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NASA Shared Services Center Service Delivery Guide

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Effective Date: March 1, 2018
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Intelligent Automation Services (IAS)

Responsible Office: Enterprise Services Division

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Approved by

Pamela J. Wolfe
Chief, Enterprise Services Division

Date

Kenneth L. Newton
Director, Service Delivery Directorate

Date

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1.0 Introduction

Beginning March 1, 2018, the NASA Shared Services Center (NSSC) is implementing a new capability known as Intelligent Automation Services. The goal of this service is to identify routine and repetitive tasks that can be automated and performed by a digital workforce in an agile environment allowing IT developers to focus on larger development efforts. Intelligent Automation provides a way of reducing operating costs while also facilitating agility in response to customers' evolving needs. The purpose of the service is to provide improved, cost-effective, operational efficiencies, and standardized interfaces and processes performed by the digital workforce.

The Automation Management Service Office (AMSO) is located at the NASA Shared Services Center within the Enterprise Services Division. The AMSO will oversee the Intelligent Automation Services provided by the NSSC Service Provider.

Intelligent Automation services are inclusive of traditional macros, scripting and Intelligent Automation (IA)--RoBOTic Process Automation (RPA), Cognitive Automation and Artificial Intelligence. The initial focus will be limited to RoBOTic Process Automation. Cognitive Automation and Artificial Intelligence may be offered at a later date as the demand for these services are defined.

IA introduces a new type of employee to the workforce. This digital employee has the same characteristics of human users. Digital employees require user credentials, licenses, access roles, desktops or virtual machines, supervisors, and work instructions. The AMSO serves as the single Point of Contact (POC) for the digital workforce creation and maintenance.

Benefits of intelligent automation services include:

- Rapidly trains digital employees to securely support NSSC's internal and external customers in a hyper-agile environment
- Reduces processing time while providing consistent results based on established business rules;
- Reduces costs associated with highly repetitive functions;
- Leverages NSSC support processes, systems, and service management expertise;
- Provides for increased reporting capability and validation of process results;
- Applies the Shared Services business model to IAS administrative support functions; and
- Provides for use of the NSSC Working Capital Fund (WCF) for service chargeback.

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Roles and responsibilities for IAS will be incorporated in the NSSC Service Level Agreement (SLA) to include service specific Service Level Indicators (SLIs). SLIs will detail performance expectations, and customer satisfaction.

2.0 Scope

The Intelligent Automation Services provides support for the following functions:

- Determines candidates for process automation:
 - Define
 - Measure
 - Analyze
 - Improve
 - Control
- Automate Processes:
 - Develop digital work instructions used to program or “train” the RoBOT (aka the BOT)
 - Design
 - Test
 - Deploy
- Maintain:
 - Schedules for processes
 - Monitor performance
 - Backups
- Host:
 - IAS hardware and software infrastructure for NASA
 - Digital Employees in virtual desk environments
- Provide:
 - Technical support
 - Incident Management
 - Audit support
 - Variety of Reports
- Manage:
 - Customer inquiries
 - Required software licenses
 - Priorities in coordination with the AMSO

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3.0 Assumptions

- Use of the NASA Working Capital Fund (WCF) for sustaining operations.
- Use of ServiceNow for requesting quotes, initiating work, and incident management;
- Use of UiPath software for process automation;
- Potential use of additional software as processes and growth potential dictate;
- Charging for work instruction automation (Development Rate) in FY18/19 as special projects; and
- Potential charging for digital employee processing time (Run Time Rate) as BOTs reach capacity in FY20. The Run Time Rate for a Digital Work Year Equivalent (DWE) is calculated on the basis of a 12 hour day, 5 day work week (12 hours/day * 5 days/week * 52 weeks/year = 3120 hours/year). Run Time Rate (\$5900/year)/(3120 hours/year * 60 minutes/hour) = \$0.032 per minute

4.0 Internal Controls

Digital employees retain the same characteristics as human employees. Any process which requires segregation of duties must be taken into consideration during the development/training of the BOT software.

