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Project Athena Strategic Plan

- DRAFT -

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EXECUTIVE SUMMARY

The following is the draft plan of Administrator-nominee, Jared Isaacman, which aims to transform NASA into a mission-driven agency focused on achieving the near-impossible through a comprehensive reorganization and cultural overhaul. Mr. Isaacman's strategy emphasizes three core objectives: leading American human space exploration by accelerating lunar missions and advancing Mars exploration through nuclear electric propulsion; igniting the space economy by fostering commercial partnerships and maximizing ISS utilization; and becoming a force multiplier for science.

To execute this vision, Mr. Isaacman outlines his immediate directives, including workforce recognition reforms, organizational streamlining, programmatic reviews, financial and infrastructure audits, and investments in future technologies. Mr. Isaacman also proposes consolidating NASA's centers for efficiency, modernizing infrastructure, and establishing a "Starfleet Academy" study to develop a regulatory framework for the commercial space industry.

This draft plan, which is subject to refinement based on post-confirmation diligence and workforce input, remains in development and shall not be implemented without consent and approval of President Trump.

I. THE PLAN

NASA will return to focusing on achieving the near impossible–doing what no other agency, organization, or company is capable of accomplishing. This will require a reorganization and a reinvigorated culture, all aimed at delivering on the following challenging objectives:

- **Lead the world in human space exploration**. We will accelerate current lunar ambitions and determine the scientific, economic, and national security value of sustained presence--while in parallel working alongside industry to determine a more affordable, repeatable architecture that applies to the Moon, Mars, and deep space. This includes demonstrating operational nuclear electric propulsion capability.

- **Ignite the space economy**. To fund the future we all envision in space, NASA must help unlock a broader orbital economy--one that extends beyond launch, observation, and communication--to support commercial activity and generate new sources of value.

- **Become a force multiplier for science**. We will leverage talent, launch capacity, and standardized commercial bus architectures—working alongside industry and academia to accelerate the pace of scientific discovery.

Immediate Action and Directives
Within the first week, we will:

- Begin hiring temporary and full-time experts, 'strike teams', to support the plan.
- Set the stage and expectations with agency leadership alongside space media.
- Communicate the plan agency-wide through an all-hands address alongside Q&A to align the workforce.
- Launch a multi-pronged data-gathering initiative to inform a single, integrated reorganization plan, replacing the fragmented RIF and efficiency strategies currently in circulation.
- Issue a series of Administrator Directives to set the tone to the workforce and put the plan in action, summarized below.

Administrator Directives

Directive #1: Recognize, Reward, Inspire (Day ~3)

- Reform the performance system to properly evaluate the workforce – identifying those that should be recognized and those that need improvement or potentially separation from the agency.
- Reinvigorate the recognition system to include flight and payload specialist opportunities.
- Consolidate NASA social media accounts and partner with space media to communicate and document the agency transformation.

Directive #2: Organizational/Productivity Enhancement (Day ~3)

- Request consolidation proposals from executive leadership.
- Flatten the org structure and eliminate deputy/assistant roles and reinstate voluntary retirement.
- End large recurring meetings and other productivity drags unless approved.
- Suspend boards and committees that delay decision making and pivot towards individual ownership and accountability.

Directive #3: Programmatic Review (Day ~6)

- Launch deep-dive reviews of the top 10 programs to assess schedule, critical paths, and acceleration levers.
- Initiate a broader phased review of all programs.
- Deploy an engineering strike team to accelerate/fix/delete high priority programs.

Directive #4: Finance and Infrastructure Review (Day ~6)

- Stand up a "finance strike team" to perform a bottoms-up independent analysis to inform the broader reorganization effort.
- Conduct a thorough infrastructure review to assess demand and determine opportunities for investment, decommissioning or potentially further monetization.
- Implement commercially-friendly procurement reforms.

Directive #5: Invest in the Future (Day ~9)

- Launch the Mars Program, Project Olympus, including an expanded nuclear electric propulsion program.
- Begin IT and communication modernization, AI integration, and workforce software alignment.
- Develop the "Mission Control of the Future" initiative to consolidate and upgrade operations including modernization of communication systems.

Directive #6: Ignite the Space Economy and Accelerate Scientific Breakthroughs (Day ~9)

- Appoint a Chief Commercial Officer and consolidate the "front door" for external engagement.
- Prioritize and accelerate research throughput on the ISS to include external industry engagement.
- Kick off bulk-buy and science-as-a-service programs to bring down the cost of routine science and energize academic institutions to fund their own flagship missions.
- Reevaluate decadal prioritization process, expand access to existing data,

Directive #7: Aeronautics Restructuring (Day 21)

- Consolidate aeronautics related activities under a single Mission Directorate and at a primary operating facility.
- Review all programs for relevancy and focus resources on cutting-edge technology.

Directive #8: Study: Starfleet Academy (~Day 60)

- Begin outlining a regulatory framework for the maturing space industry.
- Develop a training and certification roadmap for spaceflight crew, operators, vehicles, and spacecraft.

Reorganization Plan

We will consolidate all ongoing RIF and reorganization initiatives into a single, comprehensive plan informed by existing efforts, research requests and field teams as indicated in the directives. The goal is completion within 180 days.

Key Inputs:

- Finance Strike Team reports
- AA/Center Director proposals
- AA research deliverables
- Anonymous workforce suggestions
- President's Budget and OMB deletion guidance

Outputs:

- New org chart aligned to core objectives
- List of deletions
- Before/After data to justify change
- Ongoing KPI framework to track effectiveness (e.g., decision velocity, manager-to-doer ratio)

Culture Transformation

We will rebuild a mission-first culture that owns outcomes, acts urgently, and is focused on achieving the extraordinary.

- **Duty and Competence:** Working at NASA is a privilege. To serve in the world's most accomplished space agency, you need to be dedicated to excellence in your professional responsibilities.
- **Mission-Driven Intensity and Urgency:** Maintaining a bias toward action and achieving objectives in support of the mission is the highest priority of every NASA employee.
- **Ownership and Accountability:** We own our responsibilities and the outcomes. Every project, problem, part, and requirement have a clear owner.
- **Recalibrated risk framework**: We will ensure safety is at the forefront of our decisions but achieving the mission of NASA means accepting that some risks are worth taking.

Core Objectives in Action

#1: Lead the World in Human Space Exploration

- Pull forward Artemis II & III to the greatest extent possible
- Work alongside industry to establish repeatable and affordable architectures for subsequent lunar and eventual Mars missions.
- Launch Mars program, Project Olympus & Nuclear Electric Propulsion Programs
- Build "Mission Control of the Future"
- Streamline science and research programs to enable human spaceflight objectives alongside national security, scientific, and economic value

#2: Ignite the Space Economy

- Maximize the remaining life of ISS and unlock the economic potential of LEO to support future LEO destinations.
- Prioritize high potential research and reducing process friction
- Improve ISS utilization, increase crew and research throughput
- Establish new industry/academic incentives (e.g., 7-seat Dragon, front door, internship tracks)
- Prepare for a future regulatory roadmap for vehicle/crew/operator certification requirements

#3: Become a Force Multiplier for Science

- Make flagship missions routine and affordable
- Take advantage of science-as-a-service models where applicable
- Reevaluate Earth science priorities, decadal frameworks, and mission pacing
- Encourage and enable academic institution-funded science and exploration missions.
- Introduce new processes for prioritizing and vetting science proposals
- Investigate ways to alleviate the DSN

Facility Focus Areas

A quick-reference guide to support the reorganization and onsite strike team efforts at each location.

All Centers:

- Investigate the relevance and ongoing necessity of the center.
- If a requirement, streamline and modernize to make centers more efficient.
- Gather workforce data and trends to measure productivity
- Determine test asset demand, utilization & monetization strategy

Evolve toward financial sustainability (properly monetize revenue centers).

Center	Goals / Focus Areas
Ames	• Determine the future, if any, of in-house high-performance computing
Armstrong	• Centralization of aviation assets & programs. • Evolve to become the aviation center of excellence
Glenn	• Determine suitability of chamber, simulation and propulsion centers of excellence
Goddard	• Evaluate dispersion of mission control centers vs JPL, JSC, MSFC with the aim to consolidate at JSC. • Many field sites under the Goddard banner (KJIV&V, GISS, Columbia, etc.) - opportunities for deletion, consolidation or at minimum standardization for efficiency
HQ	• Flatten & streamline org for faster decision making.
Johnson	• Human spaceflight center of excellence for NASA and eventually all commercial spaceflight missions. • Evaluate ISS workforce/distribution and consolidate in to a multi-mission control center of the future. Maximize the talent • Evolve to support commercial industry in the certification and operation of spaceflight activity. (Be ready when Congressional 'learning period' expires)
JPL	• Contract structure: Very expensive. Must increase the output and 'time-to-science' KPI. • *Case study: How much money allocated to JPL goes straight to Lockheed/prime? What is 'built' at JPL?*
Kennedy	• Continue to attract and encourage commercialization alongside properly monetizing unique launch assets. • What costs & headcount scale with commercial launch rate? • VAB and 39B - usage potential outside SLS • Develop nuclear pre-launch infrastructure

Langley	• Reallocate aviation assets to Armstrong. • NESC ownership, organization, & costs should be clear and easy to understand
Marshall	• Duplication of mission control functionality & ISS operations • Evolve to support nuclear program propulsion and structures.
Michoud	• Evolve to commercialize high value capabilities and assets. Liquidate outdated/dead-end tooling & facilities • Pivot production to the nuclear future.
Stennis	• Evolve to achieve financial sustainability - commercialization and efficiency • Liquidation of outdated & unused test assets • Potential state-level management.
Wallops	• Can suborbital & balloon programs be absorbed into academia/private industry • Continue to attract and encourage commercialization
White Sands	• *Case study - what productivity system is in place for requesting & documenting tests? Planning work?*

Program Focus Areas

Program	Goals / Focus Areas
Mission Control 1	• Evolve toward a centralized, multiplexing mission control with greater autonomy and reduced headcount • Incorporate debris tracking & avoidance and integration with 'field' mission controls (i.e. vendor) • "NORAD of peaceful space"
Artemis 2	• Critical path to Artemis II and III. Physics limit schedule vs current pace • How are we maximizing the likelihood of discovering scientific, economic, or national security need for lunar presence?
ISS 3	• Fast track scientific discovery and reduce obstacles to science delivery. Prioritize discovery to enable the space economy and give commercial LEO destinations a fighting chance • Increase personnel on station & flight rate. Increase efficiency of operations and training • Review deorbit conops & contract for improvements. Publish the clear roadmap to disposal & transition to commercial.

