Appendix A: Pennsylvania State University Libraries Geospatial Services Survey

Q1 University Libraries Maps and Geospatial Services Survey Informed Consent Form

### Introduction

The results of this survey will be used to develop services offered by the University Libraries to support the use of maps, spatial concepts, data, tools and analysis techniques in teaching, research and other activities at The Pennsylvania State University.

### **Procedures**

It is expected that the survey take less than 5 minutes to complete.

Risks/Discomforts

Risks are minimal for involvement in this study.

### Benefits

There are no direct benefits from participating in the survey. Participants in the survey, along with anyone at the university, have access to maps and geospatial services offered by the University Libraries.

# Confidentiality

All responses collected will be kept confidential. This online Qualtrics survey will not collect identifying information, such as name, email, or IP address. All data obtained from participants will only be reported in an aggregate format. At the end of the survey, you are given the option to provide an email address if you wish to seek or share additional information with the University Libraries. If you choose to provide your email address, your survey responses may no longer be anonymous to the researchers. No names or identifying information will be included in reporting survey results and responses will be remain confidential.

## Compensation

There is no compensation for participation.

# Participation

Participation in this research study is completely voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to your academic status, GPA, or standing with the university. If you desire to withdraw, please close your internet browser. You may also communicate your thoughts on the survey topic directly to the principal investigators via email and/or other form of communication (see contact information in the next section).

## Questions about the Research

If you have questions regarding this study, you may contact authors.

Q2 I have read and understood the above consent form and desire of my own free will to participate in this study.
<ul><li>Yes (1)</li><li>No (2)</li></ul>
If No Is Selected, Then Skip To End of Survey If Yes Is Selected, Then Skip To Do you currently use print maps of an
Q3 Do you currently use print maps of any kind as a primary information source in your
professional activities?
<ul><li>Yes (1)</li><li>No (2)</li><li>Unsure (3)</li></ul>
If Yes Is Selected, Then Skip To Do you currently use any geospatial tIf No Is Selected, Then Skip To If you do not currently use print map
Q4 If you do not currently use print maps, are you interested in incorporating these into your teaching, research or other professional work? (If you check 'Yes' and would like to be contacted by someone from the University Libraries to help with this task please leave your email address at the end of this survey).
<ul><li>Yes (1)</li><li>No (2)</li></ul>
O Unsure (3)
If Yes Is Selected, Then Skip To Do you currently use any geospatial tIf No Is Selected, Then Skip To Do you currently use any geospatial t
Q5 Do you currently use any geospatial technologies (e.g. geographic information system [GIS], global positioning system [GPS], web-mapping platform, spatial statistics, remote sensing, spatial data of any kind, etc.)?
O Yes (1) O No (2)
O Unsure (3)  If Yes Is Selected, Then Skip To What geospatial concepts do you use (If No Is Selected, Then
Skip To If you do not currently use geospatiaIf Unsure Is Selected, Then Skip To If you do not currently use geospatia

