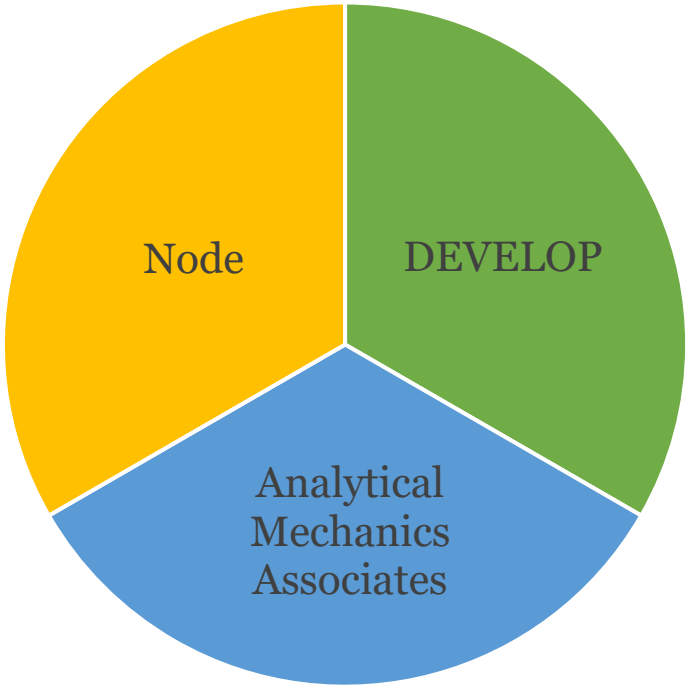
DEVELOP Orientation

Module 1. Programmatic Foundations

EARTH ACTION

First Week of the Term

- Week 1 is focused on getting to know each other, the program, and kicking off your project.
- For your project, you will begin literature review, familiarize yourself with the work plan, brainstorm your project's methodologies, and begin exploratory data acquisition.
- Orientations this week fall into three categories:
    - **Analytical Mechanics Associates** – AMA is your contracting employer, and this orientation covers logistics and company-specific systems, tasks, requirements, etc.
    - **DEVELOP** – this introduces you to NASA DEVELOP, provides information about the people you will interact with, resources available to you, federal regulations and requirements, and insight into what you will be doing.
    - **Node** – learning about your node, its history, your local team, and resources available to you.
- Your Lead is your go-to person when you have questions. If they can't answer a question, they will point you to the right person to reach out to!



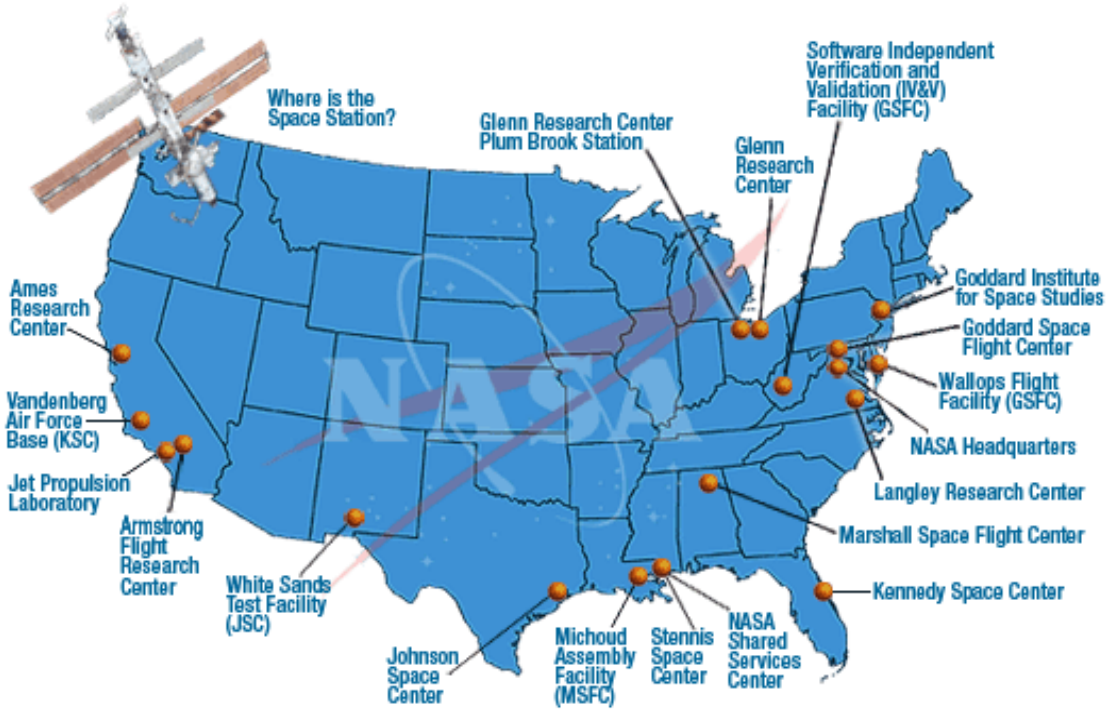
By The Way

It's typical that during the orientation overload, you will forget things. A best practice is to **take notes** and refer back to the materials throughout the term!