Program	Goals / Focus Areas
SLS Gateway	• Fly Artemis II and III to determine the reasons to be on the Moon. Terminate as appropriate after sunk costs are expended and pivot to routine and affordable commercial transportation. • Pivot Gateway hardware to commercial LEO or nuclear programs.
Aeronautics	• Consolidate and combine aviation activities, programs, and assets into single organization & location with limited detachments • Cancel programs not moving the needle & overhaul aero programs (should be fast or high AND novel or radical)

Nuclear Electric Program	• Crash public/commercial program to develop fast demo at medium power
	• Three-pronged approach to support vision
	  ○ Technology development (high power thrusters, materials dev. etc.)
	  ○ Infrastructure & test support (non-nuclear testbeds, space-specific nuclear tests)
	  ○ Regulatory & legislation overhaul/steamrolling
	• Extensive comm and political campaign for the nuclear future (multi-MWe tugs for human and scientific exploration)
	• Dual use approach could support DoD and Golden Dome applications.
	• *Pivot SLS & Gateway hardware and centers to the nuclear future*

Mars/ Olympus	• Rapid contract for 2026 Mars mission (discovery base) • Technology investments that will enable the future of American astronauts landing and returning from Mars
Earth Science	• Implement science-as-a-service model to take advantage of constellations already going up • Increase availability and accessibility of data • Take NASA out of the taxpayer funded climate science business and leave it for academia to determine.
Other Science	• Establish consolidated front door & begin bulk acquisition of launches. busses, operations. etc. to drive down the cost ('The bus is leaving the station') • Attract academic institution funding and evolve to become a force multiplier

Vendor Focus Areas (not all-inclusive)

Vendor	Goals / Focus Areas
Axiom	• EVA and Lunar Suits

Blue Origin	• New Glenn & Blue Lander essential for early Artemis objectives
	• Blue Ring - Bulk buy of launches for science acceleration
	• Credibility of New Glenn + Orion (or in-house) for possible Artemis IV+ as competitor to Starship
	• Kuiper
	  ○ Planning for sat deconfliction & communication.
	  ○ Science as a service
	• Best plan for the economic market potential of space station
	•

Boeing	• Starliner as backup ISS and future LEO crew transportation
Bus Providers	• Bulk-buy busses for academic partnerships and science acceleration
Commercial LEO	*Blue/Sierra/Boeing; Voyager/Nanoracks/Northrup; Axiom; Vast* • Best plan for the economic market potential of space station? What will drive orbital economy.
Constellation Operators	• Science-as-a-service • Bulk-buy busses for science acceleration
Lockheed	• Orion future; other paths for Orion to lunar operations (not SLS) • Nuclear desires - DRACO's downfall, desire for NEP program
Rocket Lab	• Bulk buy of launches and common busses/components for science acceleration
Sierra Space	• Dreamchaser in a post-ISS future

SpaceX	• Starship & HLS credible path to return to Moon
	• Mars Discovery Base contract - Olympus, plan for ISRU
	• Ongoing Dragon support & rate. 7 seat modification
	• Deorbit vehicle and contract/requirement simplifications
	• Bulk buy of launches for science acceleration
	• Starlink
	  ○ Science-as-a-service or common bus for dedicated science
	  ○ Usability for alleviating DSN

Varda/Astroforge	• Space economy

II. DIRECTIVES

1. **Workforce Directive: Recognize, Reward, Inspire**
2. **Workforce Directive: Organizational Updates**
3. **Workforce Directive: Programmatic Review**
4. **Workforce Directive: Critical Finance and Infrastructure Review**
5. **Workforce Directive: Invest in the Future**
6. **Workforce Directive: Igniting the Space Economy and Accelerating Scientific Discovery**
7. **Workforce Directive: Aero Consolidation**
8. **Workforce Directive: Commission a Study for a Starfleet Academy**

Roll-Out Timeline:

- **Day 3:** Recognize, Reward, Inspire + Organizational Updates
- **Day 6:** Programmatic Review and Critical Finance + Infrastructure Review
- **Day 9:** Invest in Future + Igniting the Space Economy and Accelerating Scientific Discovery
- **Day 21:** Aero Consolidation
- **Day 60:** Commission a Study for a Starfleet Academy

1. Workforce Directive: Recognize, Reward, Inspire

Background:

Achieving NASA's world-changing mission requires the best from a talented, inspired, and mission-focused workforce. To recognize outstanding contributions, reward excellence, and inspire future achievement, I am directing the following actions:

Recognize Performance: within 60 days, the chief Human Resource Officer will

- Conduct a full review of employee and contractor recognition and awards programs, including medals, to ensure the top performers are recognized. Areas of greatest consideration will be given to those with verifiable accomplishments in line with agency priorities including reorganization, cultural transformation, leading in human space exploration, igniting a thriving space economy and increasing the rate of scientific discovery.
- Perform a recategorized performance review of the workforce to restore meaningful differentiation. This should include recommendations on ways to further reward the workforce that receives a 5 or 4 rating and improvement plans for those below the average.
    - No more than 5% may receive a 5 (Outstanding)
    - No more than 20% may receive a 4 (Great)
    - No more than 60% may receive a 3 (Good)
    - No fewer than 10% may receive a 2 (Improvement Required)
    - No fewer than 5% may receive a 1 (Unsatisfactory)
- Establish a peer nomination system to recognize outstanding contributions from employees, contractors, partners, and aerospace community members.

Reward Achievement: within 90 days, the Chief Human Resource Officer will create or expand the following programs

Reactivation of the Payload Specialist Program:

- Open spaceflight crew positions for Payload Specialists to include employees from the NASA workforce with the aim of expanding access to space, rewarding outstanding contributors to agency objectives and advancing science and exploration goals. Payload specialists will contribute their experience back to their community for the betterment of NASA.
- *The NASA Astronaut Corps will, in addition to existing responsibilities, provide leadership, training and mentoring for Payload Specialists, a step in the direction of NASA astronauts supporting other commercial and private spaceflight missions.*

Additional Flight Opportunities Programs:

- A ride-along program in NASA aircraft through a nomination and approval process.
- Mission launch observation opportunities
- Receiving "flown hardware" awards

Inspire the Next Generation:

Expanded Flight Inspiration Program: within 30 days, the chief of the Aircraft Operations Directorate will

- Increase the use of NASA and affiliate aircraft for flyovers at launches, major sporting events, and national celebrations to inspire the next generation.
- Update the NASA website to promote flyovers and field inbound requests for inspirational missions.

Media Restructuring Program: within 30 days, the Acting Associate Administrator for Comms will

- Consolidate all NASA social media channels with the aim of delivering quality content over quantity that prioritize NASA's most inspiring and transformational undertakings.
- Develop a plan to expeditiously refresh and simplify the NASA website in line with agency objectives down to the Mission Directorate level.
- Consolidate communication departments and contractors across all Centers into a single efficient structure reporting to the Associate Administrator for Communications.
- Expand access and transparency to space educators and media partners so they can document, and bring the public along with, the history NASA is making.
- Increase use of specialized cameras on launch vehicles, payloads, aircraft and on the ISS—including 360° and immersive coverage—to more authentically capture and share NASA's story.

2. Workforce Directive: Organizational Updates

Background:

NASA is not immune to the bureaucratic inefficiencies that burden many government institutions and large organizations. To accomplish the extraordinary missions the world is waiting for us to achieve, we must liberate the agency from needless inefficiencies, build a logical structure with clear ownership and accountability, enable the rapid dissemination of information, and foster a culture of urgent execution.

The agency has been evaluating options for re-organizing for efficiency for years, including most recently the OMB directive phase I & II RIF. While these efforts may inform our ultimate outcome, we will aim to accomplish the reorganization in a single integrated effort.

Cultural Emphasis: Immediately, leadership across the agency with the assistance of the Chief Human Resource Officer, we will promote and embed the following principles across the workforce:

- **Duty and Competence:** Working at NASA is a privilege. To serve in the world's most accomplished space agency, you need to be dedicated to excellence in your profession.
- **Mission-Driven Intensity and Urgency:** Maintaining a bias toward action and achieving objectives in support of the mission is the highest priority of every NASA employee.
- **Ownership and Accountability:** We own our responsibilities and the outcomes. Every project, problem, part, and requirement has a clear owner.
- **Recalibrated risk framework**: We will ensure safety is at the forefront of our decisions but achieving the mission of NASA means accepting that some risks are worth taking.

Organizational Restructuring: each Center Director or HR as appropriate, with input from Mission Directorate leadership will

- Immediately re-implement the voluntary retirement program.
- Maintain the hiring freeze - encouraging recruitment from within the agency. Waivers can be submitted to HR alongside a justification statement.
- In preparation for an eventual resumption in hiring, the process should be streamlined to ensure exceptionally qualified personnel can be onboarded in less than 30 days.
- Suspend all second-in-command or co-leadership roles and titles, including but not limited to "Deputy" and "Assistant" with the single exception of the Deputy Administrator (which is a required political position). Individuals in these roles will remain within their departments and assume responsibilities consistent with their peers, along with any other tasks appropriate for a senior contributor.

- Within 30 days, submit a consolidation and simplification proposal for their center with the following goals. *These submissions will help inform the broader integrated reorganization plan alongside the existing proposals and data gathered from independent analysts.*
    - Reduce costly management layers and increase the number of "doers" at the agency.
    - Consolidate departments that serve similar purposes and delete departments that are insufficiently utilized
      Re-structure organization such that both department and authority structures logically build towards broader functional mission priorities, enabling clear authority and decision making ownership

Enhancing Productivity: effective immediately, Center Directors and Program Managers should take the following steps to regain productivity

Reinforce workforce email reporting system [TBD] to urgently identify inefficient policies, procedures, or organizational obstacles detrimental to productivity.

- Except for town halls or social events, meetings with more than 10 attendees are discouraged; meetings exceeding 20 attendees require Administrator approval.
    - Delete recurring and informational meetings whenever possible and replace them with email updates. Try to limit meetings for when collaboration is essential or for decision making, at which point only invite those absolutely necessary to participate.
    - Large safety-related reviews such as Flight Readiness Reviews (FRR) and Launch Readiness Reviews (LRR) will be audited to ensure only essential personnel are permitted.
- Meetings should generally not exceed 1 hour and should, whenever possible, be scheduled in no greater than 15-minute increments.
- The following meeting etiquette should be enforced:
    - When leading a meeting:
        - Clearly communicate objectives and agenda along with supporting materials for review in advance of the meeting.
        - Only invite essential personnel in accordance with this directive.
        - Keep the meeting focused and on time.
        - A designated notetaker should send a summary alongside clear actions and owners after the conclusion of the meeting.
    - When attending a meeting:
        - Only attend meetings in which your input is required.
        - Regardless if the meeting has concluded, depart when your input is complete.
        - Do not multi-task. Give the meeting your full attention: anything to the contrary suggests you are not an essential attendee.
- *Eliminating excessive or inefficient meetings is not meant to discourage communication. Individual contributors should communicate frequently over e-mail, chat tools and provide formal updates on at least a weekly basis. Those*

updates should bubble up through leads, management and leadership to ensure organizational awareness and prompt decision making.