- NASA Access Management System (NAMS) must be utilized for the Digital Employee provisioning which requires specialized access to the network and the applications.
- Just like the human work force, digital employees cannot obtain roles that can conflict. These types of tasks must also be performed by separate BOTS.
- This requires proper segregation of development efforts as well to ensure that work instructions are properly authorized.
- Individual development efforts must be overseen by the IAS Team to ensure that potential for collusion does not exist.
- Individual development efforts must be assigned by the IAS Team Lead to maintain the integrity of segregation of duties.
- The IAS Team must ensure that all the related information is captured in the process documentation.
- Digital employees' passwords must be maintained as NASA security policies dictate.
- A designated IAS Team member must change the digital employee passwords every 60 days prior to the expiration date and provide a copy of the passwords in a sealed envelope to the NSSC CISO every time the passwords are changed.

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- He or she must not share the passwords with anyone. If any password in the production environment is shared for testing and troubleshooting purposes, it must be changed immediately after the work is completed.
- NSSC CISO will be responsible for safe keeping the passwords in a locked safe in a secure area and destroy the expired passwords.
- IAS Servers, virtual desktops and laptops must be kept in secure areas with limited access to only those authorized.
- All the virtual desktops and laptops must have the NASA approved baseline and must be set to receive all the security and software updates.
- All the digital employee laptops must have the PGP encryption enabled and kept screen locked at all times.
- All the hardware and software must meet the NASA and NSSC standards and security requirements.

Any exceptions must be coordinated through the NSSC CISO for approval.

5.0 Training

AMSO or IAS personnel will provide training to Process Owners on the processes, procedures, and systems used by the IAS. Internal BOT Developers will be provided training on processes and procedures along with product training through internal and vendor services.

6.0 Reference Documents

Document	Version	Release Date
IAS Business Case (Initial Draft)	Version 01	November 3, 2017
IAS SLIs	Version 1.0	Draft in work
NSSC Service Level Agreement	Annual	effective: January 12, 2018
NSSC Services Catalog	Annual	effective: January 12, 2018
NIST 800-53, Security Controls	Version 4	

Table 6.0 - Reference Documents

This Service Delivery Guide details the operations of the IAS focusing on the following areas:

- Organization, staffing, and skill sets needed to perform the functions assigned;
- IAS processes utilized;
- Technical systems and infrastructure required to support operations;
- Functional processes/responsibilities performed; and
- Information interfaces to stakeholders, and customers.

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7.0 Privacy Information

All participants involved must ensure protection of all data covered by the Privacy Act, and other applicable Federal Regulations and NASA policies.

8.0 AMSO and IAS Organization

AMSO is within the NSSC's Enterprise Services Division. Figure 8.0 below reflects the organization and cross functional relationship to support this service. To the extent feasible, staffing is located within a single office which provides focus and cross-collaboration for managing the IAS functions. Development support staffing is included in the cost quote for external customers. Development for internal customers will be charged directly to the function receiving the benefit of automation.

