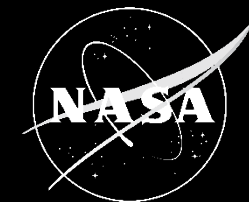


National Aeronautics and Space Administration



NASA Programmatic Performance

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April 26, 2022

www.nasa.gov

NASA Wasted Billions, Federal Audits Disclose

Inspectors Repeatedly Warned Agency Over Abuses and Mismanagement

By STUART DIAMOND

The space agency and its contractors have wasted billions of dollars on the

tion and spending abuses have been found in virtually every aspect of the many probes, on of build- nts to em- quarters to the docu-

de Govern- ministration hurt the nd are im- the safety n the Chal- leath of its

Lost t least \$3.5 ts cited in cases for in- , and Fran- ley for the office, said,

GAO

United States
General Accounting Office
Washington, D.C. 20548

Comptroller General
of the United States

January 23, 1990

ENCLOSURE

NASA Contract Management - NASA will spend \$11 billion in 1990 on contracts and has a very decentralized contract administration process. In this environment, there is considerable potential for mismanagement, fraud, and abuse. The potential for large savings exists if better contract controls and oversight can be achieved.

Fletcher conceded he was "over-optimistic," but he denied he attempted in any way to mislead Congress.

The pattern of management problems, as well as broken promises on costs, schedules and performance, emerges from a review by The New York Times of more than 500 audits, other Government documents and economic reports by outside experts and from interviews with American space experts.

In the last 15 years, bad administra-

did not properly monitor what hap- pened to defective equipment. Mar- shall was in charge of the booster rocket whose seal problems are consid- ered the probable cause of the shuttle explosion. And last November, just two months before the disaster, Congres- sional auditors repeated previous find- ings that Marshall was weak in keeping track of and handling shuttle equip- ment.

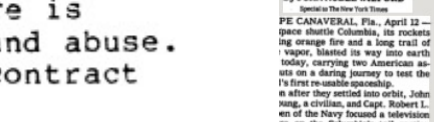
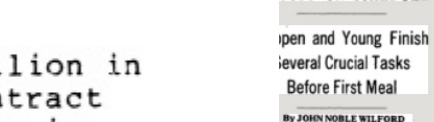
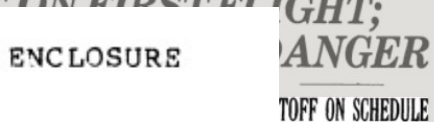
Millions of dollars in NASA equip-

Continued on Page A14, Column 1

mentaries say telephon- last month with an off- squads to bomb Unite targets.

The expulsions of dents were ordered by tary "in the national

Statement by Hon- British authorities dents, all men, had be- lance for some time, las Hurd, the Home S- had been actively inv-



NASA's First 32 Years

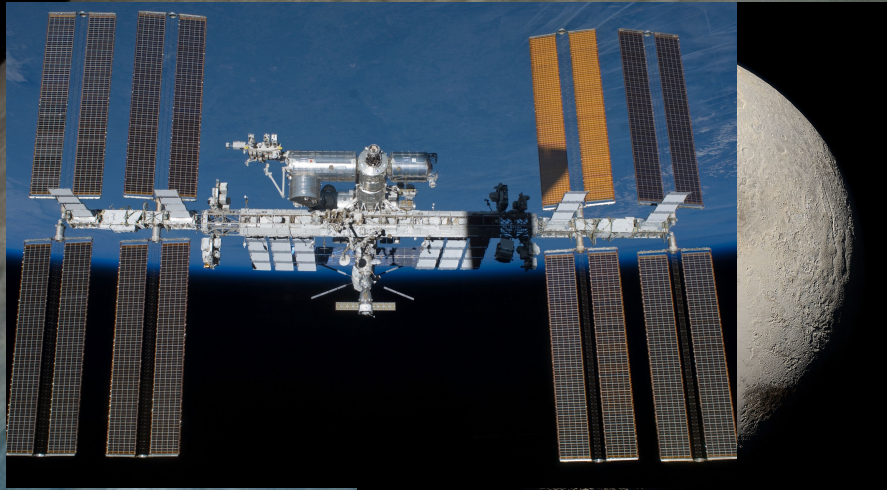
GAO's High Risk List

What is it?