thes	If you do not currently use geospatial technologies, are you interested in incorporating se into your teaching, research or other professional work? (If you check 'Yes' and would like se contacted by someone from the University Libraries to help with this task please leave r email address at the end of this survey).
<b>O</b>	Yes (1)
O	No (2)
	o Is Selected, Then Skip To In the past 12 months, which of the fIf Yes Is Selected, Then To What geospatial concepts do you use (
	What geospatial concepts do you use (check all that apply)? (Concepts from Geographic rmation Science and Technology Body of Knowledge, DiBiase et al. (2006))
	Conceptual Foundations (e.g. philosophical foundations, cognitive and social foundations)
	Cartography and Visualization (e.g. map design, use and production) (2)
	Design Aspects (e.g. project definition, resource planning) (3)
	Data Modeling (e.g. database construction and management, 3D, representing uncertainty) (4)
	Analytical Methods (e.g. query operations, surface analysis, geostatistics, spatial statistics, network analysis) (5)
	Other (6)
Q8 \	What kinds of spatial data do you use (check all that apply)?
	Primary collected data (1)
	Publically accessible spatial data (2)
	Proprietary spatial data from a domestic private or foreign data producer (3)
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Q9 What software tools do you use in your spatial work (check all that apply)?
<ul> <li>□ ArcGIS Desktop (1)</li> <li>□ ArcGIS Online (2)</li> <li>□ R-Statistical spatial packages (3)</li> <li>□ QGIS (4)</li> <li>□ MapInfo (5)</li> <li>□ Python (6)</li> <li>□ Web-mapping programs (i.e. Leaflet, CartoDB, Mapbox) (7)</li> <li>□ GeoDa (8)</li> <li>□ GRASS GIS (9)</li> <li>□ Saga GIS (10)</li> <li>□ Other (11)</li> </ul>
Q10 Have you ever received assistance with a geospatial question or problem?
<ul> <li>Yes (1)</li> <li>No (2)</li> <li>If Yes Is Selected, Then Skip To Where do you seek assistancIf No Is Selected, Then Skip To In the past 12 months, which of the f</li> </ul>
Q11 Where do you seek assistance with geospatial questions or problems (check all that apply)?
<ul> <li>□ Your academic department or unit (1)</li> <li>□ University coursework (2)</li> <li>□ In person workshop (3)</li> <li>□ Esri Technical Representative (4)</li> <li>□ Online resources including Esri resources (5)</li> <li>□ Information Technology Services (ITS) (6)</li> <li>□ Individual or acquaintance (7)</li> <li>□ Penn State University Libraries (8)</li> <li>□ Other (9)</li> </ul>

Q12 In the past 12 months, which of the following subscription geospatial databases provided by the Penn State University Libraries have you used (check all that apply)?
<ul> <li>□ PolicyMap (1)</li> <li>□ SimplyMap (2)</li> <li>□ DataPlanet (3)</li> <li>□ LandScan (4)</li> <li>□ China GeoExplorer (5)</li> <li>□ Social Explorer (6)</li> <li>□ None (7)</li> </ul>
Q13 In the past 12 months, which of the following have you used (check all that apply)?
☐ Print map from the Center for Maps and Geospatial Information, Penn State University Libraries (1)
☐ Digital scan of print maps or aerial photographs from the Center for Maps and Geospatial Information, Penn State University Libraries (2)
Penn State University Libraries online research guides (e.g. http://guides.libraries.psu.edu/gis) (3)
☐ Maps from the Digital Collections, Penn State University Libraries (i.e.
https://www.libraries.psu.edu/psul/digital/mapdrawer.html) (4)  Digital maps from other sources, (e.g. the Library of Congress) (5)  None (6)
If Digital scan of print maps Is Selected, Then Skip To For my purposes, how important is it If Print map from the Center Is Selected, Then Skip To For my purposes, how important is it If None Is Selected, Then Skip To In the past 12 months, I have acquire
Q14 For my purposes, how important is it that scanned print maps and aerial photographs are georeferenced (i.e. geolocated) for use in a geographic information system or web-mapping platform?
<ul><li>Very (1)</li><li>Somewhat (2)</li><li>Not at all (3)</li></ul>

Q15 Print maps that are relevant to my work (research, teaching, own-interests) include: (Please choose all that apply)
□ Sanborn maps (1) □ Topographic maps (2) □ International maps (3) □ Environmental maps (4) □ Aeronautic and navigation maps (5) □ US tourist maps (6) □ Other (7)
Q16 In the past 12 months, I have acquired a geospatial dataset from a proprietary source for my research, teaching or other professional activity.
<ul> <li>Yes (1)</li> <li>No (2)</li> <li>If Yes Is Selected, Then Skip To The approximate cost of the dataset was:If No Is Selected, Then Skip To How important are the following geosp</li> </ul>
Q17 The approximate cost of the dataset was:
O 0 - \$1,000 (1) O 1,001 - \$5,000 (2) O more than \$5,000 (3)
Q18 I paid for the data using the following kind(s) of funds (check all that apply):
<ul><li> Grant (1)</li><li> Departmental (2)</li><li> Other (3)</li></ul>
Q19 I know of others at Penn State who have a need for the proprietary geospatial data that I have purchased, but am unsure how to share these data with others.
<ul><li>True (1)</li><li>False (2)</li></ul>

Q20 Purchase of the pro	oprietary dataset was,	/is:
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- A one-time purchase (1)
- A recurring purchase that I anticipate making again in the future (2)

Q21 How important are the following geospatial services provided by the University Libraries?