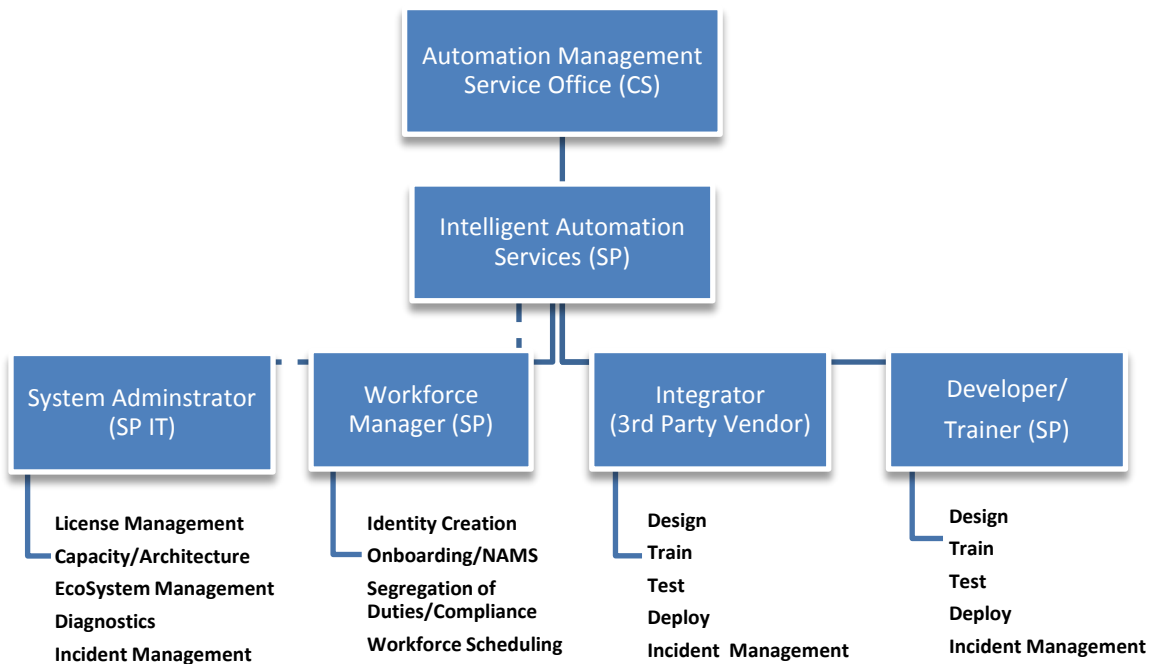


Figure 8.0 - Organizations and Staffing

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8.1 Civil Servant (CS) and Service Provider (SP) Staffing

Staffing of the AMSO consists of both CS and SP/Contractor personnel. Table 8.1 defines the initial staffing profile. Staffing below reflects total staffing currently involved and does not represent equivalent headcounts as this staffing will support other functions in addition to IAS. This staffing may fluctuate as the demand changes.

Role	Function	Civil Servant	Service Provider
Chief, Enterprise Services	Overall responsibility	X	
Automation Management Service Office Lead	AMSO Primary Support	X	
Intelligent Automation Services Service Owner	Responsible for the Intelligent Automations Services Team		X
Workforce Manager	Oversee BOT Administration and Operations		X
Infrastructure System Administrator	Systems Administration –IT		X
Integrator (3 rd Party Vendor)	Development and control		(ODC)
Developers/BOT Trainers	Design and Deploy		X
Process Owner(s)	Requestor/Customer (Internal or External)		

Table 8.1 - IAS Staffing Profile

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8.2 Roles and Responsibilities

Chief, Enterprise Services	Enterprise Services Division Chief has the overall responsibility and oversight of the AMSO and IAS. The manager oversees operations, provides strategic guidance and ensures compliance with NASA's policies and procedures.
Automation Management Service Office (AMSO) Lead	The AMSO Lead is responsible for interfacing with the customers to prioritize work instructions for development, working closely with the workforce manager, the integrator, and developers as necessary to ensure development efforts are on schedule for delivery to customers.
IAS Service Owner	The IAS Service Owner is the Service Provider Manager responsible for the overall performance of the IAS Team.
Workforce Manager	The Workforce Manager oversees operations of the digital workforce, forecasts BOT capacity, ensures proper segregation of duties among the developers, assists in prioritization of development efforts, and manages the developer team.
Infrastructure System Administrator	The System Administrator provides IT support, and identifies architectural requirements to ensure a robust, and redundant eco-system for digital employees to properly execute their tasks.
Integrator	The Integrator collaborates with multiple process owners to design, train, test, and deploy work instructions for the digital workforce. Responsible for managing the orchestrator, scheduling runtimes, determining capacity, and projecting requirements for additional digital workforce
Developer/Trainer	The Developer/ Trainer collaborates with multiple process owners to design, train, test, and deploy work instructions for the digital workforce.
Process Owner	The Process Owner is responsible for initiating the service request (SR), defining the work instruction and business rules, partnering with the integrator for development, delivery, testing, and maintenance of digital workforce, knowledge articles, and incident management

9.0 Funding Intelligent Automation Services

Funding for the AMSO operations will be handled as follows:

- Service requests will be initiated through ServiceNow. The initial service request will result in a quote for the effort at no charge to the requestor.
- The service request initiated to proceed with the provided quote will determine whether the requestor is internal to the NSSC or external within the Agency. Internal requests will be charged directly to the functional WBS benefitting from the development effort. External requests will be charged a fixed rate per hour for development (Development Rate). An estimate will be provided; however, customer bills will be based on actual hours for development. The resource approver will identify the appropriate funding source (external) or WBS (internal) for charging the effort when approving the service request. Any licenses required unique to the process will be charged directly to or provided by the customer.

