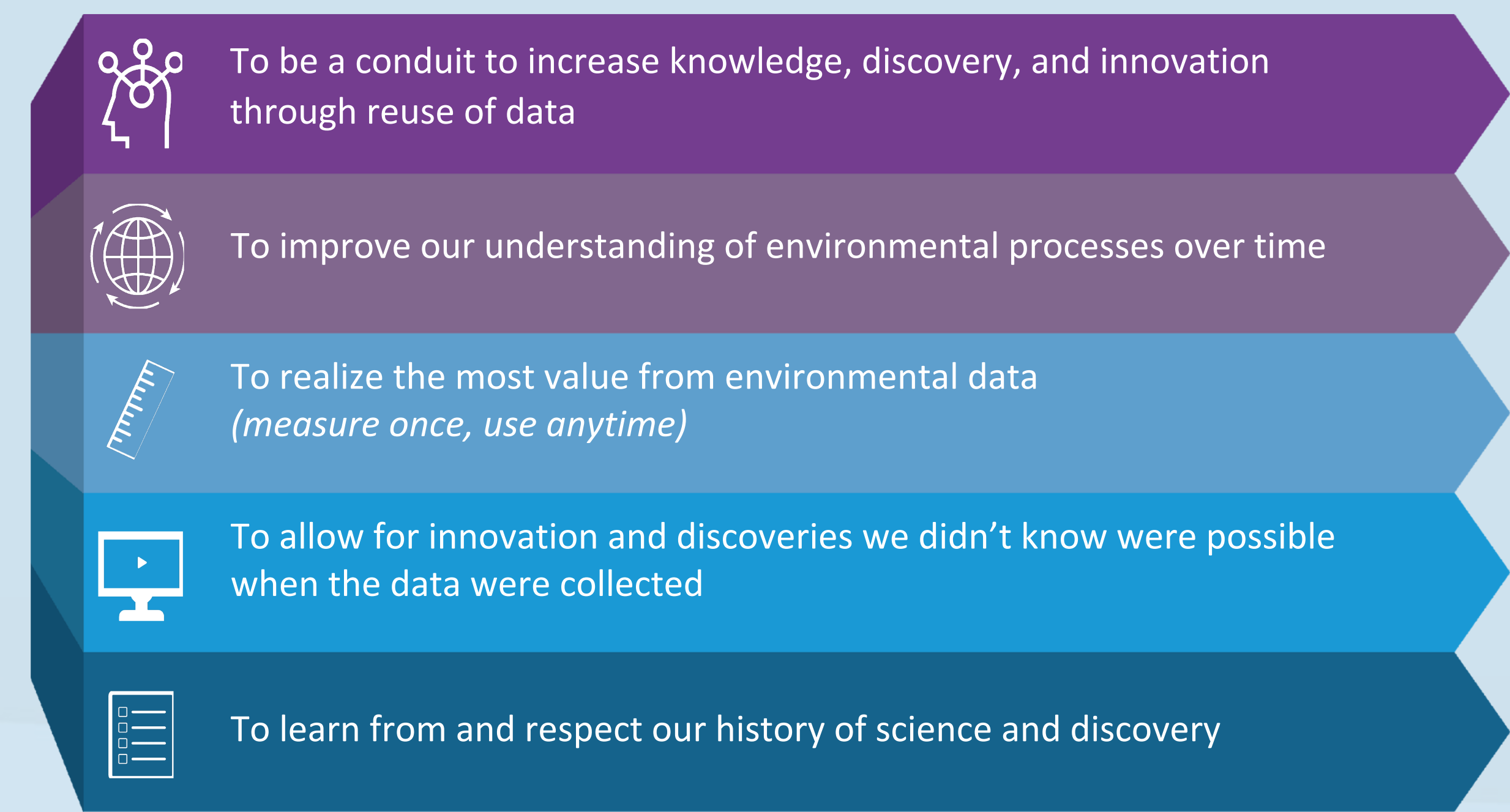


NCEI Data Stewardship

The Value of Data Stewardship

NCEI preserves and provides today’s data for tomorrow’s. The purpose of data stewardship is to apply rigorous analysis and oversight **to ensure these data are broadly available, independently understandable, and usable by future generations.**

- Data Stewardship is a priority for many reasons:



Legal Mandates Highlights

- Expanding Public Access to the Results of Federally Funded Research (PARR) OSTP Memorandum February 22, 2013
- Foundations for Evidence-Based Policymaking Act of 2018 – Title II: Open Government Data Act
- NOAA Administrative Order 212-15 Environmental Data Management Policy

