

Strategic Investments Division (SID) Overview

2 February 2017



TRANSPARENCY

Strategic Investments Division

Vision and Mission

- VISION: Recognized as the Agency's trusted agent for comprehensive, Agency-level strategic analyses and performance assessments to inform institutional and programmatic investment options and decision-making to accomplish NASA's Mission
- MISSION: SID delivers transparent, independent analyses and advice providing a unique perspective on NASA-wide investment strategies to deliver the optimum portfolio in alignment with the Agency's strategic direction while promoting good governance to ensure NASA delivers on its commitments to external stakeholders.



COLLABORATION

PROFESSIONALISM

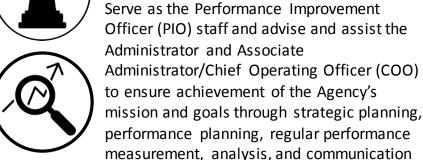


Strategic Investments Division

Focus Areas



Strategic Planning, Performance Management and Reporting





Agency Investment Analysis

Conduct Agency-level portfolio programmatic analyses to inform internal Agency decision-makers and external stakeholders to ensure NASA has the correct mix of programs and projects to accomplish its Mission



Portfolio Intelligence and Analysis

Conduct Mission Directorate portfolio programmatic analyses to inform internal Agency decision-makers and external stakeholders to ensure NASA has the correct mix of programs and projects to accomplish its Mission



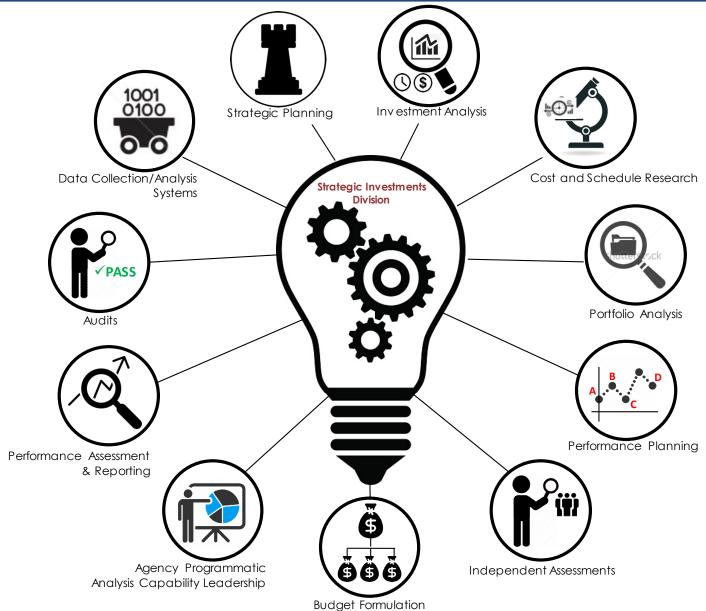
Programmatic Analysis Research & Capability Leadership

Build the Agency Programmatic Analysis Capability (APAC) by implementing Agency policies and encouraging best practices, facilitating communities of practice with internal and external stakeholders and subject matter experts, and cultivating the human network of programmatic analysts across NASA and connecting them to high-quality training, tools, and other leadership resources.



