

JACIE

Civil Commercial Imagery Evaluation Workshop



Cape Hatteras
Light House

Charles Mondello, DCTO
Pictometry International



A Change of Perspective

An industry & data provider viewpoint

Bodie Island
Light House

Briefing Agenda

- Discussion of industry direction
- Affects on the airborne data provider community
- Change within Pictometry

Ponce de Leon Inlet
Light Station

An aerial photograph of a city street scene. In the center, a large, light-colored building with a prominent facade and a red-tiled roof is visible. To its right, there are several other buildings, some with red-tiled roofs and others with grey roofs. A parking lot with several cars is visible on the right side. The foreground is dominated by a large, dense area of green trees. The text "Phase VI ASPRS Ten Year Industry Forecast Results" is overlaid in the upper half of the image.

Phase VI ASPRS Ten Year Industry Forecast Results

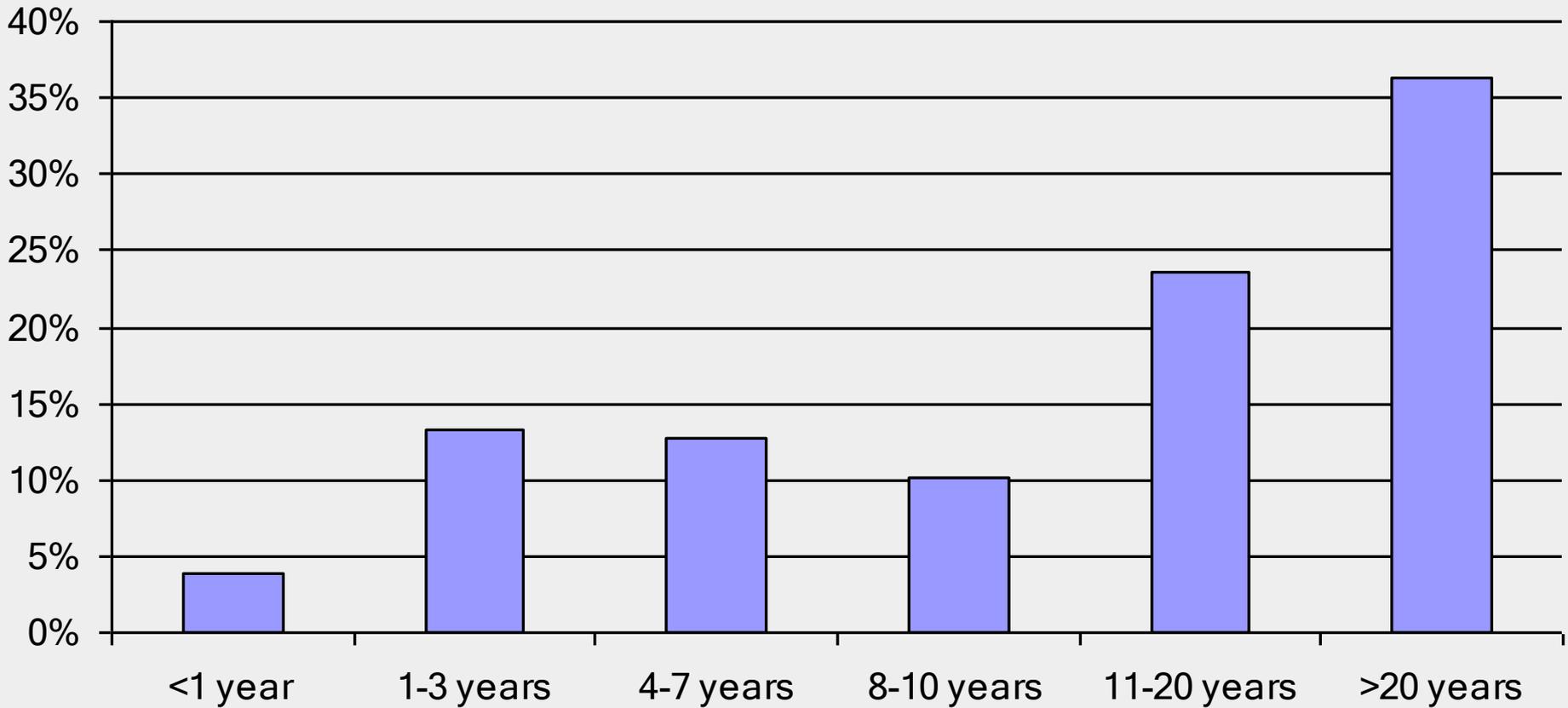
Cathedral of St Augustine

Direction: Results from ASPRS 10 Year Industry Forecast

- Phase VI of the study started initially in 1999
 - NGA and USGS partnered with ASPRS for Phase VI
 - Questions develop to answer workforce issues and retain continuity with past studies

Lake Ontario Light House
Oswego, NY

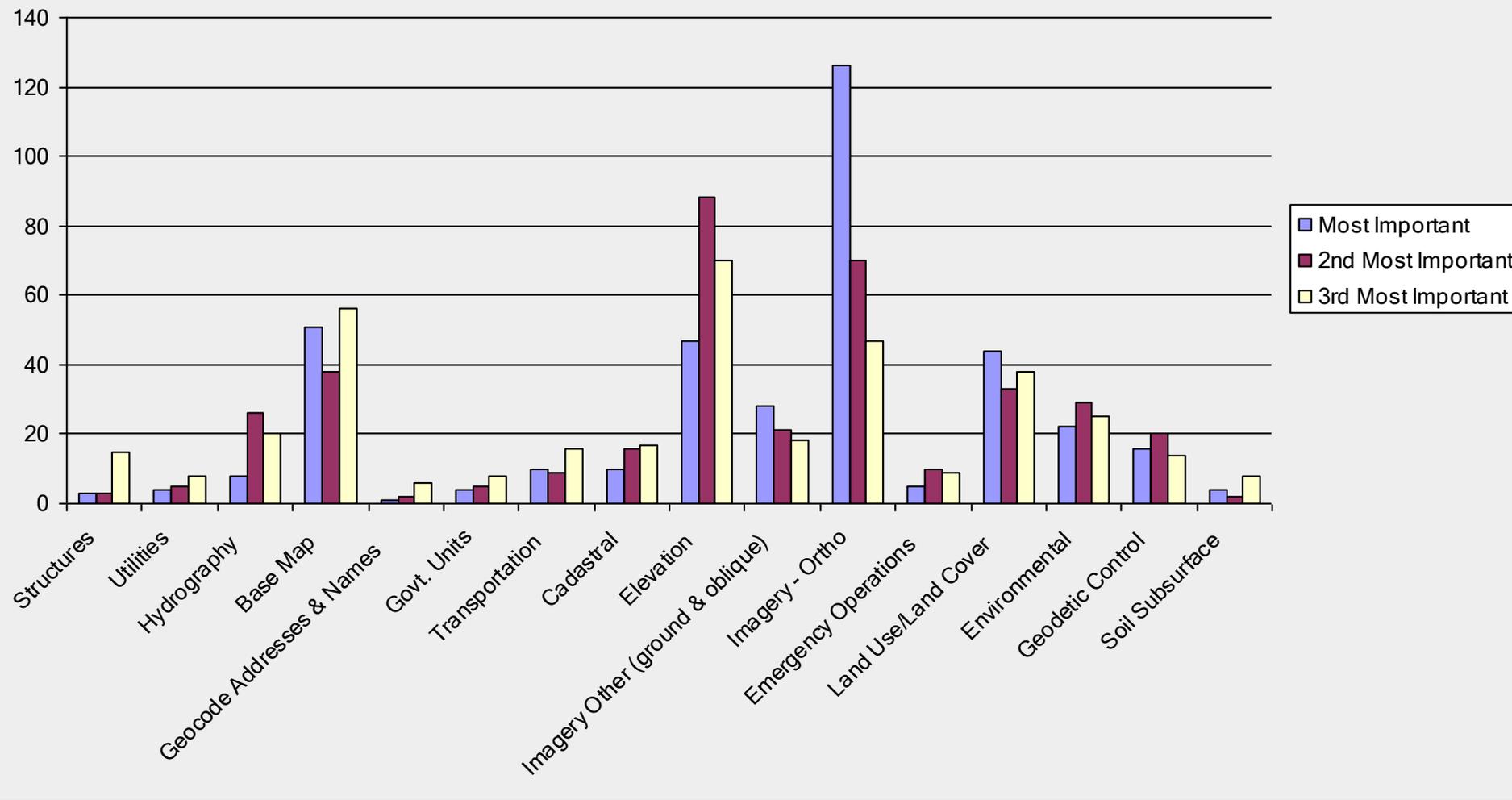
How many years of remote sensing experience do you have?