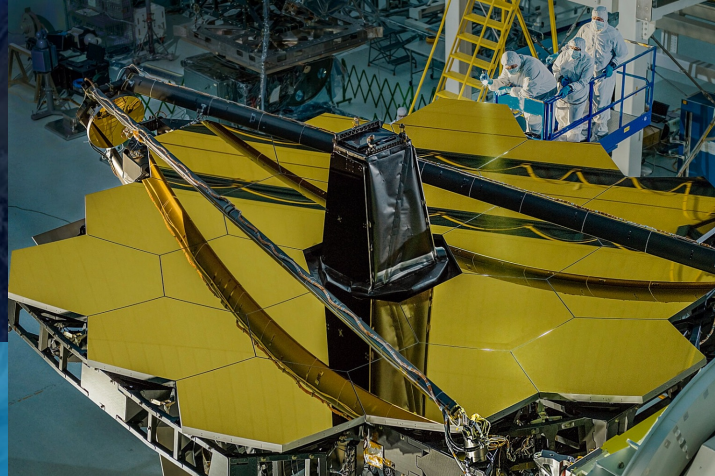


- The GAO publishes the new High Risk List at the start of each odd-numbered year to coincide with the start of the newly elected Congress, informing areas of concern needing congressional attention and/or action.
- Since 1990, the Government Accountability Office (GAO) has routinely tracked areas of the federal government deemed High Risk for fraud, waste, abuse, and mismanagement, or that need transformation. NASA's **acquisition management** has been designated as a High Risk area since the first High Risk Report in 1990.
- NASA's High Risk designation undermines Congressional and public confidence in our ability to responsibly and efficiently spend taxpayer dollars.

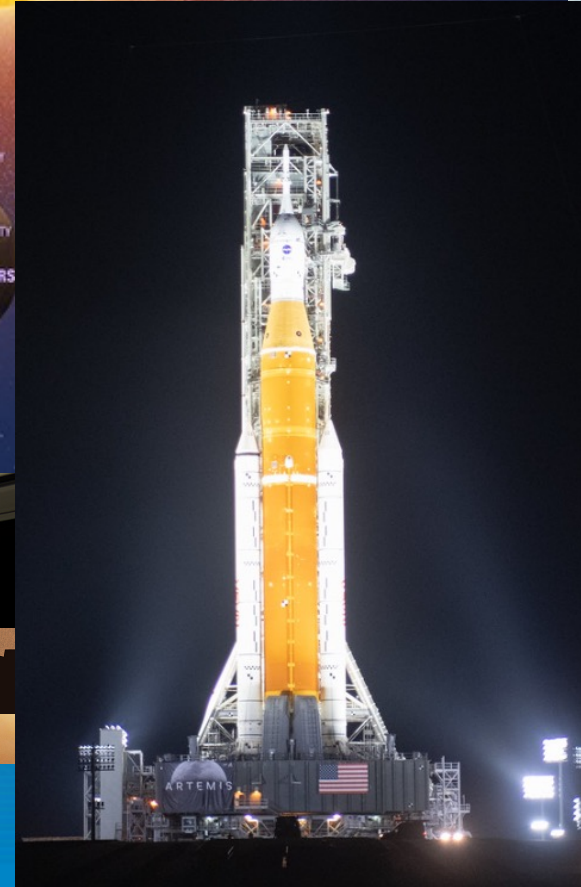




NASA's Second 32 Years



When a satellite is first assembled it is in the form of a can and looks like this. "Let them leave it behind, but however it moved, it was not."



