

**Observations (USGEO)**  
**Satellite Needs**  
**Identifying Federal Satellite**  
**User Needs**  
**Glenn Bethel / USDA**  
**SNWG Co-Chair**

The USGEO Satellite Needs process provides the first-ever whole-of-government approach to identifying desired satellite products across the civilian agencies and communicating this information to NASA.



# Background

- In 2016 NASA was made the agency responsible for developing all U.S. Government civilian Earth-observing satellites, with the exception of weather satellites (which continue to be funded and managed by NOAA).
- This framework for satellite responsibilities was intended to address:
  - Challenges in transitioning experimental observations into sustained observations
  - Uncertainty over whether existing satellite measurements would be continued
- USGEO, an interagency group with 13 agencies, was tasked with developing a process by which agencies would provide inputs on their desired satellite measurements/products to NASA.
- USGEO created a Satellite Needs Working Group (SNWG) to implement this.

# Satellite Needs

- The SNWG supports a process every 2 years by which Federal departments and agencies can communicate their desired satellite-based Earth observation data/information products to NASA and potentially other providers of satellite observations.
- NASA will take these inputs into consideration when developing its future plans and budgets.
- **Round 1 Survey:** View Survey call

[https://remotesensing.usgs.gov/rca-eo/documents/Satellite\\_Needs\\_Collection\\_Survey.pdf](https://remotesensing.usgs.gov/rca-eo/documents/Satellite_Needs_Collection_Survey.pdf)



# Satellite Product Requests Submitted by Agency and Department

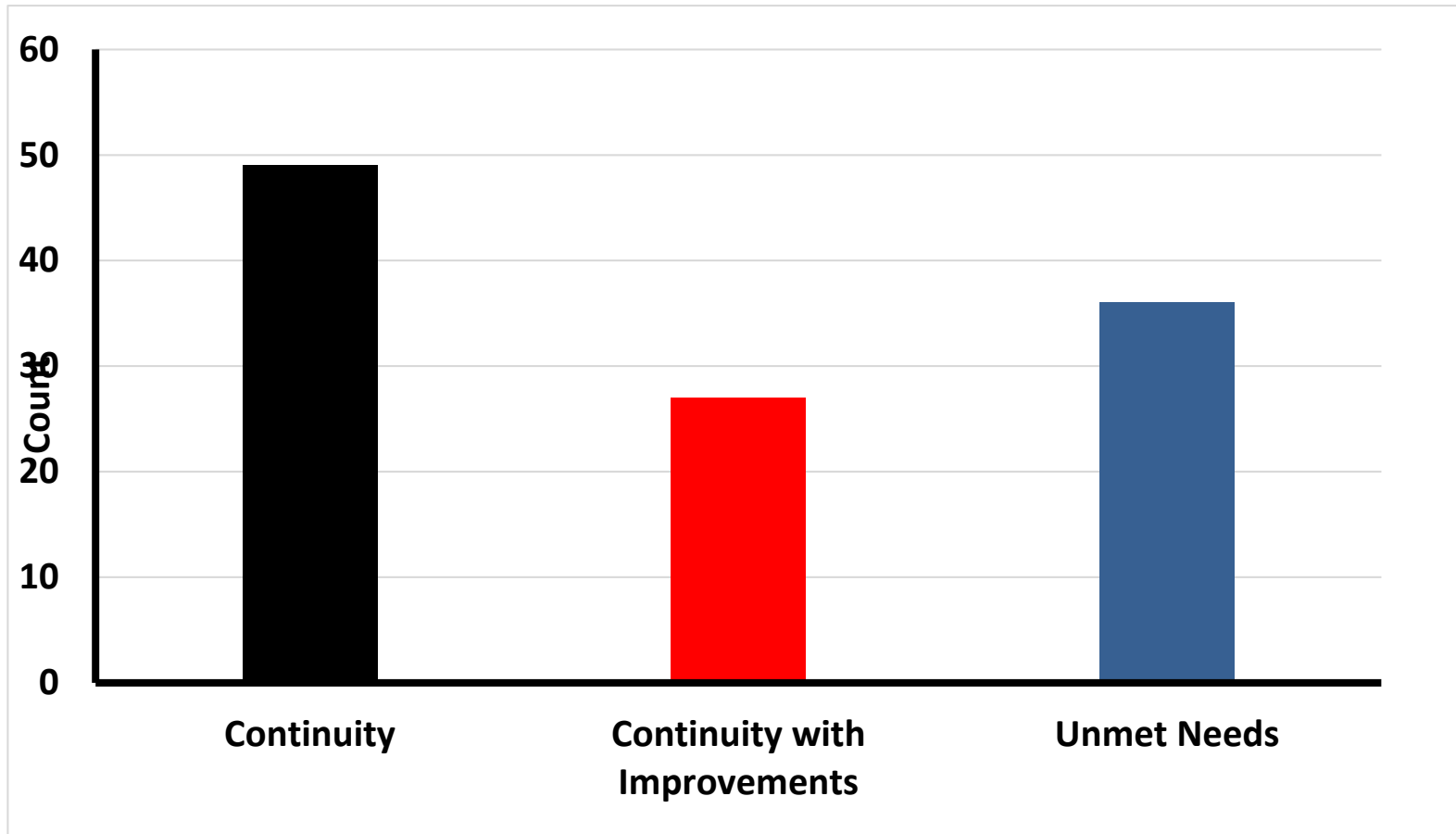
	Agency	Count
	Agriculture Research Service	USDA 2
	Bureau of Land Management	DOI 3
	Bureau of Reclamation	DOI 1
	Environmental Protection Agency	5
	Farm Service Agency	USDA 1
	Federal Emergency Management Agency	DHS 1
	Foreign Agricultural Service	USDA 3
	Forest Service	USDA 3
	National Agriculture Statistics Service	USDA 1
	National Oceanic and Atmospheric Administration	DOC 8
	National Science Foundation	1
	Natural Resources Conservation Service	USDA 2
	Department of Energy	DOE 13
	Risk Management Agency	USDA 2
	U.S. Agency for International Development	9
	U.S. Fish and Wildlife Service	DOI 5
	U.S. Geological Survey	DOI 17
<b>Grand Total</b>		<b>77</b>