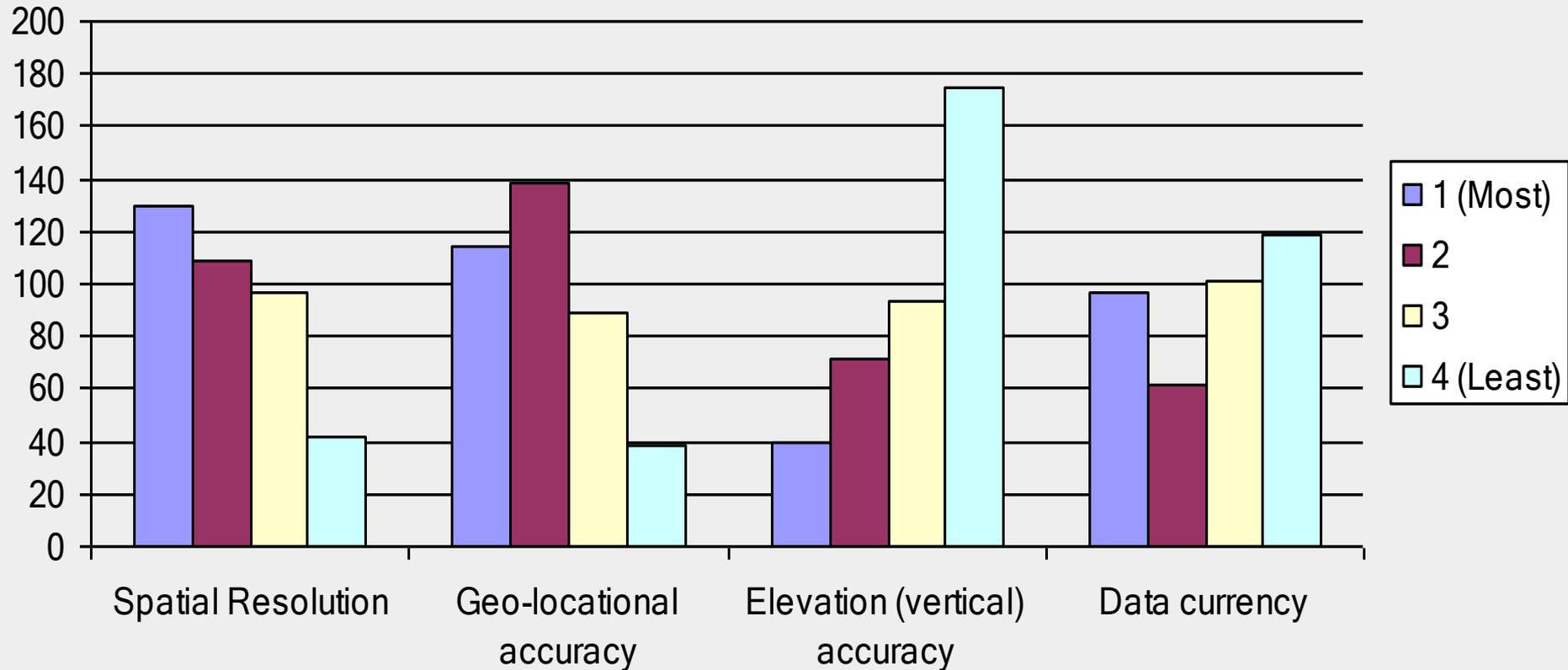
Answered Question 440

Skipped Question 9

Which of the following are the three MOST important geospatial data layers that you currently use?



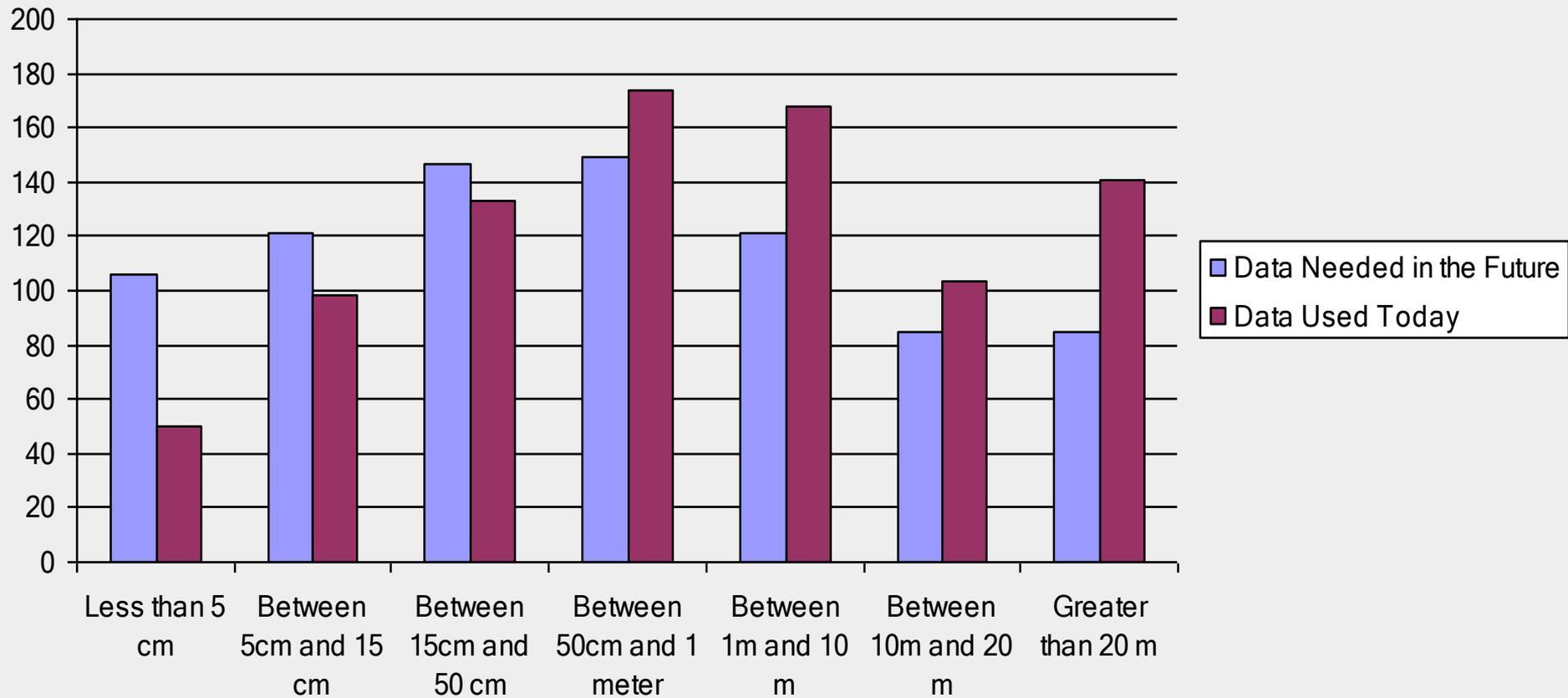
For your typical remote sensing requirements, please rank the following characteristics, from most important (1) to the least important (4).



Answered Question 383

Skipped Question 67

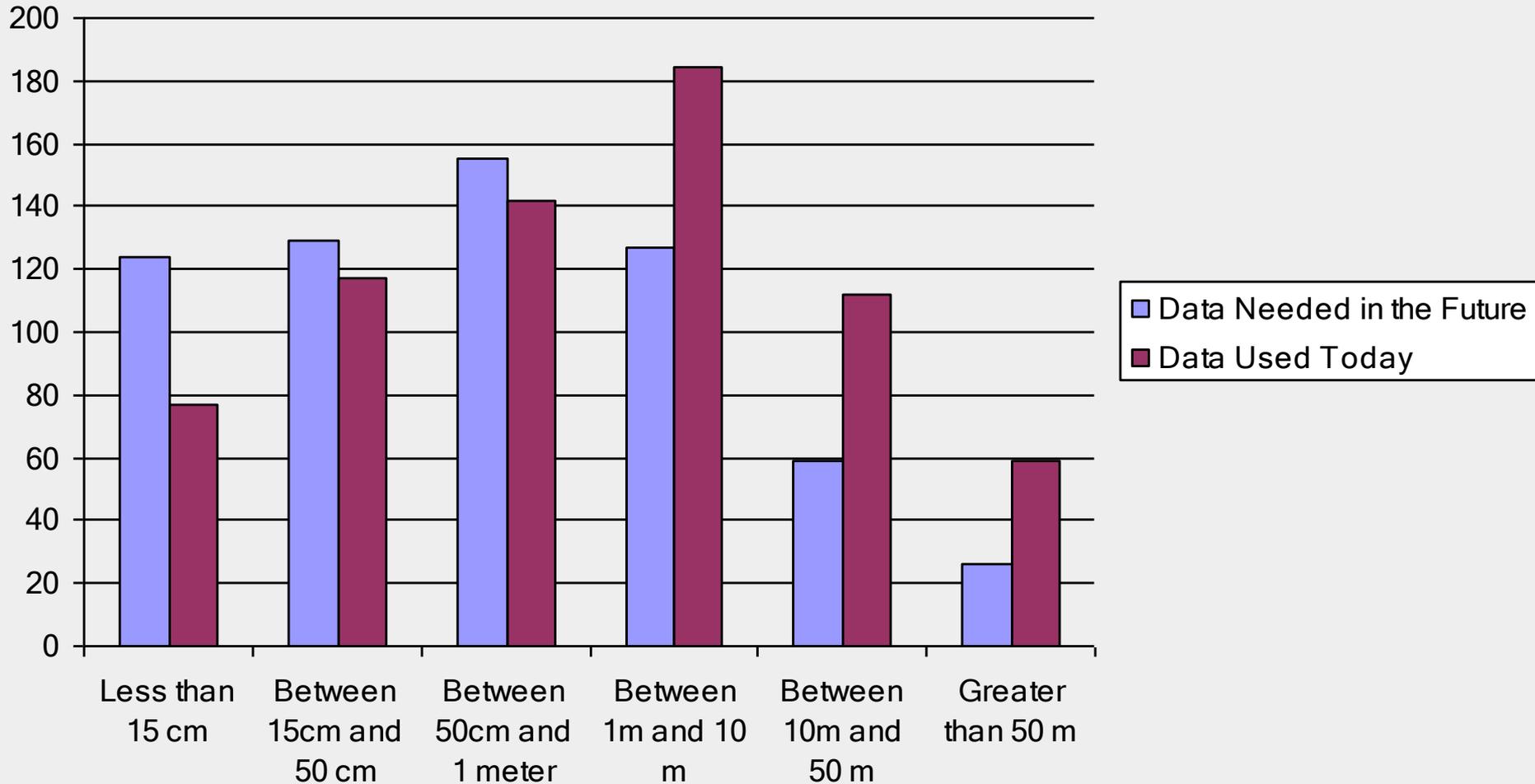
What levels of Spatial Resolution do you currently WORK WITH today? What levels of Spatial Resolution do you NEED most to do your job? (Could be the same - check all that apply)