What we do

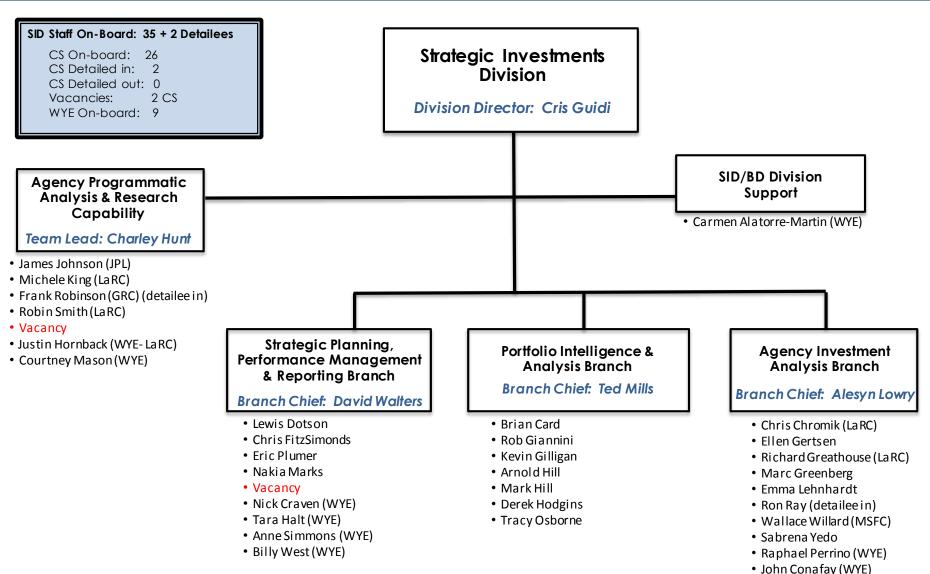
Mutually-dependent Functions





Strategic Investments Division

Revision: 23 January 2017





By the Numbers

SID Demographics

(As of: 24January 2017 - Includes Civil Servants and Contractors; No Detailees)



35

Total Headcount

26

Civil Servants Contractors



35%

Bachelors Degree

65%

Masters Degree



39.3

Average age

63%

37%

(22)

(13)

25-39 y ears old 40-69 years old



76%

(27) NASA HQs

Remote

24%

15% (5): Langley Research Center 3% (1): Marshall Space Flight Center

3% (1): Jet Propulsion Laboratory

3% (1): North Carolina



53%

(18)

Non-Minority Male

26%

Non-Minority Female

(3)

12%

Minority Male

Minority Female



7%

(2)

(16)

SES/SL

GS-15 Supervisory

62%

GS-15 Non-Supervisory

19%

12%

(5)

GS-14

Strategic Investments Division



Front Row: Charley Hunt, Rich Greathouse, Jillian Taylor, Marc Greenberg, Chris FitzSimonds, Ron Ray

Middle Row: Anne Simmons, Carmen Alatorre-Martin, Michele King, Ellen Gertsen, Emma Lehnhardt, Eric Plumer, Raphael Perrino, Kevin Gilligan, Cris Guidi, Nakia Marks, Alesyn Lowry Back Row: Frank Robinson, Ted Mills, Chris Chromik, Derek Hodgins, Wallace Willard, Robin Smith, Justin Hornback, Nick Craven, Arnold Hill, Billy West, Robert Giannini, David Walters,

Lewis Dotson, Tracy Osborne





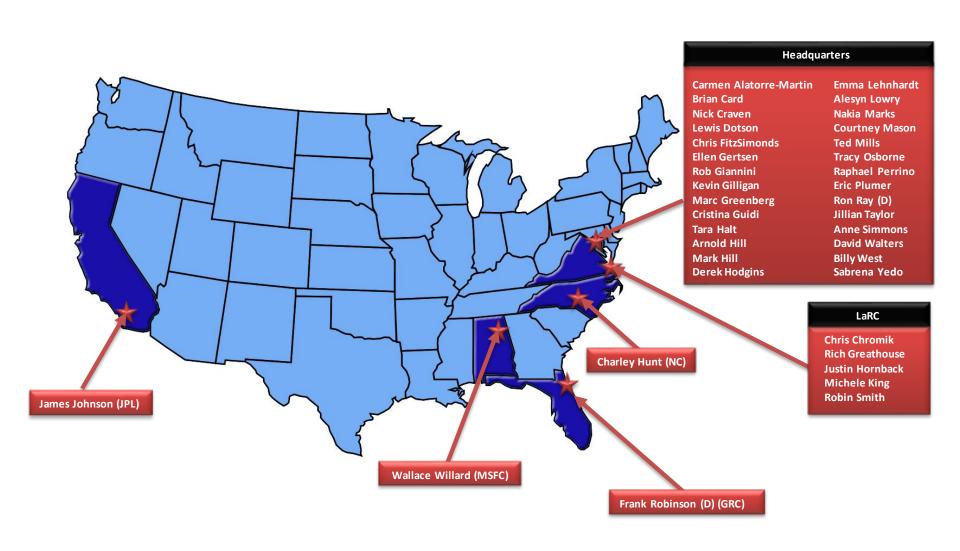


Pictured Left to Right: Brian Card, Vermithrax Pejorative (in waste bin), James Johnson



