

National Aeronautics and Space Administration



# ITCD STRATEGIC PLAN

INFORMATION TECHNOLOGY AND COMMUNICATIONS DIVISION

NASA HEADQUARTERS | JANUARY 2012



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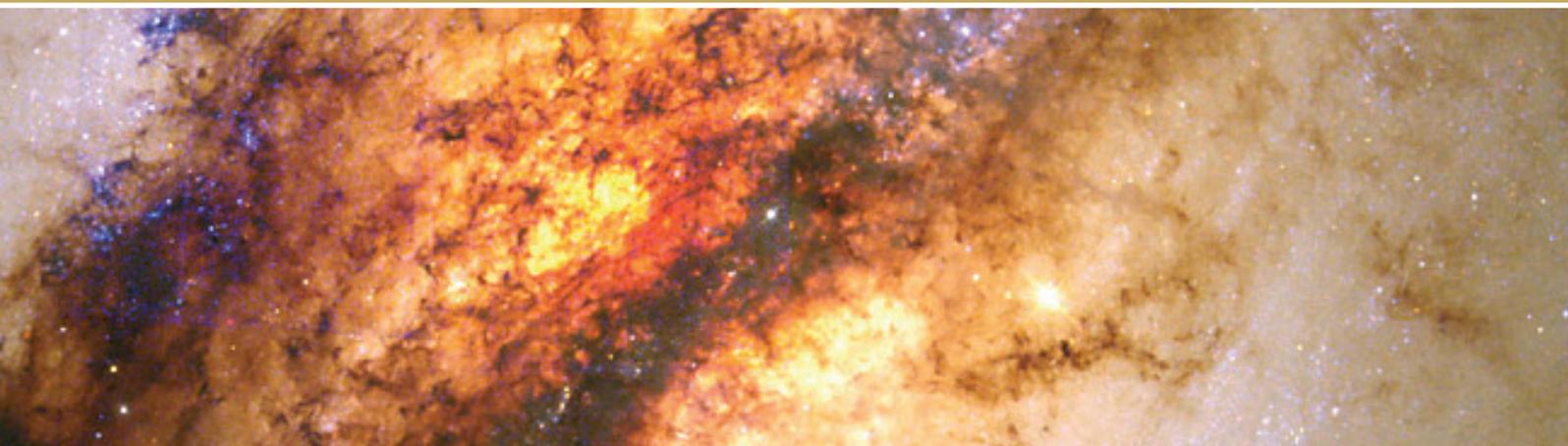
**ITCD**

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MESSAGE FROM ITCD LEADERSHIP

**ITCD**

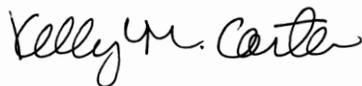


We are pleased to release the Information Technology and Communications Division (ITCD) Strategic Plan, a document that represents our Division's efforts over the next 3 to 5 years to transform the way in which ITCD fulfills its mission: to provide the full range of IT and communications products and services to NASA Headquarters employees and organizations. To this end, ITCD also develops, implements, and manages NASA Headquarters IT policies, standards, and procedures to enable an interoperable yet secure IT environment across the Agency.

At NASA Headquarters, Agency leadership shapes NASA's strategic direction, makes mission-critical decisions related to major programs and budgets, and sets policies for the Nation's activities in Earth orbit and beyond. Now, more than ever, the ability of NASA leadership to successfully carry out these activities depends on the secure and efficient delivery of IT and communications products and services.

However, new directions in Agency programs and increasingly constrained budgets present an evolving set of challenges to ITCD. Of particular significance is the successful implementation of NASA's IT Infrastructure Integration Program (I3P)—an initiative aimed at transforming NASA's IT infrastructure services from a Center-based model into an enterprise service management approach. This transformation is responding to the need for a more efficient and effective IT infrastructure to support NASA programs that cross Center boundaries. Initiatives like I3P mark a fundamental shift in NASA's approach to IT, which will continue to present many challenges to ITCD over the coming years.

With these considerations in mind, ITCD leadership developed a strategic vision and mission, supported by underlying goals and objectives, to cover the next 3 to 5 years (Figure 1). Guided by Core Values and Collaboration Principles, this strategic direction will enable ITCD to meet any and all of the challenges along the way toward implementing a modernized, enterprise-based IT approach to enable more effective and efficient missions across NASA.