KDP Decision Memos Actually Document Decisions

NASA Establishes the Chief Program Management Officer

NASA Emphasizing Use of EVM for Program Control

JCL's Raise Confidence in NASA Estimates

NASA Increases Transparency

Performance Management Takes Hold at NASA

New Jersey Native Steve Shinn Named NASA Deputy CFO

Congress Enacts CFO Act of 1990

CADRe's Build NASA Historical Record

NASA Receives 11th Consecutive Clean Audit Opinion

NASA Leadership Institutes Baseline Performance Reviews

NASA Adopts New High Risk Corrective Action Plan

NASA Adopts New High Risk Corrective Action Plan Again

NASA Develops Slew of New Cost/Schedule Estimation Tools

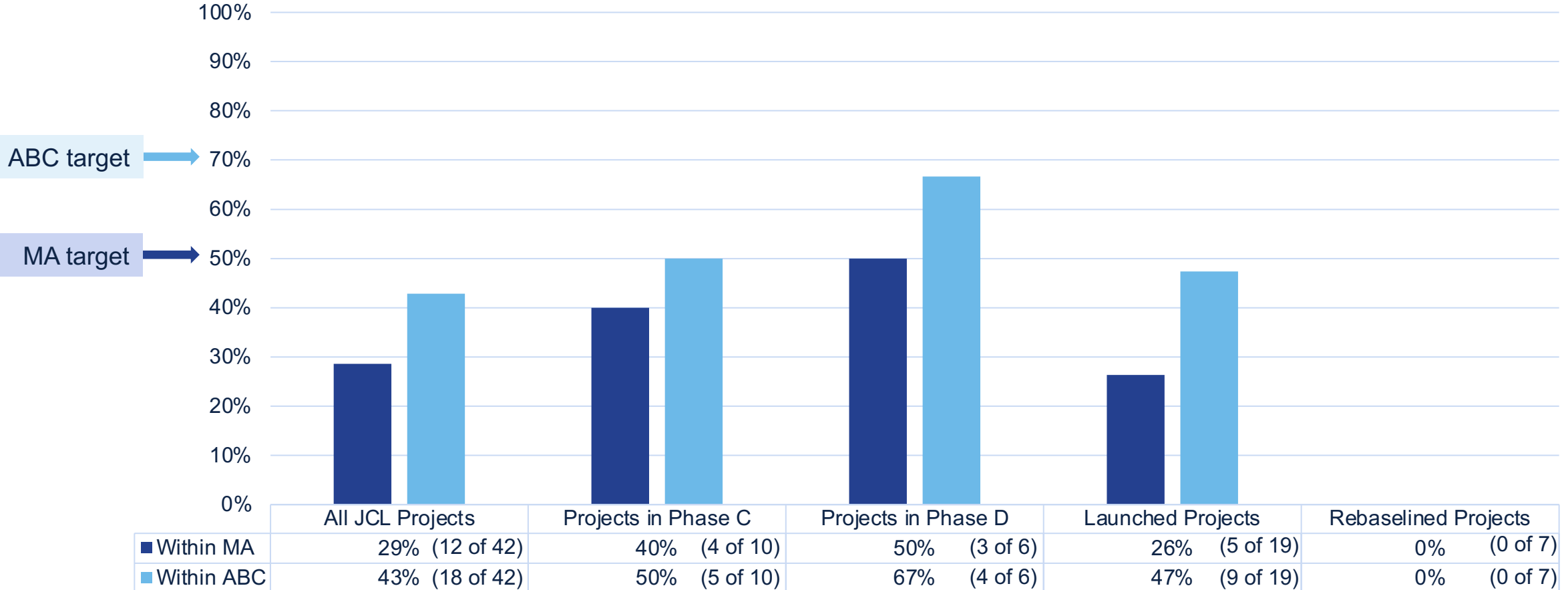
**NASA's
Second 32
Years**

Alternative
Headlines of
Progress

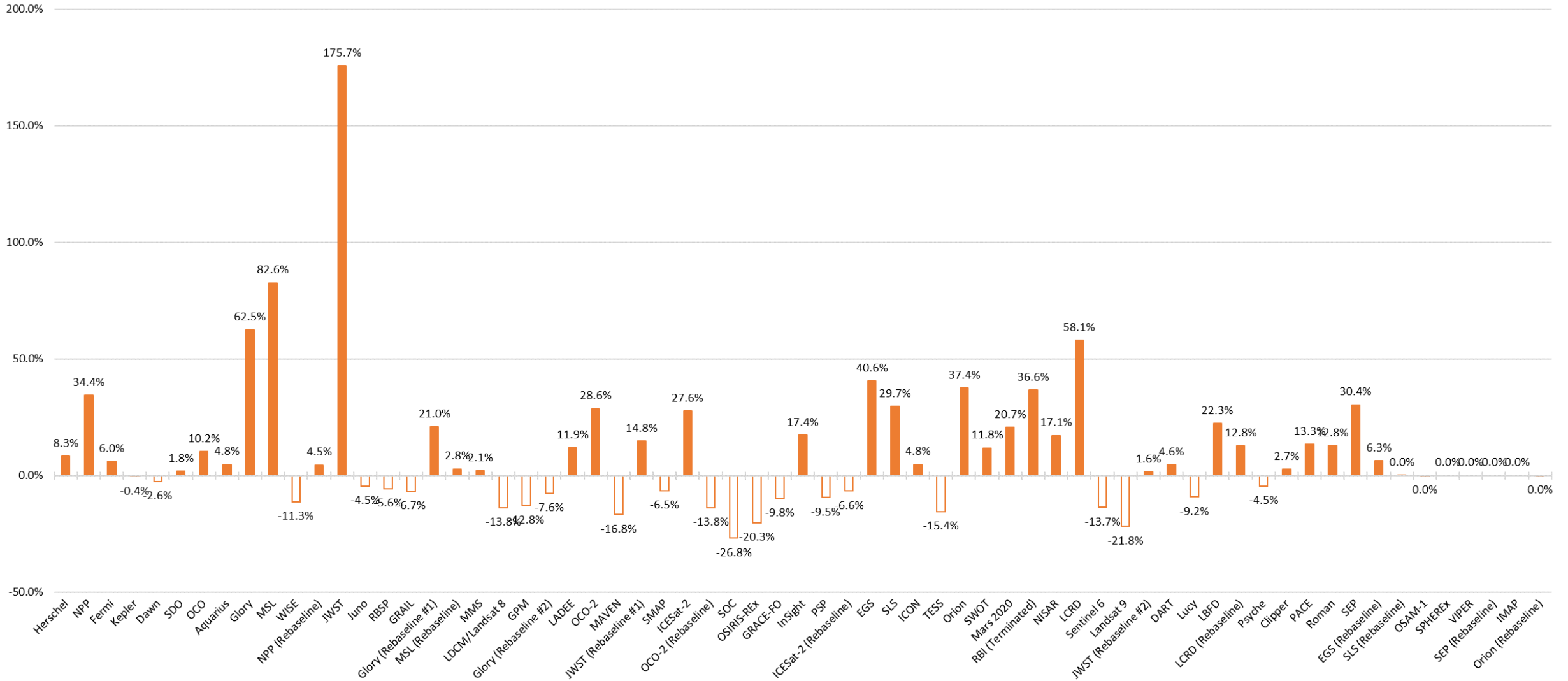
Challenges Remain...