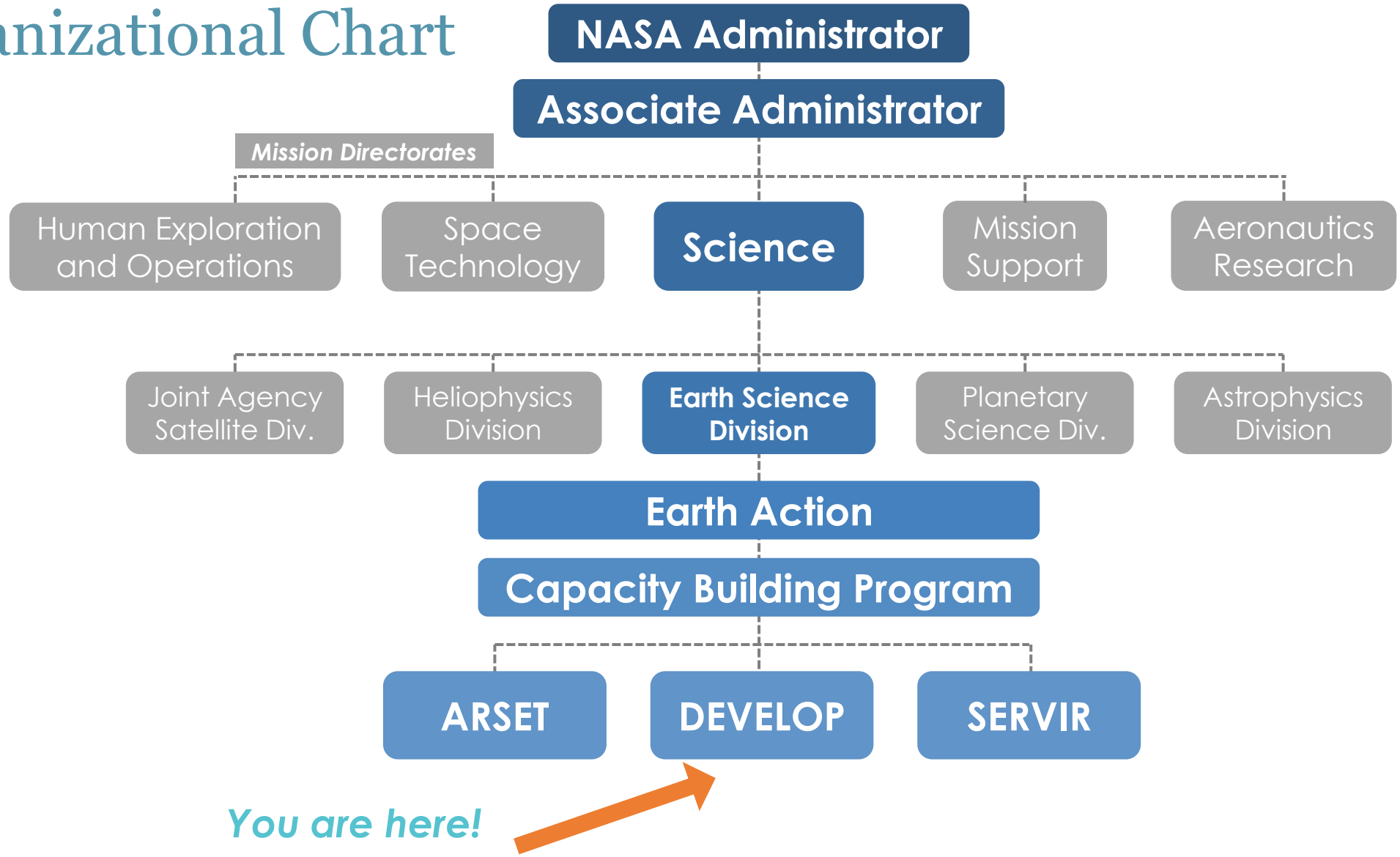
NASA History

"An Act to provide for research into the problems of flight within and outside the Earth's atmosphere, and for other purposes."

- With this simple preamble, the US Congress and President Dwight D. Eisenhower established the National Aeronautics and Space Administration on July 29, 1958.
- NASA began operations on October 1, 1958.
- It absorbed into itself the earlier National Advisory Committee for Aeronautics (NACA).
- Today, NASA has 10 Centers and multiple facilities around the country.



NASA Organizational Chart



NASA Leadership

NASA Administrator	Janet Petro (ACTING)
Associate Administrator	James Free
Deputy Associate Administrator	Casey Swails
Science Mission Directorate	Nicky Fox, Ph.D.
Earth Science Division	Karen St. Germain, Ph.D.
Earth Action / Applied Sciences Program	Tom Wagner, Ph.D.
Capacity Building Program	Nancy Searby, Ph.D.
DEVELOP National Program	Kenton Ross, Ph.D.

By The Way

Knowing key NASA leaders is important because you will see these people at conferences and events!


