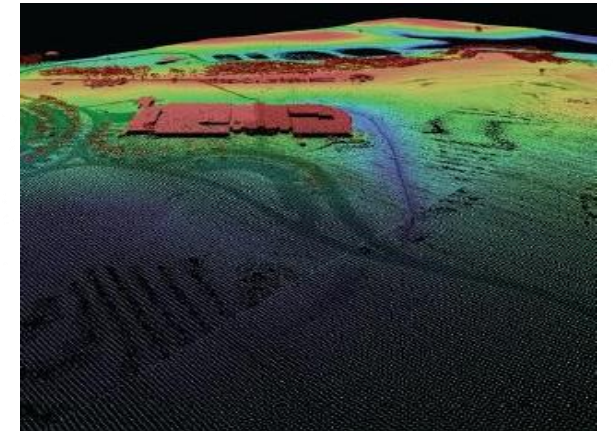
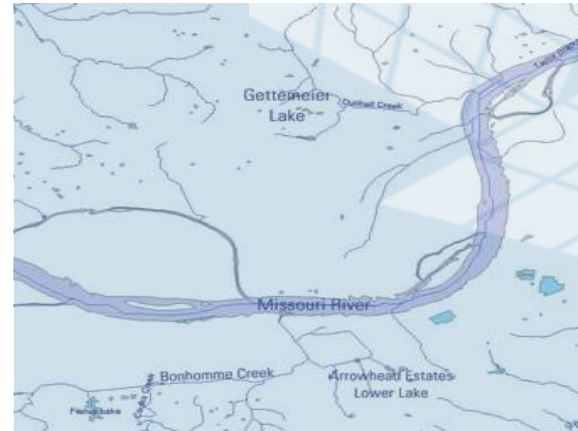
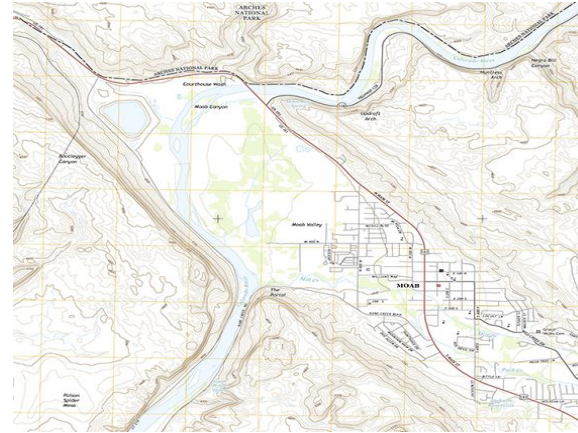




3D Elevation Program

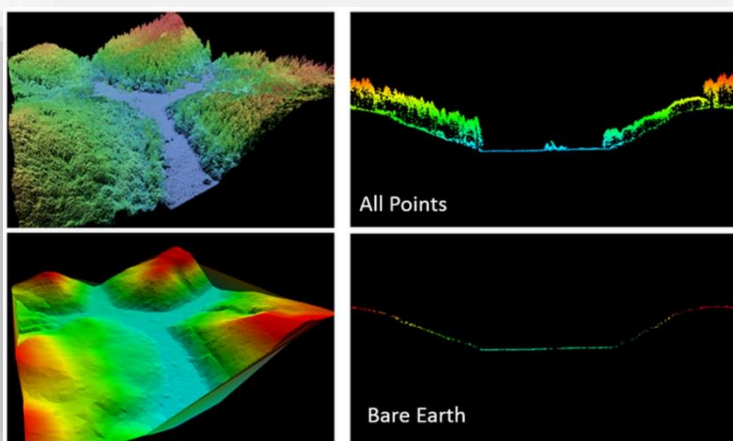
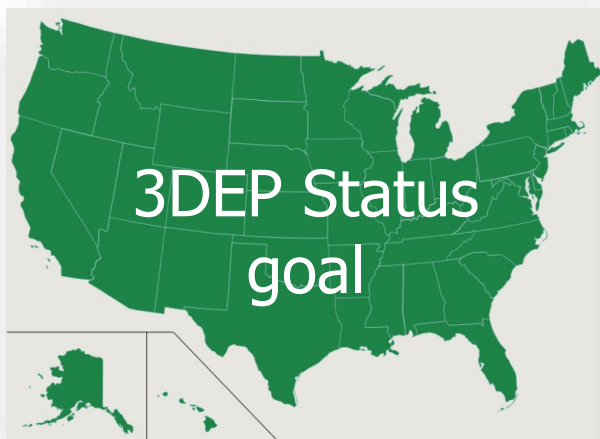