Distributed Team

Staying Connected with Frequent Face-to-Face Meetings

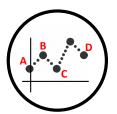




Strategic Planning, Performance Management, & Reporting

Strategy, Tactics/Products













- Inform, manage, and coordinate Agency strategic planning process by developing the NASA Strategic Plan and conducting long-range programmatic analyses to answer critical questions needed to shape and implement NASA's priorities and direction [Strategic Plan, Strategic Assessments]
- Evaluate potential strategic impacts of legislation, guidance, and policy on NASA's programs and long-range mission and goals
- Monitor progress of organizational goals and objectives and periodically evaluate progress
 through implementation of Government Performance and Results Act Modernization Act
 (GPRAMA) requirements and OMB Circulars A-11, A-123, an A-136 guidance by monitoring
 the quality and performance of programs against the plan [Strategic Reviews (SOAR),
 Annual Performance Report/Annual Performance Plan (APR/APP), Annual Performance
 Indicator (API) Assessments, Cross Agency Performance (CAP) Goals, Annual Financial
 Report (AFR)]
- Lead Planning and Programming phases of the PPBE process to ensure strategic guidance is translated into achievable and credible budget submittal resulting in a portfolio that meets Agency goals [Strategic Programming Guidance (APG) thru Program and Institutional Guidance (PAIG), Trade Space Analysis (Issue papers), Budgeting and Execution Support (Congressional Justification)]
- Institutionalize the use of programmatic data collected to better understand cost and schedule growth and to improve future estimates [Cost & Schedule Reporting (OMB Quarterly, Major Program Annual Report (MPAR), etc.)]
- Support and coordinate programmatic and GPRAMA audits through monitoring, tracking, and reporting concerns/recommendations to ensure timely resolution of corrective actions and conduct analyses to determine trends and Agency-wide issues. [QuickLook Book, High Risk, GPRAMA)]

 For Internal Use Only



Strategic Planning, Performance Management, & Reporting Branch Chief: David Walters

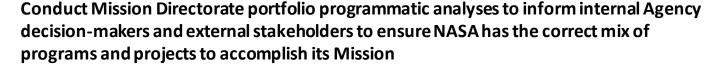
Activity	Primary POC	Alternate POC	Tauri POC
GAO QuickLook Book	David Walters	Ellen Gertsen	Billy West
GAO High Risk	Ellen Gertsen	David Walters	n/a
GPRAMA Audits	Ellen Gertsen	Chris FitzSimonds	Billy West
EVM Working Group	Ellen Gertsen	David Walters	n/a
Evidence and Evaluation	Chris FitzSimonds	Ellen Gertsen	n/a
Strategic Reviews .	Ted Mills	Emma Lehnhardt	n/a
Agency Financial Report & Summary of Performance and Financial Information	Emma Lehnhardt	David Walters	Nick Craven
Strategic Plan	Ellen Gerts en	Emma Lehnhardt	n/a
Agency Priority Goals & Cross-Agency Priority Goals	Chris FitzSimonds	David Walters	Jillian Taylor
Performance Planning and Performance Assessments	Chris FitzSimonds	David Walters	Anne Simmons, Jillian Taylor
Annual Performance Report/Annual Performance Plan	David Walters	Chris FitzSimonds	Anne Simmons, Jillian Taylor
Enterprise Risk Management	Frank Robinson	Emma Lehnhardt	
FedStat	Chris FitzSimonds	Emma Lehnhardt	n/a
WBS Chart	Chris FitzSimonds	David Walters	Nick Craven
Newsletter	Nick Craven	David Walters	n/a
Community of Practice	Jillian Taylor	David Walters	n/a
Performance Management Systems	David Walters	Chris FitzSimonds	Tara Halt



