

Understanding NASA 2040

APPEL KS Quick Webinar

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Deputy Associate Administrator

July 25, 2024

Quick poll: Please respond in the Teams poll in the chat



Have you heard
about NASA 2040
already?

WHAT IS NASA 2040?

NASA 2040 is an agency strategic initiative that accelerates and aligns planning for the necessary workforce, infrastructure and technology capabilities necessary to meet the bold mission requirements of tomorrow.

NASA 2040 will shape change and inform future focused decisions that:

- build a more integrated, coordinated agency,
- outline clear roles for decision-making,
- balance investment across mission and institutional capabilities,
- attract and retain the best and the brightest, and
- invest in the infrastructure and technology we need now and over the next two decades.

LEADERSHIP COMMITTED TO A CHANGE JOURNEY: NASA 2040



NASA's
current state

- ✓ Robust, inspiring **mission**
- ✓ Lasting record of **accomplishment**
- ✓ Diverse, committed, talented **workforce**
- ✓ Poised for enduring **stakeholder** support
- ✗ Lack of **clear roles for NASA in the future**
- ✗ Slow **decision velocity**
- ✗ Insufficient **financial** flexibility
- ✗ Uncertain **workforce** strategy
- ✗ Aging critical **infrastructure** and IT



Transformation

Cross-functional agency teams will identify and recommend strategic changes to our agency structure, mission strategy, budget alignment and institutional operations that support our future vision.



NASA 2040

“The preeminent institution for research, technology, and engineering, to lead science, aeronautics, and space exploration for humanity.”

WHY NASA 2040?

External Drivers

Bold, ambitious NASA mission goals
and limited government resources

A dynamic, growing commercial
and international aerospace
ecosystem and shifts in where
and how NASA leads the way



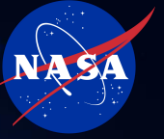
Internal Drivers

Institutional investment has not
kept pace with mission

Complex matrix model prompts a need
for role clarity, transparency, and
healthy collaboration

Unified leadership commitment to improve the
employee experience

For internal use only



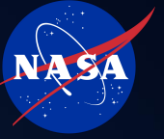
Experience 2040

WORKING IN AEROSCIENCES A CENTURY
AFTER THE FIRST JET FLIGHT

Shannon Eichorn
Strategic Engagement Lead

Advanced Air Vehicles Program
Aeronautics Research Mission
Directorate

Imagine Advanced Aerosciences in the 2040s



- NASA leads the world in exploring the frontiers of flight
- Leads the world in applying 21st century tools to 21st century challenges in ways that are more inclusive than ever
- Uses new technologies to enrich research and speed the ways we work: AI, high-end computing, digital twins, immersive tech and virtual reality
- Teams internally and externally in virtual, digital and inclusive ways

