

National Aeronautics and
Space Administration



MSFC PP&C Improvement

Andy Prince
Manager, OSAC PP&C Office
April 28, 2022



EXPLORE
MARSHALL

The Purpose of Program Planning and Control is Program and Project Success

A decorative graphic on the left side of the slide features a stylized globe with a grid pattern, partially obscured by a blue curved shape. A thick blue horizontal bar spans the width of the slide at the bottom, containing the text 'Opening Statement'.

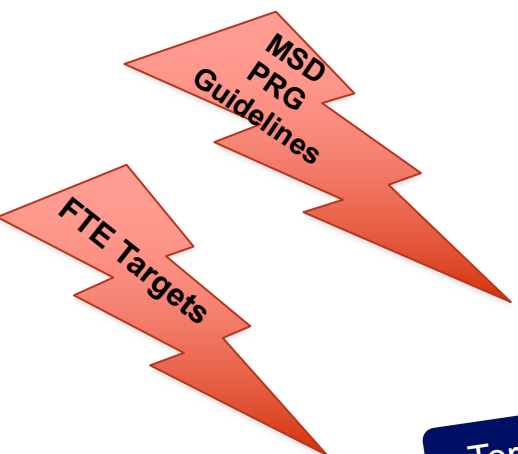
Opening Statement

The value added in PP&C lies in the synthesis, analysis, assessment, and interpretation of information to enable effective program and project management decisions

- PP&C is *a core capability for mission success*
- PP&C combines inter-related disciplines necessary to developing the plans for executing a project and subsequently assessing and evaluating progress against that plan
- The **PP&C Manager** is a valuable member of the management team bringing together the budget, cost and schedule performance, risk, technical content, the industrial base, and mission objectives



PP&C and Program/Project Success



Incoming
PP&C

Outgoing
PP&C



Term Hires

Interns

Retirement

No backfills with FTEs

Details/Reassignments

Corporate Knowledge

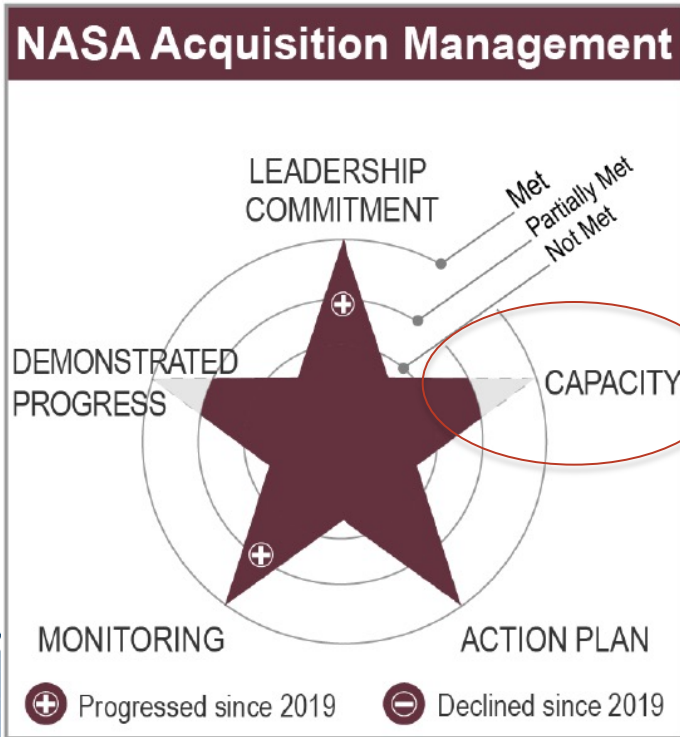
PP&C Skill Set

Capability Base



MSFC PP&C Capability Erosion

2021 Report



Source: GAO analysis. | GAO-21-119SP

• 2021 GAO Recommendations

- Establish cost and schedule baselines for additional human spaceflight capabilities in a timely manner to ensure the baselines are a useful programmatic tool and to demonstrate a commitment to improving transparency into long-term human spaceflight costs.
- Implement our recommendations related to its lunar missions, including developing a life-cycle cost estimate for the Artemis III mission, and defining and determining a schedule to ensure requirements are aligned across programs.
- **Build capacity by ensuring that NASA's workforce has the right skills to develop project cost and schedule estimates that meet best practices.**
- Demonstrate sustained improvement in cost and schedule performance for new, large, complex programs entering the portfolio.