**Kelly M. Carter,**  
ITCD Director and Headquarters Chief Information Officer



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## ITCD Strategic Plan Overview

VISION			
Deliver reliable, innovative, and respected IT solutions.			
MISSION			
Provide quality IT products and services, enabling Headquarters customers to accomplish NASA missions.			
Goal 1	Goal 2	Goal 3	Goal 4
Enhance technical capabilities to provide the highest quality of work products and excellent customer service.	Further position ITCD as a trusted partner by developing, maintaining, and strengthening relationships with customers and stakeholders.	Align with, support, and influence Agency IT direction, policies, and initiatives.	Develop and retain a highly skilled and engaged workforce that can successfully meet current and future challenges.
<p><b>Objective 1.1</b> Deliver products and services quickly and efficiently to customers.</p> <p><b>Objective 1.2</b> Develop new technologies to increase customer productivity.</p> <p><b>Objective 1.3</b> Develop tools to provide up-to-date information regarding operational status and project developments.</p> <p><b>Objective 1.4</b> Manage changes in IT services in a way that minimizes disruption and ensures continuity of operations.</p>	<p><b>Objective 2.1</b> Utilize Headquarters IT governance processes to fully engage stakeholders.</p> <p><b>Objective 2.2</b> Formalize process for obtaining, analyzing, and implementing customer feedback.</p> <p><b>Objective 2.3</b> Enhance communication and outreach to Headquarters customers about ITCD's products and services.</p>	<p><b>Objective 3.1</b> Implement I3P at Headquarters by maintaining transparency.</p> <p><b>Objective 3.2</b> Influence and support Agency decisions and initiatives to ensure that Headquarters' needs and perspectives are represented.</p> <p><b>Objective 3.3</b> Monitor Headquarters IT and communications policies to ensure that they are current and aligned with Agency policies.</p>	<p><b>Objective 4.1</b> Strengthen workforce technical skills and competencies.</p> <p><b>Objective 4.2</b> Ensure equitable distribution of work within ITCD.</p> <p><b>Objective 4.3</b> Provide growth opportunities for staff.</p> <p><b>Objective 4.4</b> Recognize employee contributions to ITCD and to NASA.</p> <p><b>Objective 4.5</b> Enhance employee engagement through internal communications and team building.</p>

Figure 1: ITCD's strategic vision and mission are supported by underlying goals and objectives.



SUPPORTING OTHER MISSIONS  
AND STRATEGIC GOALS

**ITCD**



## 8 SUPPORTING OTHER MISSIONS AND STRATEGIC GOALS

As shown in Figure 2, ITCD supports the mission of the Agency’s Office of the Chief Information Officer (OCIO) by providing quality IT and communications products and services to NASA Headquarters employees as part of a larger Agency-wide infrastructure. Moreover, ITCD and OCIO both drive the Agency’s overall mission, as NASA’s ability to successfully carry out its programs depends on the secure and efficient delivery of IT and communications products and services across the Agency with strong leadership from Headquarters.

NASA VISION	OCIO MISSION	ITCD MISSION
Drive advances in science, technology, and exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.	Increase the productivity of scientists, engineers, and mission support personnel by responsively and efficiently delivering reliable, innovative, and secure IT services.	Provide quality IT services, enabling Headquarters customers to accomplish NASA’s mission.

**Figure 2: ITCD’s mission supports those of OCIO and NASA.**

ITCD’s strategic goals are aligned in either a direct or cross-cutting manner to those of the Agency and OCIO, as shown in Figure 3 and Figure 4, respectively. Direct alignment is established when there is clear linkage between the execution of an ITCD goal and achievement of a NASA or OCIO goal. Cross-cutting alignment is established when execution of the ITCD goal supports the broader environment in which a NASA or OCIO goal will be achieved.

# SUPPORTING OTHER MISSIONS AND STRATEGIC GOALS

Comparison of NASA Strategic Plan to ITCD Strategic Plan		NASA STRATEGIC PLAN					
		1. Extend and Sustain Human Activities Across the Solar System.	2. Expand Scientific Understanding of Earth and the Universe.	3. Create Innovative New Space Technologies.	4. Advance Aeronautics Research for Societal Benefit.	5. Enable Program and Institutional Capabilities to Conduct NASA Activities.	6. Share NASA and Provide Opportunities for Participation.
ITCD STRATEGIC PLAN	1. Enhance Technical Capabilities To Provide the Highest Quality of Work Products and Excellent Customer Service.	Cross-cutting	Cross-cutting	Cross-cutting	Cross-cutting	Direct	Cross-cutting
	2. Further Position ITCD as a Trusted Partner by Developing, Maintaining, and Strengthening Relationships with Customers and Stakeholders.	Cross-cutting	Cross-cutting	Cross-cutting	Cross-cutting	Direct	Direct
	3. Align with, support, and influence Agency IT Direction, Policies, and Initiatives.	Cross-cutting	Cross-cutting	Cross-cutting	Cross-cutting	Direct	Cross-cutting
	4. Develop and Retain a Highly Skilled and Engaged Workforce that can Successfully Meet Current and Future Challenges.	Cross-cutting	Cross-cutting	Cross-cutting	Cross-cutting	Direct	Cross-cutting

**Figure 3: Alignment of ITCD strategic goals to those of NASA.**

**Direct:** Direct alignment is established when there is a clear linkage between the execution of an ITCD goal and achieving a NASA mission goal.