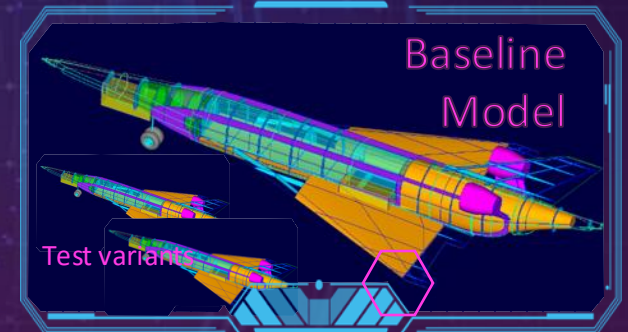
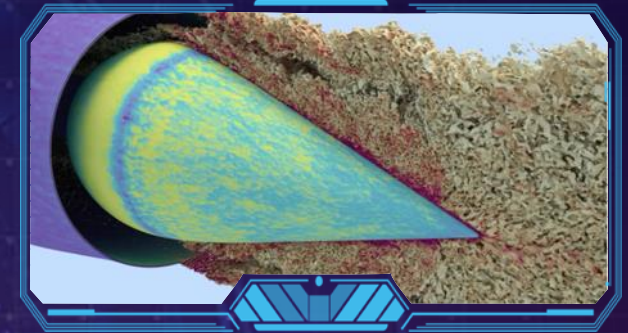
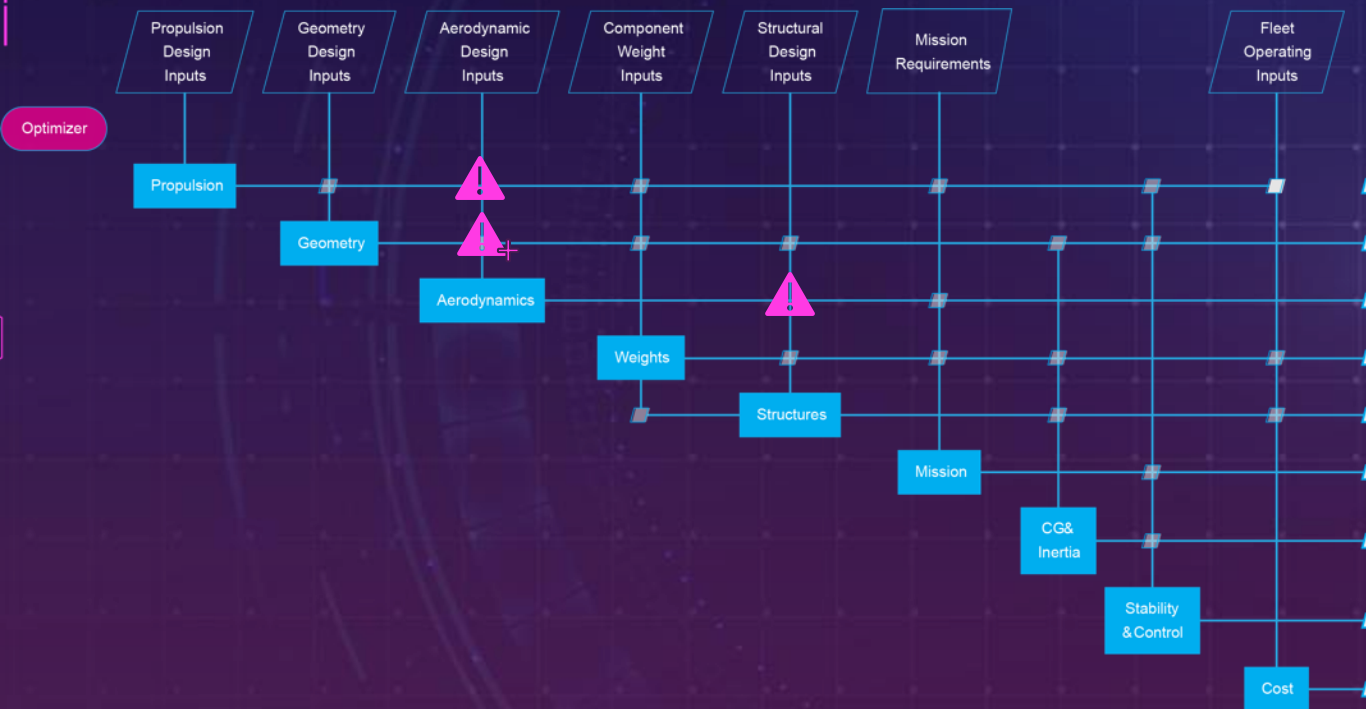
Research Supporting the HyperSPACE X-Plane

