

# Becoming A More FAIR PDS

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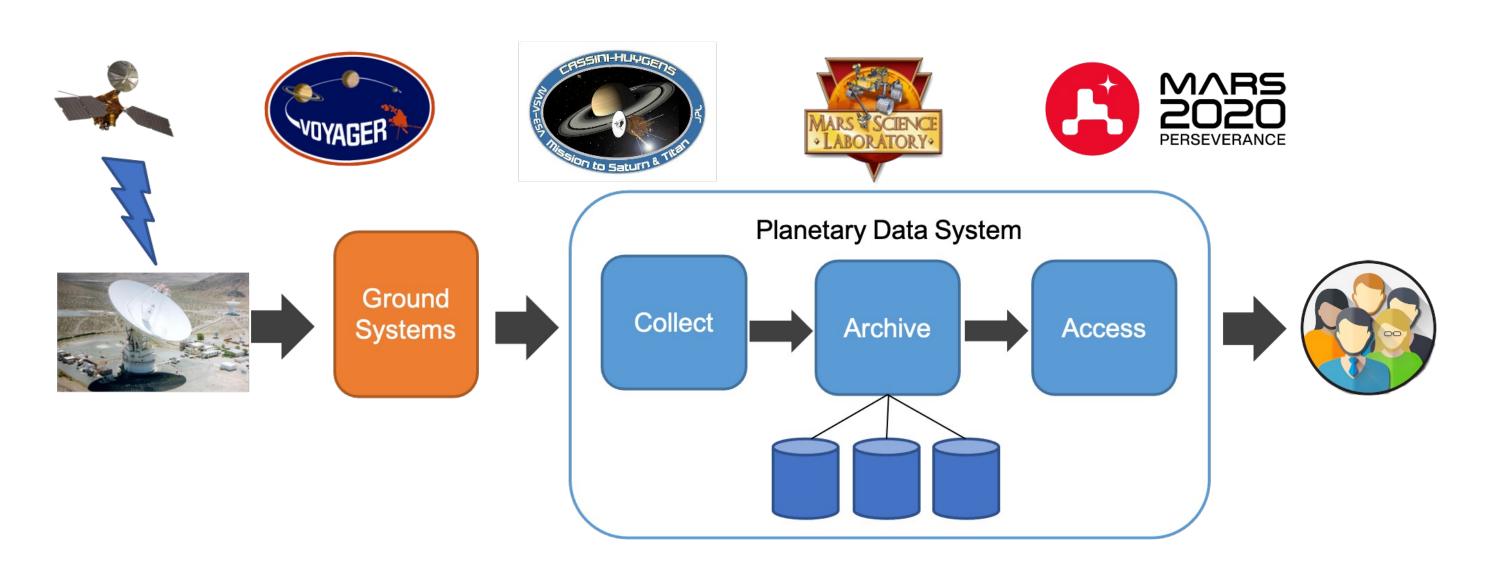
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Overview