	Very important (1)	Important (2)	Neutral (3)	Slightly unimportant (4)	Unimportant (5)
Access to Geographic Information System (GIS) hardware/software (1)	0	0	O	•	•
Access to web- mapping applications (2)	•	•	0	•	•
In-person workshops (3)	<b>O</b>	<b>O</b>	<b>O</b>	•	•
Online workshops (4)	O	0	0	0	•
One-on-one research consultations/support (5)	•	•	•	•	0
Maintaining reference webpages (6)	•	•	•	0	0

Q22 How important are the following geospatial services provided by the University Libraries?

	Very Important (1)	Important (2)	Neutral (3)	Slightly important (4)	Unimportant (5)
Coordination and hosting of outreach events (e.g. GIS Day) (1)	•	•	0	•	0
Teaching partnerships (2)	<b>O</b>	<b>O</b>	<b>O</b>	<b>O</b>	•
Research partnerships (3)	<b>O</b>	<b>O</b>	<b>O</b>	<b>O</b>	•
Promotion/coordination of university-wide geospatial activities at Penn State (4)	O	0	O	O	•
Geospatial data discovery assistance (5)	<b>O</b>	0	•	•	•
Engaged scholarship opportunities in the University Libraries for undergraduate students (6)	0	•	•	O	•

Q23 Identify your preferences of priorities for future geospatial initiatives by the Penn State University Libraries.

	High Priority (1)	Medium Priority (2)	Low Priority (3)
Geospatial data storage, archiving and long-term preservation (1)	O	O	0
Centralized acquisition and coordinated use of proprietary spatial datasets (2)	•	•	•
Collaboration/partnership on research projects (sponsored or otherwise) (3)	•	•	•
Research grade Global Positioning System (GPS) lending and training (4)	•	0	•
Geospatial dataset production (e.g. assembly of commonly used datasets) (5)	•	•	•
Development of a Geographic Information System (GIS) and data visualization facility (6)	•	•	•
Involvement in local, county and state government geospatial data initiatives (7)	•	0	•

Q2	4 What is your primary campus affiliation?
O	University Park (1)
$\mathbf{O}$	Abington (2)
$\mathbf{O}$	Altoona (3)
O	Beaver (4)
O	Berks (5)
O	Brandywine (6)
$\mathbf{O}$	Carlisle (7)
$\mathbf{O}$	DuBois (8)
$\mathbf{C}$	Erie (9)
O	Great Valley (10)
0	Fayette (11)
O	Greater Allegheny (12)
O	Harrisburg (13)
O	Hazelton (14)
O	Hershey (15)
O	Lehigh Valley (16)
O	Mont Alto (17)
O	New Kensington (18)
0	Schuylkill (19)
0	Shenango (20)
0	Wilkes-Barre (21)
O	World Campus (22)
O	Worthington Scranton (23)
O	York (24)
Q2	5 What is your primary status with the university?
O	Faculty (1)
O	Staff (2)
O	Graduate Student (3)
O	Undergraduate Student (4)
$\mathbf{O}$	Other (5)

Q2	6 What is your academic unit affiliation (i.e. academic college)?
0	Agricultural Sciences (1)
O	Arts & Architecture (2)
O	Business (3)
O	Communications (4)
O	Earth and Mineral Sciences (5)
O	Education (6)
O	Engineering (7)
O	Health and Human Development (8)
O	Information Sciences and Technology (9)
O	Liberal Arts (10)
O	Medicine (11)
O	Nursing (12)
O	Science (13)
O	Law (14)
O	University Libraries (15)
O	Undeclared (16)
O	Not Applicable (17)
O	Other (18)
Q2 he	7 If you have a secondary unit affiliation (e.g. institute, center, office of etc.) please enter it
	Secondary unit (1)
O	Not Applicable (2)
Ω2	8 (Ontional) I would like a representative of the University Libraries to contact me at the

Q28 (Optional) I would like a representative of the University Libraries to contact me at the following email address to discuss current and potential future support for geospatial teaching, research and/or other professional activities at Penn State, including the acquisition of geospatial datasets.

Q29 Please provide any additional comments about current or future University Library support for maps and geospatial services at Penn State.