DHS 1    DOC 8    DOE 13    DOI 26    EPA 5  
 NSF 1    USAID 9    USDA 14



# Product Requests by Category

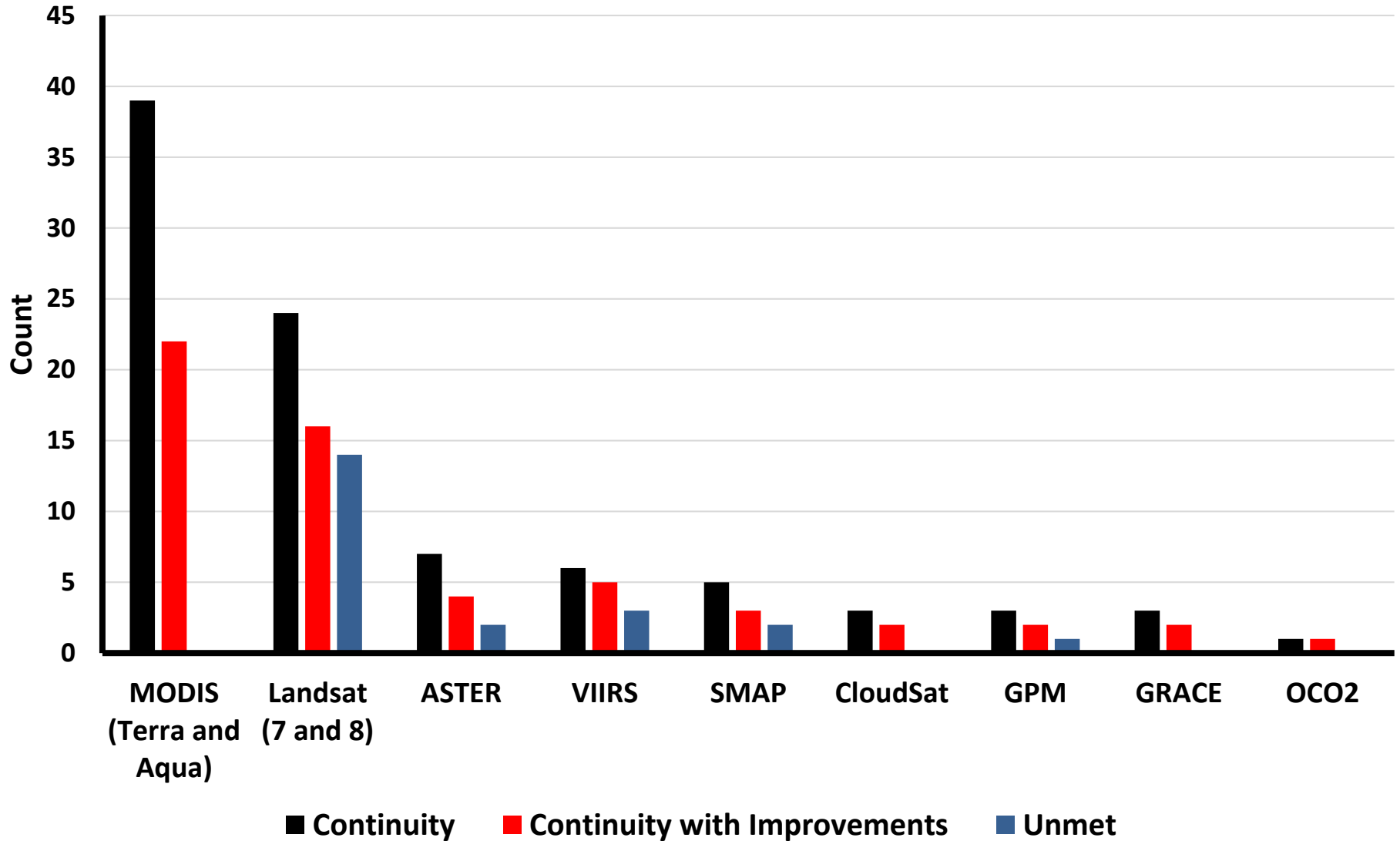


**Continuity requests represent Products that are currently being used and should be continued.