NCEI is responsible for managing the Data Stewardship and Archive of NOAA’s environmental data

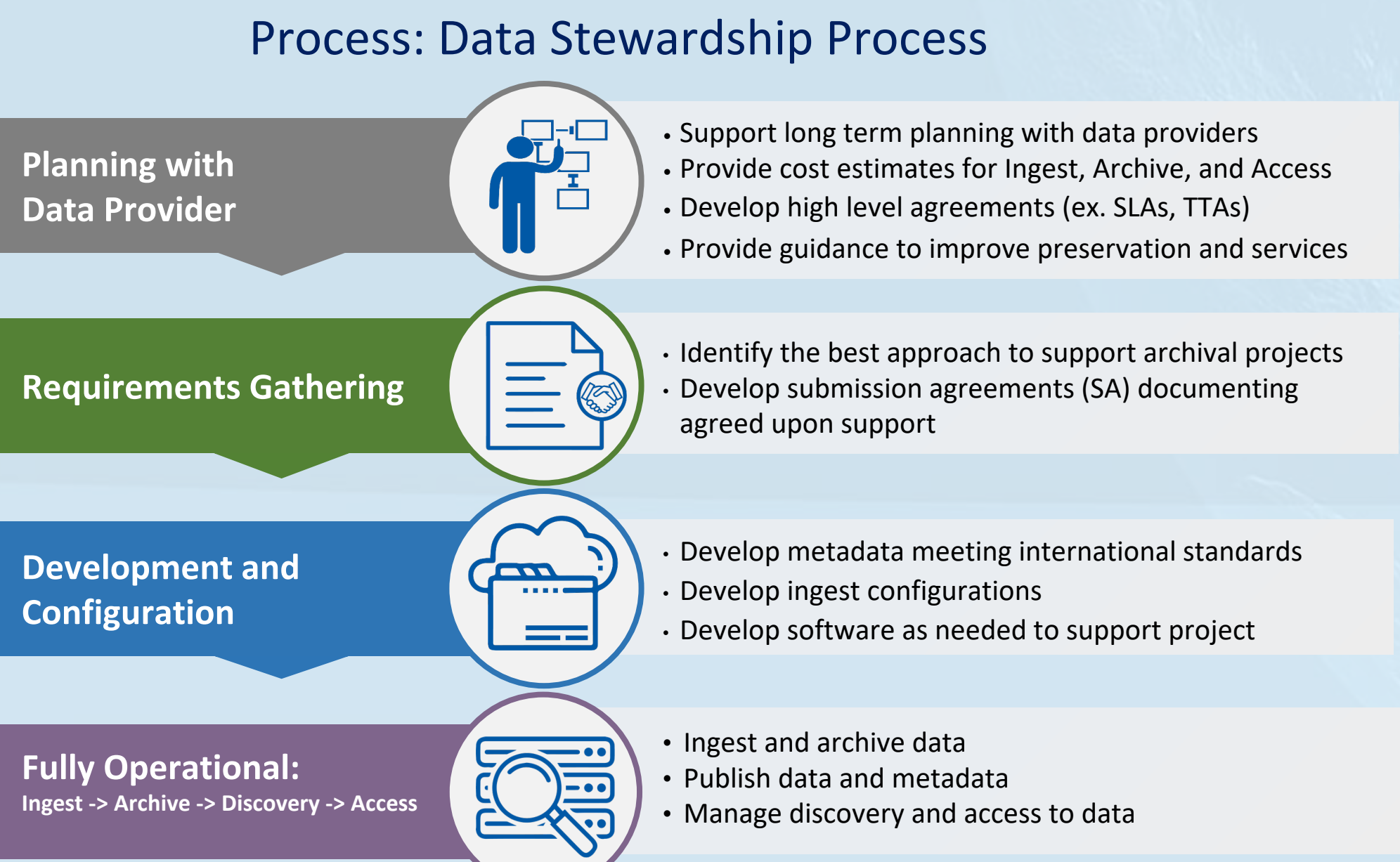
Fulfilling NCEI’s Data Stewardship Role

NCEI coordinates across LOs, the NOAA Library, NARA, and the international community to develop and maintain best practices in Data Stewardship.

