User-Centered Design of a Resource Center about Geospatial Data Preservation
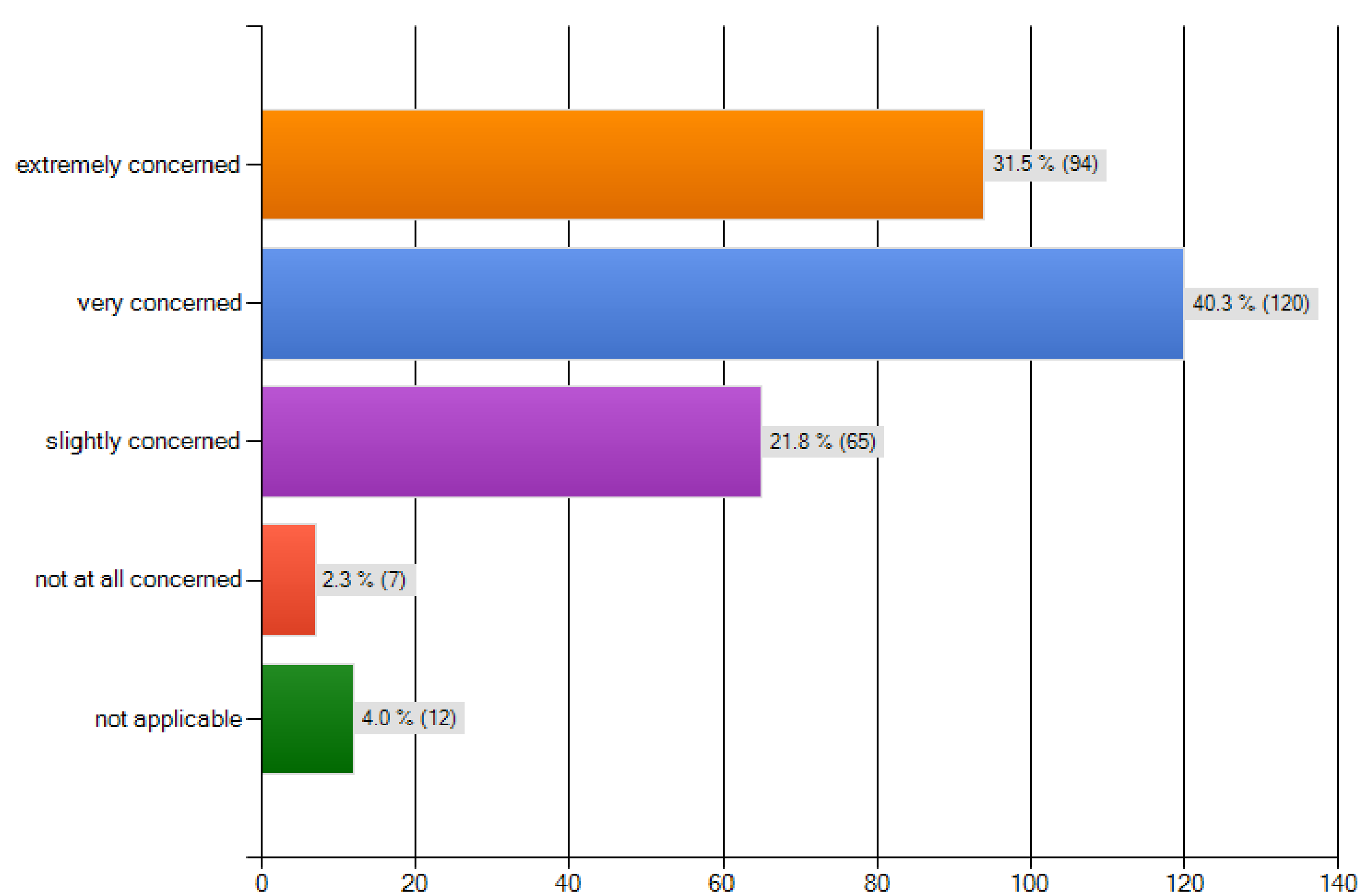
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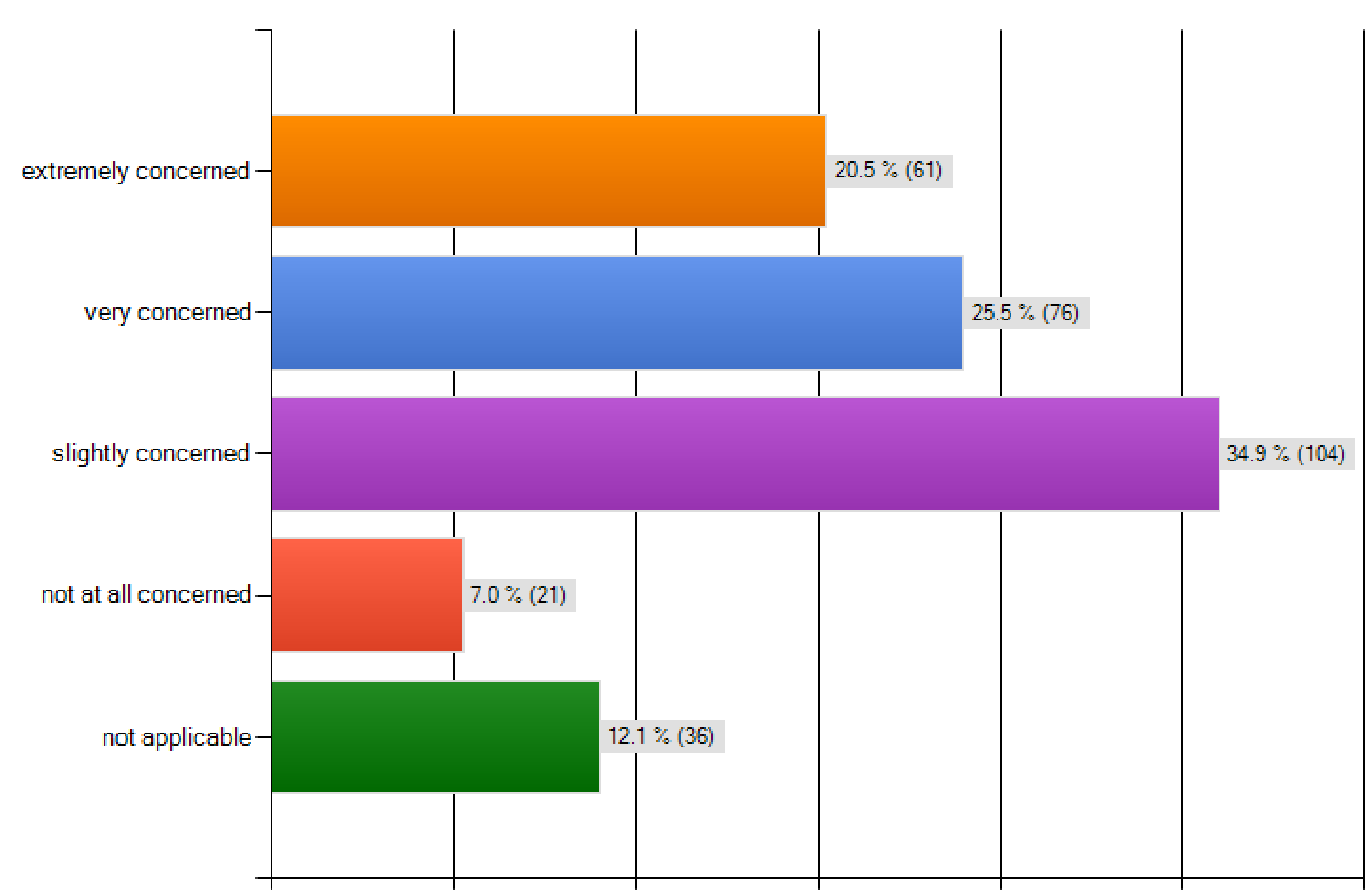
Geospatial data are valuable assets for science, education, business, government, and society. The data may not be replaceable if representing characteristics of a location at a particular time. Preserving geospatial data and related information products can improve their longevity and enable their use in the future. The Geospatial Data Preservation Resource Center has been developed to improve awareness and understanding of geospatial data preservation. The user-centered approach that informed the first release of the online resource center will be described.

