

A Newly Developing Community-Oriented Data System from NASA GES DISC

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- Find out the WEF Nexus community needs on data system
 - Co-design the best practice for WEF NEXUS implementation
- Share NASA ESDS/ESDIS/GES DISC data system strategy and approaches
- Partnership



GES DISC's Complicated Data System to meet Earth Science Data and Information **Needs**

A certified trusted repository (WDS) Multi-Disciplines Data Repository

Designated Mission Archive

Multi-Disciplines & Missions

- Atmospheric Composition
AIRS, OMI, OCO2/3, OMPS, TROPOMI
- Weather and Atmospheric Dynamics
AIRS, GPM, MERRA-2, TROPICS, Sentinel 6A/B
- Climate Variability and Change
TSIS, MERRA-2, xLDAS, MEaSUREs
- Water And Energy Cycle
MERRA-2, xLDAS, GPM
- Carbon Cycle and Ecosystems
ACOS, OCO2/3, CMS, MEaSUREs, GEOCARB

Community Products



Services and Resources for Research, Applied Sciences, Public Community

Services (Open, FAIR)

- Data and metadata Stewardship
- Information Management
- Open-source software support
- User Support (documentation, forum, instruction video...etc)



Partners

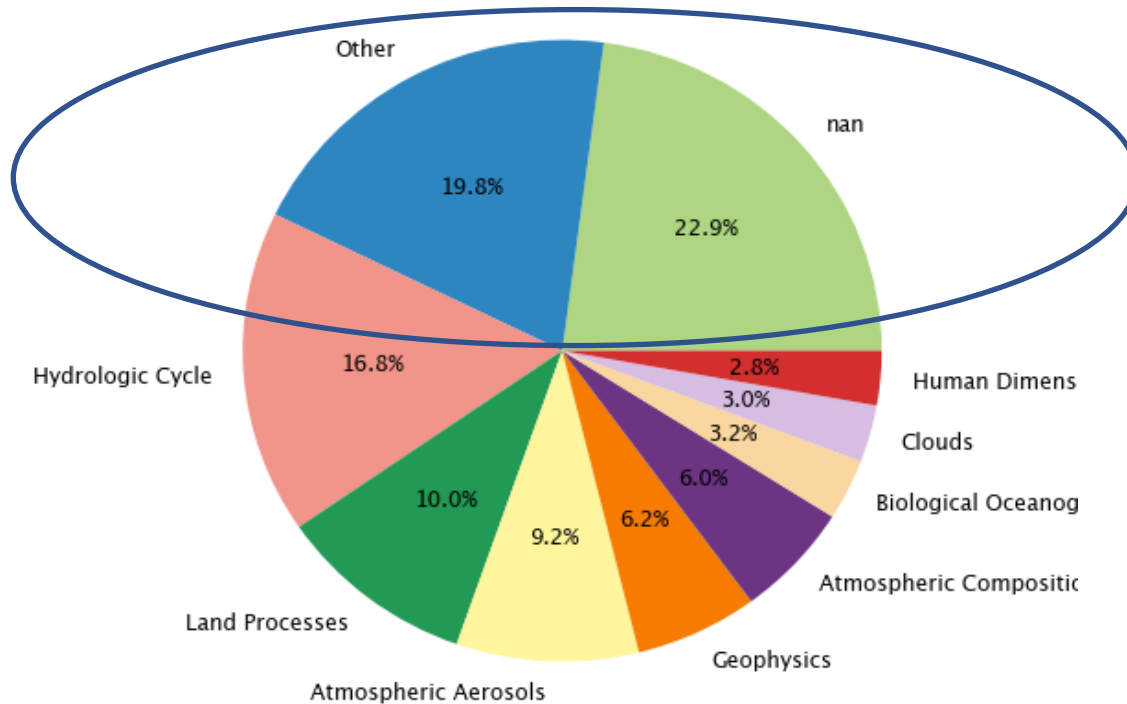
- ESDIS & other DAACs
- GSFC Applied Science
- ARSET
- ESIP
- Selected Universities
- HAQAST
- EO4WEF (?)
- ...





