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# Joint Center for Satellite Data Assimilation (JCSDA) Testbed Lessons

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# JCSDA Mission

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- Mission: To accelerate the use of satellite data in operational and research environmental models
  - Use more of the available satellite data
  - Use new data more quickly
    - Reduce from 2 years to 1 year the time between launch and operational assimilation
  - Use data in more environmental models
    - All partners (NASA, NOAA, DoD)
    - Standardization a key, e.g., CRTM



# JCSDA Components and Focus Areas

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- **Directed Research Initiatives**
  - Typically within agency
  - Near-term transition to operational use (1-2 years)
- **Federal Funding Opportunity**
  - Open Competition
  - Forward-looking (3-5 years out)

- **Focus Areas**
  - Radiative Transfer Modeling
  - Advanced Instruments
  - Ocean Data Assimilation
  - Climate
  - Clouds and Precipitation
  - Land Surfaces



# Some Lessons Learned

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- Success Stories

- Impact of Advanced Sensor data
  - AIRS, COSMIC, WindSat, etc.
  - “Inside” Relationships help
- Community Radiative Transfer Model
  - Made possible many of the advanced sensor triumphs; reducing cost and effort for all partners
- NOAA-NASA Common DAS

- Challenges

- Balance of research and implementation resources
  - Research results may far outpace implementation, for example in Land Surfaces
- DAS and Model differences
  - Not all partners benefiting equally from successes
  - Differing missions/priorities a factor
- Access to operational (parallel) HPC environments for external partners
  - Too little of it;
  - Security, access, training issues