Answered Question 377

Skipped Question 73

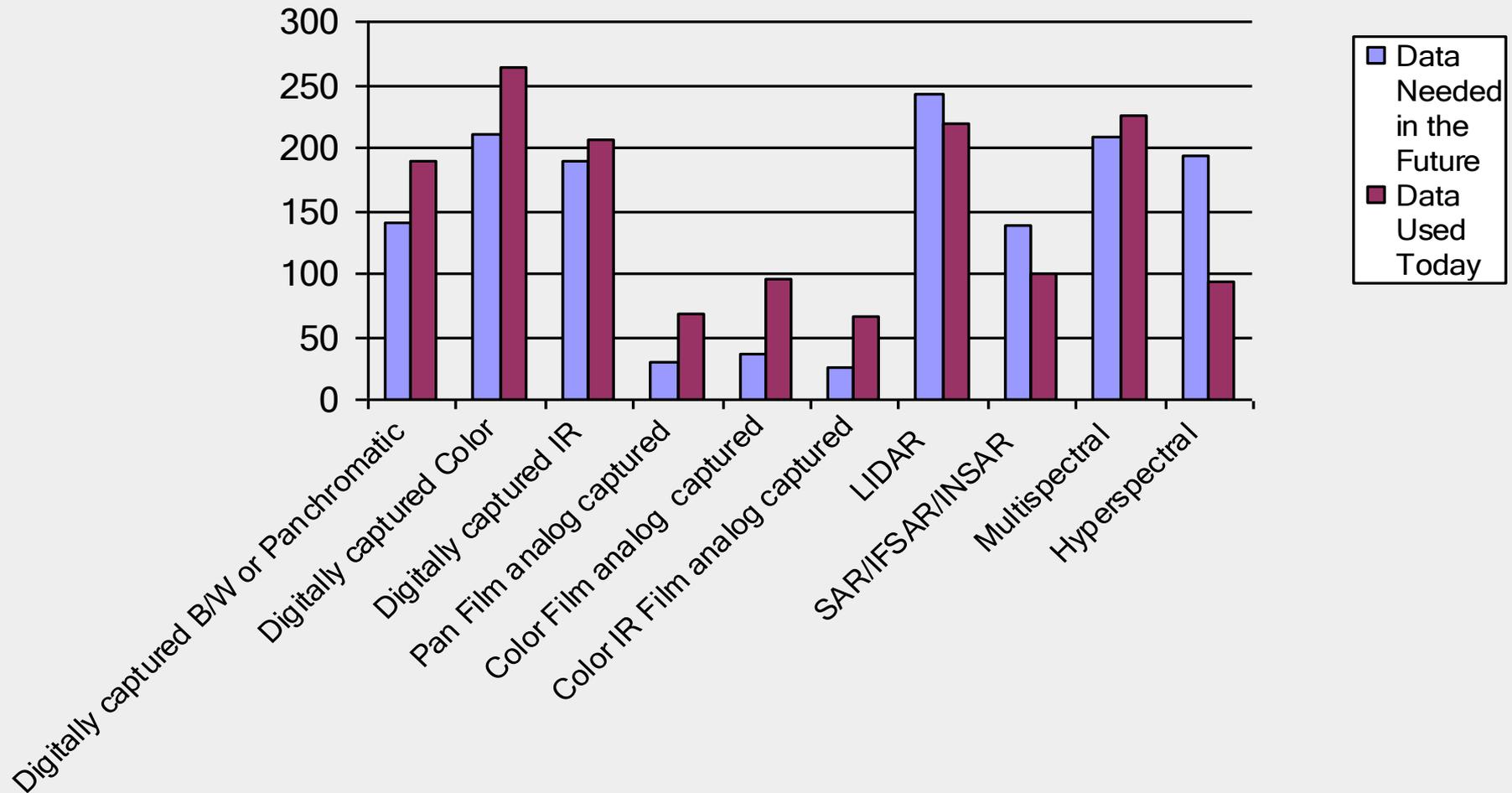
What levels of geo-locational accuracy do you currently WORK WITH today? What levels of geo-locational (horizontal) accuracy do you NEED most to do your job? (Could be the same - check all that apply)