Streamline Decisions: effective immediately, Center Directors and Program Managers should ensure that:

- Except for those boards or committees directly supporting a present safety of flight matter, all other boards and review committees are suspended. Any proposal to reinstate a board or committee must be submitted to the Administrator, accompanied by a clear rationale and justification for its necessity.

3. Workforce Directive: Programmatic Review

Background:

NASA is entrusted with an extraordinary mission—and the resources—to deliver scientific breakthroughs, world-changing discoveries, and capabilities unmatched by any other agency or organization. We have a duty to deliver on that mission as quickly, affordably, and decisively as possible.

Accelerate Top 10 Initiatives

Within 30 days, the Chief Program Management Officer will conduct an immediate review of NASA's Top 10 programs by budget, working directly with the respective Program Managers.

- The objective is to **reduce time-to-science and discovery** by pulling launch dates forward to the earliest that physics would support and reduce costs associated with preventable delays.
- The review must evaluate the day-by-day schedule to flight and consider the following key levers and associated trade-offs:
  - Expanding work shifts (more resources)
  - Accelerating or streamlining decision-making, including escalating directly to the Administrator
  - Accepting greater levels of programmatic risk where appropriate
  - Utilizing alternative vendors or contractors
  - Removing requirements not essential to the success of the mission
  - Any other creative ideas that should be considered

Comprehensive Portfolio Assessment

Within 60 days, the Chief Program Management Officer and [TBD] [Finance Person] will coordinate an audit of all programs and grants, regardless of program size, for the following:

- What scientific, economic, or national security imperative does the program address?
- Are other agencies, academic institutions, governments, or other organizations working on or capable of solving the program goals?
- Assuming the science output is comparable, could an 'as-a-service' model assume responsibilities for this program?
- Top three reasons why the program or grant should continue, and three reasons why it could be discontinued.
- The single program owner responsible for the outcome.
- The budget and resources assigned to ensure success
- The current target deadline for launch or delivery and a review of the 6 levers/trade-offs above for accelerating timelines.

- If program goals or ultimately delivery dates are unreasonably far into the future (All programs with delivery dates more than 4 years in the future must be approved by the Administrator)
- Othér obstacles impeding progress, and recommendations for clearing those blockers

Engineering Strike Team

Within 30 days, the Chief Engineer will establish an Engineering Strike Team.

- This team will be tasked with assisting program managers in solving major engineering problems, removing technical, organizational, or procedural barriers, beginning with the Top 10 agency programs.

4. Workforce Directive: Critical Finance and Infrastructure Review

Background:

In a constrained budget environment, it is essential that NASA concentrate financial resources on delivering on the objectives that no other agency or institution—public or private—is capable of achieving. Resources must be directed toward the most pressing priorities, critical infrastructure must be properly funded to support ongoing modernization, and unnecessary cost burdens must be eliminated with urgency.

Within 30 days, the Acting Chief Financial Officer (CFO) will direct the following including the establishment of a temporary Financial Strike Team of analysts.

Financial Review and Cost Rationalization (Bottoms-up Cost Analysis by Center)

- Conduct a full bottoms-up build of every expense, grant, cost sharing, partnership or other financial expenditure at each NASA center. Each expense should include
  - An assigned owner
  - A justification statement on how the expense directly supports agency priorities, specifically scientific, economic or national security justification in line with the agency mission.
- Perform center-by-center analysis of trends in expense growth relative to expected output or achievement. If costs are outpacing expected productivity, assemble a list of likely causes and recommended solutions.
- Wherever possible, renegotiate or require a re-bid on a fixed firm price basis all contracts regardless of dollar amounts.
- Challenge all assumptions regarding the necessity of expenses or resource allocations, particularly in comparison to other competing or higher-priority initiatives.
- Refer any potential fraud, waste or abuse to the Office of the Inspector General.

Infrastructure Monetization and Optimization

- Conduct a comprehensive review of all critical infrastructure (buildings, test assets, launch facilities, labs, etc.), leveraging existing reviews to the greatest extent possible.
- Each facility must be assessed across the following criteria:
  - Current and anticipated demand for the facility's services.
  - Whether user fees or cost recovery models are sufficient to support upkeep, modernization, and throughput.
  - If management of the facility should be outsourced to industry.
  - If no viable current or future demand exists, the team must identify the most expeditious path to decommissioning or repurposing the facility to maximize value for NASA and taxpayers.

Implement Procurement Reforms

- Alongside the broader reorganization initiative, consolidate small business, legal and overall procurement functions into a single responsible department.
- Work towards a streamlined procurement system that prioritizes mission results and expediency.
- Implement KPIs and scoring systems to assess the timeliness. affordability and success of the procurement with the aim of reducing the time-to-science & discovery.
- Minimize requirements to the greatest extent possible and instead direct bidders to propose creative. compelling and detailed solutions.
- Cost Plus Contracts are prohibited without a waiver by the Administrator.

5. Workforce Directive: Invest in the Future

Background:

NASA achieves the near impossible—and then sets its sights even higher. To continue leading humanity's expansion into space, it is imperative that we invest today in the capabilities needed to enable the next era of exploration.

Within 30 days, the Chief Program Management Officer will establish teams to pursue the following:

Deep Space Technology Initiatives

- **Mars Program, Project Olympus**
  Immediately prepare a dedicated program, working alongside industry and international partners, to launch an uncrewed mission to Mars during the 2026 launch window, as aligned with presidential direction.
  - Objective: Land the first infrastructure on Mars to accelerate the technologies needed for future crewed missions.
  - This effort should stimulate innovation, investment, and collaboration across the technologies required to enable routine Lunar & Mars exploration and eventual sample return missions.
- **Focused Nuclear Propulsion:**
  Consolidate NASA's nuclear programs into a single department with a primary focus on nuclear electric propulsion. Build ground testing capability, rapidly develop technology, and fly operational vehicles in the next few years.
  - Objective: Ensure the United States is "underway under nuclear power in space" in the immediate future.
  - The program will demonstrate practical megawatt-level nuclear power generation, efficient electric energy conversion, and the operation of next-generation thrusters to transport mass efficiently in deep space.

Information Technology Modernization

- **Foundational Workforce Tools:**
  - Equip the workforce with standardized modern tools for performance management, project management, and communication.
  - Conduct a full audit of all software subscriptions for necessity, accuracy and security compliance.
- Communication of the future?
- **Artificial Intelligence Initiatives:**
  - Develop two AI tools to enhance access to critical information:
    - A public-facing AI assistant for all publicly releasable NASA information.

    - An internal AI assistant for the authorized workforce to support mission and operational knowledge.

- **Next Generation Mission Control:**
  - Establish the foundation for a future with rich, simultaneous spaceflight operations—crewed, uncrewed, lunar, Martian and across deep space.
    - This should include space traffic management and NEO/Planetary defense awareness.

  Early steps include identifying opportunities to consolidate mission control operations into a centralized location and outlining an integration path for future government and commercial missions.
- **Establish a Software Strike Team:**

  Identify manual processes that could benefit from software tools or further automation.

  Close gaps in the capabilities of existing tools that could improve productivity.

6. Workforce Directive: Igniting the Space Economy & Accelerating Scientific Discovery

Background:

For more than 60 years, the space economy has largely been limited to launch, observation, and communication services—primarily funded by world governments. Despite substantial investment across private and commercial industry, few profitable ventures have emerged, and the range of services remains largely unchanged. Taxpayers alone cannot fund the future we all want to see in space.

Similarly, with launch costs declining and the advent of standardized bus architectures, NASA must become a force multiplier for science rather than a sole provider—making talent, expertise, and capabilities available to academia and other partners to accelerate the pace of world-changing discoveries.

Within 30 days, the Chief Program Management Officer will establish teams to pursue the following:

Igniting the Space Economy

- **Establish the Office of the Chief Commercial Officer:** a dedicated team to interface with industry, academia, and international partners to identify and realize the next wave of products and services that only the unique environments of space and the lunar surface can provide—and that generates value in excess of the cost.
- **Establish a consolidated "front door"** for external collaboration, including the creation of a website, with the goal of accelerating the space economy and exploring a path toward NASA becoming a partially or fully self-sustaining agency. The team will regularly communicate with industry on the agency priorities so that private investment can allocate accordingly.
- **Accelerate High Potential Scientific Payloads:** Conduct a comprehensive review of existing scientific and research experiments destined for the ISS or lunar surface to identify those with the highest potential to support a future space economy and accelerate the time-to-science.
    - Expand the pipeline of high-value payloads through proactive engagement by the Chief Commercial Officer's outreach efforts.
    - Prioritize high-potential payloads and urgently overhaul the lifecycle of research programs including streamlined approvals in the flight clearance process and reduced iteration timelines.

NASA as a Force Multiplier for Science

- **Accelerate and Broaden Scientific Missions**:

- Leverage bulk-buy launch capabilities and standardized satellite bus architectures alongside reduced certification/regulatory overhead to create a regular schedule of low-cost, high potential scientific missions.
- Energize academic institutions to fund meaningful probes, telescopes, rovers, and other exploration assets—with NASA providing support including launch services, spacecraft buses, mission control, and other agency resources.
- Work with the Associate Administrator for International and Interagency Relations to expand cost-sharing and joint missions with international partners.

- **Reform Science Mission Prioritization and Resource Allocation:**
  - Reevaluate the prioritization process with the aim of generating prompt, lower-cost missions inside of the traditional decadal cadence.
  - Eliminate rigid dollar-value thresholds in defining scientific missions; prioritize missions based on promise and potential impact, regardless of cost category.
  - Evaluate opportunities, especially in Earth Sciences, to transfer repeatable and mature scientific missions to private industry through "as-a-service" models on new & existing constellations to reduce agency burden.
  - Expand open access to NASA scientific data, making it broadly available to qualified academic institutions, thereby freeing NASA resources to focus on new initiatives.

7. Workforce Directive: Aero Consolidation

Background:

NASA's Aeronautics program should focus on pioneering technologies beyond the scope of industry or other agencies. This initiative consolidates aeronautics and flight test programs to enable rapid decision making, reduced operating cost, and results in focused research areas such as high-altitude, high-performance transportation or revolutionary airframe and propulsion designs.

Within 60 days, the Director of Aeronautics, in conjunction with Human resources and the Chief Program Management Officer will:

Aeronautics Organizational Realignment:

- Consolidation of Aviation Responsibilities: All aviation functions, including pilot operations and maintenance, will be unified under a single department with centralized leadership to enhance efficiency and accountability.
- Asset Relocation: Aviation assets will be primarily based at Armstrong Flight Research Center, leveraging its unique capabilities and infrastructure. Detachments, such as the T-38 fleet at Johnson Space Center (JSC), are permitted provided they do not necessitate redundant departments or leadership structures.
- Programs, such as those sponsored by the Science Mission Directorate, will no longer operate aviation assets, but instead serve as a customer to the flight services provided by Aeronautics.