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10.0 Process Flows

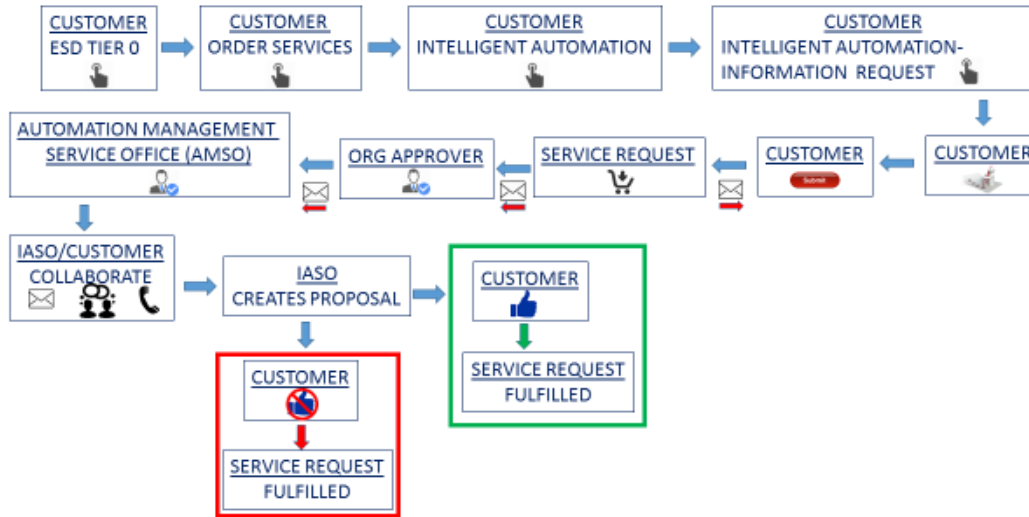


Table 10.1 IAS Assessment Service Request Process Flow

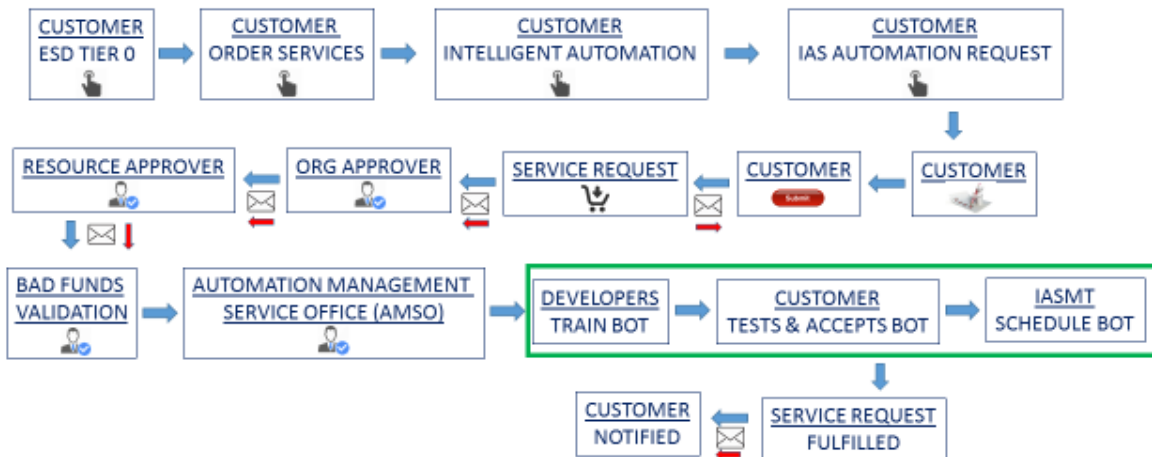


Table 10.2 IAS Service Request Fulfillment Process Flow

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11.0 IAS Ordering Process

Process – IAS Service Request for Assessment / Quote		
Roles and Responsibilities	Action	Tips/Notes
<p>Step 1</p> <p>IAS Customer or Contact On Behalf Of</p> <p>Submit Service Request</p>	<p>IAS customers or contacts On Behalf Of customers wishing to obtain information or assistance submits the IAS Service Request for Assessment/Quote.</p> <p>Output: ServiceNow Catalog IAS Service Request.</p>	<p>The request will go through the organizational approval process before it is received by the IAS Service Office.</p>
<p>Step 2</p> <p>IAS Service Fulfillment Team Member</p> <p>Start the service fulfillment process</p>	<ol style="list-style-type: none"> 1) When evaluating the service request, the IAS fulfillment team determines if additional information is required. If additional information is needed, the agent calls the customer. 2) The agent puts together a proposal including the following information: <ul style="list-style-type: none"> • Size of the process • Complexity Analysis • Approximate time it will take to develop the BOT • Cost Estimate • Types of software and licenses required • Whether the requirements can be done by the BOT (Suitability for RPA) • Information on what is expected from the customer (Availability of time and resources) 3) The proposal is sent back to the requester and the service request is marked complete. 4) If the requester wishes to proceed with the job, the requester submits a second service request for automation. This request must include the resource approver to identify the source of funding. 5) Once the request is approved, the request is submitted to the IAS Control Board (IACB) for acceptance and prioritization. <p>Output: The activities and the remarks are recorded in ServiceNow Enterprise Service Request System (ESRS) system in the service request.</p>	<p>If the requester changes mind or no longer require the service, the request can be cancelled in ServiceNow.</p>

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Process – IAS Service Request for Automation		
Roles and Responsibilities	Action	Tips/Notes
<p><u>Step 1</u></p> <p>IAS Customer or Contact On Behalf Of</p> <p>Submit Service Request</p>	<p>IAS customers or contacts On Behalf Of customers who want to automate their processes submit the IAS Service Request for Automation. This time the service request has to be approved by their resource approver and funding is made available.</p> <p>Output: ServiceNow Catalog IAS Service Request.</p>	<p>The request will go through the organizational approval process before it is received by IAS Service Office.</p>