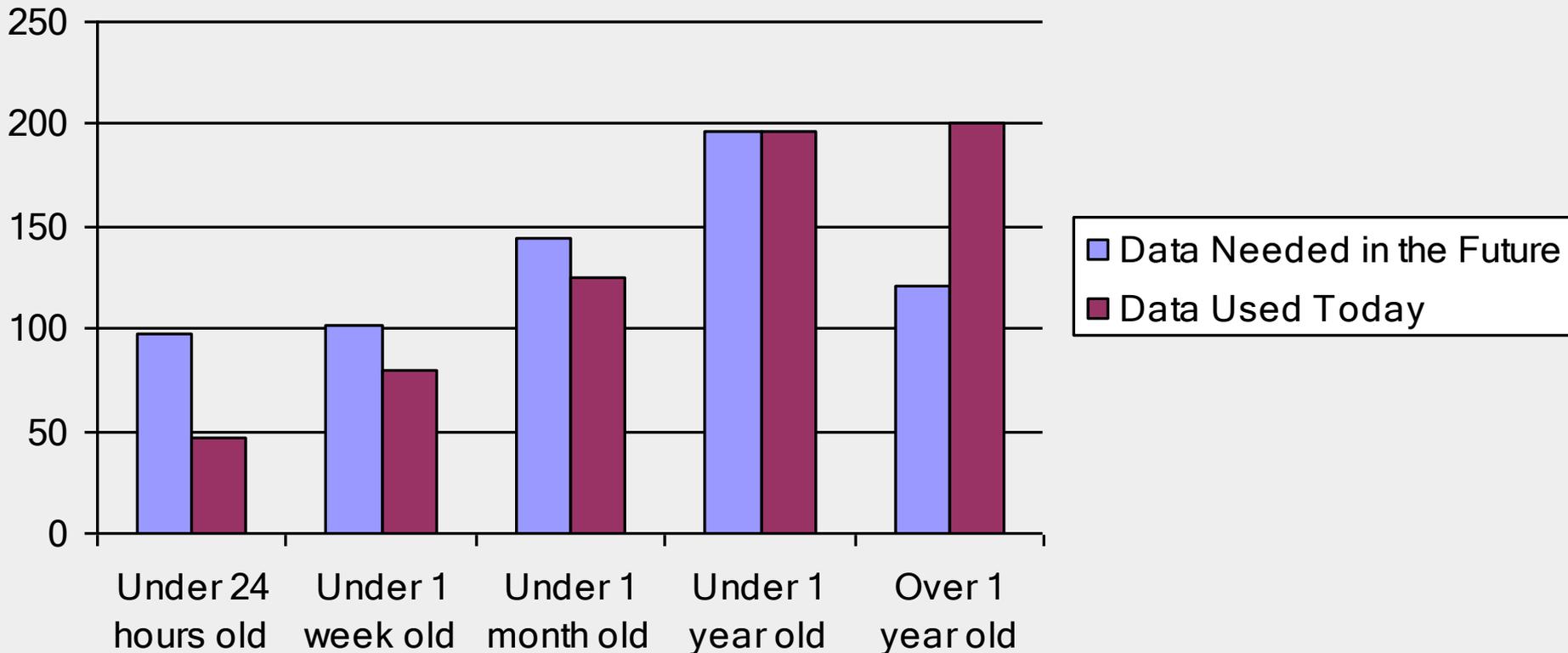
Answered Question 369

Skipped Question 81

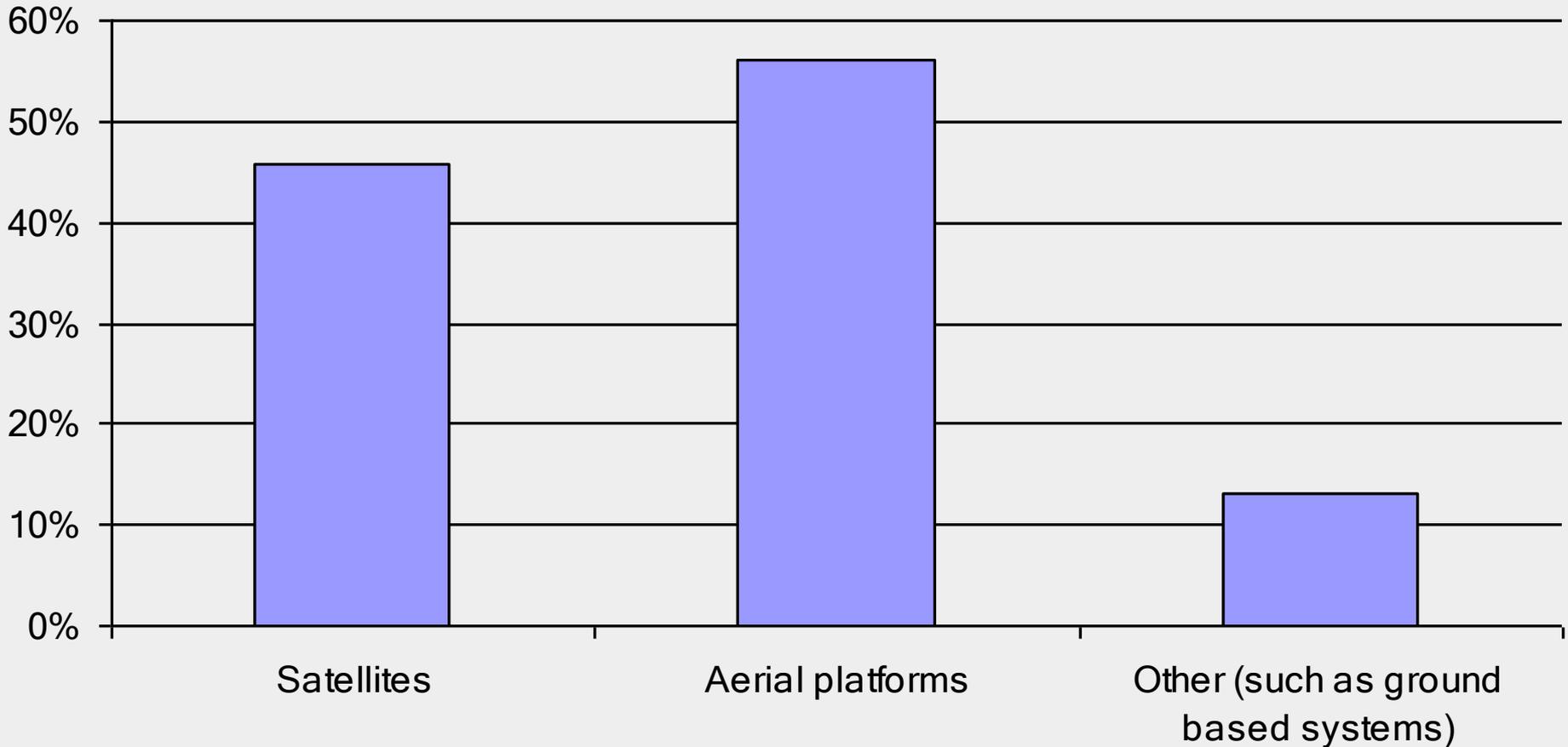
What image/sensor types do you currently WORK WITH today?
 What image types do you NEED most to do your job? (Could be the same - check all that apply)



How current are the PRIMARY data sets that you WORK WITH? How current do you NEED your data to be?



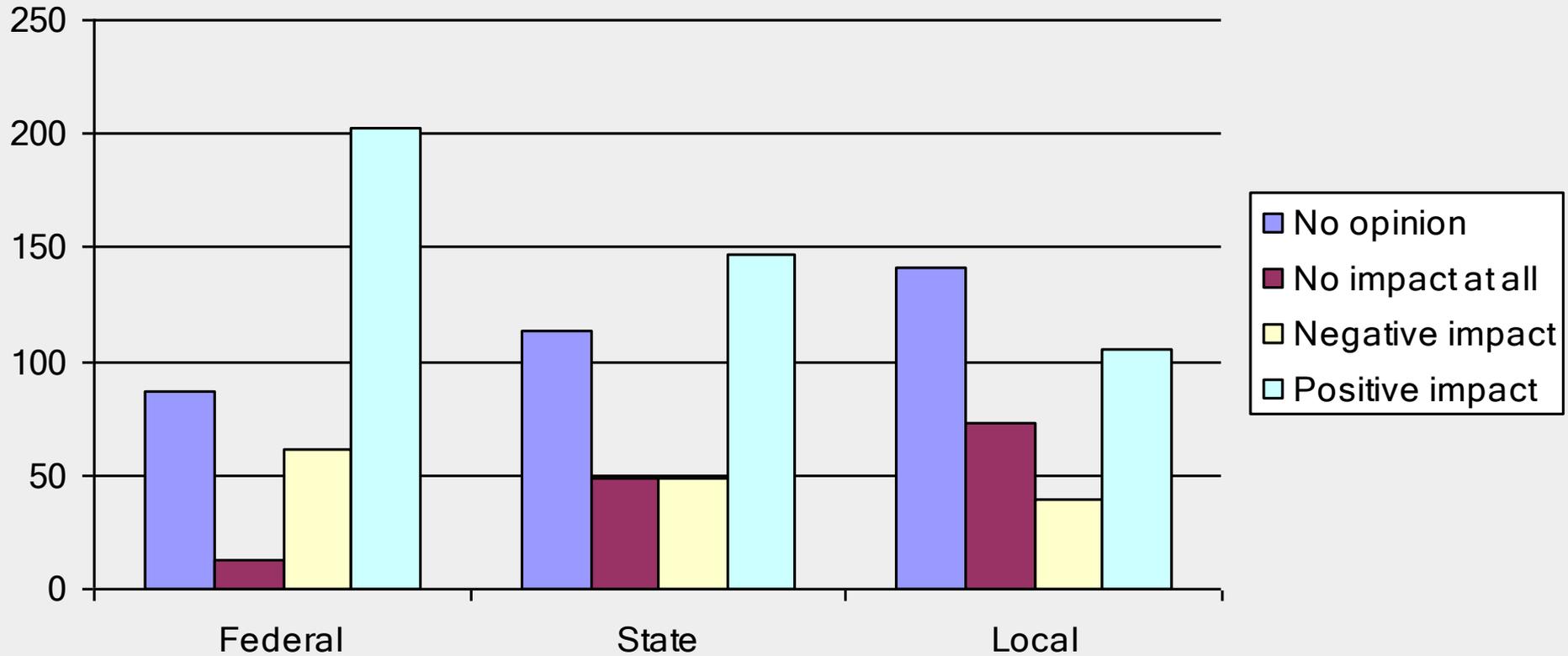
What proportion of your remote sensing data/information is collected by aerial platforms vs. space-based collection? Your responses must add to 100%



Answered Question 367

Skipped Question 83

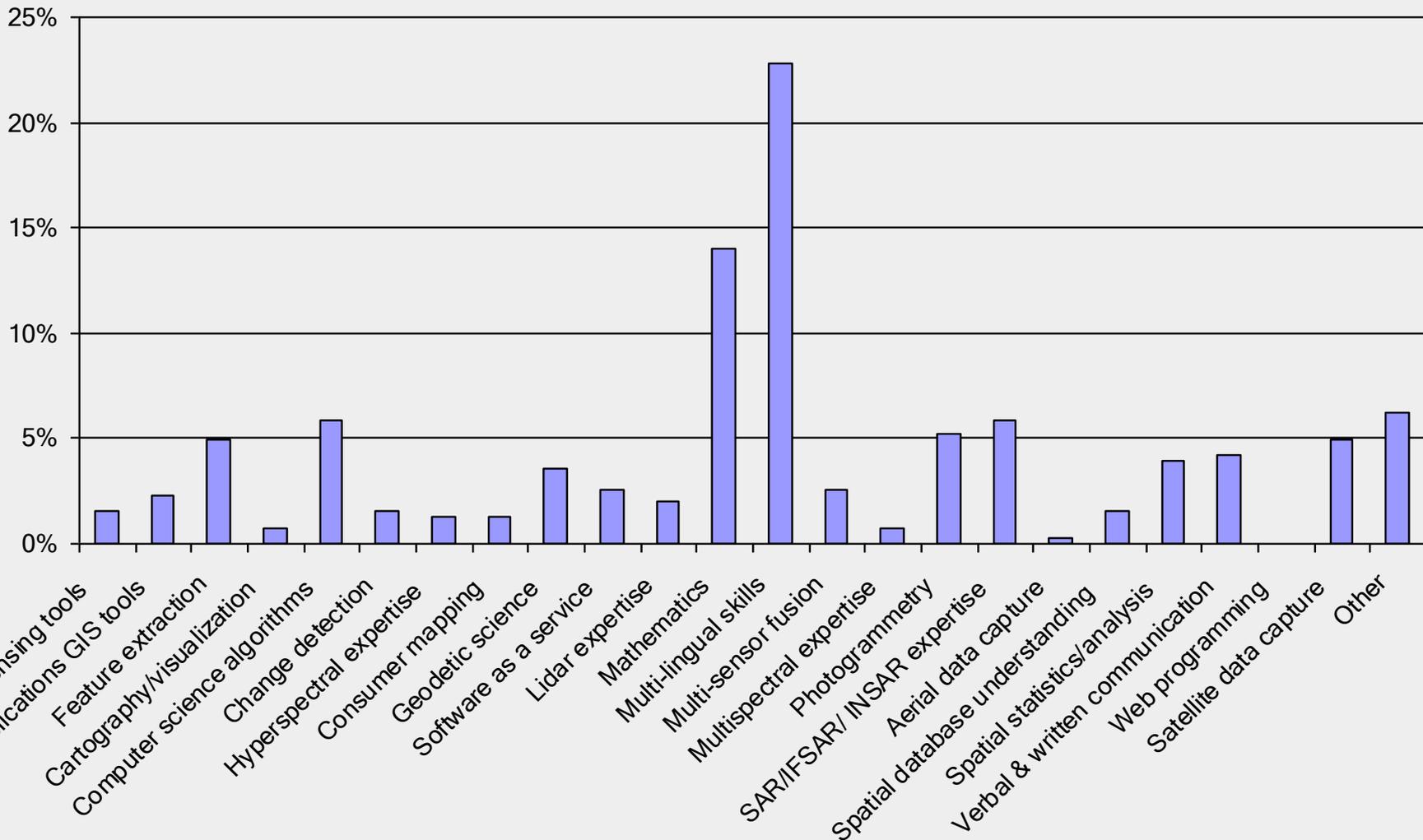
In your opinion, how do government policies at various levels affect the U.S. geospatial community?



