NPP/SDS OVERVIEW

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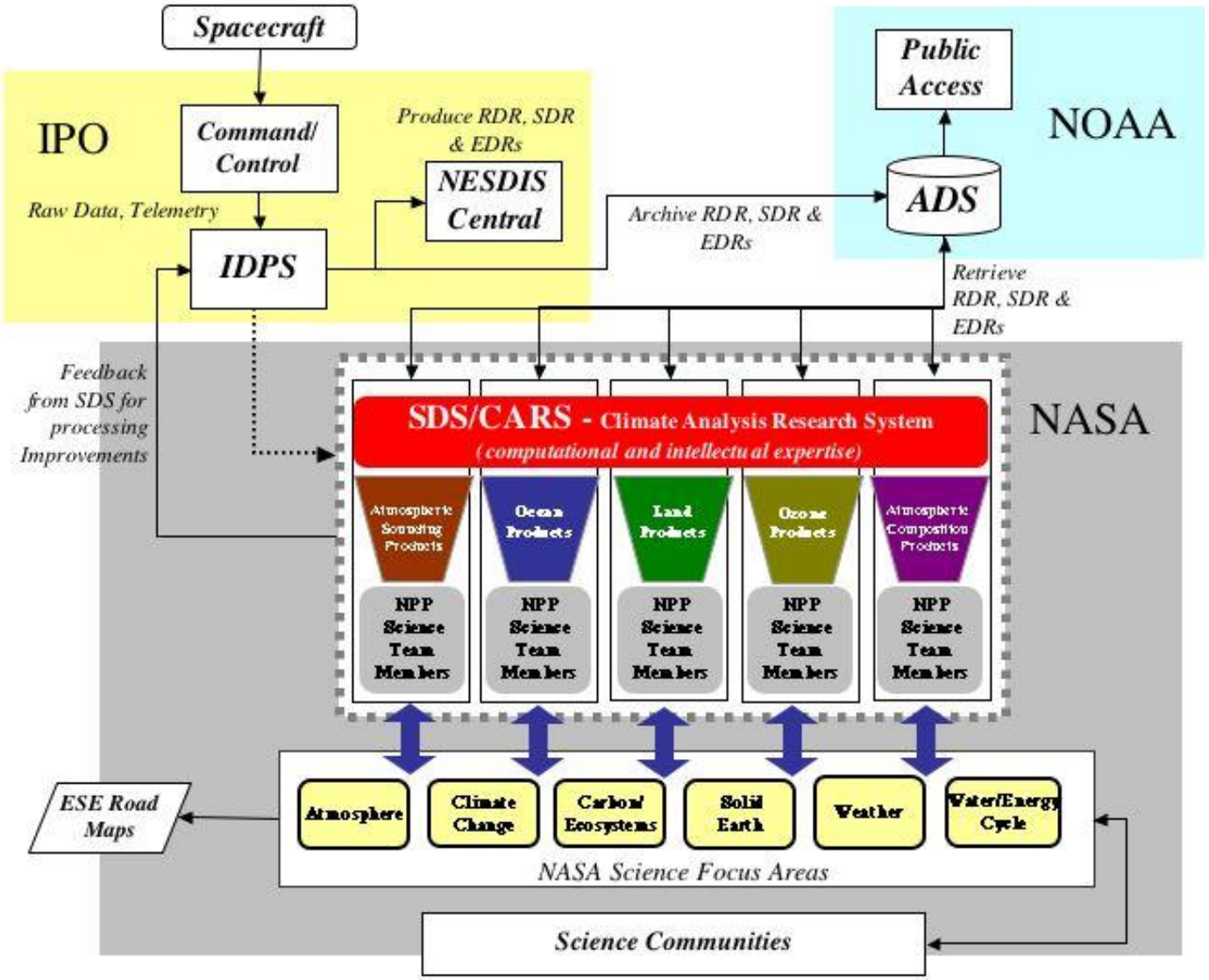
February 9, 2004

…The NPP Science Team and other appropriate science measurement teams shall assist in addressing the roles and functionality of the SDS.