Janet Petro


James Free


Casey Swails


Dr. Nicky Fox


Dr. Karen St. Germain


Dr. Tom Wagner

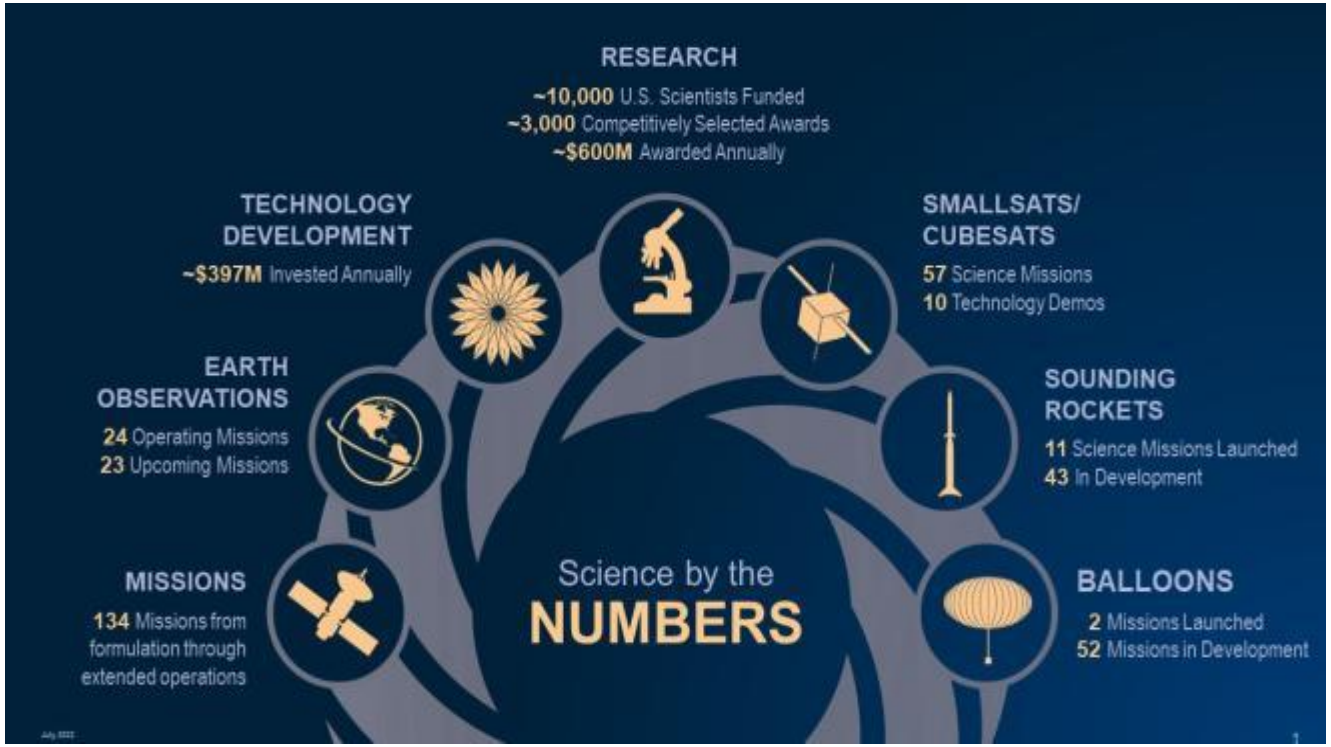

Dr. Nancy Searby


Dr. Kenton Ross

NASA Organization Chart: http://www.nasa.gov/about/org_index.html#.VBNBWvldWbM

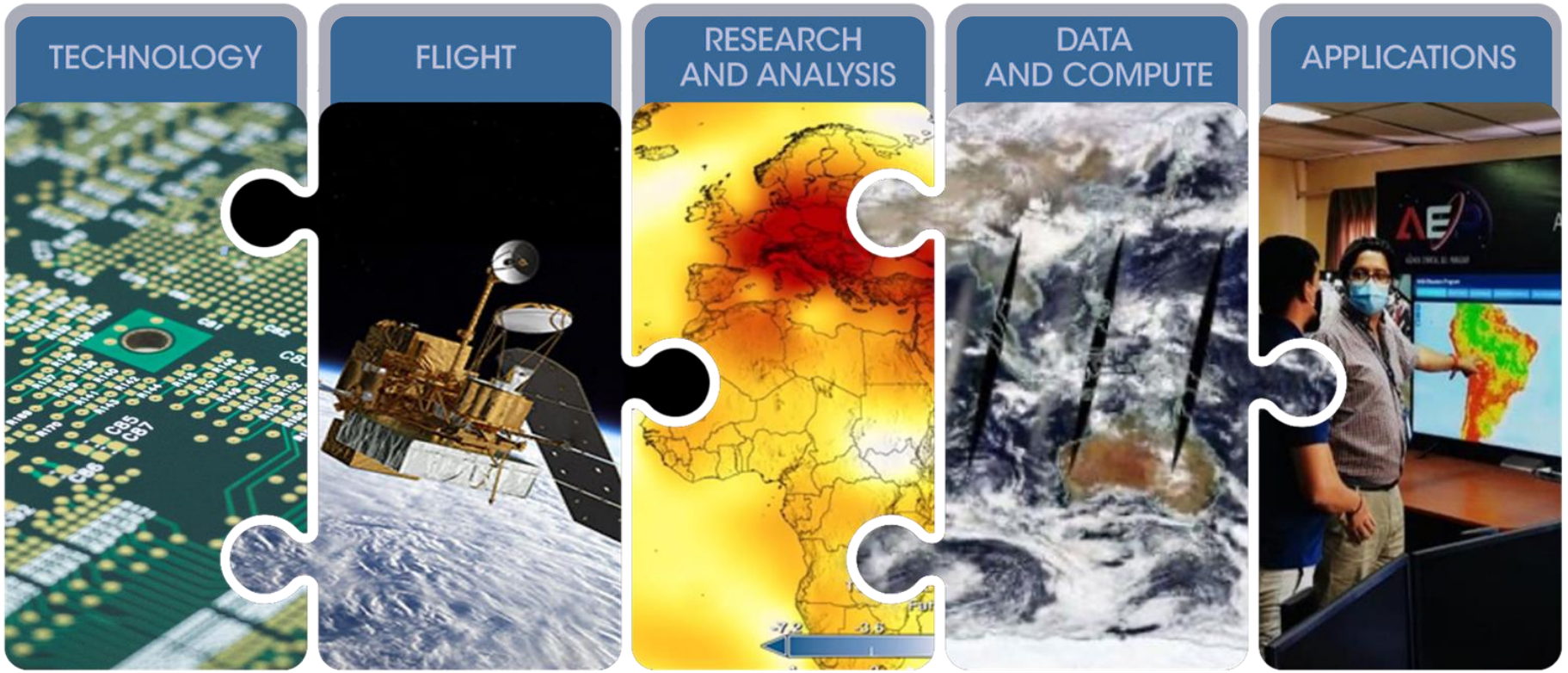
Science Mission Directorate

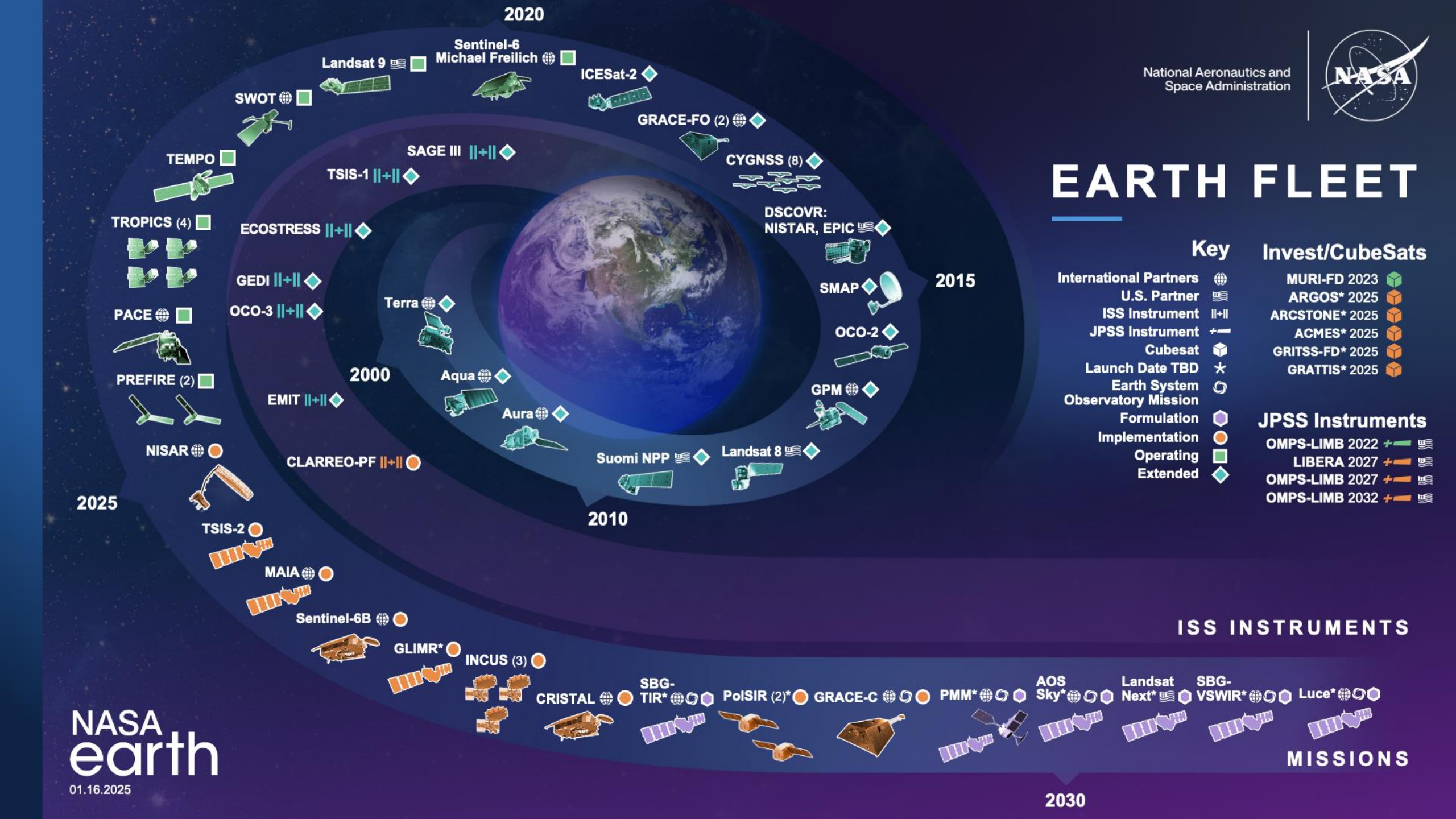
- Science is interconnected; no important question stands alone.
- The **Science Mission Directorate** (SMD) is an organization where discoveries in one scientific discipline have a direct route to other areas of study. This flow is something extremely valuable and is rare in the scientific world.
- SMD seeks to understand the origins, evolution, and destiny of the universe and to understand the nature of the strange phenomena that shape it by…
  - Engaging the Nation's **science community**
  - Sponsoring **scientific research**
  - Developing and deploying satellites and probes in collaboration with NASA's partners around the world to answer **fundamental questions** requiring the view from and into space



Earth Science Division

Using the global vantage point of space, ESD builds fundamental, scientific knowledge about Earth and how it is changing. ESD advances understanding of Earth as an integrated system and develops and tests applications that deliver direct societal benefit. It has five lines of business:





National Aeronautics and Space Administration

NASA

EARTH FLEET

Key

- International Partners
- U.S. Partner
- ISS Instrument
- JPSS Instrument
- Cubesat
- Launch Date TBD
- Earth System Observatory Mission
- Formulation
- Implementation
- Operating
- Extended

Invest/CubeSats

- MURI-FD 2023
- ARGOS* 2025
- ARCSTONE* 2025
- ACMES* 2025
- GRITSS-FD* 2025
- GRATTIS* 2025

JPSS Instruments

- OMPS-LIMB 2022
- LIBERA 2027
- OMPS-LIMB 2027
- OMPS-LIMB 2032

NASA earth

01.16.2025

Earth Action

Earth Action helps people across the world use NASA data to solve big problems right here on Earth.

