



NOAA CDR Program Update

W. Jesse Glance, Jr.
Program Manager

Center for Weather and Climate
NOAA's National Centers for Environmental Information

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National Centers for Environmental Information | Center for Weather and Climate





Focus of This Year's Meeting

- **Insights and Status** on NOAA's CDR Program (CDRP) and it's supporting Scientists
- CDR **User Engagement News** - including updates from International and U.S. Govt. agencies that coordinate / partner with CDRP
- **Increased Priority** for CDR User Engagement and high-value applications beyond traditional climate science research; in various sectors such as agriculture, water mgmt., energy, health, transportation, forestry, tourism, etc.
- **Best practices** for CDR Life-Cycle Management



2015 Annual Meeting Outline

DAY-1: NOAA CDRP Programmatics & Processes

DAY-2: Updates from the NESDIS/AA, and International & Federal Partner Plans & Activities relevant to CDRs

DAY-3: CDR End-Users & Applications

Surprise!

U.S. Department of Commerce

Gold Medal Award

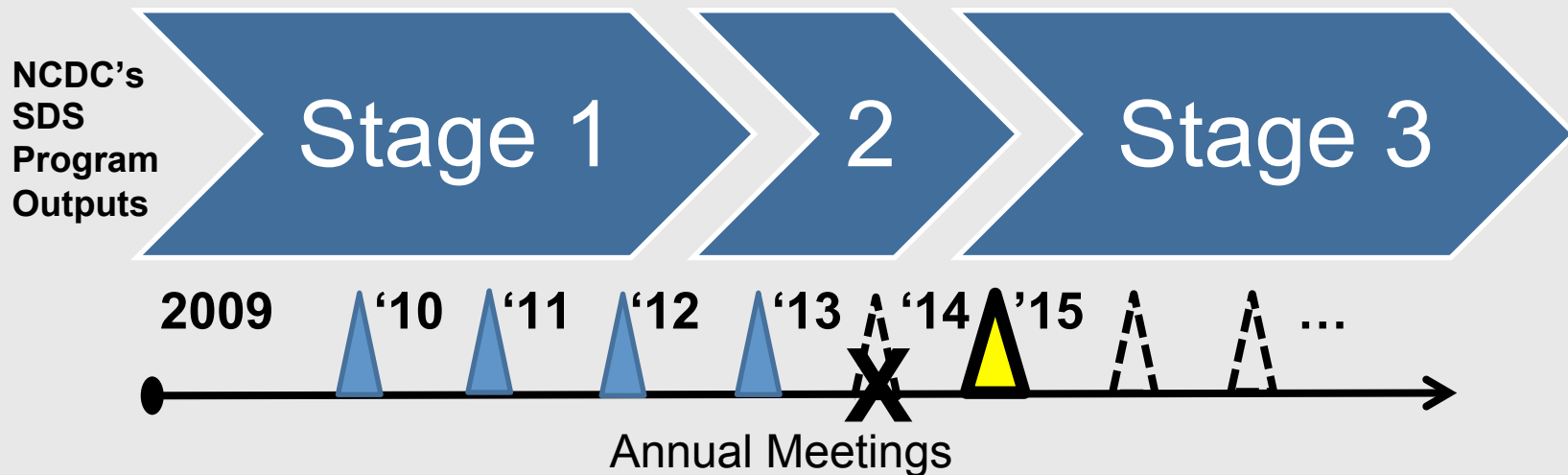
CITATION:

For creation and operational implementation of a new, extensible community standard for the production and preservation of climate data records.