Aeronautics Program Review:

- All programs will be assessed to ensure they align with NASA's objectives and that no other government agency or industry is capable of providing that service.
- All aviation assets will be assessed to evaluate budget and schedule adherence along with overall necessity in supporting NASA's objectives.
- Aviation flight hour programs will be assessed to determine their alignment with training, crew resource development, and transportation needs.
- Alternatives to high cost programs and assets will be explored, including the utilization of lower-cost, reliable business jets and repurposing other government assets, including high performance tech demonstration vehicles, to meet operational requirements more efficiently.
- This review should be completed and presented alongside recommendations for Aeronautics focus areas within 30 days.

8. Workforce Directive: Commission a Study for a Starfleet Academy

Background:

The commercial space industry remains in its early stages, operating largely under a limited regulatory framework known as the "learning period." As NASA envisions a thriving future in space—with multiple space stations, lunar and Martian outposts, and a growing cadence of crewed and uncrewed missions—it is essential to prepare now to properly enable the people, organizations, and vehicles that will support safe, sustained, and peaceful exploration.

To that end, the Chief Program Management Officer will commission a team within 30 days to assess the creation of an institution capable of certifying launch and spaceflight hardware for operation, training operators and flight crew members, and certifying the competence of such personnel. Study results to be published within 90 days.

Study Scope and Objectives

- **Mission Framework:** establish a framework focused on safely enabling, not stifling, the peaceful exploration and scientific pursuits of commercial and private space activities.
- **Comparative Research:** analyze comparable education and certification institutions supporting other mass transportation sectors, including aviation, maritime, and rail industries.
- **Curriculum Development:** explore potential curricula and certification requirements covering human and non-human spaceflight operations, scientific missions, ground control operations, spacecraft/launch vehicle design, manufacturing and repair, flight and ground safety, orbital debris mitigation, and other critical disciplines.
- **Industry Feedback:** Solicit input from commercial space companies, private operators, and academic institutions to assess demand, ensure curricula relevance, and align certification pathways with future industry needs.
- **Instructor Talent Pool:** Identify subject matter experts capable of serving as instructors, mentors, or curriculum advisors.
- **Mission Control Integration:** coordinate with the Next Generation Mission Control initiative to ensure future commercial and private operators are familiar with, and prepared to integrate into, a multi-mission environment.
- **Facility Location Assessment:** evaluate potential locations for the academy based on proximity to existing NASA facilities, workforce expertise, supporting

infrastructure, and subject matter relevance.

- **Financial Viability:** project the operational costs needed to establish a costing model for long-term viability.

III. RESEARCH REQUESTS

FOR HANDOFF:

Initial Request List (Day 1)

- Boards within NASA (aim to delete)
  - List of all Boards and committees making critical flight safety decisions (center directors?)
  - List of all boards at each Center along with purpose, function, and which decisions they are responsible for (center directors?)
- Admin
  - Major agency events or meetings (launches, international meetings, congressional or executive branch meetings, major program reviews, etc.)
  - Contact list of leadership
  - authority matrix and escalation tree
  - Authorized to post on social channels
  - Critical issue list
- Legal:
  - What is the origin of the statue limitation for number of civil servants
  - Laws against a binned/enforced quotas in performance management
- HR
  - Precise summary of federal employees and contractors by location
    - How many heads are in each location, and how are they organized?
      - What was this stat pre COVID vs post COVID?
      - What is the trend overtime
    - What is the current manager to doer ratio in each location?
    - What is the contractor distribution (full vs part time, parent company/companies, contract structure)
    - Review of salary (or net contractor cost) distribution, age distribution, performance score distribution
  - Review the performance management system. What is in place for contractors, and for peer review?
  - Summary of what does STEM engagement currently do and assessment of need to re-assign into comms
- IT
  - Software tools list for the workforce across all NASA centers
  - Who are the AI experts and what are the current use cases for AI at NASA

FOR INTERNAL USE:

Internal War Room Creations

- Gain / Loss matrix by center and vendor
- KPIs for key metrics (TBD)
- Things to be projected in room for SA:
  what are the top 5 things each team is looking at
  top priorities

Consolidated List of Actions from Directives

Human Resources Officer:

- Conduct a full review of employee and contractor recognition and awards programs
- Perform a recategorized performance review of the workforce to restore meaningful differentiation
- Establish a peer nomination system
- Reactivation of the Payload Specialist Program
- Create Additional Flight Opportunities Programs
- Streamline the hiring process

Chief Program Management Officer

- Conduct an immediate review of NASA's Top 10 programs by budget
- Audit of all programs (done with finance person too)
- Establish teams to pursue the following:
  Mars Infrastructure Mission:
  Focused Nuclear Propulsion:
  Information Technology Modernization, including:
    - Foundational Workforce Tools:
    - Artificial Intelligence Initiatives
    - Next Generation Mission Control:
    - Software Strike Team

  Establish the Office of the Chief Commercial Officer
  Establish a consolidated "front door"
  Conduct a comprehensive review of existing scientific and research experiments destined for the ISS or lunar surface to identify those with the highest potential
  Maximize the operational life of the International Space Station and prepare for commercial LEO destinations
  Accelerate and Broaden Scientific Missions
  Reform Science Mission Prioritization and Resource Allocation: to assess the creation of an institution capable of certifying launch and spaceflight

hardware for operation, training operators and flight crew members, and certifying the competence of such personnel.

International Affairs

- International Agreements and Deals review (International Hot List)
  Program issues?
  What are our obligations/commitments?
  What are the good and bad deals?

Chief Engineer

- Establish an Engineering Strike Team

Chief Financial Officer

- Establishment of a temporary Financial Strike Team
  Then also lists a whole bunch of things also actioned to the Finance Strike Team

Chief of the Aircraft Operations Directorate

- Increase the use of NASA and affiliate aircraft
- Update to website to promote and field inbound requests for inspirational missions.

Acting Associate Administrator for Comms

- Consolidate all NASA social media channels
- Develop a plan to expeditiously refresh and simplify the NASA website
- Consolidate communication departments and contractors across all Centers
- Expand access and transparency to space educators and media partners
- Increase use of specialized cameras on launch vehicles, payloads, aircraft and on the ISS

"Leadership across the agency"

- promote the new culture

Center Directors

- Immediately re-implement the voluntary retirement program
- Maintain the hiring freeze
- Suspend all second-in-command or co-leadership roles and titles
- Submit a consolidation and simplification proposal for your center, considering the following:
  - Reduce costly management layers and increase the number of "doers" at the agency.
  - Consolidate departments that serve similar purposes and delete departments that are insufficiently utilized
  - Re-structure organization such that both department and authority structures logically build towards broader functional mission priorities. enabling clear authority and decision making ownership
- Steps to enhance productivity (meeting size, etc.)
- All other boards and review committees are suspended

Addendum to Directives - Additional Detail to the Research Requests

Center Directors:

- For the action to submit a consolidation and simplification proposal for your center, considering the following:

  Reduce costly management layers and increase the number of "doers" at the agency.

  Consolidate departments that serve similar purposes and delete departments that are insufficiently utilized

  Re-structure organization such that both department and authority structures logically build towards broader functional mission priorities. enabling clear authority and decision making ownership

Chief Program Management Officer → Mission Directorate Leadership

- Conduct a comprehensive review of existing scientific and research experiments destined for the ISS or lunar surface to identify those with the highest potential

IV. ALL HANDS SPEECH

Workforce Speech - Day 1 Speech

I am incredibly grateful to serve under President Donald J. Trump as the 15th Administrator of NASA. I am humbled by the opportunity to work alongside the greatest scientific and engineering minds this nation has to offer.

This is the agency that sent humans to the Moon and brought them home safely, that developed and launched world-changing scientific instruments across the solar system, that pioneered groundbreaking technology, and that showcased American ingenuity with every launch. It is also the agency that has energized a new space industry, restoring our capability to launch American astronauts and opening space to others– something I was fortunate to experience firsthand.

NASA is the most respected space agency in the world—simply seeing the insignia is enough to inspire people to look up and dream of the possibilities. That is what separates NASA from every other government organization – **we are leading the greatest adventure in human history—and we are bringing billions of inspired and hopeful people along for the ride.**

Like any great organization, NASA is not without challenges. Since 1989, nearly every U.S. president has called for a return to the Moon and a path to Mars. Well over $100 billion has been spent on the grand return and we still face an expensive and lengthy journey ahead.

The problems are not limited to human exploration. There is a history of programs running over budget and behind schedule. When projects are delayed or eventually canceled, it not only wastes resources and opportunities for discovery, but it also leaves NASA's orbital assets and Earth-based infrastructure even further behind.

I've heard the usual explanations— discontinuity between administrations, congressional restrictions, budget challenges, recruitment and retention issues, and more. While there is much for me to learn, from what I can observe:

The agency is spread across many projects, some of which may not be aligned with NASA's true mission: doing what no other agency or organization in the world can accomplish. There is a top-heavy hierarchy that puts leadership on a pedestal instead of in the trenches, a crushing bureaucracy that paralyzes progress and as a result–I believe a culture has developed that accepts these inadequacies, not out of lack of passion or desire to win, but out of a belief that real change isn't possible.

I am not here to assign blame as I know everyone who shows up to work at NASA believes in the mission and is equally frustrated when progress stalls. I am also sure many of the present challenges stemmed from historic decisions that were made with the best of intentions. This is not the time to dwell on the past, when I am sure we all

want to start looking to the future, but it is important to acknowledge we have problems that necessitate change, or we are never going to get back to achieving what this agency was established to accomplish.

With the support of the President, Congress, and NASA's leadership, I will be issuing a series of Directives in the coming days. But today, I want to give you a sense of the direction I intend to lead this agency.

We Will Relentlessly Serve Our Mission, by focusing on three challenging objectives:

#1 – Lead the World in Human Space Exploration:

Our primary objective—in line with the President's inaugural address—is for American astronauts to lead in human space exploration. We will work urgently to accelerate the timeline of our immediate lunar ambitions while charting a bold and achievable course to Mars.

We are going to take a hard look at the factors that have historically contributed to delays—both within NASA and among our partners—and ensure that our current path is safe, executable, and positioned for the earliest possible launch opportunities. Even if we have to work around the clock– we will get Artemis II out to the pad and around the moon ahead of the current schedule.

At the same time, we will start preparing for the future beyond Artemis III by evaluating our architecture and working closely with commercial partners to determine the safest, most affordable, and sustainable approach for routine deep space missions.

