well data, well protection zones, septic field data, water district maps, water system maps. |
| Voting Precincts and a written definition to all zoning codes. |
| Fire service areas. |
| We at the office of public instruction need a good district boundaries map. |
| A decent topo map would be great now that we have thrown away all the paper maps. The online topo maps leave a lot to be desired. |
| Native & Invasive species. |
| Hunting district boundaries and possibly a feature that will tell you what district you are in, even if that particular map or aspect isn't showing the district boundary lines. |
| Critical infrastructure such as power lines, healthcare facilities, pipelines, water and wastewater distribution lines, etc. |
| Clarifying Aerial Photography to add Historical Aerial Photography. |
| Mine sites, mineral/gas leases, reclaimed sites |

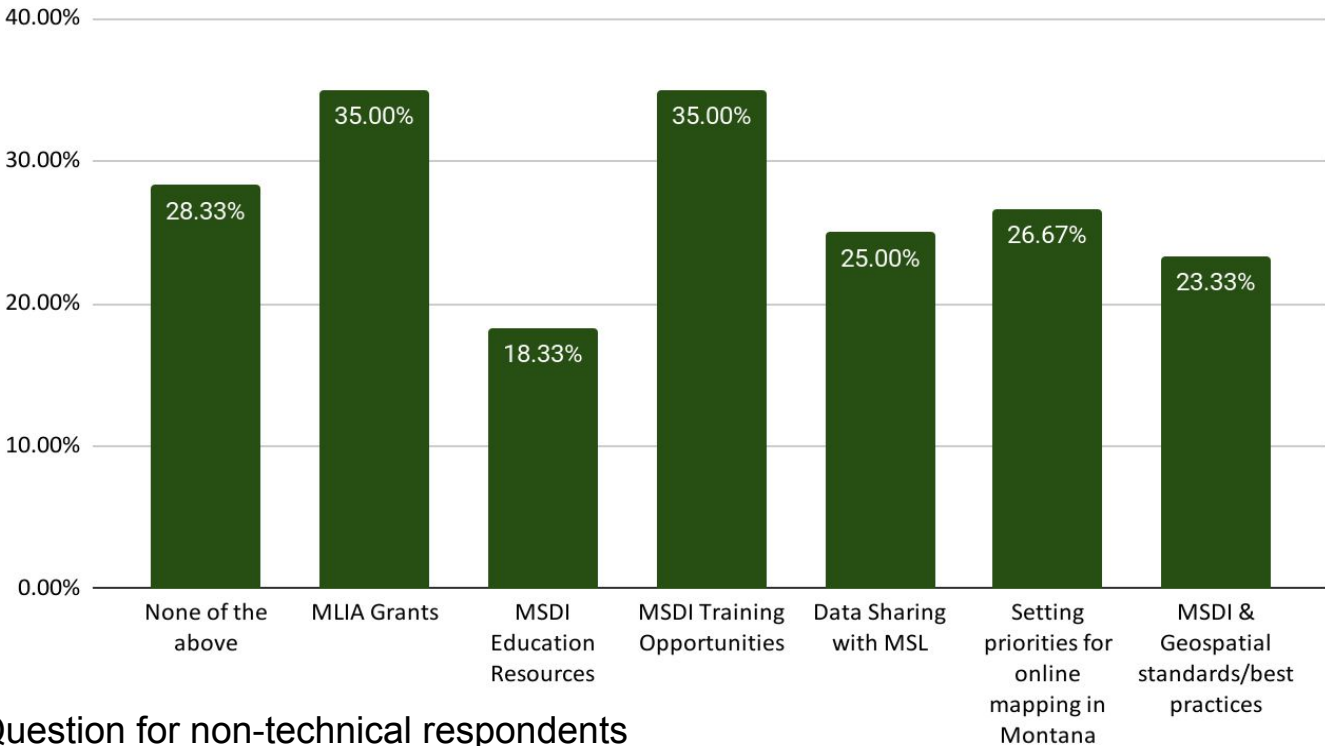
The results and specialized data interests perhaps indicate opportunity for MSL to expand GIS education. Teach the community -- even those non-technical users -- how to fish. Build awareness of how to search for and access data/maps with existing tools.

Q14: How often have you visited the Montana State Library Geographic Information website?



While the GIS Coordinator's role and responsibilities are clear, the brand/identity of Montana GIS is not apparent to a website visitor. How does geospatial fit into overall MSL mission? Compare to public facing UGRC web presence: <https://gis.utah.gov/> Opportunity to strengthen brand and presence?

Q15: Which of the following MSL GIS programs or activities might be important to you?*



Non-technical users recognize the value of the grant programs and training programs but nearly 1/3 of respondents don't understand how GIS programs could benefit them.

*Question for non-technical respondents

Q16: How can the Montana State Library mapping efforts be of more value to you?

Summary Of Narrative Responses

Accuracy and Frequency of Update

Data should be updated more frequently and be more spatially precise, esp. cadastral and addresses. Better coordination (state to local) may be important to having datasets that are both more accurate and updated more frequently.

Additional Data Themes

It would be good have additional statewide datasets for utilities (water, electric, telephone), for voter registration (precinct boundaries), for hunting, fishing, and other purposes.

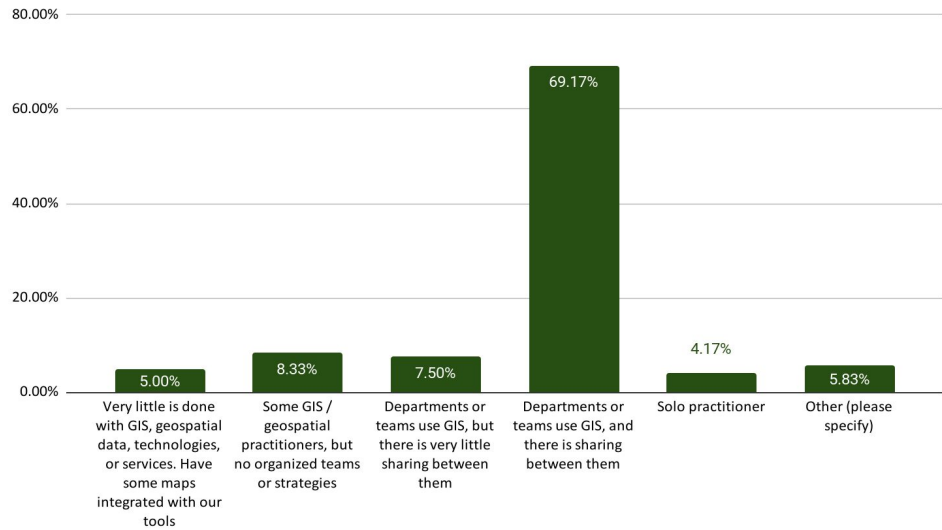
Improved Mapping Applications and Interfaces

There were several ideas here - make export of georeferenced data possible along with map printing (MT Cadastral); combine all species in one AIS application / map viewer; create sites that are easier for the public to find for specific uses (hunting and fishing for example) and are very easy for the public to use.