I am concerned that valuable geospatial data from other sources that I need for my work may not be preserved in the long run for future use

- extremely concerned — 31.5 % (94)
- very concerned — 40.3 % (120)
- slightly concerned — 21.8 % (65)
- not at all concerned — 2.3 % (7)
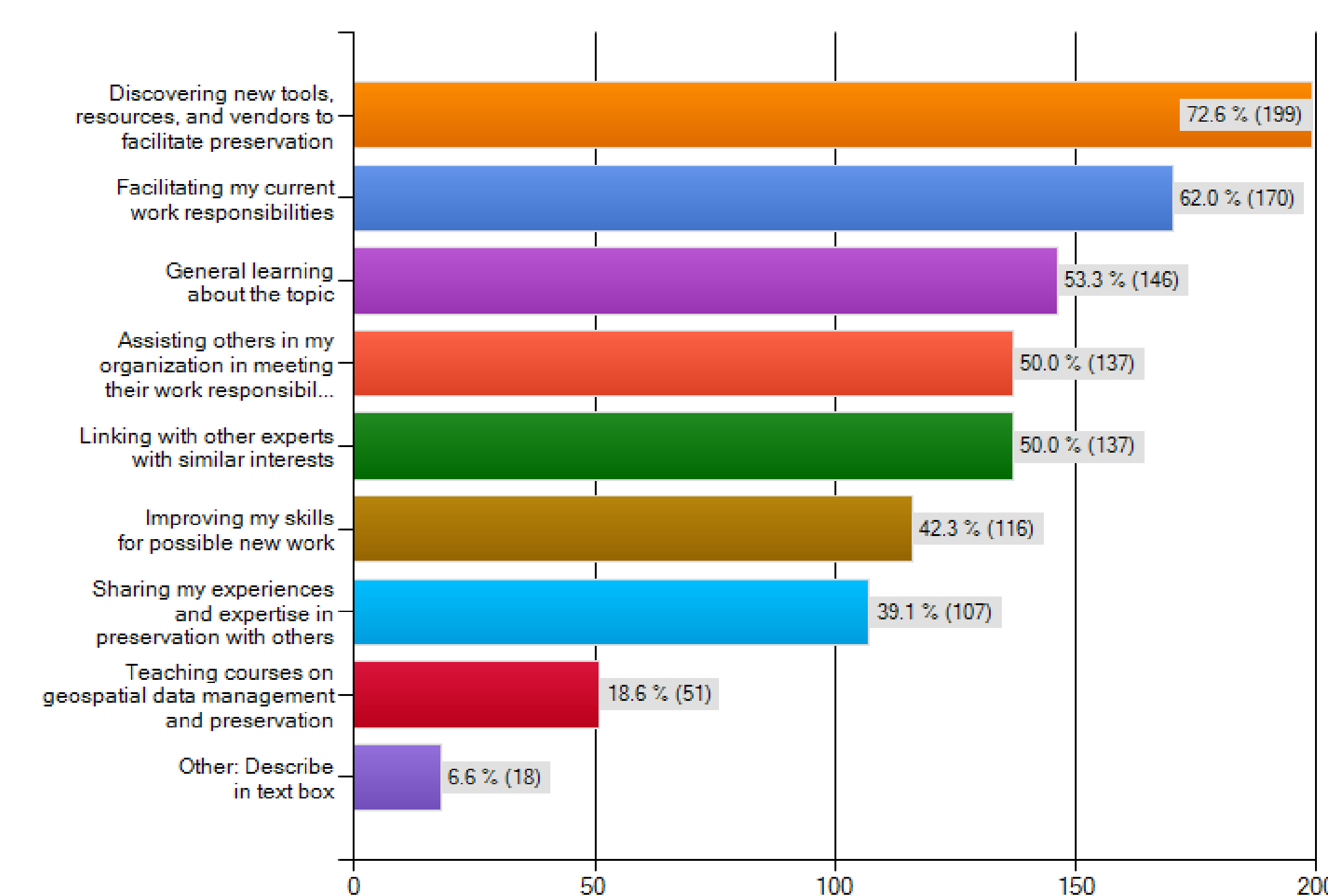- not applicable — 4.0 % (12)