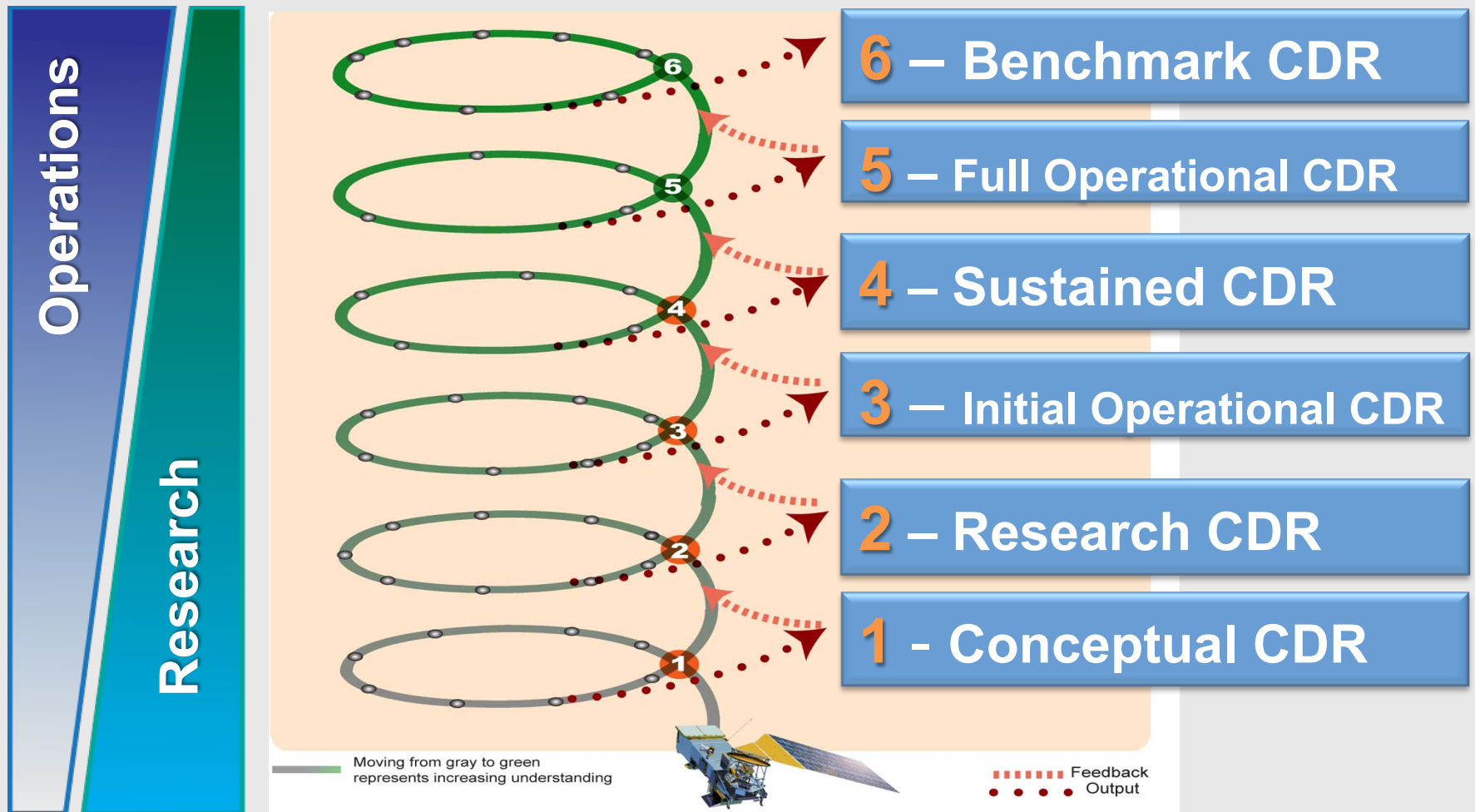


CDR Program is Maturing

- Program Evolution



NOAA CDR Operational Spiral Development

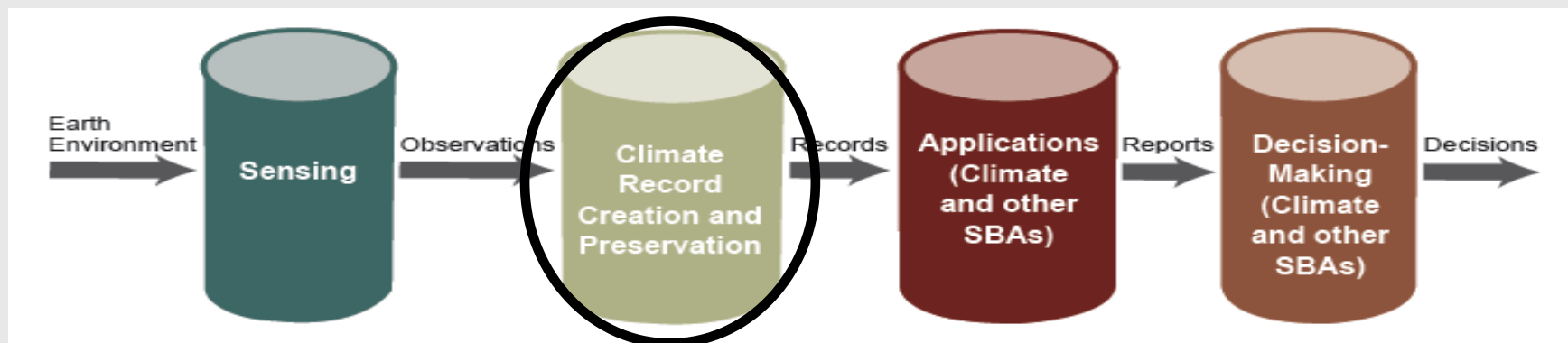


NOAA CDR Program (CDRP) – Stage 1

Annual Meetings #1-3

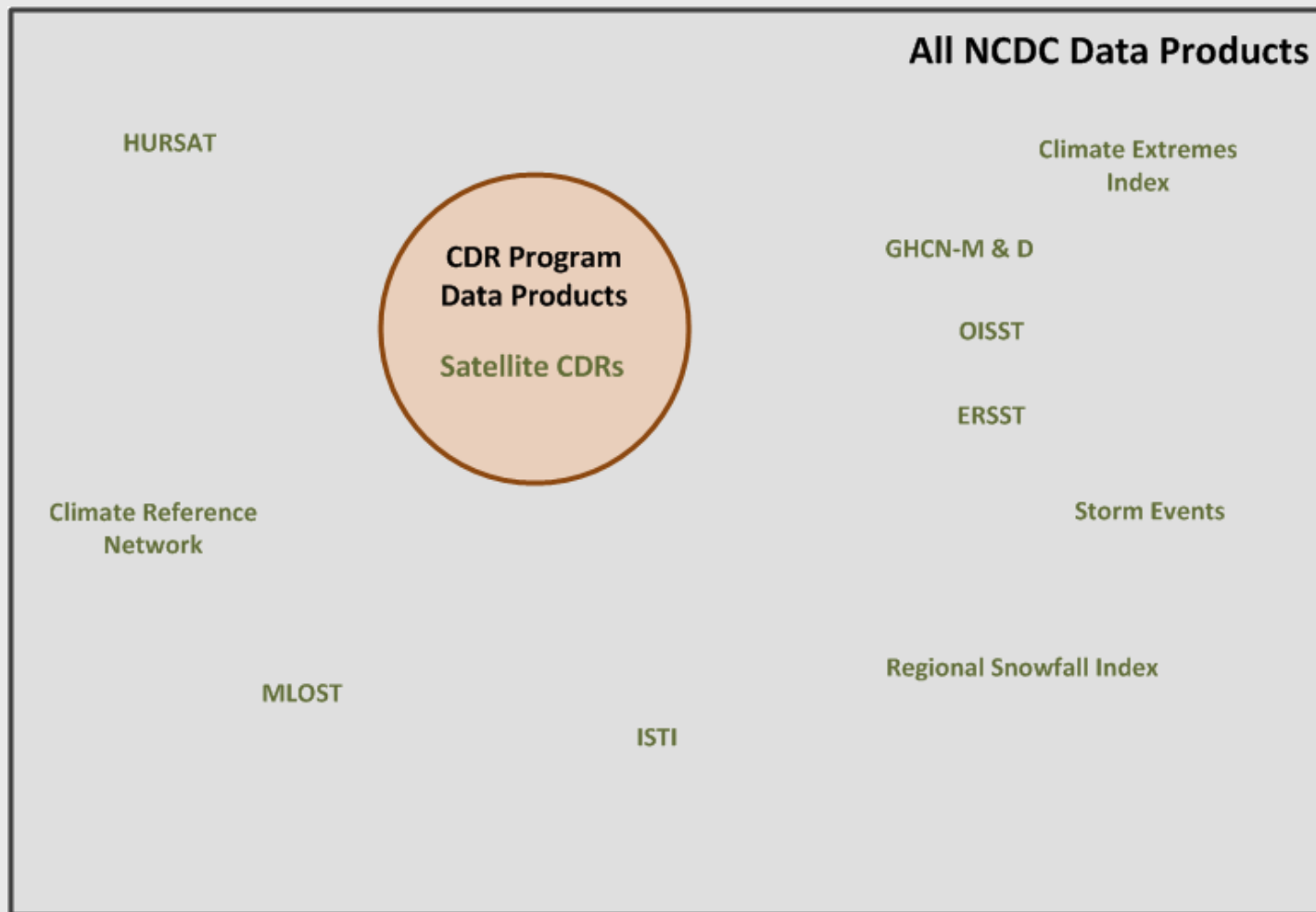
CDRP began in **2009** as an outgrowth of the National Climatic Data Center (NCDC) Science Data Stewardship (SDS) Program.

- Focus: **Essential Climate Variables** (ECVs); “**critical**” CDRs identified by international experts were top priority.
- **R2O** awards based on **best science** and **most mature** algorithms.
- **Grant competition** captured leading knowledge from the research community. (U.S. agencies, universities, private companies)
- CDRP **coordinated** with NASA, USGS, and international partners.