Drew Decker
December 5, 2024

+ 3D Elevation Program (3DEP) Goal

- Complete acquisition of nationwide lidar (IfSAR in AK) to provide the **first-ever national baseline of consistent high-resolution elevation data – both bare earth and 3D point clouds**
- Address Federal, state and other mission-critical requirements
- Realize ROI 5:1 and potential to generate \$13 billion/year
- Leverage the expertise and capacity of private mapping firms
- Achieve a 25% cost efficiency gain
- Completely refresh national data holdings

Rank	Business Use	Annual Benefits	
		Conservative	Potential
1	Flood Risk Management	\$295M	\$502M
2	Infrastructure and Construction Management	\$206M	\$942M
3	Natural Resources Conservation	\$159M	\$335M
4	Agriculture and Precision Farming	\$122M	\$2,011M
5	Water Supply and Quality	\$85M	\$156M
6	Wildfire Management, Planning and Response	\$76M	\$159M
7	Geologic Resource Assessment and Hazard Mitigation	\$52M	\$1,067M
8	Forest Resources Management	\$44M	\$62M
9	River and Stream Resource Management	\$38M	\$87M
10	Aviation Navigation and Safety	\$35M	\$56M
:			
20	Land Navigation and Safety	\$0.2M	\$7,125M
Total for all Business Uses (1 – 27)		\$1.2B	\$13B



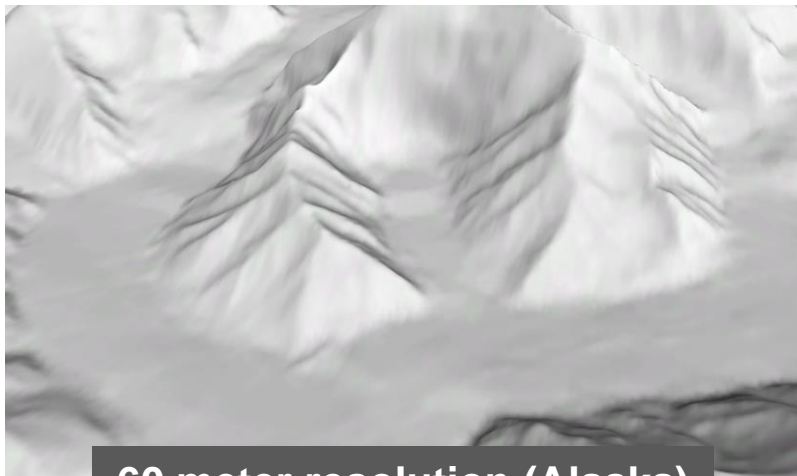
+ Lidar Products

Digital Elevation Models (DEMs)

