

A Summary of State DOT GIS Activities

Presented at the
2010 AASHTO GIS-T Symposium
Charleston, West Virginia

Information Sources

- AASHTO GIS-T State Survey
- 50 responses from 49 “states”
- Thank you

Purpose

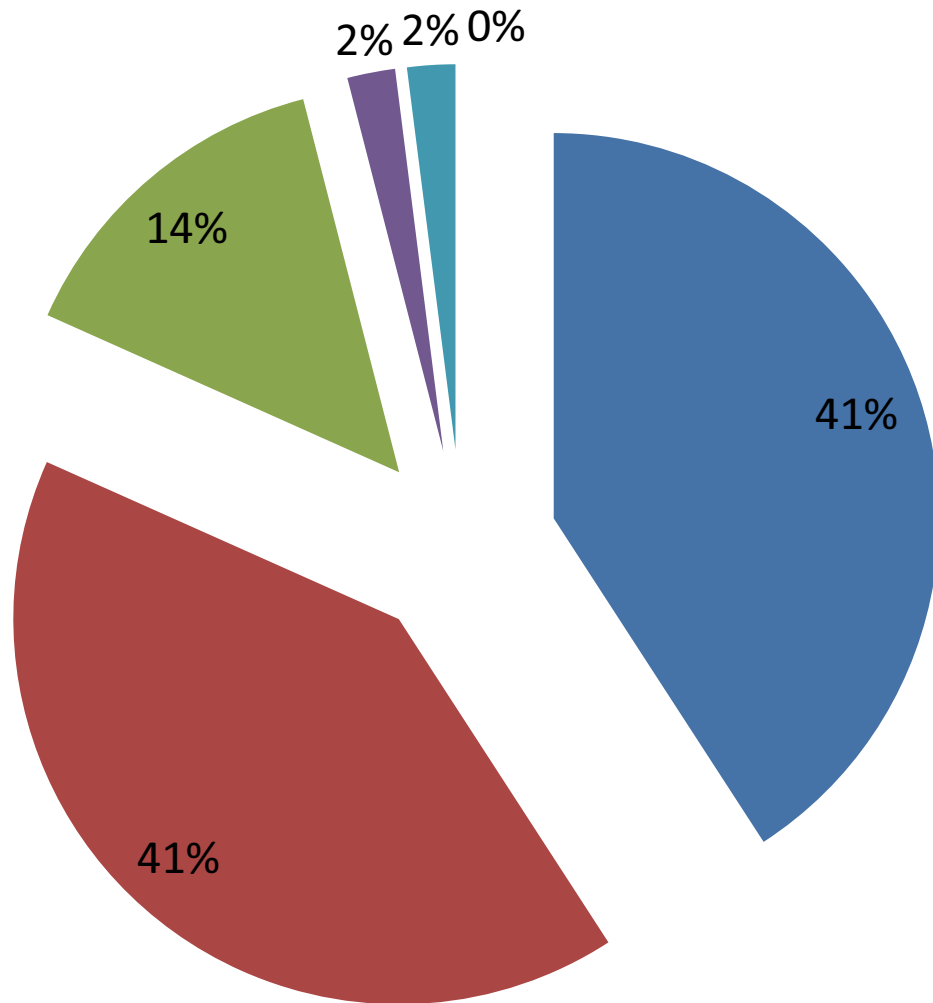
- To take inventory of the current state of the practice in particular areas of interest.
- To determine what potential needs are.
- To quickly obtain information for topic discussion
 - Panel Session
 - Emerging Issues

Summary of Presentation

- Staffing
- Software & Application Areas
- Road Base Networks
- Food for thought for Panel Session and Emerging Issues
- Some Conclusions
- Availability of this presentation

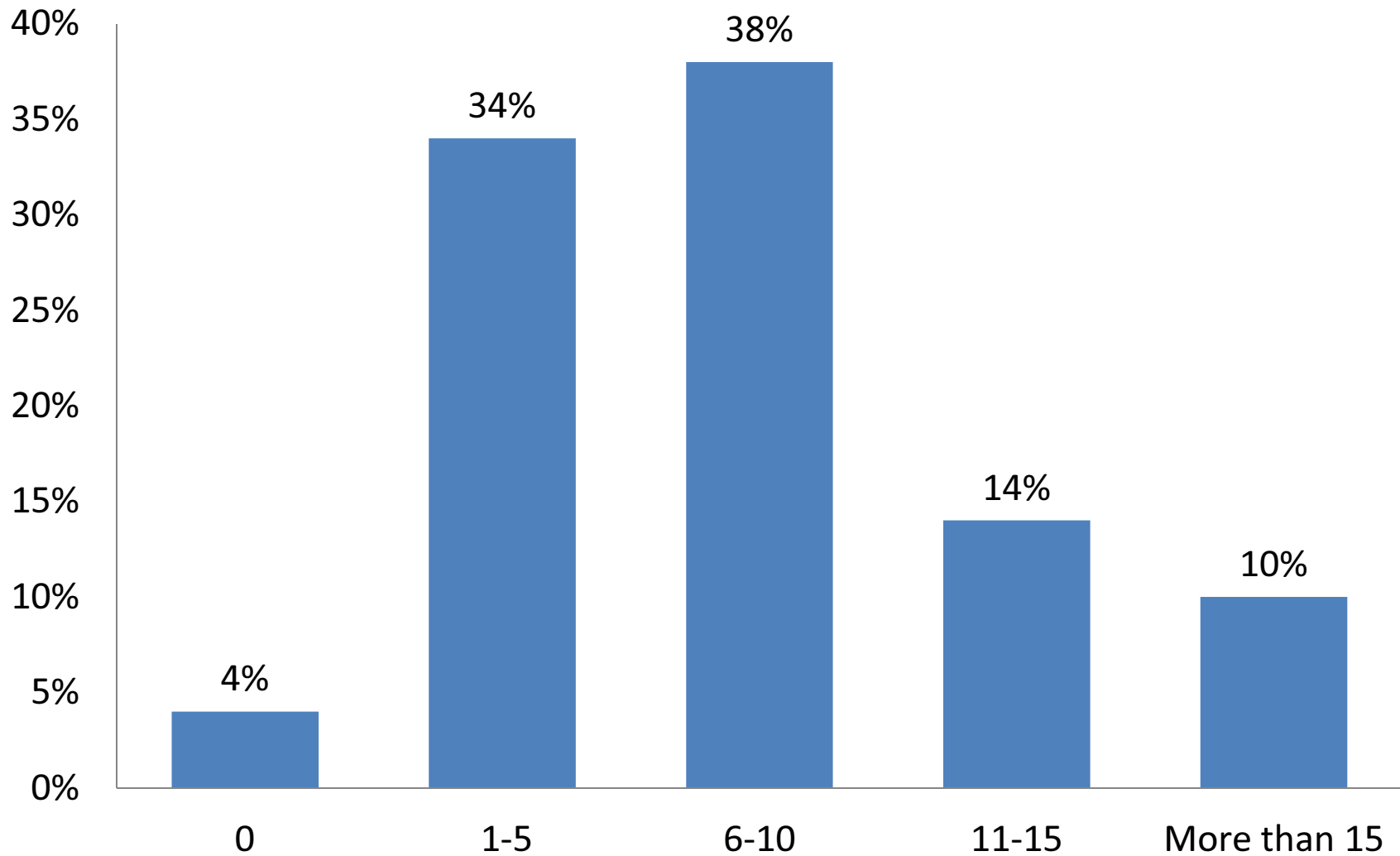
STAFFING

GIS Deployment in Agency

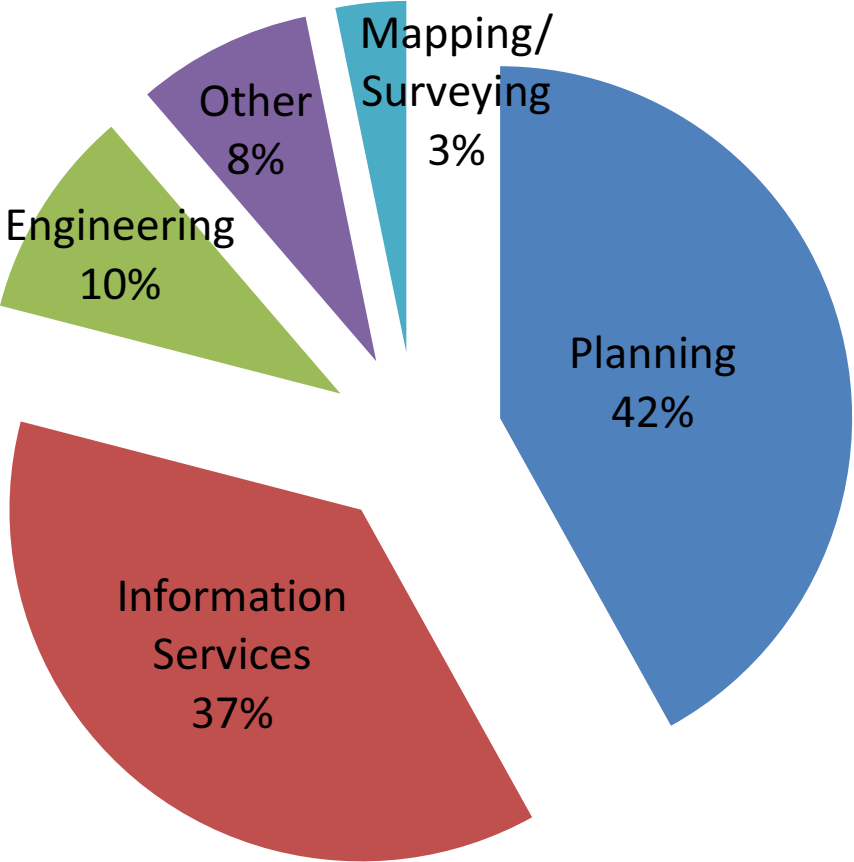


- We have GIS unit(s) responsible for core functions, and multiple end users in various program offices
- We have integrated most agency databases through an Enterprise GIS, and have developed GIS applications throughout the agency
- We have a single unit responsible for both GIS core functions and applications
- We have specific individuals involved in GIS applications, but no agency-wide coordination
- Other
- We have no GIS function in our agency