Based on answers from 298 respondents

I am concerned that valuable geospatial data that I develop or generate may not be preserved in the long run for future use.
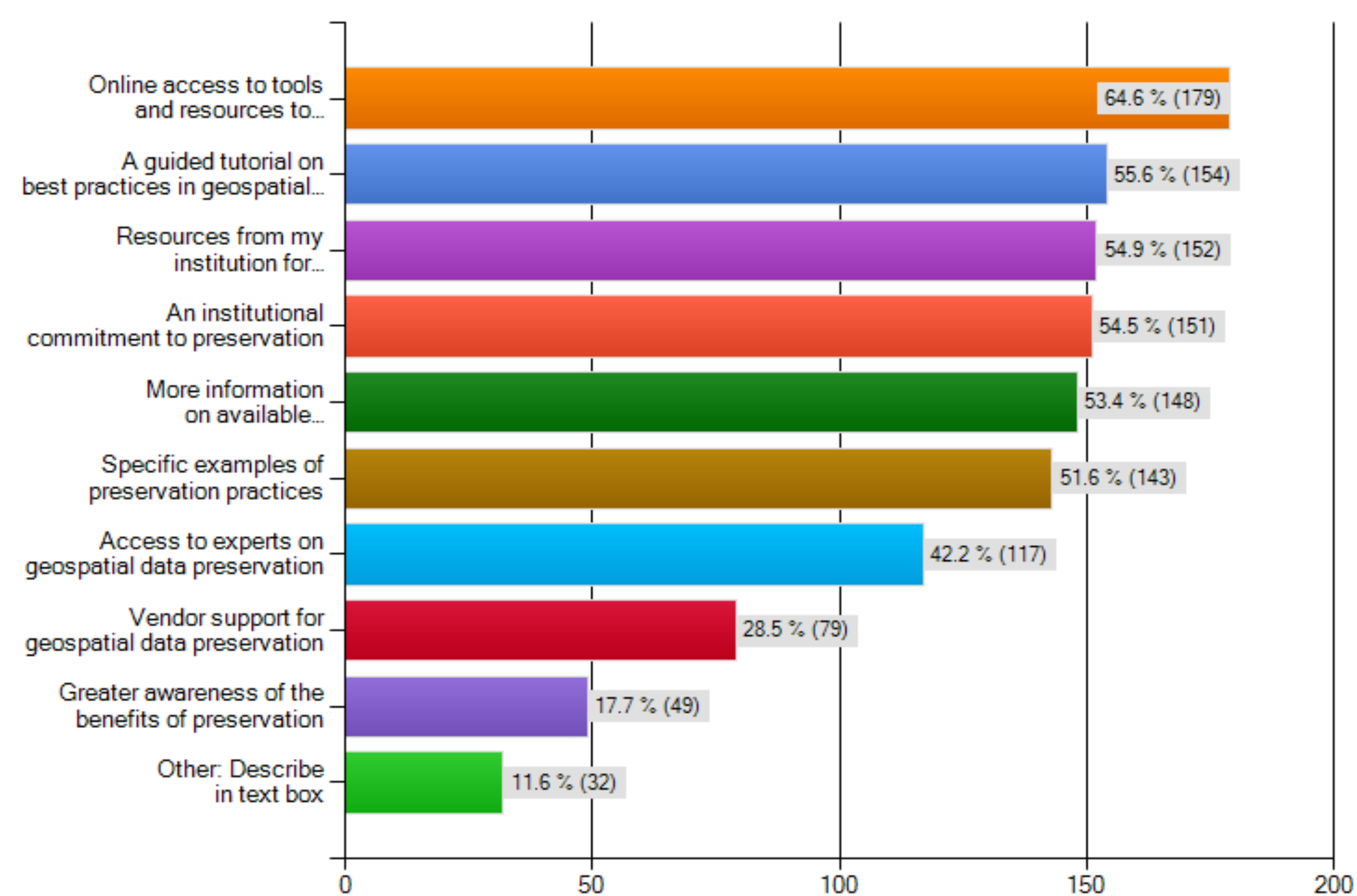