As the logical evolution of our 'big rocket' efforts, we will dramatically increase investment and urgency around next-generation propulsion—specifically nuclear electric—with the goal in the next few years of having America underway on nuclear power in space.

- In all cases, every program must have clear objectives that maximize scientific, economic, and national security value for the American people.

#2 – Ignite a Thriving Space Economy

After more than a half century, the space economy remains largely unchanged—built around launch capabilities, communications, and observation, with tax-payer funded government spending as the primary customer. NASA will never be able to afford the future we all want to see in space, if the only viable economic model is perpetual government funding. We need to help industry develop capabilities that only the unique environment in space and on the lunar surface afford, that necessitate jobs on and off the planet and ultimately generate value in excess of the initial investment.

- We will prioritize scientific and tech initiatives that have the highest economic potential, working alongside our partners AND finding new partners that are looking to crack the code on the orbital economy.
- The ISS will be the starting point before handing over to what we hope will be multiple LEO destinations, but the future will extend far beyond, as there will inevitably be economic implications from exploring the moon, Mars and other celestial bodies.
- We will future-proof our mission control architecture to support numerous simultaneous operations and prepare for the inevitable flourishing activity that will take place across this great new frontier.
- Over time. NASA should aim to become a partially self-sustaining agency, reducing its reliance on taxpayer funding, much in the way the FAA operates today.

#3 – Become a force-multiplier for Science

We will leverage our resources and expertise to enable academic institutions and industry to invest alongside NASA with the aim of increasing the pace of groundbreaking discoveries. We will accelerate scientific breakthroughs and look to prioritize areas that have world changing implications, enable human spaceflight objectives, increase domain awareness in support of planetary defense or could otherwise have economic or national security implications for the American people. NASA has pioneered some of the world's most exquisite exploration assets—Voyager, Hubble, Chandra, Curiosity, New Horizons, JWST—but we should aim to launch missions like this routinely and affordably.

We will implement a repeatable framework and challenge our historic approach to include more frequent and lower cost missions, making use of commercial services from existing constellation providers and accepting more risk on uncrewed missions to ensure budgets and schedules are maintained.

The agency will leverage its buying power for launch vehicles or bus architectures and assign our talent to collaborate with commercial partners and academic institutions alongside their $1 trillion in endowments to fund more frequent and ambitious exploration missions.

A Reorganization is Necessary to Meet These Objectives

In addition to the institutional shortcomings. we are in a challenging budget environment and I support the President's goal to reduce the deficit and restore America's financial strength. As a nation. we can't print our way out of this problem—and if you care about the future of science and discovery. then a reorganization is long overdue.

I've heard from hundreds of passionate scientists. engineers. and astronauts. Many can recite the history behind every agency problem. but most believe real change is unachievable. I disagree. This is a unique moment in history—one where NASA can

and must be reorganized to concentrate resources on what truly moves the needle. We will take on this obligation ourselves– because it is the right thing for the future of the agency.

- We will eliminate the bureaucracy and implement a flatter organizational structure that enables clear communication and faster decision-making. That means reducing unnecessary layers of leadership, committees, and review boards that slow progress— and shifting toward fewer managers and more doers.
- We will remove unjustifiable expenses, consolidate departments, and challenge the justification, budget, and timeline of every program that may divert resources from our core mission.
- To be clear, this integrated reorg effort will replace the existing reviews already underway, with the goal of completion before year's end. I will be transparent, defend our decisions, and get NASA back to exclusively achieving world-changing projects as quickly as possible.

I've heard the doubts — that the mission can't be achieved with less money. I'm not sure when we started believing a million dollars isn't still a million, or that you can't do much with billions. At some point, we settled into the idea that everything worth doing must be expensive and take a long time. It doesn't have to be that way — and it wasn't in our past. As a nation, we once did bold, ambitious things — quickly and affordably. And I suspect the best and brightest at this agency, and across public service, will soon showcase that ingenuity once again.

You have my commitment to fight for the programs and people that are the backbone of this agency. We will never fly with reduced crews and waste precious opportunities to put explorers in space. And if we are on the verge of something extraordinary—like launching Roman—I will explore every option to get the program to the pad, even funding it myself if that's what it takes to deliver the science.

Alongside the reorganization we will ensure an intense, **mission-focused** culture centered on:

- **A relentless pursuit of the near-impossible** for all humankind
- **Decision making with a bias toward action and urgency**
- **Ownership and accountability** at all levels
- **And A recalibrated risk framework:** We will ensure safety is at the forefront of our decision making **but the mission of NASA means accepting that some risks are worth taking**

I do want to take a minute to expand on what a Mission-driven agency means. I have heard the mantra "if we have 10 Healthy Centers, the science will take care of itself". When children dream of working at NASA, they don't dream of healthy centers—they dream of launching rockets, building satellites, walking on the moon and Mars, studying planets and helping unlock the secrets of the universe. That is the mission of NASA and

when we deliver on our objectives, the inspiration, the STEM engagement, the recruiting and the science will all take care of itself.

To succeed, we must hire and promote based on merit and contract with vendors that deliver the best capabilities—on time and on budget. We will align ourselves with international partners not for the sake of having partners, but for those nations looking to meaningfully contribute to our shared mission. We will fund the centers, teams, and capabilities necessary to achieve our objectives as quickly as possible—not for the sake of creating jobs or maintaining facilities, but for executing urgently on the mission.

NASA is consistently ranked the Best Place to Work in the Federal Government. As an agency with such a challenging mission. NASA should be ranked the hardest place to work in the federal government, the most demanding, the most intense AND the most frustrating when we are not delivering the breakthroughs the world expects from our agency.

If you're satisfied with your job today–just imagine how you will feel when we return to the Moon, travel under nuclear propulsion, land astronauts on Mars, ignite the true space economy, and deliver the scientific headlines the world is waiting to read.

We Have Competition

We are not the only ones pursuing this mission and these objectives. Our great competitor is making rapid progress—challenging us in human spaceflight, exploration, innovative technology, scientific discovery, and economic opportunities.

If we fail, the consequences go far beyond national pride—they are about breakthroughs that could shift the balance of power here on Earth. President Kennedy stated America will lead in space under a banner of freedom and peace. Our President, Donald J. Trump, just reminded us of that when declaring American Astronauts will plant the 'Stars & Stripes' on Mars.

We are in a race—one with strategic implications in the ever-expanding high ground. If we do not lead, we will follow. And if we follow, we may never catch up.

NASA was never meant to be a caretaker of history—it was built to make history. This agency exists to break boundaries, pioneer new technology, take calculated risks, expand the frontier, achieve major discoveries, and inspire the world as to what is possible.

But history isn't made by protecting the status quo. It is made by those who dare to act—by those who make decisions, move fast, harness the tools and talent this great nation provides, and refuse to accept anything less than success.

We are going to make history, and I am honored to serve alongside you in the greatest adventure humankind has ever known. Now let's get back to work.

V. FINANCE STRIKE TEAM

To the Finance Strike Team (diligence/performance review):

Deliverable

Simple report no politician or member of the public would dispute, with the aim of liberating the agency of bureaucracy, improving performance and repurposing funding back to the mission. Include a 'high level summary' report and a detailed report

- *Note: engineers will be embedded with the outside financial/real estate/data analysts to enable quick checks of staffing, costing, and schedule estimates for any program.*

Recommend regular check-ins and feed the results from the field into the war room as close to real-time as possible so that the team can adjust the reorg plans accordingly. The final deliverable should be the supporting materials for the reorg, but we should know the results well before then.

Research Topics

1. **Financial Analysis:** Make the data visible and identify spend inconsistent with objectives and mission.
    a. Fully itemized expenses (expense, grant, cost-sharing partnership, or otherwise financial expenditure), including vendors and contractors, for last 1-2 years.
        i. Every check / payable, including contractors. Why should we be spending this much on having this many. Each cost should attempt to have a requestor (owner) and program (purpose), and a justification (how does it move the needle)
        ii. Challenge all assumptions regarding the necessity of expenses or resource allocations, particularly in comparison to other competing or higher-priority initiatives.
        iii. Prioritize any big expenditure where it's not overwhelmingly clear what we're getting in return (i.e. like JPL, where large facilities receive funding not necessarily tied to specific projects.)
    b. Review procurement systems and vendor selection process. Is the system logical and set up to get the best product at the best price with the lowest overhead?
    c. Revenue review (for data, launch, test asset usage, training services, designs, etc.)
        i. How does revenue relate to the cost of creating, operating, and upgrading the revenue centers?
        ii. Trends over time (have costs/staffing increased while revenue remained constant? Has revenue dropped off as revenue centers become obsolete?)

d. Specific desires/actions:
    i. How to properly monetize revenue centers?
    ii. Are there clear, large expenses that do not result in a measurable output (i.e. subsidy for retaining talent)
    iii. Refer any potential fraud, waste or abuse to the Office of the Inspector General.
    iv. Wherever possible, renegotiate or require a re-bid on large contracts regardless of dollar amounts

2. **Staffing and Productivity Analysis:**
    a. Organization layout
        i. Hierarchy review
        ii. Decision making procedures
        iii. Authority matrix for every program/project
    b. Organization details:
        i. How many heads (including civil servants and contractors) are in each location, and how are they organized? What was this stat pre COVID vs post COVID?
        ii. What is the contractor distribution (full vs part time, parent company/companies, contract structure, performance management system, perceived productivity (output: cost) relative to civil servant)
        iii. Review salary (or net contractor cost) distribution, age distribution, performance score distribution
    c. Specific staffing questions:
        i. What is every researcher/scientist at NASA doing (and how many/where are they) and how does their work align with agency goals?
        ii. Identify management layers to eliminate, departments to consolidate, decision making and ownership misalignment (for both government employees and contractors)
        iii. Manager to employee ratio in each department
    d. Research output and metrics for measuring productivity. How has output trended over time?
    e. Productivity analysis:
        i. Costs (financial, staffing) vs output over a multi-year period of time
            1. If trends are positive, recommendations on how to accelerate
            2. If negative, recommendations on how to improve the operating leverage of the center (how do you get more science out than expense growth)
        ii. Are there universal processes with high friction (e.g. travel platform, expenses, capital expenditures, etc.)

