



A “User’s” Perspective: NPOESS Data Exploitation (NDE)

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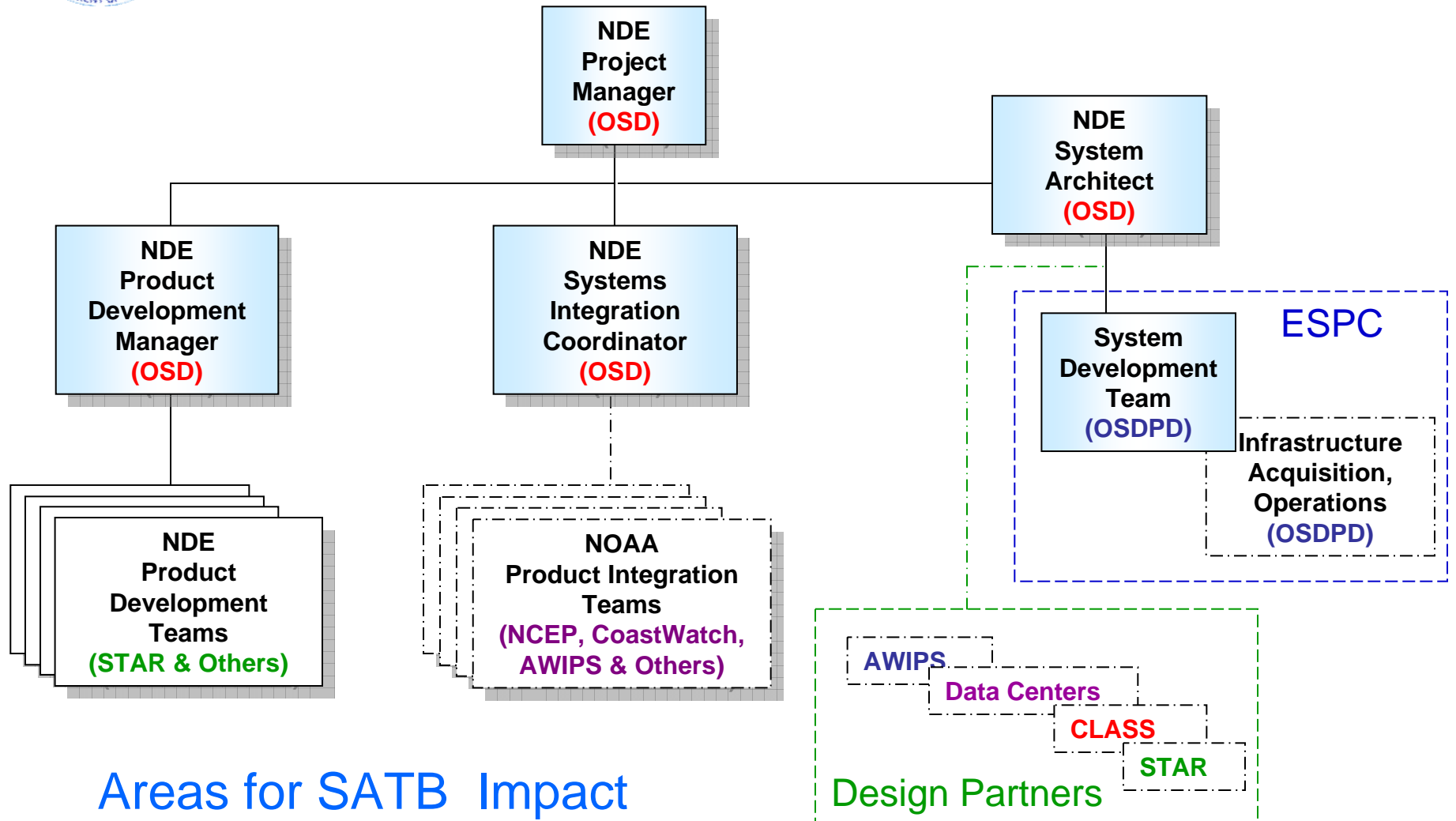
Mission



