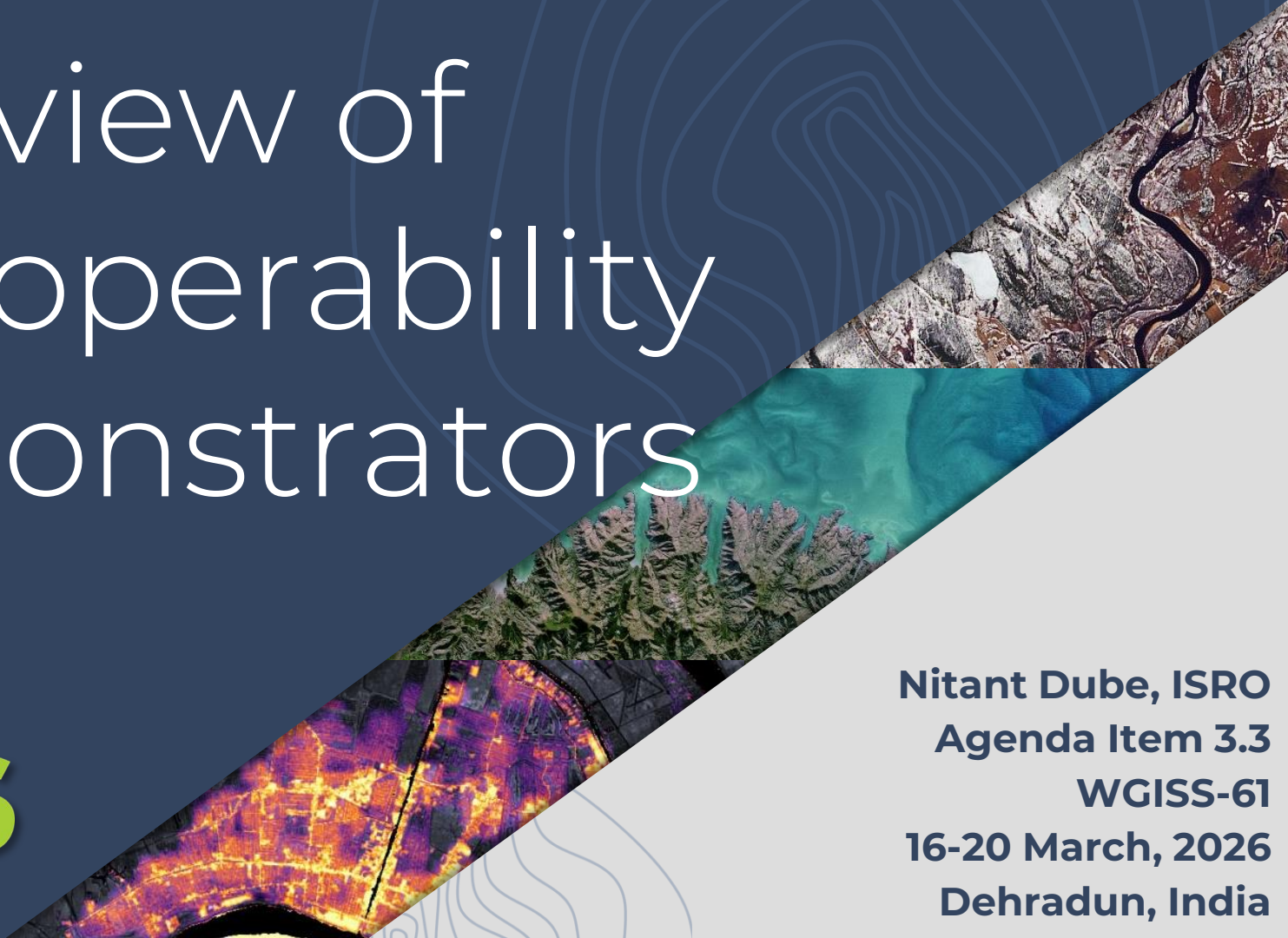
Overview of Interoperability Demonstrators



CEOS
Committee on
Earth Observation Satellites

Nitant Dube, ISRO
Agenda Item 3.3
WGISS-61
16-20 March, 2026
Dehradun, India

CEOS Interoperability Handbook V 2.0

❖ Objective

- CEOS Interoperability Handbook Version 2.0 should provide guidance to the organizations for development of **Interoperable Data** and **Services** and help them in measuring their **maturity level**

Completed and Endorsed during CEOS Plenary 2025

Interoperability Handbook V2.0

On-Going as part of WGISS Work Plan for 2026

Maturity Matrix

Will be taken up as part of WGISS Work Plan for 2026 and 2027

Interoperability Demonstrators

Interoperability Demonstrators

- **Applications of Interoperability Recommendations** : (Primarily for Data and Service Providers)
  - Demonstrate how CEOS Interoperability Recommendations 2.0 (vocabulary, architecture, Interface, quality and policy) can help in improving Interoperability of Data and services
- **Best practices based on Recommendations and beyond:** (Primarily for end users)
  - Develop Documents/Applications that can demonstrate interoperability of data and services

Why Interoperability Demonstrators

- Help align Data and service providers for standard/s adoption
- Demonstrate how concepts can be converted to practices
- Provide Interoperable Reference code/software for implementation
- Interconnected Data Systems, empowering users, improve efficiency, address Big data challenges

Target Users/Collaborators

- Target Users
  - Data and Service providers (including New Space Startups)
  - End users (Researchers, operational users)
- Target Collaborators
  - CEOS Working Groups, Virtual constellations

Success Indicators

- For Data and Service providers, the maturity matrix will be the success indicator
- For End user, their ability to access data and services from multiple data providers and generate homogeneous analysis (May be difficult to quantify)

Linkage to Handbook

- Will try to map the deliverable to the Interoperability Recommendations (usually will be more than one)
- Interoperability demonstrator will help in refining/updating the recommendations based on real world problems and use-cases

Deliverables & Deployment

- Deliverables
  - Jupyter Notebook
  - Software
  - Best Practices
  - Notes

- Deployment
  - Deployment of Notebooks on github and execution link on Google Colab or Binder(github provides support for this)
  - Development of software with software repository on github

Interoperability Demonstrators

Demonstrators	Objective	Working Group/VC
Resilience Interoperability Demonstrator	Utilize concepts of Interoperability, CEOS Analysis-Ready Data, and Open Science to demonstrate the capability for monitoring Geohazard supersites SIT-Chair Priority-2 (Connected Data for Community Resilience)	SIT Chair Team, SEO,WGISS WGDisaster, Comms Team, ARD-OG, LSI-VC
Surface Reflectance Quality and Consistency	Demonstrate capability for generation of Interoperable Surface Reflectance from ARD	WGCV, WGISS
Shoreline Decision Ready Data	Develop Shoreline Decision Ready Data Specifications and develop sample products demonstrating Impact of Interoperability Recommendations	VC-COAST, WGISS
Decision Ready Data : Surface Inundation Product Specification	Develop Specifications for Decision Ready Data for Surface Inundation SIT Chair Priority-1 (Guidance on integrating multiplatform, multispectral data for enhanced water variables and decision-support solutions)	WGISS, WG-Disaster, SIT Chair
Vocabularies for CDR	Enhance Existing CEOS Vocabulary to support	LSI-VC, WGClimate, WGISS

Thanks

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