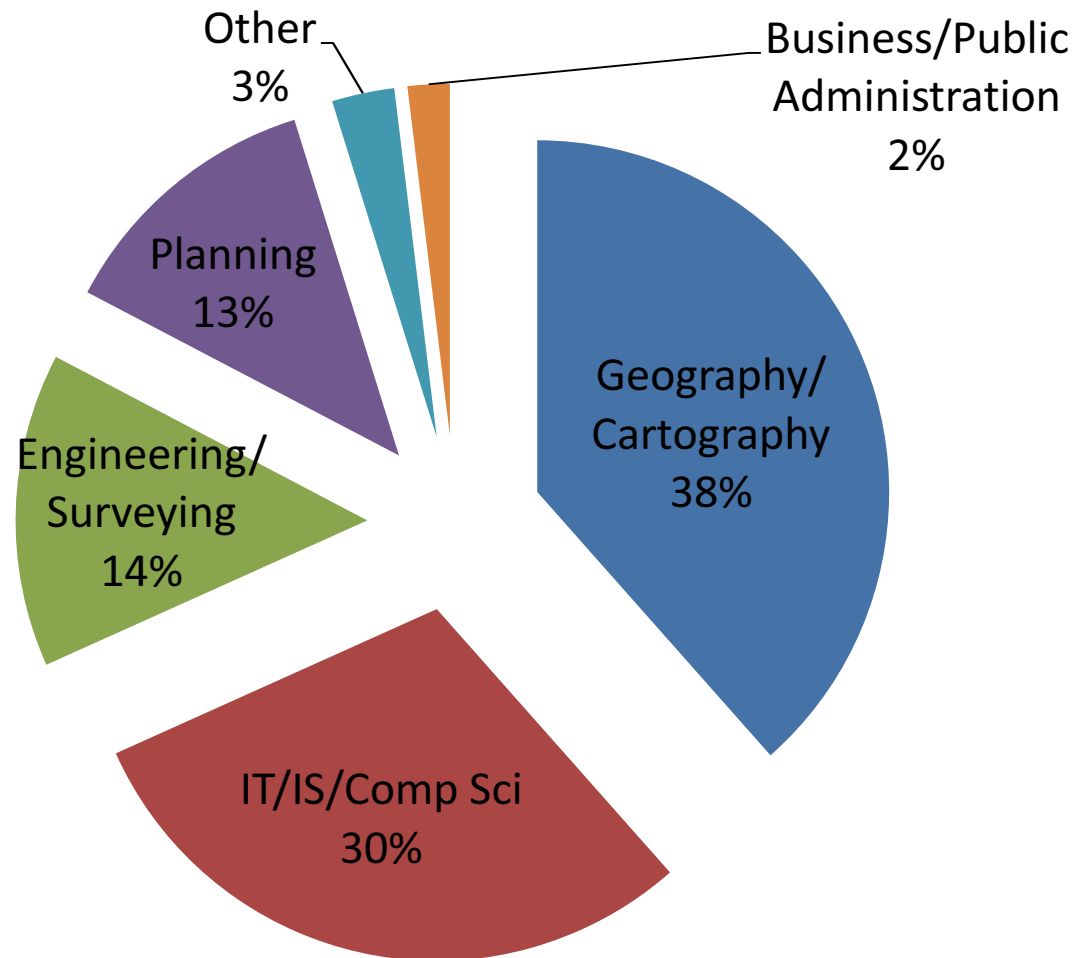
GIS Core Unit Staffing



Location of GIS Core Staff



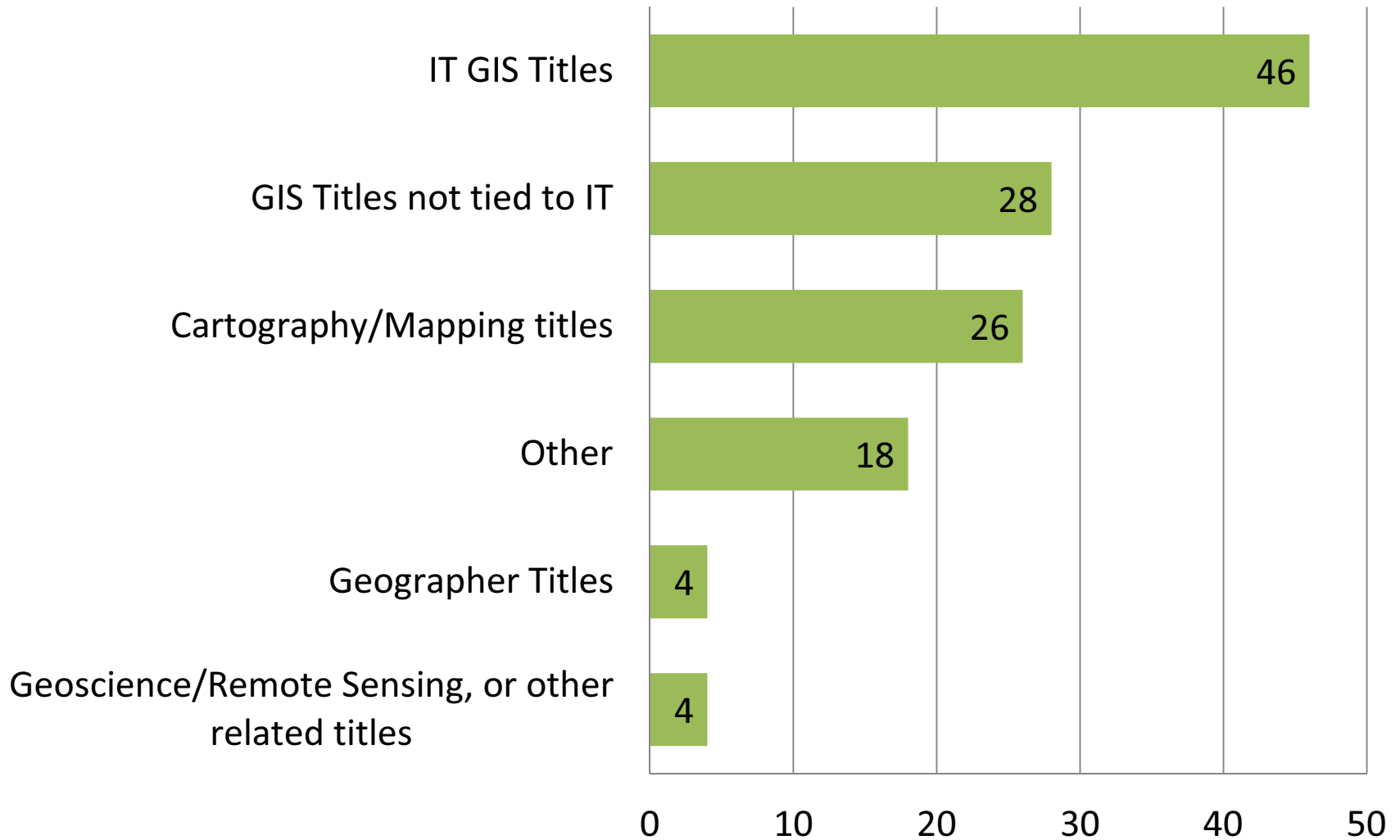
GIS Staff Expertise



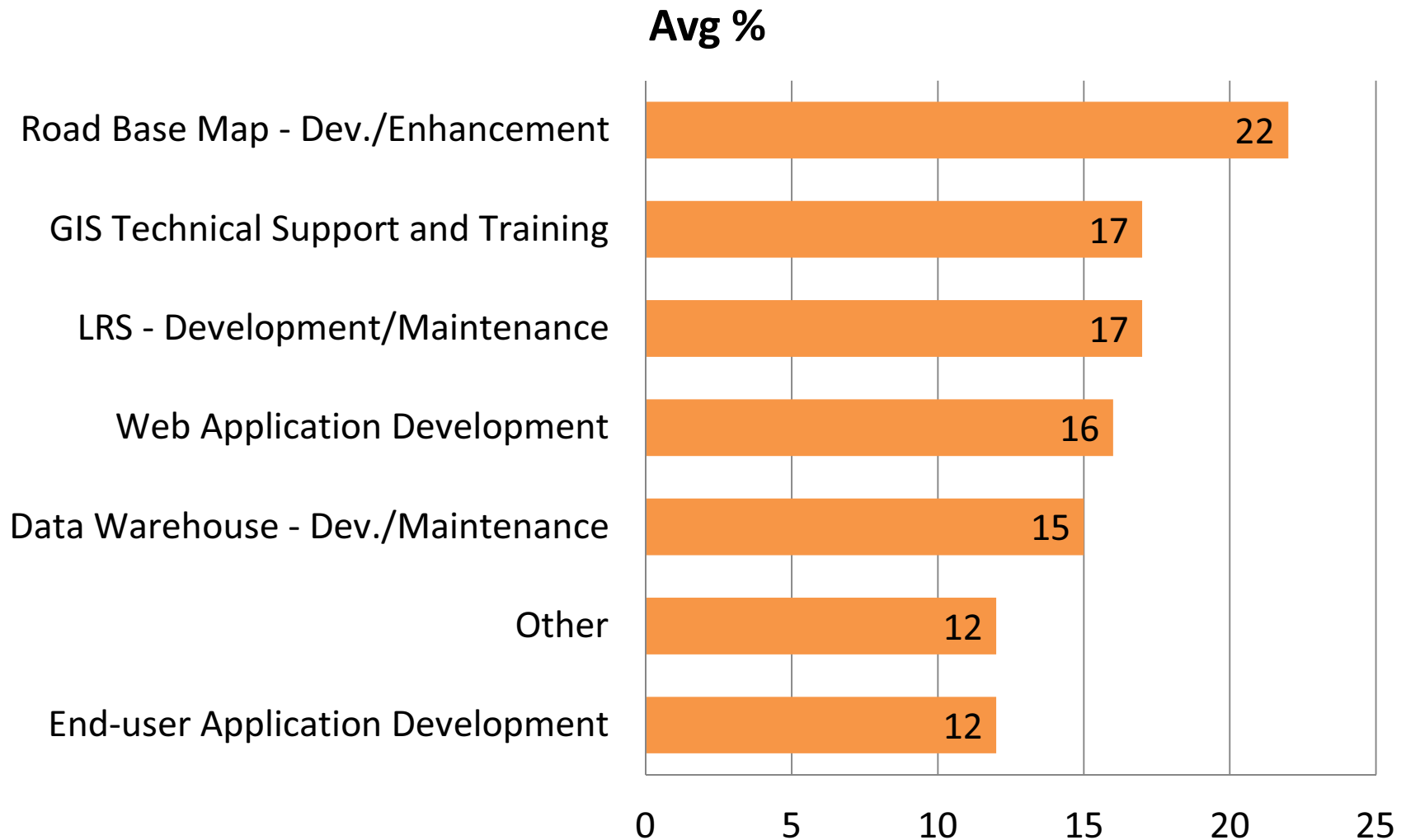
GIS Professional Certification

	Yes	No	Not Sure
Is anyone on the GIS core staff a Certified GIS Professional?	35%	52%	13%
Will GIS Professional Certification be an important consideration in hiring future GIS core staff?	6%	59%	35%

