

Developing Next-Gen Ground for NOAA's Future Earth Observation Architecture

Maximizing Benefits of Partnership & Coordination

National Environmental Satellite,
Data, and Information Service

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The Impact of Earth Observation Data

KEEPING US SECURE

The estimated value of NASA and NOAA information services to the U.S. Navy's operational effectiveness is **\$2 billion** per year.

The U.S. Navy and other U.S. defense agencies partner with NASA and NOAA to use satellite data, to access operational services, and to leverage their scientific progress.

MITIGATING NATURAL DISASTERS

Extreme weather and fires have cost the federal government more than **\$350 billion** over the past decade.

Satellite measurements play a critical role in tracking the paths of hurricanes and wildfires so that we can warn populations at risk, assess the damages, and avoid future costs.

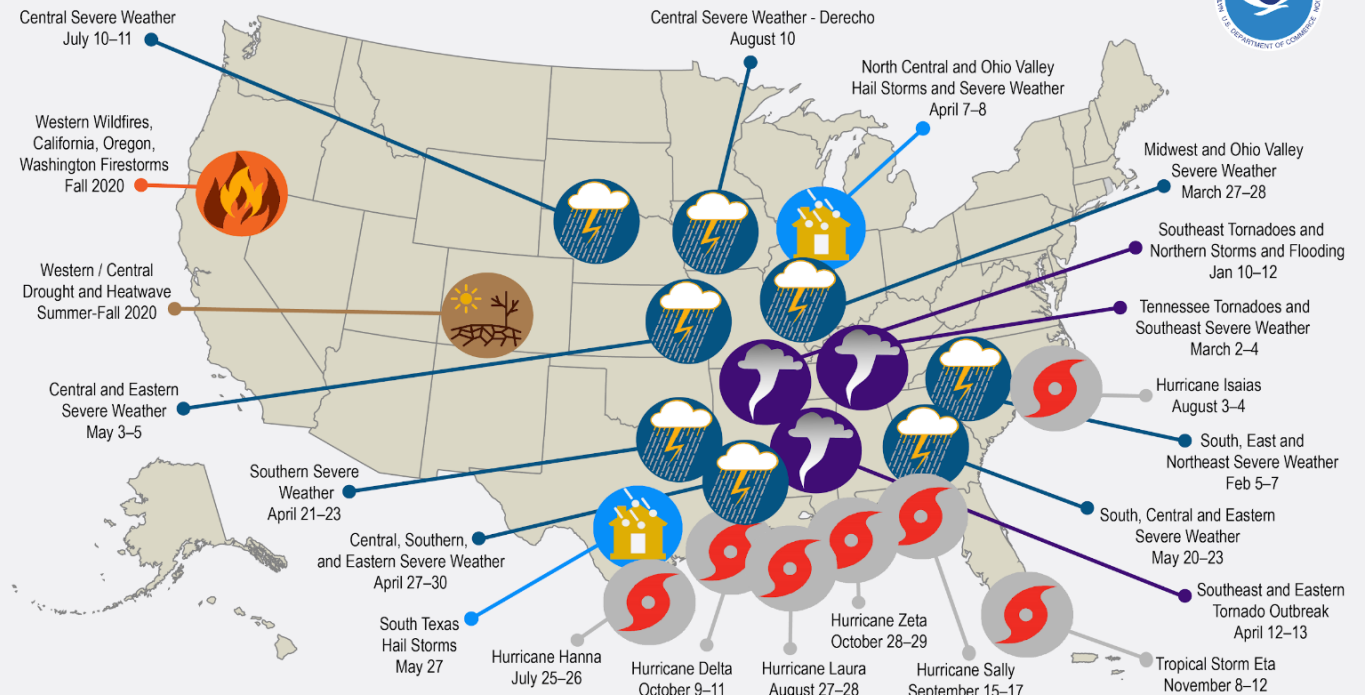
ENSURING RESOURCE AVAILABILITY

Advanced technology, including many types of Earth information, will unlock up to **\$1.6 trillion** in economic savings for energy generation and use by 2035.

Satellite observations can also help ensure water availability, which is particularly important to the 20% of the world now living in areas of water scarcity.

NOAA's Earth observations support weather forecasts valued at \$315 billion to the nation's economy, protecting and improving weather-vulnerable industries such as farming, shipping, and utilities.