HyperSONIC SPACE PASSENGER ACCESS, CONSCIENTIOUS OF THE ENVIRONMENT

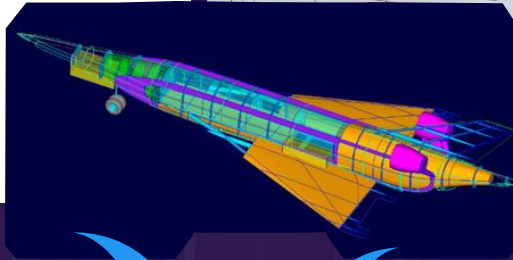
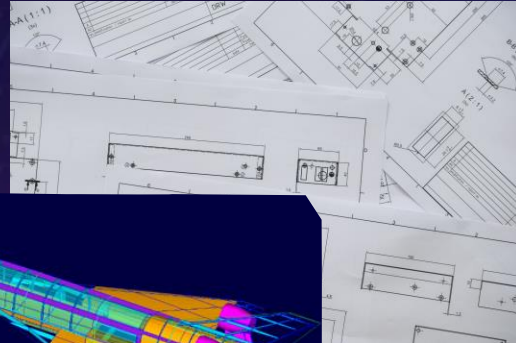
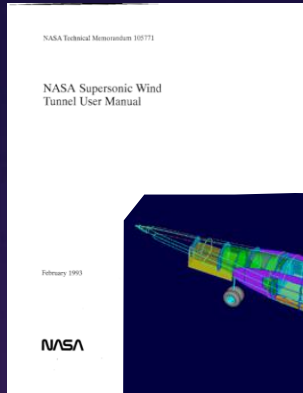


Design Supporting the HyperSpace X-Plane Test

WRAPPER



Ground Testing the HyperSPACE Concept



Ground Testing the HyperSPACE Concept

TEST MATRIX V0.1

Wind off zero

Wind on baseline

▼ Mach sweep

0.80

0.90

0.95

1.05

1.10

2

4

5

8

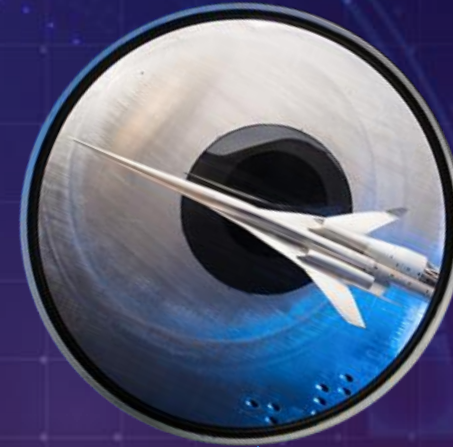
11

12

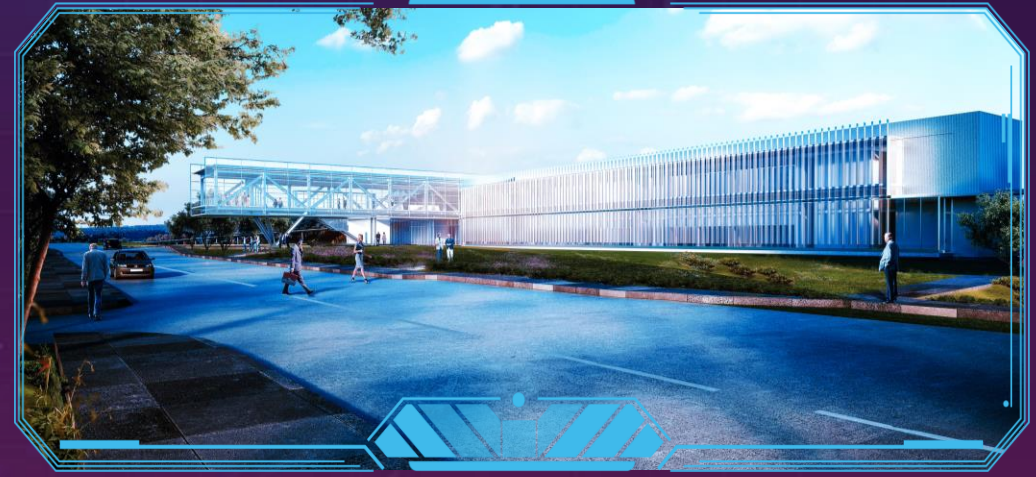
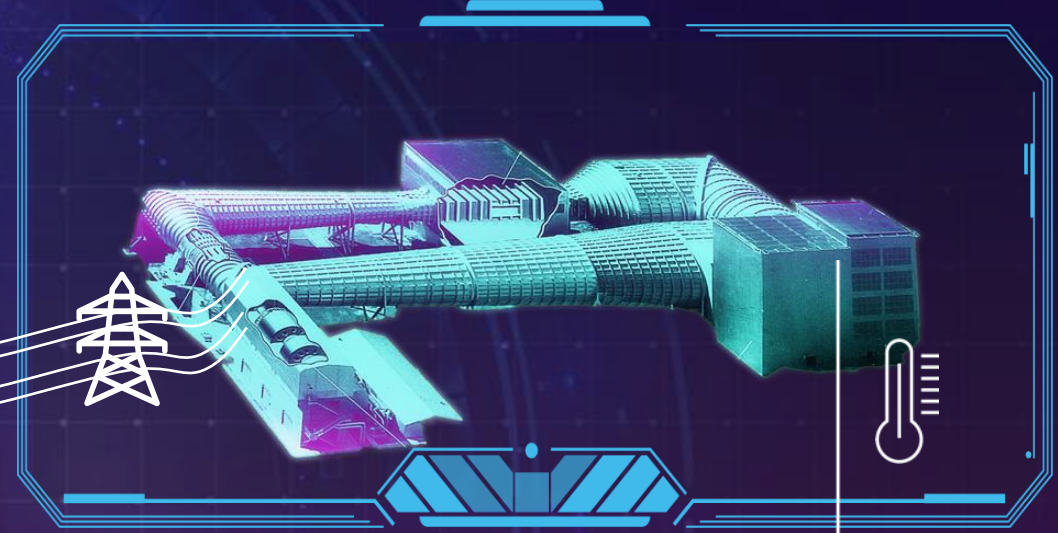
► AoA sweep