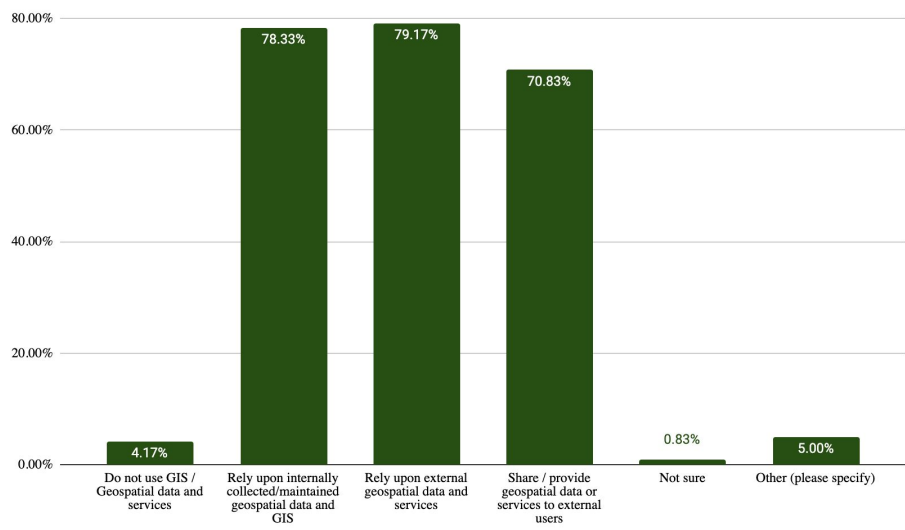


Questions 17 through 31 were answered by technical GIS users.

Q18: How well-established is GIS and the use of geospatial data in your organization?

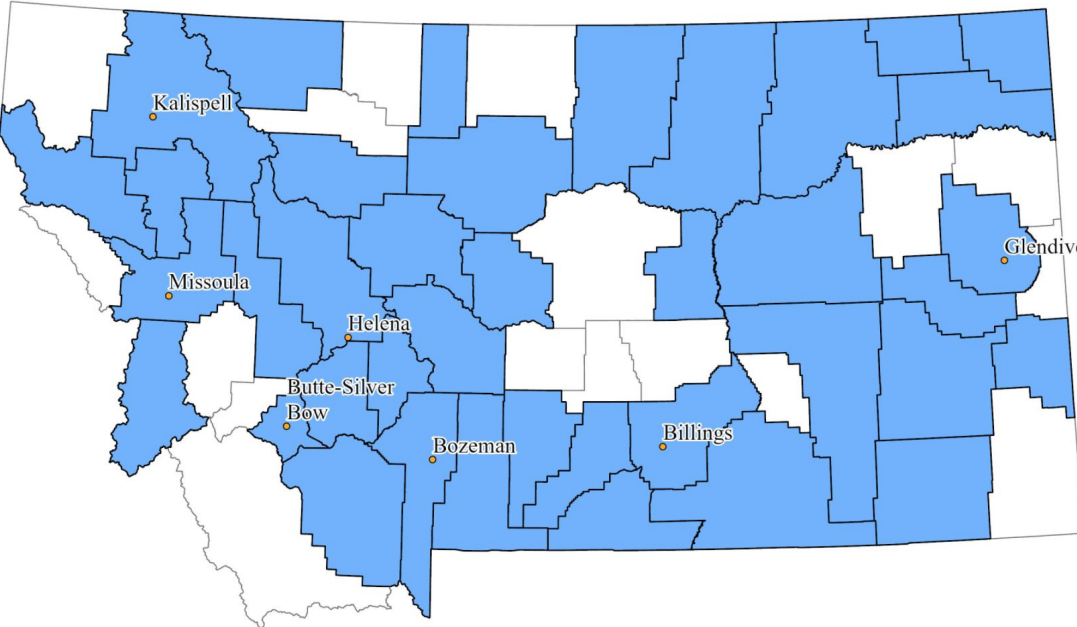


Q19: Describe how your organization uses GIS / geospatial data or services.



GIS is well established with widespread usage. Strong data sharing culture and recognized reliance on both internal and external data sources. Other survey questions help identify which external data is critical to their success.

Local Government Respondents



- County Respondent
- Major City Respondent

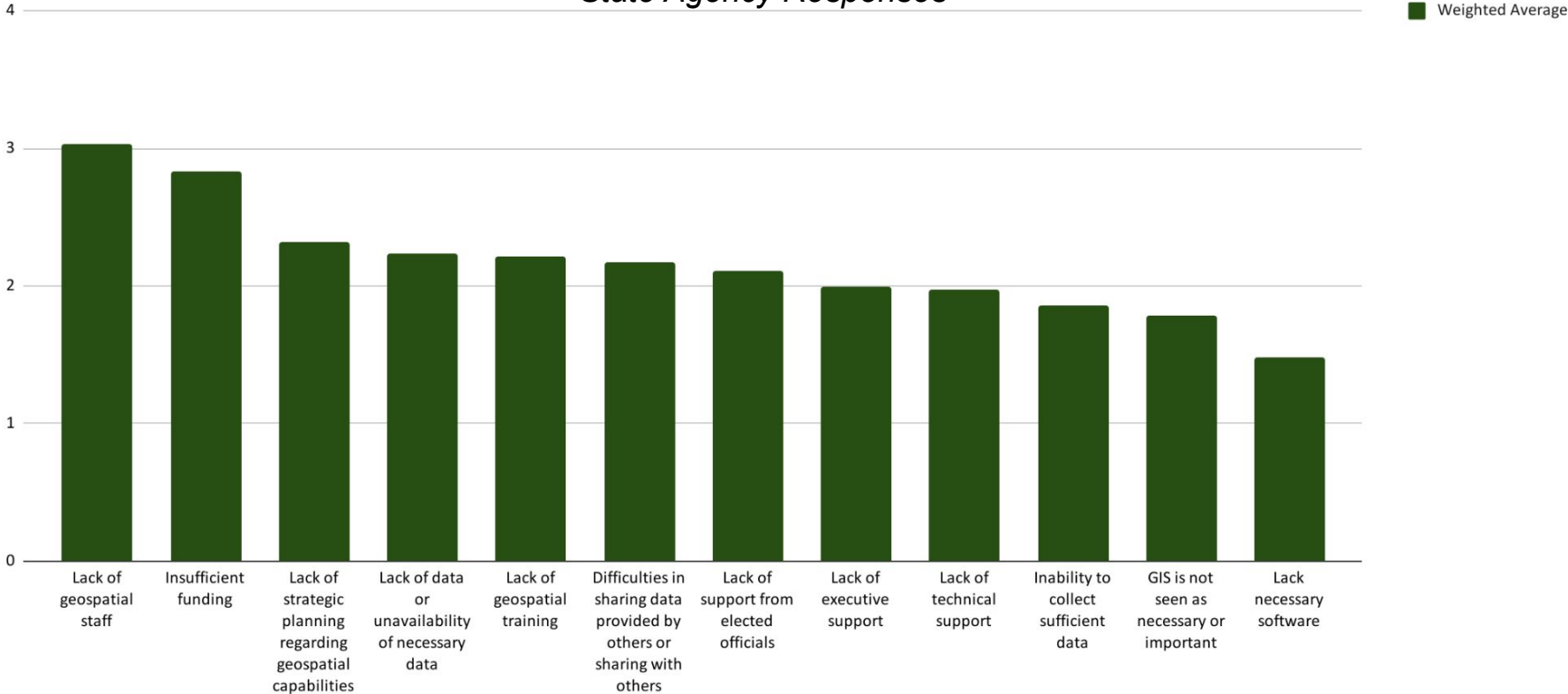
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|----------------------------------|---|
| Belgrade Community Library | Liberty County |
| Big Horn County | Madison County |
| Blaine County | Meagher County |
| Blaine County Clerk and Recorder | Missoula County |
| Broadwater County | Montana House of Representatives |
| Broadwater County Development | Montana Judicial Branch |
| Carbon County | Park County |
| Cascade County | Petroleum County |
| Chouteau County | Phillips County |
| City of Billings | Powder River County |
| City of Bozeman | Powell County |
| City of Glendive | Prairie County |
| City of Helena | Ravalli County |
| City of Kalispell | Roosevelt County |
| City of Missoula | Rosebud County |
| Custer County | Sanders County |
| Daniels County | Sheridan County 9-1-1 |
| Dawson County | Stillwater County |
| Fallon County | Sweet Grass County |
| Flathead County | Teton County |
| Gallatin County | The City and County of Butte-Silver Bow |
| Garfield County | The City of Kalispell |
| Glacier County | Valley County |
| Glacier County Sheriff's Office | Valley County Planning |
| Jefferson County | Warriors and Quiet Waters Foundation |
| Judith Basin County | Yellowstone County |
| Lake County | Yellowstone Ecological Research Center |
| Lewis and Clark County | |