Wilkinson, Mark D., et al. (15 March 2016). "The FAIR Guiding Principles for scientific data management and stewardship". *Scientific Data*. p. 160018. doi:10.1038/sdata.2016.18

NCEI Leadership in Data Stewardship

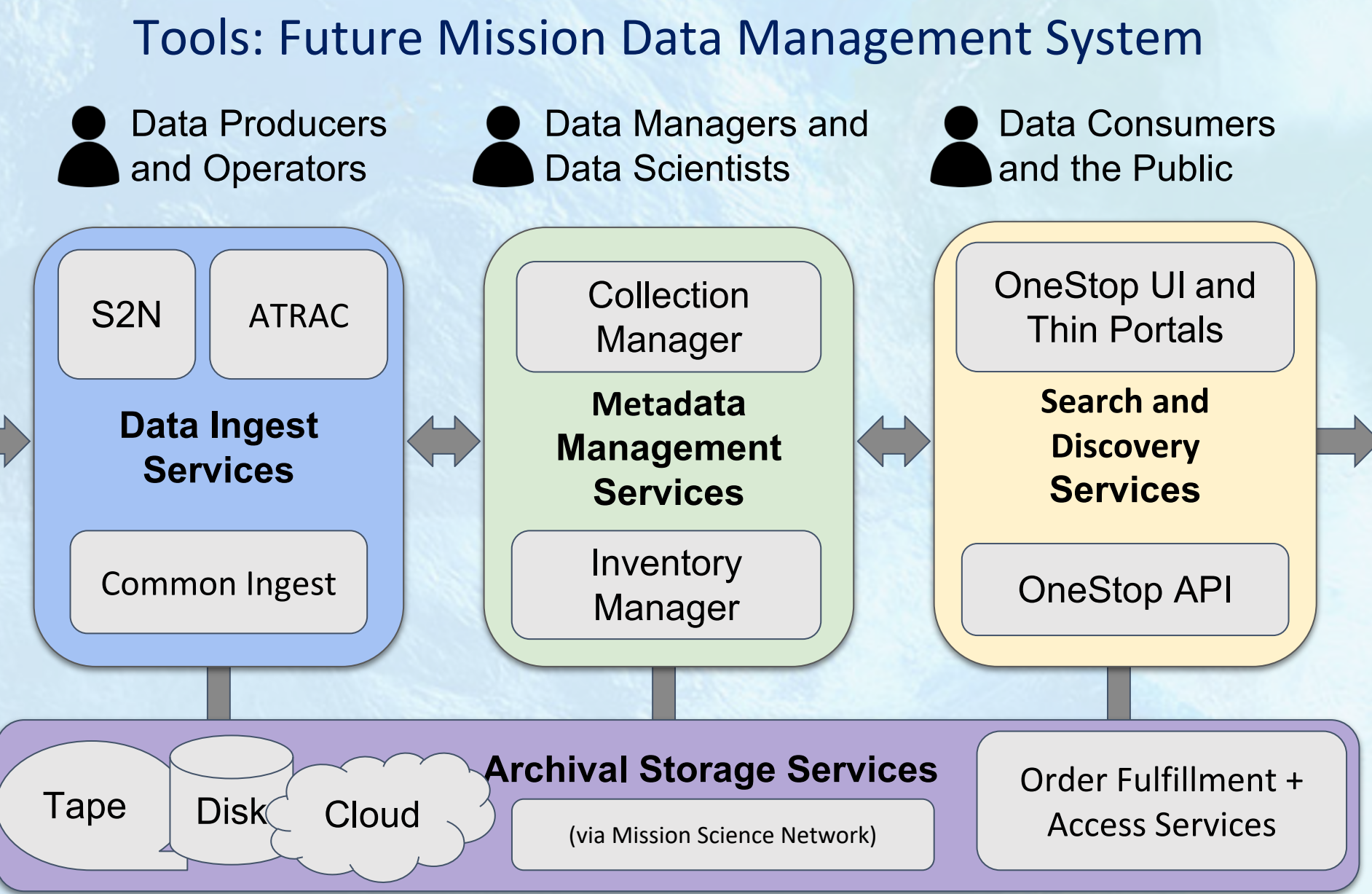
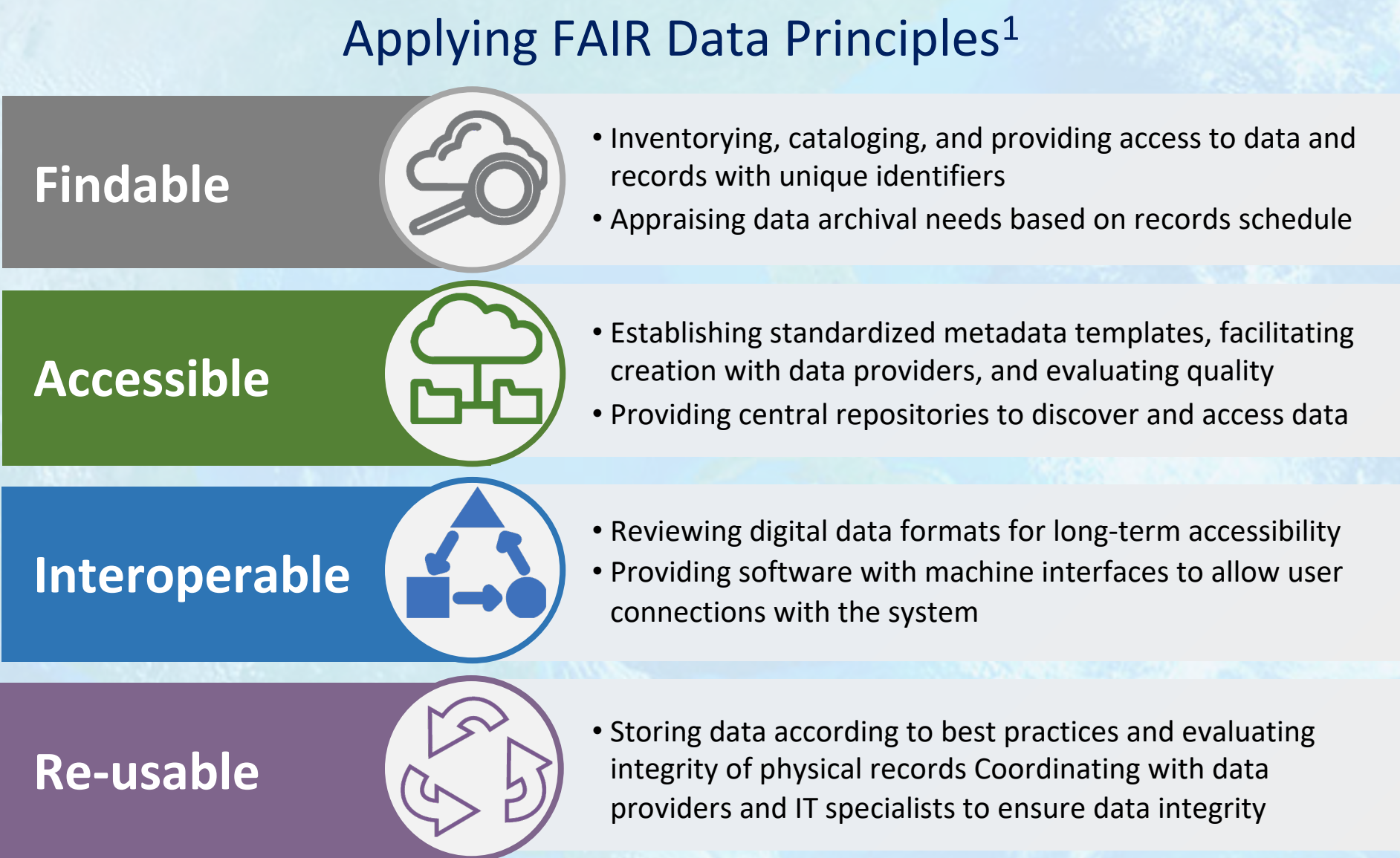
NCEI is NOAA’s Environmental Data Archive and a World Data Service Member in Meteorology, Paleoclimatology, Oceanography, and Geophysics