NASA Major Project Portfolio Performance

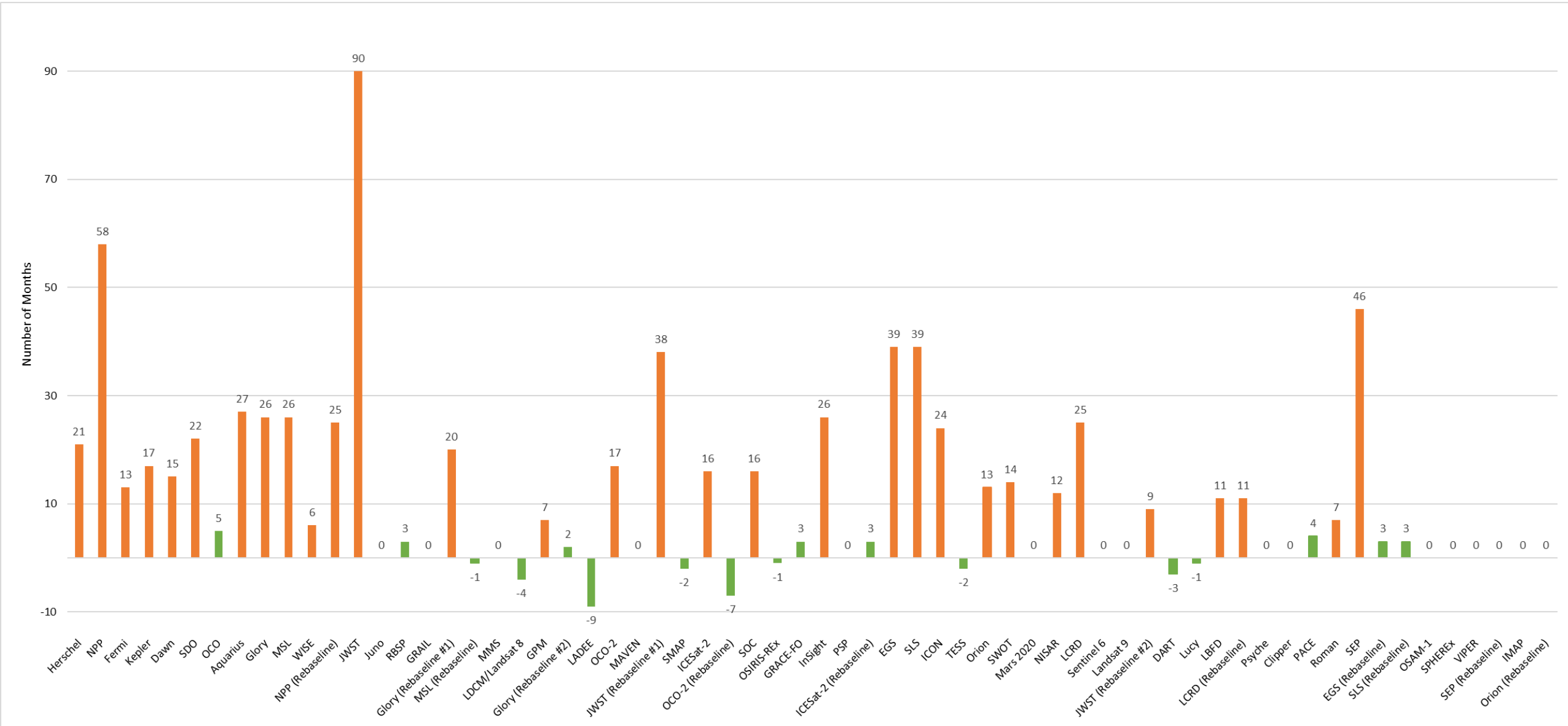
Percent within Management Agreement (MA) &
Percent within Agency Baseline Commitment (ABC)



