NASA

IT Request Fulfillment Process Document
Version 1.0

April 17, 2009

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Document Abstract

This document provides all involved parties (including staff, management, partners, providers, and contractors), regardless of physical location with a guide and reference to **NASA's** IT Request Fulfillment processes, procedures, and standards.

Document Owner

The IT Request Fulfillment Process document is owned by the Architecture and Infrastructure Division within the NASA Office of the Chief Information Officer.

Revision History

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Next Revision:	

IT Request Fulfillment Purpose

NASA recognizes the need to establish reasonable guidelines for the effective use, management, and maintenance of underlying IT Request Fulfillment. In doing so, **NASA** seeks to protect the integrity of its production environment and ensure adherence to NASA standard IT service management practices.

The purpose of this document is to provide all involved parties (including staff, management, partners, providers, and contractors), regardless of physical location with a guide and reference to **NASA**'s IT Request Fulfillment processes, procedures, and standards.

This document also serves to ensure that all parties involved in **NASA**'s IT Request Fulfillment processes, procedures, and standards, understand the requirements associated with **NASA**'s IT Request Fulfillment processes, procedures, and standards.

IT Request Fulfillment Scope

This document is intended to cover all IT requests associated with **NASA**'s IT environment including, but not limited to:

- HW
- SW
- Operating Systems
- Applications
- Telecommunications
- Networks
- Systems
- Patches, Upgrades, Modifications
- People/Organizational Structure
- Process
- Support

IT Request Fulfillment Description

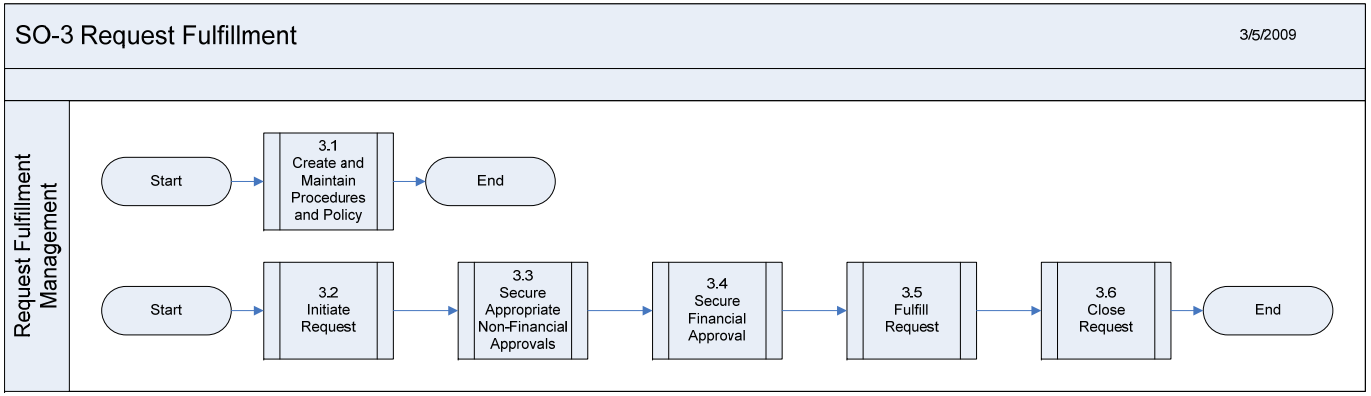
The IT Request Fulfillment process at **NASA** is a complex set of tasks, activities, and functions that manage any/all HW/SW requests made of the IT environment.

The IT Request Fulfillment process at **NASA** is comprised of the following tasks:

- Recognition of demand
- Logging of requests
- Categorization of requests
- Authorization/rejection of requests
- Assignment of requests for action

- Request tracking/management
- Request closure

IT Request Fulfillment Process Flow



Purpose, Goals, and Objectives:

Request Fulfillment is the process of dealing with Service Requests from users. The Objectives include:
1) To provide a channel for users to request and receive standard services for which a pre-defined approval and qualification process exists;
2) To provide information to users and customers about the availability of services and the procedure for obtaining them;
3) To source and deliver the components of requested standard services (e.g. licenses and software media);
4) To assist with general information, complaints, or comments.

The term "Service Request" is used as a generic description for many varying types of demands that are placed upon the IT Department by the users. Many of these are actually small changes – low risk, frequently occurring, low cost, etc. (e.g., a request to change a password, a request to install an additional software application onto a particular workstation, a request to relocate some items of desktop equipment) or maybe just a question requesting information – but their scale and frequent, low-risk nature means that they are better handled by a separate process, rather than being allowed to congest and obstruct the normal Incident and Change Management processes.

Triggers:

Most requests will be triggered through a user calling the Service Desk or completing some form of self-help web-based screen to make their requests. The latter will often involve a selection from a portfolio of available request types.

Primary Interfaces:

Many Service Requests may come in via the Service Desk and may be initially handled through the Incident Management process.