► Crosswind sweep

+ Data request



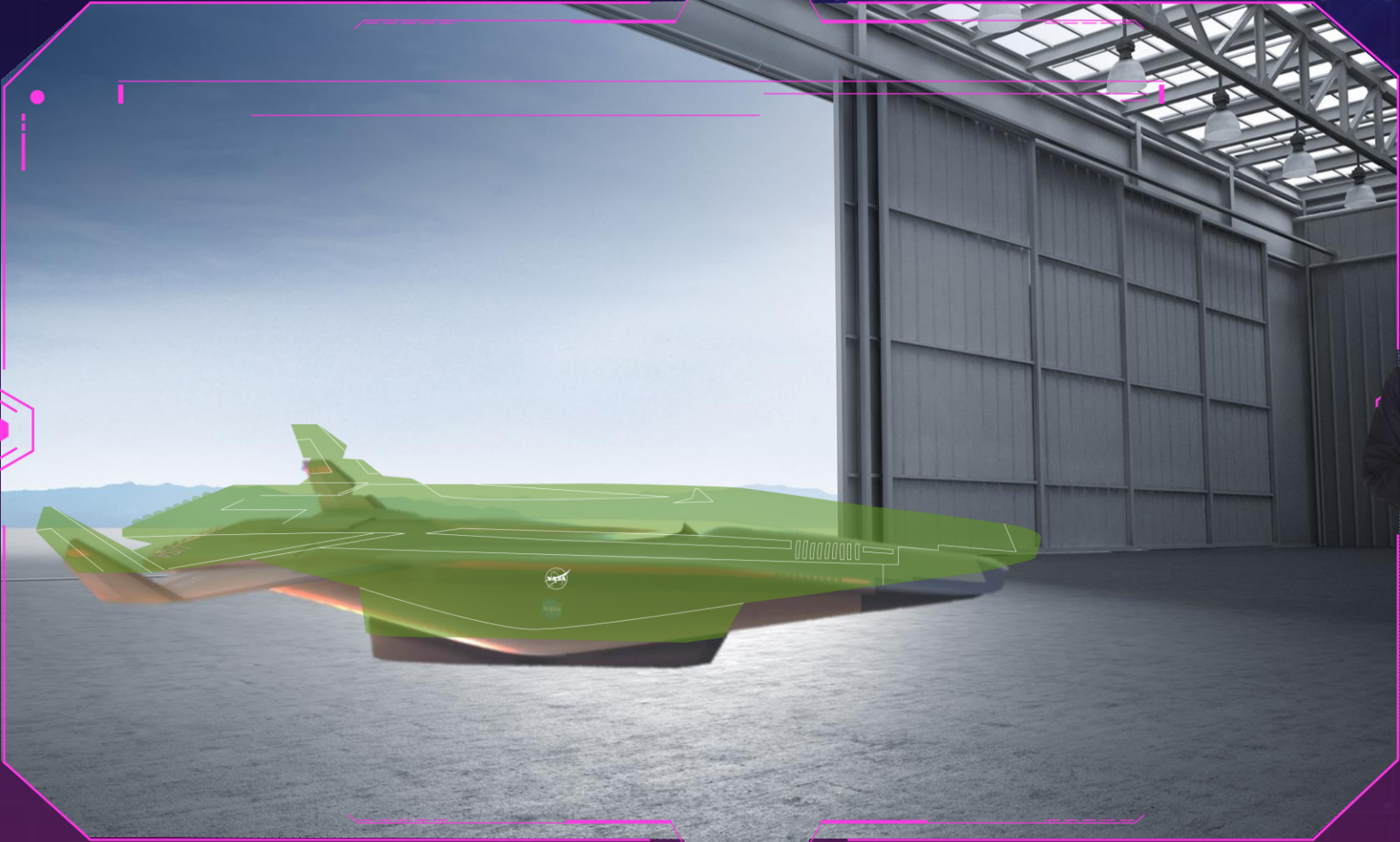
Mid 21st Century Infrastructure & Operations



