

Genesis Mission

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New Space Economy
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Introduction

“Genesis Mission” is an infographic collection examining the structure, purpose, governance, scientific direction, implementation, and evaluation of the Genesis Mission. Across ten infographics, the collection presents the mission as a subject involving the U.S. Department of Energy, national science and technology priorities, artificial intelligence, research coordination, execution, security, intellectual property, dual use, and measures of success. The material is intended to provide a structured reference for professional readers seeking an overview of how the mission is organized and how its major components relate to one another.

The collection begins with “THE GENESIS MISSION AT A GLANCE,” which establishes the broad frame for the subject. It then turns to institutional responsibility in “WHY THE DEPARTMENT OF ENERGY LEADS THE MISSION” and to governance in “WHO GOVERNS THE

GENESIS MISSION?” Together, these opening infographics organize the mission around its overall identity, departmental leadership, and governing structure.

The next section of the collection focuses on the mission’s scientific and technological foundation. “INSIDE THE AMERICAN SCIENCE AND SECURITY PLATFORM” addresses the platform associated with the mission, while “HOW AI COULD CHANGE THE SCIENTIFIC METHOD” considers the relationship between artificial intelligence and scientific practice. “THE NATIONAL SCIENCE AND TECHNOLOGY CHALLENGES” broadens the focus to the challenges the mission is intended to address. These infographics place the mission within a framework connecting scientific methods, technology, security, and national-level priorities.

The collection then moves from structure and purpose to participation and execution. “THE GENESIS RESEARCH ECOSYSTEM” presents the research environment surrounding the mission, and “THE 270-DAY BUILDOUT: FROM ORDER TO EXECUTION” follows a defined progression from an initiating order through implementation. This sequence gives the document an operational dimension, showing how the mission is considered not only as an institutional and scientific initiative, but also as something that must be organized and carried out.

The final two infographics address conditions that shape the mission’s use and assessment. “SECURITY, ACCESS, INTELLECTUAL PROPERTY, AND DUAL USE” groups the issues associated with controlling and applying the mission’s work. “HOW SHOULD GENESIS MISSION SUCCESS BE MEASURED?” closes the collection by turning to evaluation. The progression therefore runs from an overview, leadership, and governance through platforms, methods, challenges, research relationships, and execution, before

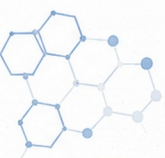
concluding with questions of responsible use and measurement.

Taken together, the infographics present the Genesis Mission as a coordinated framework in which governance, scientific capability, artificial intelligence, research organization, implementation, security, intellectual property, dual use, and success measures must be considered in relation to one another. The collection provides a visual reference for understanding the mission’s principal structures, themes, and stages.

Section 1: Mission Foundations

4 infographics

These infographics introduce the Genesis Mission, explain its departmental lead, describe its governance, and present its core platform.



THE GENESIS MISSION AT A GLANCE

A NATIONAL AI-FOR-SCIENCE INITIATIVE CREATED BY EXECUTIVE ORDER 14363



LAUNCHED
NOVEMBER 24, 2025



MISSION
ACCELERATE TRANSFORMATIVE
SCIENTIFIC DISCOVERY WITH AI



**SCIENTIFIC
DISCOVERY**



**NATIONAL
SECURITY**



**ENERGY
CAPABILITY**



**RESEARCH
PRODUCTIVITY**



**PUBLIC R&D
VALUE**

★ **THE VISION: CONNECT FEDERAL DATA, COMPUTE, MODELS,
RESEARCHERS, AND EXPERIMENTAL FACILITIES**

★ MANHATTAN PROJECT AND APOLLO COMPARISONS EXPRESS AMBITION—NOT EQUIVALENT SCALE OR MATURITY.