State Agency Respondents

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|---|
| Montana Bureau of Mines and Geology |
| Montana Department of Commerce |
| Montana Department of Environmental Quality |
| Montana Department of Justice |
| Montana Department of Military Affairs |
| Montana Department of Natural Resource and Conservation |
| Montana Department of Revenue |
| Montana Department of Public Health and Human Services |
| Montana State Historic Preservation Office |
| Montana State Library |
| National Center for Landscape Fire Analysis (University of Montana) |
| University of Montana |

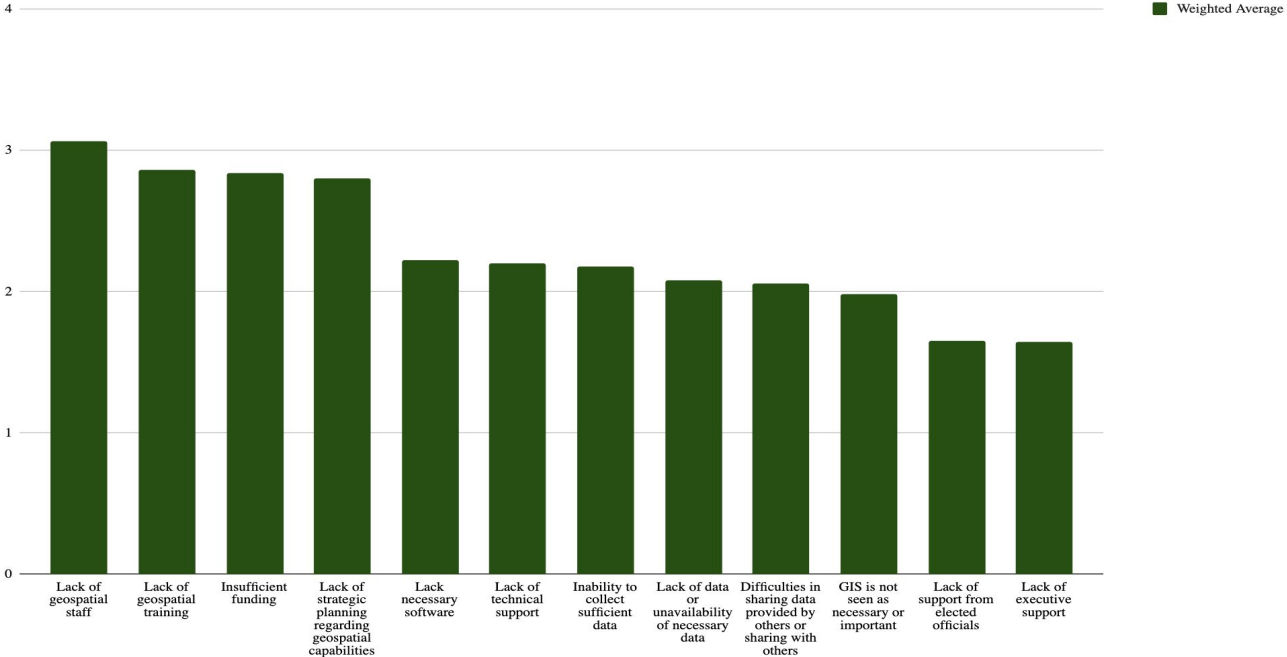
Q20 State: What barriers prevent your organization from developing the geospatial capabilities that you would like to have? (higher average = greater barrier)