Analyzing the HyperSPACE Test



Models, Interfaces, and Security



X-Plane Flight Testing





Dream Big
Dream Together

Imagine it's the year 2040... Engage in the Teams chat with your quick reactions.



Given what you've just seen, what's missing in your NASA experience today that would help us realize the NASA 2040 vision?

NASA 2040: TRANSFORMATION ENGINE AND FOCUSED WORKSTREAMS

THE OFFICE OF THE ADMINISTRATOR NASA 2040 Executive Owner & Sponsor

Casey Swails, Deputy Associate Administrator
Role: Leads change vision and makes final decisions

Workstreams

Role: Makes detailed plans and implementation recommendations



Workstream Owners



Workstream Executive Sponsors



Workstream Lead



Team Members

Engine Team

Role: Prioritizes issues, optimizes teams, integrates initiatives, leads comms strategy



Executive Lead & Deputy



Team members

NASA 2040 LEADERSHIP AT-A-GLANCE

Engine	NASA 2040 Owner & Sponsor		 Casey Swails Deputy Associate Administrator	Engine Lead	 Laurie Grindle Deputy Director, Armstrong Flight Research Center	Engine Deputy Lead	 Emily VanSice Director of A-Suite Operations, Office of the Administrator
	Owner		Sponsor		Sponsor		Workstream lead
Mission	 Pam Melroy Deputy Administrator		 Makenzie Lystrup Director, Goddard Space Flight Center		 Jimmy Kenyon Director, Glenn Research Center		 Carlos Westhelle Division Chief, Aero and Flight Mechanics Division, Johnson Space Center
Structure	 Jim Free Associate Administrator		 Nicky Fox Associate Administrator, Science Mission Directorate		 Karla Smith-Jackson Deputy Chief Acquisition Officer & Asst. Administrator, Office of Procurement		 John McCullough Deputy Associate Administrator for Integration, Exploration Systems Development Mission Directorate
Budget	 Margaret Vo Schaus Chief Financial Officer		 Vanessa Wyche Director, Johnson Space Center		 Bob Gibbs Associate Administrator, Mission Support Directorate		 Tia Ferguson Director, Space Systems Department, Marshall Space Flight Center
People	 Kelly Elliott Chief Human Capital Officer		 Eugene Tu Director, Ames Research Center		 Joe Pellicciotti NASA Chief Engineer		 Rob Carver Director, Workforce Strategy and Transformation, Office of the Chief Human Capital Officer
Infrastructure	 Joel Carney Assistant Administrator, Office of Strategic Infrastructure (OSI)		 Bob Pearce Associate Administrator, Aeronautics Research Mission Directorate (ARMD)		 John Bailey Director, Stennis Space Center		 Susan Kevdzija Deputy Director of the Facilities, Test and Manufacturing Directorate, Glenn Research Center
Technology	 A.C. Charania Agency Chief Technologist		 Jeff Seaton Chief Information Officer		 Clayton Turner Acting Associate Administrator, Space Technology Mission Directorate (STMD).		 Christyl Johnson Deputy Director for Technology and Research Investments, Goddard Space Flight Center
Process	 Dave Mitchell Chief Program Management Officer		 Russ Deloach Chief of Safety and Mission Assurance		 Janet Petro Director, Kennedy Space Center		 Neil Mallik Chief Engineer, Space Comms and Navigation, Headquarters