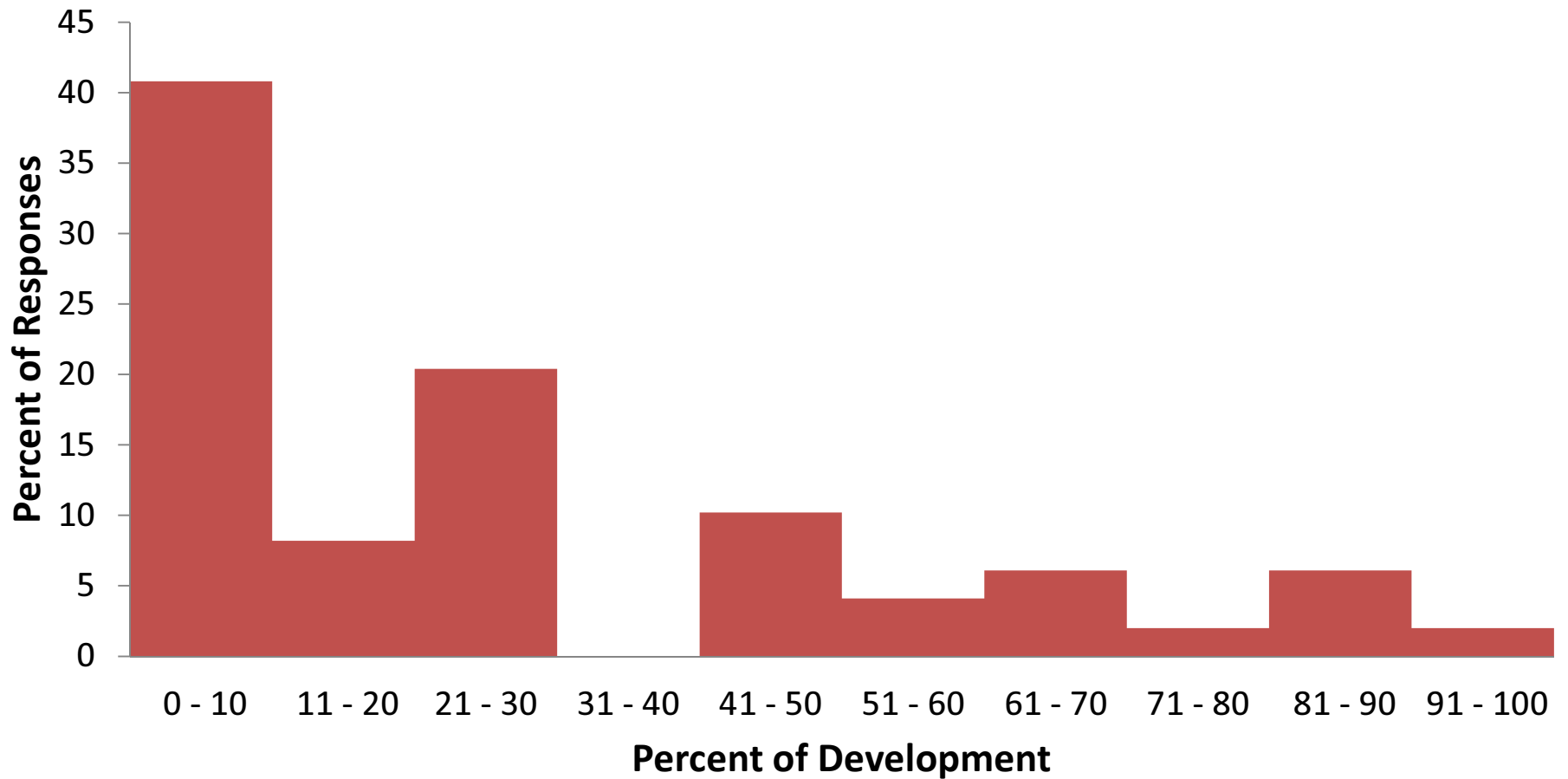
Civil Service Job Titles



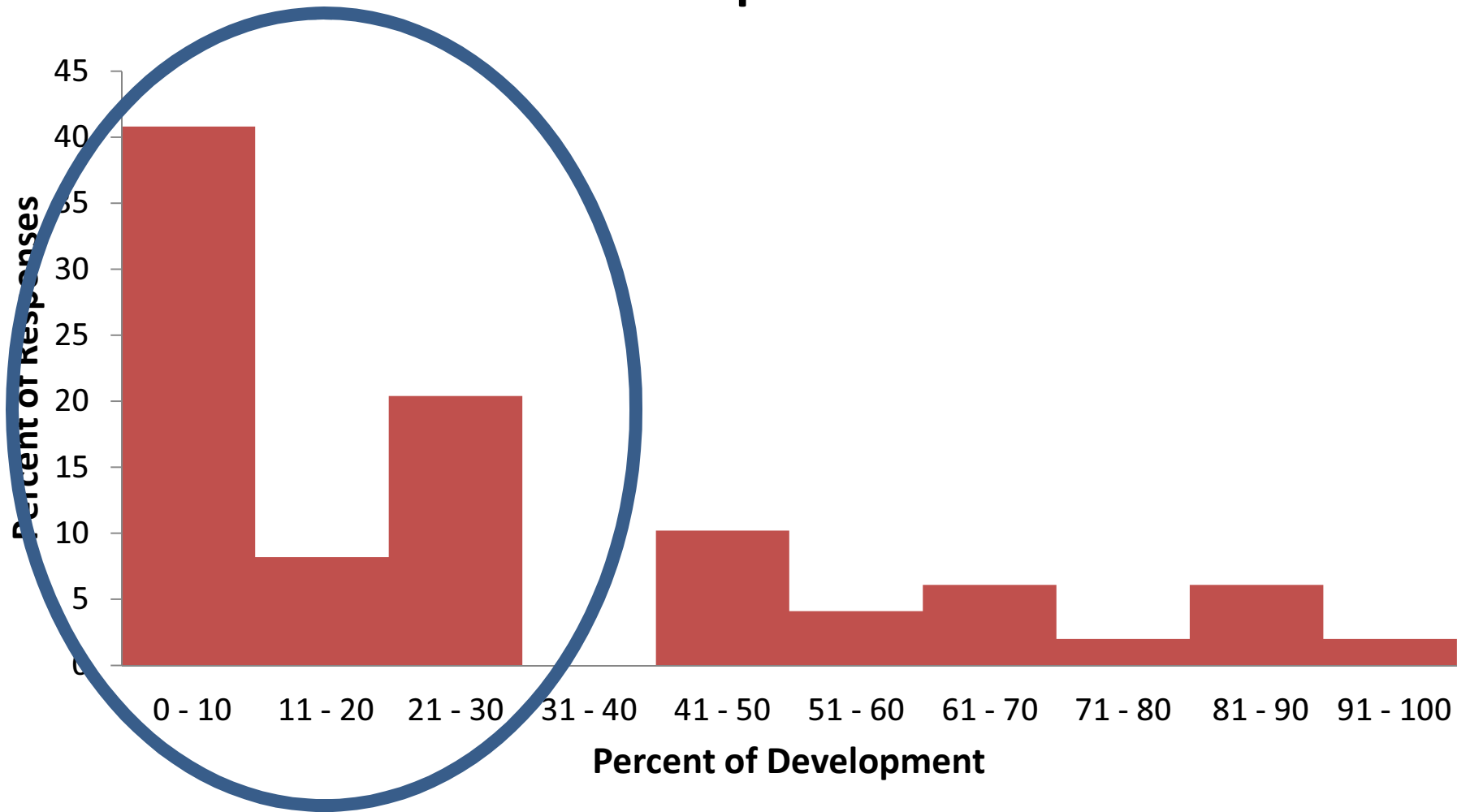
GIS Staff Time Allocation



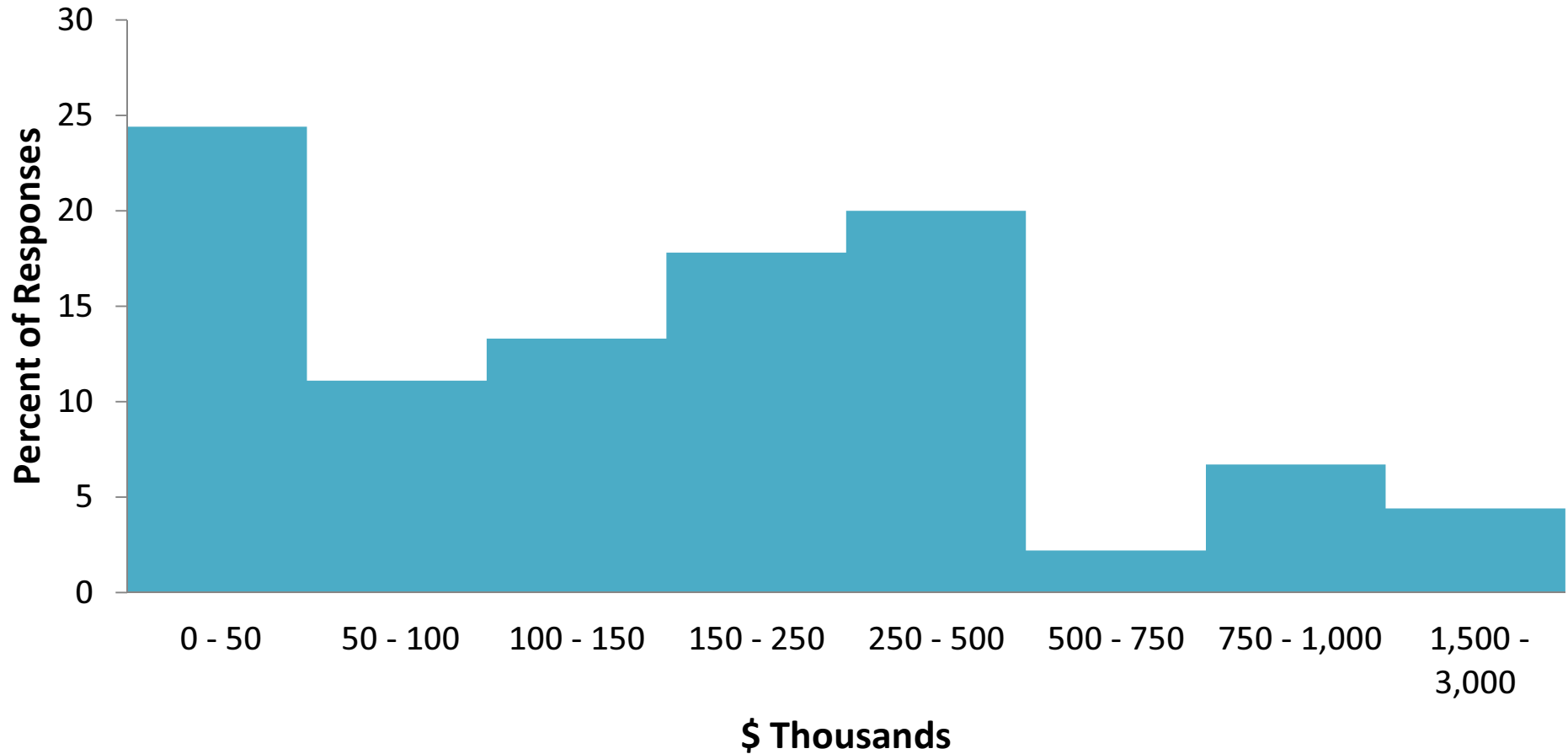
Outsourcing GIS Application Development



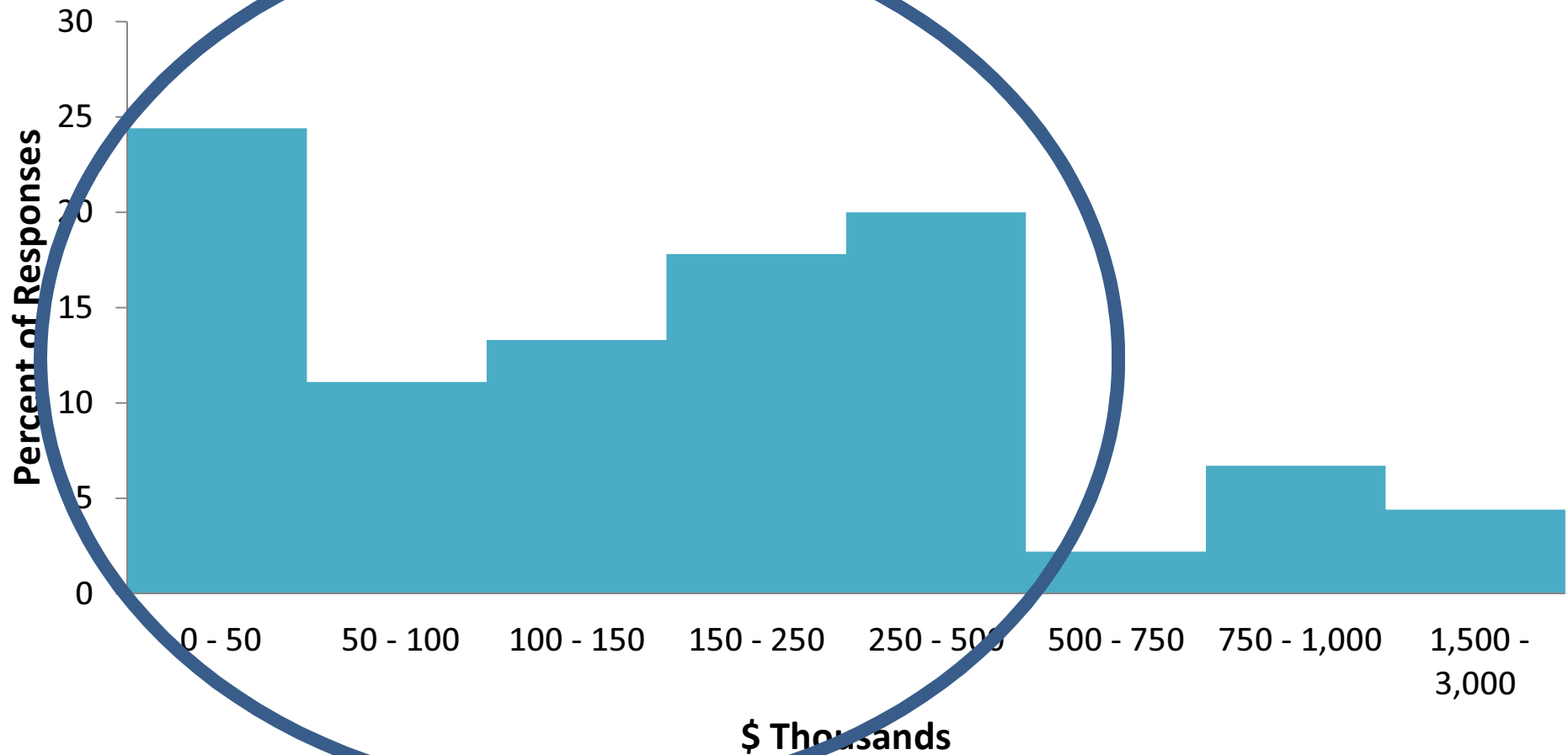
Outsourcing GIS Application Development



Annual Expenditures for GIS Application Development Contracts



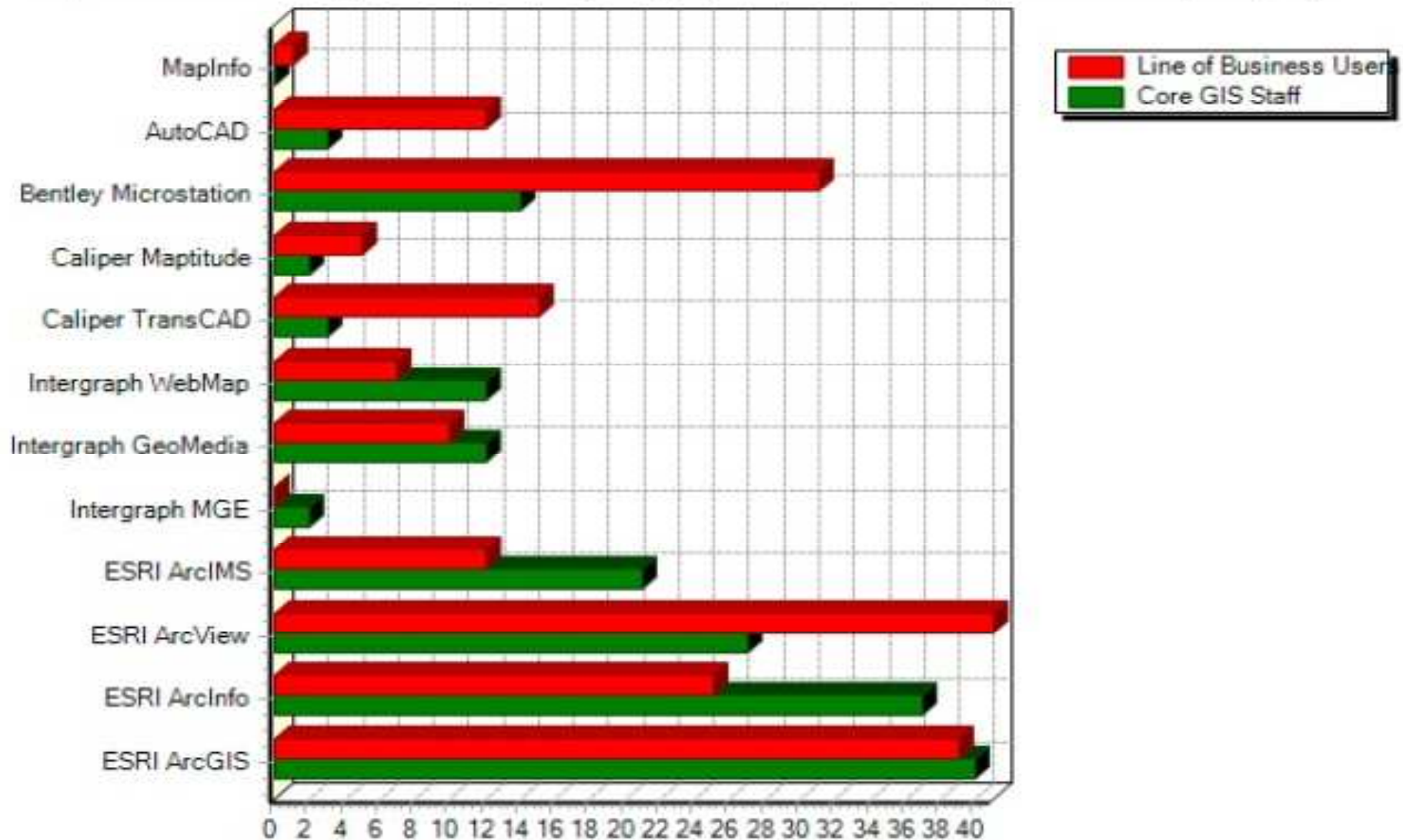
Annual Expenditures for GIS Application Development Contracts



SOFTWARE & APPLICATION AREAS

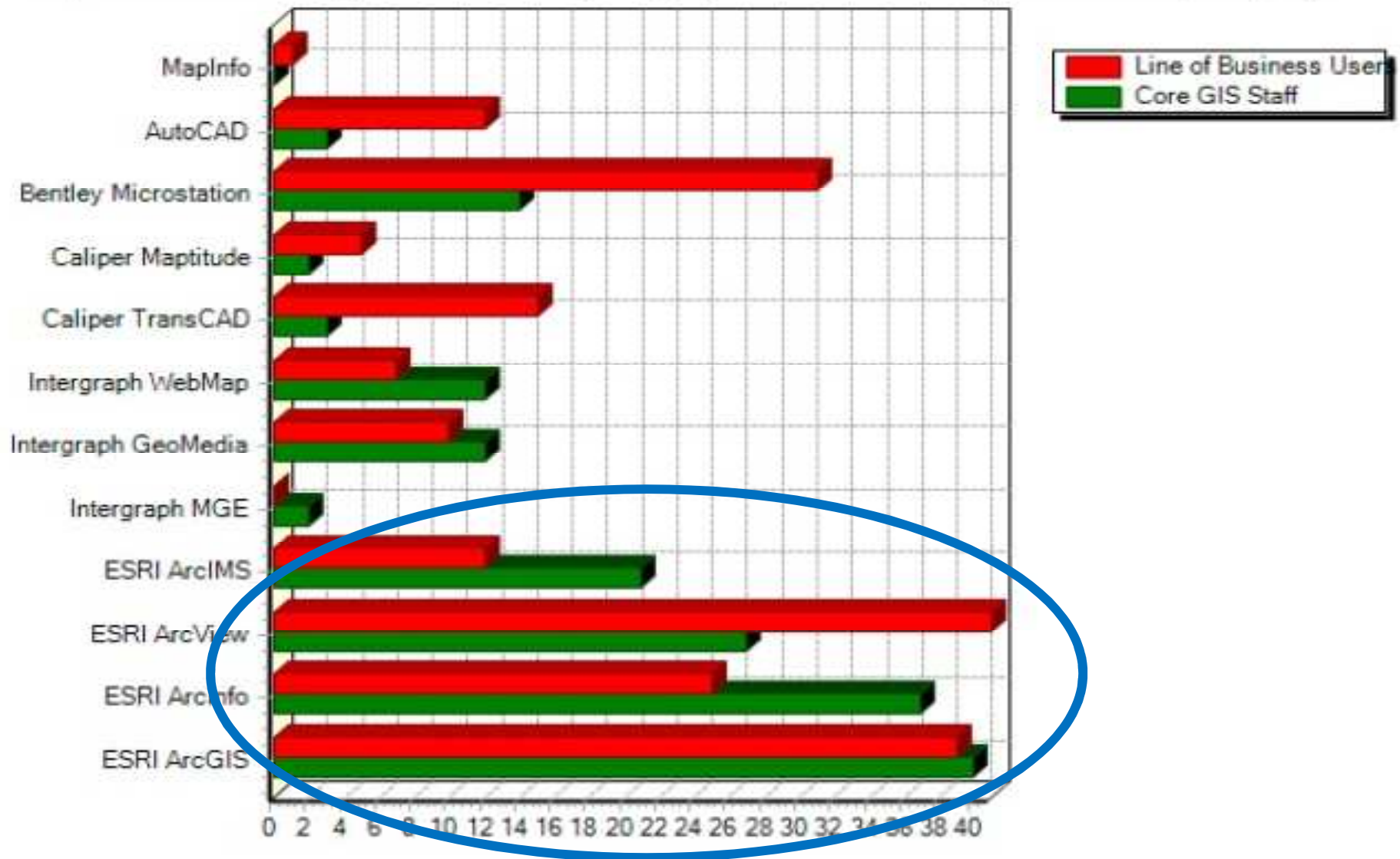
Software Products Used by Agency

15) Which GIS software products are used in your agency? Please check all GIS products used in your agency