GAO High Risk List

Program Planning & Control (PP&C) Office CS50

Manager: Andy Prince
Deputy: Mary Duncan

Earned Value Management

- EVM Leadership for NASA

Capability Stewardship

- PP&C Leadership for MSFC
- Education
- Program/Project Support
- Agency PP&C Contract

Engineering Cost

- Cost Estimates and Analyses
- Cost Models and the REDSTAR Library

The MSFC OSAC PP&C Office

- Work Breakdown Structure (WBS)
- Schedule Development and Analysis
- EVM Implementation
- Program/Project Analysis
- Independent Assessment
- Contract Administration
- Business Case Analysis
- Cost/Benefit Analysis
- PP&C Training
- Cost Estimating and Analysis of Science Missions, Launch Vehicles, Space Transportation Systems, and Crewed Systems
- Confidence Level (Cost Risk) Analysis
- Launch Vehicle Industrial Base Analysis
- Data Collection, Normalization & Analysis
- Data Cataloging, Management, and Distribution
- Cost Model Development & Automation



The OSAC PP&C Office provides a high degree of knowledge and expertise in all PP&C disciplines

Knowledge and Expertise

Discipline	Stewardship Org
Budget Development	OCFO
Funds Control	OCFO
Project Analysis	OSAC
Risk Management	S&MA/OSAC
Work Breakdown Structure	OSAC
Acquisition & Contract Management	OP/OSAC
Configuration/Data Management	Engineering
Scheduling	OSAC
Earned Value Management	OSAC
Cost Estimating & Analysis	OSAC

OSAC has **primary stewardship responsibility** for these key analytical disciplines, and a responsibility to **partner** with OCFO, S&MA, OP, and Engineering to support the stewardship of the other disciplines

PP&C Disciplines

- **Advocacy**
 - MSFC Focal Point for PP&C Improvement
- **Education**
 - *PP&C Training Classes**
 - MSFC PP&C Website, Handbook, and Community of Practice
- **Involvement**
 - EVM Working Group
 - PP&C Steering Group Representative
 - Cost Analysis Steering Group Representative
- **Opportunity**
 - *Details and Rotations for future PP&C Leaders and Program/Project Managers**

Leverage Center and Agency resources to create knowledgeable and skilled PP&C professionals

**These activities directly support P/PM development*



PP&C Leadership and P/PM Development

Course	Date	Instructor	Time allotment	Start Time
WBS	Wed, Jan 12, 2022	Chris Sadler	4hrs	8:30
Planning and Scheduling	Wed, Feb 9, 2022	Melissa Lee	8hrs	8:30
EVM Overview Course	Wed, Mar 2, 2022	Chris Sadler	8hrs	8:30
Cost Estimating	Tuesday, Mar 22, 2022	Andy Prince	4hrs	8:30
Project Performance Analysis	Wed & Thurs, April 13-14	Melissa Lee & Chris Sadler	8hrs	8:30
Using MSP to Manage Your Project	Wed, May 4, 2022	Melissa Lee	8hrs	8:30
Schedule Analysis and Assessment	Wed, Jun 8, 2022	Chris Sadler	5hrs	8:30
WBS	Wed, July 13, 2022	Chris Sadler	4hrs	8:30
Planning and Scheduling	Wed, Aug 10, 2022	Melissa Lee	8hrs	8:30
Cost Estimating	Tuesday, Aug 23, 2022	Andy Prince	4hrs	8:30
EVM Overview Course	Wed, Sep 14, 2022	Chris Sadler	8hrs	8:30
Project Performance Analysis	Wed & Thurs, Oct 5-6, 2022	Melissa Lee & Chris Sadler	8hrs	8:30
Using MSP to Manage Your Project	Wed, Oct 26, 2022	Melissa Lee	8hrs	8:30
Schedule Analysis and Assessment	Wed, Nov 9, 2022	Chris Sadler	5hrs	8:30

FY22 OSAC-led PP&C Training

- **Smart fill vacancies to restore capability**
- **Define an MSFC PP&C development program**
- **Ensure future MSFC Program/Project Managers have knowledge of and appreciation for PP&C**
- **Be an active participant in the NASA PP&C community**

A decorative graphic on the left side of the slide features a stylized globe with a grid pattern, partially obscured by a blue curved shape. A solid blue horizontal bar spans the width of the slide at the bottom, containing the text "Specific 2022 Goals" in white.

Specific 2022 Goals

- **The Future of NASA PP&C is Multi-Disciplinary Specialists**
 - May have one Preferred Discipline, but able to Work in the Others
- **Culture Shift: The PP&C Profession is Universally Recognized as Vital to Program and Project Success**
 - Highly Trained, Experienced, and Assertive PP&C Professionals
 - Project Managers who Understand and Appreciate the Value of PP&C, and what brings PP&C to the Table