3. **Program & Grant Analysis:**
    a. *Note: NASA leadership and project management office will own the major program reviews, but finance strike team can still put a few pages together*

from their onsite review of what might fall under the radar. Example: funding obsolete wind tunnels or obsolete super computers because they're in support of a program that doesn't know better

b. Program management review (what tools are used, how are owners defined, performance measured—KPIs, is accountability present in schedule)
c. What programs are active at each center and how do they relate to the center organizational structure?
d. For each -
    i. Do they support NASA's mission? Clearly define this mission as moon, mars, propulsion, critical resources.
    ii. Quantify cost/schedule overrun. Is the overrun salvageable?
    iii. Next steps:
        1. Escalate to Administrator for termination if needed
        2. Escalation engineering strike team to fix

4. **Physical Infrastructure Analysis** (leveraging existing reports to the greatest extent reasonable):
    a. Summary of center facilities: land, buildings, laboratories, test/launch assets, hardware inventory, vehicles, etc.
        i. State of repair/upgrade: how old is it, what is the remaining life, does it require upgrades?
        ii. Current and anticipated demand for the facility's services.
        iii. If management of the facility should be outsourced to industry.
        iv. Test assets & laboratories:
            1. Utilization, level of demand and potential for revenue, redundancy vs other locations/industry. What programs?
            2. Cost of use (staff/$)
            3. How is asset usage tagged to projects/programs/customers? A wind tunnel should be able to 'bill' time to a program.
            4. Level of mobility
            5. Closure/decommissioning costs
        v. If no viable current or future demand exists, the team must identify the most expeditious path to decommissioning or repurposing the facility to maximize value for NASA and taxpayers.
    b. Provide a suggestion for an aggressive facility plan (achieve within 3 years)
        i. Recommendation on keep, kill (vacate vs decommission vs lease), or modify (upgrade, renovate, etc.)
        ii How to properly monetize facility-based revenue centers? Are user fees or cost recovery models sufficient to support upkeep, modernization, and throughput?
        iii. What can be done to make the center more inspiring or useful?

5. **Data/Information System Analysis**
    a. What IT organizations and assets are present at each center? How good are these organizations/personnel?
    b. Administrative
        i. Network access (WIFI, hardline, etc.), speeds, ease of access
        ii. Review of tools & methods - software availability, how can we make things better?
    c. Licenses
        i. Cost vs output
        ii. Seats purchased vs utilization vs actual need
    d. Data management & Compute
        i. Datacenters - what do we manage in house vs could be commercialized? Cost of operation vs outsourcing?
        ii. High performance computing - what do we do in house vs should we outsource?
        iii. Database management - tools used, software languages, ease of access for internal and external parties?
        iv. External agreements
    e. Cybersecurity
        i. What systems are in place to protect sensitive data or operational tools from outside entry? Is public data read only?
        ii. Do we track employee and contractor network content, data access, etc., to watch for red flags (leaks, retaliatory action, bad actors)
        iii. Test sites and hazardous operations - are we keeping our people safe from cyber threats?

Role Specifications, Commitment, & Timeline

Role Specifications

Traits / Experience / Capabilities
Top of Funnel Criteria

- US Citizens
- 2+2 years of experience (Banking + PE, not consulting)
  Note: Accepting 2+1 or 2+3 as well

Screening for...

- Motivated by impact, driven to make a difference
- Demonstrated primary data analysis experience in both (i) due diligence and (ii) deep portfolio company engagement. Example would be:
  Proprietary transaction due diligence where target did not have investment bankers supporting the preparation of information
  Hands-on portfolio company work for a material transaction (e.g. restructuring, carveout, sale) without investment banker support
- Detailed budgeting experience such as "zero based" budgeting analysis and/or carveout analysis with an eye towards resource prioritization

- Comprehension of process and governance mapping (aka delegation of authority, governance agreement negotiation, and capital allocation process)
- Procurement process analysis and material contract review
- Key soft skill will be power of persuasion / relationship building to obtain cooperation and information without compromising achieving diligence
- Not anti-administration

Specialized Experience / Capabilities

- Real estate analysis (1-3 people)
- [Data center / digital infrastructure analysis (1 person)]
- Interaction model documentation / implementation (management models) [Note: This would likely be a more senior person]

Commitment

- 60 day commitment in one of the following locations but virtually collaborating with a broader team of like skill set
- *Locations*
  - Washington, DC
  - Richmond, VA
  - Cleveland, OH
  - Birmingham, AL
  - New Orleans, LA
  - Houston, TX
  - Orlando, FL
  - Los Angeles, CA
  - Mountain View, CA

Timeline [Note: All steps post confirmation]

1. Agree candidate specifications with Working Group and Recruiting Firm
2. Recruiting Firm to develop a "top of funnel" list to invite to an informational webinar
   a. Needed: Approved external message delivered via email by Recruiting Firm
3. [???] Intermediate step where interested candidates speak to Recruiting Firm and/or some form of qualifier? [???]
4. Webinar: Accepted candidates join webinar
   a. Needed:
      i. Hype video introduction
      ii. Script
      iii. Recorded message from Jared
5. Interviews + Applications [Question: Can we simultaneously interview candidates and run background checks on them?]
   a. Interested candidates indicate to Recruiting Firm

b. [Assuming can background check] Candidates should be provided with an application that could enable a background check consisting of (i) basic eligibility questions they can represent, (ii) PII that would enable a formal background check, (iii) social media handles
c. Interview
    i. Round 1: Recruiting Firm to interview based on set of agreed upon information to screen
    ii. Round 2: 2 members of Working Group interview from a pre-agreed and consistent set of questions

Targeting 2 weeks post-confirmation to get first FST members

- +48hrs from Confirmation: Obtain approval for email outreach by Search Firm inviting candidates to webinar
- +3-5 days from outreach: Host webinar
- +3-5 days from webinar: Interested candidate list with pre-screen submitted to FST by Search Firm for interview scheduling
- +1-2 days from candidate list: Interviews completed and offers provided
- +[ ] days: Onboarding

VI. ENGINEERING STRIKE TEAM

High Level Intent

- **Create a *temporary* strike team of engineers to diagnose, communicate, and help solve issues on the top programs at NASA during the first ~120 days of the new administration.**
- **Objective**: Send a small team of engineering experts into the top programs at NASA to independently evaluate the state of the union. Is the current schedule appropriate? What is the state of the hardware/software? What opportunities are there to pull in the schedule? What seems beyond saving and should be eliminated?

  Each program will get a support team POC who will be the 'point' person in charge of communicating up and out to the Administrator's war room. 2-3 engineers will work a given program, delegating amongst themselves the work required to evaluate holistically.
  Knobs we can turn: funding, staffing/destaffing, requirements descoping, contract updates, support from other centers, increased risk acceptance, leadership changes, etc.
- **When**:

  30 days: identify and recruit >10 great engineers from within the agency, have a presence in the top programs and have built relationships with the primary stakeholders. Identify the best schedules and how they are being published. Identify the critical paths and ensure there are owners.
  60 days: Team has grown to begin work on all priority programs. On all programs evaluated, strike teams have a strong understanding of critical path and the overall schedule. Program updates are being sent regularly, including daily on the hottest projects. Strike team members have personally seen all the major hardware components, and built personal relationships with every major subteam involved. Keep/kill/modify recommendations sent to the administrator and strike teams are helping to pull in schedule/cost where possible.
  90-120 days: Strike team members have moved on to the next round of projects to start the same process. Any external hires (special government employee) contracts are terminated
  Strike teams disband either to other responsibilities or onto teams they've supported.

Focus Areas

For all programs reviewed, we'll be running the strike team playbook - learn as much as possible, evaluate what knobs are available to decrease time to science, increase payout, or decrease cost, and determine if any program is too far gone.

- **Artemis II, then III**

  Catch up on architecture and safety concerns (heatshield, engines, etc.) and make sure nothing looks totally broken

- Reconcile heatshield - review internal audit and work done to date.
  - Consider: Should we host dissenting opinions (i.e. Charlie C), should we make the internal report & results public?
  - Bring in outside reporter (i.e. Berger, Dodd) to tell the 'final story' on the Artemis II heatshield
- Architect path to bring in schedule on Artemis II, then III

- **ISS safety**
  Review and publish all life-limiting concerns into digestible format: Russian PRK concerns. Boeing concerns, etc. Sort by safety concern vs cost/hassle. Draw the clear picture of what continued operation will look like.
  Pair with JSC Finance Strike Team to make the clear picture of the incremental costs of astronauts and cost breakdown by year of operation.
- **HLS**
  Start with Blue, then SpaceX.
  Would contract/requirements updates increase probability of success?
- **Axiom Suits**
  What is the clear state of the suit and schedule and why are we getting mixed stories?
- **USDV**
  Requirements review. Are we approaching this in the simplest and most straightforward approach?
  Requirements and contract updates we can make to reduce cost
- **NGR** ($4.3B)
- **NEO Surveyor** ($1.2B)
- **Dragonfly** ($3.4B)
- **DSN Upgrade/Ground systems (>$700M)**
  Lay the groundwork and write the primer for an owner to come in to revitalize NASA comms infrastructure
- IMAP ($700M)
- DAVINCI/VERITAS ($>500M)
- LANDSAT NEXT (>$500M)
- Sentinel-6B ($500M)

Hiring Brief - How to Choose Candidates & Inform Them

- Who we need: high performing engineers from a variety of backgrounds with a track record of excellence:
  Mastery of first principles engineering - strong intuition and ability to quickly understand challenges and successes. Ability to judge the relative work of different solutions and the quality of work done to date.
  Strong communication - ability to quickly learn and synthesize new information, then convey key points up and out. Can quickly build constructive relationships with a new team and inspire trust.
  Hands-on expertise and internal drive. Has personally built and assembled hardware/software for a flight vehicle, overcome challenges, and solved

problems creatively. Comfortable using scrappy solutions alongside high fidelity methods. Can lead a team from the front lines.
- Ability to project manage - can build and develop a schedule, identify critical paths, and solve for knobs to bring that in. Identifies how and when to send updates, and can effectively delegate ownership

- Expertise checklist
  - Flight Software
  - Avionics
  - Propulsion/fluids
  - Structures/Mechanisms
  - Vehicle integration

Rules of Engagement

Purpose

The Engineering Support Team is established to support projects that are considered critical to the success of the agency that may be behind schedule or over budget. Our mission is to deploy to project teams to clarify schedule/critical path and cost, ensure clear and effective ownership exists at every level, and collaborate with project teams on creative solutions to the principal challenges threatening the schedule/budget.

Core Principles

1. **Respect and humility - listen first**: We are coming in as fresh newcomers to projects where team members have been working hard to solve very challenging problems. Value their expertise, experience, and perspectives. Engage with humility, recognizing that each project team is committed to the mission and has deep knowledge of their work. Listen with an open mind to understand the project's context, challenges, and constraints before proposing solutions.
2. **Focus on Solutions first:** We understand the program's objective and target timeline, and solve backward to identify what changes need to happen *now* to achieve the mission. Maybe the team is missing key experience, maybe they are working hard but on the wrong things. Maybe the critical path signal is being buried in layers of management. Righting these programs may require painful changes in leadership, ownership, or facilities, but *is probably* possible. If it isn't or a clean slate would be more effective, advocate for that.
3. **Bias toward action**: We'll be operating with minimal supervision and a small team. To maximize our success, move fast and use your judgement. 'Ask for forgiveness, not permission'

Engagement Guidelines

We approach every engagement with respect, and empathy. We have a *temporary* opportunity to identify and clear hurdles in these projects, leveraging our expertise, past experience, and hotline to the administrator. Ultimately, we are not long term owners of the project so it is critical to ensure the remaining teams are set up to succeed.