State Agency Responses

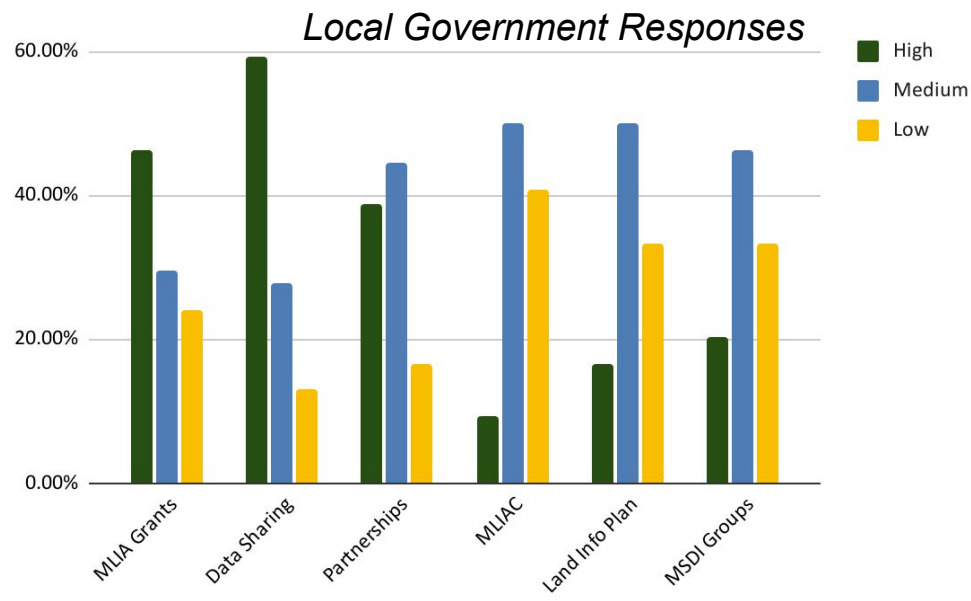
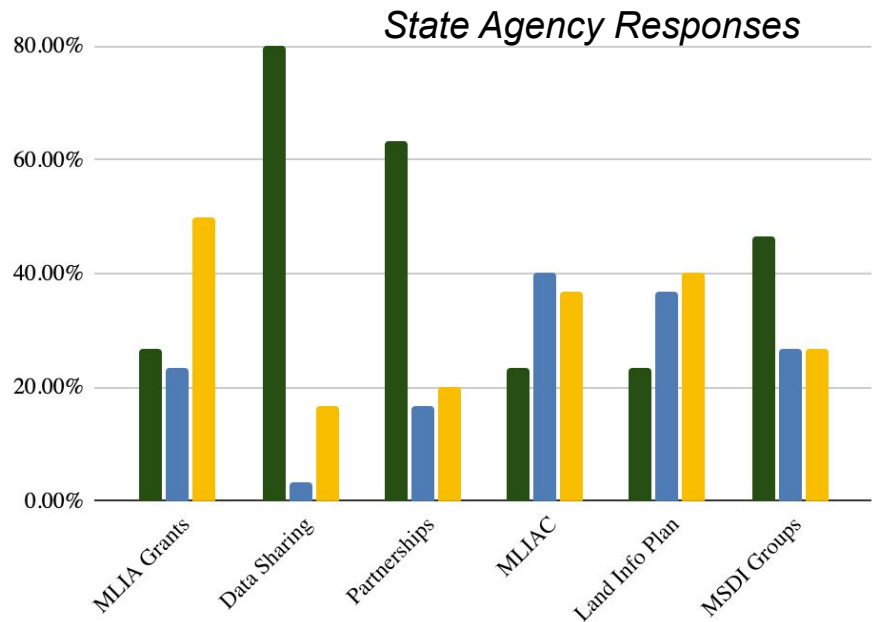


Q20 Local: What barriers prevent your organization from developing the geospatial capabilities that you would like to have? (higher average = greater barrier)

Local Government Responses

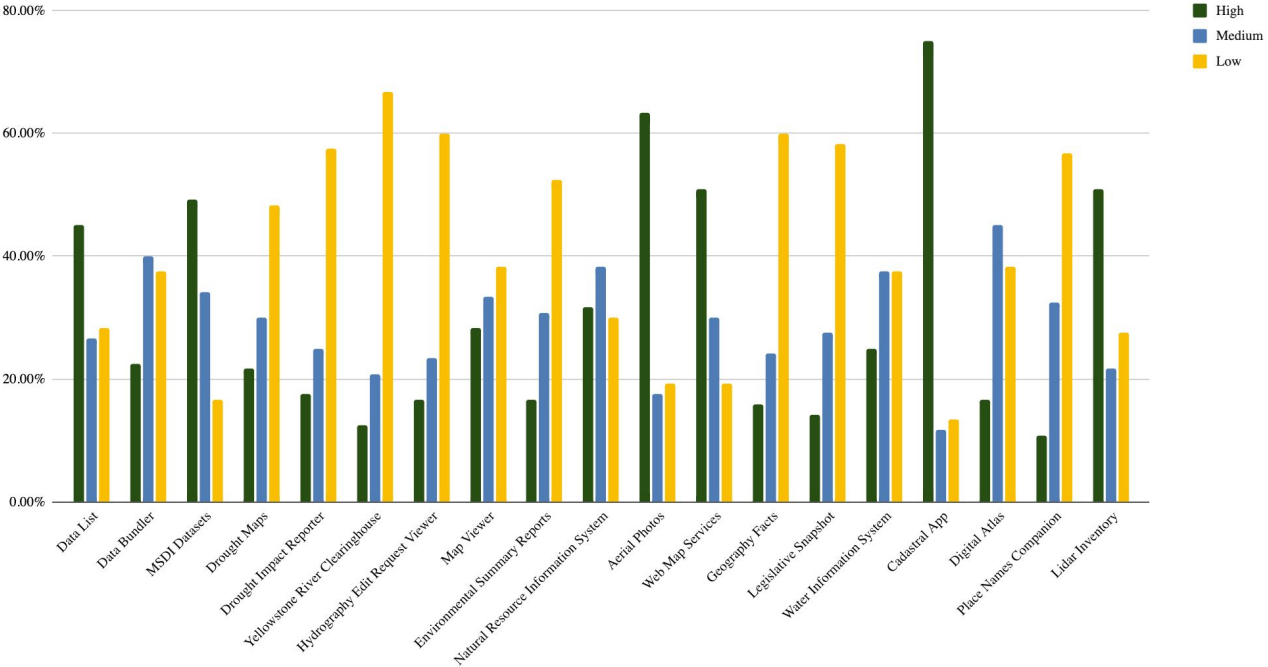


Q21 State and Local Comparison: How valuable, or potentially valuable, are each of these MSL programs and opportunities to you?