**

**Continuity requests represent Products that are currently being used but could be improved.**

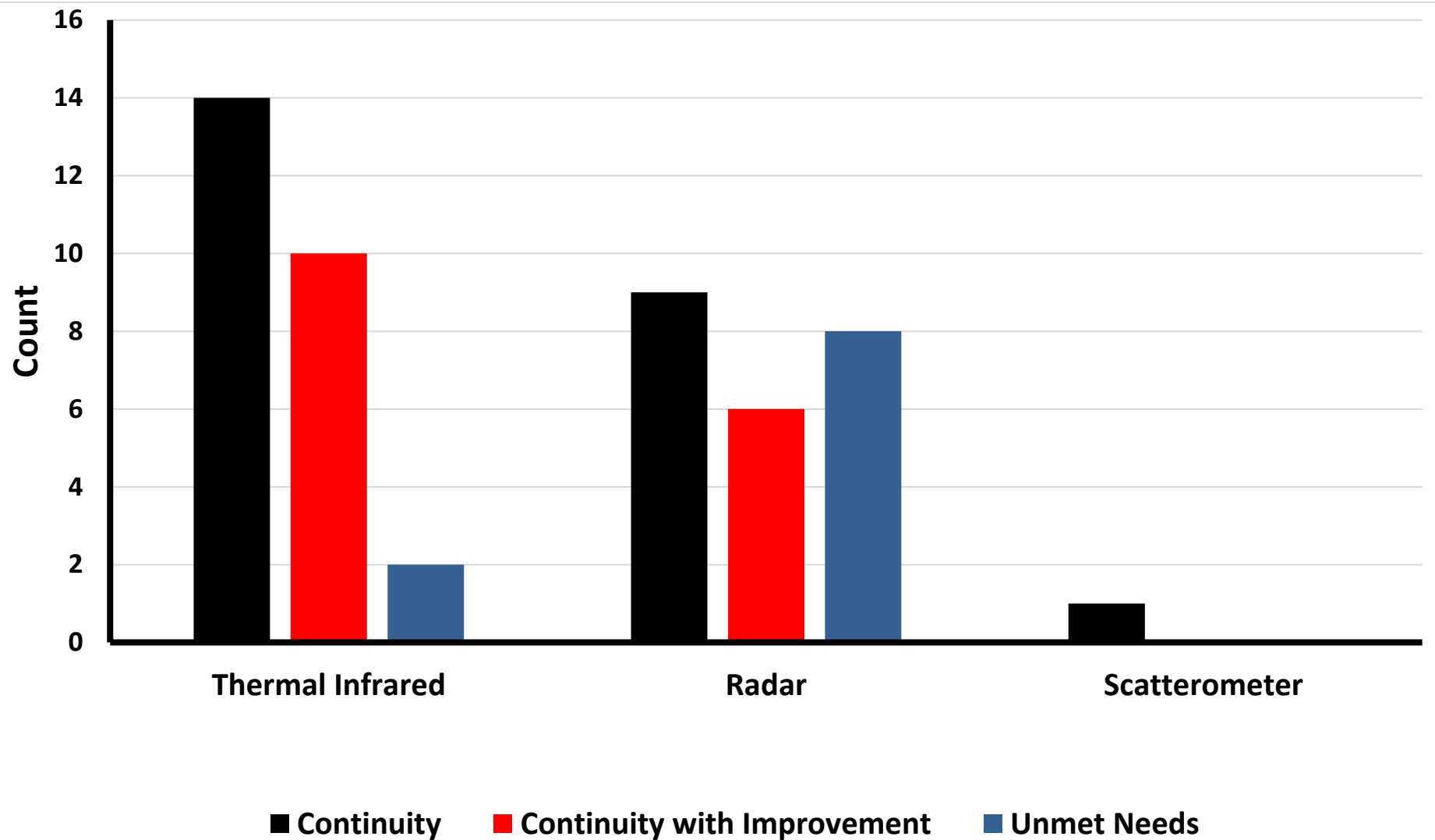
**Unmet Needs represent Products that do not currently exist.**