NASA 2040 TEAMS

Engine

Lead overall transformation effort, integrate and prioritize issues and actions, remove roadblocks, execute change management and communication

Workstream

Description

Mission

Create a strategic framework and cadence for continuous review of the roles NASA plays in executing missions as part of the broader and maturing partner ecosystem

Structure

Develop an evolved agency structure that is transparent, efficient, and effective for the future, with clear roles, responsibilities, and decision authorities

Budget

Strengthen and simplify NASA's internal budget ecosystem – how we formulate, execute, and oversee our resources – to account for the full cost of the mission including institutional capabilities

People

Build a strategic workforce plan and employee value proposition to continually monitor and adjust workforce levels, while attracting, developing and retaining top talent

Infrastructure

Accelerate work already in progress to define a more affordable, sustainable infrastructure portfolio, both workplaces and technical facilities, that considers changing requirements and full life-cycle costs from the outset

Technology

Enable a world class research, technology and engineering by working digitally with an elevated technology culture that is continually advancing, responsive to mission needs, data-driven, secure and sustainable

Process

Redesign core processes to drive velocity, agility, and innovation across NASA.

THE NASA 2040 TEAMS IN ACTION

✓ Completed Deliverables!

MISSION

- ✓ NASA mission strategy framework
- ✓ Common set of defined NASA roles

PEOPLE

- ✓ 2040 Employee Value Proposition

STRUCTURE

- ✓ Program management decision
- ✓ Updated executive performance plans
- ✓ Evaluated past major structures – final decision to not make major change