- extremely concerned — 20.5 % (61)
- very concerned — 25.5 % (76)
- slightly concerned — 34.9 % (104)
- not at all concerned — 7.0 % (21)
- not applicable — 12.1 % (36)

Based on answers from 298 respondents

I would use an online clearinghouse for geospatial data preservation for (choose all that apply):

- Discovering new tools, resources, and vendors to facilitate preservation — 72.6 % (199)
- Facilitating my current work responsibilities — 62.0 % (170)
- General learning about the topic — 53.3 % (146)
- Assisting others in my organization in meeting their work responsibil... — 50.0 % (137)
- Linking with other experts with similar interests — 50.0 % (137)
- Improving my skills for possible new work — 42.3 % (116)
- Sharing my experiences and expertise in preservation with others — 39.1 % (107)
- Teaching courses on geospatial data management and preservation — 18.6 % (51)
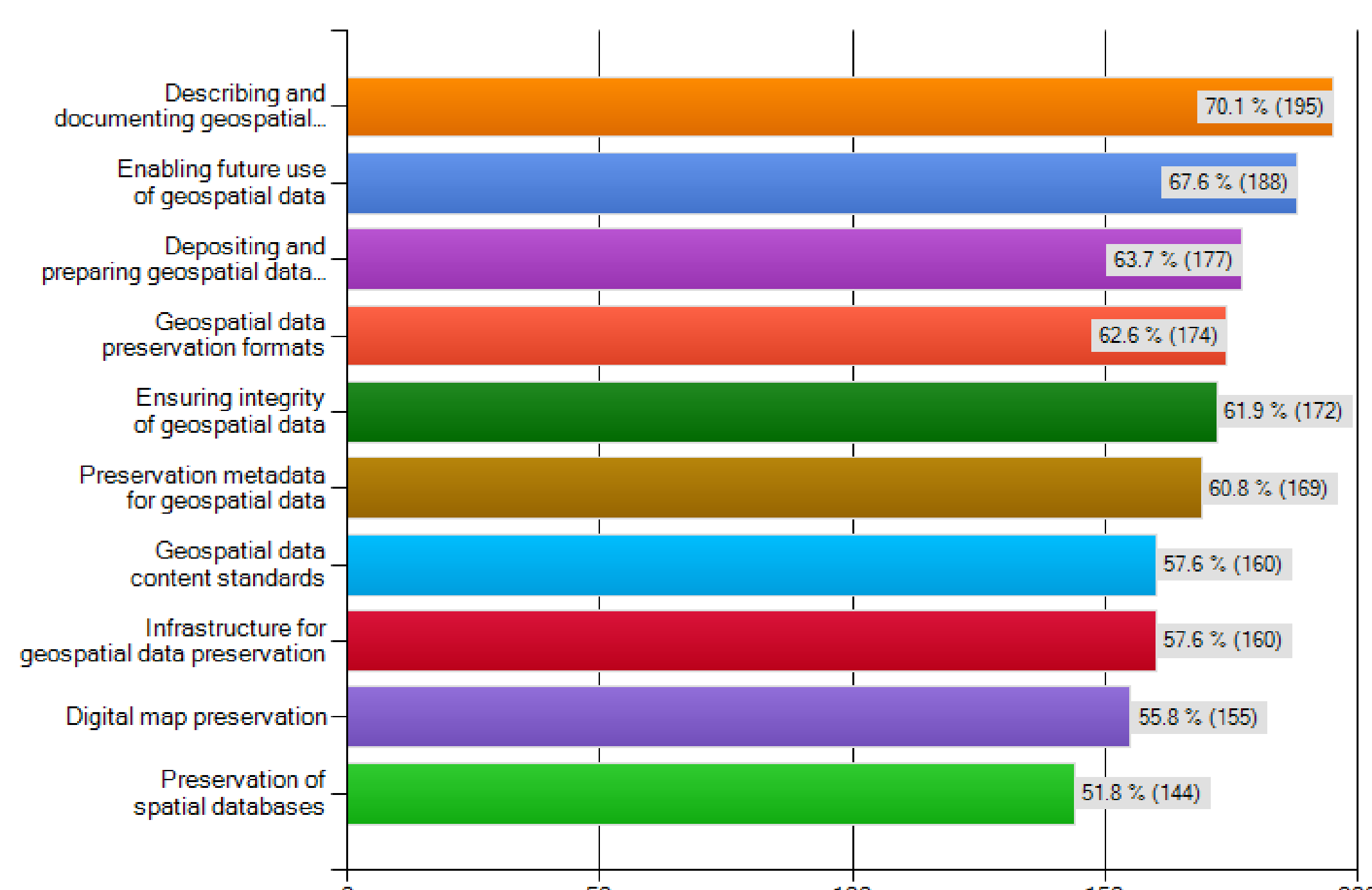- Other: Describe in text box — 6.6 % (18)