**Cross-cutting:** Cross-cutting alignment is established when execution of the ITCD goal supports the broader environment in which a NASA mission goal will be achieved.

Comparison of OCIO Strategic Plan to ITCD Strategic Plan		OCIO STRATEGIC PLAN			
		1. Transform IT Services to Better Meet Evolving Stakeholder Needs and Support Mission Success.	2. Enhance and Strengthen IT Security and Cyber Security.	3. Adopt New Technology that Will Make NASA's Missions More Capable and Affordable.	4. Provide Effective Enterprise Resources and Processes that Foster Mission Success.
ITCD STRATEGIC PLAN	1. Enhance Technical Capabilities to Provide the Highest Quality of Work Products and Excellent Customer Service.	Direct	Direct	Direct	Direct
	2. Further Position ITCD as a Trusted Partner by Developing, Maintaining, and Strengthening Relationships with Customers and Stakeholders.	Cross-cutting	Cross-cutting	Cross-cutting	Direct
	3. Align with, Support, and Influence Agency IT Direction, Policies, And Initiatives.	Direct	Cross-cutting	Cross-cutting	Cross-cutting
	4. Develop and Retain a Highly Skilled and Engaged Workforce that can Successfully Meet Current and Future Challenges.	Cross-cutting	Cross-cutting	Direct	Direct

**Figure 4: Alignment of ITCD strategic goals to those of OCIO.**

**Direct:** Direct alignment is established when there is a clear linkage between the execution of an ITCD goal and achieving an OCIO mission goal.

**Cross-cutting:** Cross-cutting alignment is established when execution of the ITCD goal supports the broader environment in which an OCIO mission goal will be achieved.

COLLABORATION PRINCIPLES  
AND CORE VALUES

**ITCD**



## COLLABORATION PRINCIPLES AND CORE VALUES

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Because ITCD believes that collaboration leads to improved performance, the Division has identified and adopted several Collaboration Principles as guidelines to be followed when performing its work. These principles comprise the philosophy of the Division, guiding the behavior of its members and providing a foundation for everything that it does.

- Clearly define the goals, objectives, requirements, and success criteria that will meet and/or exceed expectations.
- Communicate respectfully to encourage the flow of diverse ideas and stimulate creativity.
- Discuss and evaluate approaches, and present a well-researched set of options.
- Commit to the project, actively participate, and implement!

Additionally, ITCD has identified a set of Core Values that characterize the Division's overall approach to its work. These values cut across every aspect of the ITCD Strategic Plan and are essential to the success of each component.

- Integrity—we are honest and true to our word.
- Responsibility—we are accountable for our actions.
- Helpfulness—we enthusiastically assist our customers.
- Collaboration—we work together to achieve our goals.

STRATEGIC PLANNING APPROACH

**ITCD**



## 14 | STRATEGIC PLANNING APPROACH

ITCD's strategic planning approach combined top-down strategic development with bottom-up execution and performance measurement. The Division first worked closely with its stakeholders and customers at NASA Headquarters to identify its strategic priorities, then developed a set of logical stepping stones to drive the organization from strategic priorities to tactical implementations. The resulting framework is illustrated in Figure 5.

At the peak of the pyramid, the vision expresses what ITCD is ultimately aiming to achieve. One step down, the mission captures the purpose and function of the organization. Together, the vision and the mission are enduring statements on why the organization exists and what it is ultimately trying to achieve.

Directly supporting the mission are the strategic goals and objectives. The goals are broad statements of strategic change that collectively represent how the mission and vision will be realized, while the objectives provide specificity on how the goals will be accomplished. The strategic goals and objectives, reviewed with each new version of the strategic plan, are valid for 3 to 5 years.

The initiatives provide tactical specification that guide the implementation of the strategic objectives and ultimately the strategic goals. ITCD's current set of initiatives cover the next 2 years and will be revised according to evolving stakeholder and organizational needs.

During implementation, performance measurements track the accomplishment of initiatives and ultimately the objectives, goals, mission, and vision. Thus, while strategy is developed from the top of the pyramid and moves downward, execution of that strategy starts at the bottom and moves upward.