Portfolio Intelligence and Analysis

Strategy, Tactics/Products







Provide portfolio insight, foresight, and recommendations regarding the programmatic performance of programs, projects, and institutional investments that enables responsible budgeting and proactive management decisions so that NASA can efficiently manage cost, schedule, and risk; provide recommendations on investment decisions that encompass (but are not limited to) Key Decision Point (KDP) recommendations for Chief Financial Officer (CFO) signature and issue papers themselves; facilitate the KDP Decision Memorandum/data sheet and issue paper processes



Assess affordability and credibility of current and proposed NASA investments, program
plans, and project plans for multi-year acquisitions to advise Mission Directorates, senior
leadership, and external stakeholders regarding the development of executable Agency
strategies; confirm accuracy of program/project commitment under current budgets, while
ensuring external commitments are defendable, and inform the Agency of disconnects

Products and Services

- Mission Directorate Portfolio Monitoring and Analysis
 - Baseline Performance Review (BPR) Independent Assessment
 - Lifecycle Reviews
 - PPBE Support
 - Portfolio Investment Analyses
 - Historical Analyses
- Consultation to Mission Directorates



Portfolio Intelligence and Analysis Branch Chief: Ted Mills

Activity	Primary POC	Alternate POC
Aeronautics Mission Directorate	Brian Card	
Human Exploration & Operations Mission Directorate		
Exploration Systems Development (ESD)	Derek Hodgins	Robert Giannini
Advanced Exploration Systems (AES)	Derek Hodgins	Robert Giannini
Humans to Mars (H2M)	Derek Hodgins	Robert Giannini
As teroid Robotic Redirect Mission (ARRM)	Robert Gi annini	Derek Hodgins
International Space Station (ISS)	Robert Gi annini	Derek Hodgins
Space Communications and Networks (SCaN)	Robert Gi annini	Derek Hodgins
Launch Services Programs (LSP)	Robert Gi annini	Derek Hodgins
Commercial Crew Program (CCP)	Robert Gi annini	Derek Hodgins
Mission Support Directorate		
OCIO (Information Technology)	Mark Hill	Arnold Hill
SSMS (Procurement, Facilities, Education, etc)	Arnold Hill	Mark Hill
Science Mission Directorate		
Astrophysics	Tracy Osborne	Kevin Gilligan
Earth Sciences	Tracy Osborne	Kevin Gilligan
Reimbursables	Tracy Osborne	Kevin Gilligan
Planetary Sciences	Kevin Gilligan	Tracy Osborne
Heliophysics	Kevin Gilligan	Tracy Osborne
James Webb Space Telescope (JWST)	Al es yn Lowry	Tracy Osborne
Space Technology Mission Directorate	Brian Card	
Key Decision Point Decision Memos/Datasheet/Briefing Archival	Lewis Dotson	

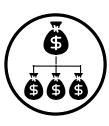


Agency Investment Analysis

Strategy, Tactics/Products







Conduct Agency portfolio programmatic analyses to inform internal Agency decision-makers and external stakeholders to ensure NASA has the correct mix of programs and projects to accomplish its Mission

- Perform Agency-level analyses and evaluations of alternative strategies, to include adjustments to content, schedule, labor, budget, and acquisitions in relation to NASA and external stakeholder objectives and priorities to understand impacts and gaps in achieving NASA's Mission;
- Assess affordability and credibility of current and proposed NASA investments, program plans, and project plans for multi-year acquisitions to advise Mission Directorates, senior leadership, and external stakeholders regarding the development of executable Agency strategies; confirm accuracy of program/project commitment under current budgets, while ensuring external commitments are defendable, and inform the Agency of disconnects;
- Provide insight to historical strategic analysis, delivering context to leadership for informed decision-making on program budget; trend analysis; budget, presidential, and congressional adjustments; and other analyses, and demonstrating how programs, projects, technology budgets, and trends fared over time as well as evaluation of past strategies and comparisons of execution of those strategies

Products and Services

- Planning, Programming, Budgeting & Execution (PPBE) Support: Passback Analysis
- Agency Mission Planning Manifest (AMPM)
- Agency-level Alternative Scenario Planning: Trade Space/Analysis of Alternatives, Strategic Alignment and Gap Analysis, Workforce Assessments, Capability Assessments
- Tools and Model Development
- Historical Analyses: Cost/Schedule Growth, Budget Traces, AMPM Launch Dates, etc.