WHY THE DEPARTMENT OF ENERGY LEADS THE MISSION

NATIONAL LABORATORIES CONNECT COMPUTE, DATA, FACILITIES, AND SCIENTIFIC EXPERTISE



**17 NATIONAL
LABORATORIES**

A NATIONWIDE
RESEARCH NETWORK



**HIGH-PERFORMANCE
COMPUTING**

LARGE-SCALE MODELING
AND SIMULATION



**MAJOR SCIENTIFIC
INSTRUMENTS**

REAL-WORLD
EXPERIMENTAL DATA



**SPECIALIZED
DATASETS**

DECADES OF FEDERAL
RESEARCH



**SECURE
RESEARCH**

SENSITIVE AND
CLASSIFIED MISSIONS



**NATIONAL USER
FACILITIES**

SHARED ACCESS FOR
RESEARCHERS



DOE'S ADVANTAGE: CONNECT DIGITAL MODELS TO REAL EXPERIMENTS



THE IMPLEMENTATION CHALLENGE IS INTEGRATION ACROSS INSTITUTIONS—NOT COMPUTE ALONE.

WHO GOVERNS THE GENESIS MISSION?

A WHITE HOUSE-LED, DOE-IMPLEMENTED, WHOLE-OF-GOVERNMENT STRUCTURE



NATIONAL DIRECTION

WHITE HOUSE SCIENCE LEADERSHIP



IMPLEMENTATION

DEPARTMENT OF ENERGY



INTERAGENCY COORDINATION

NATIONAL SCIENCE AND TECHNOLOGY COUNCIL



DATA AND AI SUPPORT

FEDERAL DATA AND AI LEADERSHIP COUNCILS



REPORTING

PRESIDENT AND OFFICE OF
MANAGEMENT AND BUDGET



PARTICIPANTS

FEDERAL AGENCIES • NATIONAL LABS •
UNIVERSITIES • INDUSTRY • NONPROFITS •
INTERNATIONAL PARTNERS



CORE MANAGEMENT TEST: ALIGN PROGRAMS, SHARE RESOURCES, AVOID DUPLICATION

INSIDE THE AMERICAN SCIENCE AND SECURITY PLATFORM

THE INTEGRATED INFRASTRUCTURE BEHIND AI-ACCELERATED SCIENTIFIC RESEARCH



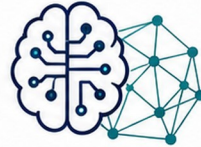
COMPUTE

SUPERCOMPUTERS +
SECURE CLOUD



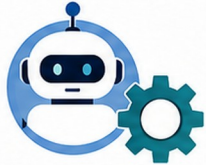
DATA

FEDERAL + ACADEMIC +
PROPRIETARY +
SYNTHETIC



MODELS

DOMAIN-SPECIFIC
SCIENTIFIC FOUNDATION
MODELS



AI AGENTS

HYPOTHESIS TESTING +
WORKFLOW
AUTOMATION



SIMULATION

PREDICTION +
DIGITAL TWINS +
OPTIMIZATION



EXPERIMENTS

ROBOTIC LABS +
AI-AUGMENTED
MANUFACTURING



ONE SECURE ENVIRONMENT CONNECTING DIGITAL RESEARCH WITH PHYSICAL FACILITIES



NOT A SINGLE CHATBOT: AN INTEGRATED RESEARCH ENVIRONMENT

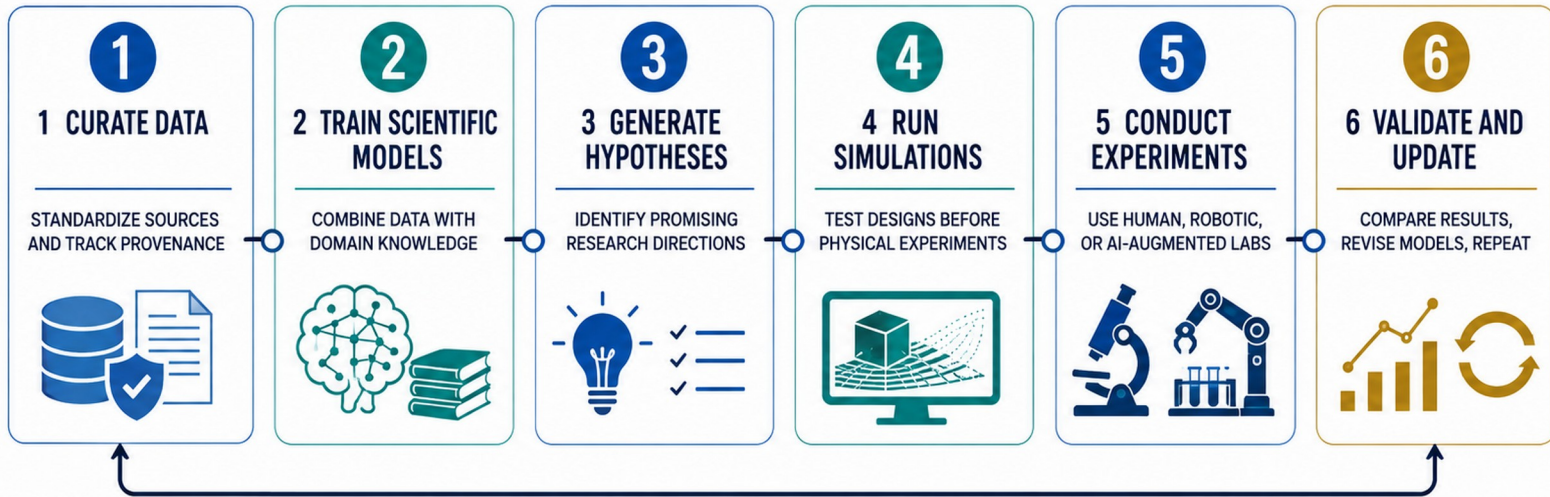
Section 2: Scientific Mission and Execution