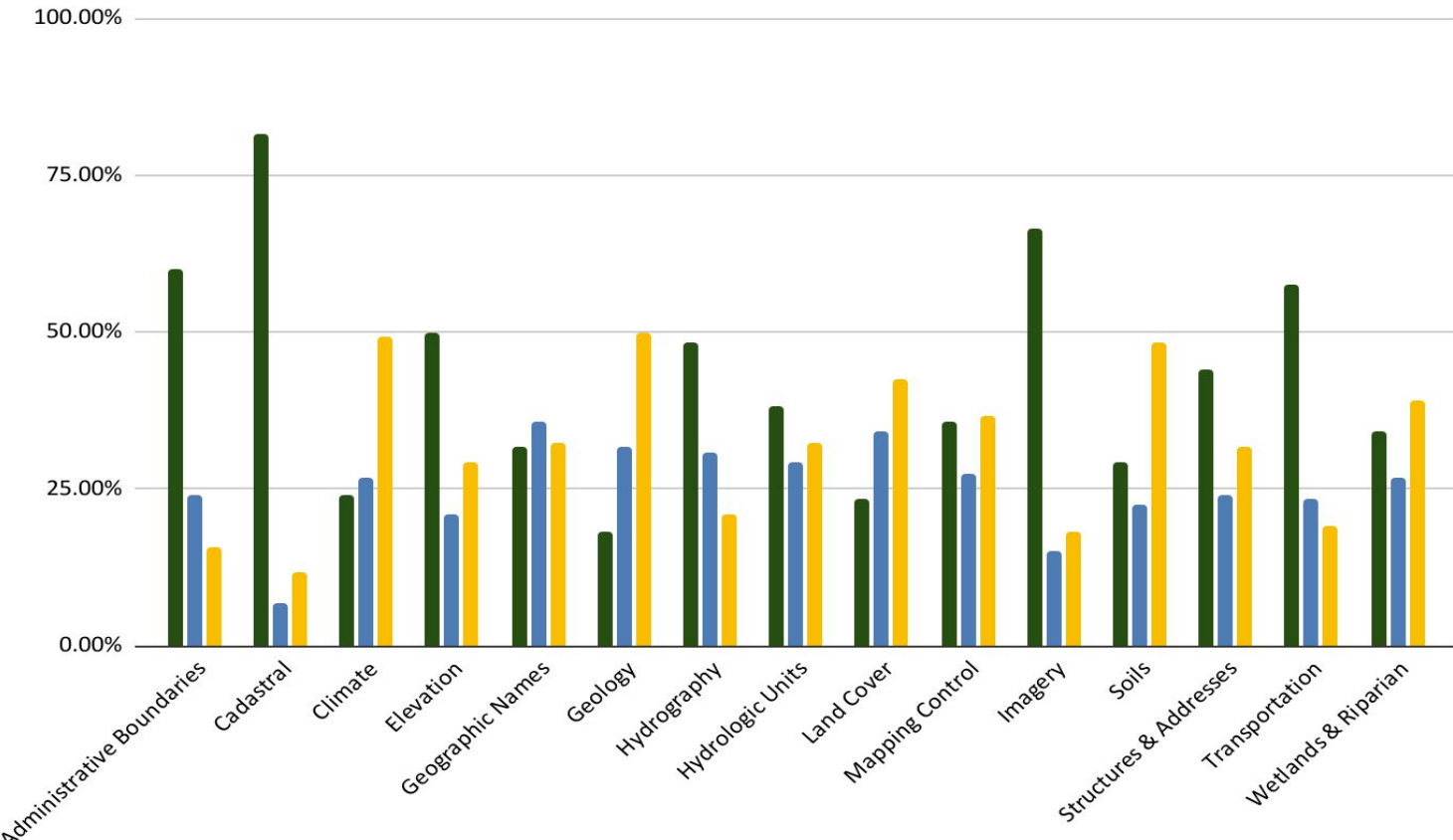
Data sharing programs are ranked highly by both state and local respondents; Local governments recognize value of MLIA grant programs whereas state agencies value partnerships and the MSDI working groups. Opportunity for education/outreach/increased participation by both sectors with regard to MLIAAC and MSDI working groups.

Q22: Are you aware of or have you used any of the following MSL Resources? Charts depict value to organization.



Question for MSL Team: Which of these resources require significant MSL time/effort? And is that investment commensurate with perceived value by community? Is there an opportunity for streamlining efforts to maintain specialized resources?

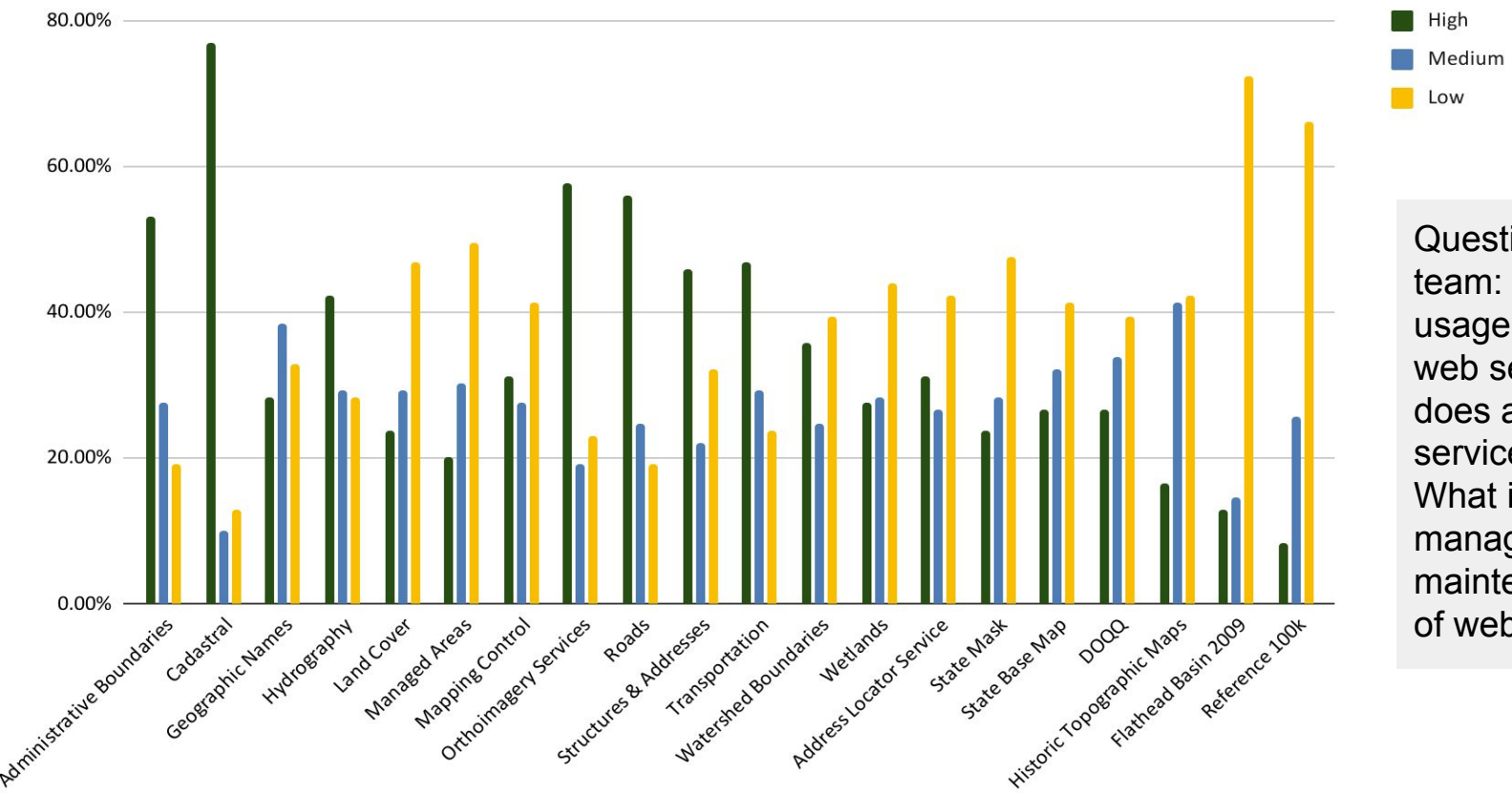
Q23: Are you aware of or have you used any of the following MSDI framework geographic datasets? Importance / Priority