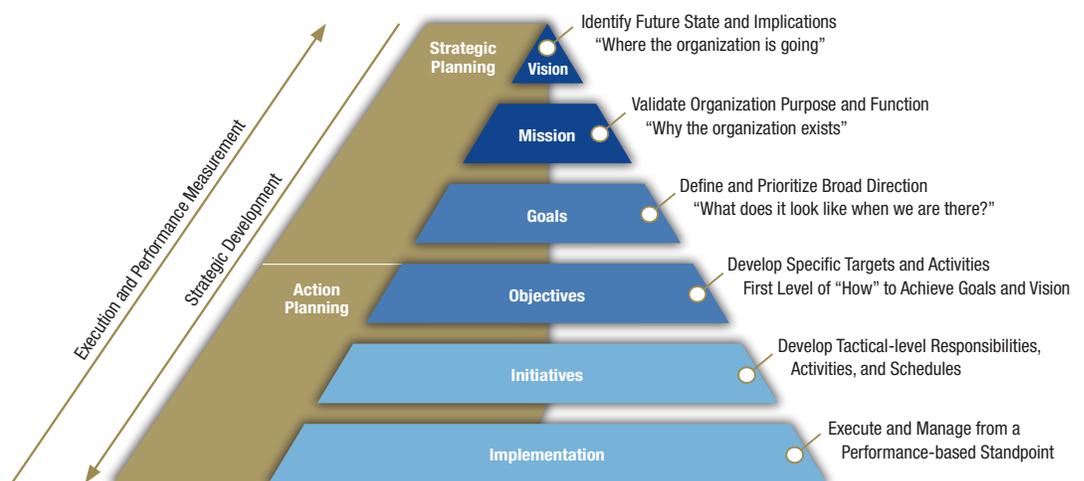


Figure 5: ITCD's strategic planning approach combined top-down strategic development with bottom-up implementation.

STRATEGIC GOALS,  
OBJECTIVES, AND INITIATIVES

**ITCD**



## STRATEGIC GOALS, OBJECTIVES, AND INITIATIVES

To achieve its mission of providing quality IT services that enable NASA Headquarters customers to accomplish NASA missions, ITCD developed four goals that define the Division's strategic priorities over the next 3 to 5 years. Underlying these strategic goals are objectives and initiatives that aim to ensure the successful implementation and maintenance of these goals, while also establishing consistent and reliable methodologies for sustaining critical IT capabilities and processes.

Each strategic goal covers a specific area of focus. Goal 1 concentrates on enhancing ITCD's technical capabilities in order to deliver the highest quality of products and services to its customers (Figure 6). Goal 2 aims to strengthen ITCD's relationships with its customers as well as other stakeholders (Figure 7). Goal 3 relates ITCD's activities to the overall NASA IT environment and direction (Figure 8). Finally, Goal 4 looks inward at developing and maintaining a highly skilled and motivated workforce (Figure 9). These strategic goals, along with the objectives and initiatives that turn them into actionable steps, are detailed below.

<b>GOAL 1</b>	
Enhance technical capabilities to provide the highest quality of work products and excellent customer service.	
	<p><b>Objective 1.1</b> Deliver products and services more quickly and efficiently to customers.</p> <p><b>Objective 1.2</b> Develop new technologies to increase customer productivity.</p> <p><b>Objective 1.3</b> Develop tools to provide up-to-date information regarding operational status and project developments.</p> <p><b>Objective 1.4</b> Manage changes in IT services in a way that minimizes disruption and ensures continuity of operations.</p>
	<p><b>Initiative 1.1.1</b> Revise the software development life cycle.</p> <p><b>Initiative 1.1.2</b> Implement IT Portfolio Management Process.</p> <p><b>Initiative 1.2.1</b> Establish an ITCD Innovation Program.</p> <p><b>Initiative 1.2.2</b> Develop an IT pilot process at Headquarters.</p> <p><b>Initiative 1.3.1</b> Use IBM Rational Suite as an ITCD standard.</p> <p><b>Initiative 1.3.2</b> Use Enterprise Project Management across ITCD.</p> <p><b>Initiative 1.3.3</b> Establish a business intelligence capability.</p> <p><b>Initiative 1.4.1</b> Effect seamless transition to new ITCD contracts.</p> <p><b>Initiative 1.4.2</b> Minimize downtime during building renovations.</p>

Figure 6: Goal 1 enhances ITCD's technical capabilities in order to deliver the highest quality of products and services to its customers.

OBJECTIVES, AND INITIATIVES

GOAL 2			
Further position ITCD as a trusted partner by developing, maintaining, and strengthening relationships with customers and stakeholders.			
		<b>Objective 2.1</b> Utilize Headquarters IT governance processes to more fully engage stakeholders.	<b>Initiative 2.1.1</b> Increase CAC activities related to strategic ITCD activities.
		<b>Objective 2.2</b> Formalize process for obtaining, analyzing, and implementing customer feedback.	<b>Initiative 2.2.1</b> Develop process for improving customer service.
		<b>Objective 2.3</b> Enhance communications and outreach to Headquarters customers about ITCD's products and services.	<b>Initiative 2.3.1</b> Implement a strategic communications plan.

Figure 7: Goal 2 builds and continues to cultivate collaborative relationships among ITCD and its customers and stakeholders.

