

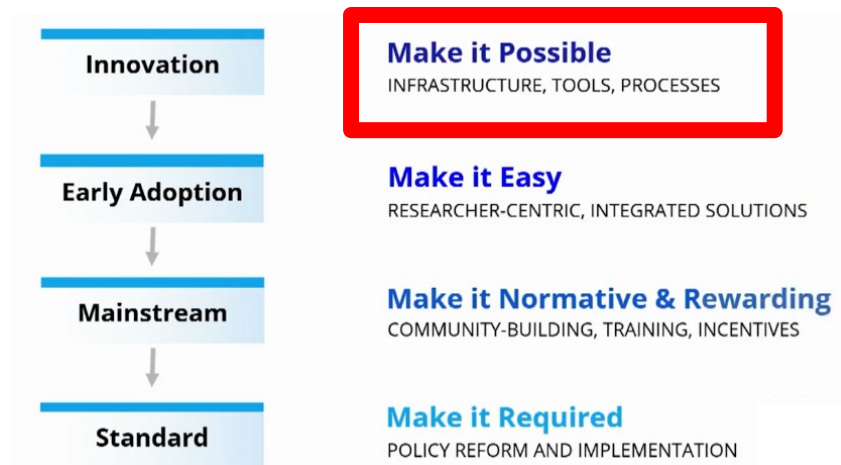
Report on Effort to Create a SPASE 3.0

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History and Evolving Demands and Opportunities

- 2009: SPASE 2.0 released
- 2013: Open Data policy (US Gov't)
- 2016: 15 FAIR principles
 - Interpretation available from Go-FAIR.org
 - Significant advances in the RDA
- 2020s: Open Science Internationally
 - Accessible, Transparent, Reproducible, Inclusive
- Technological advances
 - schema.org, DataCite, DCAT
 - RDF, JSON-LD
 - DOIs, RORs, re3data, ORCID



Lisa Cuevas Shaw, Center for Open Science, presentation at the 10th Anniversary meeting.

https://www.youtube.com/watch?v=dgB8Ry_cRwE&list=PLChfyH8TVDGmWyGePxToZ4ZcNiBkFKubl&index=4

Examples of Needed Support/Changes in SPASE

- Examples of Lacking Mechanical Support for FAIR
 - Cannot include terms from external vocabularies with their identifiers
 - No support for Research Organization Registry identifiers (<https://ROR.org>)
 - “Denormalized”: basic terms exist in multiple places (ex. author, dataset name)
- Open Science / Community Use
 - Wide opinion that making a SPASE record is difficult and time-consuming
 - International interest in a simpler more automated process
 - Complex rules for determining mandatory fields
- Increasing compatibility with modern systems
 - Denormalization propagates into mappings to other structures -> confusion, piping errors
 - Poor metadata quality -> myriad of custom corrections elsewhere

SPASE 3.0: Agreed Scope

- The agreed primary purpose of a Heliophysics-wide metadata structure is to power a Heliophysics-wide search interface.
 - Greater : Equal consideration of non in-situ space-based data (ex remote sensing, models, ground-based,..)
 - Lesser : Data extraction using SPASE out of scope.
- Focus on NumericalData and DisplayData as the primary objects
 - Delegate other object types to external international standards (ex. ORCID, ROR, re3data)
 - Delegate software and services to software-focused structures (ex. CodeMeta, HSSI)
- SPASE as an unifying structure - delegate where possible
 - Leave repository-specific details to those metadata structures
 - Purposefully incorporate ground and solar data from the start
 - Shift most vocabulary management to the community

SPASE 3.0: Team

- Team Strategy
 - International involvement across many areas
 - Engage experts from these communities
 - ~2 meetings per month and asynchronous contribution opportunities
- Current Contributor Census
 - United States, Japan, Europe
 - Existing SPASE curators
 - Ground and in-situ data repositories
 - Solar and space physics data repositories
 - Early, mid, and late career
 - Power users and beginners
 - Space weather forecasters

SPASE 3.0: Development and Status

- Strategy: Back to basics
 - Community development and voting on use cases with actors
 - Requirement extraction and discussion
 - Structural design and implementation via **mapping from SPASE 2.x**
 - Testing: Ensure support for FAIR and Open Science
- Status : Voting on Use Cases
 - Community development of use cases: **~50 use cases!**
 - Community input on relevance of use cases to SPASE via voting
 - Priority to be determined by popular vote

**PLEASE VOTE
by Nov 8!**

[https://tinyurl.com/
SPASE30](https://tinyurl.com/SPASE30)



Example Use Case

<https://tinyurl.com/SPASE30>

PLEASE VOTE by Nov 8!



Vote yes or no to support in SPASE 3.0:

Actors: Heliophysics Researchers, non-Heliophysics and new to Heliophysics Researchers, Teacher and curriculum developers, Data Scientists, Heliophysics software services

Title: Discover data associated with a mission, observatory or named group of instruments.

Description: User wants to discover datasets associated with a mission, observatory, or group of instruments. The user navigates to the Heliophysics-wide search interface (website or API), types the name (full or short) of the mission or observatory into the search bar, and begins exploring the datasets linked to that term. The user prefers to work with newer/older data and uses the time span feature in the search result page to narrow down the numerous results.

End of presentation

Brief history

- 1998: Call to action at ISTP workshop to make data more accessible
- 2002: SPASE and its goals defined
- 2005: SPASE 1.0 released
- 2009: SPASE 2.0 released with some streamlining
- 2016: FAIR publication <https://www.go-fair.org/>
- Early 2020s: Various international statements released in support of Open Science

<https://doi.org/10.1029/2018SW002038>

Outline

- **Motivation**
 - Brief history - Evolving demands and opportunities
 - Currently lacking support for FAIR in SPASE, nonlinearity
- **Approach**
 - Decided Scope
 - How we will determine SPASE 3.0 -> international community involvement
 - Capture use cases -> extract requirements -> design -> implementation(s)
- **Progress To Date**
 - International agreement on path forward
 - Community-generation of use cases
 - Use Cases (selected)
- **Summary & Request for Greater Community Participation**
 - (tinyurl and QR code needed for an updated survey)