A strong link is also needed between Request Fulfillment, Release, Asset and Configuration Management – as some requests will be for the deployment of new or upgraded components.

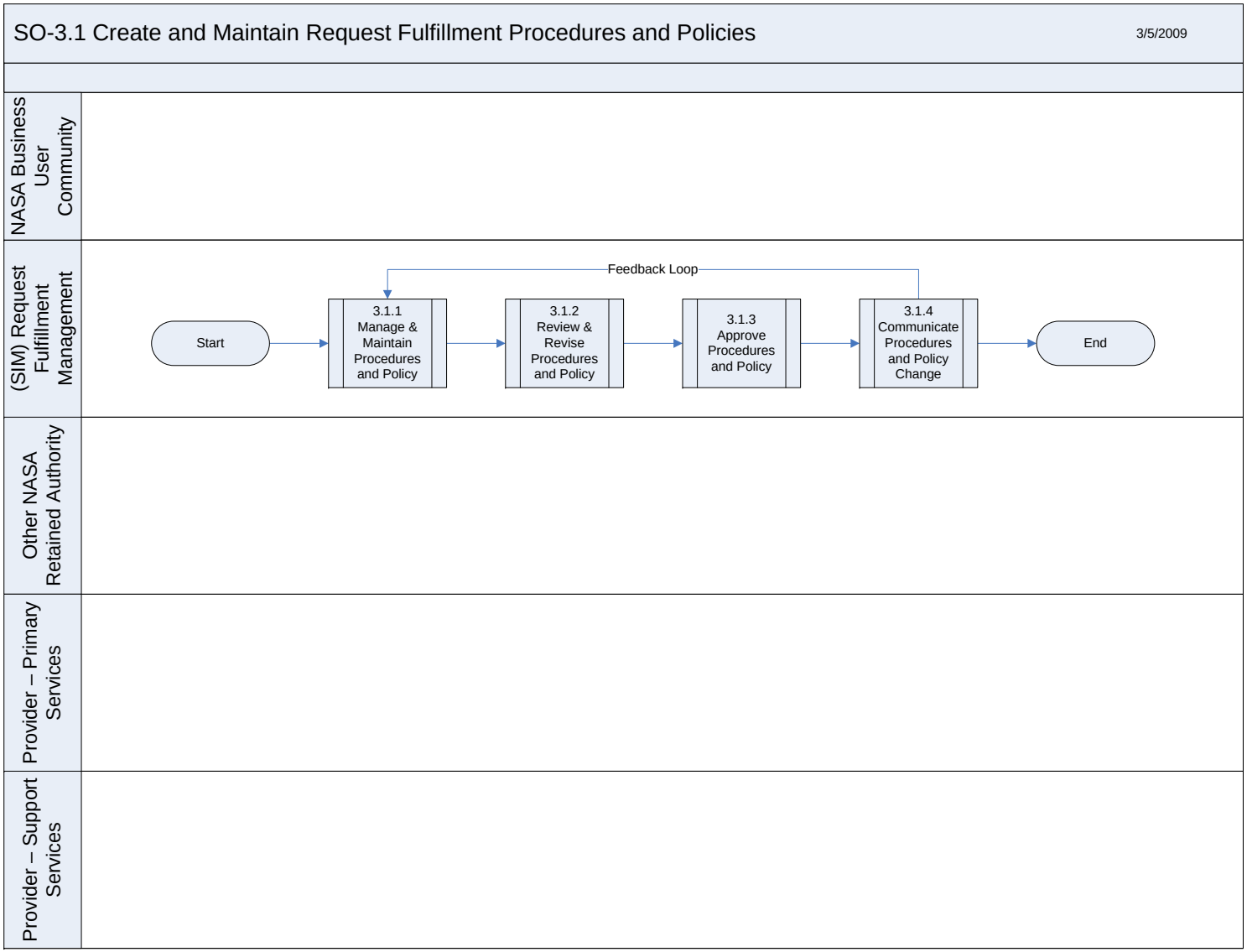
Information Management:

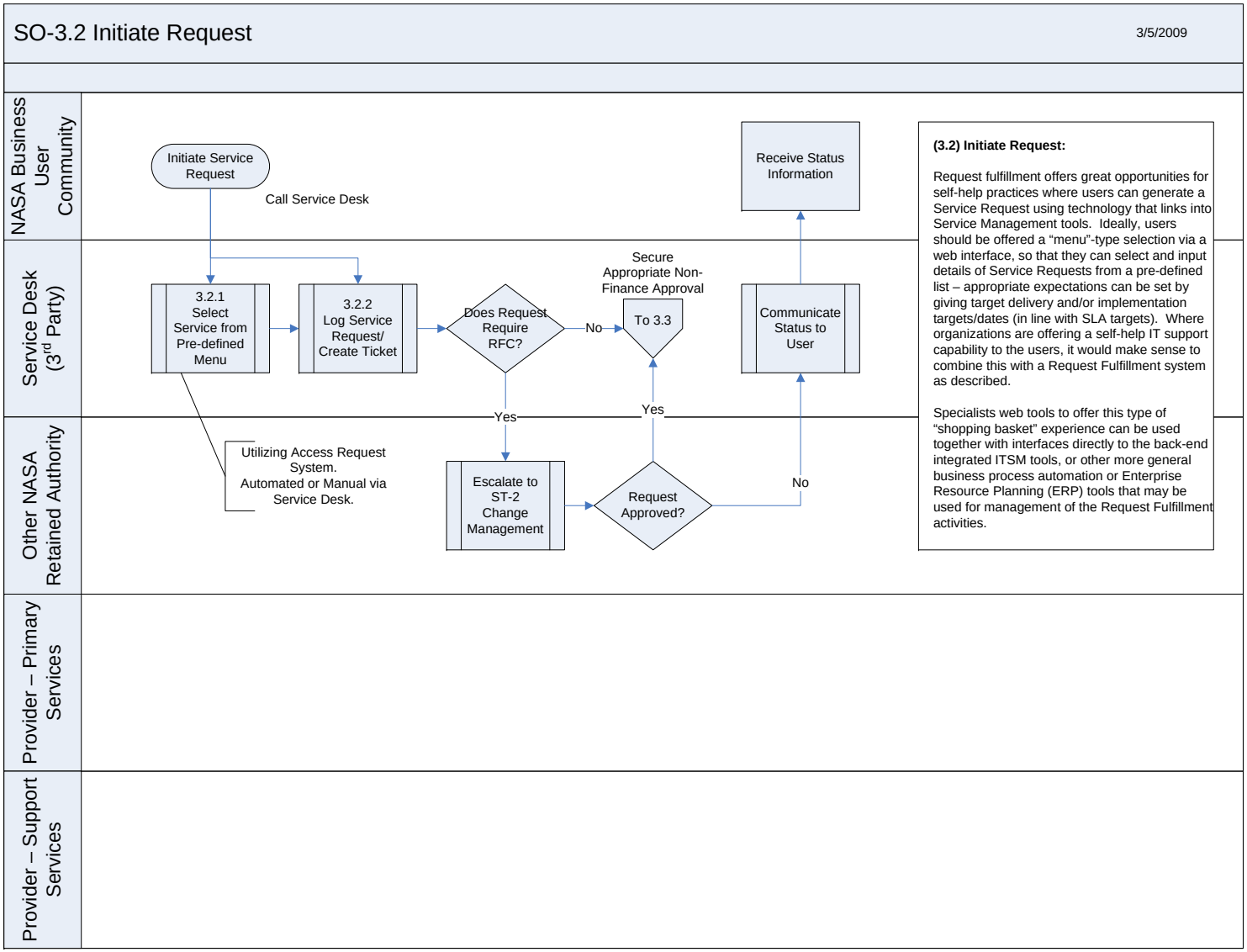
Service Request inputs will contain information about:
1. What service is being requested
2. Who requested and authorized the service
3. Which process will be used to fulfill the request
4. To whom it was assigned and what action was taken
5. The date and time when the request was logged
6. Historical sequence of actions with date and time stamps
7. Closure details