<p><u>Step 2</u></p> <p>IAS Service Fulfillment Team Member</p> <p>Start the service fulfillment process</p>	<p>The IAS fulfillment team gather the previously provided proposal and information packet and determine if additional information is required. If additional information is needed, then the agent calls the customer.</p> <p>The agent completes the packet and submits to IAS Control Board (IACB) for acceptance and prioritization.</p> <p>The IAS Fulfillment team assigns the work to the developers and oversees the collaboration effort between the developers, customers, and testing.</p> <p>Output: The activities and the remarks are recorded in ServiceNow ESRS system in the service request.</p>	<p>If the requester changes mind or no longer require the service, the request can be cancelled in ServiceNow.</p>
<p><u>Step 3a</u></p> <p>IAS Service Fulfillment Team Member</p>	<p>Prior to the deployment, the IAS will complete the Service Level Agreement (SLA) specific to the work instruction detailing the scheduling, run-time and the process owner maintenance requirements.</p> <p>Output: Service Level Agreement between Automation Management Service Office and Process Owner.</p>	
<p><u>Step 3b</u></p> <p>Process Owner</p>	<p>The Process owner accepts the testing results and signs the SLA.</p> <p>Output: The IAS service is scheduled and deployed into the production environment.</p>	

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12.0 IAS Incident Management Process

Process – Incident Management		
Roles and Responsibilities	Action	Tips/Notes
Step 1 ESD Customer or Contact OBO Submit Inquiry	The customer contacts the ESD to request or report an IAS issue. Output: Tier 0, Phone call, E-mail, Fax (supplemental information)	
Step 2 ESD Agent Creates a Call and transfer to an Incident Management Ticket	ESD identifies the correct customer, contact (if necessary), and callback number ServiceNow. Output: Call / Incident is recorded in the Call and Incident Management module	ServiceNow is used to select the correct customer and contact (if necessary). Reference the ESD Incident routing diagram in the guide
Step 3 ESD Agent Elevate Incident Ticket	The ESD takes the appropriate action based on information gathering provided by the customer in order to transfer to Incident and elevate to IAS L2 or IAS L3. The agent assigns the ticket to appropriate Tier 2 based on the knowledge articles used. Note: The ESD Agent will execute a warm handoff to the proper SP Contractor, when necessary. Output: Call is elevated to appropriate IAS L2 SP or IAS L3 CS as an Incident.	Responses to calls are completed and issues raised are addressed with a positive tone reflecting the NSSC's commitment to "unparalleled service".
Step 4 Customer Resolution Notification including Survey link	Based on the close code selected by the ESD and/or IAS L2 or IAS L3, the customer receives an automated e-mail advising their ticket has been resolved. The customer is given the opportunity to provide feedback on their experience leading up to resolution of their issue. The customer also has the ability to access the Survey using ServiceNow Output: Electronic E-mail and ServiceNow	The customer may also use the Feedback feature found on Tier 0 to provide feedback.