GOAL 3			
Align with, support, and influence Agency IT direction, policies, and initiatives.			
		<b>Objective 3.1</b> Implement I3P at Headquarters by maintaining transparency.	<b>Initiative 3.1.1</b> Ensure traceability of I3P costs in the ITCD budget. <b>Initiative 3.1.2</b> Implement a communication plan for I3P initiatives.
		<b>Objective 3.2</b> Influence and support Agency decisions and initiatives to ensure Headquarters needs and perspectives are represented.	<b>Initiative 3.2.1</b> Attend and report on Agency Working Groups and Boards.
		<b>Objective 3.3</b> Monitor Headquarters IT and communications policies to ensure they are current and aligned with Agency policies.	<b>Initiative 3.3.1</b> Ensure consistency between Headquarters and Agency IT policies.

Figure 8: Goal 3 ensures that ITCD's policies and activities are aligned with the goals of the OCIO.

## STRATEGIC GOALS, OBJECTIVES, AND INITIATIVES

<b>GOAL 4</b>	
Develop and retain a highly skilled and engaged workforce that can successfully meet current and future challenges.	
	<p><b>Objective 4.1</b> Strengthen workforce technical skills and competencies.</p> <p><b>Objective 4.2</b> Ensure equitable distribution of work within ITCD.</p> <p><b>Objective 4.3</b> Provide growth opportunities for staff.</p> <p><b>Objective 4.4</b> Recognize employee contributions to ITCD and to NASA.</p> <p><b>Objective 4.5</b> Enhance employee engagement through focus on internal communications and team building.</p>
	<p><b>Initiative 4.1.1</b> Address competency gaps and single points of failure.</p> <p><b>Initiative 4.2.1</b> Implement workload assessment recommendations.</p> <p><b>Initiative 4.3.1</b> Implement career pathing.</p> <p><b>Initiative 4.3.2</b> Develop succession planning.</p> <p><b>Initiative 4.4.1</b> Create internal recognition process within ITCD.</p> <p><b>Initiative 4.4.2</b> Recognize ITCD contributions at Headquarters and Agency levels.</p> <p><b>Initiative 4.5.1</b> Implement internal strategic communications in ITCD.</p> <p><b>Initiative 4.5.2</b> Conduct regular ITCD team-building activities.</p>

Figure 9: Goal 4 focuses internally on the ITCD workforce and organization to ensure it is well-positioned to provide superior services.

KEY STRATEGIC INITIATIVES

**ITCD**



ITCD leadership identified a set of key strategic initiatives in order to see immediate progress toward the implementation of the strategic plan, while also maintaining focus on the plan's larger goals. These key strategic initiatives represent ITCD's highest priorities, both in terms of their ability to be completed soon after the plan's implementation as well as their importance to the Division over the long term.

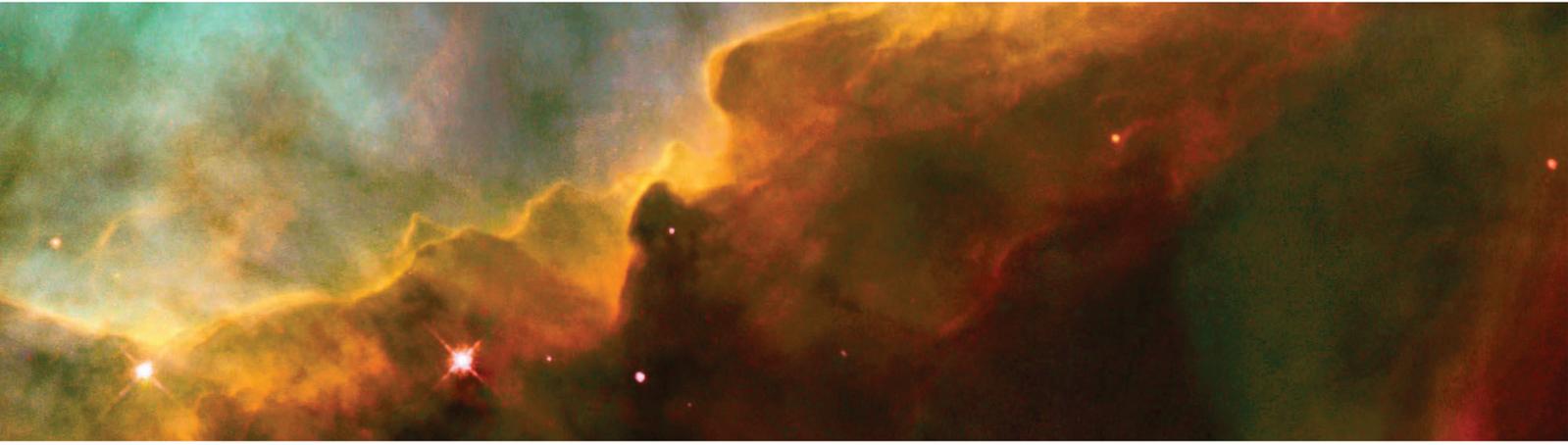
In order to prioritize these key strategic initiatives while also planning for the future, ITCD developed a timeline of its strategic initiatives over the next two years (Table 1). ITCD's current set of initiatives covers the next 2 years and will be revised according to evolving stakeholder and organizational needs.