# Satellite Product Requests by Instrument/Mission



# Satellite Product Request by Sensor Type

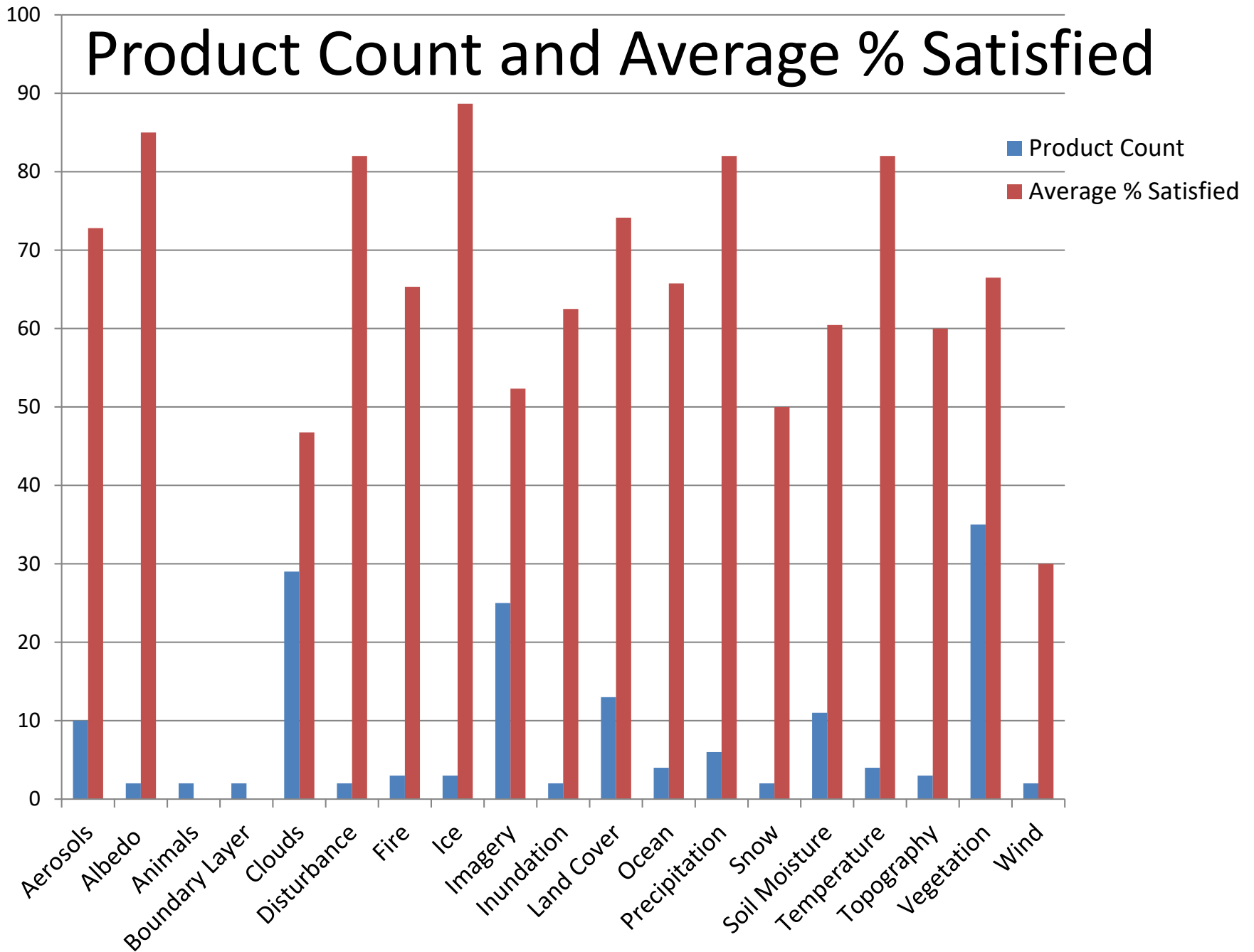
(does not include all types: MSI, Hyperspectral ...)