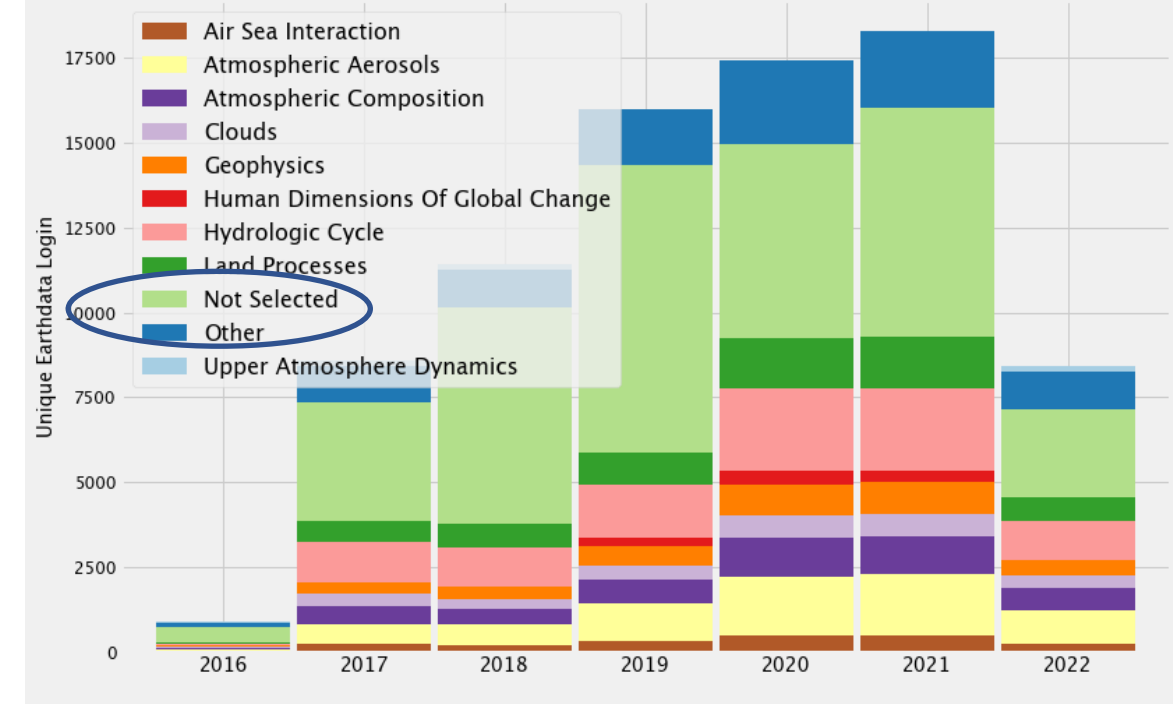
Understanding GES DISC users via Earthdata registration

Study Area (Top 10)