■ High
■ Medium
■ Low

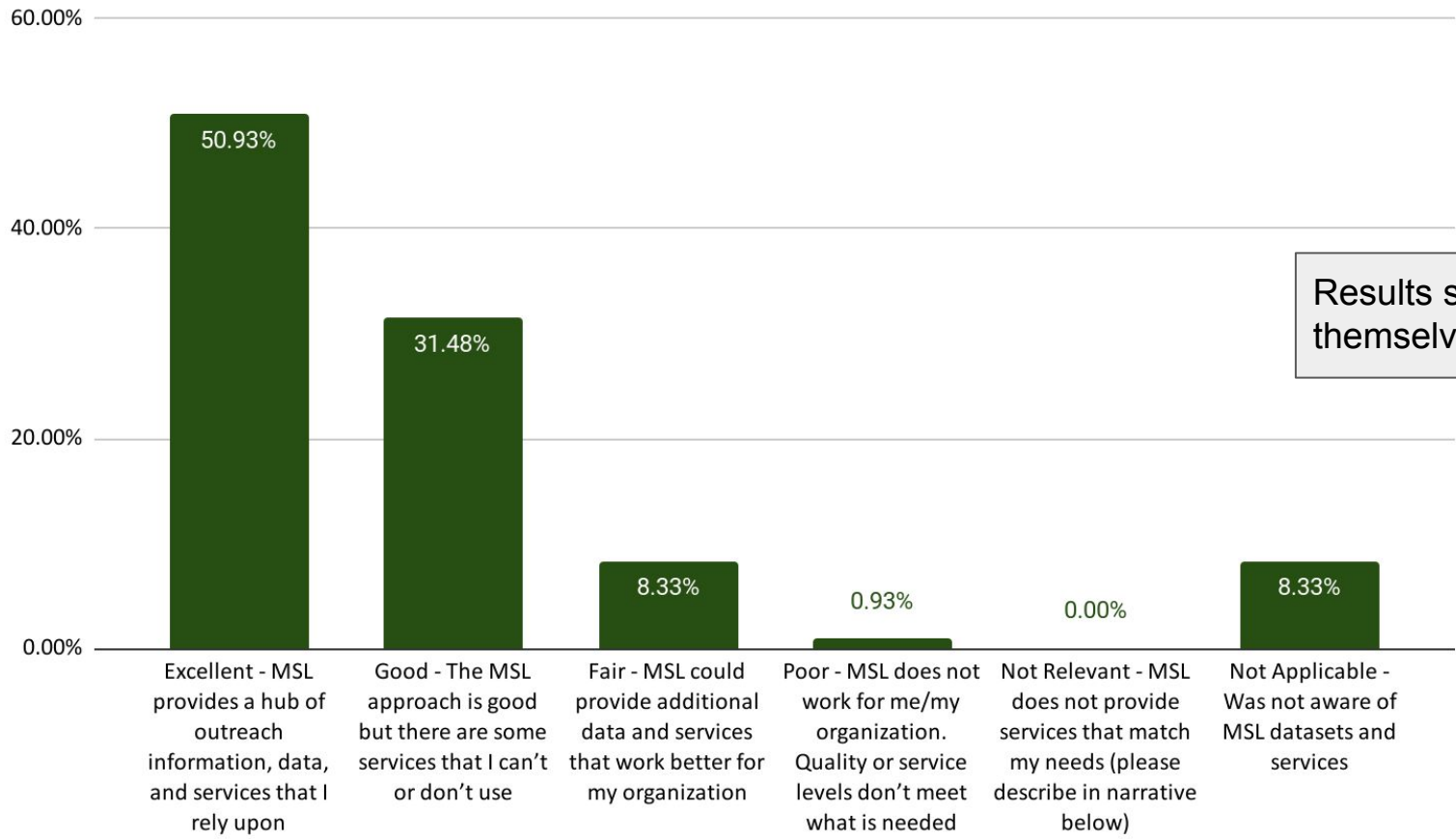
Validates universal importance of cadastral data and other foundational data sets such as boundaries, imagery, transportation and structures/addresses. Key strategic question is how does a data set become framework? What are the funding/maintenance responsibilities associated for MSL?²⁰

Q24: Are you aware of, or have you used, any of the following MSDI Web Services, and how important is each service? Importance / Priority



Question for MSL team: Do you have usage stats for MSDI web services? How does an under-utilized service get sunsetted? What is framework for managing addition, maintenance, removal of web services?

Q25: Overall, how would you rate online resources provided by MSL?

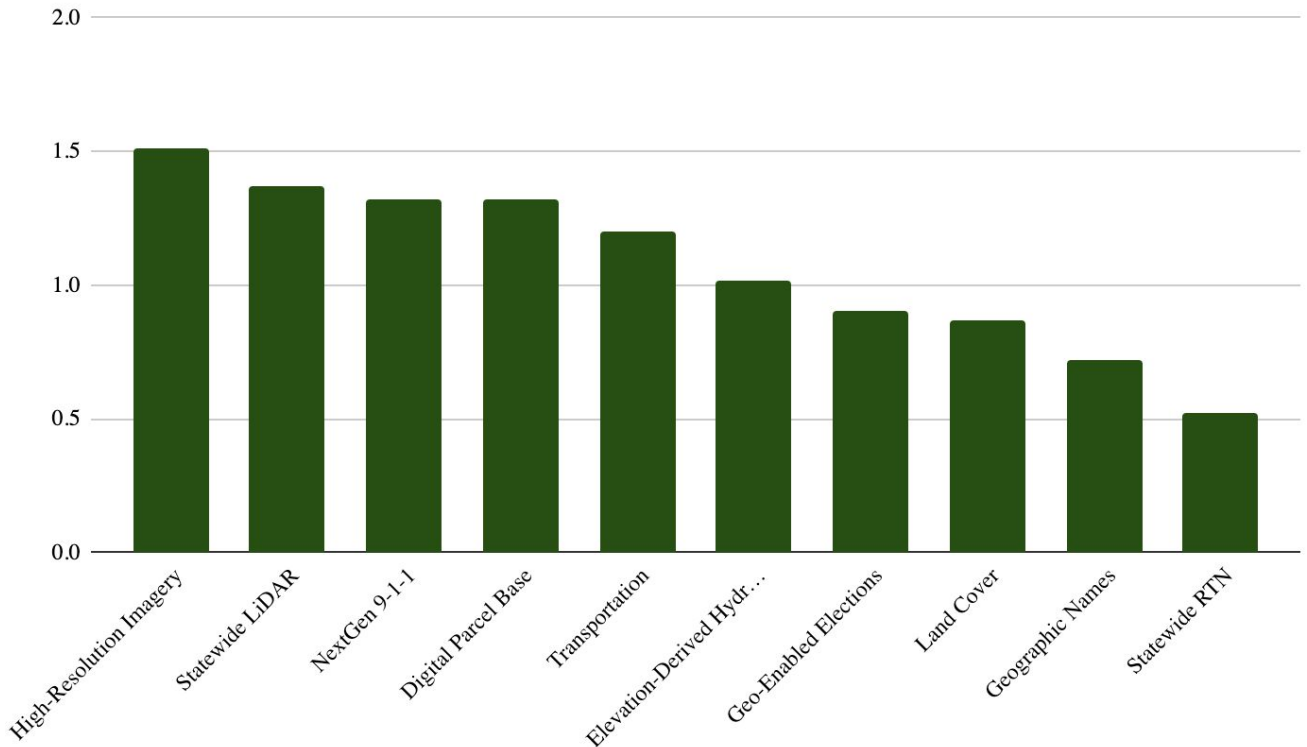


Results speak for themselves!