Evaluation: Data Stewardship Maturity Matrix

DSMM Defines Measurable, Five-Level Progressive Practices in Nine Quasi-Independent Key Components

Maturity Scale	Level 1 - Ad Hoc	Level 2 - Minimal	Level 3 - Intermediate	Level 4 - Advanced	Level 5 - Tailored
Key Component	Not Managed	Managed Limited	Managed Defined, Partially Implemented	Managed Well-Defined, Fully Implemented	Level 4 + Measured, Controlled, Audit
Preservability	The state of being preservable				
Accessibility	The state of being publicly searchable and accessible				
Usability	The state of data product being easy to understand and use				
Production Sustainability	The state of data production being sustainable and extendable				
Data Quality Assurance	The state of data product quality being assured/screened				
Data Quality Control /Monitoring	The state of data product quality being controlled and monitored				
Data Quality Assessment	The state of data product quality being assessed				
Transparency /Traceability	The state of being transparent, trackable, and traceable				
Data Integrity	The state of data integrity being verifiable				



Statistics: NCEI Data Stewardship - April 2019

- Physical Archives
 - 112 million pages of paper
 - 226,000 reels of film
- Digital Archives: 30+ PB with growth of ~2 PB per year
- Digital Data Discoverable through OneStop
 - 36,996 Collections
 - 2,386,333 Granules
- Delivery of Digital Data: 8+ PBs per year