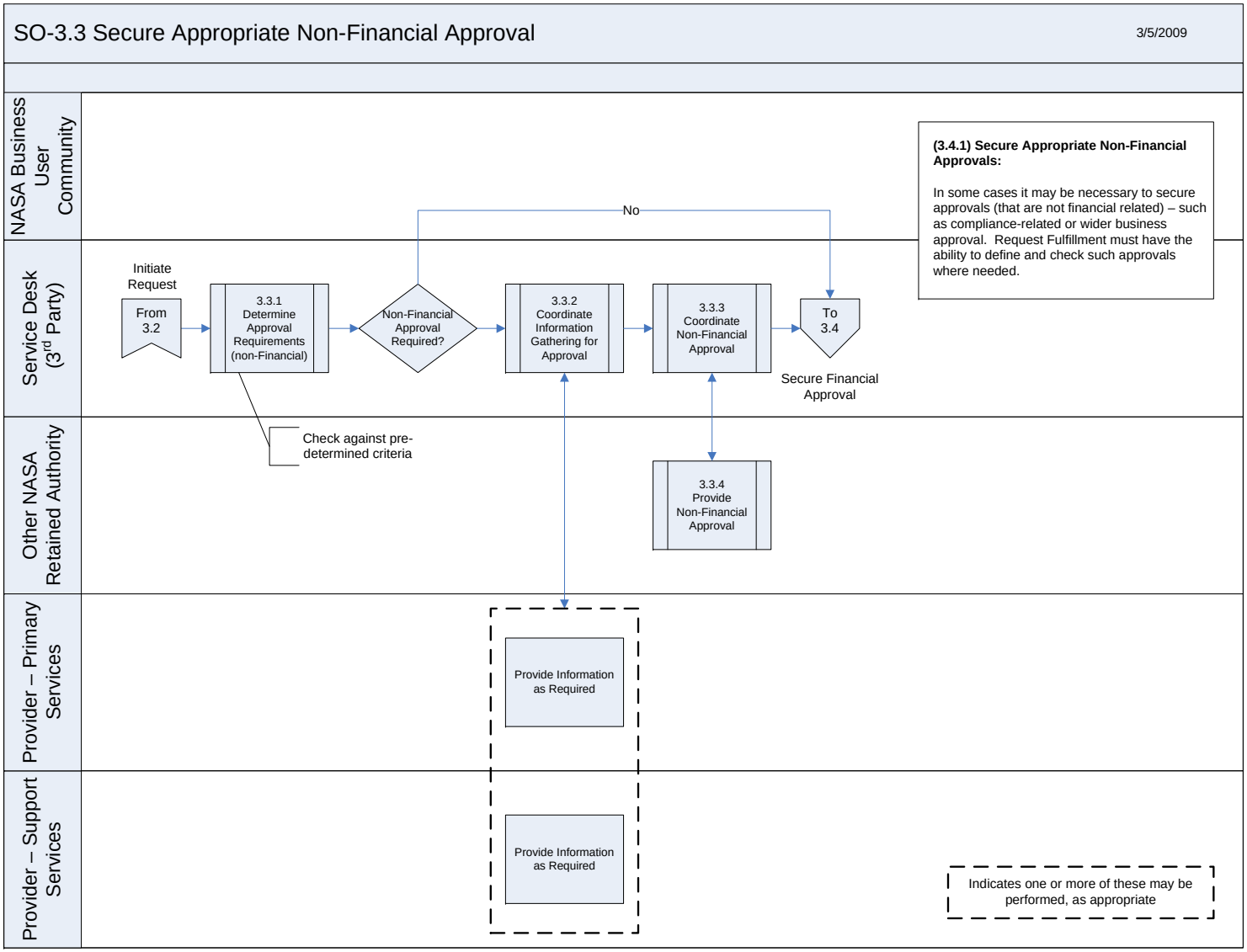
In some cases, the Request Fulfillment process will be initiated by a Request for Change (RFC), for example related to a CI. Data associated with the RFC are inputs to Request Fulfillment.

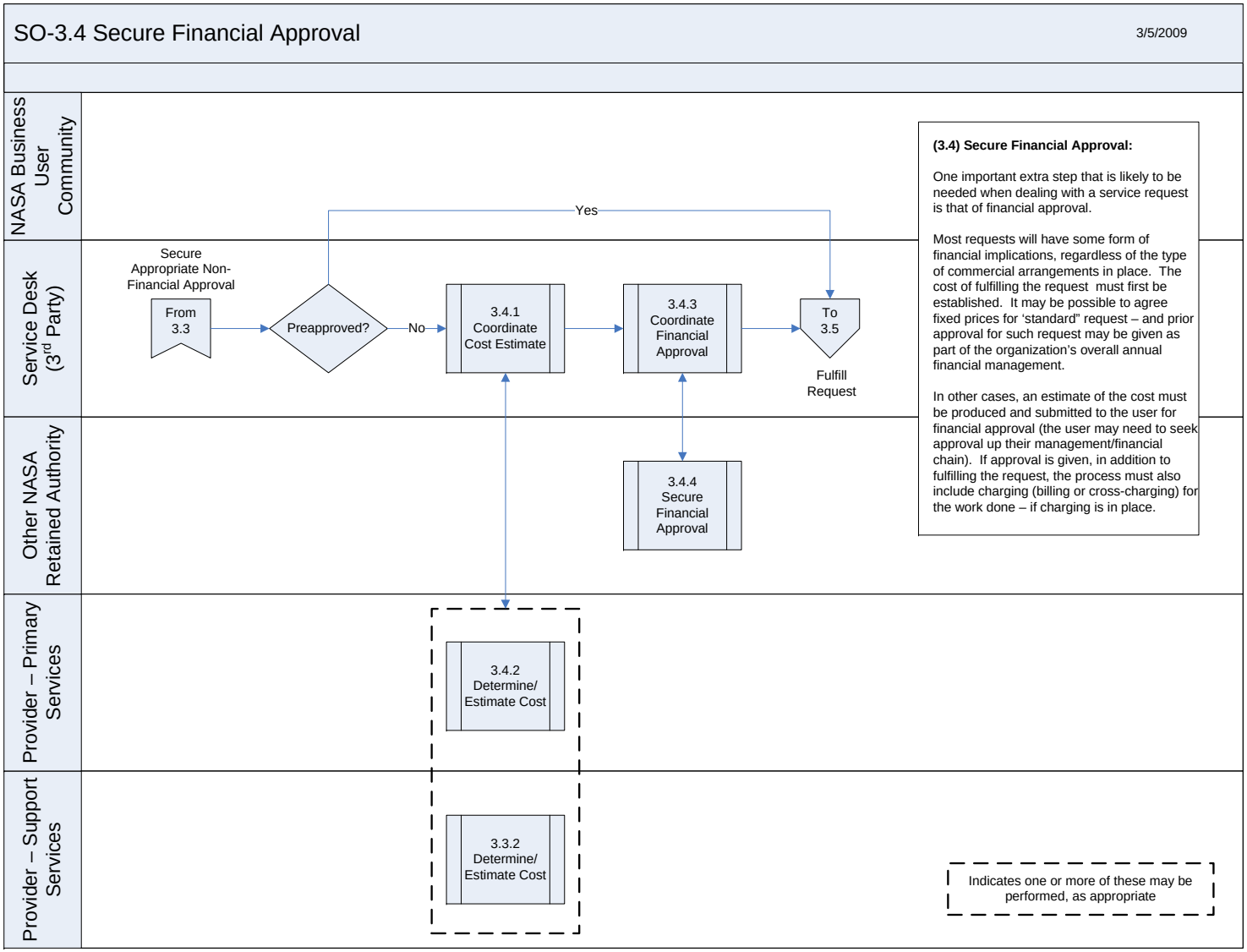
The Service Portfolio, to enable the scope of agreed Service Request to be identified.

