**The GES DISC Approach**

- **Engage Users**
  - Communications must be frequent
  - Dedicated points of contact to gather/provide information are identified
- **Build economically**
  - Look for reuse, ways to save funds
  - Willing to take calculated risks; Otherwise low risk
- **But also, build to integrate new technologies**
- **Engage employees**
  - Ensure that employees realize the value of their contributions
  - Treat all employees equally

We will not: Build it and they will come.
We will: Build it because they came (collaborating on mutual interest)

**What We Do**

- **User Support**
  - Provide user support
  - Provide training
- **Mission Support**
  - Support mission needs
  - Build tailored, archive, distribution, service systems to requirements of new project
  - Build.io
- **Science Engineering**
  - Lead system architecture: planning/implementation
  - Implement and maintain flexible system tools and services to enhance data usability, to accommodate evolving user needs
  - Employ advanced SW Engineering techniques (Aygile Methodologies)

**What We Do**

- **Infrastructure**
  - Perform System Administration (upgrades, patches, installations, backups, etc.) for main computers and database systems
- **Security**
  - Web, system configuration management
- **Virtual Machine**
  - Support SA
- **Applications**
  - Apply system monitoring tools to enhance operations efficiency
- **Management**
  - Manage a diverse staff and set of functions: Contracts, cooperative agreements, budgets, ~60 people, new business, system ownership, etc.

** abbreviated**

**Stewarding Mission Data**

**Giovanni** - Data Discovery, Visualization and Exploration
- Winter: public search and archives
- Spring: Simple Subset Wizard – Cross DISC effort to provide subsetting
- Summer: Quick and Open (Q&O) - Data Recipes
- Fall: Open Access Data Services (OAD) - Open Access Data Services (OAD)
- Winter: Data Products
- Spring: Data Redundancy - Submit decided measurements from data products
- Fall: Applications Contributions: Applied Remote Sensing Training (ARDSIT); Hydrology (DaVinci); USDA (World Board); Public Health
- Summer: User Registration
- Fall: Digital Object Identifier and Landing Pages
- Winter: Data Stewardship
- Spring: Caching
- Summer: Cloud applications
- Fall: Unified User Interface

**Goddard Earth Sciences Data and Information Services Center (GES DISC)**

- **Atmospheric Composition**
  - Carbon Dioxide Monitoring and Distribution System (CDMS)
  - Observation Data Distribution System (ODDS)
  - Atmospheric Trace Gas Observation Network (ATGON)
- **MEaSUREs**
  - MEaSUREs Surface-observed Trends (NEXUS)
  - MEaSUREs Time Series Data Clustering (TSC)
- **JPSS**
  - JPSS Data Products
- **EOSDIS**
  - EOSDIS Product Catalogs
- **Landsat**
  - Landsat Data Service
- **Committee on Earth Observation Satellites (CEOS)**
  - CEOS Data Access and Services

**Leadership Activities**

- **EDSGW Participation**
  - Leader: Virtual Collections (Canvas)
  - Team size: 6
- **JPSS**
  - JPSS Data Products
- **Giovanni**
  - Giovanni Data Products
- **MEaSUREs**
  - MEaSUREs Data Products

**Current Operational Services/Tools**

- **Giovanni** - Data Discovery, Visualization and Exploration
- **Winter**
  - Public search and archives
  - Simple Subset Wizard – Cross DISC effort to provide subsetting
- **Data Recipes**
  - Open Access Data Services (OAD) - Quick and Open (Q&O)
  - Data Redundancy - Submit decided measurements from data products
  - Applications Contributions: Applied Remote Sensing Training (ARDSIT); Hydrology (DaVinci); USDA (World Board); Public Health
  - User Registration
  - Digital Object Identifier and Landing Pages
- **Data Stewardship**
  - Caching
  - Cloud applications
  - Unified User Interface

**Best Practices**

- **Implement in response to user driven needs**
  - User satisfaction
  - User feedback, user surveys, science meetings
- **Seek opportunities for collaboration**
  - EOSDIS drivers, but also new shareable initiatives
- **Strategically utilize technology to enhance efficiency in the face of growing archives and number of users**
  - Rapidly understand forward looking relevant information technologies, but also engage science and social sciences experts to foster new research and applications to better understand the needs, and improve GES DISC services
- **Publish results for the betterment of information science**

**Successes**

- **Up to date on all Mission reprocessing and documentation**
- **Successfully released first products produced for newest missions:** GPM, OCO-2, SNPP
- **Completed transition to dynamic web page capability, driven by EMD web documentation**
- **Released new version of Giovanni (smoothing maps, downloading GeoTIFF maps, etc.)**
- **Delivered the first version of Unified User Interface with support for faceted navigation**
- **Completed population of HDF5s data and documentation into preservation system**
- **Other datasets in the works:** RS, MODIS Level-2
- **Deployed User Registration for GES DISC services and data access**
- **Recovered data include:** Nimbus, others from 1960’s vintage media.
- **GES DISC is now a recognized data repository by Scientific Data, an open-access, peer-reviewed journal for descriptions of scientifically valuable data sets**

**Challenges**

- **Efficiently adapting potentially useful advancing technologies to specific problems**
- **Facilitating science research or the masses, based on a handful of use cases**
- **Rapidly responding to the needs of users needs for value added products, tools, and services**
- **So much to do... so little time to do it.**