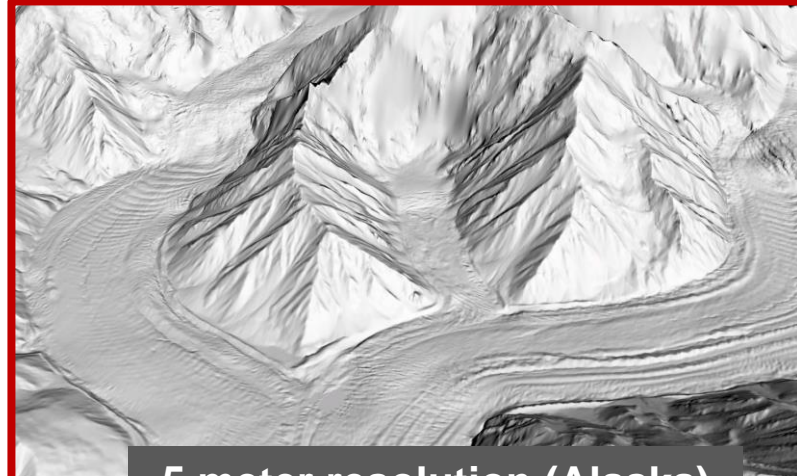
30 meter resolution

10 meter resolution

1 meter resolution



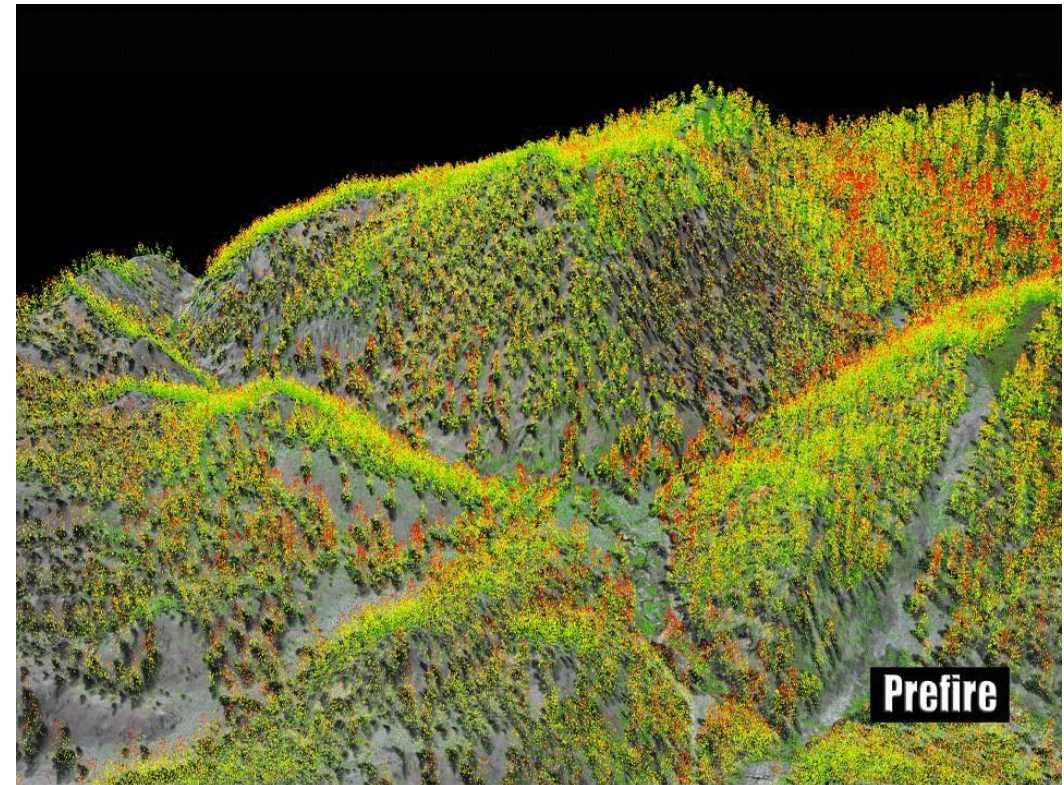
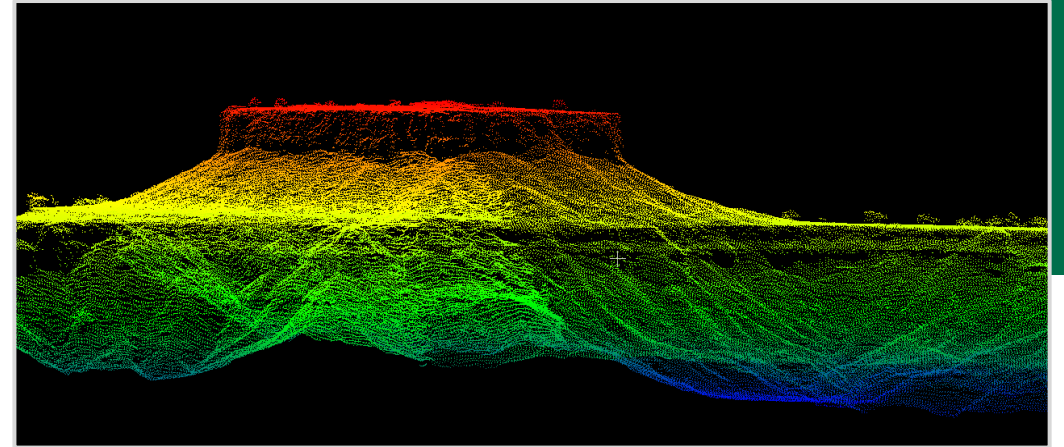
60 meter resolution (Alaska)