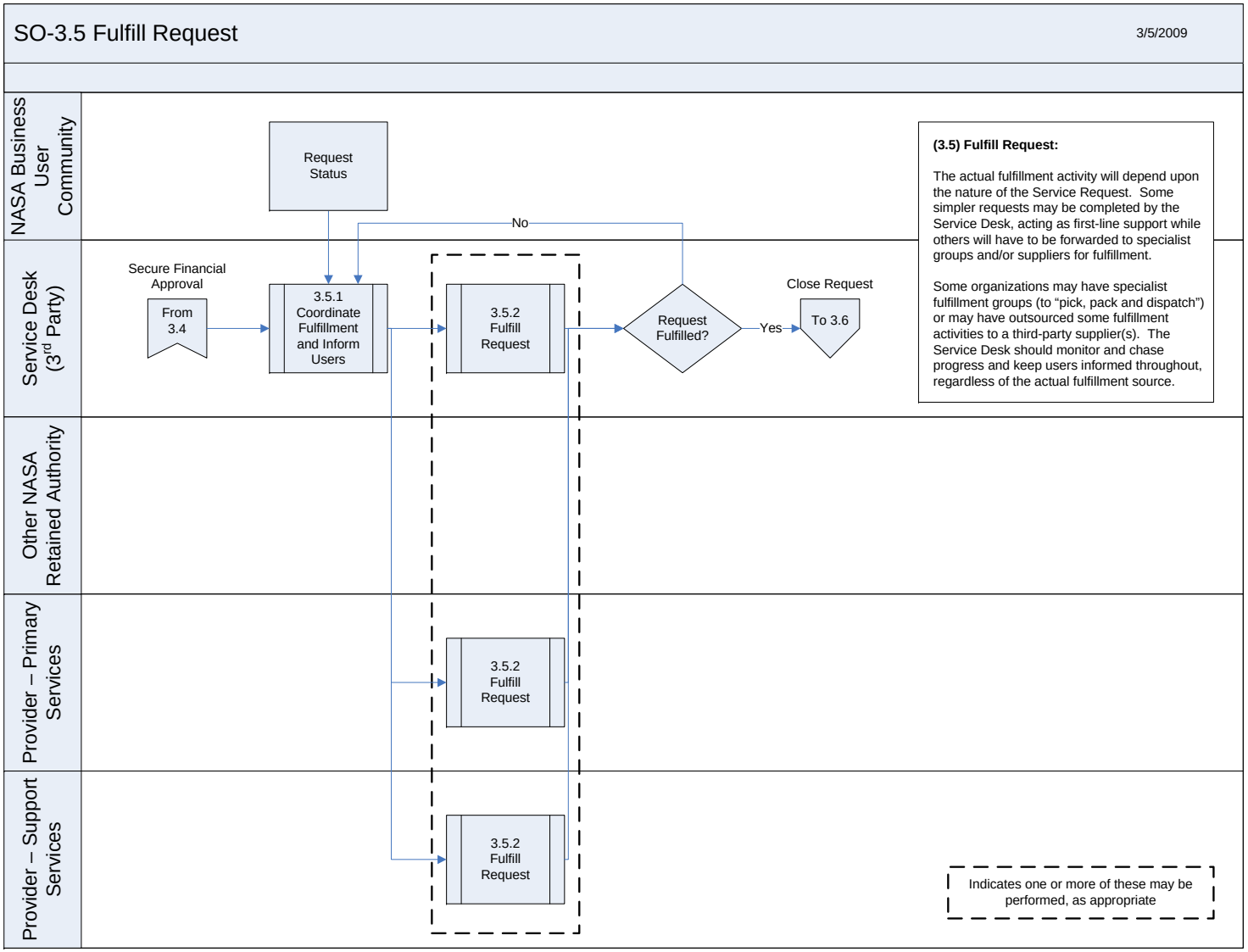
Security Policies will prescribe any controls to be executed or adhered to when providing the service.