Agency Investment Analysis Branch Chief: Alesyn Lowry

Activity	Primary POC	Alternate POC
Agency Analysis Model Development and Maintenance	Sa brena Yedo	Al es yn Lowry
Agency Mission Planning Manifest (AMPM)	Al esy Lowry	Sabrena Yedo Emma Lehnhardt
Multi-AMPM Cadence (MAC) Analysis	Raphael Perrino	Al es yn Lowry
PPBE/Passback Analysis	Al es yn Lowry	Emma Lehnhardt
Cost Research for Agency Analysis	Marc Greenberg	
Metrics Framework	Ellen Gertsen	Emma Lehnhardt
Strategic Objectives Annual Review + (SOAR+)	Ted Mills	Ellen Gersten Emma Lehnhardt
Research & Development Tracking	Al esyn Lowry	
Future Investment Model (FIM) – Mission Directorate/Center/FTE Modeling	Al es yn Lowry	Sabrena Yedo Emma Lehnhardt
Agency Portfolio Assessments	Al esyn Lowry	Emma Lehnhardt
Cost Analysis Data Requirements (CADRe)	Eric Plumer	James Johnson
Agency Forensics Analysis/Special Studies	Rich Greathouse	Wallace Willard
Explanation of Change	Wallace Willard	Rich Greathouse
Mission Directorate-Specific Portfolio Scenario Planning/Assessments		
Aeronautics	Brian Card	
Human Exploration & Operations	Derek Hodgins	Robert Gi annini
Mission Support Directorate	Mark Hill	Arnold Hill
Science Mission Directorate	Tracy Osborne	Kevin Gilligan
Space Technology Mission Directorate	Brian Card	



Agency Programmatic Analysis Research & Capability

Strategy, Tactics/Products







Build the capability for Agency programmatic analysis by facilitating communities of practice with internal and external stakeholders and subject matter experts, implementing Agency policies, and encouraging best practices, thereby cultivating and providing insight to the human network of programmatic analysts across NASA and connecting them to high-quality training, tools, and other leadership resources.

- Act as steward of NASA cost and schedule policies and key programmatic capabilities such as cost and schedule analysis capabilities, methods, and tools
- Provide leadership in building the skills of the analytical workforce and developing and promoting improved analytic tools, methods, and data collection techniques for analyzing NASA strategic investment planning
- Maintain the quality, integrity, and independence of Agency programmatic assessment capability
- Strengthen and nurture the Agency programmatic assessment skill base by providing leadership and policy for programmatic discipline training
- Perform programmatic analysis research to continue to improve the programmatic assessment capability process, toolset, and training
- Institutionalize the collection and use of programmatic data to better understand risk-impacted cost and schedule growth and to improve future estimates.
- Track Program and project programmatic assessment findings and perform research of systemic trends
 in performance of the Agency's programs and projects, to shed light onto the effectiveness of the
 Agency's policy initiatives directed to improve project performance, and to understand where the
 Agency might improve core capabilities, analysis methodologies, tools, and training resources

Products and Services

- Independent Review Processes and Logistics
 - Standard Operating Procedure Instruction (SOPI)
 - Programmatic Analyst vetting and selection
 - · Programmatic Analyst Training
- · Cost and Schedule Data Collection

- Cost and Schedule Policy/Guidance
- Cost and Schedule Tool/Model Development
- · Programmatic Analysis Advisory Consulting
- Programmatic Analysis Training
- Cost and Schedule Estimating Research
- Communities of Practice (working groups)