1. **Initial Engagement**:
   - Introduce ourselves as optimistic newcomers dedicated to the program's success. Do not be a jerk - assume they are smarter than you and have worked harder and are still in this mess. Express admiration for what they're doing and learn about every challenge. While you are there to evaluate the team, you also have a valuable megaphone to find resources or get priority across the agency.
   - Meet as many people as possible face to face to build relationships. Pick up a phone before your keyboard, and don't prioritize email
2. **Turn the Crank**
   - Be as honest and transparent as you reasonably can be, but zoom in on shortfalls and ask a million questions - don't get satisfied with a surface answer.
   - Get hands on and eyes on with every part of the program. Visit integration sites, find the payloads at vendors/contractors, and meet everyone
   - Stay in touch with the Administrator's war room - provide regular updates and debrief as necessary
3. **Building the Outcome**:
   - Is the program worth saving (remaining cost/people burden vs win) - get us out of the bad deals. If it should be ended, find the best path
     1. DOGE financial report on fraud/waste/abuse -> Administrator kills
     2. OIG report on mismanagement -> show rationale -> Administrator kills
     3. Logical choice
   - Identify the owner of the best overall program schedule, and make sure it is getting out to the masses
     1. Can everyone on the program identify the top priorities and critical path? If not, the heartbeat is not loud enough
     2. Make sure every step of the critical path has an owner, and those owners are feeling the heat. It is unacceptable for someone to be on critical path and not know it
     3. There should be a daily identifying blockers and needs to accelerate the critical path
   - Use your position and megaphone to find an owner for every problem, then find ways to unblock them. They're the project owners, not you. The knobs to turn are the same as noted in the Administrator's Directives:
     1. Solving the technical problems
     2. Expanding work shifts (more resources)
     3. Accelerating or streamlining decision-making, including escalating directly to the Administrator
     4. Accepting greater levels of programmatic risk where appropriate
     5. Utilizing alternative vendors or contractors
     6. Any other creative ideas should be considered

VII. COMMUNICATIONS PLAN

NASA Administrator Communications Talking Points

Action Notes:

- Should be briefed to Committee, NASA leadership, HR, and comms team prior to the 'All Hands' Some concurrence on hot areas from OMB/DOGE
- Should also be briefed to a roundtable of space influencers/educators/and traditional space media prior to the 'all hands' and definitely before the release of the 'Directives'.

Mission

- NASA's mission remains the greatest adventure in human history: to explore space and air, innovate for humanity, and inspire the world through discovery.
- NASA was never meant to be a caretaker of history—we are here to make history.

Leadership Under President Trump

- Under President Donald J. Trump's leadership, we are restoring America's mission focus at NASA—accelerating our lunar ambitions, leading the way to Mars, and igniting a new era of exploration and scientific discovery.
- President Trump has established an ambitious and inspiring goal to plant the Stars and Stripes on Mars—and we intend to meet that challenge.

Strategic Objectives

- **#1 Lead the World in Human Space Exploration:**
  Accelerate our lunar objectives.
  Establish a bold and achievable path to Mars.
  Evaluate our architecture and partnerships to ensure safety, affordability, and sustainability in deep space missions.
  Dramatically increase investment and urgency around next-generation propulsion—especially nuclear electric systems.
- **#2 Ignite a Thriving Space Economy:**
  Shift beyond perpetual government funding toward enabling real economic activity uniquely possible in space and the lunar surface.
  Prepare a "Mission Control of the Future" to manage flourishing crewed and uncrewed commercial missions, LEO platforms, and future lunar and deep space operations.
- **#3 Become a Force-Multiplier for Science:**
  Accelerate frequent, ambitious, and affordable scientific missions.
  Accept more development risk on uncrewed missions to increase the pace of discovery.
  Leverage international partnerships, commercial entities, and academic institutions to co-invest in exploration.

Agency Transformation

- **Reorganization**: We will flatten the bureaucracy, reduce layers of management, consolidate departments, remove blockers, and reassign resources toward needle-moving priorities.
- **Mission First**: Every project, every dollar, every partnership, every action must advance human exploration, world-changing scientific discovery, or a thriving space economy.
- **Urgency and Bias for Action**: We will move fast, empower doers, and accept that smart risks are necessary for major breakthroughs.
- **Workforce Ethos**:

  NASA must once again become the hardest, most demanding, and if successful—the most rewarding place to work in the federal government. Our culture will be defined by immense competence, ownership, accountability, urgency, honesty, and smart, calculated risk-taking—because some risks, like exploring the worlds beyond our own, are worth taking.

  True satisfaction will come from achieving major scientific breakthroughs, returning American astronauts to the Moon and on to Mars, traveling under nuclear propulsion, and cracking the code on building a true space economy.

NASA and Commercial Partnerships

- NASA has worked with commercial partners since its inception—this is not a new development.
  Major corporations like Boeing, McDonnell Douglas, Lockheed, and Northrop contributed to Mercury, Gemini, Apollo, and the Space Shuttle programs.
- NASA focuses relentlessly on achieving the near-impossible—doing what no other agency, company, or nation can accomplish.
  When achieved, those capabilities are handed off to commercial providers, as we see today with low-Earth orbit operations, the CLPS program, and Earth observation satellites.
- As commercial operations mature, NASA will recalibrate toward nuclear propulsion and deep space exploration.

Acknowledging Challenges

- NASA has a proud legacy, but we must be honest about our challenges: delays, cost overruns, aging infrastructure, and a culture throttled by bureaucracy at the expense of the mission.
- We are entering a decisive and highly competitive era—one where complacency is the greatest risk, and maintaining the status quo is not an acceptable option.

No Tough Trades

- The Administrator is committed to working alongside Congress and ensuring the President's vision for space is achieved.

- Eliminate fraud, waste, inefficiencies, and bureaucracy that starve funding from the objectives NASA was established to accomplish.
- Fix and accelerate lunar plans while simultaneously charting a course for Mars.
- Realize the potential of the International Space Station to unlock the true space economy and prepare for the handover to commercial LEO destinations.
  Increase the pace of world-changing scientific discoveries alongside international, industry, and academic partners.

Inspiring the Next Generation

- Inspiration and STEM engagement are fundamental to NASA's mission.
- The best way to inspire the next generation of astronauts, engineers, and scientists is to deliver on the mission and shock the world through discovery.

Recognizing the Competition

- We are not alone in the pursuit of space exploration. Strategic competitors are rapidly advancing in human spaceflight, science, technology, and the space economy.
- The peaceful exploration of space is a race—and failure could shift the balance of power here on Earth.
- If America does not lead, we will follow—and if we follow, we may never catch up.

Administrator's Personal Commitments

- Will personally cover all legally permissible costs associated with his duties as Administrator.
- Will donate his NASA salary to Space Camp to fund scholarships for the next generation of explorers.
- Will serve with transparency, fairness, and complete adherence to ethics guidelines.
- Holds no direct or indirect financial interests in aerospace or defense-related businesses.

Closing Core Messages

- NASA is leading the greatest adventure in human history.
- NASA is not a caretaker of history—we make history.
- NASA was established to achieve the near-impossible for all humankind—to do what no other agency, institution, public or private, is capable of accomplishing.

Communication cadence

- Weekly what was accomplished at NASA
- Always quantify to support the wins (especially as it relates to reorganization efforts, pulling forward launch dates)

- Plan out schedule of high quality inspirational or educational content (quality over quantity)
- Support the President

VIII. NUCLEAR PROGRAM PLAN

Nuclear Electric Propulsion (NEP) Program Overview

by Jared Isaacman, Lewis Gillis and reviewed by Justin Coleman

Space nuclear is hard, complex, and costly—but our rivals are moving fast, and the capabilities it unlocks are clear and compelling. America needs a government-led, commercially driven program to regain the ability to develop space-based nuclear power. This is how we open up groundbreaking capabilities near Earth, on the Moon and Mars, and across the solar system.

The program must start with presidential backing and a strong central leadership team--empowered to cut through bureaucracy and held accountable for rapid execution. The first step is a minimum-viable demonstration: fly early, fly often, and achieve a credible first flight within four years.

Major Advantages

- **Logical evolution of SLS resources** as a healthy commercial industry assumes responsibility for heavy-lift launch services.
- **Exploration:** less constraining launch windows for interplanetary missions; return capability for astronauts and samples from Mars and beyond; directly supports anticipated surface power requirements.
- **Defense:** persistent high-power surveillance; orbital agility; potential for high-power offensive capability.

Political Rationale

- The administration is action-oriented and ready for change.
- China and Russia are investing in space nuclear: China is developing a lithium-cooled fast reactor: Russia is pursuing nuclear electric propulsion; both are planning a joint lunar nuclear power station.
- The terrestrial nuclear landscape has shifted: broader public support, a strong commercial base, and new regulatory frameworks (SPD-6, NSPM-20, recent EOs) that cut through outdated bureaucracy.
- SLS will be eclipsed by more affordable commercial heavy lift services. That national investment must pivot toward the near-impossible and not compete with American industry.
- The program continues America's legacy of leading in the ultimate high-ground of space.

Phases

Following a presidential directive, we build a nuclear-powered spacecraft using NEP technology, with the goal of 'America underway under nuclear power in space' before the end of the current term. Industry scales proven technologies--thrusters, radiators, structures, power components. The government builds the reactor, integrates the system, and runs ground and in-space operations

In parallel, the Administrator works with Congress, DOE, and DoD to gradually pivot SLS resources into a Phase 2 multi-megawatt nuclear program. A likely early step: flying the VALKRE reactor from Idaho National Labs in a >100kWe uncrewed NEP demo (e.g. a Martian flyby). Industry contributes components under Space Act Agreements, but core design authority remains centralized to bypass regulatory gridlock and maintain urgency.

NASA's SLS resources and centers are repurposed as national testbeds for nuclear electric systems and structures, enabling rapid prototyping and iteration. With an adaptive regulatory framework and reliable commercial launch, this demonstration could launch within the current term, marking the first use of nuclear propulsion in space. It would open new defense options, enable Golden Dome applications, and redirect NASA's legacy programs toward a logical nuclear future.

The focus shifts to rapid flights and parallel architectures to expand the technology envelope:

- Develop lighter, more compact reactor cores with optimized enrichment and materials.
- Push core and radiator temperatures higher.
- Prove long-duration reactor operations.
- Scale electric propulsion power from high kilowatts into the megawatt class--required to support crewed exploration and surface infrastructure.

Phase 2 could include docking with crewed spacecraft to achieve the first crewed nuclear spaceflight, as well as space-based solid-state laser demonstrations for DoD missions.