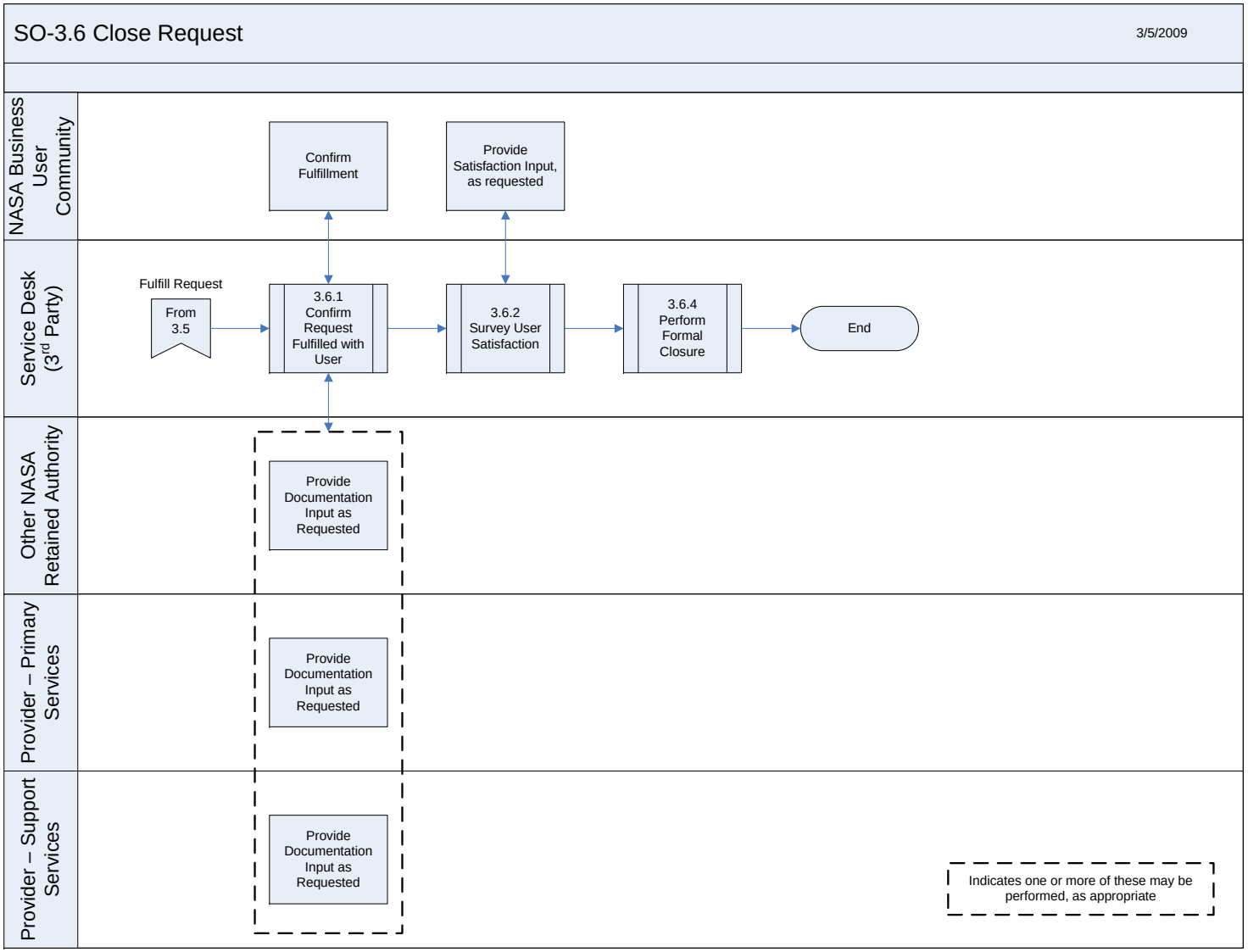

SO-3.1 Create and Maintain Request Fulfillment Procedures and Policies
3/5/2009
NASA Business User Community
(SIM) Request Fulfillment Management
Other NASA Retained Authority
Provider – Primary Services
Provider – Support Services
Feedback Loop
Start
3.1.1 Manage & Maintain Procedures and Policy
3.1.2 Review & Revise Procedures and Policy
3.1.3 Approve Procedures and Policy
3.1.4 Communicate Procedures and Policy Change
End