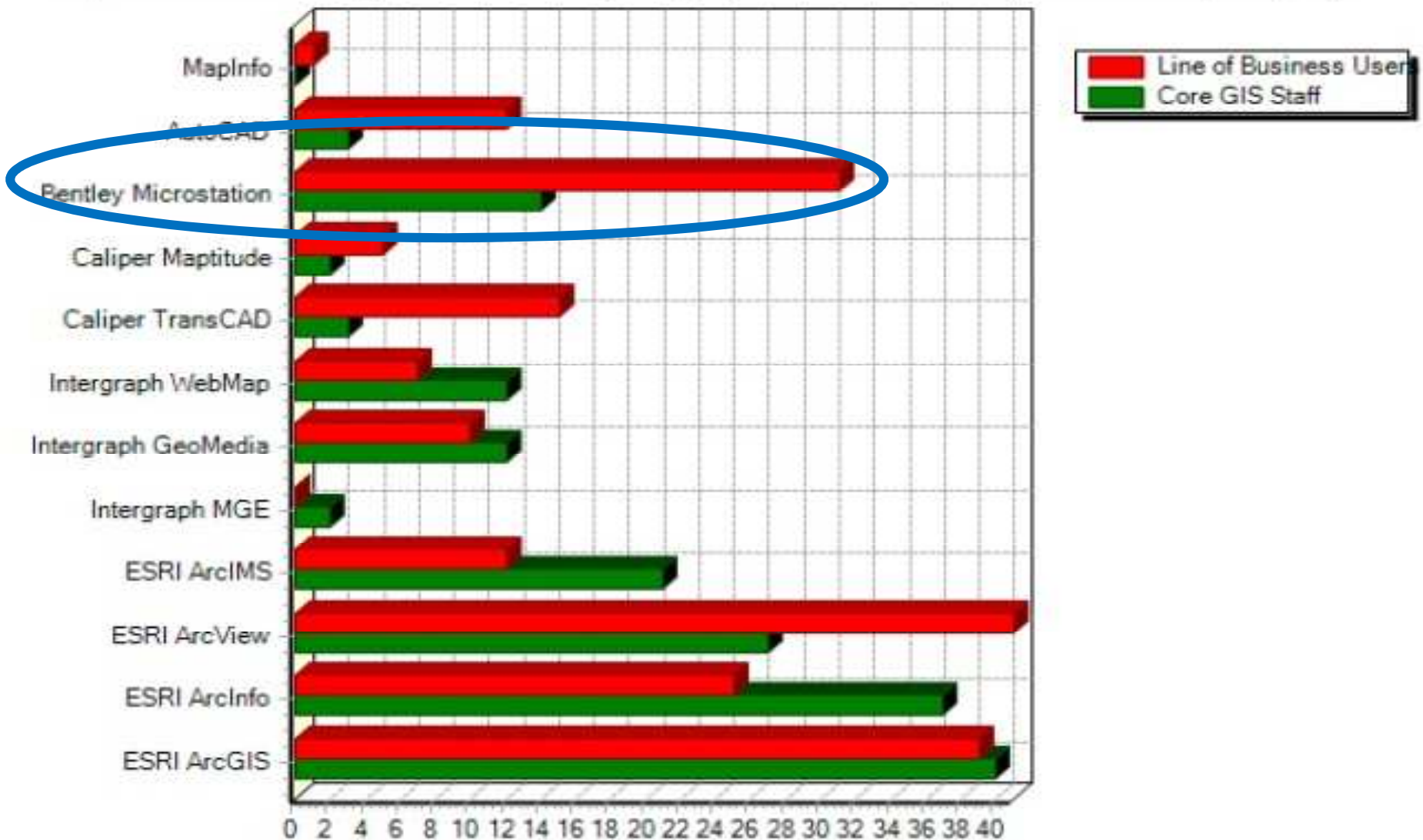
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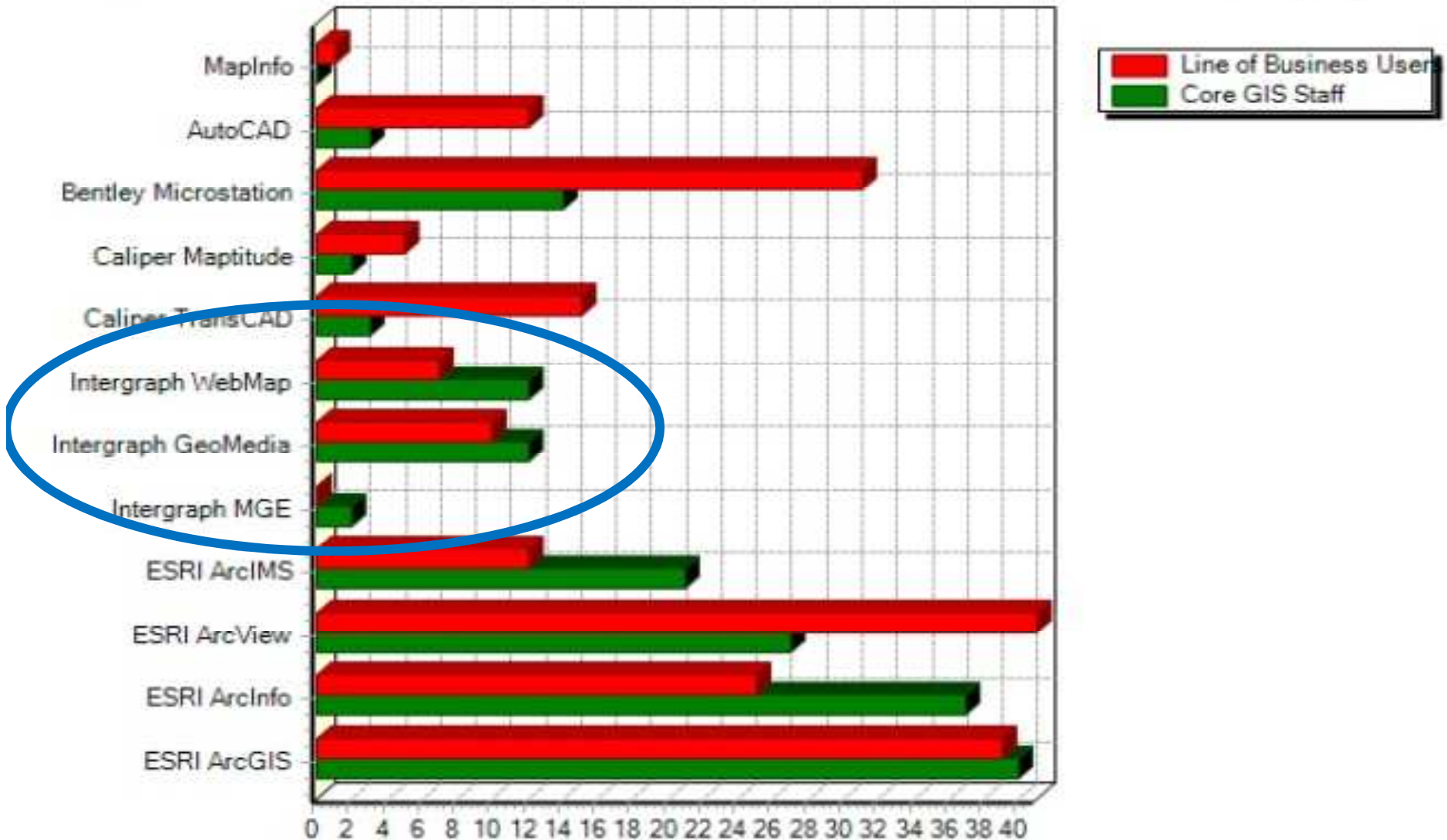
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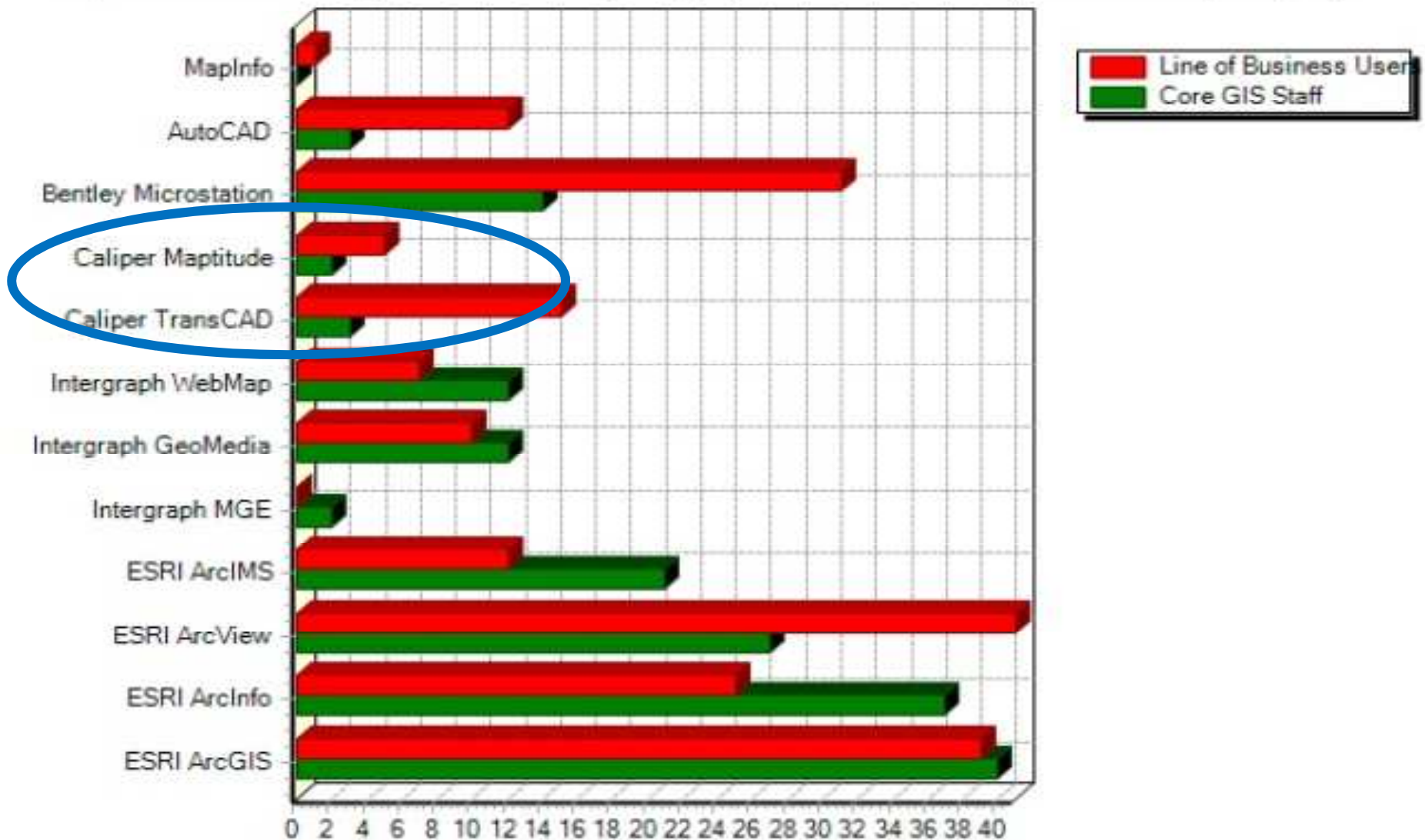
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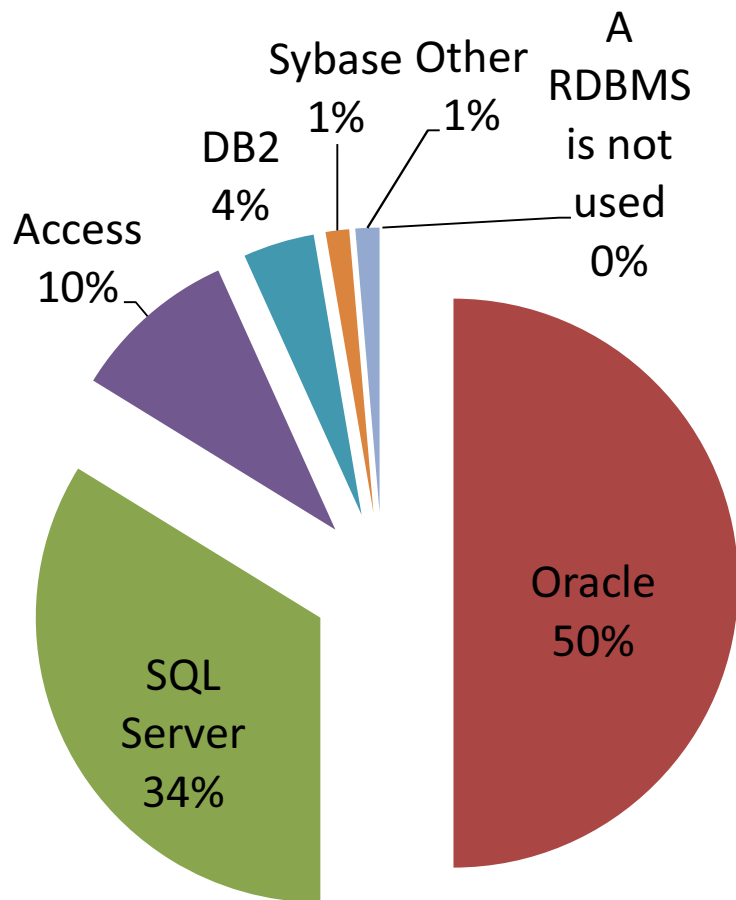