Leadership

Dr. Tom Wagner, Director

Dr. Emily Sylak-Glassman, Deputy Director

- **Capacity Building Program**: Provides support to help institutions and individuals make better decisions about our environment, food, water, health & safety
- **Thematic Application Programs**: Strategically invests in projects and teams that develop innovative and practical uses of Earth observations & lower the barriers to using Earth science information
- **Mission Engagement**: Enables the early and ongoing involvement of users and their priorities throughout the lifecycle of Earth science satellite and instrument missions
- **Cross Cutting:** Initiatives that span both Applications and Research & Analysis including NASA's Earth Information Center, US Greenhouse Gas Center, the Satellite Needs Working Group, and Commercial SmallSat Data Acquisition

By The Way

You might still hear this referred to as NASA's Applied Sciences Program

Earth Action Elements

Earth Action is structured around thematic application areas that routinely hold solicitations and have active investment portfolios at NASA HQ:

HEALTH & AIR QUALITY

John Haynes

DISASTERS

Dr. Shanna McClain

ECOLOGICAL CONSERVATION

Dr. Keith Gaddis

WATER RESOURCES

Dr. Erin Urquhart

AGRICULTURE

Dr. Brad Doorn

WILDLAND FIRES

Dr. Michael Falkowski

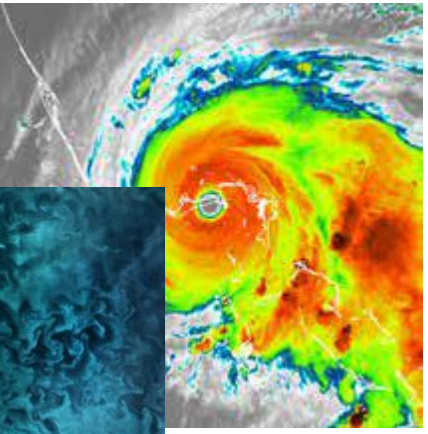
CLIMATE & RESILIENCE

Dr. Michelle Hawkins

ENERGY Resources

Shanna Combley

CAPACITY BUILDING



Capacity Building Program

CBP provides individuals and institutions with workforce development, training activities, and collaborative projects to strengthen understanding of Earth observations and expand their use around the world.

Through our **ARSET**, **DEVELOP**, and **SERVIR** programs, we work with everyone at every level — from first-time users to long-time professional users of Earth observation data.

We work through global networks like the Committee on Earth Observation Satellites (CEOS) and the Group on Earth Observations (GEO), and professional societies like the American Geophysical Union (AGU), to promote open data access and coordinate capacity building activities focused on users needs.

Dr. Nancy Searby
CBP Program Manager

Sydney Neugebauer
CBP Coordination & Analysis Lead

PROGRAMMATIC FOUNDATIONS

ARSET

ARSET offers satellite remote sensing training that builds the skills to integrate NASA Earth Science data into decision-making activities. Through its decade of trainings, ARSET has reached over 100,000 participants from 180 countries and more than 10,000 organizations worldwide.

Melanie Follette-Cook
Program Manager
NASA GSFC

https://appliedsciences.nasa.gov/arset

DEVELOP

DEVELOP addresses decision-makers' needs through interdisciplinary feasibility studies that apply the lens of NASA Earth observations to environmental issues around the globe.

Projects build capacity to use Earth observations in participants and partner organizations through nine thematic areas during three terms a year.

Dr. Kent Ross
Program Manager
NASA LaRC

https://appliedsciences.nasa.gov/nasadevelop

SERVIR

SERVIR connects space to village by helping developing countries use satellite data to address critical challenges in food security, water resources, weather and climate, land use, natural disasters, and air quality.

A partnership of NASA, USAID, and leading technical organizations around the world, SERVIR develops innovative solutions to improve livelihoods and foster self-reliance in Asia, Africa, and the Americas.

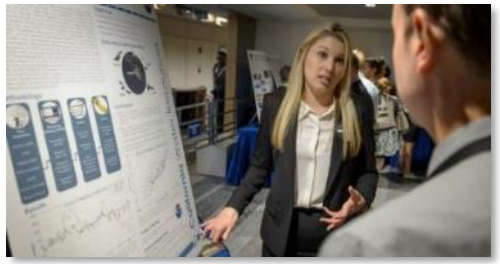
Dan Irwin
Program Manager
NASA MSFC

https://servirglobal.net

EARTH SCIENCE
APPLIED SCIENCES

DEVELOP bridges the gap between NASA Earth Science and society by building skills to use satellite data in participants and partners.

- Dual capacity building program that empowers participants and partner organizations to use Earth observation data to inform environmental decision-making
- Workforce development program for individuals 18+, open to students and non-students, all majors and backgrounds
- Conduct 10-week feasibility studies centered on partners' decision-making interests
- Interdisciplinary project teams access and apply satellite data under the guidance of NASA and partner science advisors



DEVELOP History

In 1998, three interns at NASA Langley Research Center co-authored the white paper "Practical Applications of Remote Sensing."

A proposal combining NASA's Digital Earth Initiative and the students' paper advocated the formation of a program, and in 1999 DEVELOP was officially formed.

Expansion beyond Langley began in 2001 and continues today.

By The Way

Mike Ruiz, DEVELOP's Program Manager for 24 years retired in December 2022!

DEVELOP's Mission & Vision

Mission:

Integrating NASA Earth observations with society to foster future innovation and cultivate the professionals of tomorrow by addressing diverse environmental issues today.

Vision:

Shaping the future by integrating Earth observations into global decision making

DEVELOP's Core Values:

- Collaboration
- Discovery
- Service
- Passion

By The Way

NASA's core values are:

Safety
Excellence
Teamwork
Integrity
Inclusion

DEVELOP shares these as well!

Elevator Speech:

DEVELOP, part of NASA's Applied Sciences' Capacity Building Program, addresses environmental and public policy issues by conducting interdisciplinary feasibility projects that apply the lens of NASA Earth observations to community concerns around the globe. Bridging the gap between NASA Earth Science and society, DEVELOP builds capacity in both participants and partner organizations to better prepare them to address the challenges that face our society and future generations.