NDE MISSION:
**Assist NOAA and other civilian users to
realize the potential of NPP and NPOESS
observations**



NDE Management Structure



Areas for SATB Impact



NPP Phase 1



Phase 1 (3-20 months after NPP Launch): Legacy mission continuity replacement products comprised of currently funded NUPs and xDRs

CrIS Thinned Radiances	SST Analysis	Sea Surface Temperature (SST)
CrIS Cloud Cleared Radiances	Blended SST	Nadir Profile Ozone
Total Precipitable Water (ATMS)	SST Anomalies	Ozone Total Column
Snow Cover (ATMS)	Coral Reef Degree Heating	Snow Cover and Depth
Precipitation Type/Rate (ATMS)	Coral Reef Bleaching	Imagery
Surface Emissivity (ATMS)	Total Ozone (CrIS)	Ocean Color/Chlorophyll
Cloud Liquid Water (ATMS)	Carbon products	Vegetation Index
Sea Ice Cover/Concentration (ATMS)	SST (AVHRR-like)	Active Fires
Snow Water Equivalent (ATMS)	Aerosol (AVHRR-like)	Atmospheric Temperature Profile
Ice Water Path (ATMS)	ATMS Radiances	Atmospheric Moisture Profile
Land Surface Temperature (ATMS)	CrIS Radiances	Aerosol Optical Thickness
Temperature Profiles (ATMS)	VIIRS Radiances	Land Surface Type
Moisture Profiles (ATMS)	OMPS Radiances	Surface Albedo
Rain Water Path/Profile (ATMS)	Cloud Mask	Cloud Cover/Layers

Y	NUPs
B	xDRs



NPP Phase 2



Phase 2 (20 months after NPP Launch to 1 month prior to C1 launch): Additional legacy products and enhanced products comprised of NUPs and xDRs not linked to mission continuity

Polar Winds (VIIRS)	Fire Potential	Cloud Optical Thickness
Limb Profile Ozone	Near Coast Ocean Color	Cloud Top Height (VIIRS)
Blended Ozone	Integrated xDRs at CrIS Resolution	Ice Surface Temperature
Blended Snow Cover	Cloud Liquid Water Path (VIIRS)	Net Heat Flux
Blended Total Precipitable Water	Cloud Ice Water Path (VIIRS)	Sea Ice Characterization (VIIRS)
Tropical Rainfall Potential	Cloud Top Temperature (VIIRS)	Suspended Matter
Clear Sky Radiances (VIIRS)	Aerosol Particle Size	Atmospheric Pressure Profile
Vegetation Health	Cloud Top Temperature	Quarterly Surface Type Gridded
Vegetation Moisture	Cloud Top Pressure	Soil Moisture
Drought Indices	Land Surface Temperature (VIIRS)	
Vegetation Thermal Conditions	Cloud Base Height	
Leaf Area Index	Cloud Effective Particle Size	