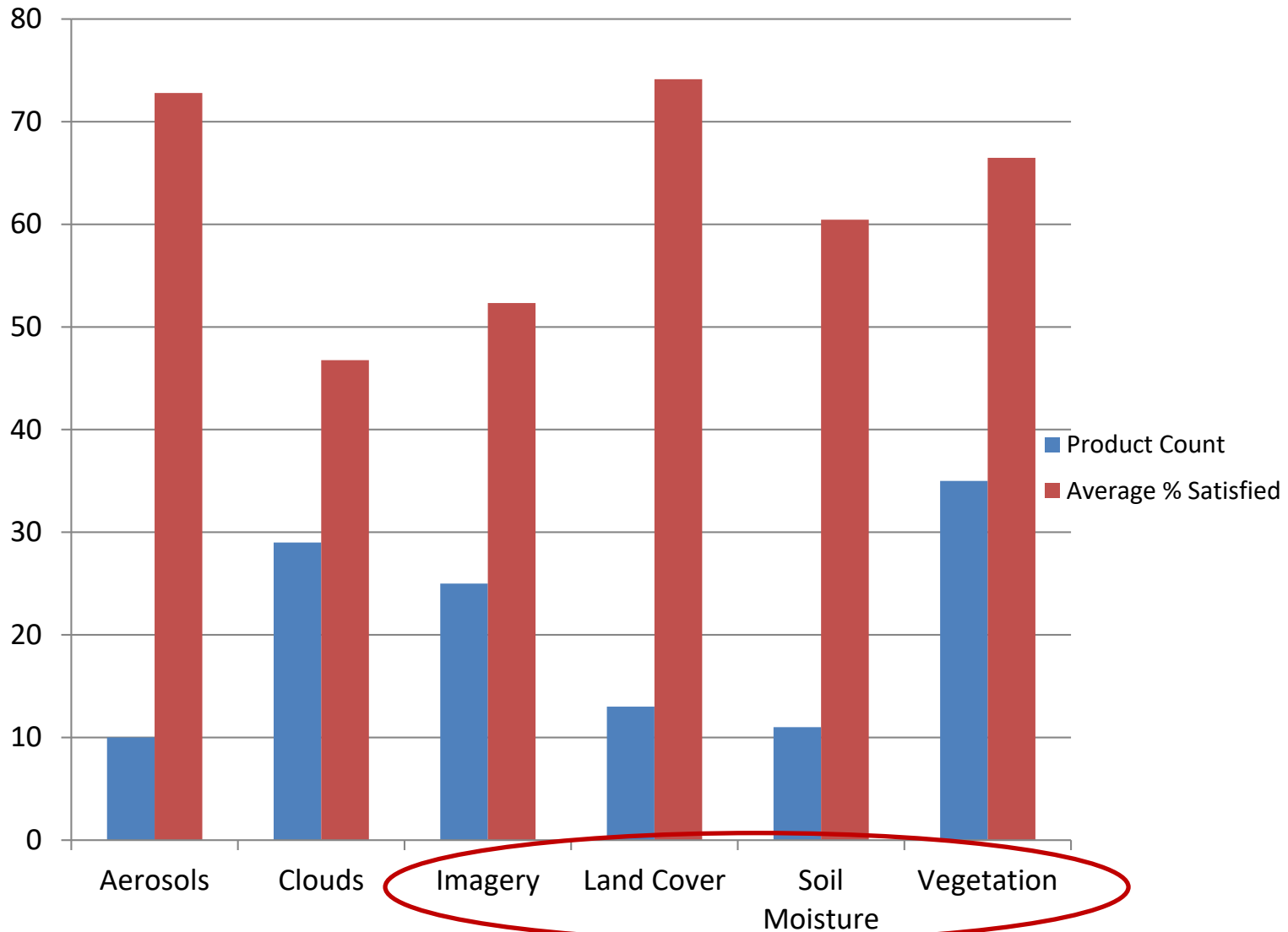
- Satellite Needs Activity Objective: ***Identify, communicate to NASA, and respond to USG agency requests for specific “new” satellite-based Earth observation data/information products***
- NASA received 187 product requests from 17 Federal government departments and agencies
  - The Earth Science Division (ESD) assembled 35 subject matter experts (SMEs) analyzing/clarifying the requests and determining the feasibility of generating and providing the desired information products
- Process kindled focused **NASA** discussions on creative ways to meet the needs
- Process served as a tool to spread awareness to other agencies on NASA’s existing high impact products that may be used to fulfill the requested data products.