Variation to Agency Baseline Commitment – Development Cost



Variation to Agency Baseline Commitment: Key Schedule Milestone





High Risk Corrective Action Plan Initiatives

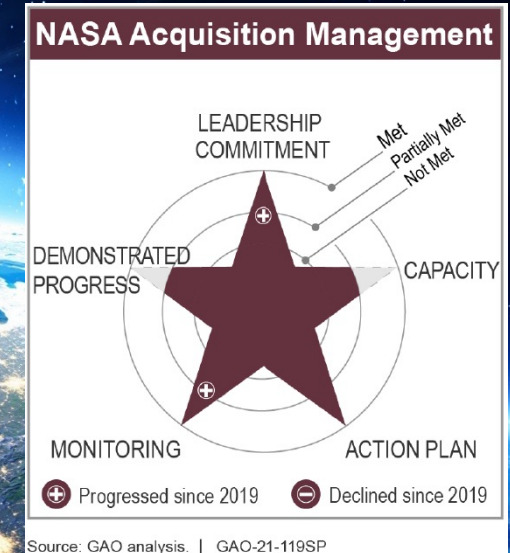
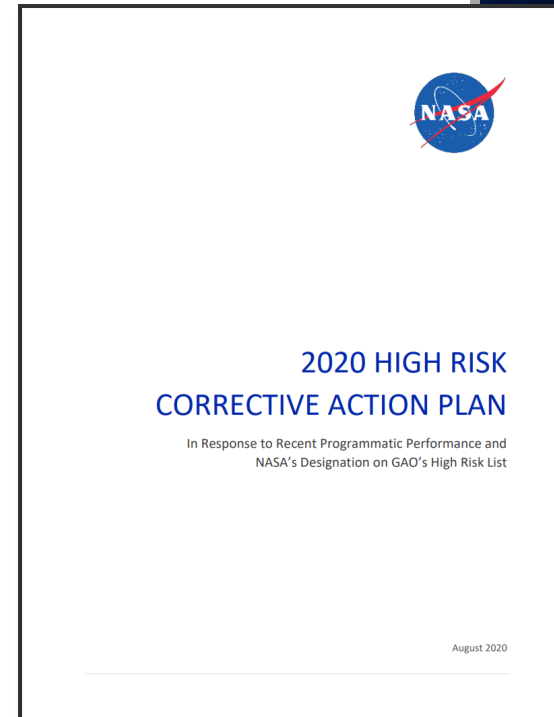
NASA has a [High Risk Corrective Action Plan](#) (CAP) in place containing a number of initiatives that are associated with High Risk concerns that, when completed, should contribute to improved agency acquisition management practices.

Completed/in-work

- ❖ Enhance EVM implementation
- ❖ PP&C training curriculum
- ❖ Pilot schedule repository
- ❖ Implement schedule repository
- ❖ Improve HEOMD insight and status
- ❖ HEOMD ESD/AES transparency of cost and schedule
- ❖ Include original ABC's for rebaselined projects
- ❖ CADRe Cat III Class D enhancements
- ❖ Enhance annual strategic review process
- ❖ Risk assessment and financial evaluation of contractors
- ❖ Create technology readiness assessment best practices document
- ❖ Update probabilistic programmatic policy
- ❖ Enhance implementation indicators

2022 CAP Update

Underway with ten additional candidate initiatives under consideration proposing or capturing improvement efforts related to acquisition management.



NASA STRATEGIC PLAN 2022

Vision

Exploring the secrets of the universe for the benefit of all.

Mission

NASA explores the unknown in air and space, innovates for the benefit of humanity, and inspires the world through discovery.



Strategic Goals and Strategic Objectives

Theme	Goal Statement	Objective Statement
Discover	Expand human knowledge through new scientific discoveries	1.1: Understand the Earth system and its climate
		1.2: Understand the Sun, solar system, and universe
		1.3: Ensure NASA's science data are accessible to all and produce practical benefits to society
Explore	Extend human presence to the Moon and on towards Mars for sustainable long-term exploration, development, and utilization	2.1: Explore the surface of the Moon and deep space
		2.2: Develop a human spaceflight economy enabled by a commercial market
		2.3: Develop capabilities and perform research to safeguard explorers
		2.4: Enhance space access and services
Innovate	Catalyze economic growth and drive innovation to address national challenges	3.1: Innovate and advance transformational space technologies
		3.2: Drive efficient and sustainable aviation
Advance	Enhance capabilities and operations to catalyze current and future mission success	4.1: Attract and develop a talented and diverse workforce
		4.2: Transform mission support capabilities for the next era of aerospace
		4.3: Build the next generation of explorers

The Next 32 Years...

