Virtual Tool Summit Kickoff

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Purpose

- Discuss current and planned tool development across the PDS to ensure capture of key requirements and sharing of capabilities.

- Provide input towards a PDS tool plan/roadmap.

- Discuss progress at the April PDS MC
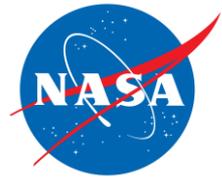
PDS Tools Overview

- PDS tools encompass archive preparation, archive management, and user support.

- PDS develops both core and node-specific software.

- Tools are shared with international partners.
  - Core software for PDS4 is being coordinated with the IPDA

- Beyond PDS, tools are developed by the broader planetary science community which can be registered with the PDS.

- Many tools are moving towards open source to ensure they can be distributed for use and adoption both for data providers/users for NASA missions and international partners.

PDS Tool Classification

Core PDS

Data Providers → Mission Support Tools → Ingest → PDS Data Management → Distribution → User Support Tools → Users
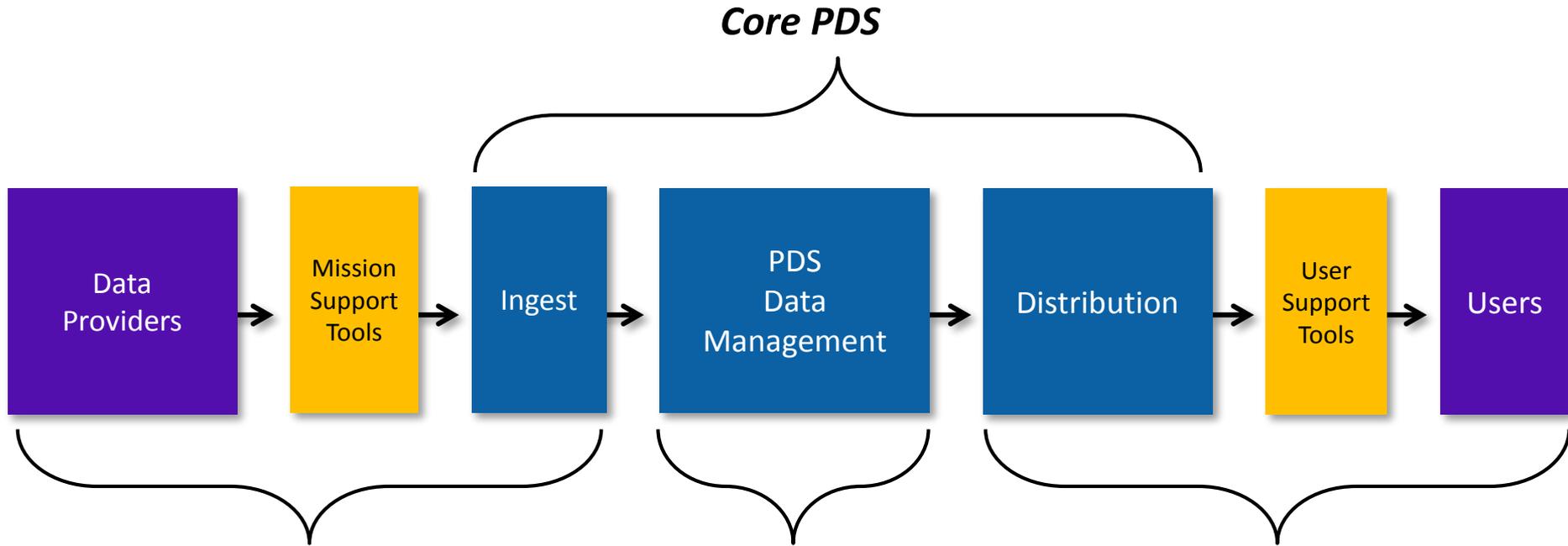
Core PDS Tools (Rqmt 1.5.x, 3.3.x)
- Design
- Generate
- Validate
- Transform
- *Visualize*
- PDS4 Tools Library Information Model

Data Provider Tools ←

→ **User Support Tools (incl Portals and Data Analysis Support)**

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PDS Tool Landscape

- **Core tools and software**: Tools and software that are at the foundation of the PDS and the international archives
  - PDS3 and/or PDS4
  - Derived from PDS Level 1,2,3 requirements
  - Used for preparation, submission, management, and distribution of archival data
  - Used by both NASA and IPDA
  - Active development, maintenance and release

- **PDS Portals and Search Tools**: PDS Web-based Tools used to Support Access to Data
  - Provide access to PDS data holdings
  - Discipline-specific search functions

- **Node and mission specific tools**: Tools which are unique to a specific mission or node
  - Augment core tools; support specific data sets and/or node functions
  - Provide specific analysis tools

- **International Partners**: Tools developed by international partners (registered at planetarydata.org)
  - Tools registered in the IPDA registry
  - Support archive preparation, management, distribution
  - Agency specific search tools (e.g., ESA, ISRO, etc)
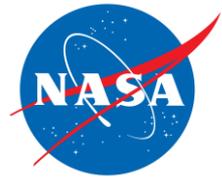
Tool Coordination

- Tools can be made available through a two pronged approach
  - Tool registry (<u>build 5b</u>): leverage IPDA tool registry infrastructure to capture tools across planetary science community.
  - PDS search (<u>available today</u>): continue to curate available tools for supporting use of PDS data so they show in search results at http://pds.nasa.gov/tools/data-search/

- Core tool development is coordinated with the Management Council and IPDA

- Node and mission-specific tools can be registered to enable the community to discover what exists before new development

- Recognize that advertised tools require support

Tool Spreadsheet

- Tool spreadsheet encompasses the four areas identified on slide 4
- Includes <u>both</u> PDS3 and PDS4 tools
- Includes node specific tools and search interfaces
- Includes inputs from the nodes on mission-specific tools
- Includes tools from IPDA member agencies (e.g., ESA and ISRO)
- This is a candidate list to be used to populate the PDS tool registry

Today's Agenda

Overview
8:00 - 8:15 - Intro, agenda, objectives, etc   (Tom Morgan, Dan Crichton)

8:15 - 8:45 – Role of IM in Tool Development (Steve Hughes, Sean Hardman)

Core Tools and Software
8:45 - 9:30 - EN core tool status (Sean)

9:30 - 10:00 - Ames core tool status (Mark)

10:00 - 10:15 Break

10:15 – 10:45 - Gaps and new capabilities

PDS Portals and Search Tools
10:45 - 11:15 - PDS Portal and Search (Sean, Emily)

11:15 – 12:00 – DN Portals and Search (tbd)

12:00 - 12:15 Break

12:15 – 12:45 - Gaps and new capabilities

Node and Mission Specific Tools
12:45 - 13:30 – Node specific tools; mission tools (tbd)

13:30 – 14:00 – Gaps and new capabilities

14:00 – Adjourn