from the NPP Level 1 Requirement 2.1.2.4



Slide presented at the November NPP Science Team meeting

SDS Budget

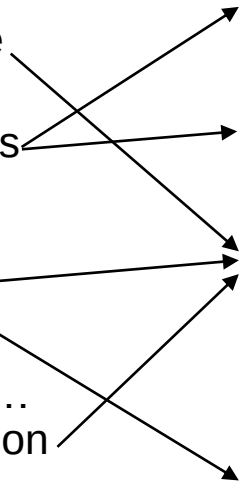
- SDS is constrained by budget

- Congressional “conference language” allocation for FY04: $8.5M
  - Note: recent email provided this direction: “Due to considerations associated with the preparations of the FY04 Operating Plan, please be sure to hold off from presently taking action to implement any of [these funds]”

Basic SDS Objectives

Based on current set of program policies (see back up charts), the SDS will

- assess the quality of the NPP EDRs for accomplishing climate research (2.1.2)
- acquire RDRs, SDRs, and EDRs from the ADS (2.1.2.2)
- provide suggested algorithm improvements to the IDPS (2.1.2.3)
- process selected data subsets … in support of Calibration/Validation activities (2.2.2)
- enable a fully distributed interoperable architecture of Climate Analysis Research System (CARS) elements, organized around key EDRs (2.1.2.4)



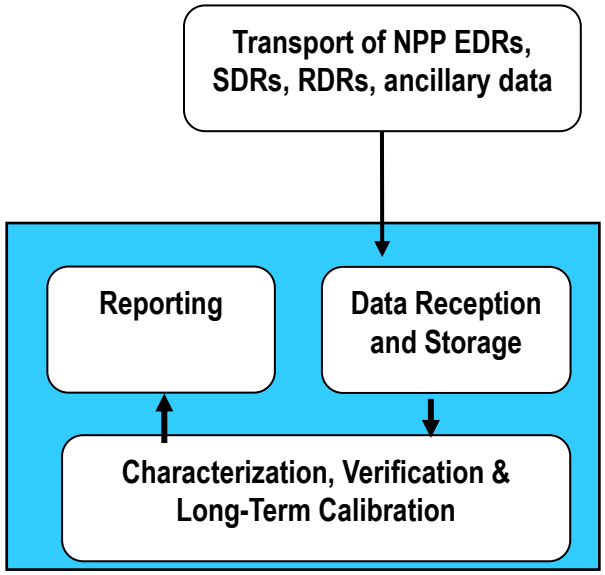
These objectives translate into a set of SDS functions (see back ups)

- Network/Transport Function
- Ingest/Storage Function
- Characterization/Verification Function
  - > Trend, analyze, process
- Reporting Function

Allocation of SDS Functions

SENSOR CHARACTERIZATION

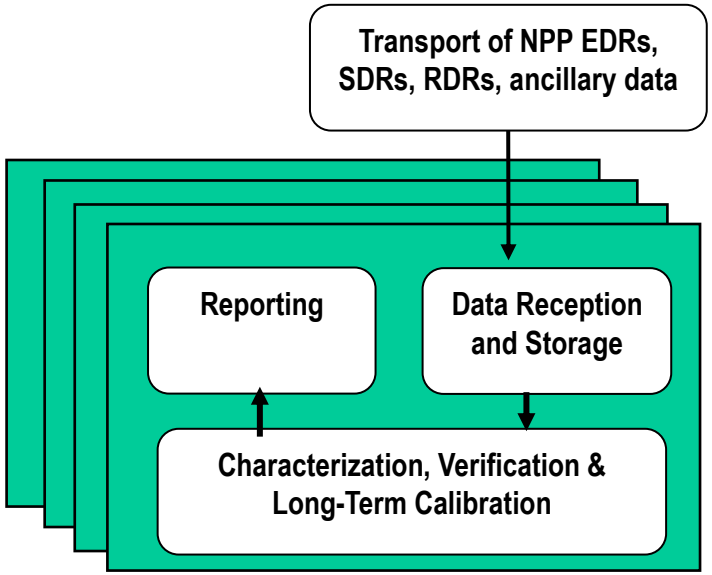
Sensor characterization & improved calibration



Skills Mix: engineering and sci cal/val expertise in satellite/instrument geometry & radiometry

SDR & EDR EVALUATION

SDR & EDR evaluation & associated algorithm improvement take place within discipline CARS