- GES DISC currently has over 100K registered users

Study Area by unique Earthdata Login user every year



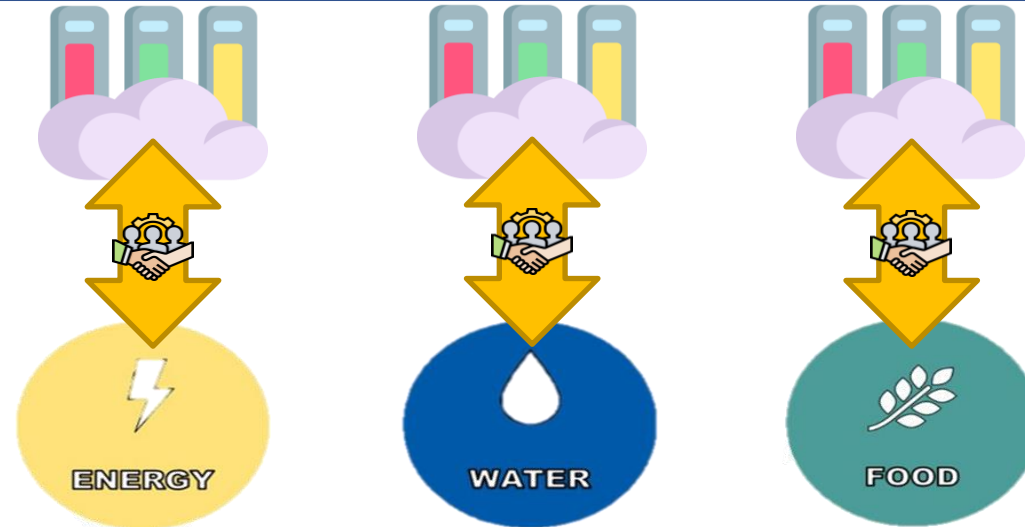
- Active GES DISC users are below 20K/yr

ACTION : Need user's help



Challenge: Discipline-focused → Interdisciplinary support

Currently, GES DISC has been supporting only GES DISC's data holdings for all the disciplines (e.g., Energy, or Water, or Agriculture)



Working Plan:

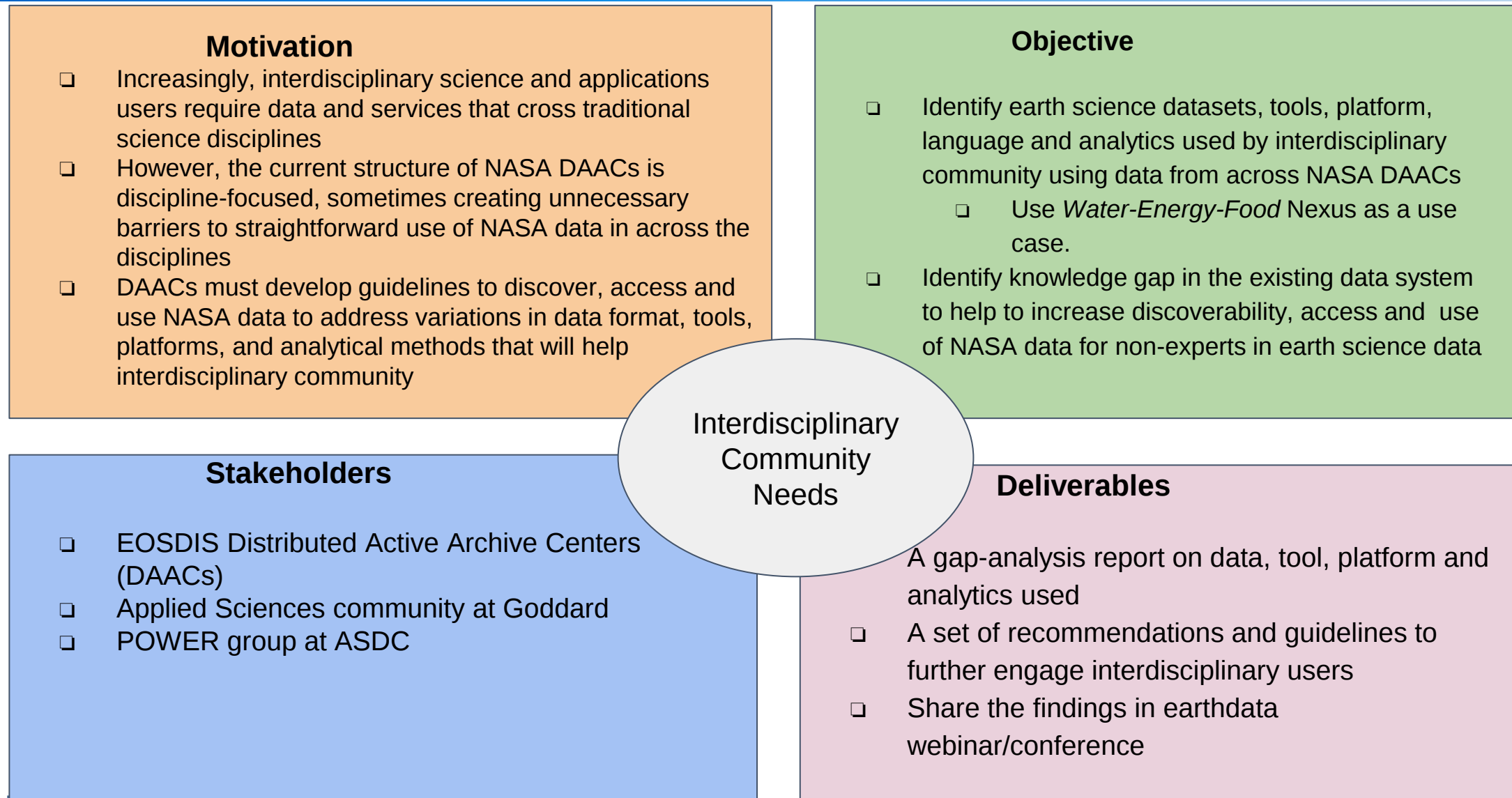
1. A new ESDSWG group
2. Science Enabling Center (SEC)
A new NASA ESDS strategy for **Open-Source Science Data and Computing Ecosystem**, DAACs will **Evolve, Realign, Simplify, and Engage**