INFRASTRUCTURE

- ✓ Agency infrastructure health metrics

BUDGET

- ✓ Increase institutional investment in FY26+

PROCESS

- ✓ Identify processes that need streamlining

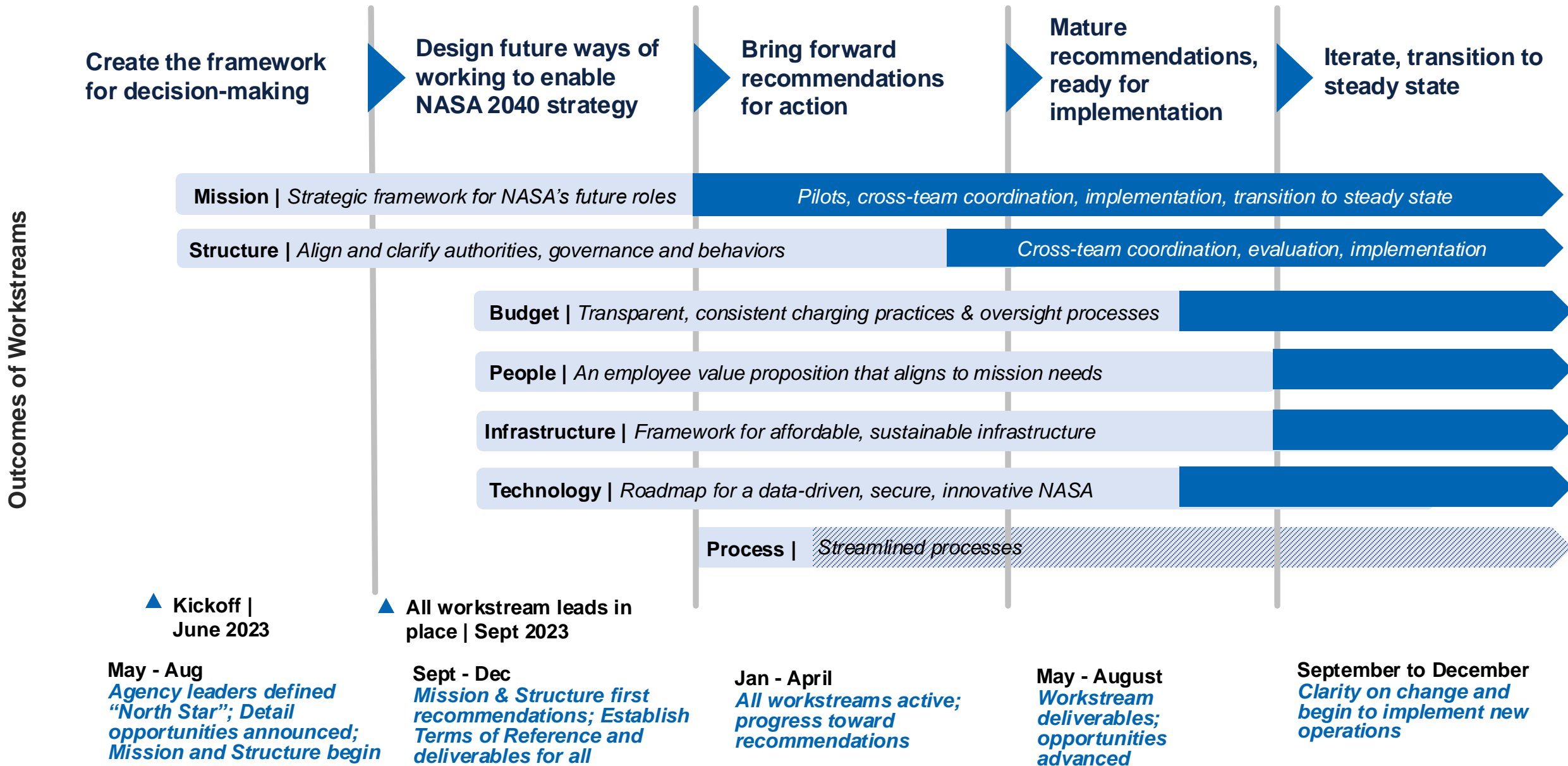
TECHNOLOGY

- ✓ Technology vision for 2040
- ✓ Library digital subscriptions
- ✓ Assessment of current digital state
- ✓ Tech Demos: enterprise data mgmt, digital ecosystem & data driven programmatics

ENGINE

- ✓ Deploy NASA 2040 vision and branding
- ✓ Finalized workstream TORs
- ✓ Launched Champions network
- ✓ Agency internal R&D (IRAD) strategy and ownership

PATH TO REALIZING THE NASA 2040 VISION

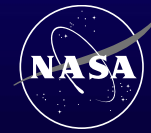


BECOME A NASA 2040 CHAMPION

If you have passion for helping shape the future, become a NASA 2040 Champion.



- NASA 2040 Champions are a select group of NASA civil servant employee ambassadors who meet monthly, provide to NASA 2040 workstreams, assist with NASA 2040 events and activities and share information.
- Champions take an active role alongside NASA 2040 teams and engage with leaders to understand why making some tough choices and changes are necessary.
- 2-hour time commitment per month and supervisor approval required.



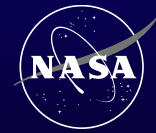
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BUILDING THE FUTURE



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OneNASA
Intranet



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The preeminent
institution for research,
technology, and
engineering, to lead
science, aeronautics,
and space exploration
for humanity.