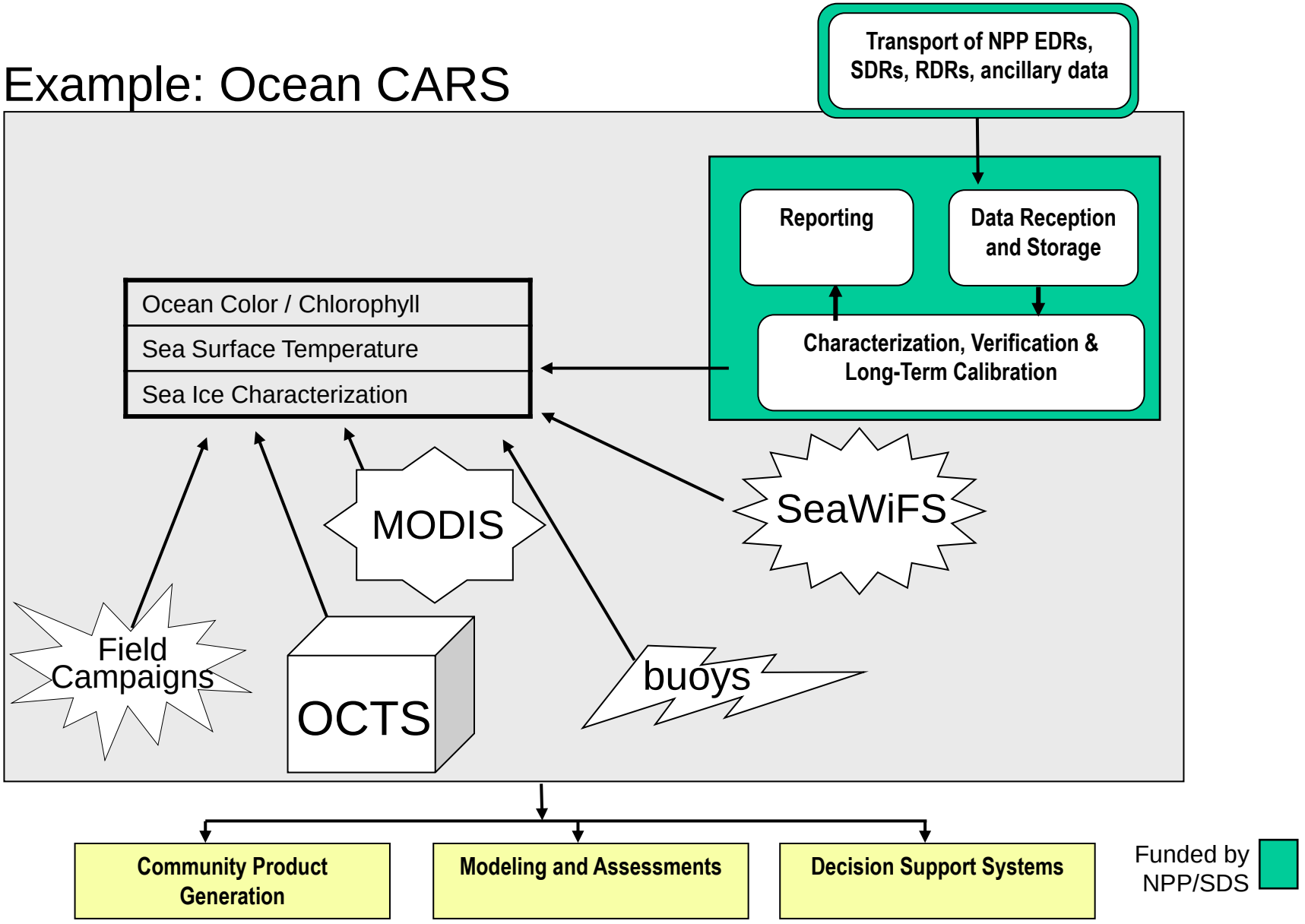


Skills Mix: discipline expertise in geophysical measurement and retrieval

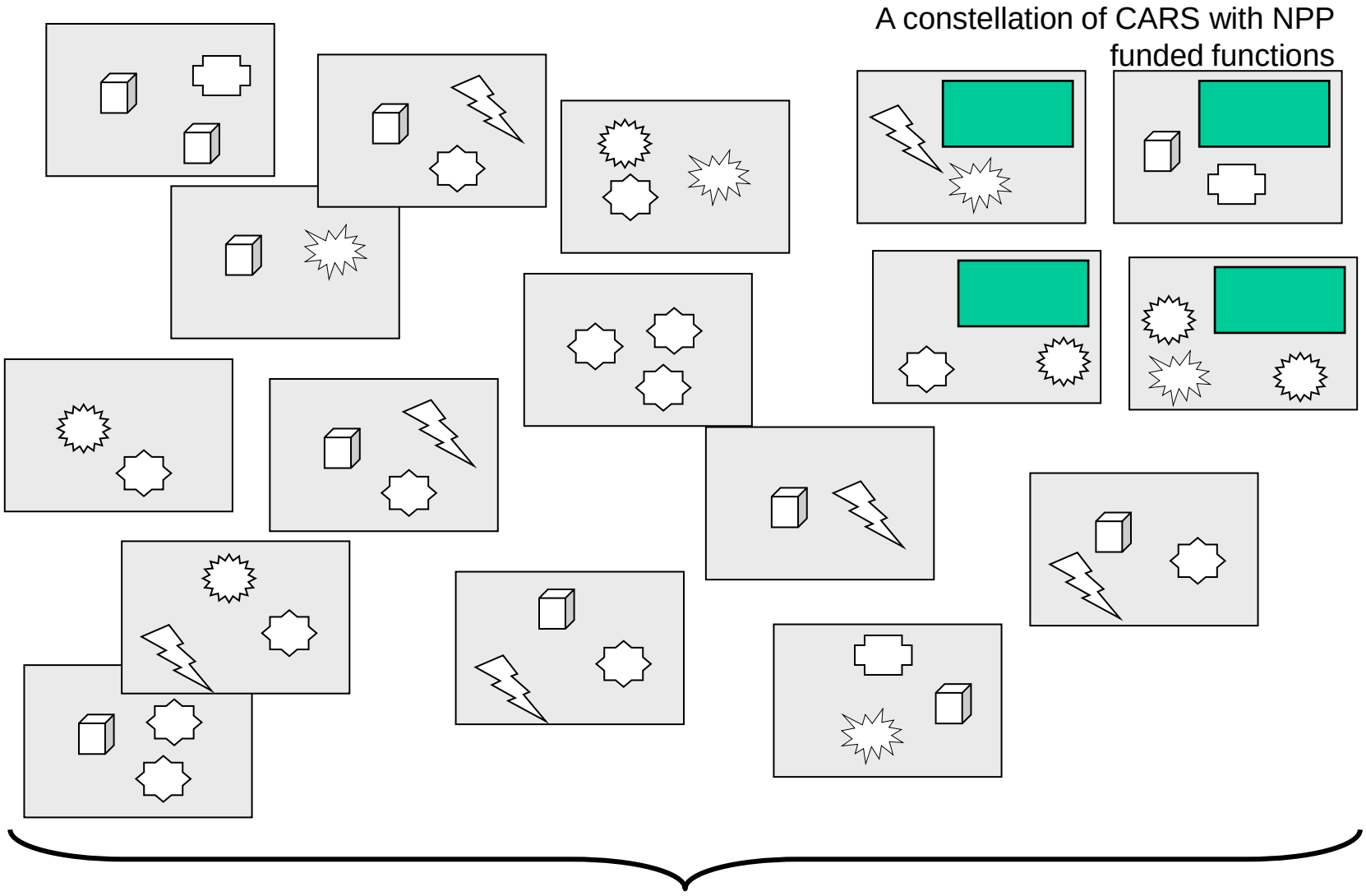
Funded by NPP/SDS

Enabling Measurement Systems via CARS

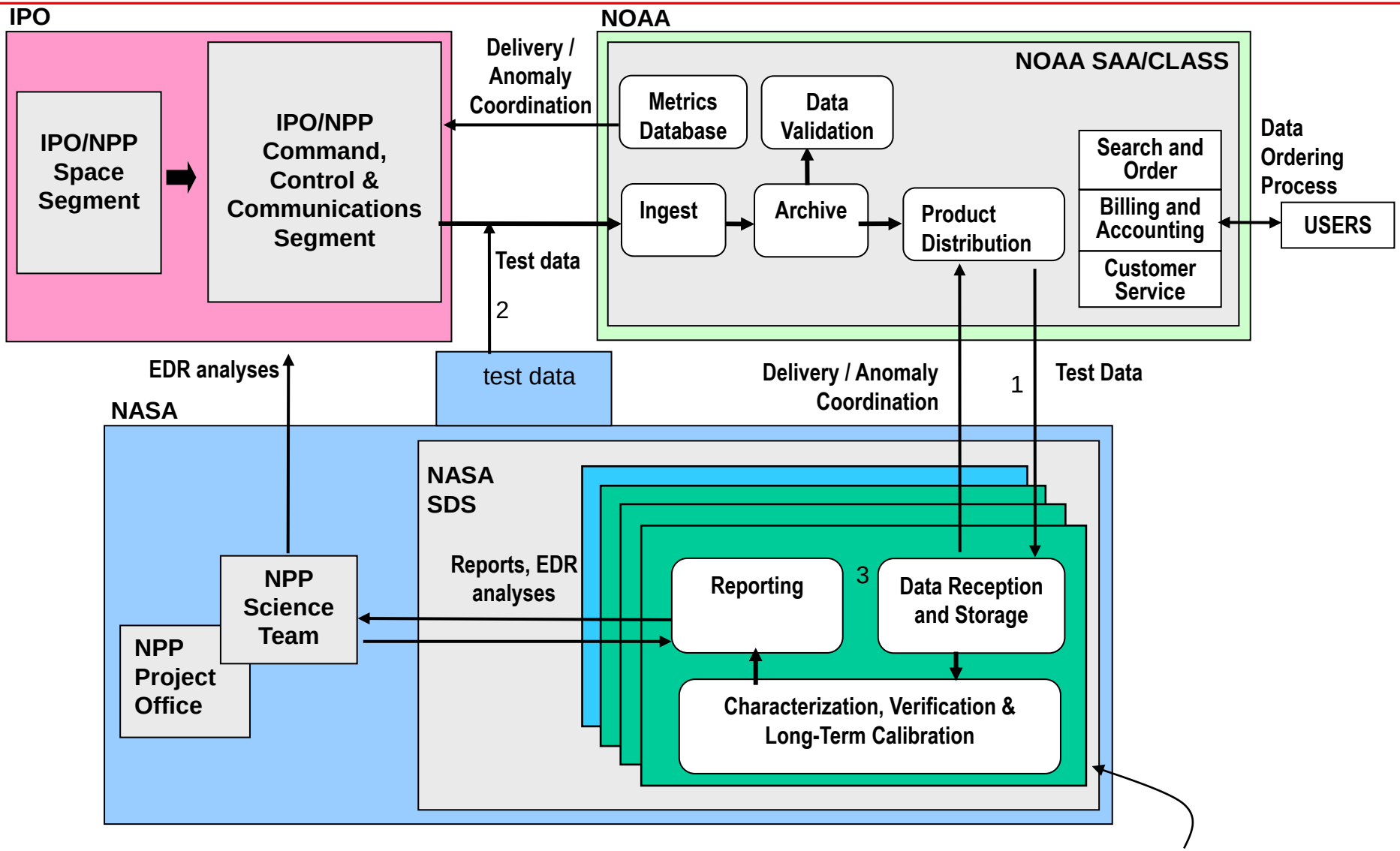
Example: Ocean CARS



A Universe of ESE CARS



SDS in the NPP Context–Pre-launch/Prototype Phase



SDS Responsibilities: tools/procedures for post-launch characterization & validation of NPP SDRs & EDRs

SDS Enabling Capabilities: long-term cal/val of SDRs and EDRs for modeling, and community consensus products (e.g., CDRs)

Implementation Issues

- **BASIC ISSUE: meeting the functional requirements while "enabl[ing] a fully distributed interoperable architecture of Climate Analysis Research System (CARS) elements, organized around key EDRs"**

- **Other issues that come to mind…**
- **Definition of CARs (one size doesn't fit all)**
- **Allocation of RDRs/SDRs/EDRs to CARS**
- **Phasing and lifecycle**
  - **What capabilities must be active at launch**
  - **What capabilities can be phased in later**
- **Cost constraints**