DEVELOP's Culture

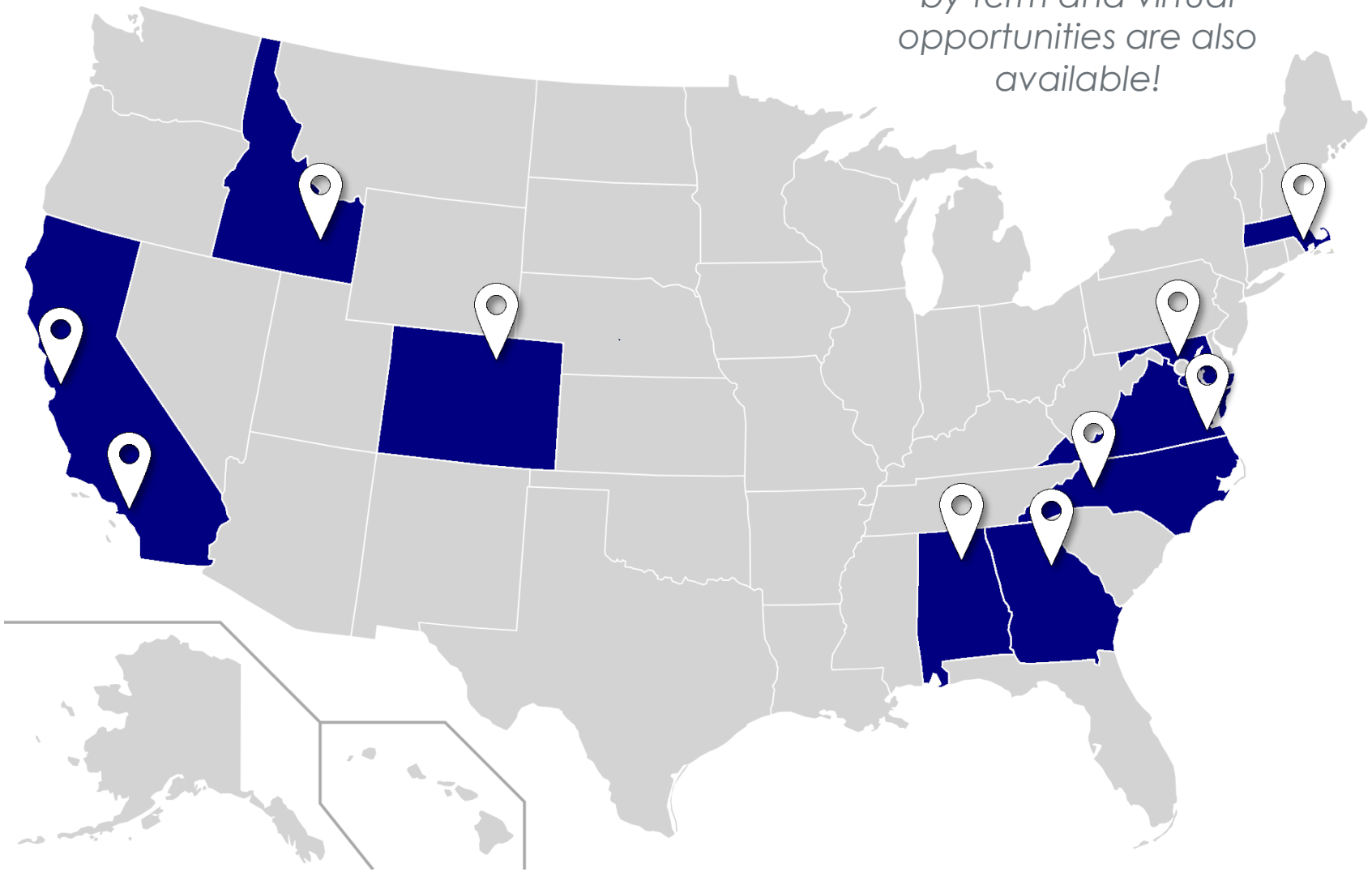
- Our approach to teamwork is based on a philosophy that each team member brings **unique experience** and **knowledge** to tasks at hand. We encourage vigorous, **open flows of communication** on all issues, in all directions.
- We are committed to creating an **inclusive environment** that fosters teamwork that supports continuous learning, innovation, and an openness to new ideas.
- We are **adaptable**, quick to respond, and go where others don't, providing more service than is expected.
- We pursue all endeavors with **energy, excitement, and enthusiasm** and are committed to maintaining an environment of trust, built upon honesty, ethical behavior, respect, and candor.
- DEVELOP nurtures an organizational culture in which individuals make full use of their time, talent, and opportunities to **pursue excellence** in both the ordinary and the extraordinary.

Collaborative
Inclusive
Innovative
Dynamic
Professional
Passionate
Service-Oriented
Excellent