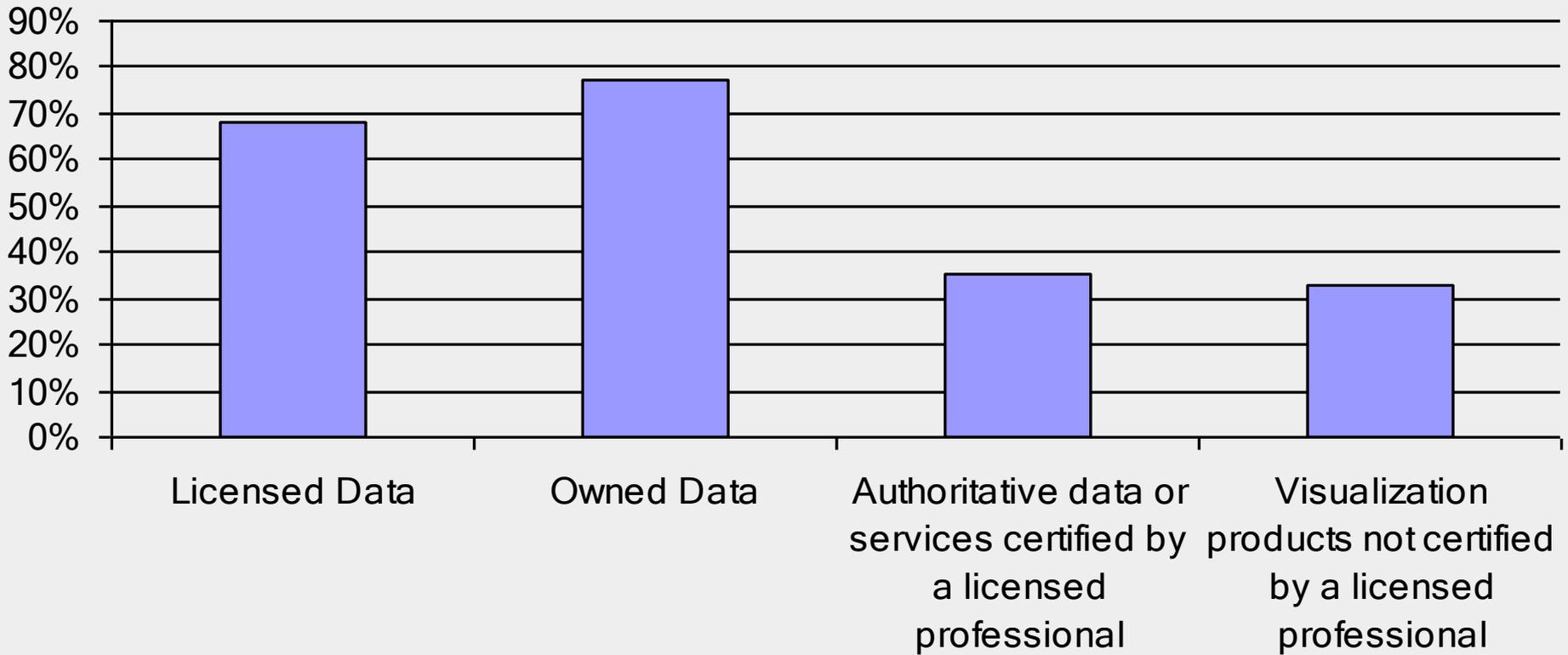
Answered Question 365

Skipped Question 85

In which area do you see the single greatest expertise shortfall in the U.S. in the future?



What types of data do you use in your work? (Please check all that apply.)



Answered Question 330

Skipped Question 120

Industry Vetted Guidance

- ASPRS Qualification Based Solicitation
 - Focused on services
- ASPRS Geospatial Products Guideline
 - Developed based on the increasing requirement for Product Procurement
 - Licensed Data
 - Interaction with the FAR

Convolution of Mapping

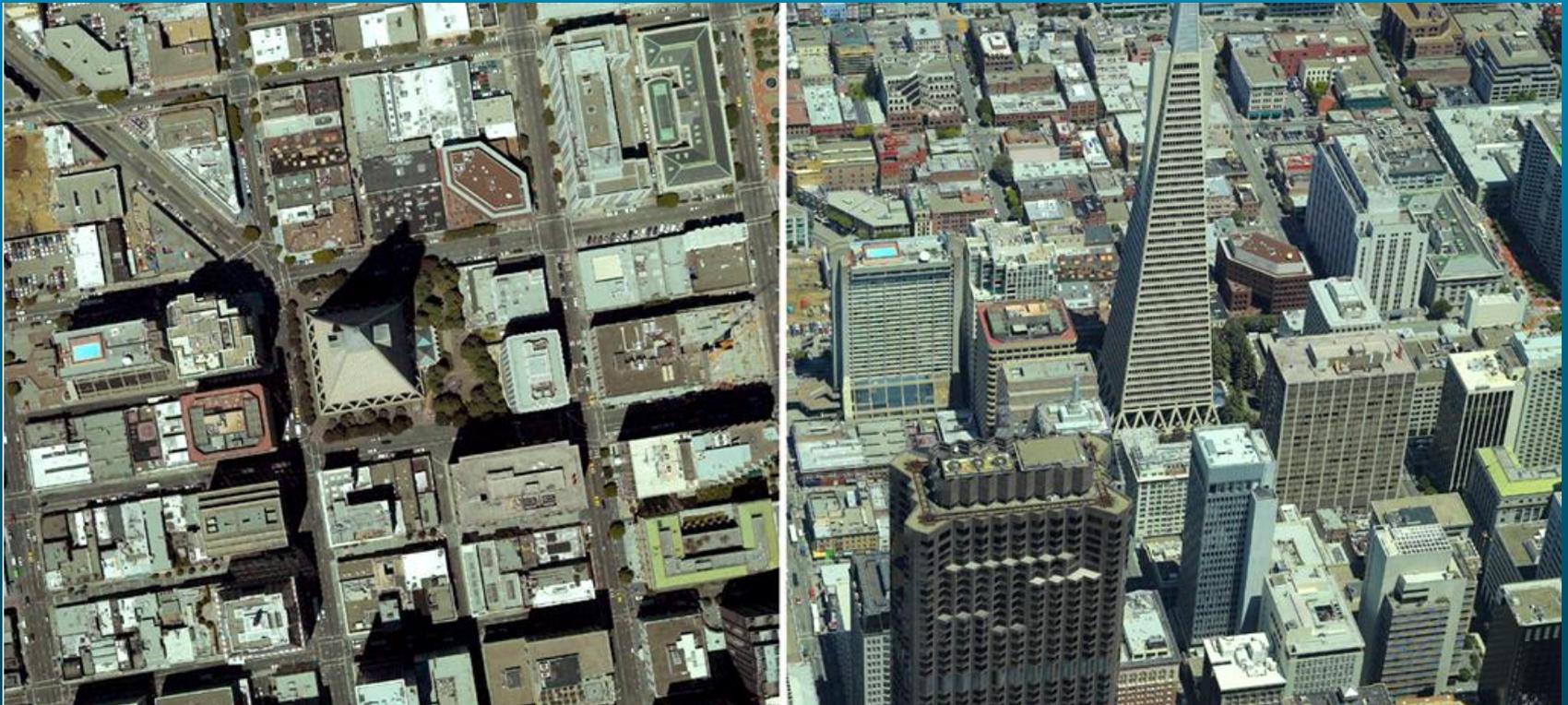
- Many events have occurred to affect the world of mapping
 - Consumer mapping
 - Data
 - Sharing
 - Access
 - Digital acquisition and manipulation technologies
 - Budget pressure
 - Partnered funding
 - More with less

ASPRS Oblique Industry Standard

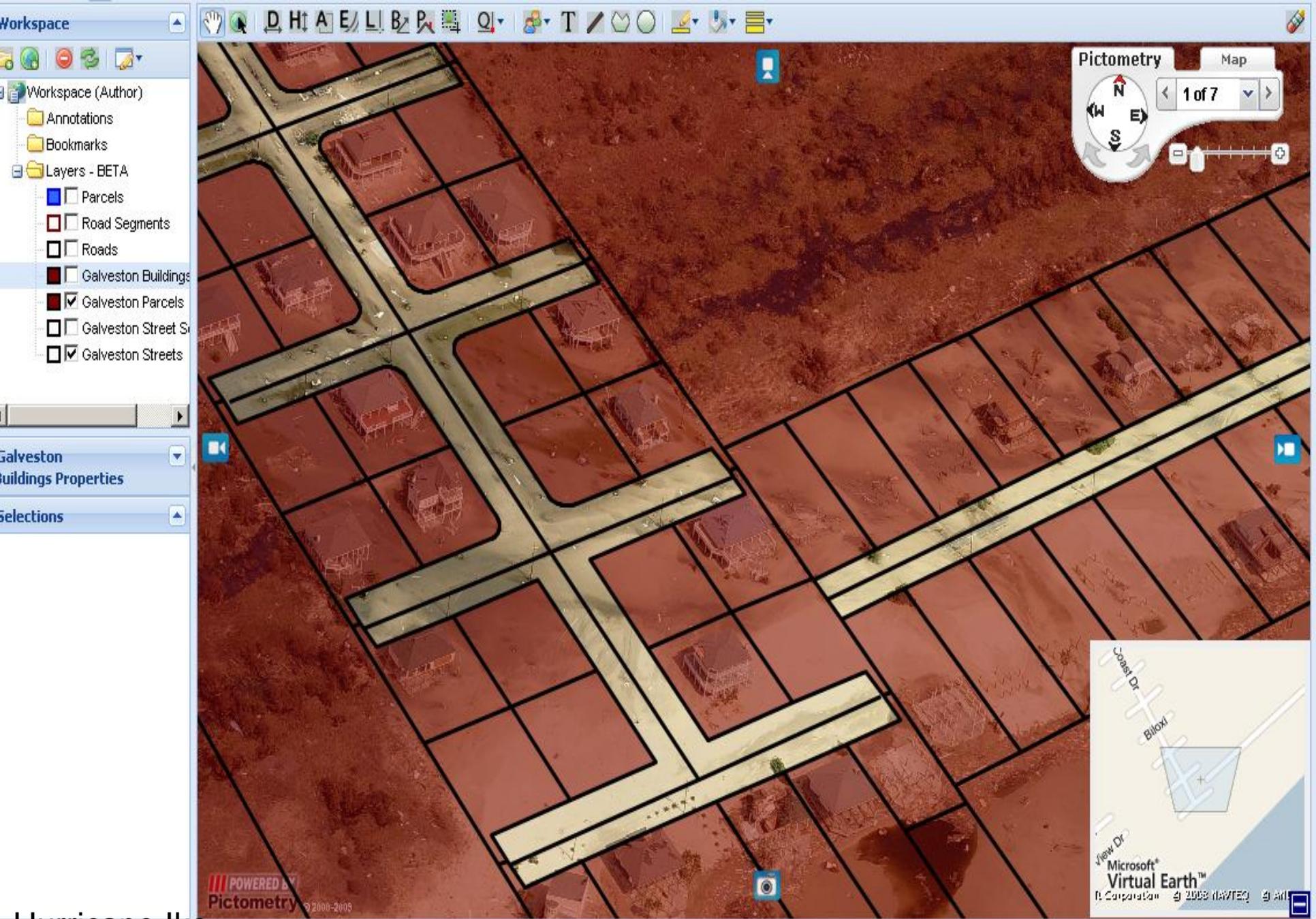
- A series of standards have existed over time on orthophoto data
 - Geospatial Resolution
 - Positional Accuracy
 - Radiometric Quality
 - Formatting
 - Product and service
- Goal will be a guidance document on similar metrics around oblique sensor capture
 - Support from Fed, State, County, Commercial & Edu