5 meter resolution (Alaska)

+ Lidar Products

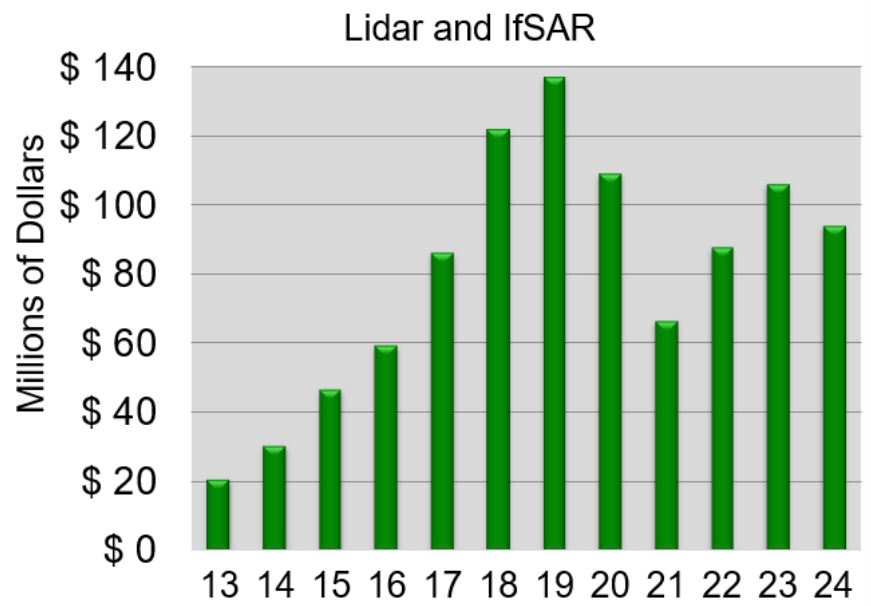
Lidar Point Clouds



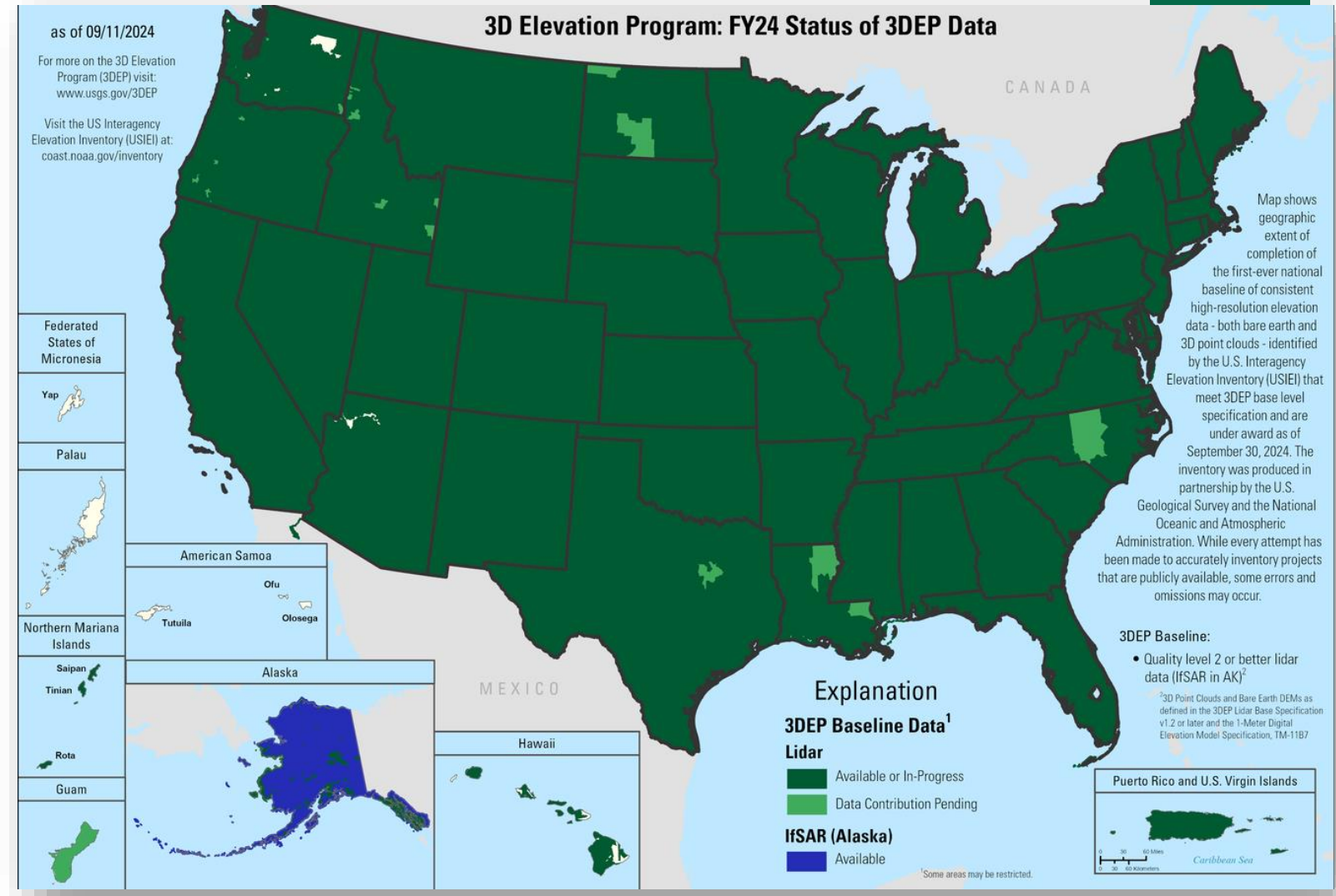
+ 3DEP FY24 Summary

Data are available or in progress for 98.3% of the Nation

*includes lidar and AK IfSAR




Data acquisition investments by all partners, by fiscal year




+ Building National 3DEP Coverage One Year at a Time




On track to complete the baseline by the end of FY26




\$13B
Potential annual benefit with ROI of 5:1