Y	NUPs
B	xDRs



NDE User Community



US GOVERNMENT

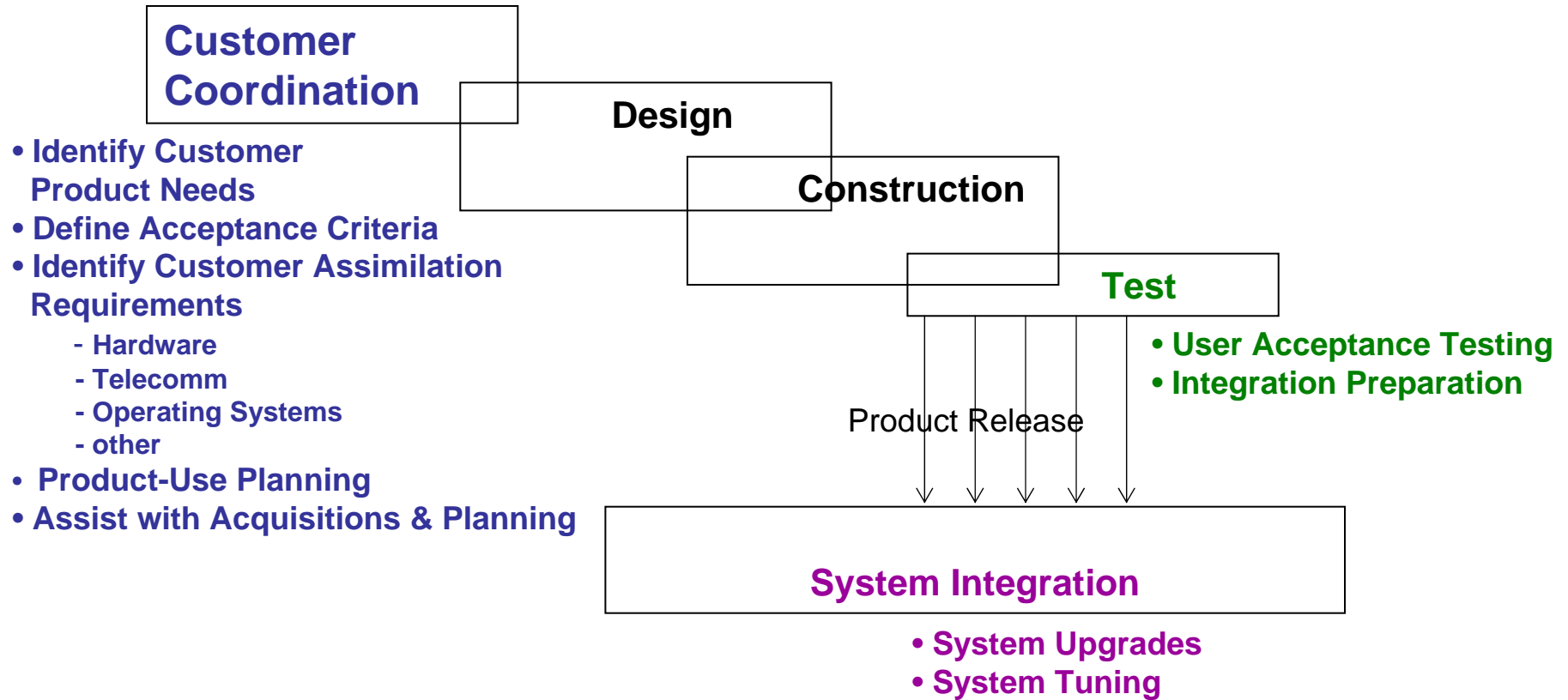
- DOC / NOAA
 - National Weather Service
 - Ocean Service
 - Fisheries
 - Research
 - Satellites & Information
- Department of Agriculture
- Federal Aviation Administration
- Coast Watch
- NOAA/Navy National Ice Center

DOMESTIC AND INTERNATIONAL

- Commercial Sector (e.g. Energy Industry)
- Universities
- European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
- International Meteorological Services (India, Japan, Brazil, UK, ECMWF, etc.)
- World Meteorological Organization
- Data Collection Service
- Search and Rescue



Project Strategy: Customer Involvement in NDE Build Cycles





Potential SATB Benefits for NDE



- Bring additional science expertise to bear on development of outstanding NUPs
- Increase efficiency of moving science from research to operations by providing standard environment for development and testing
- Expand applicability by working with NDE SIC and (new) end users to focus product development efforts
 - Local, regional, and application expertise



Questions for the SATB Audience



- How can the SATB help NDE validate its NOAA Unique Products?
- What new science algorithms and tailoring tools can the SATB introduce to NDE?
- What SATB resources are available to help NDE transition new products into operations?