Based on answers from 274 respondents

I would spend more time on improving the long-term usability of geospatial data I manage or work with if I had (choose all that apply):

- Online access to tools and resources to... — 64.6 % (179)
- A guided tutorial on best practices in geospatial... — 55.6 % (154)
- Resources from my institution for... — 54.9 % (152)
- An institutional commitment to preservation — 54.5 % (151)
- More information on available... — 53.4 % (148)
- Specific examples of preservation practices — 51.6 % (143)
- Access to experts on geospatial data preservation — 42.2 % (117)
- Vendor support for geospatial data preservation — 28.5 % (79)
- Greater awareness of the benefits of preservation — 17.7 % (49)
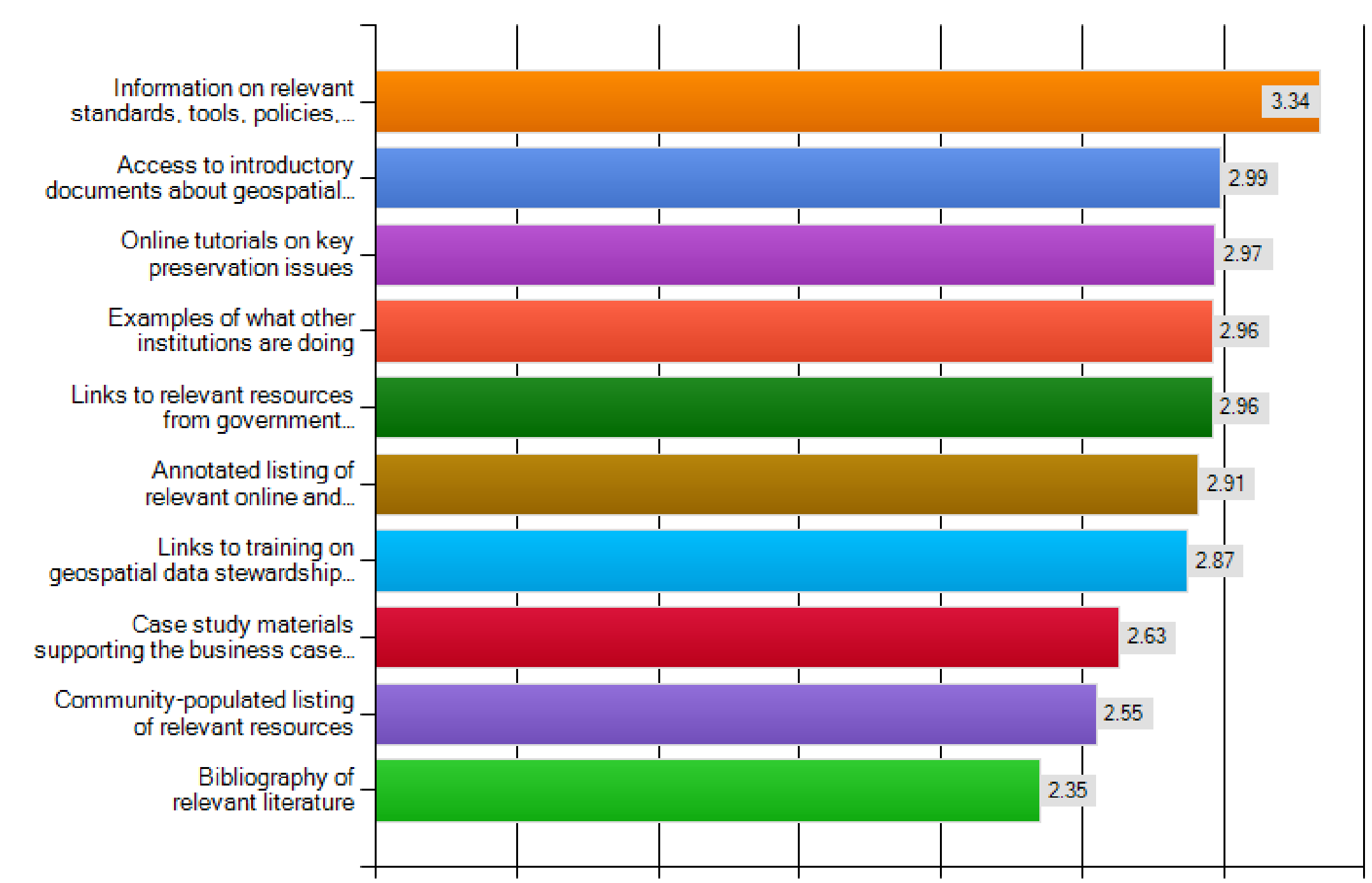- Other: Describe in text box — 11.6 % (32)