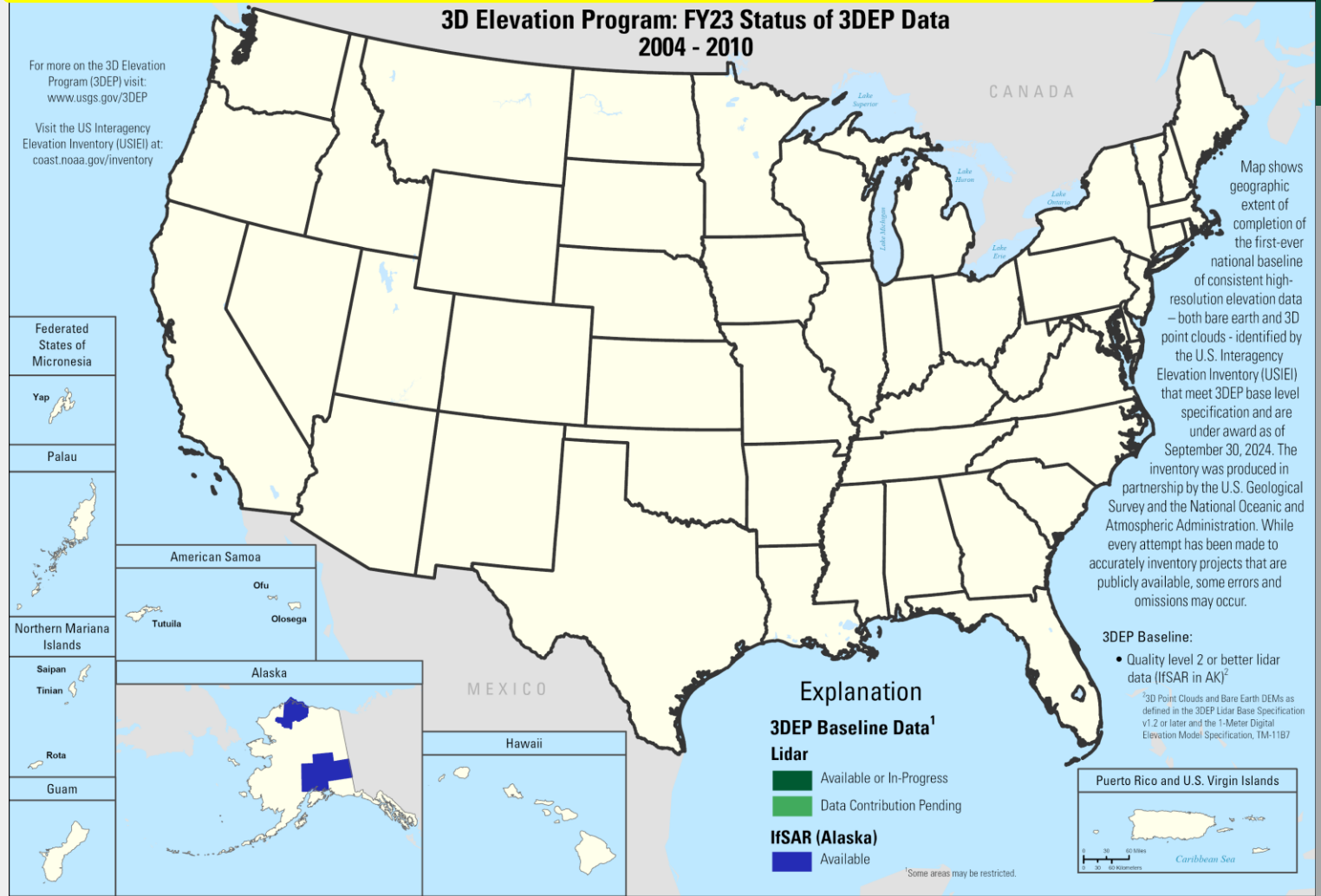
> 350
Partner Organizations



65
Percent of total 3DEP cost contributed by partners



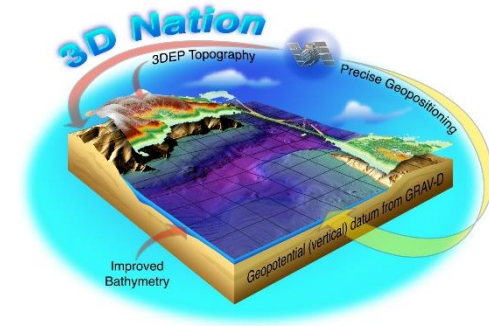
67 Trillion
Lidar data points being distributed



At the end of FY24 98.3% of the Nation had 3DEP data available or in progress

3D National Topography Model (3DNTM)

The terrestrial component of the 3D Nation vision of a continuous data surface from the depths of the oceans to the peaks of the mountains



3D Hydrography Program (3DHP)

- Hydrography derived from/integrated with 3D Elevation Program data
- Connections to groundwater, wetlands, and engineered hydrography
- 3DHP Infostructure for data sharing as part of the Internet of Water

Next Gen 3D Elevation Program (3DEP)

- New quality levels and refresh cycles
- Integration of inland bathymetry
- 3DEP Ecosystem for data and resource sharing
- Continual improvement with new technologies and approaches