		< 1 YEAR	< 1-2 YEARS	< 2-3 YEARS
		(Key Strategic Initiatives)	(Mid-term Priority)	(Long-term Priority)
<b>GOAL 1</b> (Technical Capabilities)	<b>Objective 1.1</b> (Product/Service Delivery)	<b>Initiative 1.1.2</b> (Product/Service Delivery)	<b>Initiative 1.1.1</b> (Product/Service Delivery)	
	<b>Objective 1.2</b> (Innovation)	<b>Initiative 1.2.1</b> (Innovation Program)	<b>Initiative 1.2.2</b> (Innovation Program)	
	<b>Objective 1.3</b> (Timely Information)	<b>Initiative 1.3.1 &amp; 1.3.2</b> (Rational Suite and EPMS)	<b>Initiative 3.3.3</b> (Rational Suite and EPMS)	
	<b>Objective 1.4</b> (Service Continuity)	<b>Initiative 1.4.1</b> (I3P Contract Transitions)		
<b>GOAL 2</b> (Customer Relations)	<b>Objective 2.1</b> (Governance Utilization)	<b>Initiative 2.1.1</b> (CAC Activities)		<b>Initiative 1.4.2</b> (Building Renovations)
	<b>Objective 2.2</b> (Customer Feedback)	<b>Initiative 2.2.1</b> (Customer Satisfaction)		
	<b>Objective 2.3</b> (Strategic Communications)		<b>Initiative 2.3.1</b> (External Communications)	
<b>GOAL 3</b> (Agency IT)	<b>Objective 3.1</b> (I3P Implementation)	<b>Initiative 3.1.1 &amp; 3.1.2</b> (I3P Costs and Communication)		
	<b>Objective 3.2</b> (Agency IT Involvement)	<b>Initiative 3.2.1</b> (Agency Groups/Boards)		
	<b>Objective 3.3</b> (Agency IT Policy Alignment)			<b>Initiative 3.3.1</b> (Agency Policy Alignment)
<b>GOAL 4</b> (Workforce)	<b>Objective 4.1</b> (Technical Competencies)		<b>Initiative 4.1.1</b> (ITCD Competency Gaps)	
	<b>Objective 4.2</b> (Work Distribution)		<b>Initiative 4.2.1</b> (Workload Assessment)	
	<b>Objective 4.3</b> (Workforce Growth)	<b>Initiative 4.3.1</b> (Career Pathing)	<b>Initiative 4.3.2</b> (Succession Planning)	
	<b>Objective 4.4</b> (Employee Recognition)	<b>Initiative 4.4.1 &amp; 4.4.2</b> (External/Internal Recognition)		
	<b>Objective 4.5</b> (Employee Engagement)	<b>Initiative 4.5.1 &amp; 4.5.2</b> (Team Communication and Building)		

Table 1: ITCD's initiatives have been timed to prioritize key strategic initiatives while also planning for the future.

PERFORMANCE METRICS

**ITCD**



ITCD has identified performance metrics to ensure that the Division achieves measurable outcomes that are clearly linked to its strategic progress. These success criteria will be measured on a regular basis and reported to ITCD stakeholders to communicate the Division's commitment to achieving its strategic plan.

	PERFORMANCE METRICS
<b>GOAL 1</b> (Technical Capabilities)	<ul style="list-style-type: none"> <li>■ Reduce ITCD product rollbacks to 5 percent by Dec. 2013.</li> <li>■ Three new innovations to the Innovation Virtual Showcase per quarter.</li> <li>■ 100 percent of major ITCD projects using Enterprise Project Management by Dec. 2012.</li> </ul>
<b>GOAL 2</b> (Customer Relations)	<ul style="list-style-type: none"> <li>■ Customer satisfaction rating with ITCD communications &gt; 85 percent by Apr. 2013.</li> <li>■ At least three functions of the CAC discussed at each meeting.</li> <li>■ Customer satisfaction with ITCD customer service &gt; 85 percent by Oct. 2012.</li> </ul>
<b>GOAL 3</b> (Agency IT)	<ul style="list-style-type: none"> <li>■ Implement process for aligning ITCD policies to Agency-wide IT policies by Jan. 2014.</li> <li>■ Customer satisfaction with I3P-related communications &gt; 85 percent by June 2012.</li> <li>■ ITCD attending 90 percent of relevant Agency-level working groups and boards in 2012.</li> </ul>
<b>GOAL 4</b> (Workforce)	<ul style="list-style-type: none"> <li>■ Develop IDPs for 100 percent of staff who have chosen to have them by May 2012.</li> <li>■ ITCD employee satisfaction with internal recognition &gt; 85 percent by Jan. 2012.</li> <li>■ Eliminate "single points of failure" for all critical functions by Nov. 2013.</li> </ul>

Table 2: Sampling of ITCD performance metrics.