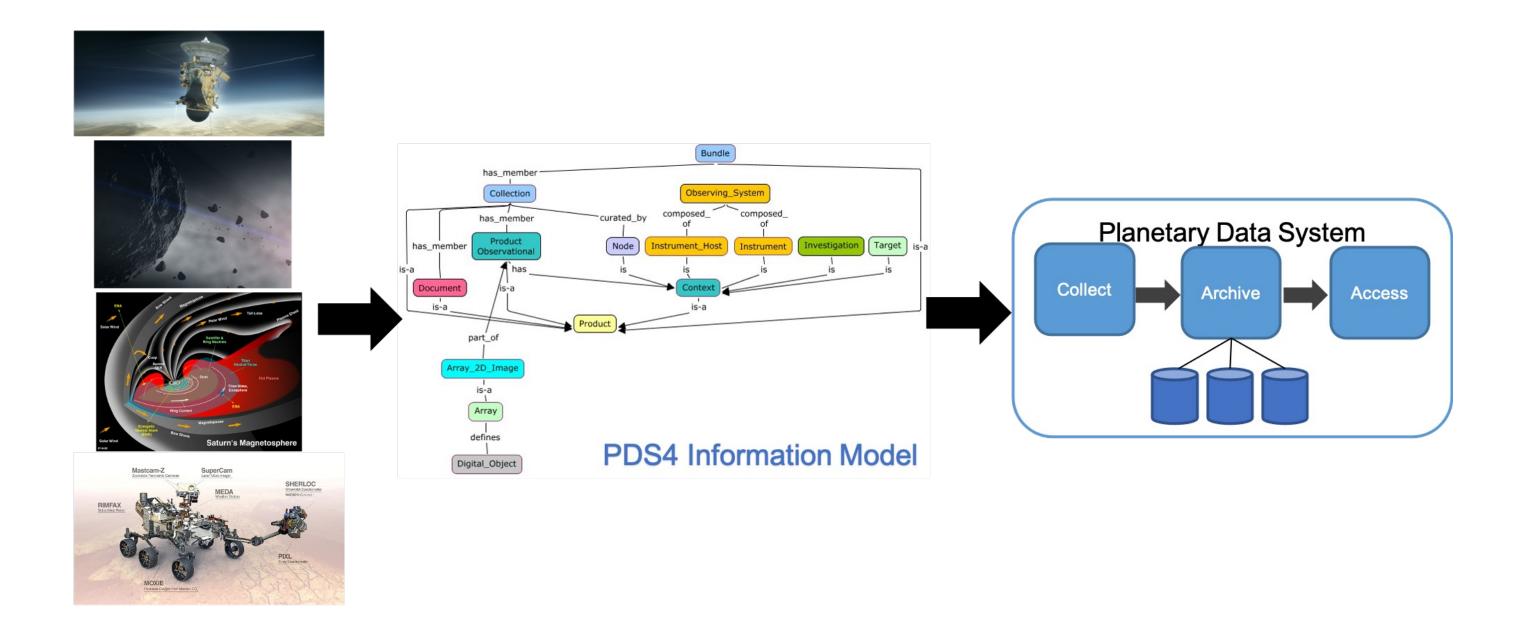
### How is PDS becoming more FAIR?

The Planetary Data System (PDS) is organized as a distributed federation of science discipline nodes responsible for

collecting, archiving and making accessible the digital data and documentation produced from NASA's exploration of the solar system from the 1960s to the present so that planetary scientists can make discoveries.



"PDS4" information model-based architectural approach developed to support planetary science's highly diverse set of heterogeneous data from over 600 instruments.



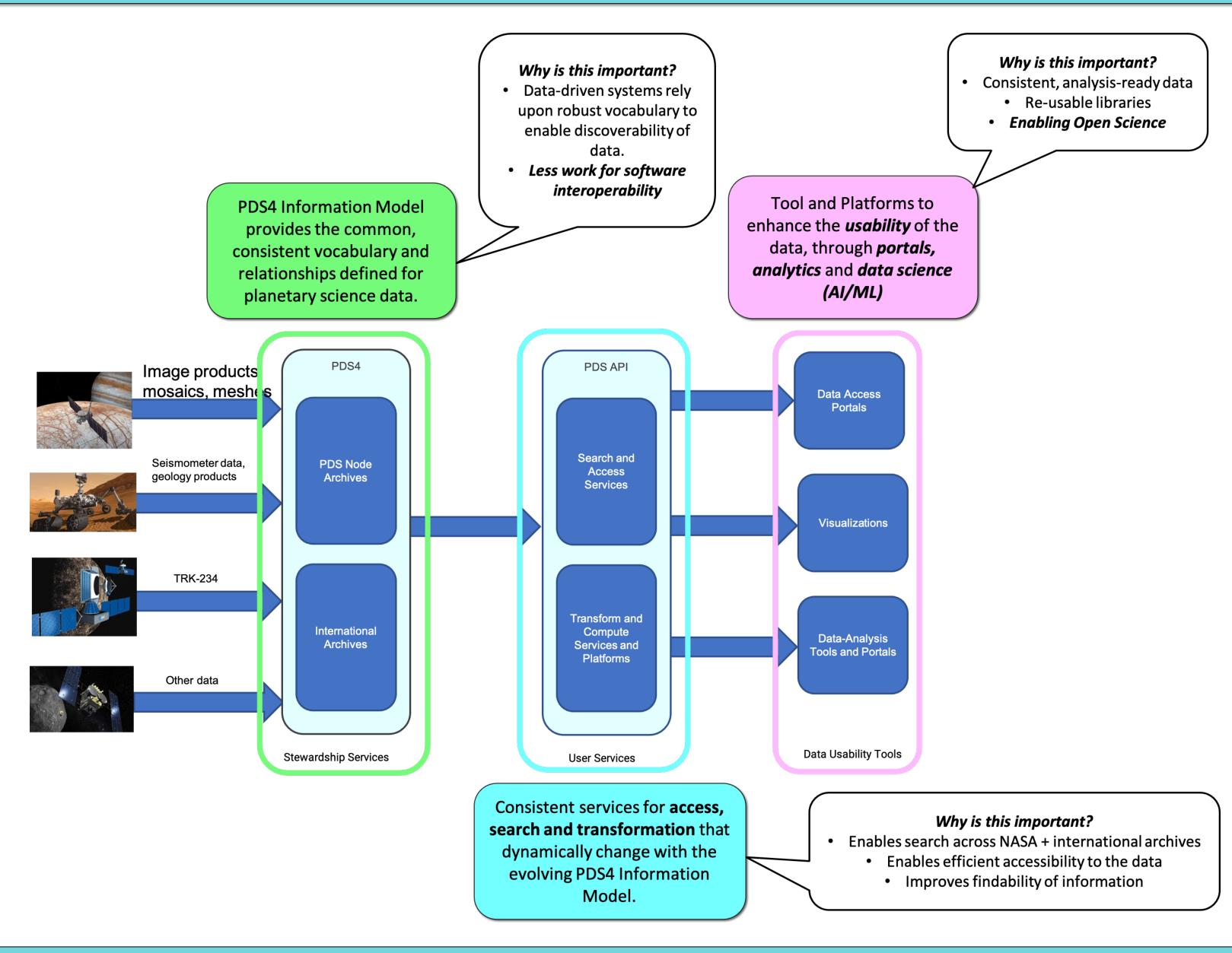
The NASA PDS is using the PDS4 Architecture and Data Services Project to become a more FAIR system [3] through improving access, (re)use, and interoperability of the data in the big data era.,