(2022 WEF News Workshop)

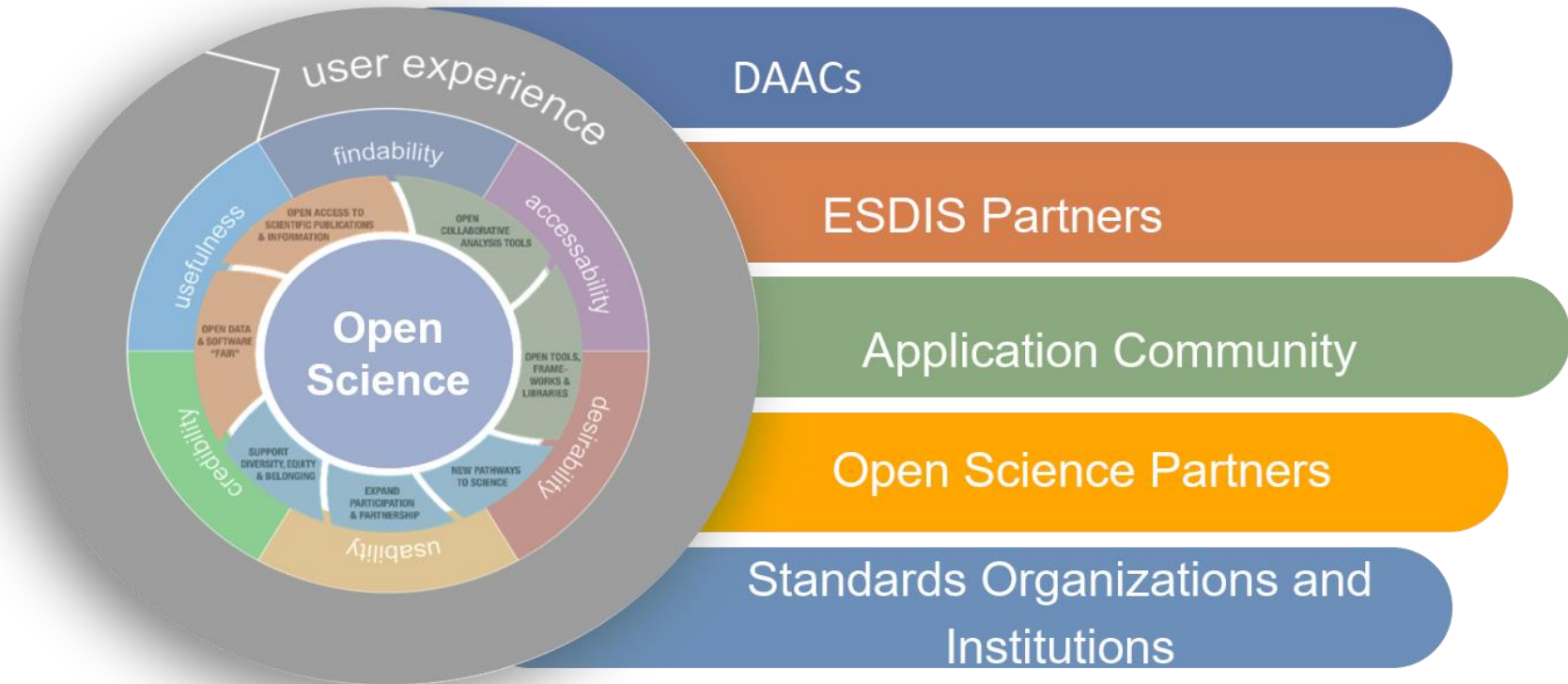