PROGRAMMATIC FOUNDATIONS

DEVELOP Locations

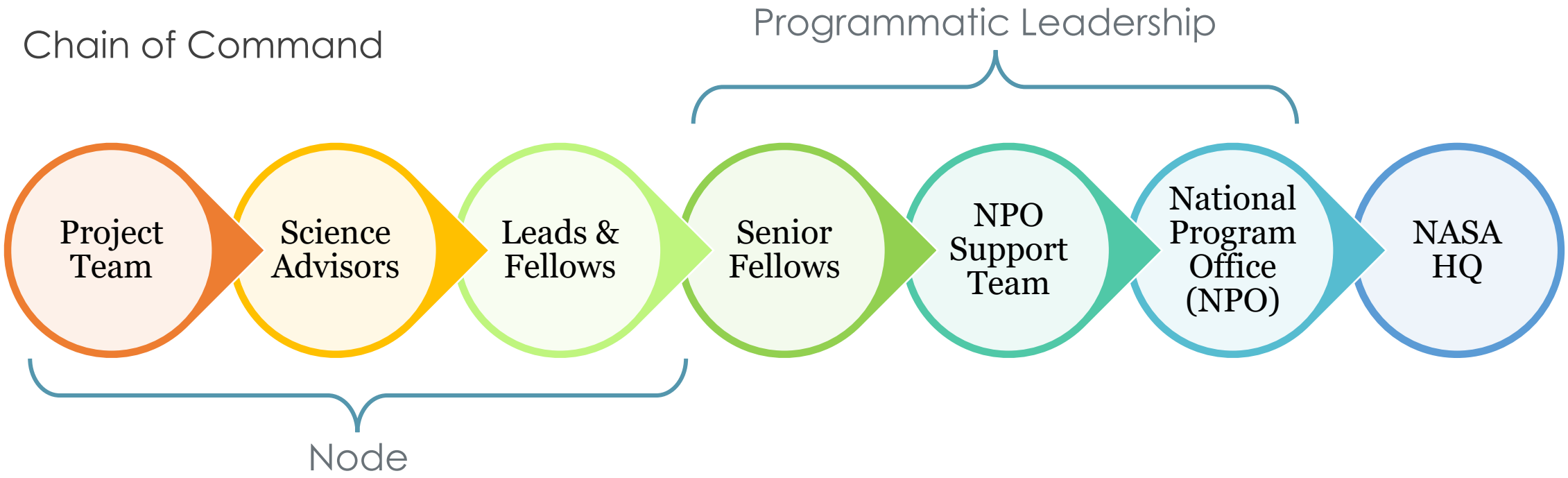
Additional in-person pop-up locations vary by term and virtual opportunities are also available!



DEVELOP Locations:

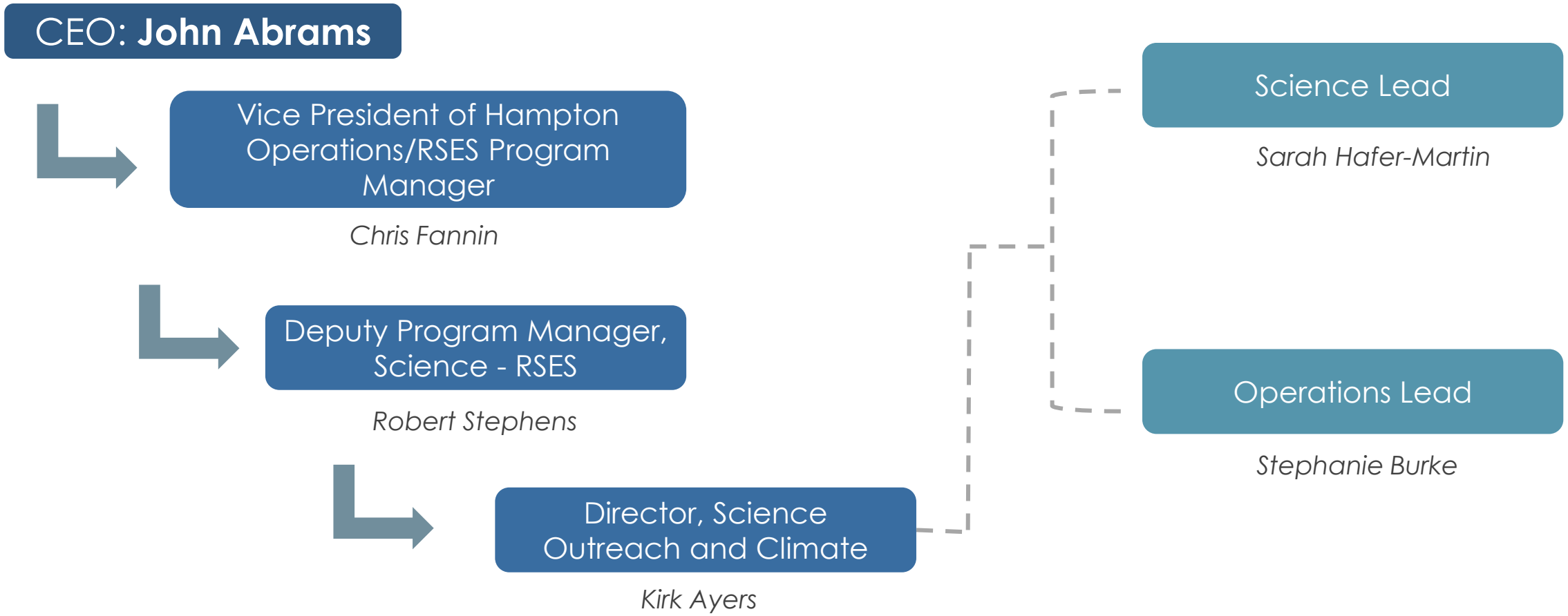
- Alabama – Marshall
  NASA MSFC
- California – Ames
  NASA ARC
- California – JPL
  NASA JPL
- Colorado – Fort Collins
  Colorado State University
- Georgia – Athens
  University of Georgia
- Idaho – Pocatello
  Idaho State University
- Massachusetts – Boston
  Boston University
- Maryland – Goddard
  NASA GSFC
- North Carolina – NCEI
  NOAA NCEI
- Virginia – Langley
  NASA LaRC

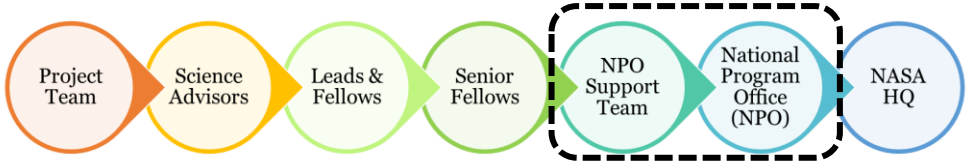
DEVELOP Structure



DEVELOP's structure is flat and all doors are open, but respecting the leadership communication chain is important for success as each link in the chain fulfills specific roles and ensures we follow NASA protocols and meet programmatic requirements.