Software Products Used by Agency

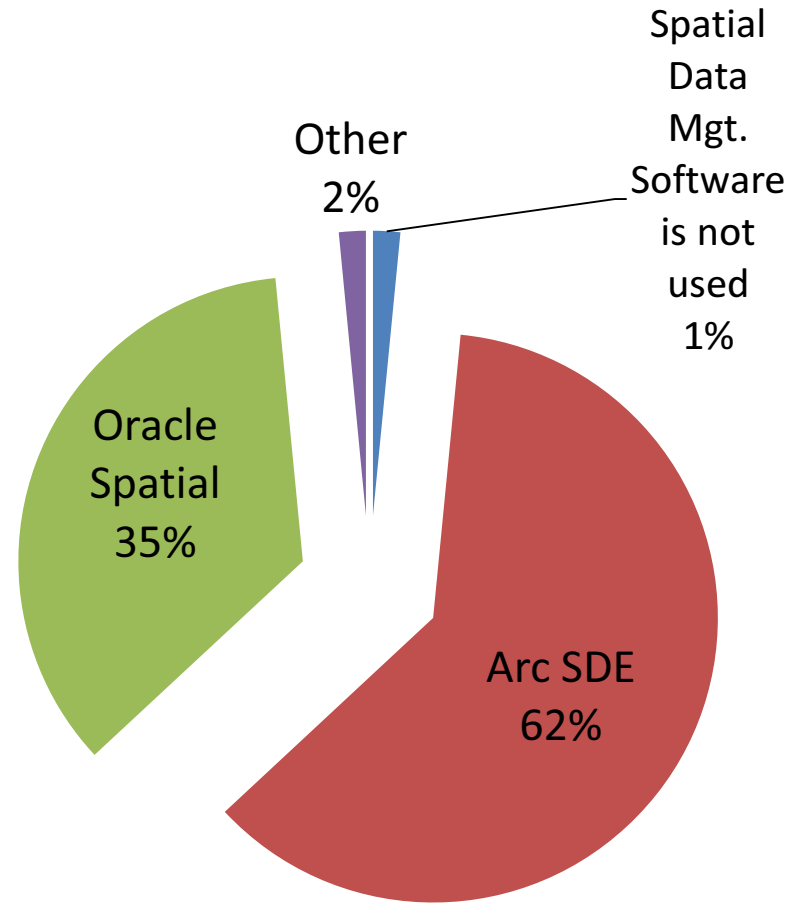
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Managing Spatial Data



Relational Database Management System

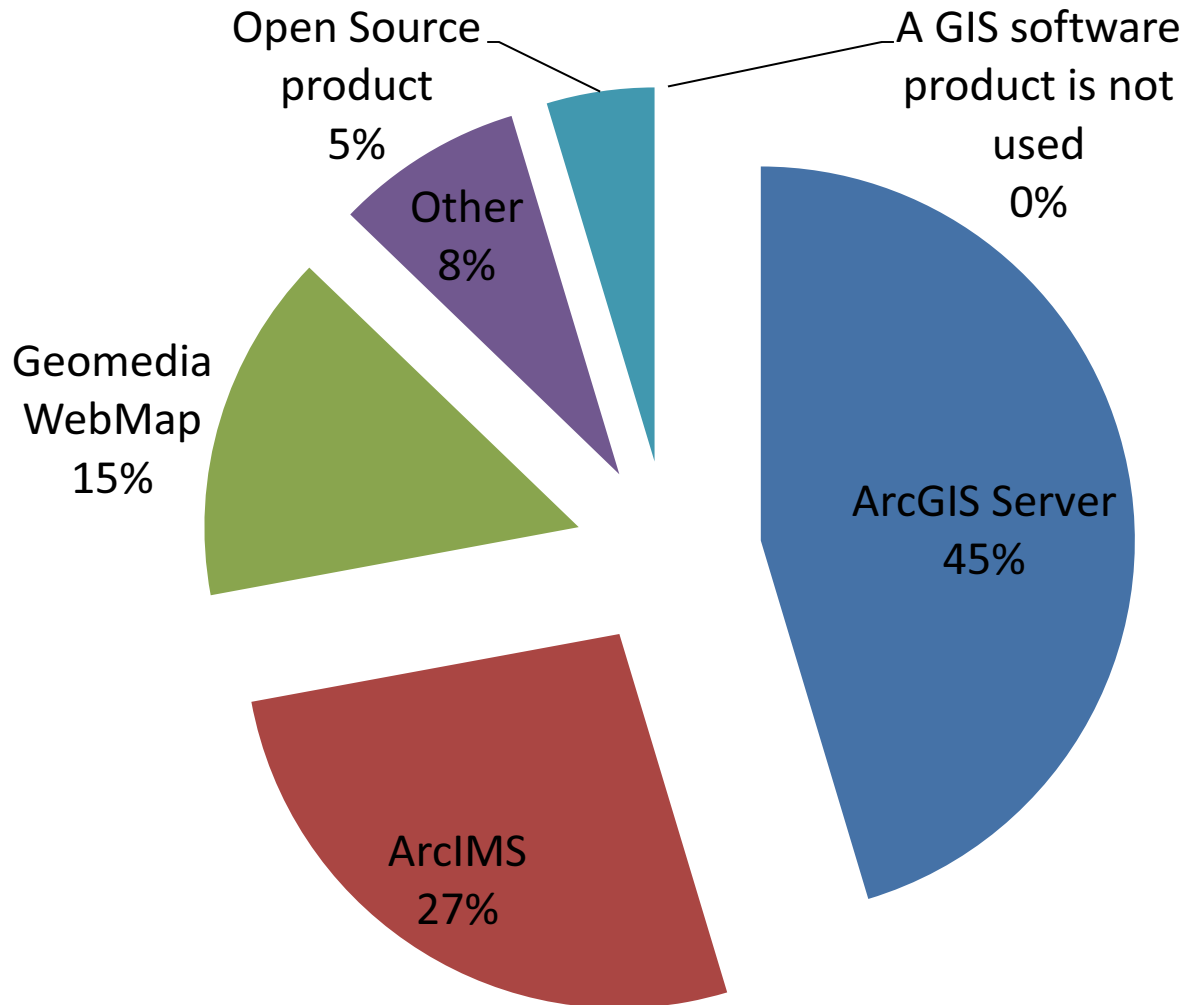


Spatial Data Management Software

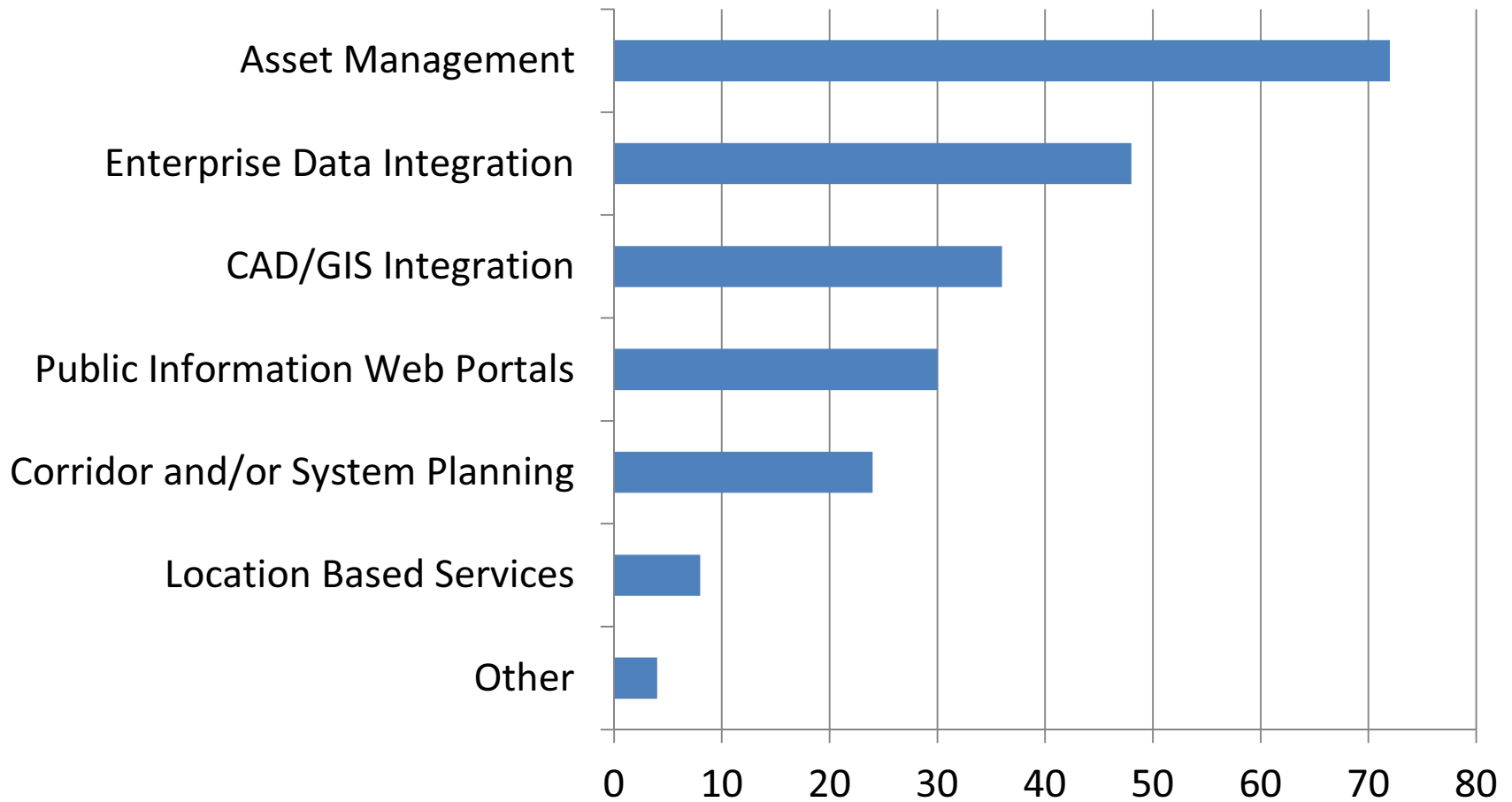
Internet Web Mapping Services

Annual Cost	Hardware	Software	Services	Data	Other
Maximum	\$400,000	\$300,000	\$2,000,000	\$500,000	\$150,000
Average	\$54,045	\$65,708	\$207,333	\$191,375	\$125,000
Minimum	\$5,000	\$10,000	\$10,000	\$1,000	\$125,000