Stage 1

Product Scope: 2009 - 2011

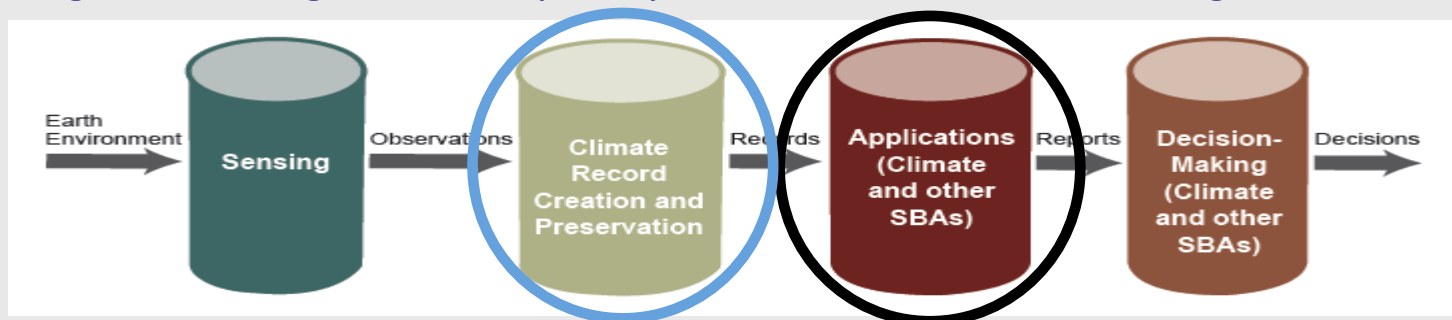


NOAA CDR Program – Stage 2

Annual Meeting #4

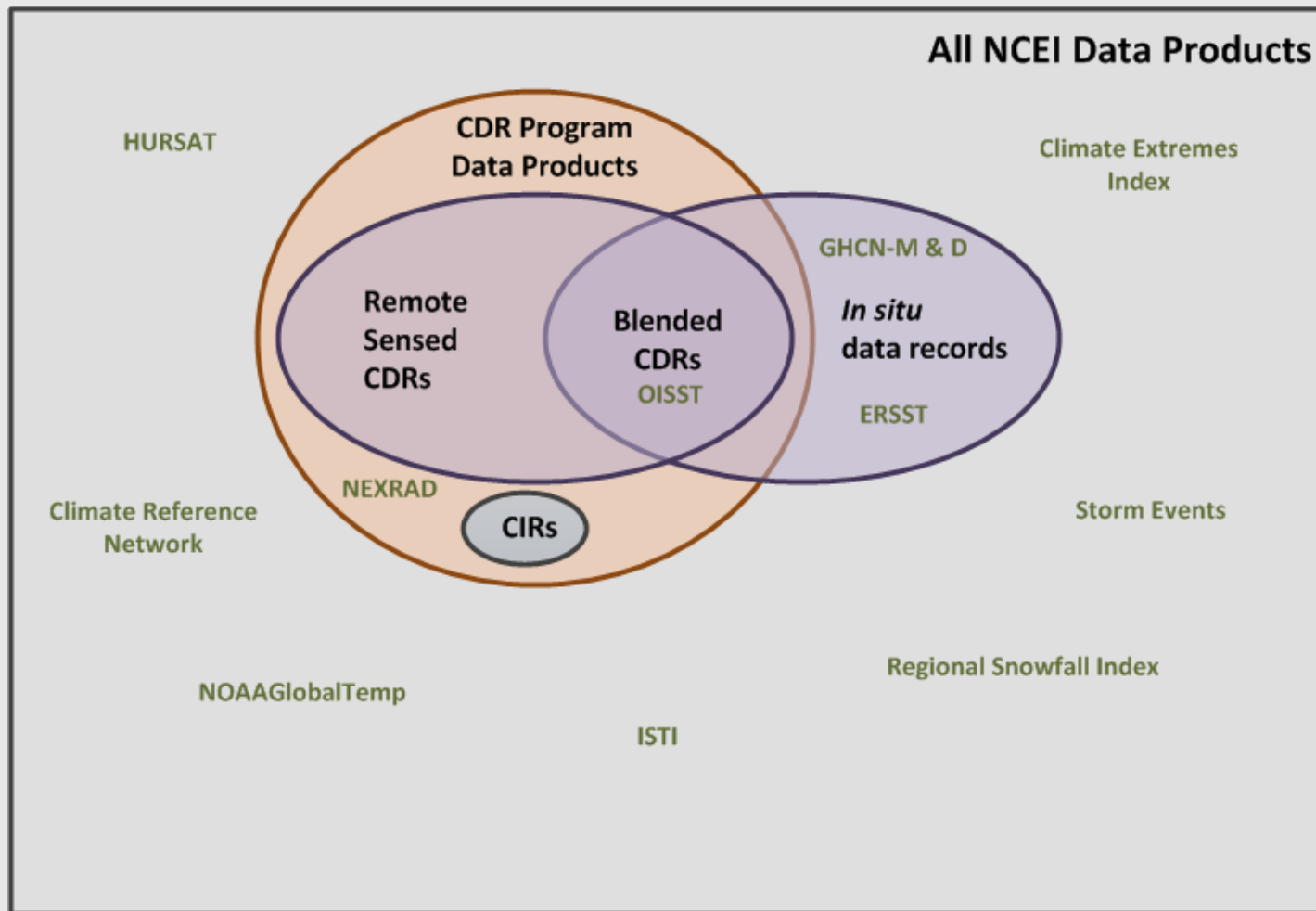
CDRP in **2013** Expanded its Target Users to Include non-climate research Applications & Users.

- Priority moved to “**best use**” regardless of Societal Benefit Area (SBA).
- Began **interactions with industry and public** to identify needs and prioritize CDRs capable of meeting them.
- Formalized **R2O processes**, cost-estimating, policies, and procedures for transition activities and information preservation.
- Began **CDR O&M** using **NOAA Contracts & IAAs** with other agencies, universities, and private industry with provisions for deliverables, configuration mgmt., and quality assurance, and user/usage statistics.