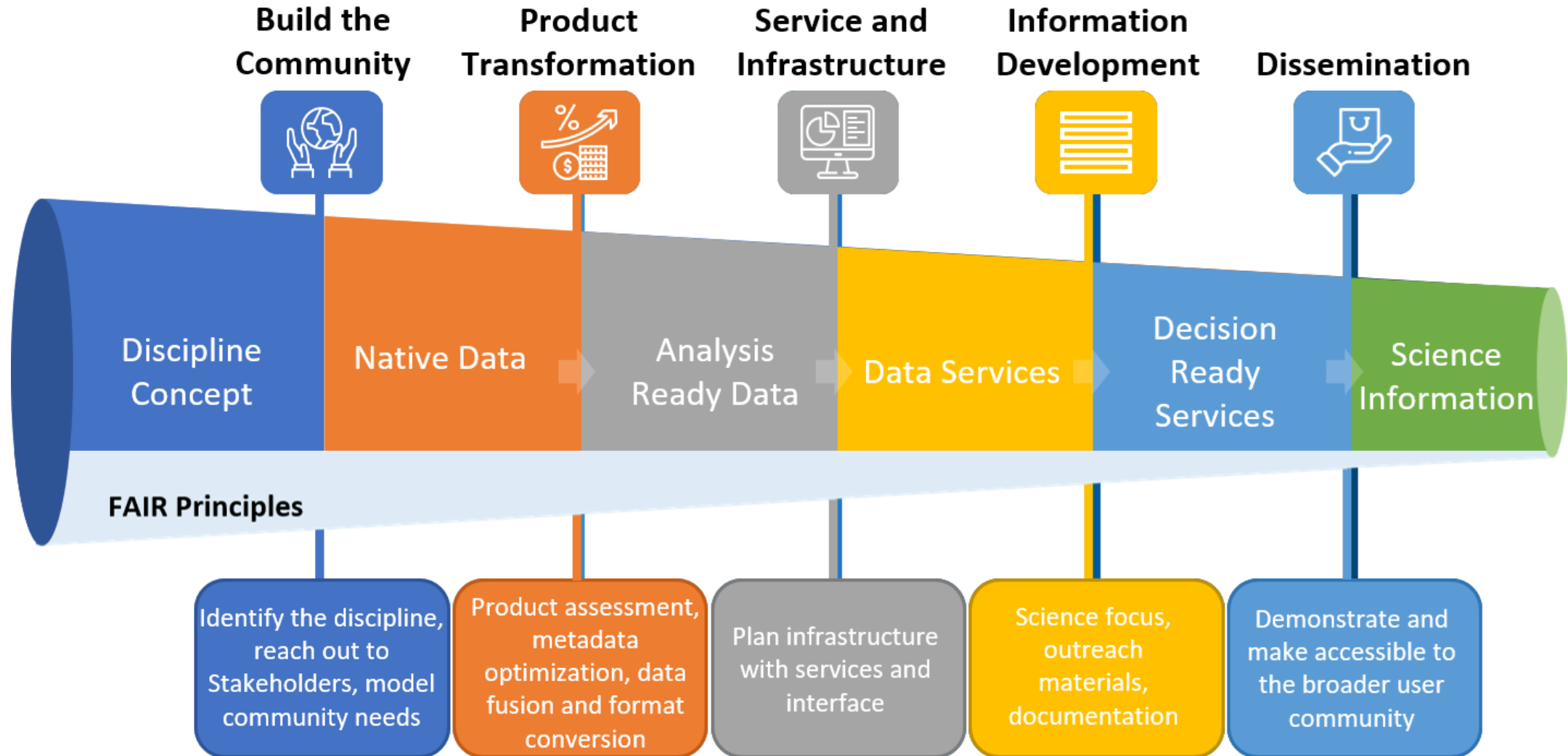
A new ESDSWG for Interdisciplinary Community Needs