Based on answers from 277 respondents

I would be interested in the following topics related to geospatial data preservation (choose all that apply):

- Describing and documenting geospatial... — 70.1 % (195)
- Enabling future use of geospatial data — 67.6 % (188)
- Depositing and preparing geospatial data... — 63.7 % (177)
- Geospatial data preservation formats — 62.6 % (174)
- Ensuring integrity of geospatial data — 61.9 % (172)
- Preservation metadata for geospatial data — 60.8 % (169)
- Geospatial data content standards — 57.6 % (160)
- Infrastructure for geospatial data preservation — 57.6 % (160)
- Digital map preservation — 55.8 % (155)
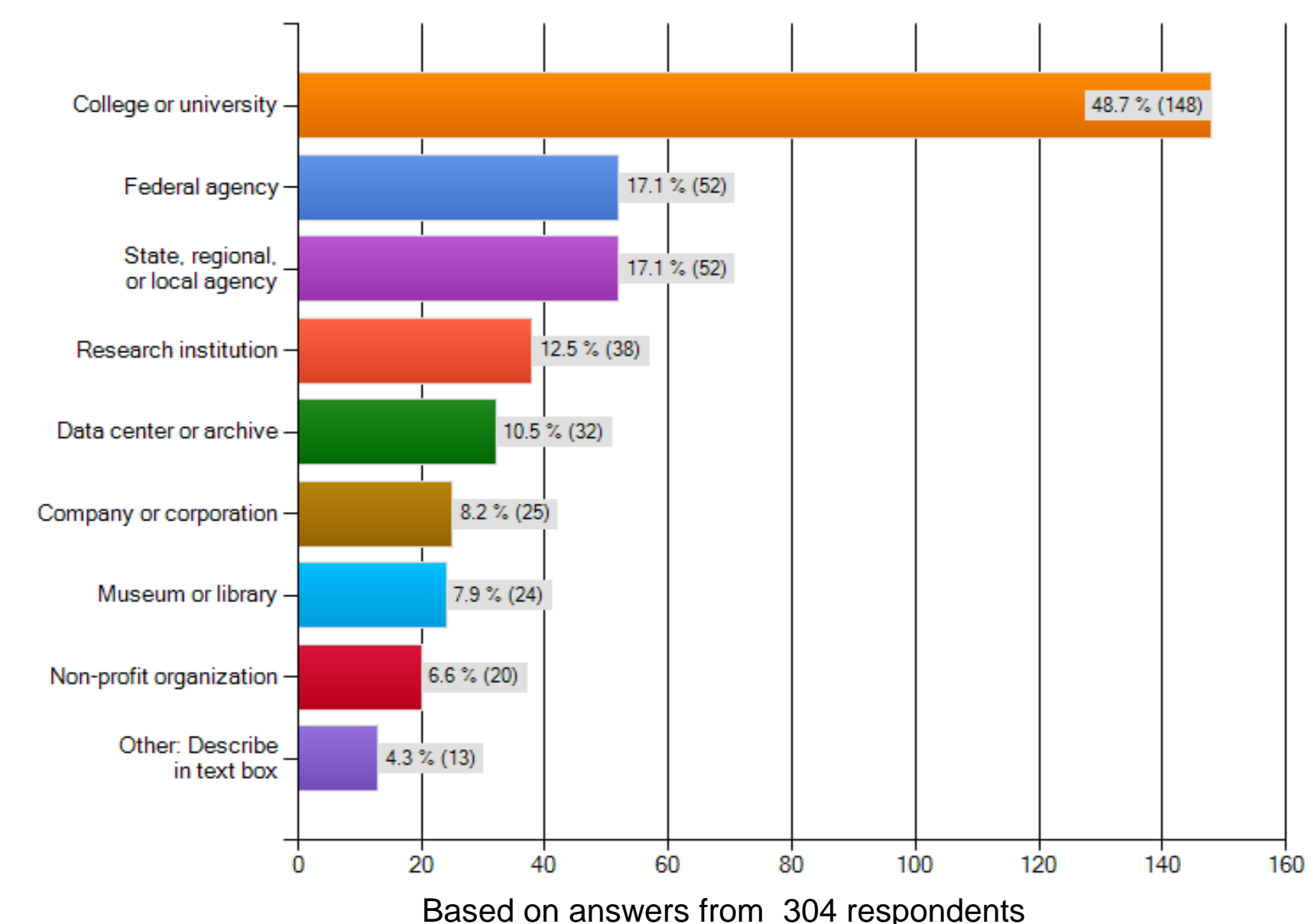- Preservation of spatial databases — 51.8 % (144)

Based on answers from 278 respondents

The resources or services that could be offered by a geospatial data preservation clearinghouse of most interest and utility to me are (rate as many of the items below as you want):

- Information on relevant standards, tools, policies,... — 3.34
- Access to introductory documents about geospatial... — 2.99
- Online tutorials on key preservation issues — 2.97
- Examples of what other institutions are doing — 2.96
- Links to relevant resources from government... — 2.96
- Annotated listing of relevant online and... — 2.91
- Links to training on geospatial data stewardship... — 2.87
- Case study materials supporting the business case... — 2.63
- Community-populated listing of relevant resources — 2.55
- Bibliography of relevant literature — 2.35

Based on answers from 259 respondents

My principal employer is a (choose all that apply):

- College or university — 48.7 % (148)
- Federal agency — 17.1 % (52)
- State, regional, or local agency — 17.1 % (52)
- Research institution — 12.5 % (38)
- Data center or archive — 10.5 % (32)
- Company or corporation — 8.2 % (25)
- Museum or library — 7.9 % (24)
- Non-profit organization — 6.6 % (20)
- Other: Describe in text box — 4.3 % (13)

Based on answers from 304 respondents

Data presented here are based on 464 survey responses received from July 9, 2010 to September 5, 2010. Of those who responded, 60% are male and 40% are female. 81% are employed in the U.S., 6% in Canada, and the remainder in other countries. More than 56% have used geospatial for 10 or more years, and 80% for 5 or more years. Human subjects research protocol approved by the Columbia University IRB.

Web Design: Annie Gerard, CIESIN

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