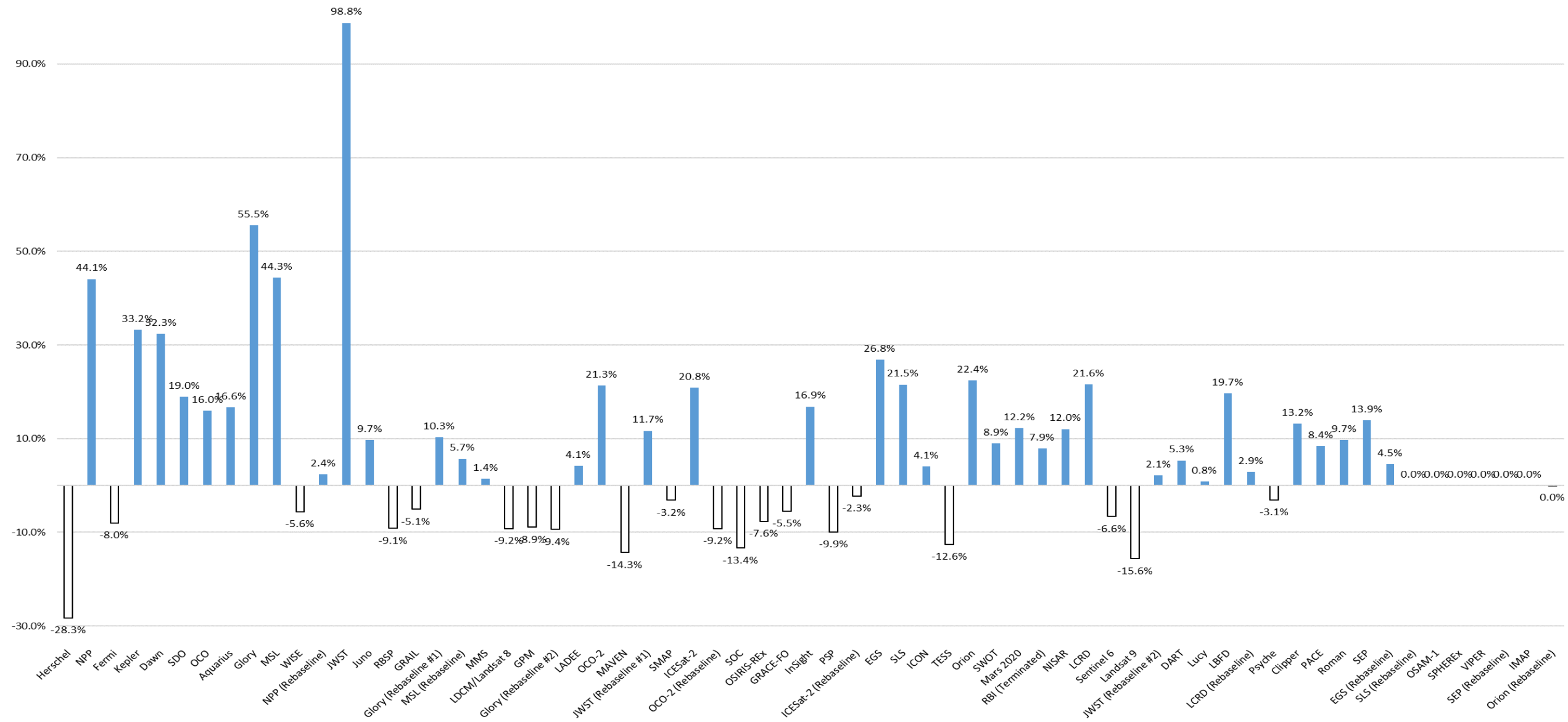
Continuous rededication to programmatic performance

- Sustained leadership commitment
- Expanded capacity for cost and schedule estimation capability
- Strengthened monitoring programs to maintain key insight into performance
- Renewed action plans to capture modern techniques and approaches
- Continue to demonstrate progress of program control across the NASA investment portfolio



Backup

Variation to Agency Baseline Commitment: Life Cycle Cost



Baselines and Rebaselines¹

- The Agency Baseline Commitment (ABC) is the baseline against which the Agency's performance is measured during the Implementation Phase
- The ABC for programs/projects with a life cycle cost (LCC) of \$250M or more forms the basis for the Agency's external commitment to OMB and Congress
- Programs or projects shall be rebaselined when:
 - The estimated development cost exceeds the ABC development cost by 30% or more;
 - The NASA AA judges that events external to the Agency make a rebaseline appropriate;
 - The NASA AA judges that the program or project scope defined in the ABC has been changed or the project has been interrupted
- When an ABC is rebaselined, the Decision Authority directs that a review of the new baseline be conducted by the Standing Review Board (SRB) or as determined by the Decision Authority

¹ As described in NPR 7120.5F paragraphs 2.4.1.5 and 2.4.1.8.