4 infographics

These items progress from AI's effect on science through national challenges, the research ecosystem, and the practical buildout plan.

HOW AI COULD CHANGE THE SCIENTIFIC METHOD

A FASTER DISCOVERY CYCLE BUILT AROUND MODELS, SIMULATION, EXPERIMENTS, AND VALIDATION



FASTER ITERATION DOES NOT REPLACE SCIENTIFIC VERIFICATION

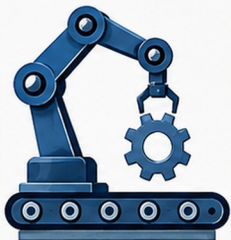


REPRODUCIBLE RESULTS REQUIRE DATA, METHODS, CODE, AND OUTPUTS

THE NATIONAL SCIENCE AND TECHNOLOGY CHALLENGES

AI-ENABLED RESEARCH TARGETS HIGH-IMPACT NATIONAL PRIORITIES

ADVANCED
MANUFACTURING



BIOTECHNOLOGY



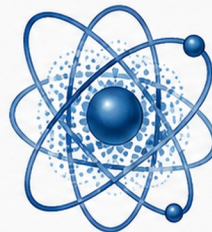
CRITICAL
MATERIALS



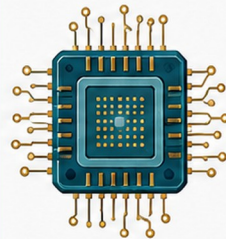
NUCLEAR
FISSION + FUSION



QUANTUM
INFORMATION SCIENCE



SEMICONDUCTORS +
MICROELECTRONICS



THE INITIAL DOE PORTFOLIO EXPANDED TO 26 CHALLENGES

GRID MODERNIZATION • MATERIALS DISCOVERY • AUTONOMOUS LABS • ENERGY SYSTEMS • WATER FORECASTING



A BROAD PORTFOLIO INCREASES REACH BUT CAN DILUTE FOCUS—MEASURABLE OUTCOMES MATTER.

THE GENESIS RESEARCH ECOSYSTEM

PUBLIC LABS, UNIVERSITIES, INDUSTRY, AND TALENT SHARE CAPABILITIES



17

NATIONAL
LABORATORIES



5

NNSA PLANTS
AND SITES



41

INDUSTRY, NONPROFIT,
AND PHILANTHROPIC
ORGANIZATIONS



MORE THAN \$800 MILLION

PARTNER COMMITMENTS REPORTED JULY 22, 2026



COMPUTE
+ CLOUD



AI MODELS
+ TOOLS



SCIENTIFIC
EXPERTISE



DIRECT
FUNDING



FELLOWSHIPS • INTERNSHIPS • APPRENTICESHIPS • LAB PLACEMENTS



CASH AND IN-KIND CONTRIBUTIONS
SHOULD BE REPORTED SEPARATELY.



PUBLIC-PRIVATE PARTNERSHIPS
SHOULD PRESERVE PUBLIC BENEFIT.