A Change of Perspective

If we look at oblique content this simply we would be missing the bigger picture







Hurricane Ike

Date: 09/17/2008 | Level: Neighborhood | Scale: 50%

Change on the horizon

- Pictometry has evolved with industry changes to support the needs of its clients and partners
 - Technology development
 - Product Fusion
 - Offering both Products and Services
 - Online access and processing of content

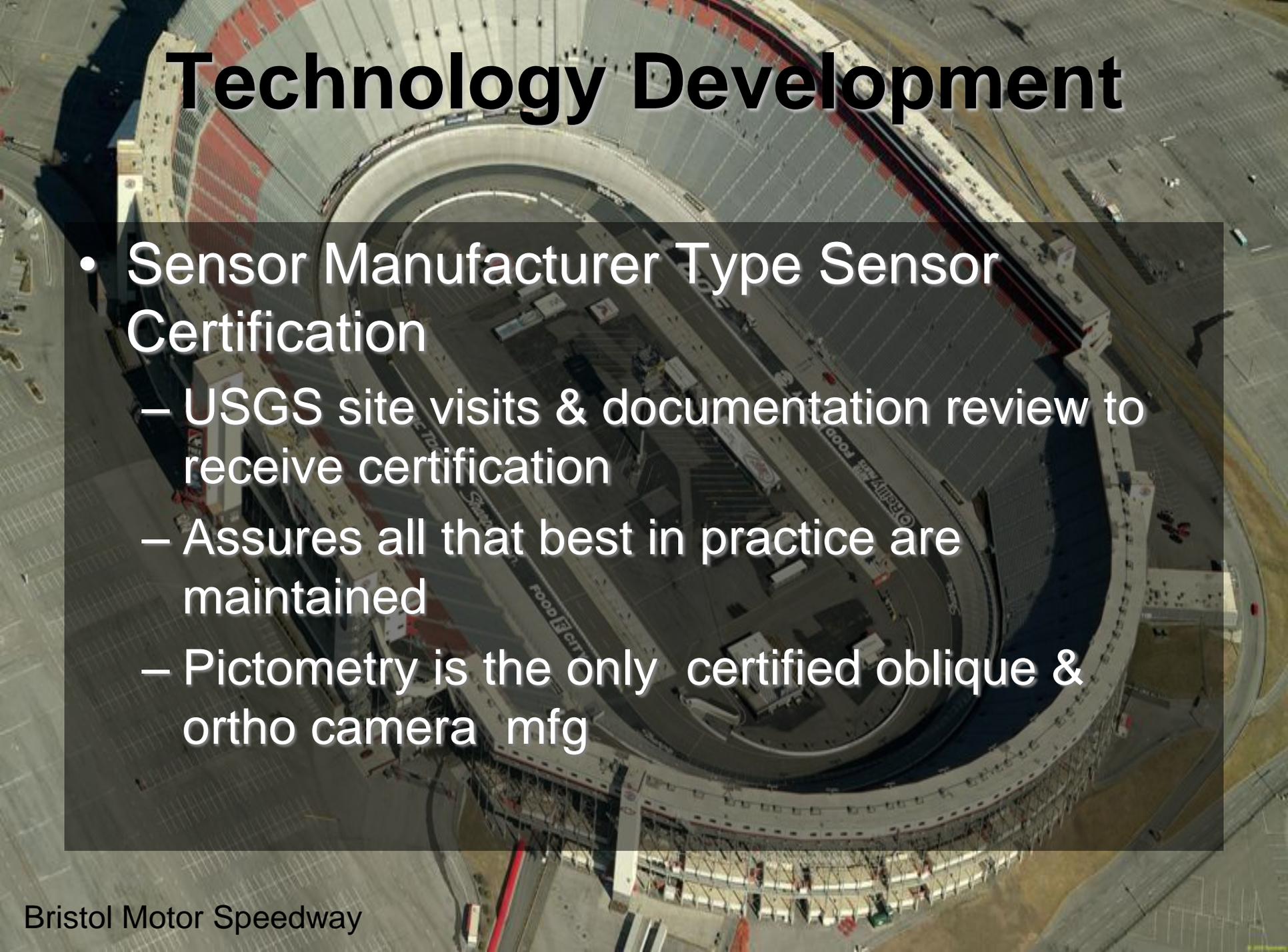
Pictometry Oblique Mapping

- The change in perspective on oblique imaging has evolved into oblique mapping
- Obliques still remain focused on visualization
- Certified Mapping cameras are now employed by Pictometry in its data capture
- Detailed capture models are deployed
- Licensed surveyors are now in authoritative charge as required based on product suite
- Data is available as a product or service

Technology Development

- USGS data certification for Pictometry orthos captured concurrent with obliques
- Excerpt from USGS Approval Letter:
“Through these technical exchanges and the review of several Pictometry AccuPlus projects, all parties now have a firm understanding on what Pictometry products can meet USGS’s 30-cm product specification”
“...NGA believes we are at a point where Pictometry should be treated as a qualified vendor for the partnership projects. As such, we can now participate on any AccuPlus or AccuPlus Lite project.”

Technology Development



- Sensor Manufacturer Type Sensor Certification
 - USGS site visits & documentation review to receive certification
 - Assures all that best in practice are maintained
 - Pictometry is the only certified oblique & ortho camera mfg

Technology Development

- Oblique and Ortho Data Fusion is driving further commonality between tem
 - Reflective surface modeling
 - 3D data generation
 - Real Time situational awareness
 - Infrared visualization
 - Critical 360