Q26: Please explain why you ranked the online services as you did.

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| I refer to downloaded data more often than web services. |
| The MSL GIS website is essential to what we do here in Cascade County. It houses data we are unable to collect ourselves in a one stop GIS data shop. You folks do great work. 👍 |
| The data bundles are an amazing, centralized, coordinated, and comprehensive collection of data in a centralized location that offer great benefit to my department, my organization, and more. The online cadastral mapping allows me to point people in a direction to gather their own information (specific to their needs), without significant time investment from my understaffed office. The support that MSL GIS staff offers is amazing and my department would not have improved to its current status without their assistance and direction. I do wish that they had more staff as the centralized efforts that they put forward could do more with more empowerment. I am certainly impressed with all that they accomplish with the staff that they have. The MSL GIS team is an exceptional and dedicated staff that the state is blessed to have. The grant funding available, and the cooperation and collaboration with the grant manager (and associated staff) is a blessing that allows under-funded departments to move forward. This opportunity and ability has helped my county clean up/improve cadastral, parcel boundaries, and the PLSS. The improvement of these layers has saved staff time not only for my agency/organization, but also for others that use the data in our geographic area. I do understand that there is more work to be done and without the MLIAC grant opportunity, I would have no hope of this data improvement. The Montana Memory Project has significantly aided my county to clarify historic road data and routes. This has had unmeasurable savings with regards to potential litigation that did not occur due to proven factual information. |
| Would like more ecosystem or biophysical hierarchical maps |
| Use data from MSL all the time, would be lost on many projects without it. |
| We used to solely rely upon MSL for sharing our program data with the public; however, the MSL service became static and the our program information became out-of-date and no longer reliable. |
| I have limited training and don't always understand how to find what I need on MSL |
| The whole infrastructure needs to be web based. Everything should be available through services, otherwise we have users downloading and storing copies of "download only" datasets. |
| I find it hard to find the correct data through my ArcPro online data portal. Also, hard to figure out how to connect or download the data. |
| As a GIS professional in Billings I don't feel like this portion of the state gets the attention the western side of the state does. It would be nice if representatives came to the City of Billings and met with the GIS staff to help us better understand how we can collaborate to meet the areas GIS needs. |
| Relying on map services comes with more caveats than benefits--symbology, zoom dependencies, limits on records (usually 1000 to 2000 at a time), etc. make them difficult to use. We're starting to revert to periodically downloading datasets. |

Q27: What priority would you assign to the following dataset development, improvement, online application, or online services for MSL or Montana generally?



Results validate current MSL priorities: statewide LiDAR, Imagery, NextGen 9-1-1, and transportation. The community recognizes the value of these potentially significant investments. Key priorities could be focus of business planning to ensure successful implementation, funding, maintenance.

Q28: What other efforts should be a priority? (Summary Of Narrative Responses)

Improved Processes

Uniform, statewide, verified GIS data layers; Improved outreach on available resources, complete and accurate metadata, vector basemap implementation of the MT Basemap; Everything as web services (switch to cloud managed services for scalability and performance of these larger datasets while still providing download function where necessary)

Additional Data Sets / Themes

Administrative boundaries, NG911 addresses, survey control, shareable transportation data (with shoulder widths, rumble strips, pavement condition), LiDAR for all counties, 3D imagery, PLSS, elevation slope, parcel fabric showing tracts of record rather than tax parcels. statewide RTN, population, LiDAR derived contours and building footprints, socially vulnerable populations, Wetland and vegetation dynamics, digitize older USDA aerial photographs