Conflicting Approaches to Rebaseline Performance Tracking

NASA-external products, such as the annual GAO Assessment of Major Projects, typically track performance only against the original baseline²

- Holds NASA accountable to original external commitments, improving transparency on complete history of project performance

² [NASA: Assessments of Major Projects | U.S. GAO](#)

In most cases, NASA-internal processes reset after a rebaseline and track performance against the new baseline³

- Recognizes that a new baseline effectively represents a newly Congressionally-authorized project following significant internal and independent review processes, at times including scope not included in the original baseline

³ Adopting GAO recommendation, NASA now also reports against original baselines for rebaselined projects both internally and externally to improve transparency

Rebaseline Assumption for Analysis

In order to maintain accountability to original baselines while also recognizing the significance of a rebaseline:

When project is rebaselined, add to dataset as new, separate project (e.g., JWST Rebaseline #1) and track performance against new established baseline

Continue to maintain original project in the dataset and continue tracking performance against original baseline

Categorize rebaselined projects separately from its original instance (e.g., rebaselined project vs Project in Phase D) for analytical purposes

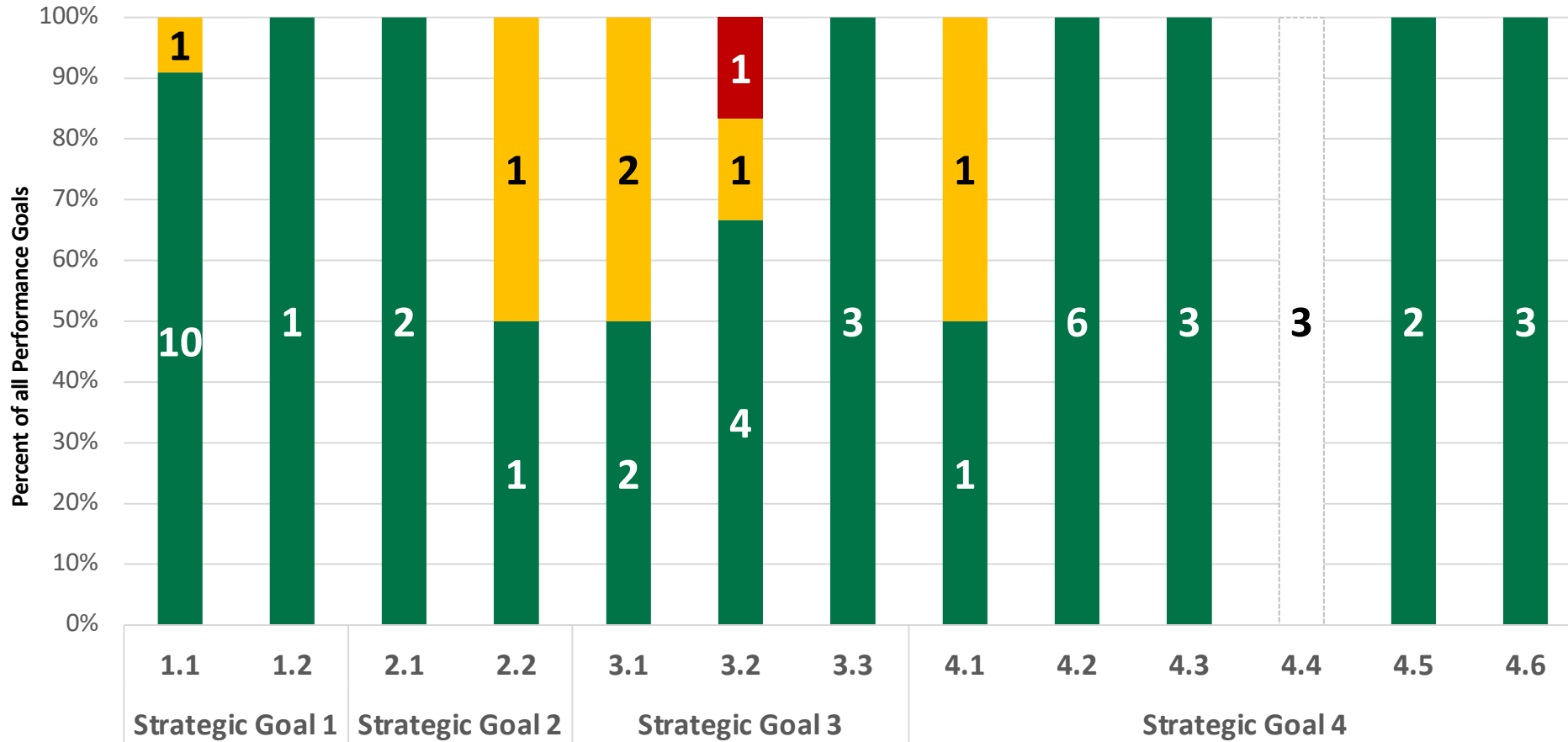
Example:

Date of Confirmation or Rebaseline	Project	Baseline Dev Cost	Latest Dev Cost	Dev Cost % Change	Baseline LCC Cost	Latest LCC Cost	ABC LCC Cost % Change	Baseline LRD	Actual or Latest LRD	LRD # of Months Change
Dec-12	ICESat-2	\$ 558.8	\$ 713.2	27.6%	\$ 860.2	\$ 1,039.4	20.8%	May-17	Sep-18	16
May-14	ICESat-2 (Rebaseline)	\$ 763.7	\$ 713.2	-6.6%	\$ 1,063.5	\$ 1,039.4	-2.3%	Jun-18	Sep-18	3



FY 2021 Performance Goal Ratings

By Strategic Objective (SO)