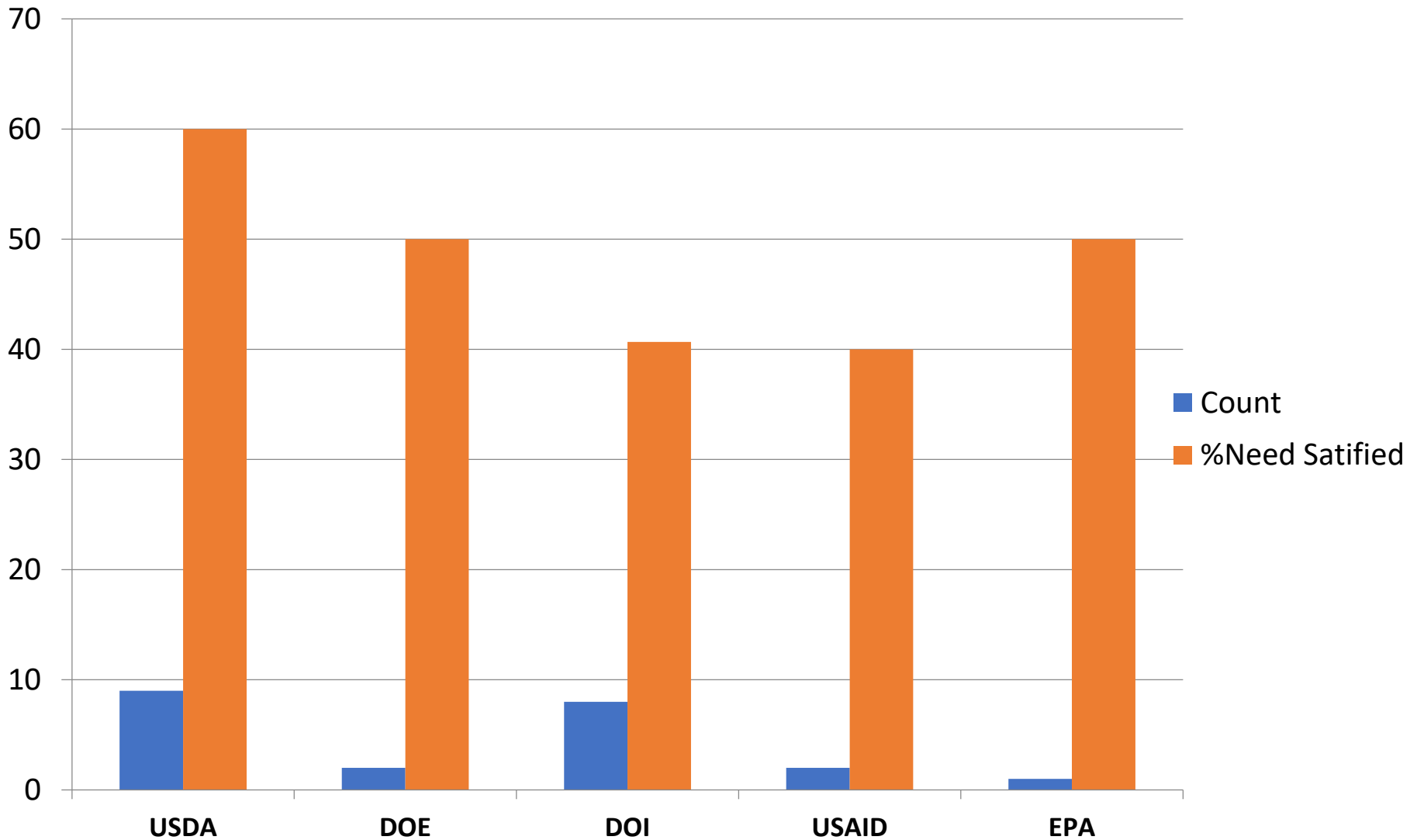
# Product Count and Average % Satisfied



# Product Requests listed 10 or more Times



# Imagery Products by Department: Count and % Satisfied



# Results from the First Satellite Needs Survey Process

## **FY19 Budget Proposal**

- The FY19 Budget includes funding in NASA to support additional capability for the NISAR mission in response to needs identified in the Satellite Needs Survey Process.
- The requested funding will support additional ground stations and communication links for NISAR data, which in turn will generate additional data, including soil moisture and natural hazard data, that will be of value to other federal agencies as well as the science community.
- The NISAR mission will provide a detailed view of the Earth using advanced radar imaging and a dual frequency synthetic aperture radar.

## **Agency Collaboration**

- Increased communication and understanding amongst the agencies that use satellite data and NASA.
- Opportunities for synergy. Process identified Agency Technical POCs.
- Suggestions of additional data sources by NASA scientists may have provided new capabilities to civil agencies.