Agency Programmatic Analysis Research & Capability Team Lead: Charley Hunt

Activity	Primary POC	Alternate POC
Programmatic Analysis Advisory Consulting		
Costing Support	Charley Hunt	James Johnson
Scheduling Support	Michele King	Robin Smith
SRB Programmatic Analysis Support	Charley Hunt	Justin Hornback (Reed)
Range Estimate and Joint Cost and Schedule Confidence Level Policy		
Policy Clarification and Jumpstart Assistance	Charley Hunt	James Johnson
Waiver/Tailor Request	Charley Hunt	James Johnson
Cost Analysis Data Requirement (CADRe)	Eric Plumer	James Johnson
One NASA Cost Engineering (ONCE) Database	James Johnson	Eric Plumer
Handbooks and Documents		
Standard Operating Procedure Instruction (SOPI)	Brian Rutkowski (OCE)	Charley Hunt
Cost Estimating Handbook	Chris Chromik	James Johnson
Schedule Management Handbook	Michele King	Robin Smith
Schedule Initiative	Michele King	Robin Smith
Programmatic Analysis Training	Michele King	Chris Chromik
Cost and Schedule Estimating Research	Charley Hunt	Marc Greenberg
Cost Tool/Model Development	James Johnson	Charley Hunt
Schedule Tool/Model Development	Michele King	Robin Smith
Independent Assessment Peer Reviews	Rich Greathouse	Chris Chromik
Contracting	Nakia Marks	Charley Hunt
APAC Information Management	Courtney Mason (FIS)	Nakia Marks

Vision	Recognized as the Agency's trusted agent for comprehensive, Agency-level strategic analyses and performance assessments to inform institutional and programmatic investment options and decision-making to accomplish NASA's Mission.			
VALUES	TRANSPARENCY	COLLABORATION	P R O F E S S I O N A L I S M	IN DEPENDEN CE
Key	SID undertakes to be open, honest and	SID emphasizes collaboration across diverse skill	SID adheres to the highest professional standards in	SID maintains a distinct, unbiased,

accountable

Accountability

direction

Strategic

Planning

Budgeting

Reporting

Strategic Budget Planning and

Programming

Cost/ Schedule

MESSAGES

MISSION

Focus

AREAS

PURPOSE

ATTRIBUTES

STRATEGIES

FOR

DELIVERY

TACTICS /

PRODUCTS

AND

PROCESSES

stakeholder community SID delivers transparent, independent analyses and advice providing a unique perspective on NASA-wide investment strategies to deliver the optimum portfolio in alignment with the Agency's strategic direction while promoting good governance to ensure NASA delivers on its commitments to external stakeholders. Strategic Planning, Performance Management

Advise and assist the Administrator and Associate

Administrator/Chief Operating Officer (COO) to ensure

achievement of the Agency's mission and goals through

performance measurement, analysis, and communication.

Commitment

Inform, manage, and coordinate Agency strategic planning process

questions needed to shape and implement NASA's priorities and

Evaluate potential strategic impacts of legislation, guidance, and

policy on NASA's programs and long-range mission and goals;

periodically evaluate progress through implementation of Government

Performance and Results Modernization Act (GPRAMA) requirements

Monitor progress of organizational goals and objectives and

and OMB Circular A-11 guidance by monitoring guality and

Report to external stakeholders NASA's GPRAMA goals and

submittal resulting in a portfolio that meets Agency goals

Institutionalize use of programmatic data collected to better

understand cost and schedule growth and to improve future

objectives, presented in annual performance plans, and results of

progress made toward achieving those annual performance plans.

· Lead Planning and Programming phases of PPBE process to ensure

· Support and coordinate programmatic and GPRAMA audits through

· Legislative Requirements (e.g.,

· Performance Assessments

OMB A-11, A-123)

strategic guidance is translated into achievable and credible budget

performance of programs against the plan

by conducting long-range programmatic analyses to answer critical

strategic planning, performance planning, regular

and Reporting

Strategic Investments Division (SID)

Predictability

Programmatic Intelligence and Analysis

and budget analyses to informinternal

Agency decision-makers and external

stakeholders to ensure NASA has the

correct mix of programs and projects to

· Provide portfolio insight, foresight, and

recommendations regarding programmatic

management decisions so that NASA can

efficiently manage cost, schedule, and risk

signature and issue papers themselves

data sheet and issue paper processes

and program/project plans for multi-year

acquisitions to advise OCFO leadership,

Mission Directorates, and Agency senior

commitment under current budgets, while

· Confirm accuracy of program/project

· Facilitate the KDP Decision Memorandum,

performance of programs, projects, and

institutional investments that enable

responsible budgeting and proactive

accomplish its Mission.