- 48 Performance Goals
- 38 rated Green
 - 6 rated Yellow
 - 1 rated Red
 - 3 rated White

Performance Goal Ratings
GREEN = Annual target achieved
YELLOW = Slightly below target or behind schedule
RED = Significantly below target or behind schedule
WHITE = Unable to assess; evaluation data unavailable for fiscal year
UNRATED at this time

History of High Risk Designations and Removals

■ = years designated high risk

NASA Acquisition Management is 1 of 5 areas designated High Risk since 1990 that remain on the list

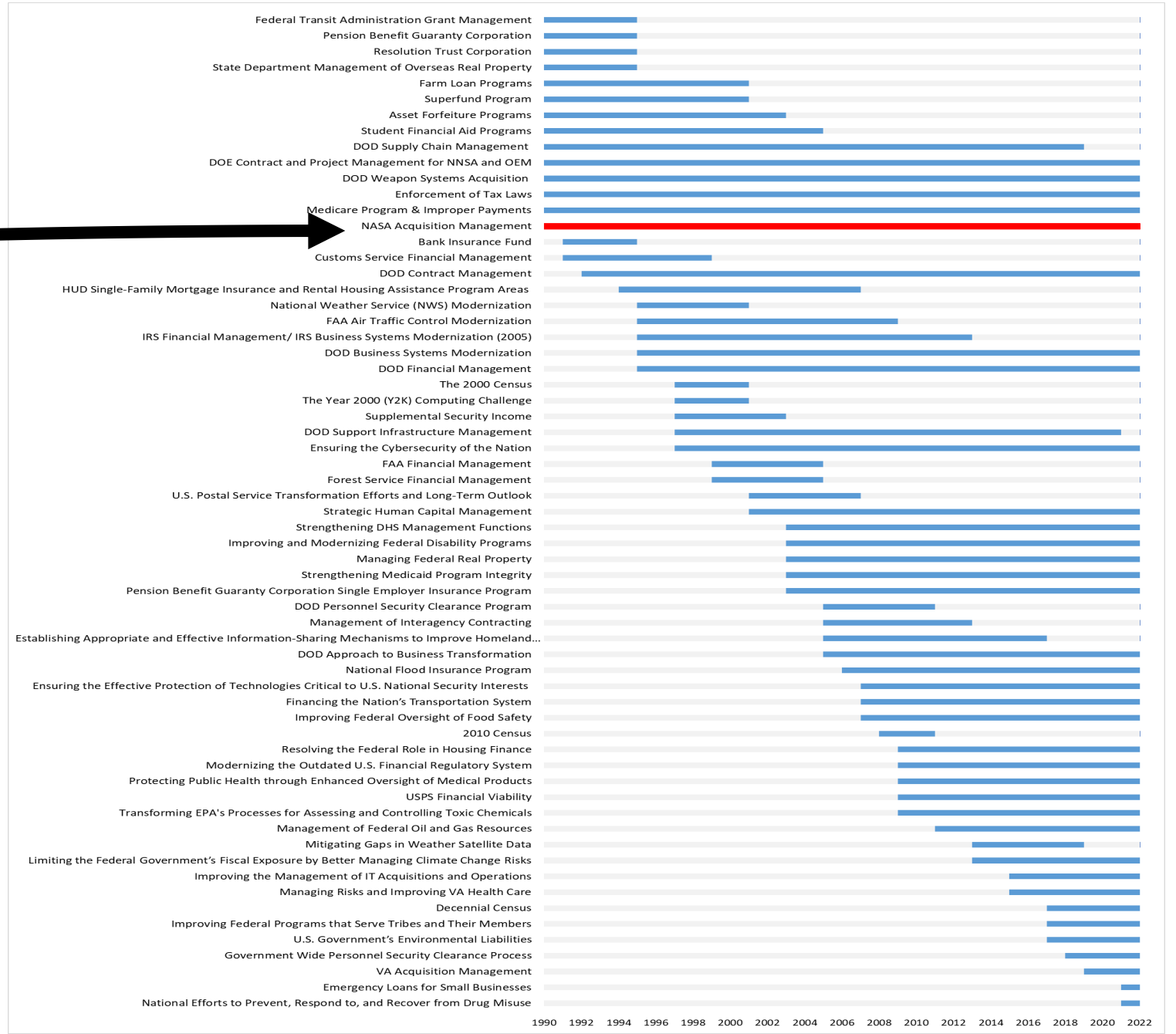


Photo Credits

Pluto: NASA/Johns Hopkins University Applied Physics Laboratory/Southwest Research Institute/Alex Parker

Saturn: NASA/JPL-Caltech/Space Science Institute

Webb: NASA/Chris Gunn

Science Mission Fleet: NASA/Jenny Mottar

SLS on pad: NASA/Joel Kowsky

Solar electric propulsion: NASA/Chris Lynch