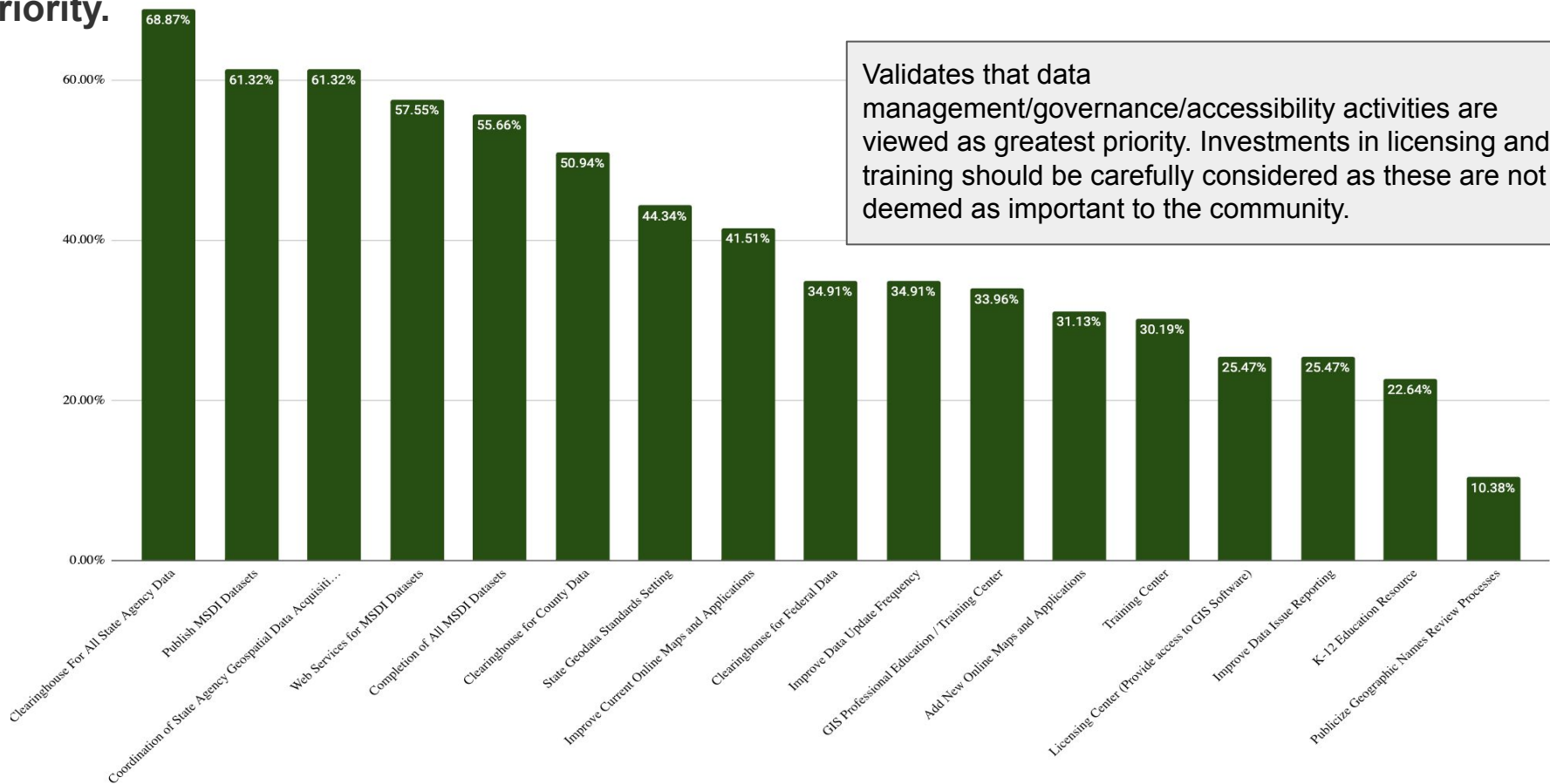
Additional Resources

- Informational Resources ("How census blocks work", "How to read PLSS", "What GIS does for your agency/organization", "How GIS saves local government Money/GIS ROI", etc. as downloadable PDFs)
- More assistance to local governments
- Break down barriers between GIS and more traditional "Business Intelligence" disciplines. Many Covid dashboards illustrated how much GIS shops are now supporting non-spatial applications.
- Evaluate open-source technologies for realistic uses in enterprise systems. GIS suffers heavily from "vendor capture".
- Routing solution

Other commentary:

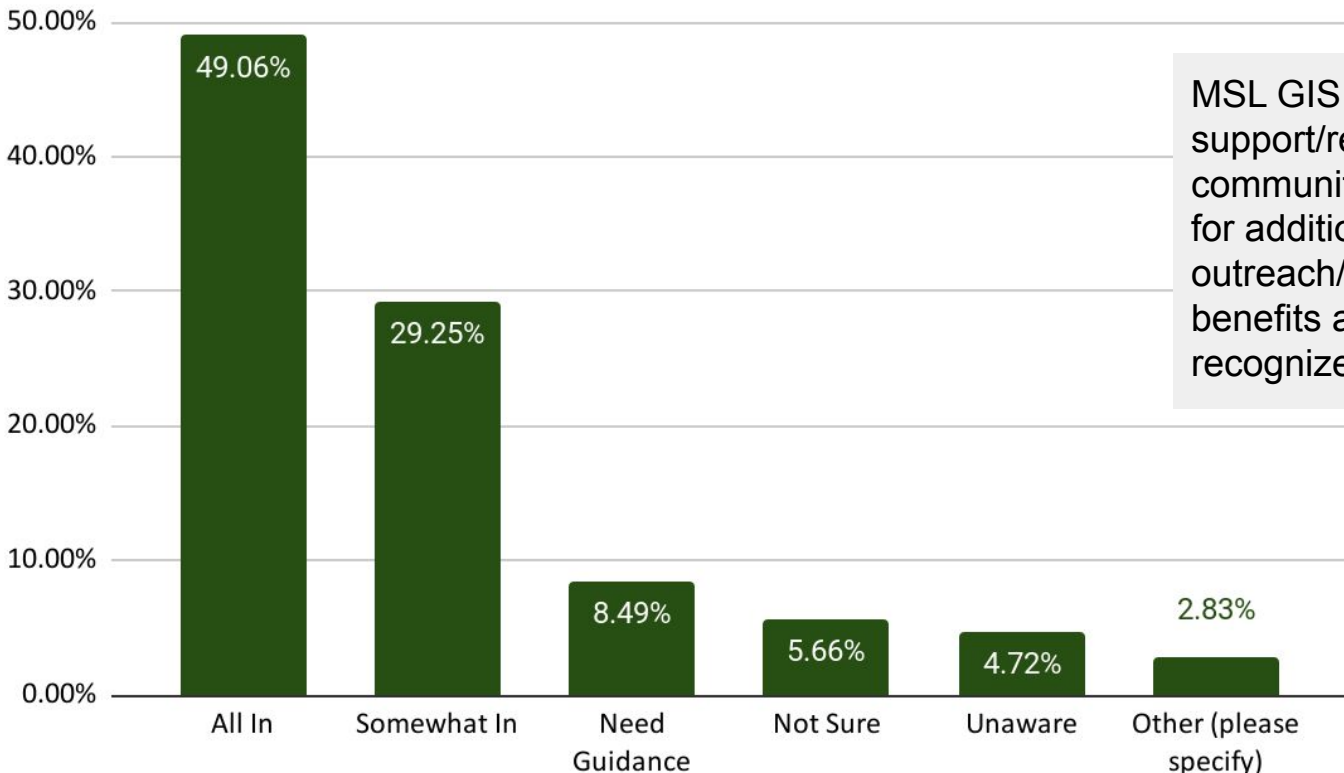
"I'm a bit surprised that Montana citizens aren't upset about all of the information in Cadastral. Do they not know that this information is publicly available? At the same time, I find Cadastral so cumbersome, it is almost useless to me. It would be more useful to me if naming was consistent. Is it USFS or US Forest Service or Forest Service or DOA? This does not even begin to address typos. Seems like these would be relatively easy corrections to make and could even be automated and provided back to counties."

Q29: For each of the following potential activities of the MSL, please indicate your opinion on priority.



Validates that data management/governance/accessibility activities are viewed as greatest priority. Investments in licensing and training should be carefully considered as these are not deemed as important to the community.

Q30: How would you characterize the benefits of the GIS Coordination efforts and the Montana Spatial Data Infrastructure?



MSL GIS has support/respect of the community. There is room for additional outreach/education but benefits are widely recognized.

Q31: Do you have additional ideas on long-term needs/goals for the MSL, geospatial data and services, or GIS in Montana generally that you would like to share with us?

Define the Focus of MSL and the GIS Coordinator

Clarify the mission of MSL's geospatial program and the role of the State GIS Coordinator within it. Serve as the true nexus for authoritative data from all state agencies to avoid confusion and duplication of effort. Even if MSL is not the maintainer of an authoritative dataset it would be very valuable to know how one goes to MSL to find authoritative data..

"The inter-weaving of the State library, day-to-day GIS data maintenance of NRIS, scientific research of NHP, and State agency-wide GIS Coordination adds a level of complexity to the mission of MSL. Are you a library? Are you a State GIS Data Center? Are you a scientific research organization? These are all very different things. Yet they are all being managed together as one organization"

Outreach / Support

Rural communities and counties really need MSL's efforts and support for education, licensing, and training at a technical and an executive or decision-maker level. Long-term funding is essential in rural communities and counties. Simplify the grant submittal process. Become a licensing center for small agencies to use public funds effectively.

"GIS information is 'greek' to me. I understand the importance of it, but don't really understand what it is."

Training and Education

Training for other agencies, including regional governments (also see Outreach/Support above for similar ideas). Keep our professional community informed of national trends, standards, and MSL's involvement in these.

Data, Data, and Data

Improve the utility of data download by allowing users to subset and then download (clip - zip - ship) across many datasets at once; improve the accuracy of parcel data; update Cadastral more frequently; provide better orthoimagery; maintain the Yellowstone Clearinghouse and make (or keep) it very simple for a non-technical person to use;