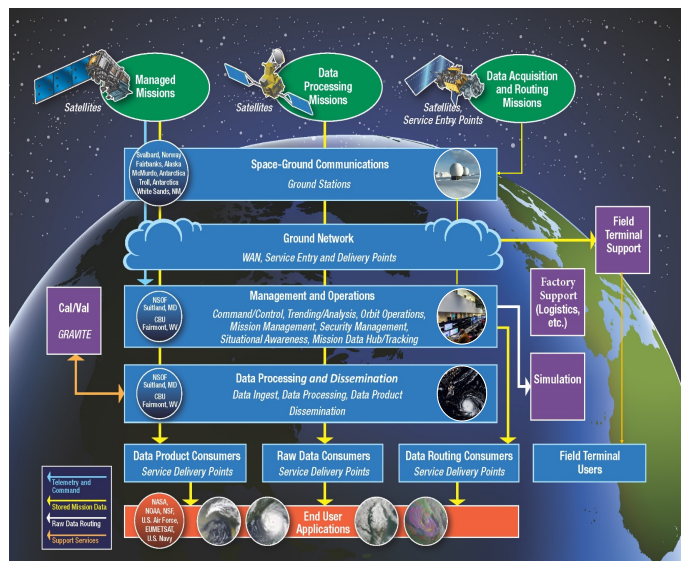




# Evolving NOAA's LEO Ground System to Support Future Missions

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## Managed Missions

- Suomi National Polar Partnership (S-NPP)
- JPSS 1/2/3/4

## Data Processing Missions

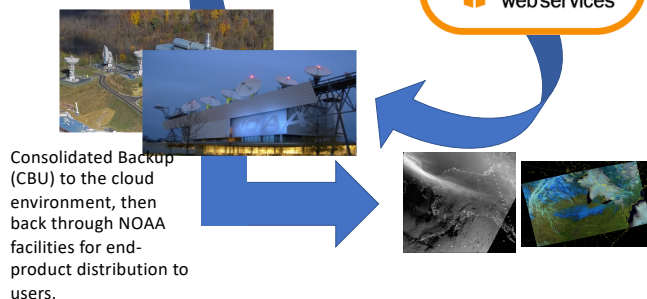
- Global Change Observation Mission (GCOM)

## Data Acquisition and Routing Missions

- Defense Meteorological Satellite Program (DMSP)
- EUMETSAT Meteorological Operational (MetOp)
- NASA Space Communications and Navigation (SCaN)
- NASA Earth Observing System (EOS)
- US Antarctic Programs

NOAA's Joint Polar Satellite System (JPSS) acquires and distributes global environmental data from multiple polar-orbiting satellites. The program plays a critical role in NOAA's mission to understand and predict changes in weather, climate, oceans and coasts, and the space environment, supporting the Nation's economy and protecting lives and property. The JPSS Common Ground System (GS) operates NOAA's flagship polar weather satellites, providing over 5 TB of science mission data daily to support weather forecast model development world-wide. The JPSS CGS also supports partner missions, providing flight operations, data acquisition, data routing, science data processing, and communications services to a diverse set of both domestic and international missions.

Mission data flows through existing interfaces from the NOAA Satellite Operations Facility (NSOF) and

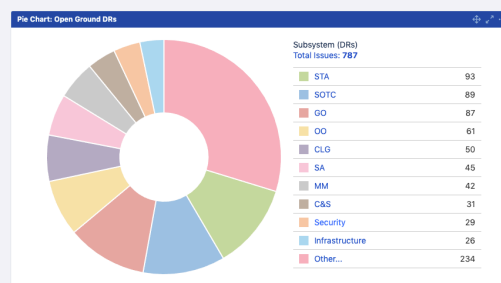


JPSS is in the process of migrating the Interface Data Processing Segment (IDPS) capabilities from on-premises systems to cloud-based infrastructure. IDPS in the cloud provides the ability to rapidly add capability to support future missions through creation of new instances of the IDPS baseline for development, testing, and operations.

The IDPS cloud migration maintains existing user and external interfaces, minimizing the impacts of the initial migration. Over time, the IDPS cloud implementation will be optimized to operate efficiently in the cloud environment.

Issue Statistics: Open Ground Dis (Element)

Element	Count	Percentage
CSS	652	83%
External	10	1%
Ground Project	9	1%
IDPS	15	2%
Infrastructure	101	13%
<b>Total</b>	<b>787</b>	



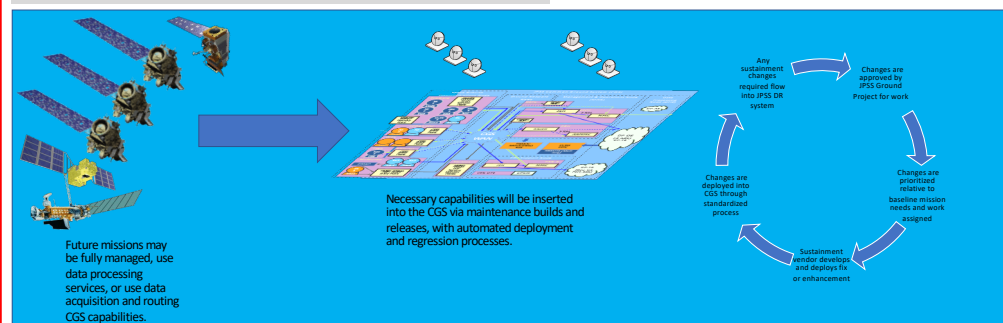
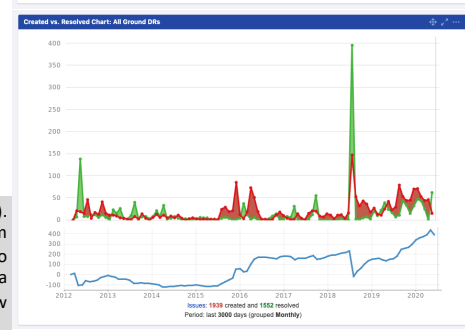
JPSS uses the Jira tool to track system Discrepancy Reports (DRs). During the sustainment phase of the CGS life cycle, system enhancements and issues are identified, prioritized, and tracked to closure in Jira. As missions are integrated into the CGS, Jira provides a way to balance sustainment activities with new development.

Issue Statistics: Open Ground Dis (Status)

Status	Count	Percentage
OPEN	567	72%
NEW	3	0%
WATCH	59	7%
FIXED	155	20%
VERIFIED	3	0%
<b>Total</b>	<b>787</b>	

Issue Statistics: Open Ground Dis (Priority)

Priority	Count	Percentage
Critical	3	0%
Urgent	258	33%
Routine	496	63%
<b>Total</b>	<b>787</b>	



NOAA has made substantial investments in the JPSS CGS to provide an enterprise-class system capable of accommodating a variety of Low-Earth Orbit (LEO) missions, with ground station receptor sites at both Svalbard, Norway and McMurdo Station in Antarctica. In the future, JPSS anticipates supporting additional missions through the existing CGS, which will evolve over time in order to accommodate these new capabilities. Key enablers for this include the use of agile management of sustainment DRs, automation of deployment and regression testing, and migration to common tools, services, and platforms to provide the required level of support for each mission.

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