Knowledgeable

sets within SID, across NASA, and the NASA

Conduct Mission Directorate portfolio

Agency Investment Analysis Conduct Agency-level portfolio and budget analyses to informinternal

Flexible

to NASA and external stakeholder objectives and priorities to understand impacts and gaps in achieving NASA's Provide consultation and recommendations Mission on OCFO Products and investment decisions · Assess affordability and credibility of that encompass (but are not limited to) KDP current and proposed NASA investments recommendations for Chief Financial Officer to advise OCFO leadership, Mission Directorates, and Agency senior leadership Provide insight into Agency strategy and resource allocation, delivering context to · Assess affordability and credibility of current Agency leadership to enable informed decision-making, and inform external stakeholders; to include assessments, trending, and forecasting of budgets, mission content, workforce, costs, and other factors influencing the ability of NASA to achieve its mission

performance of work and interactions with others

Agency decision-makers and external

stakeholders to ensure NASA has the

correct mix of programs and projects to

Perform Agency-level analyses and

evaluations of alternative strategies, to

include adjustments to content, schedule,

labor, budget, and acquisitions in relation

Balanced

accomplish its Mission.

 Maintain the quality, integrity, and independence of Agency programmatic assessment capability · Strengthen the abilities of individuals with the goal of institutionalizing sustainable practices that will aid NASA in continuously improving its programmatic capabilities, including cost estimating and schedule risk analysis Strengthen and nurture the Agency programmatic assessment skill base by providing leadership and policy for programmatic discipline training · Perform programmatic analysis research to continue to improve the programmatic assessment capability process, toolset, and training future estimates

leadership resources.

capabilities, methods, and tools

Cultivate

 Institutionalize the collection and use of programmatic data to better understand risk-impacted cost and schedule growth and to improve · Track Program and project programmatic assessment findings and perform research of systemic trends in performance of the Agency's programs and projects, to shed light onto the effectiveness of the Agency's policy initiatives directed to improve project performance Programmatic Consulting

Working Group

Leadership

· Community of

Practice - ScoPE,

ECASG, CIPT, etc.

Revision: 17 October 2016

Innovate

independent, and objective perspective in

analy sis and reporting

Agency Programmatic Analysis Research &

Capability Build the Agency Programmatic Analysis Capability (APAC) by

implementing Agency policies and encouraging best practices,

facilitating communities of practice with internal and external

stakeholders and subject matter experts, and cultivating the

human network of programmatic analysts across NASA and

Educate

Provide leadership in building the skills of the analytical workforce and

developing and promoting improved analytic tools, methods, and data

collection techniques for analyzing NASA strategic investment planning

connecting them to high-quality training, tools, and other

Act as steward of NASA cost and schedule policies and key

programmatic capabilities such as cost and schedule analysis

monitoring, tracking, and reporting concems/recommendations to ensuring ex ternal commitments are defendable, and inform the Agency of ensure timely resolution of corrective actions and conduct analyses to determine trends and Agency-wide issues disconnects · GAO/IG Audits · Mission Directorate Consultation · Performance Reporting APR/APP & AFR Performance on OCFO Products APGs Business · Performance Monitoring and · CAP Goals Forecasting analysis Systems SOAR (PMM. PMMe)

Performance

Practice

Community of

· BPR/OCFO Monthly Reviews Lifecycle Reviews · Key Decision Point Memos/Datasheets

· Portfolio Investment Analysis

leadership

 Agency Investment Analyses Trade Space/AoA Manifest (AMPM) Strategic Alignment/Gap Development Analysis Workforce /Capability · Historical Analyses Assessments Budget traces Passback Assessment · GAO High Risk Trace

· Agency Mission Planning · Analysis Tools/Model · Cost/Schedule Growth AMPM Launch Dates

· Workforce

· Cost/schedule policy Tool development · Cost estimating research Independent Review Logistics (vetting, selection, training) ONCE Database Development

· Independent Review processes and Standard Operating Procedures Programmatic Analysis Training Peer Reviews CADRe