Stage 2

Product Scope: 2012 –2015

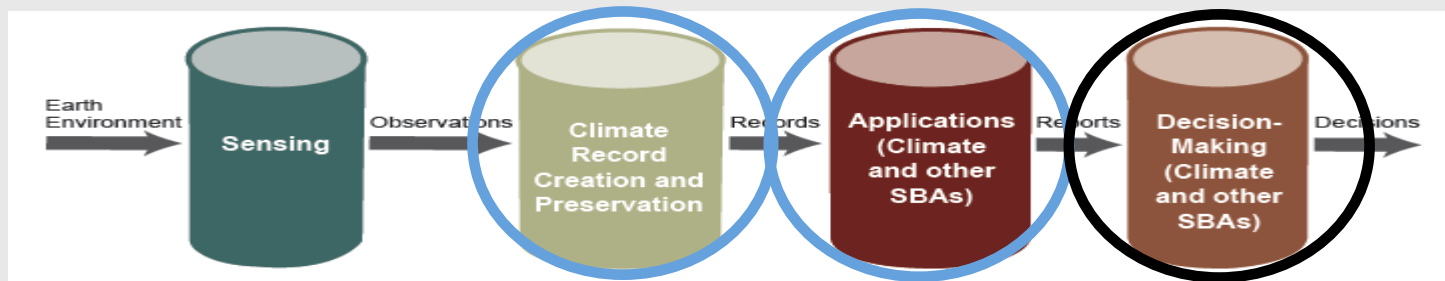


NOAA CDR Program – Beginning Stage 3

2015 Annual Meeting (*Now)

CDRP in **2015** is focused on: Sustaining NOAA's Operational CDRs and Users Requiring trusted environmental information products. (e.g. informed decision making, management, and climate applications including science)

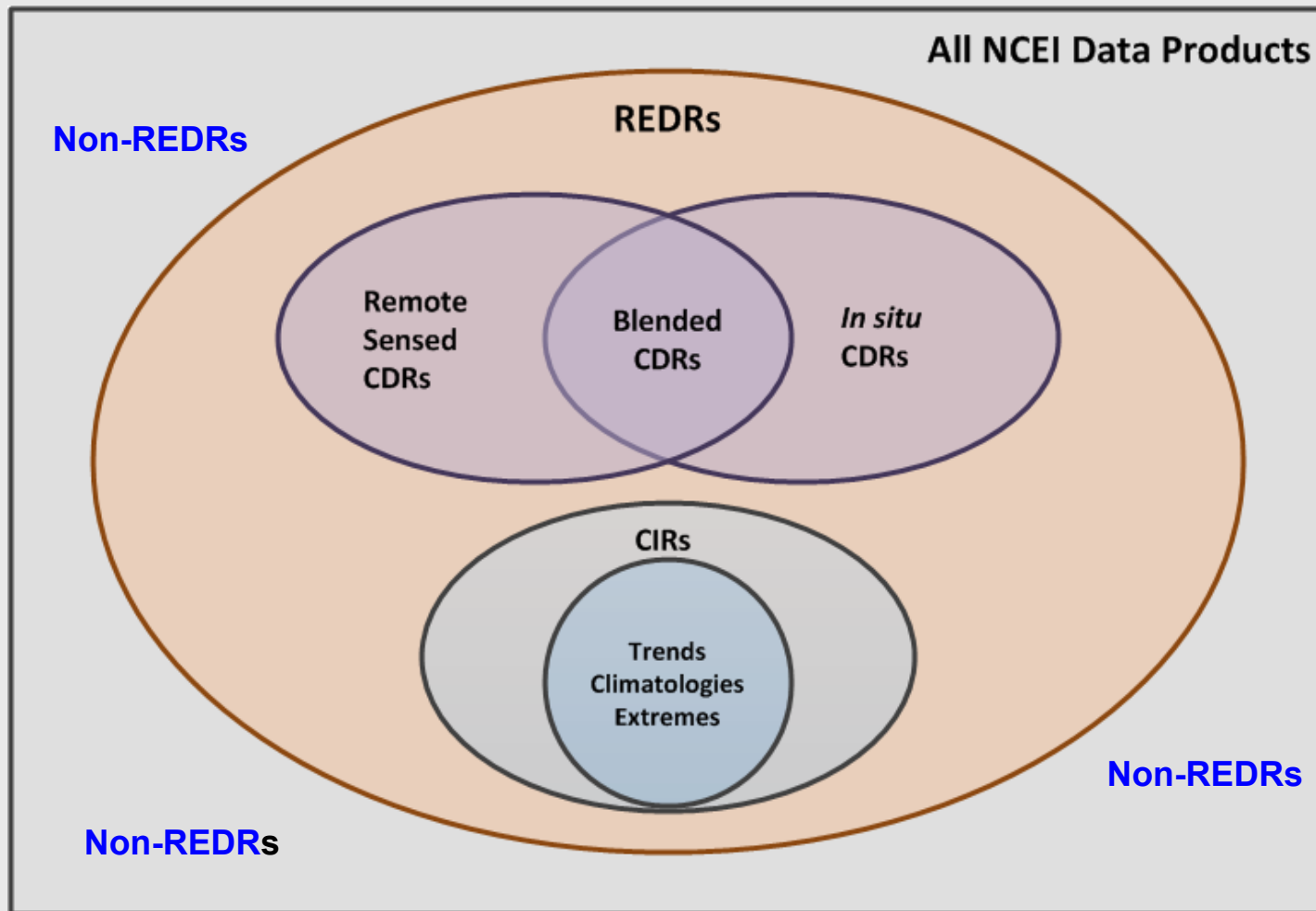
- Incorporating ***in-situ* and blended products** into the CDR portfolio to preserve those products for the future in addition to the satellite data products.
- **Developing Climate Information Products** that target User needs and requirements.
- Supporting decision-makers with lower-latency “Preliminary” or **ICDRs** that employ the most mature algorithms, but are not yet CDRs.
- Accelerating **high-demand, less scientifically maturity products**, e.g. NEXRAD weather radar reprocessing for hi-res precipitation CDRs/CIRs requested by Users.