Pictometry AccuPlus

High Accuracy Ortho-Mosaic + High Accuracy Obliques + LiDAR

High Accuracy Ortho-Mosaic

NMAS 1:400, 1' RMSE for 4" GSD

NMAS 1:600, 1.5' RMSE for 6" GSD

High Accuracy LiDAR

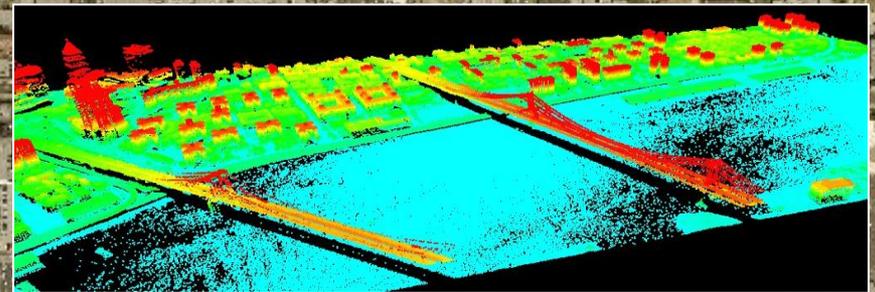
1.0-meter point spacing

0.5' RMSE Vertical

2' Contours

High Accuracy Obliques

99% Height Measurement Accuracy

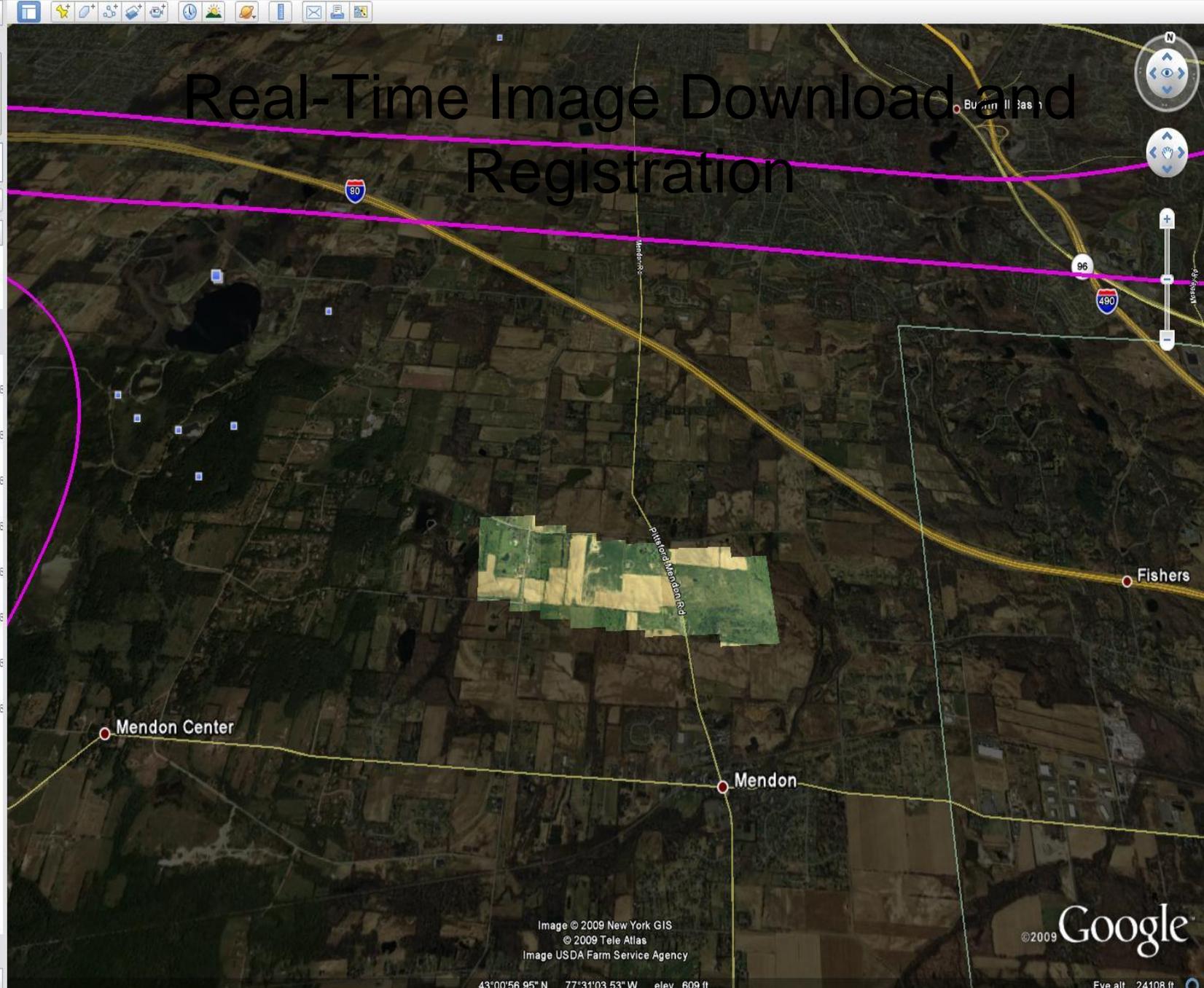


Fly To Find Businesses Directions

Fly to e.g., Tokyo, Japan

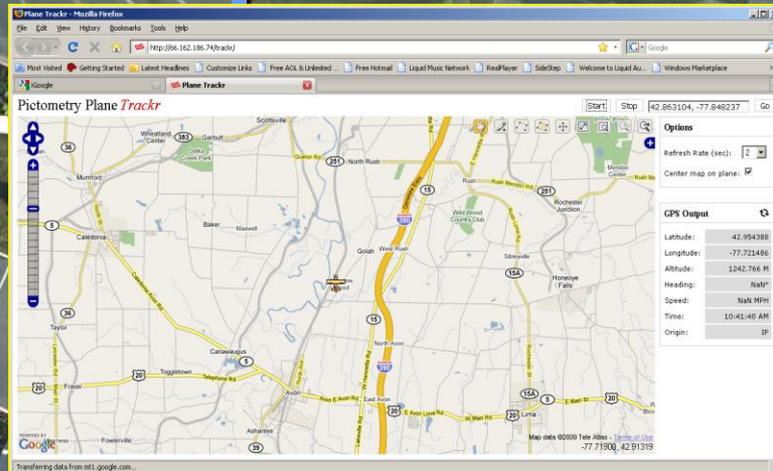
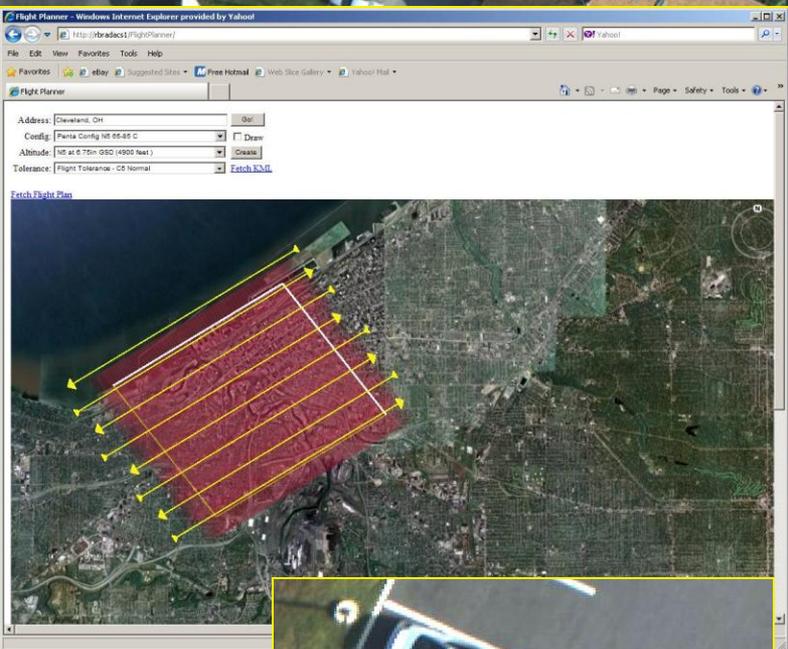
My Places

- Sightseeing
 - Start your Google Earth world tour here! Click on an underlined
- Black Layer
 - An all-black layer.
- Pictometry-Test 000000122: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000116: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000118: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000108: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000110: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000112: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000114: D:
 - \\Pictometry\ShotData\21Y_H_090518
- Pictometry-Test 000000106: D:
 - \\Pictometry\ShotData\21Y_H_090518
- NemaData
 - created using GPS Visualizer
- Tracks
 - NemaData
- Temporary Places



Real-Time Image Download and Registration

Real Time in flight Aircraft tracking & Flight Planning and Upload



Reflective Surface Model



Conclusions

- The industry continues to evolve into a marriage between oblique and ortho content
- New markets are necessitating reconsideration of when products should be visualization and authoritative
- Pictometry is leading many initiative to insure the best interests of the industry are upheld



Mt Rushmore

Questions?



La Brea Tar Pits
LA, CA

Questions?



Whirlpool Rapids

Questions?



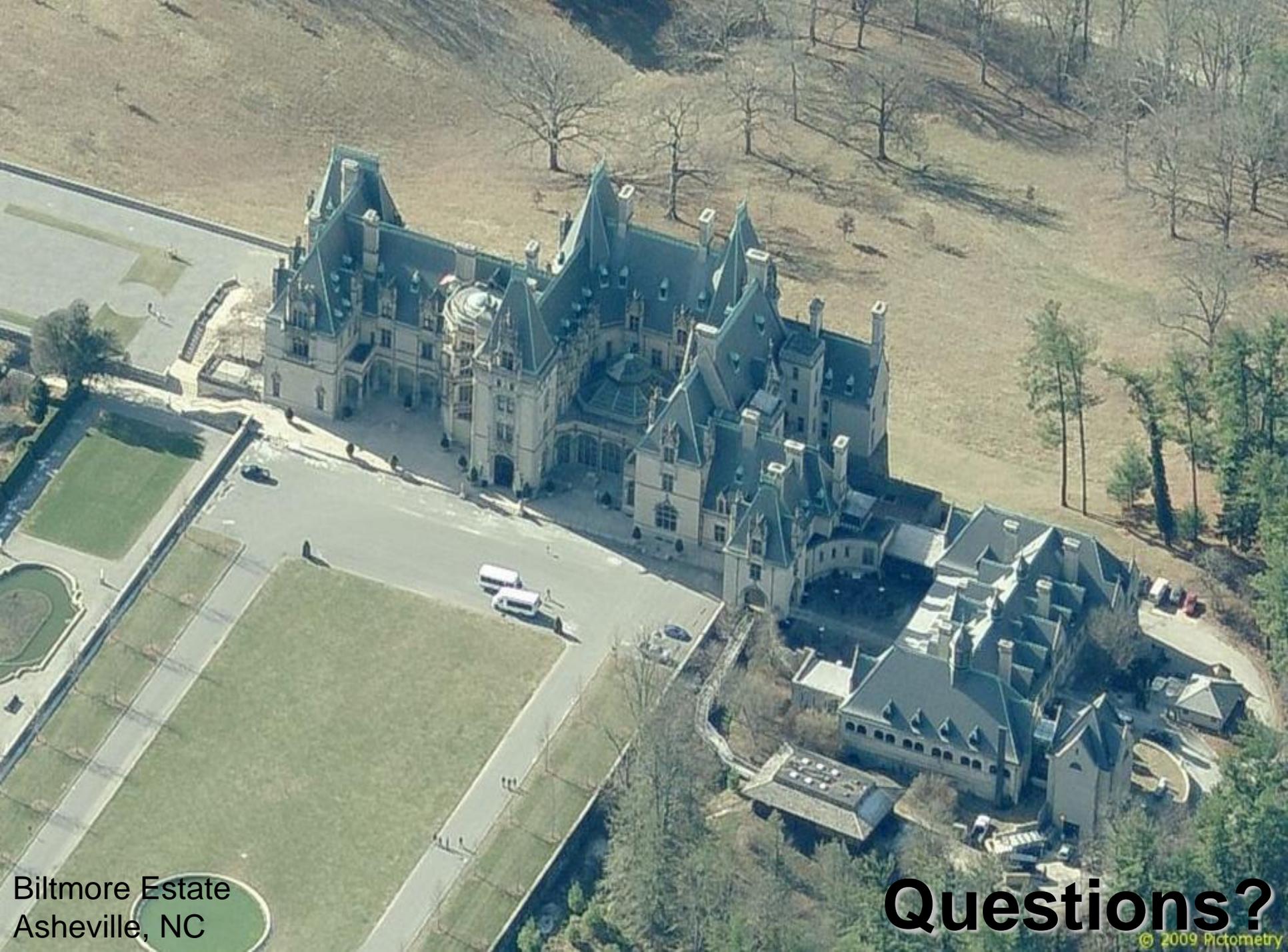
Old Mill
Nantucket

Questions?
© 2010 Fictometry



Miami-Biltmore Hotel

Questions?