MOVING FORWARD

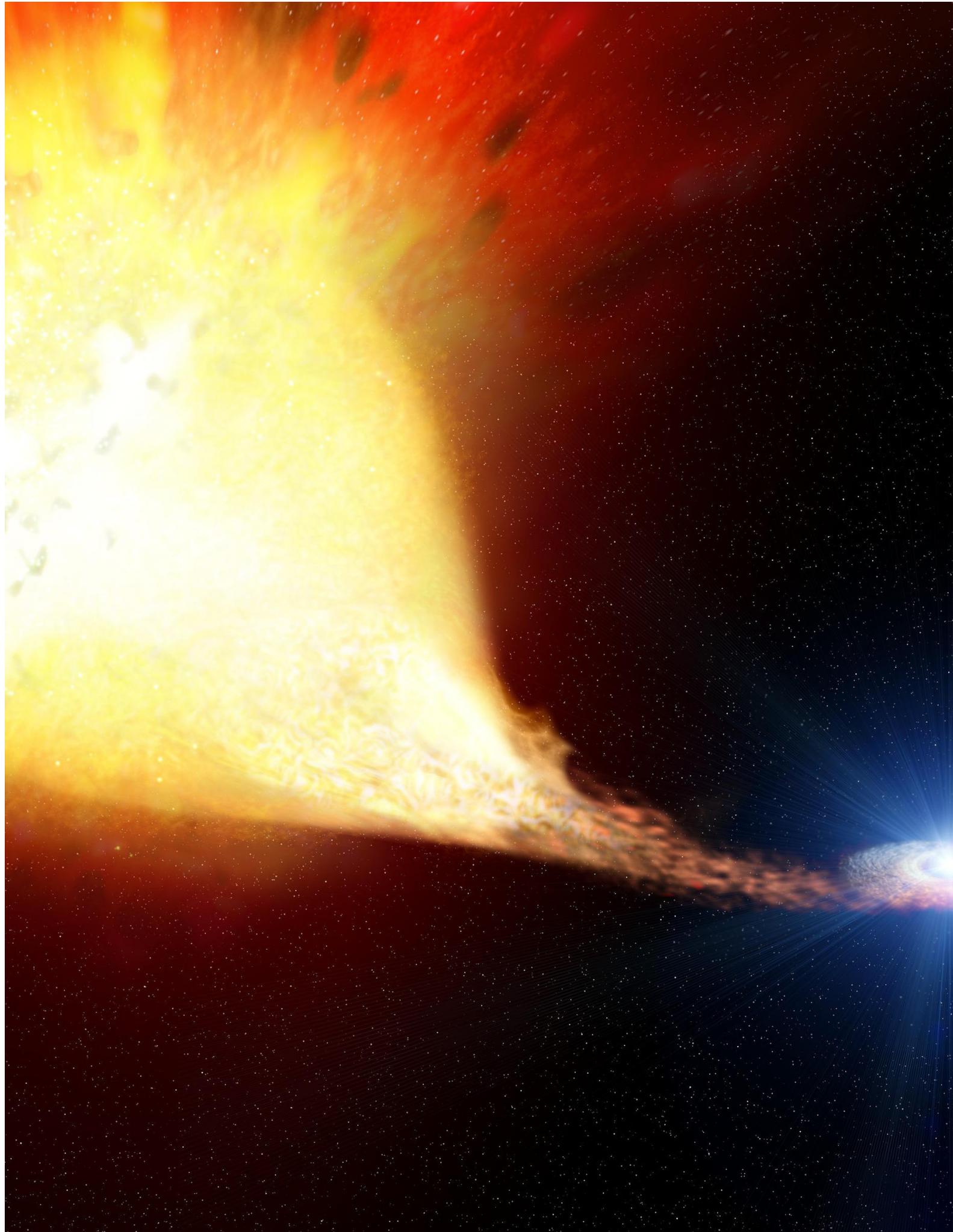
**ITCD**

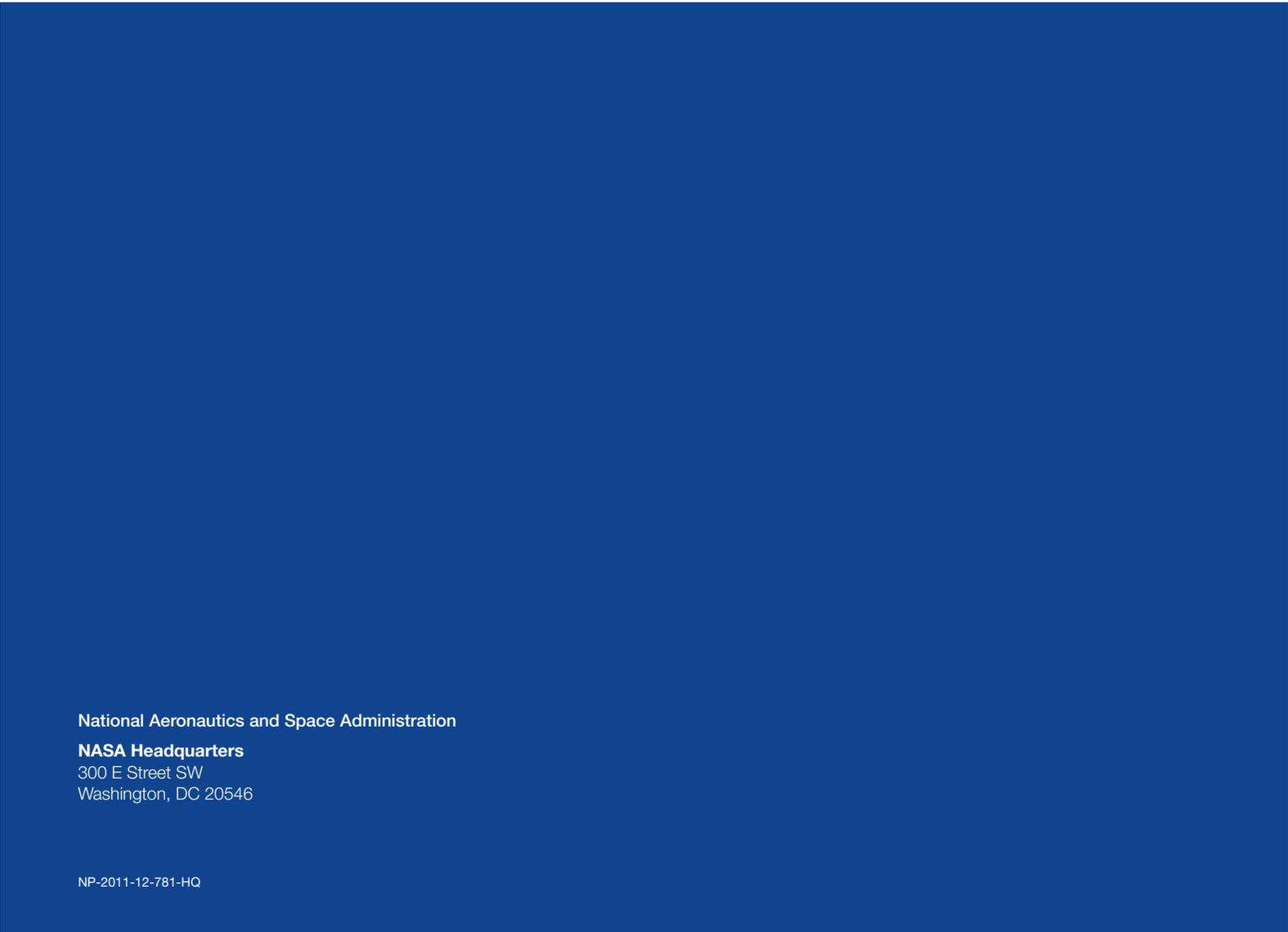
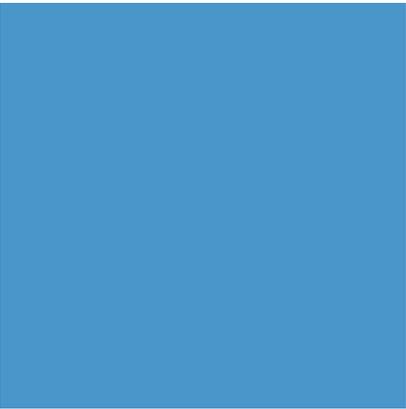


## 24 | MOVING FORWARD

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ITCD strives to provide high-quality and innovative IT and communications products and superior customer service to its Headquarters customers. To that end, ITCD has been working with its stakeholders to help identify its strengths as well as opportunities for improvement. This strategic plan serves as an internal as well as external roadmap that provides the Division, its stakeholders, and its customers with a clear path toward achieving their common goals. Moving forward, this strategic plan will shape ITCD's day-to-day and longer-term actions to ensure that it is focused on becoming the best possible IT and communications service provider for NASA Headquarters.





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