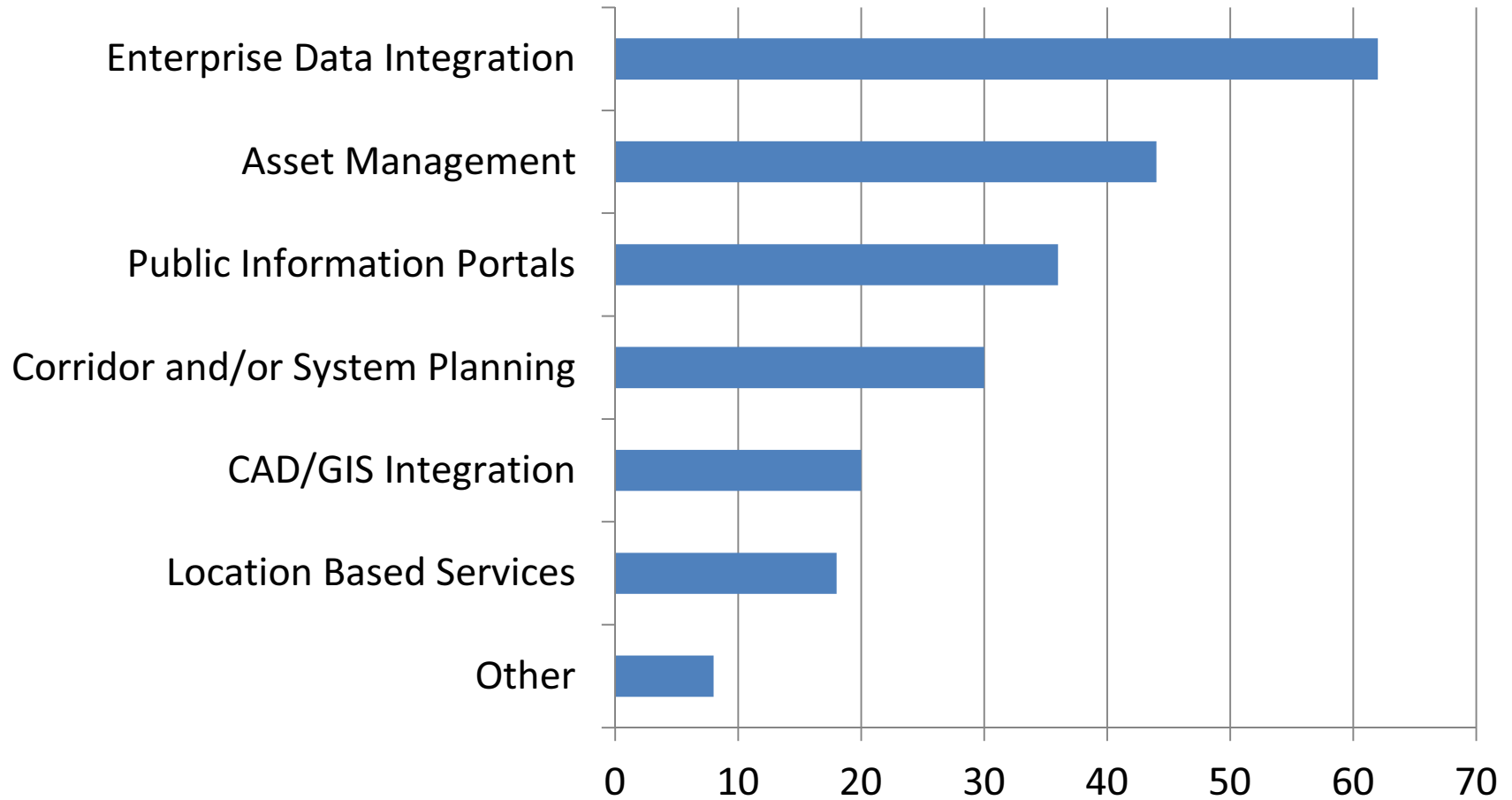
GIS Web Applications



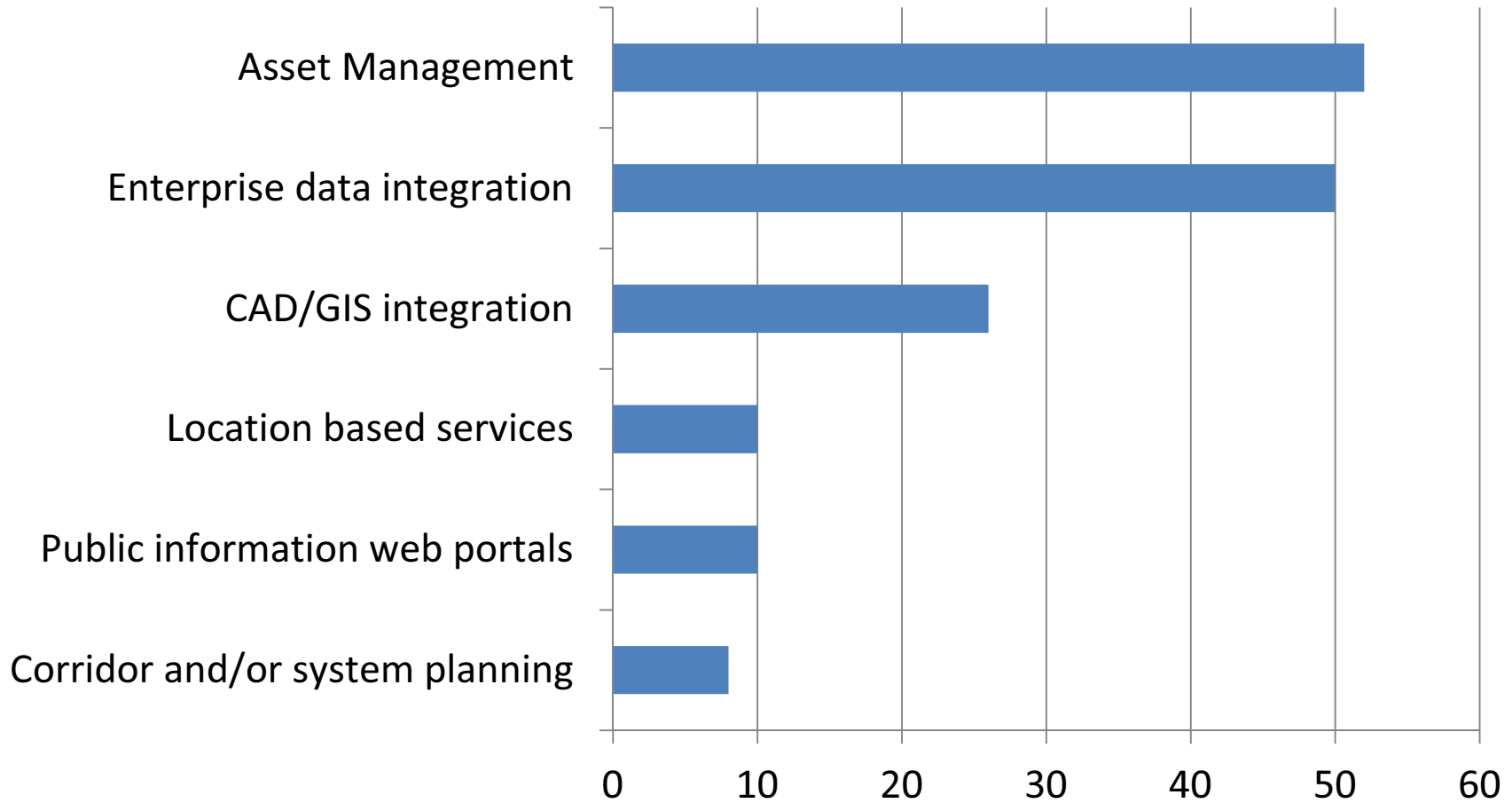
Areas where Geospatial Technology adds the most value



Areas benefitting the most from Geospatial Technology

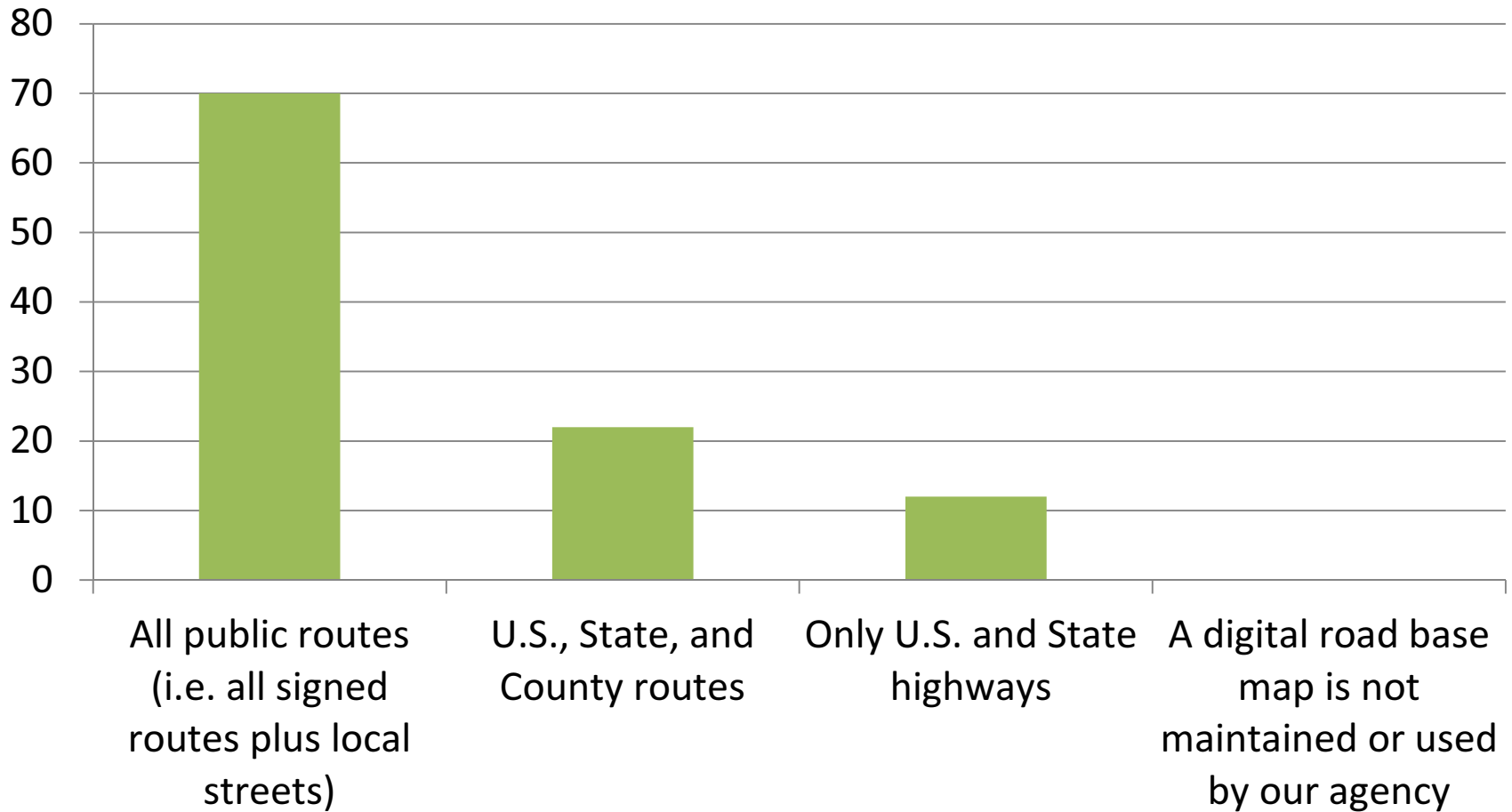


Areas where Geospatial Technology is most costly/difficult to implement

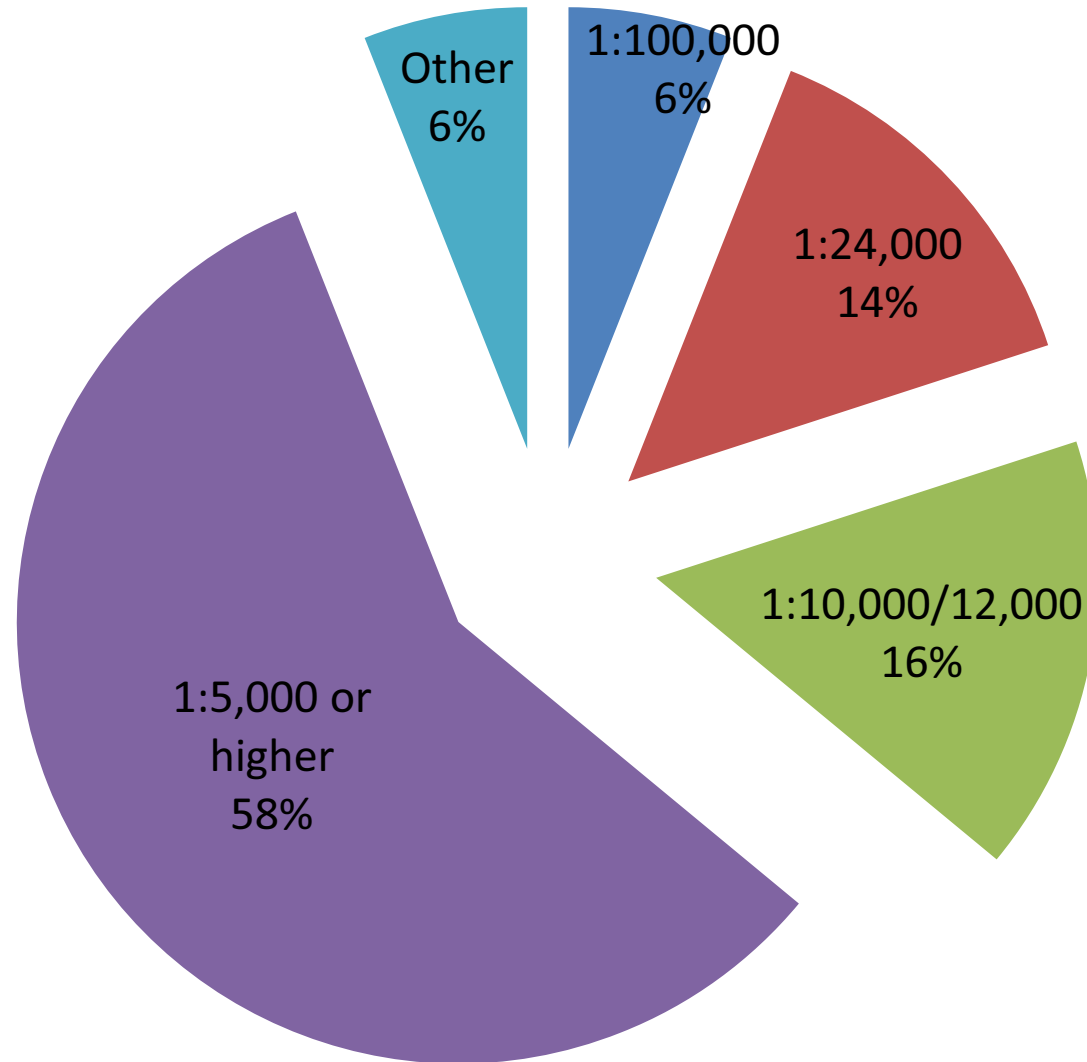


ROAD BASE NETWORKS

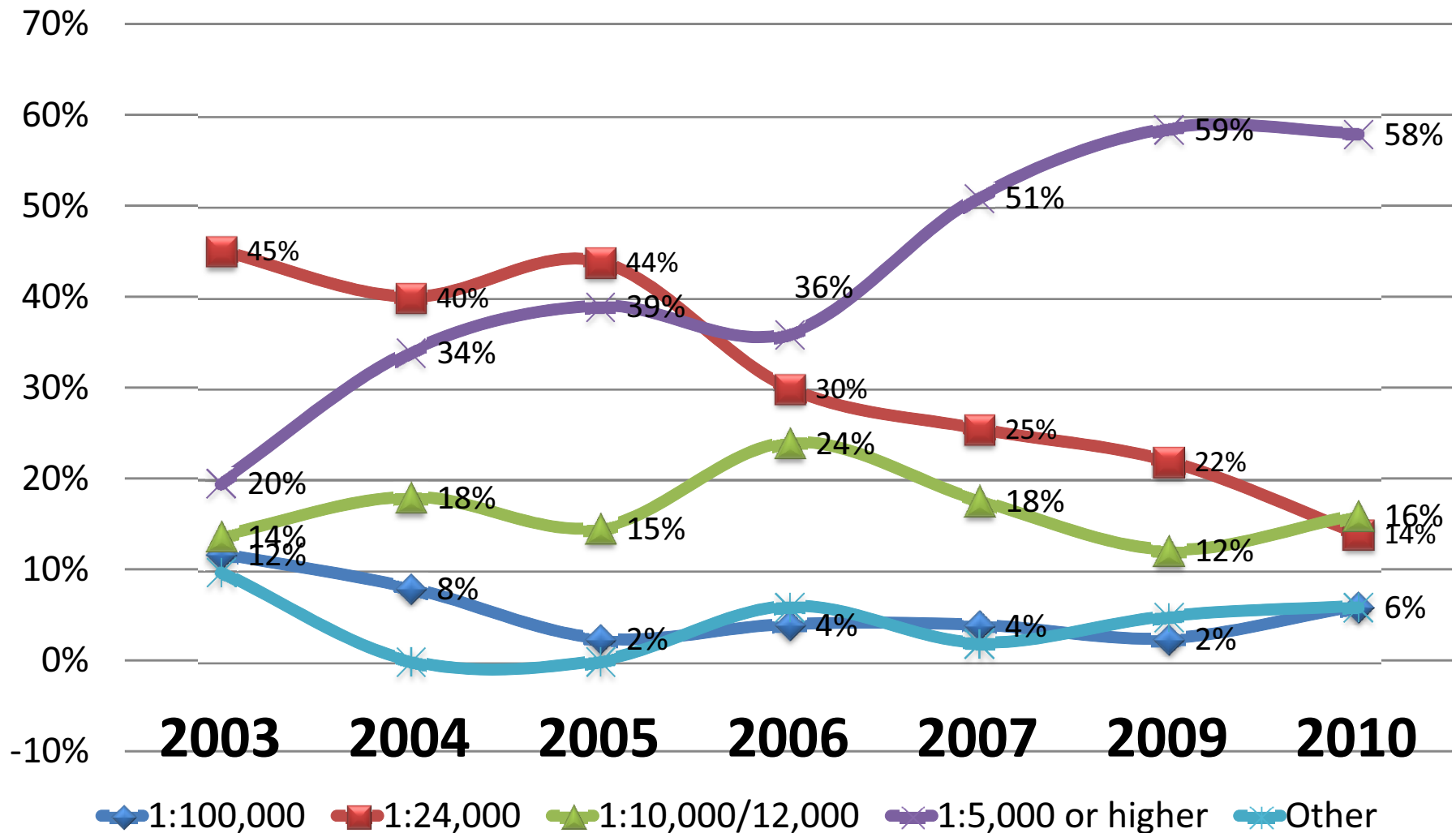
Road Network Coverage



Base Map Scales (2010)