The ultimate goal: a clear path to a fleet of nuclear-electric spacecraft to support crewed expeditions, enable commercial industry, and land American astronauts on Mars--and bring them safely home.

Why Past Efforts Failed

Space nuclear has a long history of accomplishing very little with large resources. Why?

- Fragile or nonexistent mission pull: no prioritization or leadership.
- Misaligned objectives: overly ambitious goals and requirements, mismatched to political timelines and funding.
- Fragmented leadership: projects buried in bureaucracy, with no unified champion.

Principles for Success

- Centralized, empowered leadership able to cut through bureaucratic delays.
- Clear, politically realistic goals aligned with immediate national security and scientific needs.
- Fast, decisive action to demonstrate operational capability within the current political window.

Extra Points

America must take the nuclear option in space, or watch Russia and China eclipse us in the ultimate high ground.

President Trump has made it clear that American astronauts should plant the Stars and Stripes on Mars. Commercial industry is investing heavily in the capabilities to make this possible, but returning from Mars without nuclear propulsion would require a string of miracles requiring production of cryogenic propellant on another planet. NEP investments are essential for NASA and fully complementary to (not competitive) with commercial industry.

We can debate NEP vs. NTP vs. surface power endlessly. In reality, we will eventually need all three, just as we rely on gas, solar, and nuclear here on Earth. NEP is the logical focus: it aligns with the widest range of applications, can be safely tested on the ground, and directly builds on past progress.

Key Contacts & Commercial Interests

(alongside many traditional commercial entities)

- General:
  - Bhavya Lal - Wrote the National Strategy for Space Nuclear Power, alongside Roger Meyer
  - Jeff Waksman - Pele program manager @ Pentagon (development & management lessons learned
- Reactors/reactor components
  - Justin Coleman: Idaho National Labs
  - Jacob DeWitte: Oklo
  - Jordan Bramble: Antares Nuclear
  - Doug Bernauer: Radiant Energy
- Powerplant components
  - Doug Bernauer: Radiant Energy
  - Pat McClure: SpaceNukes
- Electric Propulsion
  - Neel Kunjur: K2
  - Impulse Space: Tom Mueller

IX. APPENDIX

Op-Ed: We Need a 'Mini-Manhattan Project' for Nuclear Electric Propulsion

Isaacman, Jared, and Newt Gingrich. "We Need a 'Mini-Manhattan Project' for Nuclear Electric Propulsion." RealClearScience, 13 Aug. 2025, www.realclearscience.com/articles/2025/08_13/we_need_a_mini-manhattan_project_for_nuclear_electric_propulsion_1128436.html.

We Need a 'Mini-Manhattan Project' for Nuclear Electric Propulsion

By Jared Isaacman. Newt Gingrich
August 13, 2025

The high ground has always held strategic and tactical importance—from mountaintops in ancient battles to the orbital vantage points of today. China and Russia are rapidly accelerating their space and lunar ambitions. Both are seeking scientific, economic, and national security breakthroughs that could shift the balance of power on Earth.

The President's budget calls for an eventual pivot away from NASA's Space Launch System (SLS)—leaving the heavy-lift rocket business to a capable commercial industry. That pivot should be toward something no other agency, organization, or company is capable of accomplishing: building a fleet of nuclear-electric-powered spaceships and extending America's reach in the ultimate high ground of space.

The NASA centers, workforce, and contractors that manage, assemble, and test SLS are suited to take on this inspiring and necessary challenge. NASA Center at Michoud, for example, built landing craft during WWII, the Saturn V during the space race, the Space Shuttle, and the SLS. It is now waiting for the next logical evolution to ensure the competitiveness of our national space capabilities.

Like the railroads that once opened the American frontier, nuclear propulsion is an efficient means of accelerating mass through deep space. Unlike chemical propulsion—which demands complex in-situ propellant manufacturing, orbital refueling, and tightly aligned launch windows—nuclear-electric propulsion offers freedom of movement and operational simplicity.

It reduces planetary launch window constraints. It has less dependency on orbital depots and surface propellant manufacturing. And it is reusable and provides greater mission optionality to Mars and beyond.

In addition to propulsion, onboard nuclear reactors offer sustained electrical power that solar panels simply can't match – especially in deep space or on shadowed lunar or Martian terrain. This would unlock persistent surface operations, high-throughput communications and instruments, and dual-use options for national security missions and critical Department of Defense platforms.

Unlike Nuclear Thermal Propulsion, Nuclear Electric Propulsion does not require radioactive, open-air testing. Nor does it require the complexity of hydrogen propellant and on-orbit refueling.

Our competitors are not waiting. China and Russia are investing heavily in nuclear space technologies. If America wants to lead, NASA must take on the hard problems again and do the near-impossible. It must urgently deliver the systems only it can build—leaving routine operations such as Earth-to-orbit delivery to the healthy commercial launch industry.

This is no easy road, and there is a long list of obstacles that should not deter this endeavor. We need to get into the rhythm. We must get comfortable working with and transporting highly enriched uranium and launching and operating nuclear reactors in space. As we apply the practical uses of nuclear power and propulsion in space, we will inevitably gain experience and a deeper understanding. This will drive down costs and improve performance until we eventually unlock even more exotic forms of propulsion. NASA must embrace bold undertakings again. Making the development of nuclear-electric propulsion a mini-Manhattan project would be a good start. As we did with the USS Nautilus, the first nuclear submarine, we should unleash the best and brightest minds to ensure America is underway under nuclear power in space.

America has no choice. What we stand to learn and gain—for our people, economy, and security—is astronomical. If we don't lead, you can be sure others will.
If we lose the high ground, the consequences won't be limited to space. It is time for NASA to commit to the nuclear option.

Jared Isaacman is an entrepreneur, pilot, and astronaut with more than 7,000 flight hours, including ratings in experimental and ex-military aircraft. He is Executive Chairman of Shift4 (NYSE: FOUR) and co-founder of Draken International, the world's largest private air force, supporting U.S. military pilot training.

Newt Gingrich was Speaker of the U.S. House of Representatives from 1995-1999 and a candidate for the 2012 Republican presidential nomination. He is chairman of Gingrich 360.

Op-Ed: Reforming NASA: A Path to Mars and Beyond

Isaacman, Jared, and Newt Gingrich. "Reforming NASA: A Path to Mars and Beyond." *The Hill*, 6 Aug. 2025, www.thehill.com/opinion/technology/4561477-reforming-nasa-a-path-to-mars-and-beyond/.

Reforming NASA: A path to Mars and beyond

by Jared Isaacman and Newt Gingrich, opinion contributors - 08/06/25

Despite everything that is broken and unsettling in the world. America and our great space agency is worth fighting for — and fixing.

From the moment Jared's nomination to head NASA was announced last year, the reaction from passionate space enthusiasts and professionals was overwhelmingly positive. Everyone had ideas — big, small, crazy, pragmatic and visionary. It became immediately clear that no other federal agency attracts the level of engagement NASA does. Space captivates people — us included. So, we wanted to share a few of our ideas. Please consider these thoughts just a drop in the sea of ideas that come from many knowledgeable voices who long for humankind's next giant leap.

The first step to fixing a problem is admitting we have one. If NASA wants to get back to generating world-changing headlines, we must confront some difficult facts.

Every president for the past 35 years has called for a return to the Moon and a path to Mars. More than $100 billion has been spent, yet the return path remains distant and uncertain. Major programs are over budget, behind schedule and often canceled. This wastes opportunities for science and discovery and undermines public confidence in NASA.

Similarly, we have maintained a continuous presence in low Earth orbit (which is a great accomplishment). But we still haven't cracked the code on creating the commercial orbital economy. If we don't, humankind's future in space will forever be tethered to taxpayer funding and inefficient government spending. The federal government is entering a challenging budgetary environment. The national debt is exploding, and we can't spend our way out of it. NASA can and must do more with less.

Already, NASA isn't getting the most out of its budget — whether it's $20 billion or $25 billion. The agency's leadership has often said, "If we have 10 healthy centers and take care of people, the science will take care of itself." By this logic, any CEO with a good human resource department should be as successful as Steve Jobs. This is ludicrous.

One of leadership's current solutions to budget pressures is to reduce astronaut crew sizes and mission frequency. Meanwhile, bureaucratic positions proliferate. This is unacceptable. Astronauts — not bureaucrats — are the human identity of the agency

There are too many managers, deputies, assistants and review boards — and not enough doers. Bureaucracy is stifling innovation.

The culture must return to being mission focused. We need to empower the best and brightest to make decisions and take calculated risks. Some efforts — such as exploring worlds beyond our own — involve risks worth taking.

NASA has also lost its ability to inspire and excite people. The agency's storytelling is fragmented. NASA has numerous social media channels and countless small initiatives that dilute the big, bold mission the agency was established to achieve.

NASA must reorganize, cut the bureaucracy and align responsibilities logically with agency priorities alongside a cultural rebirth. We should create engineering and finance strike teams that can identify inefficiencies, solve problems and fix failing programs.

Of course we will also need to use what we already have. This means using the Space Launch System vehicles that are already funded to return to the Moon. This being said, Artemis II must get to the pad and launch by Christmas.

To get to Mars, we must work in parallel alongside the commercial industry that is pioneering the reuseable heavy lift vehicles. NASA should support the development of reusable systems for routine deep space missions and focus agency resources on the challenges commercial industry will not be capable of solving.

Ultimately, we should move beyond Space Launch System. The agency should redirect talent and resources to nuclear electric propulsion. This is the logical evolution for power, efficiency and exploration at scale with dual use potential. NASA needs a mini-Manhattan Project to get America underway on nuclear power in space.

In addition to returning to the Moon and going to Mars, NASA needs to develop an industry outreach effort to prioritize high-value science and commercial work aboard the International Space Station. This incredible investment can generate economic returns. The taxpayers alone can't fund the future we all want to see in space. As we mentioned before, a strong commercial orbital economy is imperative.

If NASA is operating as it should, we should be able to generate a continuous cycle of amazing scientific discovery. We all love the James Webb Space Telescope, Hubble and the Mars rovers. But we need to launch missions like these frequently.

A flagship science program shouldn't have to cost a billion dollars. Administrator Dan Goldin was right. NASA should focus on lower-cost, higher-frequency missions, that accept more risk. Today's commercial space sector makes this model much more viable.

This could help enable academic institutions to leverage their $1 trillion in endowments to fund their own extraordinary scientific missions. NASA can be a facilitator and partner in a new age of discovery.

These are turbulent times, and budget pressures are real. But delay and defeat are not options. NASA was never meant to be a caretaker of history. The agency was built to make history. China is moving fast with bold ambitions in the ultimate high ground of space. If we fail to be the leader, we will be the follower — and we may never catch up.

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