SO-3.2 Initiate Request
3/5/2009
NASA Business User Community
Service Desk (3rd Party)
Other NASA Retained Authority
Provider – Primary Services
Provider – Support Services
Initiate Service Request
Call Service Desk
3.2.1 Select Service from Pre-defined Menu
3.2.2 Log Service Request/ Create Ticket
Does Request Require RFC?
No
Secure Appropriate Non-Finance Approval
To 3.3
Yes
Yes
Utilizing Access Request System. Automated or Manual via Service Desk.
Escalate to ST-2 Change Management
Request Approved?
No
Communicate Status to User
Receive Status Information
(3.2) Initiate Request:
Request fulfillment offers great opportunities for self-help practices where users can generate a Service Request using technology that links into Service Management tools. Ideally, users should be offered a "menu"-type selection via a web interface, so that they can select and input details of Service Requests from a pre-defined list – appropriate expectations can be set by giving target delivery and/or implementation targets/dates (in line with SLA targets). Where organizations are offering a self-help IT support capability to the users, it would make sense to combine this with a Request Fulfillment system as described.
Specialists web tools to offer this type of "shopping basket" experience can be used together with interfaces directly to the back-end integrated ITSM tools, or other more general business process automation or Enterprise Resource Planning (ERP) tools that may be used for management of the Request Fulfillment activities.


SO-3.3 Secure Appropriate Non-Financial Approval
3/5/2009
NASA Business User Community
Service Desk (3rd Party)
Other NASA Retained Authority
Provider – Primary Services
Provider – Support Services
(3.4.1) Secure Appropriate Non-Financial Approvals:
In some cases it may be necessary to secure approvals (that are not financial related) – such as compliance-related or wider business approval. Request Fulfillment must have the ability to define and check such approvals where needed.
No
Initiate Request
From 3.2
3.3.1 Determine Approval Requirements (non-Financial)
Non-Financial Approval Required?
3.3.2 Coordinate Information Gathering for Approval
3.3.3 Coordinate Non-Financial Approval
To 3.4
Secure Financial Approval
Check against pre-determined criteria
3.3.4 Provide Non-Financial Approval
Provide Information as Required
Provide Information as Required
Indicates one or more of these may be performed, as appropriate


SO-3.4 Secure Financial Approval
3/5/2009
NASA Business User Community
Service Desk (3rd Party)
Other NASA Retained Authority
Provider – Primary Services
Provider – Support Services
Secure Appropriate Non-Financial Approval
From 3.3
Preapproved?
Yes
No
3.4.1 Coordinate Cost Estimate
3.4.3 Coordinate Financial Approval
To 3.5
Fulfill Request
3.4.4 Secure Financial Approval
3.4.2 Determine/ Estimate Cost
3.3.2 Determine/ Estimate Cost
(3.4) Secure Financial Approval:
One important extra step that is likely to be needed when dealing with a service request is that of financial approval.
Most requests will have some form of financial implications, regardless of the type of commercial arrangements in place. The cost of fulfilling the request must first be established. It may be possible to agree fixed prices for 'standard" request – and prior approval for such request may be given as part of the organization's overall annual financial management.
In other cases, an estimate of the cost must be produced and submitted to the user for financial approval (the user may need to seek approval up their management/financial chain). If approval is given, in addition to fulfilling the request, the process must also include charging (billing or cross-charging) for the work done – if charging is in place.
Indicates one or more of these may be performed, as appropriate


SO-3.5 Fulfill Request
3/5/2009
NASA Business User Community
Service Desk (3rd Party)
Other NASA Retained Authority
Provider – Primary Services
Provider – Support Services
Request Status
No
Secure Financial Approval
From 3.4
3.5.1 Coordinate Fulfillment and Inform Users
3.5.2 Fulfill Request
Request Fulfilled?
Yes
Close Request
To 3.6
3.5.2 Fulfill Request
3.5.2 Fulfill Request
(3.5) Fulfill Request:
The actual fulfillment activity will depend upon the nature of the Service Request. Some simpler requests may be completed by the Service Desk, acting as first-line support while others will have to be forwarded to specialist groups and/or suppliers for fulfillment.
Some organizations may have specialist fulfillment groups (to "pick, pack and dispatch") or may have outsourced some fulfillment activities to a third-party supplier(s). The Service Desk should monitor and chase progress and keep users informed throughout, regardless of the actual fulfillment source.
Indicates one or more of these may be performed, as appropriate


SO-3.6 Close Request
3/5/2009
NASA Business User Community
Service Desk (3rd Party)
Other NASA Retained Authority
Provider – Primary Services
Provider – Support Services
Confirm Fulfillment
Provide Satisfaction Input, as requested
Fulfill Request
From 3.5
3.6.1 Confirm Request Fulfilled with User
3.6.2 Survey User Satisfaction
3.6.4 Perform Formal Closure
End
Provide Documentation Input as Requested
Provide Documentation Input as Requested
Provide Documentation Input as Requested
Indicates one or more of these may be performed, as appropriate

IT Request Fulfillment Roles and Responsibilities

A number of roles and responsibilities have been identified as essential to the IT Request Fulfillment process. The purpose of this section is to define those functional roles and responsibilities necessary for effective IT Request Fulfillment, including but not limited to **NASA**'s staff, management, partners, providers, and contractors, regardless of physical location, involved in making IT requests to **NASA**'s IT environment.