PDS continues to strive towards becoming a more FAIR organization. Here are a few examples and why they are important:

- Interoperable Data Services services driven by the metadata will more easily enable interoperability
- Digital Object Identifiers (DOI) enhanced access to the data through DOIs
- Open Source Software and Open Science one of the first steps towards becoming more interoperable is open sourcing software.
- Improved Citation Documentation new and improved web page and information on citing PDS data enabling reproducibility and credit.

## Interoperable Data Services



#### Citing PDS Data

One primary method for enabling this has been the minting of Data Object Identifiers (DOIs) for all PDS archival data leveraging the PDS4 Information Model metadata, as a standard mechanism:

 To credit data creators: PDS archived data sets are refereed publications.

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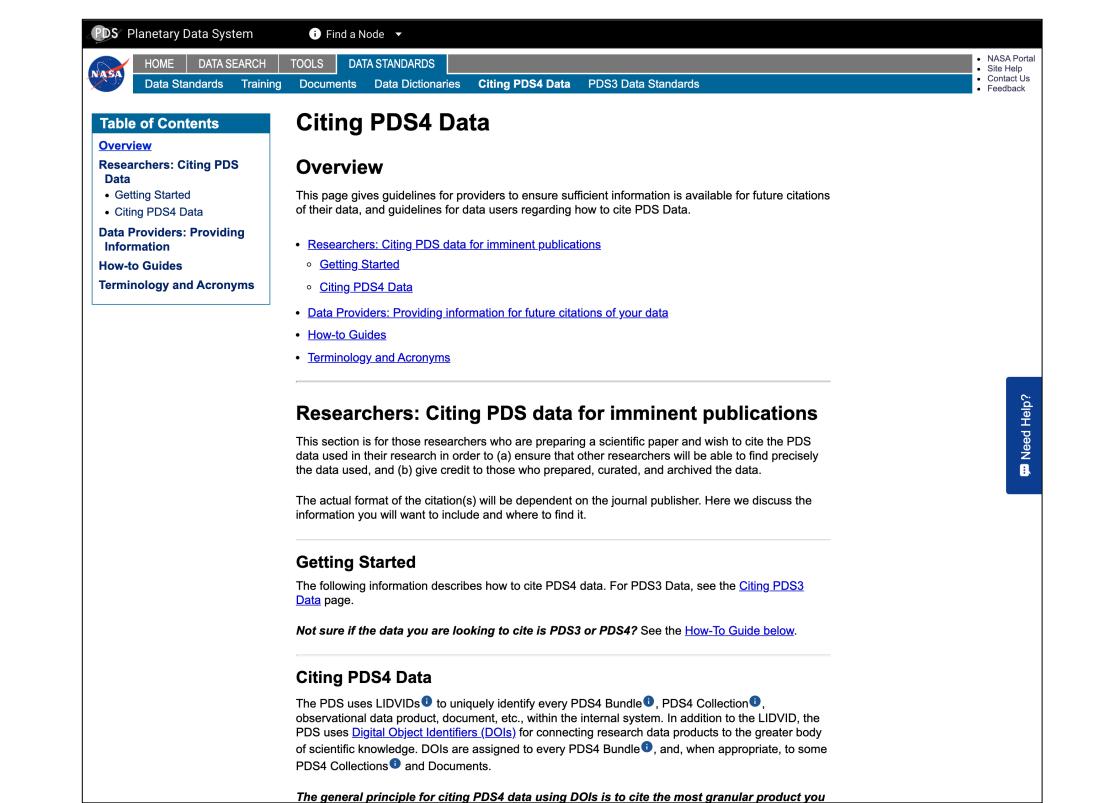
Carol Neese, Ronald Joyner, Baptiste Cecconi,