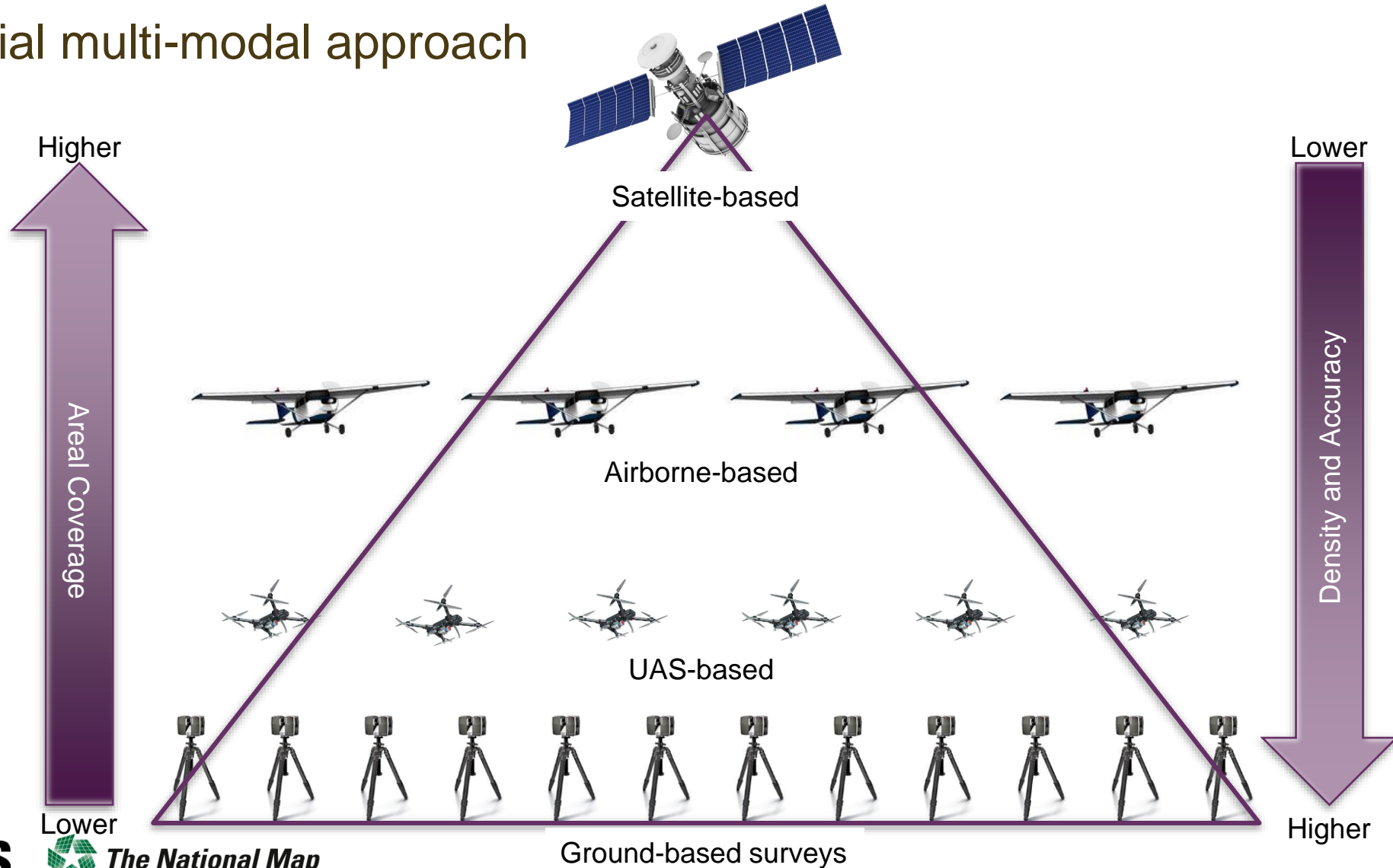
Future Integrated 3D Model

- *Research and develop a 3D data model to fully integrate 3DHP and next gen 3DEP*
- *Integrate other data from The National Map*

+











3DEP Future Generation Just Around the Corner

Potential multi-modal approach



+

The Transition is Underway

	3DEP Baseline	Next gen 3DEP
Target Quality Level	QL2 / QL5 in AK 	QL1 or QL2 as proposed by partners 
Scope	Topographic data 	Topographic and bathymetric data 
Update frequency	8 years 	5 years CONUS 8 years AK, HI, Territories 
Annual costs	~ \$146M 	~ \$259M 
Annual benefits	\$690M 	\$7.6B 

THANK YOU!

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