Biltmore Estate
Asheville, NC

Questions?



Patriots Point
Charleston, SC

Questions?



Buffalo & Erie
Navel Park

Questions?



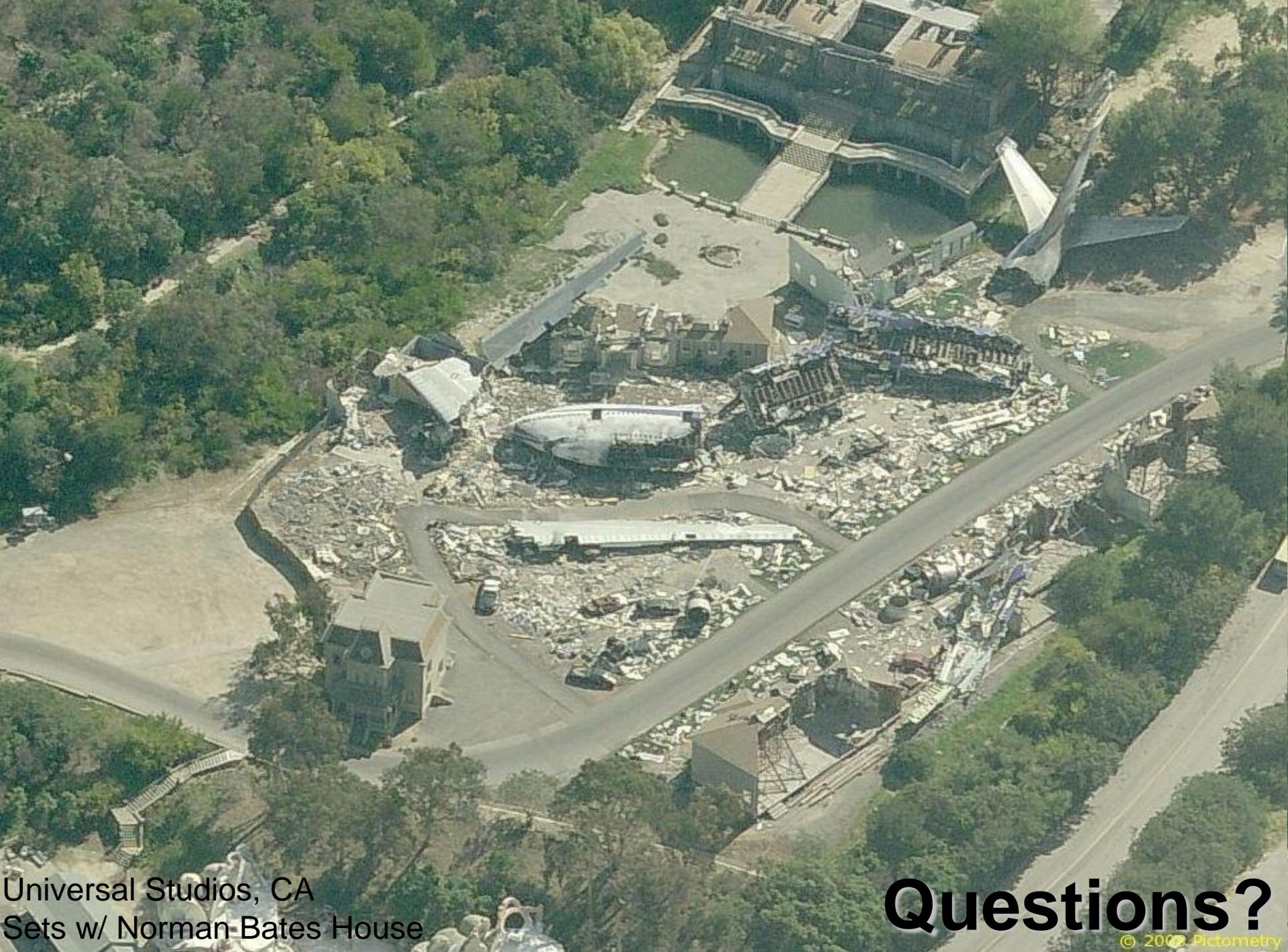
Pensacola Naval Air Station

Questions?



Willow Grove Naval Air Base

Questions?



Universal Studios, CA
Sets w/ Norman Bates House

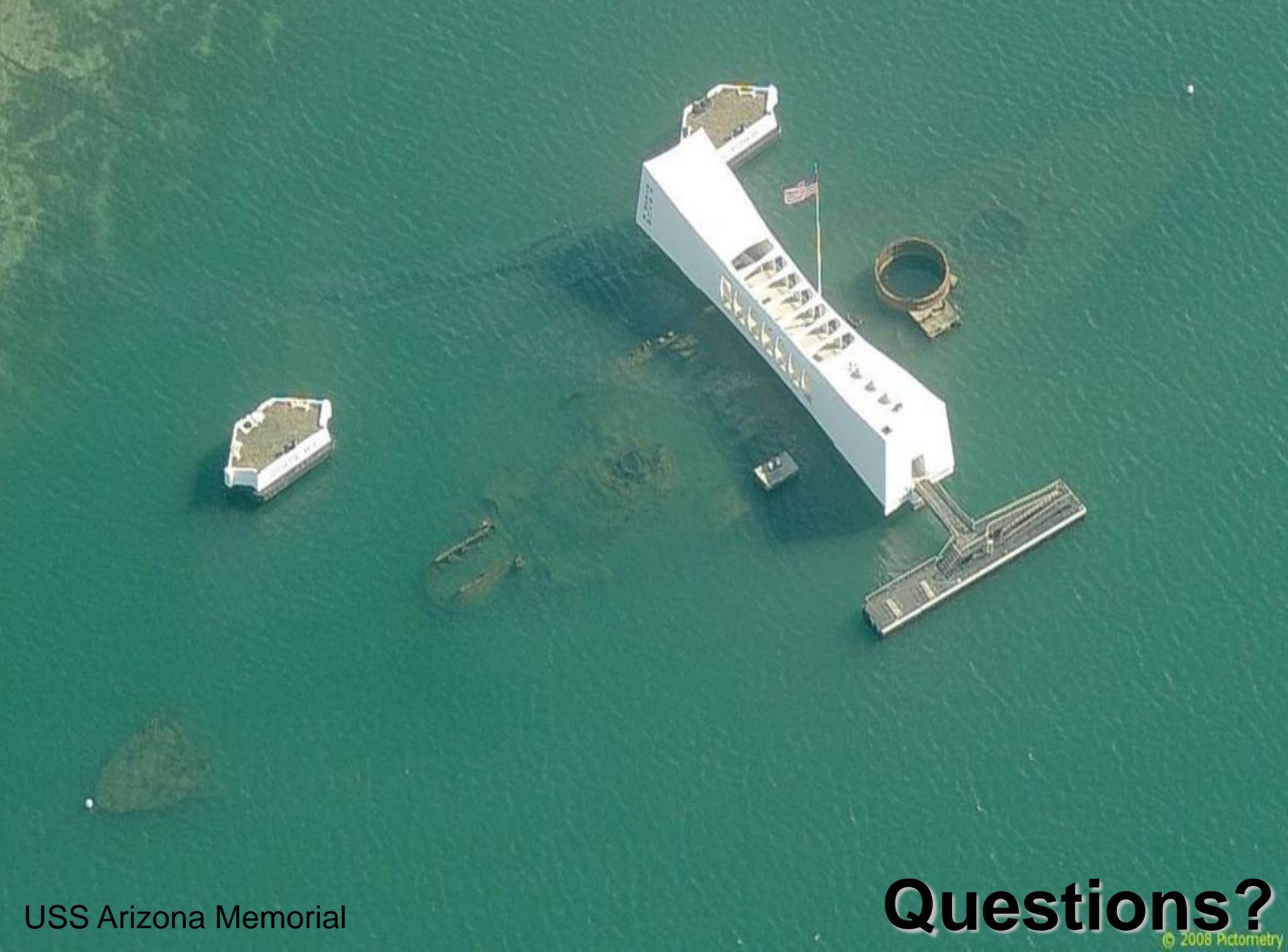
Questions?

© 2002 Pictometry



Alcatraz

Questions?



USS Arizona Memorial

Questions?



Boldt Castle on Heart Island
Thousand Islands, NY

Questions?

An aerial photograph of a small, two-story house with a brown roof and light-colored siding, situated on a tiny, circular island in the middle of a vast, deep blue body of water. The water's surface is covered in small, white, shimmering reflections. The house is surrounded by a small patch of green grass and a few trees. The overall scene is serene and isolated.

Thank-you