National Aeronautics and Space Administration

Special thanks to the PDS DOI Working Group

- To support reproducibility of published research: This will sometimes involve citing subsets of a data set, or selected products from multiple data sets.
- Enable interoperability of data sets across data systems: With DOIs becoming the de facto standard for citing data, we can utilize DOIs to integrate with other data systems.

Improved Citing PDS Data Online Help https://pds.nasa.gov/datastandards/citing/



Additional steps the PDS has taken to operationalize and improve access to DOIs for archive data:

#### PDS DOI Policy Established in October 2020

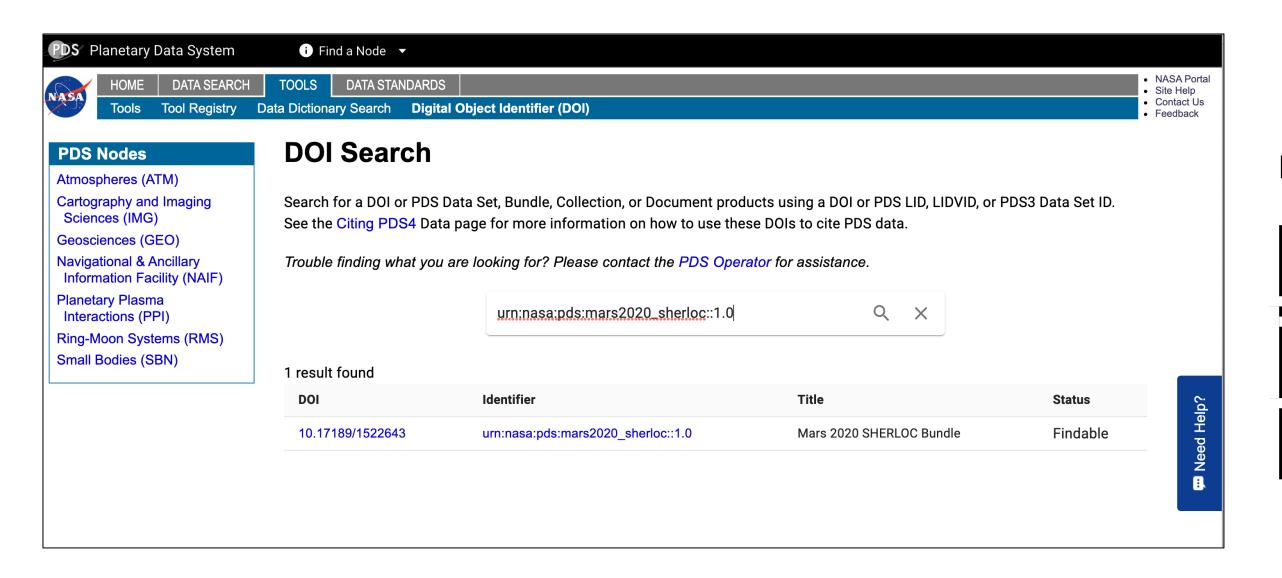
The PDS will assign at least one DOI to all PDS4 Bundles and selected PDS3 Data Sets. (See policy for caveats and exceptions)

#### NASA PDS has implemented an operational DOI system:

- DOIs have been assigned to most PDS3 data sets
- DOIs have been assigned to most PDS4 data bundles
- Other DOIs may be available for PDS4 Collections or Documents on a case-by-case basis

#### New DOI Search

https://pds.nasa.gov/tools/doi/



https://github.com/NASA-PDS/