

S5: Information Technology For Science Missions


SUBTITLE

Presenter: Joe Coughlan (in place of Nikunj Oza)

MD: SMD

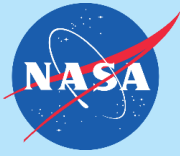
Date: 06/27/2017

TIME: 14:30 PDT

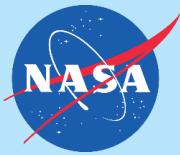


NOTE: All presentations will undergo a review by the MDL and then by ITAR/EAR.

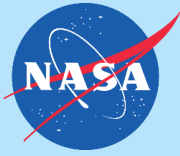
INNOVATION | PARTNERSHIP | COMMERCIALIZATION



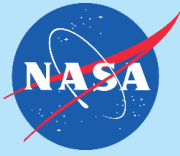
- Simulation
 - high-end computing
- Data
 - Observational, model, and/or simulation data
 - Transform into useful science, societal benefits
- Missions
 - Modeling for mission design
 - Decision support
- Generally: Information Technology to let humans spend more time doing science, less time doing “grunt work.”



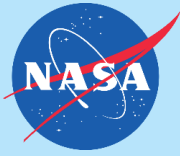
- Increase “bang-for-the-buck” in NASA’s supercomputing investment through novel hardware and software technologies
 - Decrease the barriers to entry for prospective supercomputing users.
 - Minimize time-to-solution, cost for given level of supercomputing performance on NASA applications, increase efficiency
- Decision Support Tools to increase utilization and societal benefits of Earth science data
 - Component framework that can be used to build multiple remote sensing driven DSTs
- Science Data Processing, Discovery, and Analysis
 - Improvements needed for parallelization of analysis tools, improvement data management and file systems, and others.



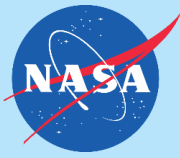
- Integrated Science Mission Modeling
 - Improved modeling of the science mission targets and engineered systems to facilitate human mission design teams' work
- Fault Management (FM) Technologies
 - Technologies to allow better estimation and control of FM complexity and development costs, improved FM designs, and accelerated advancement of FM tools and techniques



- Information Technology is widely used and developed
 - Universities
 - Small businesses
 - Large businesses
 - Research labs
- Many developments can be used for multiple problems, problem areas
- Desire for increased collaboration between government and businesses in “innovation space.”
- Science data and information have minimal sharing restrictions



- NASA Science Mission Directorate: <http://science.nasa.gov>
- NASA's Earth Science Technology Office (ESTO): <https://esto.nasa.gov>
- NASA Earth Exchange: <https://nex.nasa.gov/nex/>
- NASA High-End Computing Program: <http://www.hec.nasa.gov>



The End

THANK YOU FOR YOUR PARTICIPATION!

NOTE: *This presentation will be accessible through the Industry Day website.*