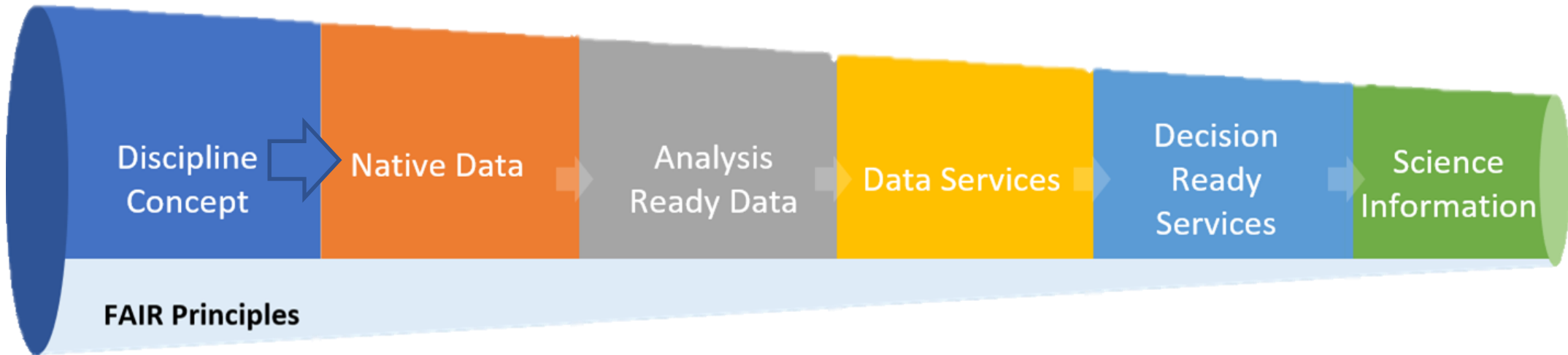
Goal - Aligning Communities

- Establish what a Science-Enabling Center is and Roles and Responsibilities.
- Establish a diverse team to develop a SEC Formulation plan includes several options for future enterprise architectures.





WEF Nexus Community Needs for a data system



Partnership Building

- Find out the WEF Nexus community needs on data system
 - What are the target variables for the WEF nexus?
 - How the community use those variables? Analyze? Visualize?
- Co-design the WEF Nexus implementation



Knowledge Sharing: Open-Source Science (OSS)

- NASA Earth Data: <https://earthdata.nasa.gov/>
- GES DISC: <https://disc.gsfc.nasa.gov/>
- NASA Earth Data Forum: <https://forum.earthdata.nasa.gov/>

Question?

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