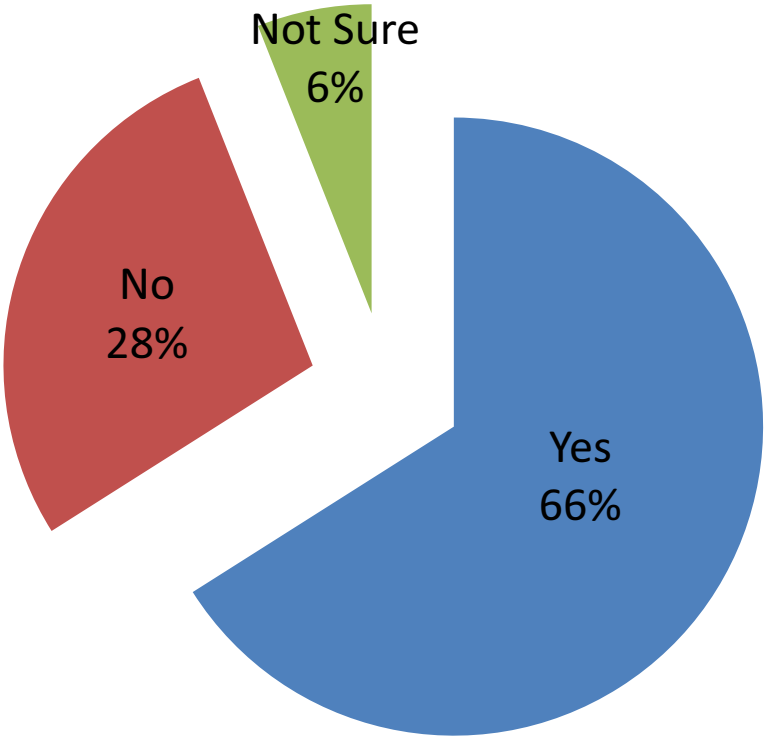


Base Map Scales

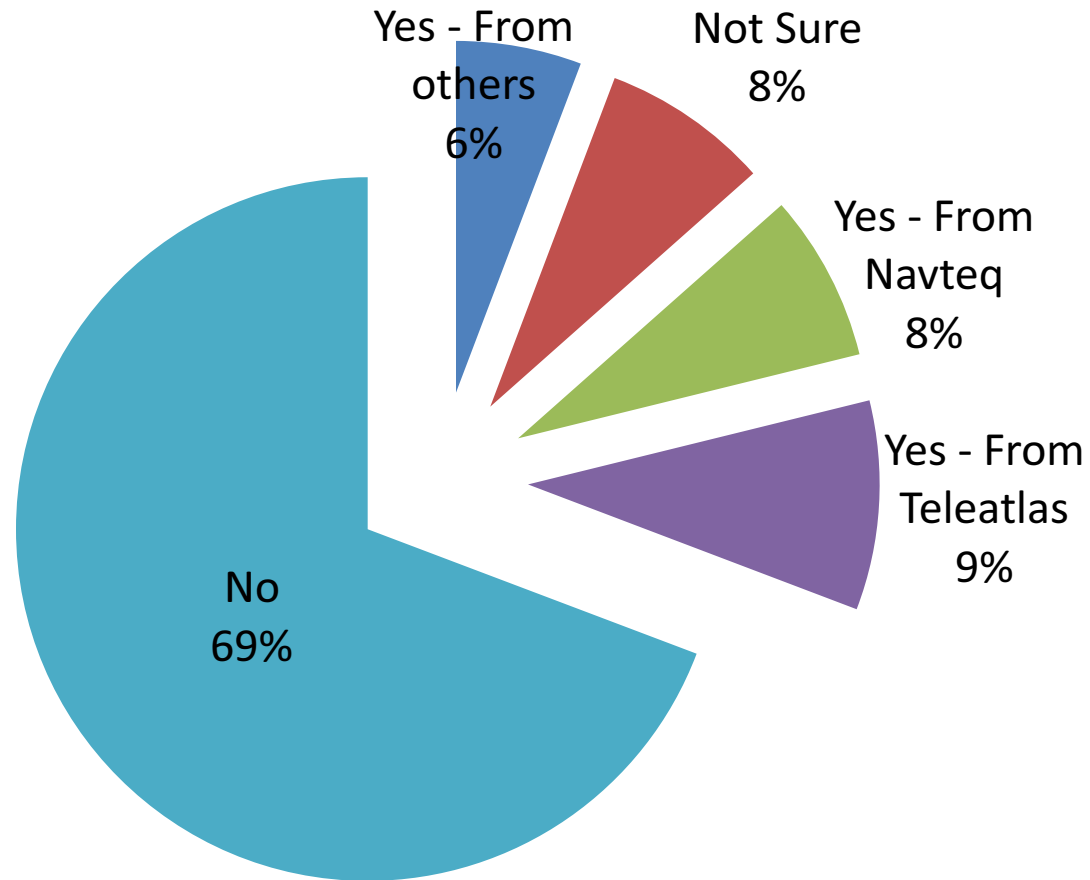


**FOOD FOR THOUGHT FOR PANEL
SESSIONS AND EMERGING ISSUES**

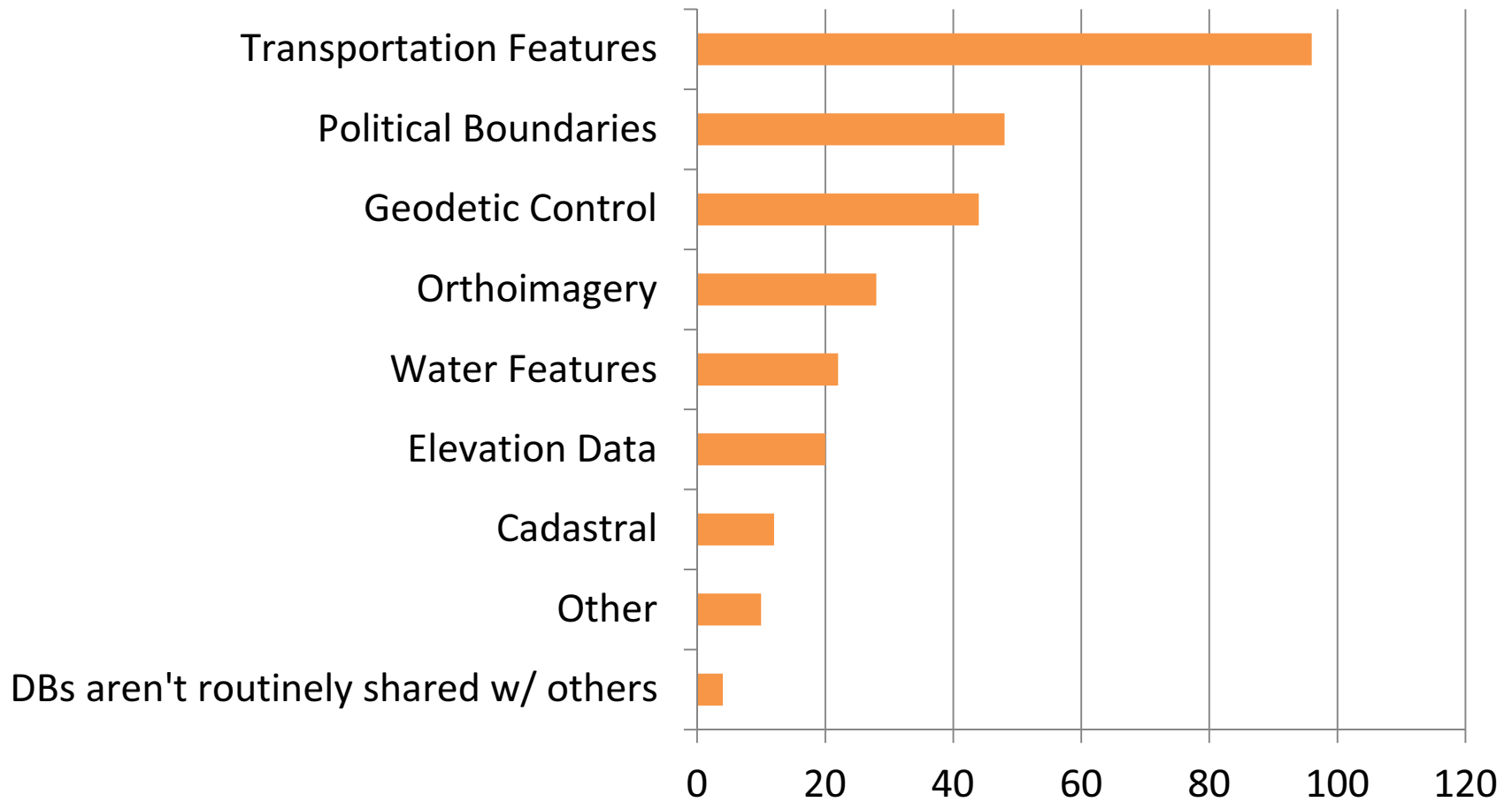
Roadway Transportation Data include local government data?



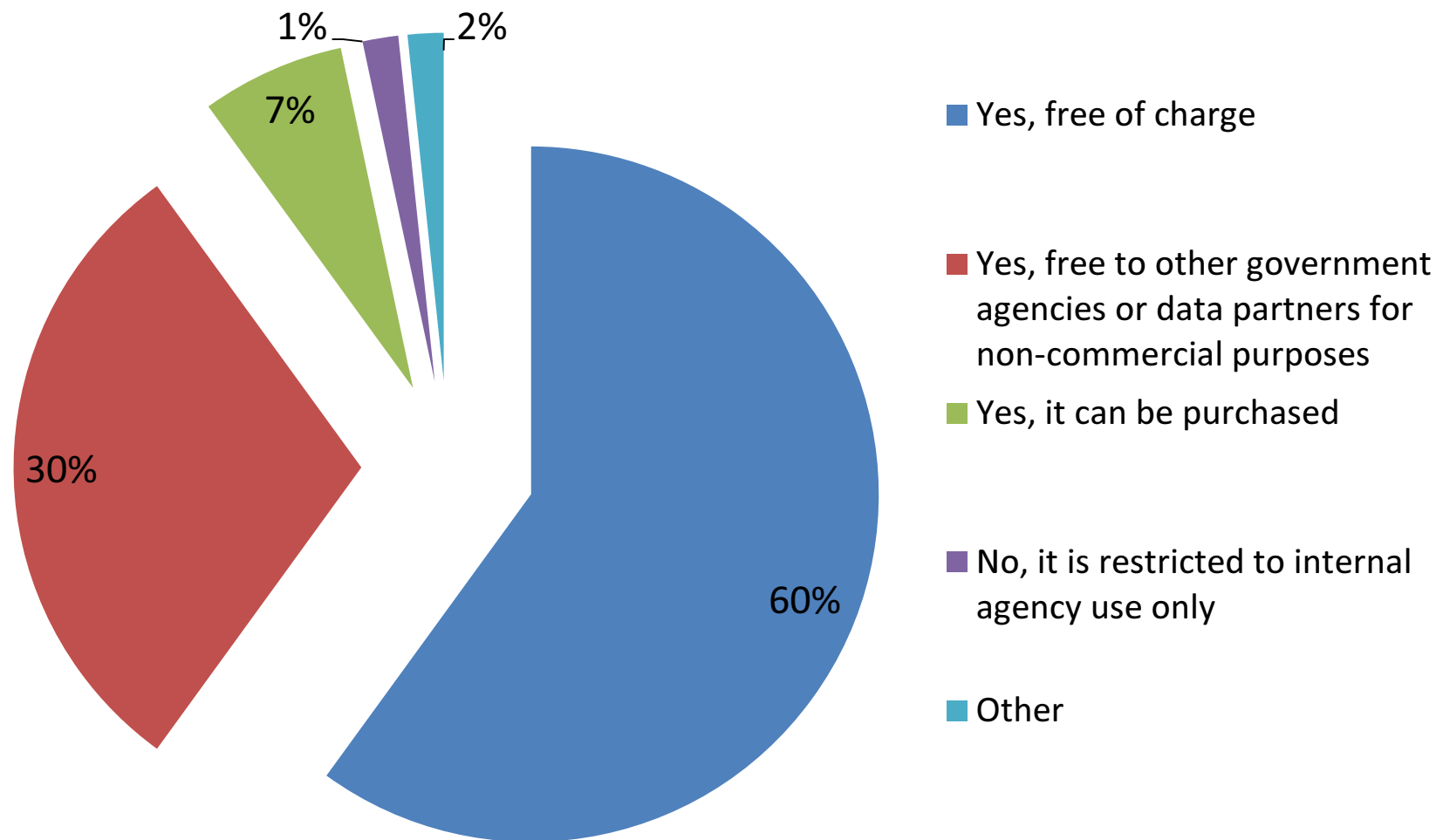
Does your data include commercial data?