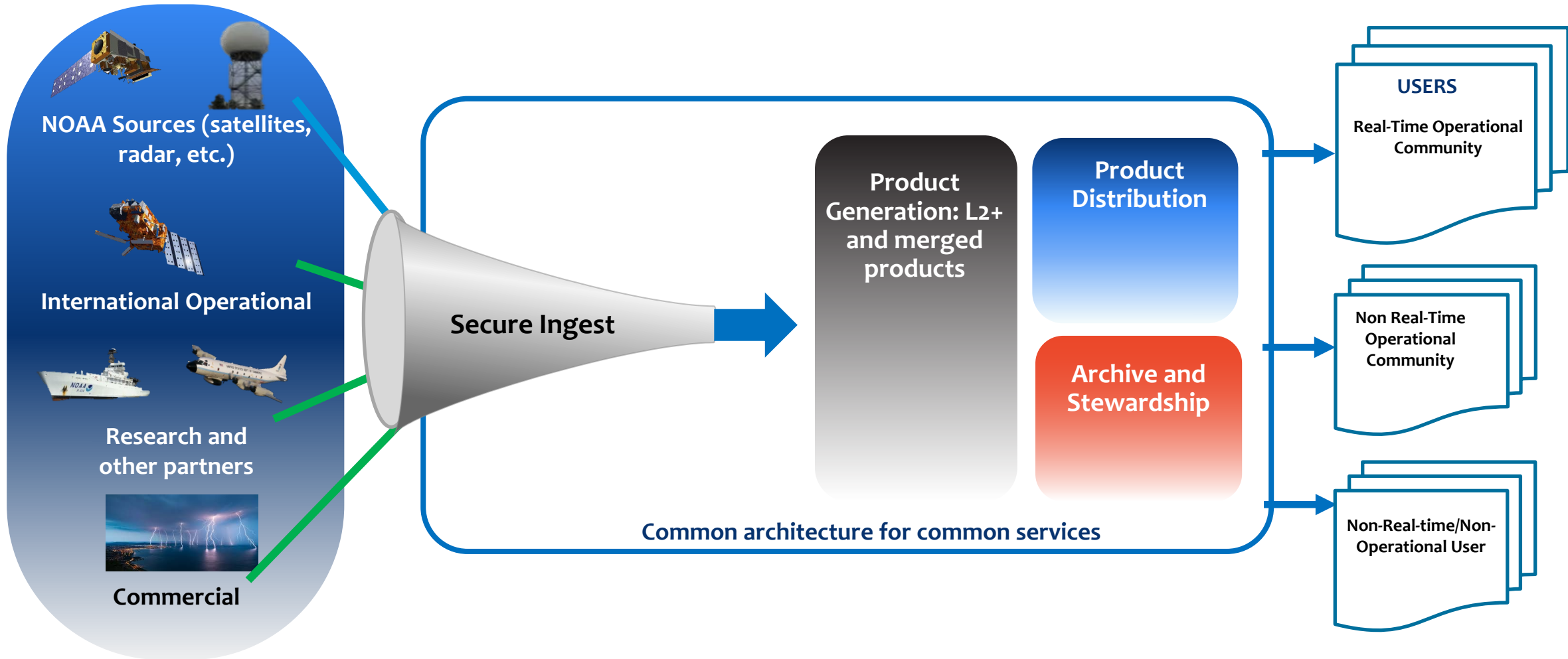
U.S. 2020 Billion-Dollar Weather and Climate Disasters



Leveraging Partnership Capabilities in our Next-Gen Space-Based Architecture Requires Enterprise-Level Coordination



Common Services Architecture & Data Systems Designed to Meet User Needs



Matching NOAA's Next-Gen Space Capability with Next-Gen Data Science & Ground Capability

The National Oceanic and Atmospheric Administration
(NOAA) Satellite Observing System Architecture Study

Building a Plan for NOAA's 21st Century Satellite
Observing System



May 31, 2018

DISAGGREGATED & HYBRID CONSTELLATIONS

- MORE SATELLITES, INSTRUMENTS & DATA
- COMMERCIAL BUYS
- INTERNATIONAL PARTNERSHIPS
- OTHER FEDERAL AGENCY PROVIDERS

"BROADER APERTURE" TO ABSORB ALL FORMS OF DATA

- SECURE INGEST & DATA INTEGRATION
- QUANTUM-COMPUTING, MACHINE-LEARNING
- CLOUD-BASED ACCESS, ARCHIVING & INFORMATICS
- USER-CENTRIC DATA DELIVERY





Thank you