Roles	**Responsibilities**
(SIM) Request Fulfillment Process Owner	• Responsible for the documentation, modification, and update of all IT Request Fulfillment process documentation • Responsible for assuring that the request process meets organizational performance expectations • Ensures that individuals/groups adhere to the request process • Accountable for the efficiency, effectiveness, and accountability of the process • Responsible for Request Fulfillment performance reporting
Request Coordinator	• Accountable for scheduling of requests • Responsible for overseeing of requests across processes • Identifies when to update the request process • Reviews requests for accuracy/completeness • Reports performance of request process • Assists with Request Fulfillment reporting and documentation • Assists with Request Fulfillment scheduling and communication
Requester	• Submits request • Responsible for communicating all requirements, risks, and timing issues associated with the request
Request Ticket Management	• Responsible for tracking request status (e.g., requested, open, on-hold) in relation to schedules. • Responsible for communicating status of requests

Authorization of IT Requests

IT request forms are to be filled out for any/all requests made of **NASA**'s IT environment.

Sample IT Request Form

Submission Date	
Submission #	
Requestor information	
Description and identity of item(s) to requested	
Reason for request	
Request priority	
Authorization signature	
Authorization date and time	

Scheduled implementation	
Relevant distribution/build information	
Actual distribution date and time	
Review date	
Review results	
Request status – logged, assessed, rejected, accepted, on hold	

IT requests are expected to be filed prior to any actions being taken.

IT requests that have not been "pre-authorized" must be reviewed by the appropriate authorizing body (see change categorization table) in addition to entry of a formal IT request.

Low risk IT requests which have been "pre-authorized" by the change advisory board are required to have a request entered, but do not require review by the change advisory board.

IT requests must be authorized by the appropriate authorizing body. IT requests will use the change categorization table as a guide. The following summarizes the change categorization table:

IT Change Categorization Table

1	• High risk • High possibility of major business impact • No potential for back-out • Lengthy change	CAB and Business
2	• High risk • Moderate possibility of major business impact • Complex back-out • Lengthy change	CAB
3	• Moderate risk • Moderate back-out • Moderate length change	CAB or Manager
4	• Low risk • Moderate back-out • Moderate length change	Manager
5	• Low risk • Known requirements • Easy back-out	"Pre-Authorized

IT requests may be rejected for any of the following reasons:

- if the IT request is submitted without the required information (e.g., risk assessment, timing estimates)
- if the IT request is submitted outside of the authorized windows
- if the IT request conflicts with other IT initiatives currently in progress
- if the IT request is likely to negatively impact the production environment
- if the IT request requires an undue amount of resource (e.g., person-hours)

IT Request Fulfillment Performance Measures

NASA will measure and maintain the performance of its IT Request Fulfillment process with the following performance measures:

- # of requests
- Request ticketing is centralized (yes/no)
- % of requests by type
    - Project
    - Development
    - HW/SW
    - Support
- % of requests by requesting group
    - Business lines
    - Applications development
    - Operations/Infrastructure
    - Business Relationship Management
- % of standard requests
- % of non-standard requests
- % of requests made outside of any formal request process
- % of requests requiring additional resources
- % of requests that require additional support

IT Request Fulfillment - Key Integration Points

Effective IT Request Fulfillment requires significant integration between those technology and business communities that request, build, test, implement, and monitor IT requests. As such, the IT Request Fulfillment process should include, but not be limited to, the following process integration points:

- Inputs
    - Incident Management
    - Problem Management
    - Change Management
    - Operational Release Mgmt
    - Configuration Management
    - Asset Management
    - Inventory Management

    - Capacity Management
    - Monitoring
    - Test Management
    - Service Continuity
    - Service Level Management
    - Request Fulfillment
    - Project Management
    - Business Relationship Mgmt
- Outputs
    - Incident Management
    - Problem Management
    - Change Management
    - Operational Release Mgmt
    - Configuration Management
    - Asset Management
    - Inventory Management
    - Capacity Management
    - Monitoring
    - Test Management
    - Service Continuity
    - Service Level Management
    - Request Fulfillment
    - Project Management
    - Business Relationship Mgmt

Document Maintenance

The Service Integration Management office and associated parties will review the IT Request Fulfillment process document annually for detail and refinement opportunities.

Additional reviews may be conducted as needed to amend policies to reflect changes in **NASA**'s IT and business strategies, service offerings, and changing conditions in legal, regulatory, and market conditions. Suggestions or feedback regarding the IT Request Fulfillment process document may be submitted to the document owner, who will formalize and submit draft document revisions for review and approval by the document review board. Once approved, the document owner will update and distribute the document.