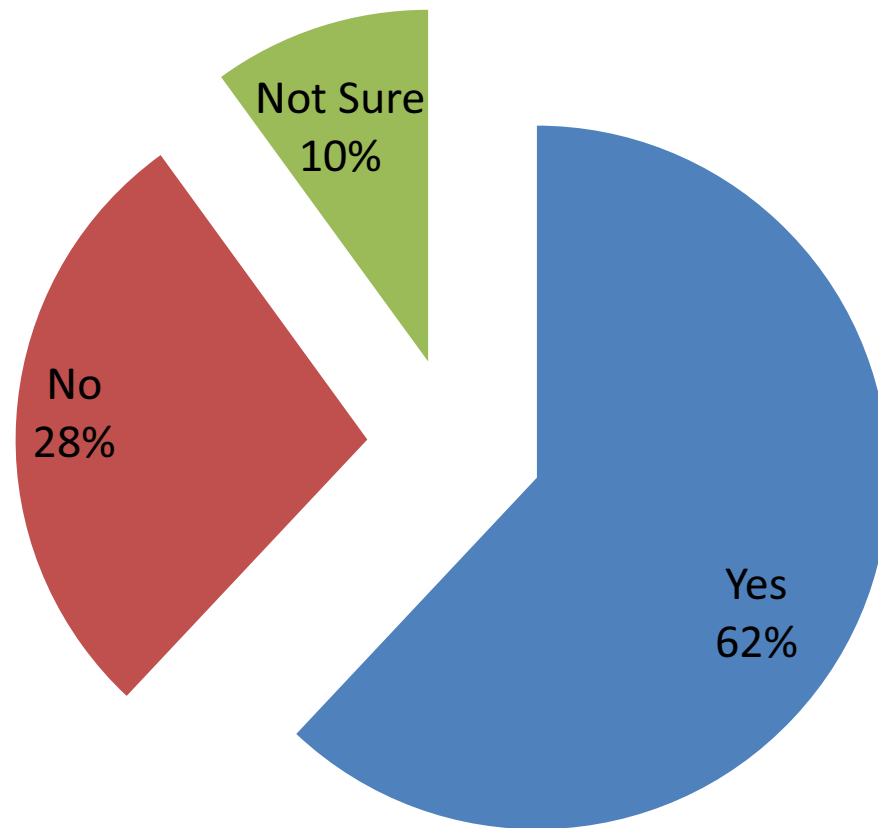
Geospatial Databases Shared with other state agencies or the public



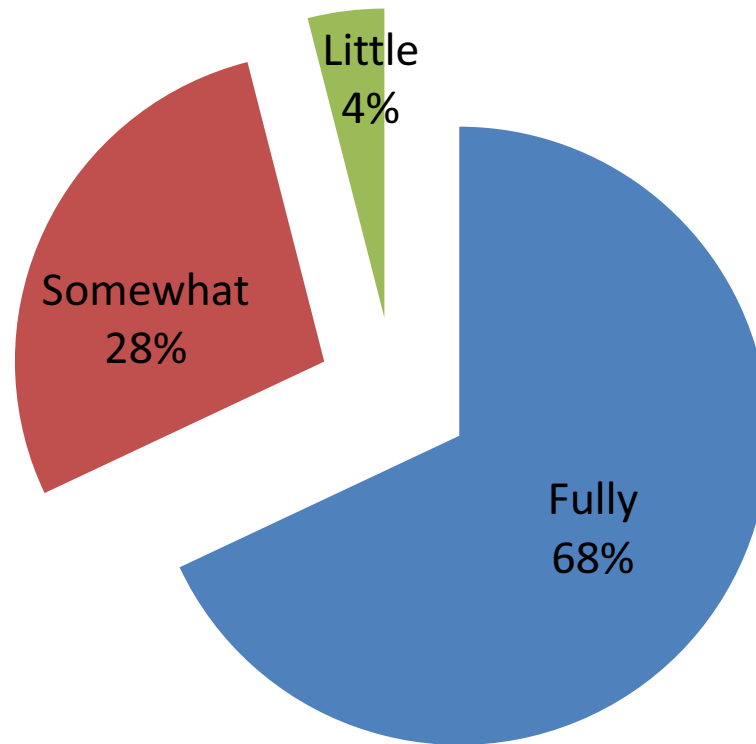
Data distributed outside of agency?



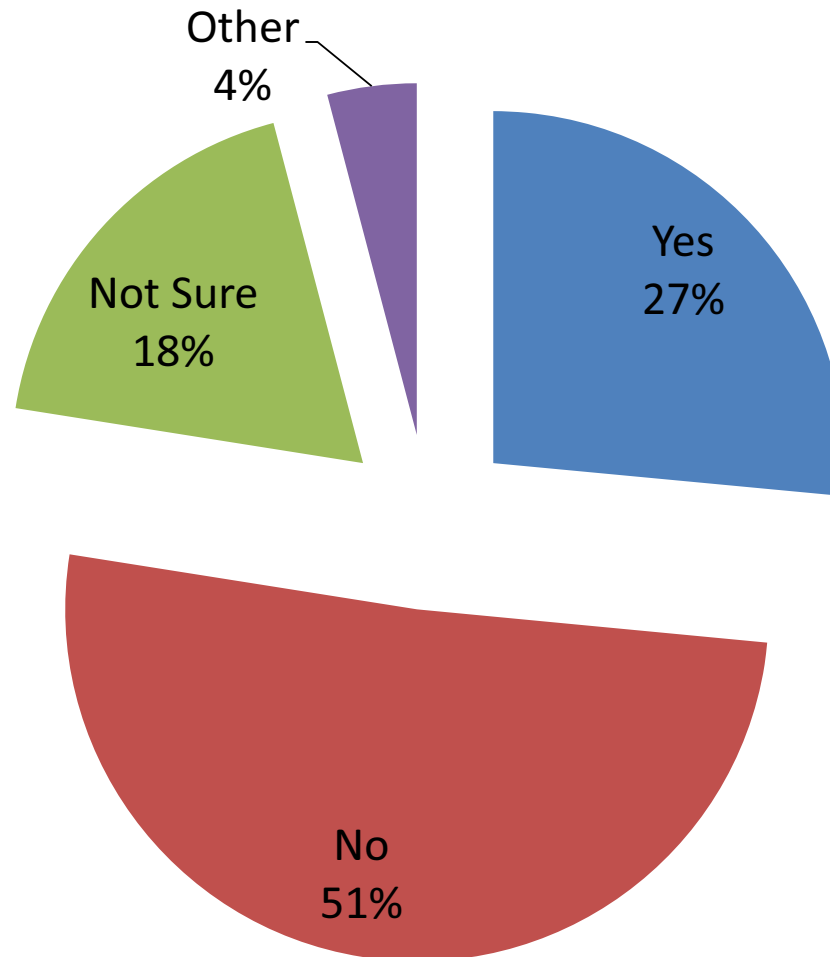
Formal Data Sharing Agreements



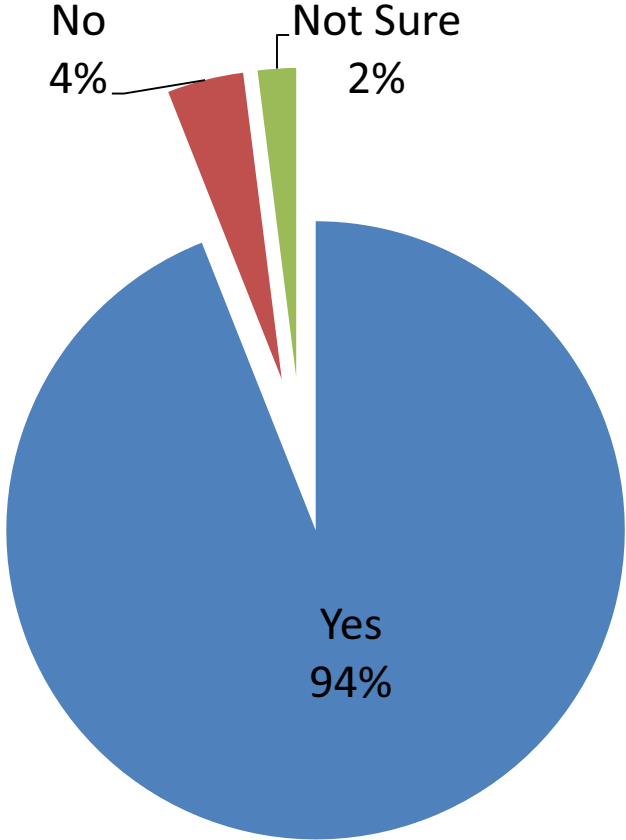
State DOT involvement in State GIS Coordination Program



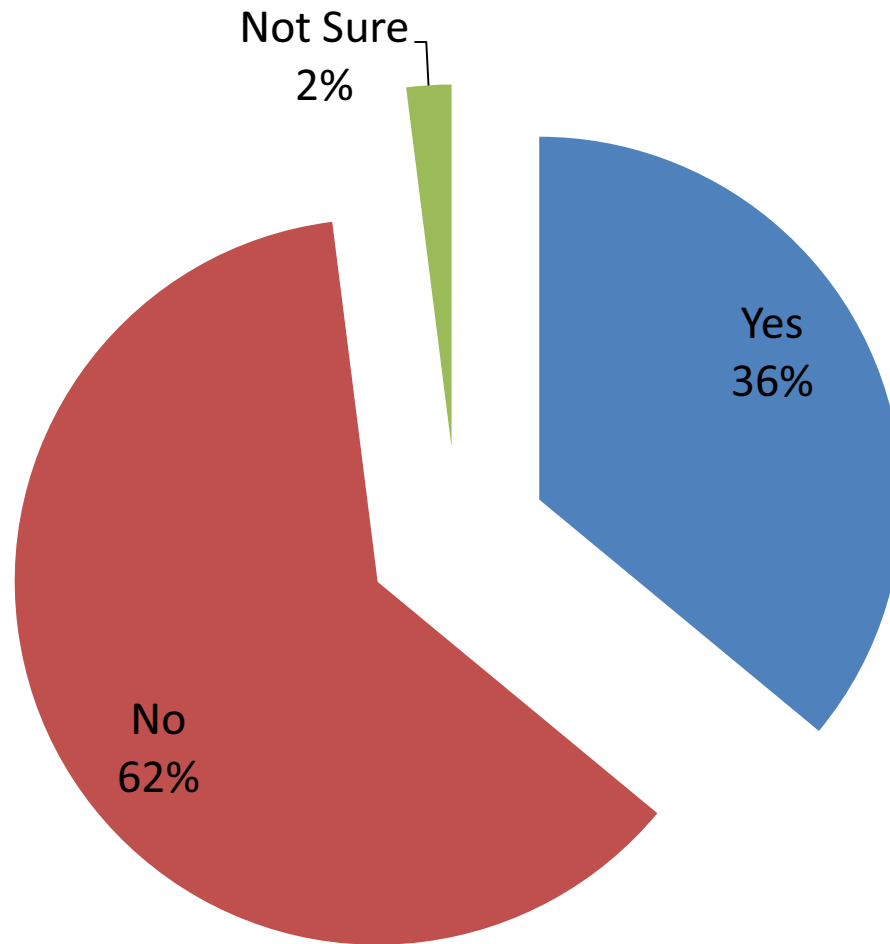
Working with neighbor states



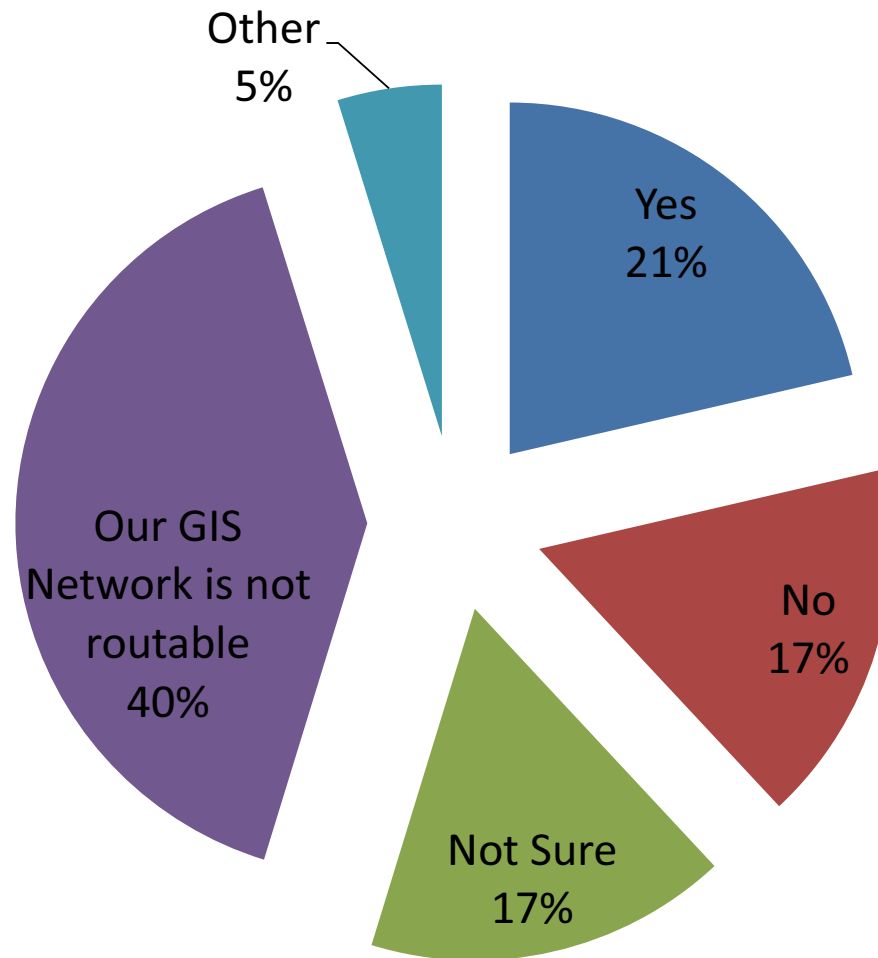
Use roadway transportation data for HPMS reporting?



Is GIS road network routable?



If network is routable, are you submitting it as part of HPMS?



Some Tentative Conclusions

- Consistency
 - Core Unit location
 - Staffing background
 - Software used
- Road base networks have a very good resolution
- Focus areas for Geospatial Technology implementation
 - Asset Management,
 - Enterprise Data Integration, and
 - Public information web portals

More (Tentative) Conclusions

- State DOTs can share their data
 - 90% to other gov agencies
- FHWA is receiving state networks from State DOTs

Availability

- This presentation and survey results will be made available on the AASHTO GIS-T website:
 - <http://www.gis-t.org>
- Thank You