AMA Organizational Chart





National Program Office (NPO)

NPO is the core leadership and support team who manage and facilitate the various aspects of the program. The team is made up of NASA civil servants and AMA contractors who implement DEVELOP.

National Program Office

NASA Civil Servant Management

Dr. Kent Ross
Program Manager

Karen Allsbrook
Deputy Program Manager

Dr. Xia Cai
Program Scientist

Amanda Clayton
Science Manager

Analytical Mechanics Associates (AMA) Contractor Management

Stephanie Burke
Operations Lead

Sarah Hafer-Martin
Science Lead

Kait Lemon
Collaboration Coordinator

DEVELOP Support Team

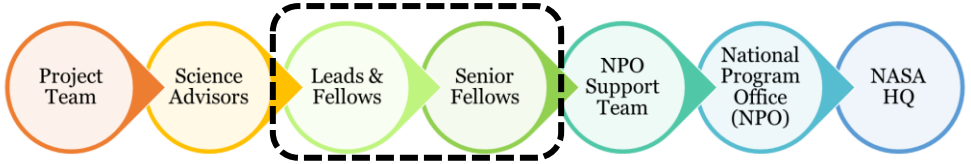
Sean McCartney
Training Lead

Shanise Hunter
Graphic Designer

Jae Wattley
AMA HR

PROGRAMMATIC FOUNDATIONS

Leads, Fellows, & Senior Fellows



ARC
Lauren Webster – Node Lead
Katie Miller –Lead
Maya Hall – IA Fellow

ID
Isaac Goldings – Node Lead

GSFC
Spencer Harman – Node Lead
Marisa Smedsrud – Geo/PC Fellow

MA
Madi Arndt – Node Lead

LaRC
Alyson Bergamini – Node Lead
Ella Haugen – Pop-Up Fellow
Brooklyn Appling – Geo Fellow
Jennifer Hall – Comm Fellow
Brent Bowler – PC Fellow
Laramie Plott – Senior Fellow

JPL
Caroline Baumann – Node Lead
Gwen Greco –Lead
Jane Zugarek – Pop-Up Fellow

CO
Truman Anarella –
Node Lead

MSFC
Cristina Villalobos-Heredia – Node Lead
Isabel Tate – PC Fellow

GA
Jenni Mathis – Node Lead

NC
Tallis Monteiro – Node Lead

Programmatic Elements

Communications

- Social Media
- Project & Promotional Videos, Brochures, and Flyers
- Recruitment
- Ambassador Corps
- Newsletter
- Alumni Engagement
- Graphic Design

Geoinformatics

- GIS & Remote Sensing
- Programming & Coding
- Software Release
- Code Curation
- Maintenance of the DESC
- Tutorial Deliverable Review

Impact Analysis

- Project, Partner, & Participant Tracking
- Project Strength Index
- Partner Reports & Highlights
- Personal Growth Assessments
- Exit & Alumni Surveys
- Indicator Tracking

Project Coordination

- Deliverable Review & Management
- Proposal Review
- DEVELOPedia Maintenance
- Project Tracking
- Deliverable Templates
- Publications

Questions?

First source for answers is your Lead. If you have additional questions, here's who to contact:

Operational Items & Processes

- Participant Application Process
- AMA Systems & Processes
- Travel
- Lead, Fellow & Senior Fellow Competition

Stephanie Burke
Operations Lead
Stephanie.I.Burke@ama-inc.com

AMA Human Resources

- Employment Verifications & Offer Letters
- Human Resource Questions
- Space Systems Onboarding Processes, Systems & Paperwork
- Payroll Questions

Jae Wattley
AMA HR
jaynyce.wattley@ama-inc.com

Programmatic Activities

- DEVELOPedia
- Deliverables
- Export Control
- Term Events – SWC Workshops, Professional DEVELOPment Week

Laramie Plott
Senior Fellow
Laramie.d.plott@nasa.gov

Projects

- Project Creation & Planning
- Publishing & Presenting DEVELOP Work
- Conference & Meeting Opportunities
- Partner Engagement

Sarah Hafer-Martin
Science Lead
Sarah.Hafer-Martin@nasa.gov

Things to Note

- DEVELOP IS part of NASA's Earth Sciences Division's Earth Action.
  DEVELOP is **NOT** part of NASA's Office of STEM Engagement (NASA education & internships).
- DEVELOP is **very different** from NASA's internship opportunities in our approach to conducting projects, focus on teamwork, the level of responsibility and authority given to participants, the opportunities we provide, and the individuals and organizations we network with. Enjoy it while you are here!
- Earth observations and Earth science data are objective, transparent, and **policy-neutral**.
- NASA Earth Science **does NOT develop or prescribe policy**. Other agencies and organizations use the data and scientific results in their policy analysis and development.
- Travel is limited and carefully managed following Federal guidelines and contract requirements. This means any potential travel must go through the appropriate approval processes to even be considered for DEVELOP. **Travel is a privilege!**

Quiz Time

- What was NASA's predecessor?
- Who is the SMD Associate Administrator?
- What is the focus of NASA Earth Action?
- Who was DEVELOP's first Program Manager?
- Who should you contact if you have a project-related question?
- Who should you contact if you have a payroll-related question?

Thank You.

Joining the DEVELOP family
means being part of NASA's Legacy.

Learn it. Know it. Live it.

EARTH
ACTION