BACK-UP SLIDES & OTHER STUFF

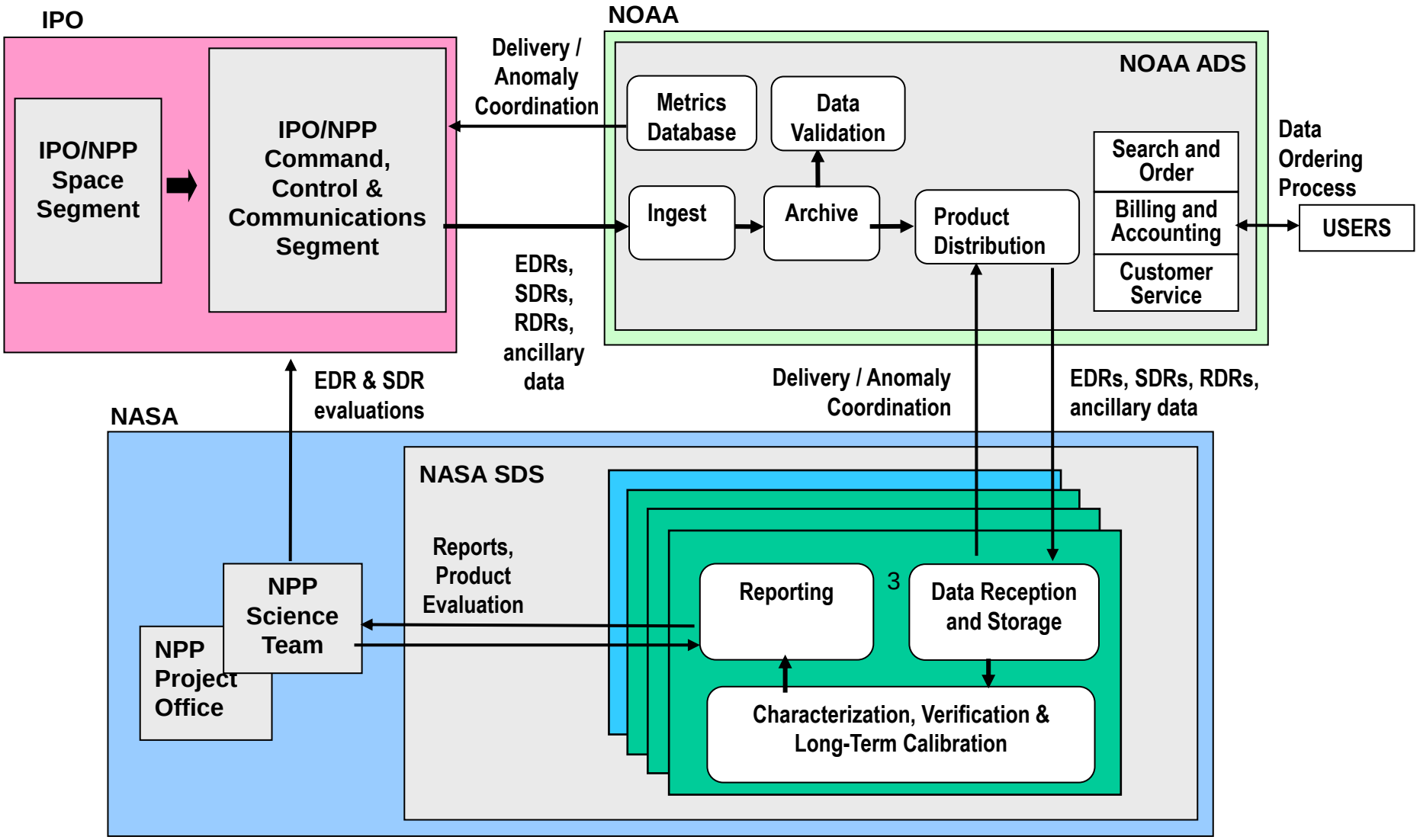
Parsing SDS Policy Language–1

Parsing SDS Policy Language–2

Parsing SDS Policy Language–3

Parsing SDS Policy Language–4

SDS in the NPP Context–ICO Phase



SDS in the NPP Context–Operations Phase