Stage 3

Product Scope: 2016 +

Reference Environmental Data Records (REDRs)





Near-Term Major Activities

- **O&M (Sustainment)** for CDRs that Evidence Continued User Demand
- **End-User Application Projects** that Verify CDRs alone, or in combination with other Products, Can Meet Specified User Needs (may precede R2O)
- Complete the **R2O Transitions** Backlog
- Transition **Period of Record Extensions** to CDRs Using New Sensor Data (from SNPP/JPSS, NASA-GPM, METOP, etc.)
- With NOAA/NESDIS/OSGS and other Partner assistance, determine best path for attaining a **CDR re-processing capability**

User Needs Met are Society's Benefit

Priority areas



Agriculture and food security



Disaster risk reduction



Energy

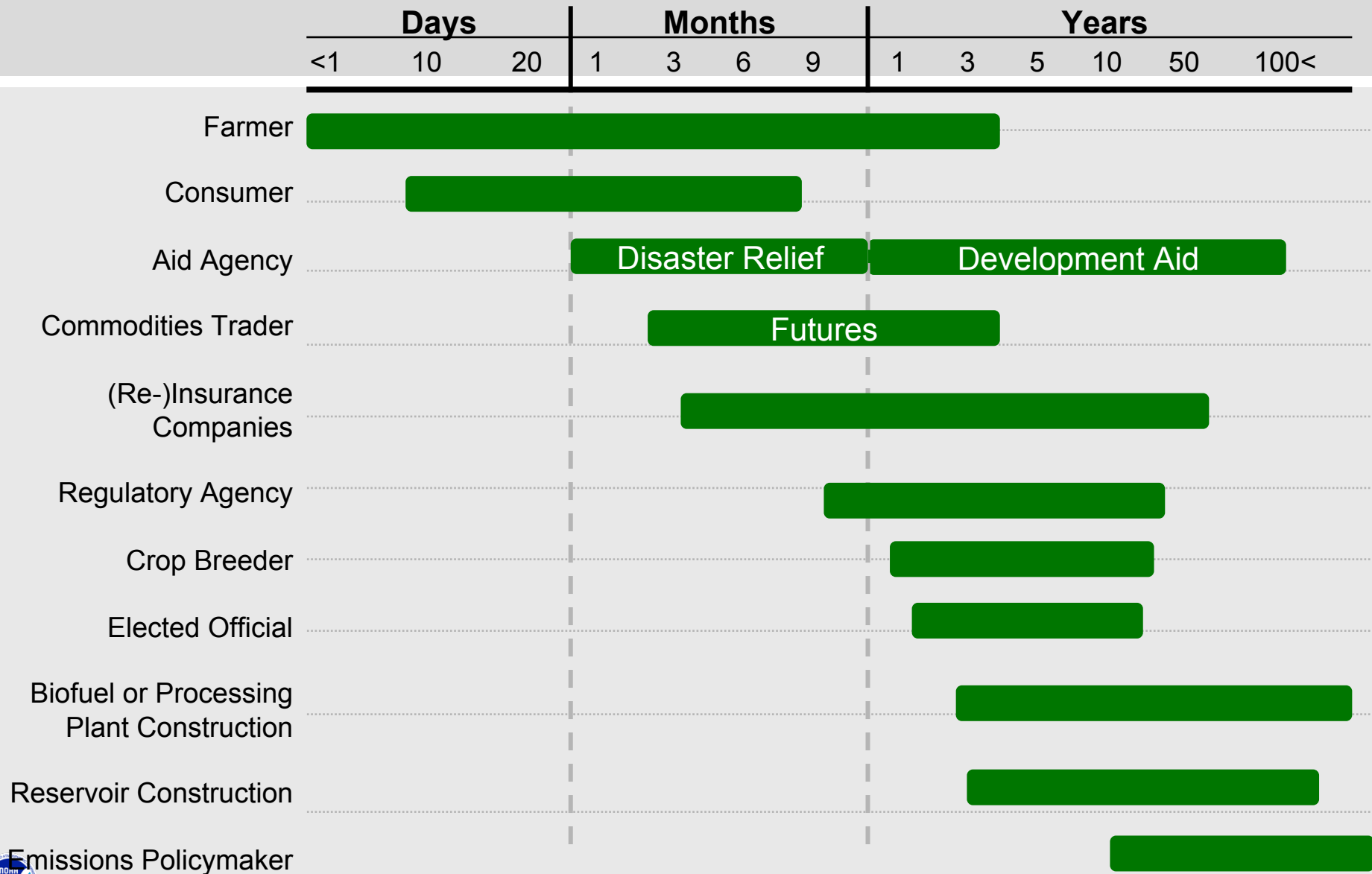


Health



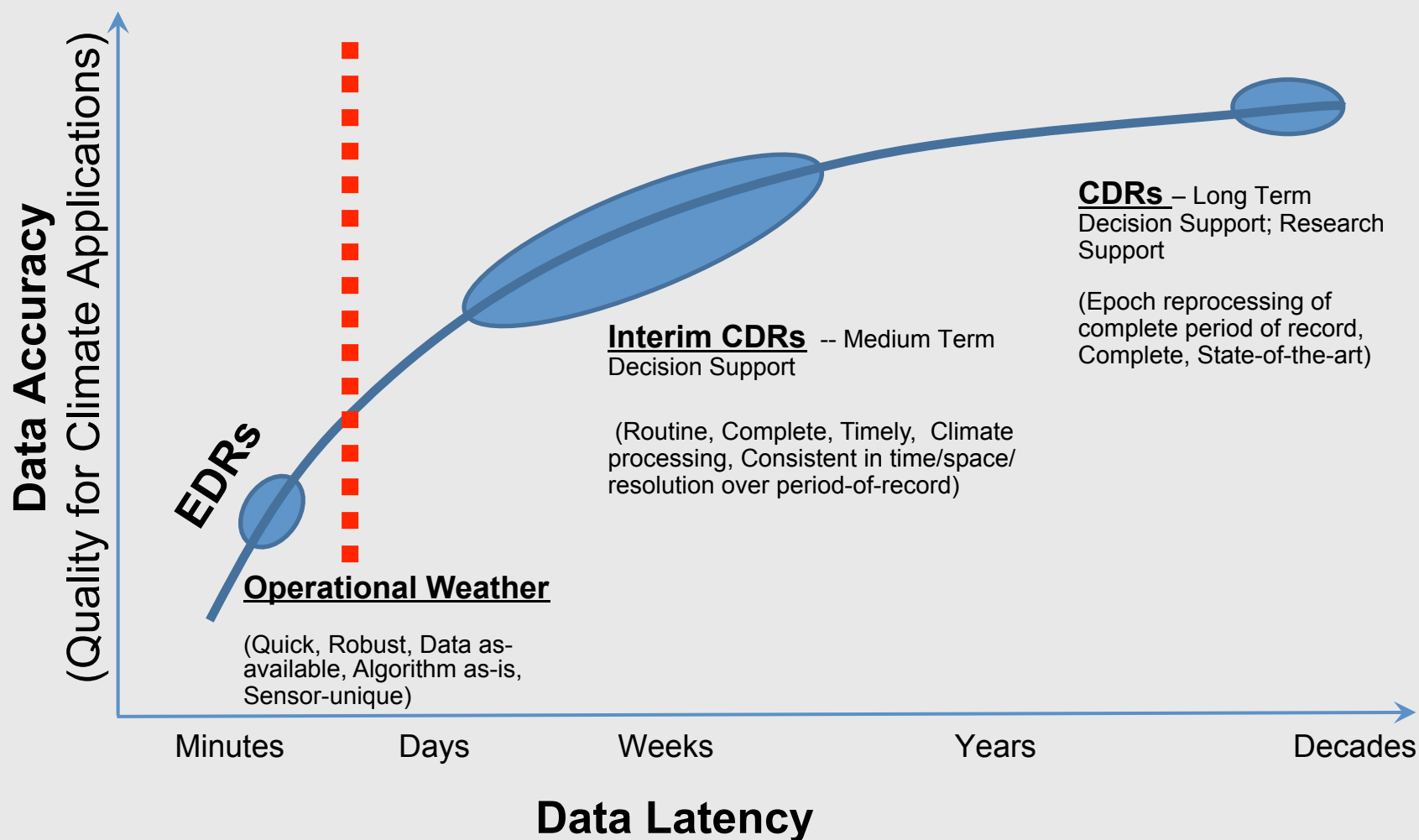
Water

Agricultural Stakeholders Temporal Scale

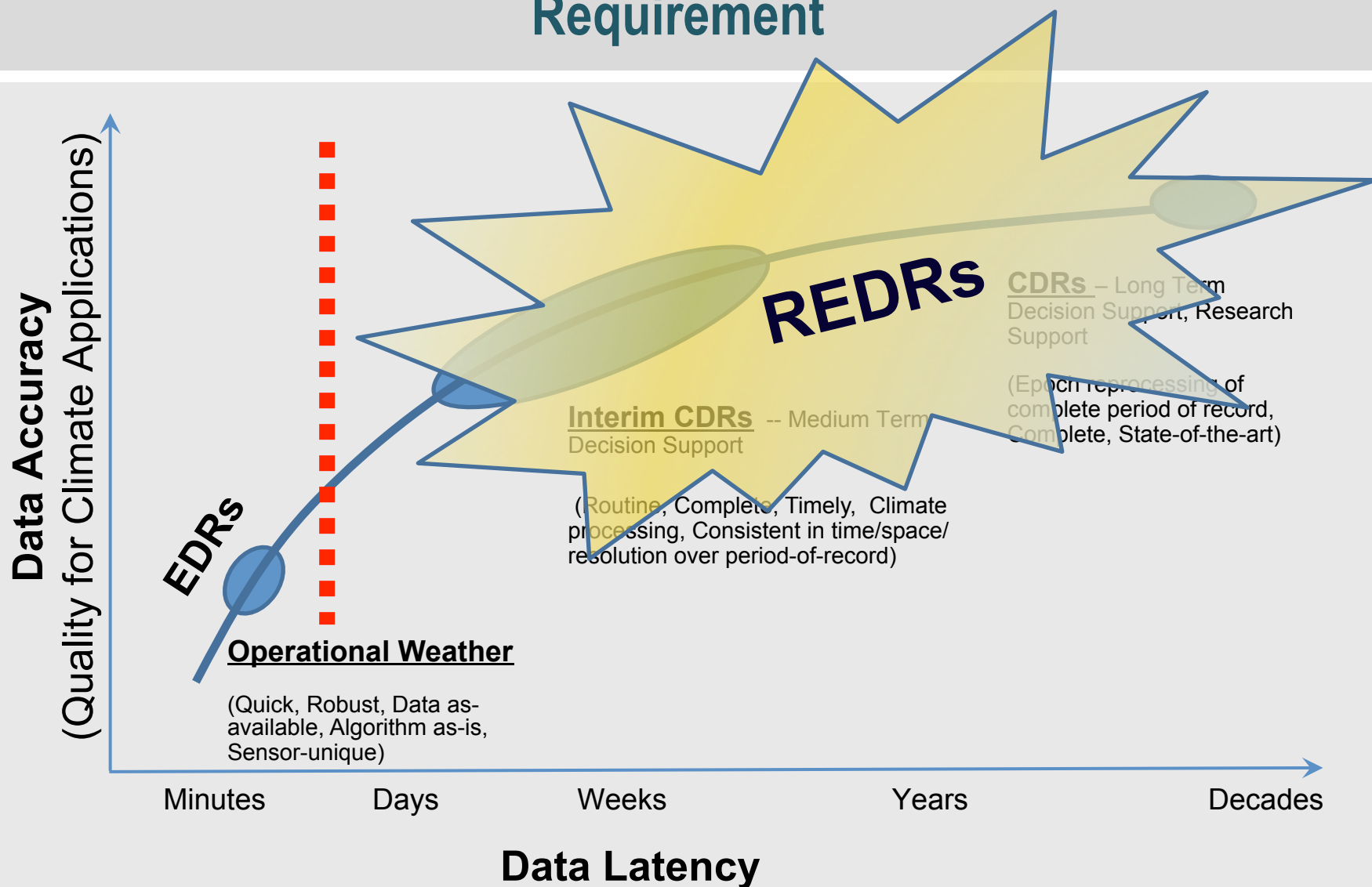


Accuracy vs. Latency

CDRs Have Higher Latency, but are Better for Long-Range Decisions than Low Latency Operational Weather Data Products



REDRs: Able to Meet Any Higher-Latency Application / Requirement





CDR Program's Vision - 2016 & Beyond

Meet the End-User's Need for Environmental Information by:

- **Making vital contributions to an emerging market for a new class of environmental information products.**
- Addressing User needs across **many Societal Benefit Areas (SBAs), including global climate change research.**
- Acknowledging some Users require **lower-latency products and are willing to sacrifice accuracy for decreased latency** (i.e. ICDRs and products derived from or blended with them).
- **REDRs**, which include NOAA's CDRs, that leverage CDRP and Partner experiences and lessons learned.



Conclusion

QUESTIONS?