THE 270-DAY BUILDOUT: FROM ORDER TO EXECUTION

THE EXECUTIVE ORDER SET A RAPID SEQUENCE OF PLANNING, INVENTORY, INTEGRATION, AND DEMONSTRATION

DAY 60



**IDENTIFY
NATIONAL
CHALLENGES**

DAY 90



**INVENTORY
COMPUTE,
STORAGE, AND
NETWORKING**

DAY 120



**SELECT DATA
AND MODEL
ASSETS**

DAY 240



**REVIEW ROBOTIC
AND PRODUCTION
FACILITIES**

DAY 270



**SEEK AN INITIAL
PLATFORM
DEMONSTRATION**

ONE YEAR



**BEGIN ANNUAL
REPORTING**



FEB 2026 •
26 DOE CHALLENGES ANNOUNCED



MAR 2026 •
\$293 MILLION REQUEST
FOR APPLICATIONS



JUL 2026 •
278 PROJECTS SELECTED



AUG 2026 •
270-DAY MILESTONE

ORDERED DEADLINES AND PUBLIC ANNOUNCEMENT DATES ARE NOT THE SAME.

Section 3: Safeguards and Success

2 infographics

These infographics address the mission's security and dual-use concerns before defining how its success should be measured.

SECURITY, ACCESS, INTELLECTUAL PROPERTY, AND DUAL USE

AI-ENABLED SCIENCE REQUIRES GOVERNANCE AS WELL AS COMPUTING

WHO CAN ACCESS WHICH DATA, MODELS, COMPUTE, AND FACILITIES?



CYBERSECURITY

PROTECT NETWORKS AND
RESEARCH SYSTEMS



SUPPLY-CHAIN SECURITY

ASSESS HARDWARE AND
SOFTWARE DEPENDENCIES



CLASSIFICATION

SEPARATE OPEN, SENSITIVE,
AND CLASSIFIED WORK



USER VETTING

AUTHORIZE RESEARCHERS
AND COLLABORATORS



PRIVACY

PROTECT PERSONAL AND
RESTRICTED DATA



EXPORT CONTROLS

MANAGE CROSS-BORDER
TECHNOLOGY ACCESS



INTELLECTUAL PROPERTY

DEFINE OWNERSHIP, LICENSING,
AND TRADE SECRETS



BIOSAFETY + BIOSECURITY

MANAGE HIGH-CONSEQUENCE
DUAL-USE RESEARCH



OVERSIGHT MUST DEVELOP ALONGSIDE PLATFORM CAPABILITY.

HOW SHOULD GENESIS MISSION SUCCESS BE MEASURED?

A BALANCED SCORECARD FOR SCIENTIFIC IMPACT, PUBLIC VALUE, AND RISK



STATED GOAL: DOUBLE THE PRODUCTIVITY AND IMPACT OF U.S. SCIENCE AND ENGINEERING WITHIN A DECADE

1 TIME TO VALIDATED RESULT



Measure speed from investment to independent validation.

2 REPRODUCIBILITY



Assess independent replication and robustness of results.

3 PROTOTYPES + TECHNOLOGIES



Track tangible prototypes, tools, and technology transitions.

4 COST + COMPUTE EFFICIENCY



Measure cost per result and compute efficiency gains.

5 TRAINED RESEARCHERS



Count and track researchers trained and advanced.

6 CROSS-AGENCY USE



Measure adoption and impact across federal agencies.

7 PUBLIC ACCESS + BENEFIT



Evaluate public access to data, resources, and societal benefit.

8 SAFETY + SECURITY



Assess risk management, safety, and security posture.



MORE THAN \$5 BILLION

FEDERAL COMMITMENTS ANNOUNCED JULY 22, 2026



COMMITMENTS ARE NOT THE SAME AS APPROPRIATIONS OR SPENDING.



SUCCESS REQUIRES SUSTAINED FUNDING, CLEAR PRIORITIES, TRANSPARENT REPORTING, AND VERIFIED OUTCOMES.

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Feedback and Suggestions

This document is revised as its material is corrected and extended. Corrections, omissions, and suggestions for what a future edition should cover are all welcome, and are read by the people who maintain it.

The most useful feedback names the page or the figure it is about, says what is wrong or missing, and — where it is a correction — points at a source. Feedback about the document as a whole, including whether it answered the question you opened it with, is just as welcome.

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