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Data Way Forward

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Data Way-Forward Discussion group

- Ad-hoc discussion group formed by an action from ADC Co-chairs telecon
- Main emphasis:
  - Increasing availability of data through GCI and the broader GEOSS
  - Considering access and value-adding to data in open distributed environment
  - Influence ADC Data Tasks and AIP-3
- Discussion group include: Ken McDonald, Jay Pearlman, Siri Jodha Singh Khalsa, Rob Koopman, Alessandro Annoni, and George Percivall (editor)

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Data Management Way Forward

*"The user cannot **find** the data;*
*If he can find it, cannot **access** it;*
If he can access it,
*he doesn't know **how good** they are;*
if he finds them good,
*he can not **merge** them with other data"*

The Users View of IT, NAS 1989

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Data Way Forward Topics

- Global datasets
- Services for access to data and information
- Implications of data sharing principles
- Data quality
- Information architecture

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Several global datasets are underway – are more needed?

- Task DA-09-03 includes several categories of global datasets: Land Cover; Meteorological and Environmental; Geological; and DEM
- Most of these are geophysical. Also need health, population, sociological, species distribution
- Considering the base data categories identified in other activities (INSPIRE, FGDC, GCOS, others) should ADC identify and promote additional global datasets in DA-09-03?
- Link to Summit planning (Document 21)

Continue to increase Access Services

- GEOSS 10 Year Plan envisions “access to data and information through service interfaces”
  - Move from “Order and delivery of files” to “Access Services”
- Most global dataset tasksheets say nothing about making data available through services.
  - An exception is DA-09-03c - OneGeology
  - Opportunity is exemplified by existing operational service that provides 300,000 access /day
- AIP-3 increase data access services and ensure services are correctly registered in the GEOSS CSR.
  - Discovery of ASTER GDEM via the GCI should become a case study in how the GCI is failing
  - WIS is registered but you need to go to WIS to find services

Consider implications of data sharing principles

- Continue to participate in review of DSTF Guidelines and Action Plan
  - policy and requirements on GEOSS interoperability arrangements for access services
- Consider existing practices, e.g., Landsat and ASTER require user registration with the data center
- Topics considering multiple provider environment.
  - authentication of user identity for data with restricted access,
  - Notification and acknowledgment of copyright restrictions, licenses
  - mechanisms for assurance that data is uncorrupted.
  - charges and fees, when appropriate.
- DA-09-02A Data Integration and analysis systems
  - Collecting information for data centers. (Talk to Rick Lawford)
- AIP-3
  - Consider methods for licenses and user registration
  - Technologies like single-sign-on could be investigated

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Quality Assurance is vitally important in a distributed information system.

- Task DA-09-01a - quality assurance of EO data.
- QA4EO information propagated into information systems
- Consider international standards for quality of geographic information, e.g., ISO TC211 standards, is needed.
- Interoperability arrangements for the propagation of uncertainty in a distributed information system is required,
  - e.g., Uncertainty Markup Language (UnCertML).
- Validation of datasets with user feedback from larger audience to allow that information to get back to the data provider.

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Fusion is only possible with a harmonized information architecture.

- GEOSS 10 Year Plan RD anticipates GEOSS will enable new value-added products resulting from fusion of diverse Earth Observation and socio-economic data.
- Harmonized information architecture allows sharing across different disciplines.
- DA-09-01b (data harmonization task) and AIP-3 can be a starting point for such information architecture.
- Multiple topics in an information architecture that must accommodate dataset lifecycle

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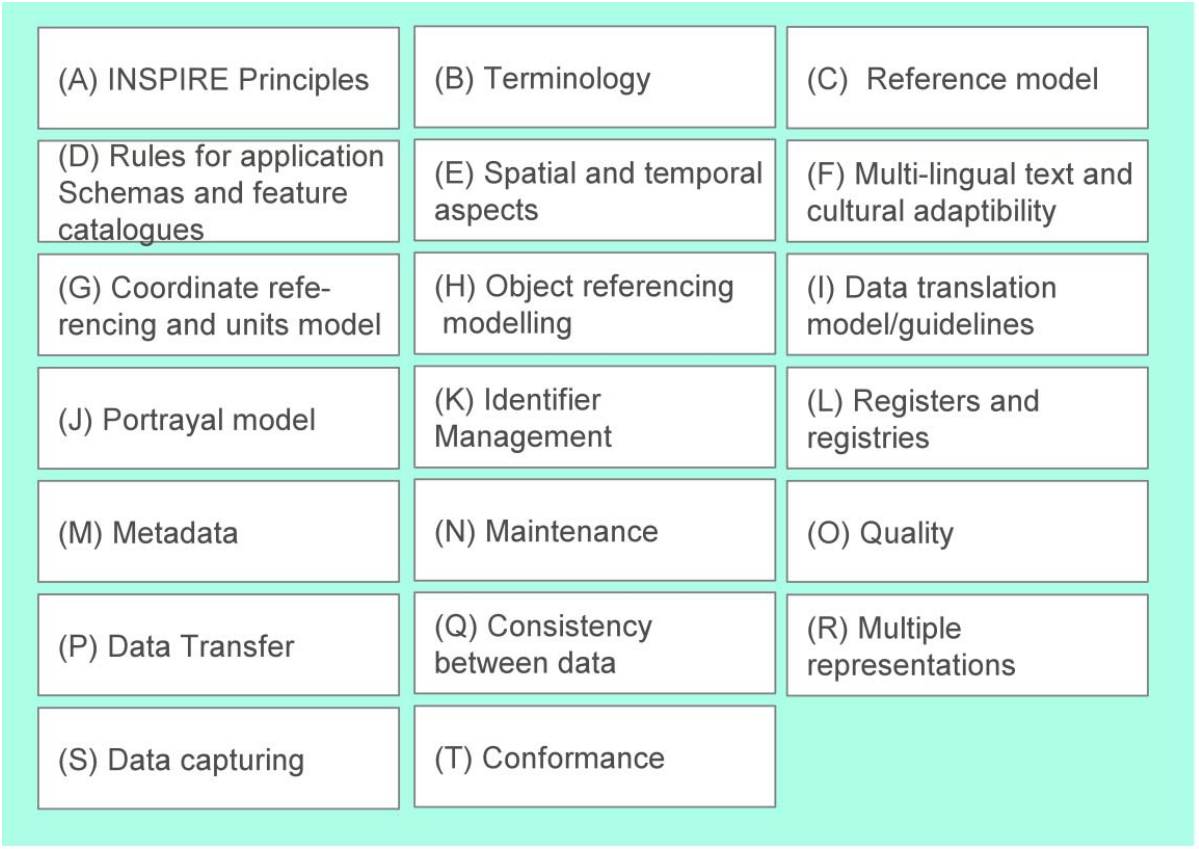
Data harmonisation components

This diagram is from INSPIRE.
Need to migrate to GEOSS specifics



coordinate reference systems (CRS); geospatial information types (features, coverages, observations and metadata), application schemas, product definition process, multilingualism and ontologies

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