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12.1 Incident Severity Levels

Severity Level 1 - A complete loss of critical business IT functions/systems/services/applications/infrastructure where there is no work-around.

Severity Level 2 - A partial degradation or loss of critical business IT functions/ systems/ services/applications/infrastructure where there is no work-around and where a number of people/organizations are affected.

Severity Level 3 - A loss or degradation of non-critical business IT functions/systems/ services/applications/infrastructure where a small number of users are impacted and where there is a work-around.

Severity Level 4 - A loss or degradation of non-critical business IT functions/systems/ services/applications/infrastructure to an individual where there is a workaround.

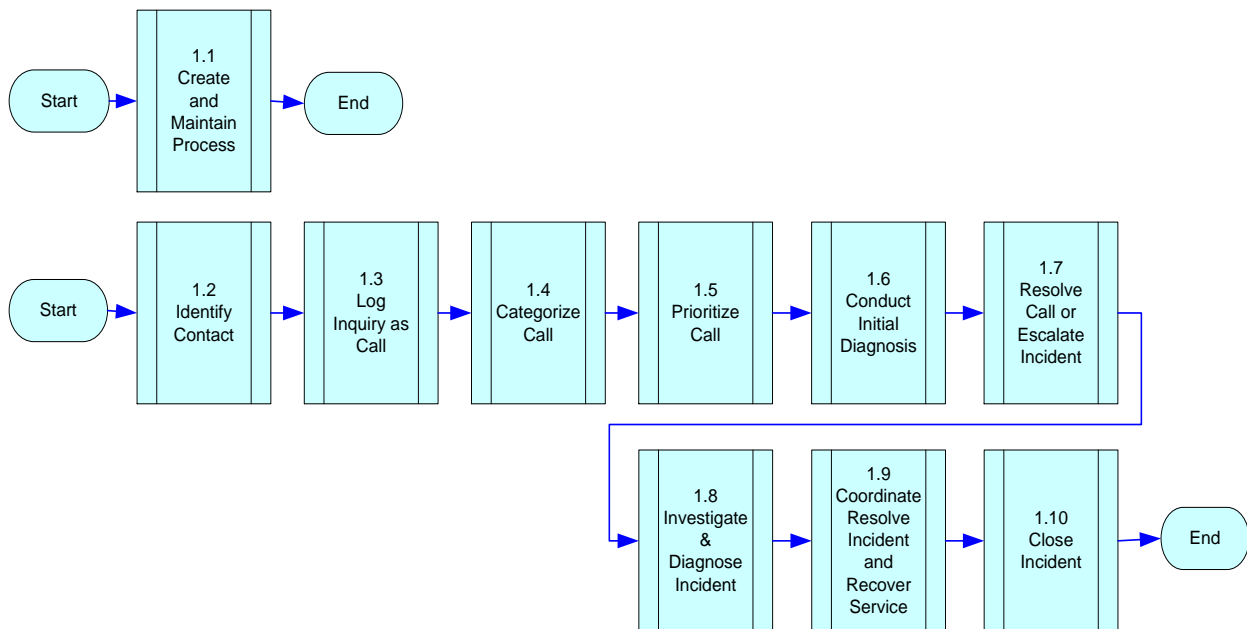


Table: 12.0 Incident Management Process Flow

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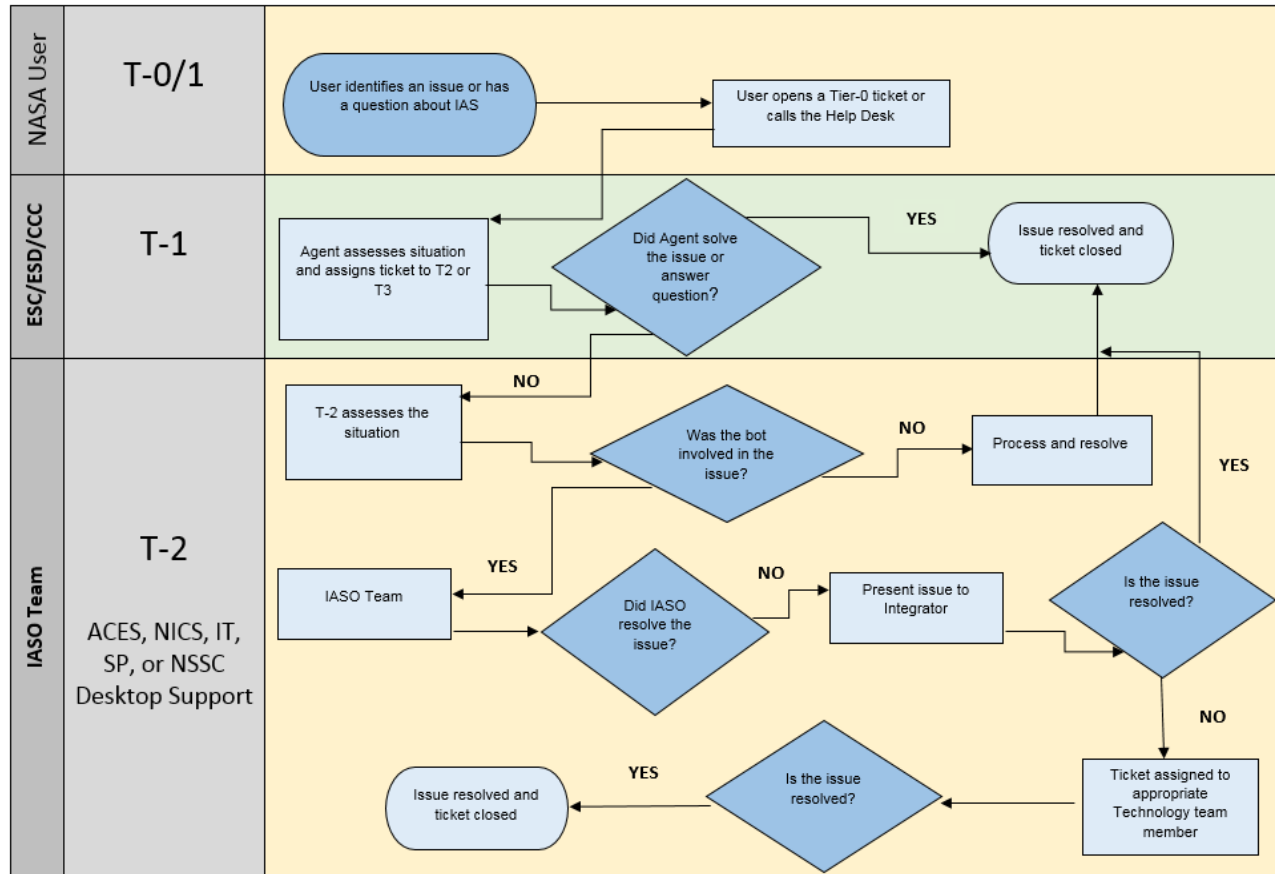


Table: 12.1 IAS Incident Escalation Process

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13.0 IAS Change Management Process

Process – Change Management		
Roles and Responsibilities	Action	Tips/Notes
<u>Step 1</u> IAS Customer Submit Service Request	The IAS process owners wishing to modify a current IAS process submits the IAS Service Request for Automation. The Requester selects the “Modify” BOT option in the form and fills in all the pertinent information required. Output: ServiceNow Catalog IAS Service Request.	The request will go through the approval process before it is received by AMSO.

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<p>Step 2</p> <p>IAS Service Fulfillment Team Member</p> <p>Start the service fulfillment process</p>	<p>When evaluating the service request, the IAS agent determines if additional information is required. If additional information is needed, then the agent calls the customer.</p> <p>The agent puts together a proposal including the following information:</p> <ol style="list-style-type: none"> 1. Size of the modification request 2. Complexity Analysis 3. Approximate time it will take to modify the BOT 4. Cost Estimate 5. Types of software and licenses required 6. Whether the requirements can be done by the BOT (Suitability for IAS) 7. Information on what is expected from the customer (Availability of time and resources) <p>The agent completes the packet and submits to the IAS Control Board (IACB) for acceptance and prioritization.</p> <p>Once approved by the IACB, the IAS Fulfillment team assigns the work to the developers and oversees the collaboration effort between the developers, customers and testing.</p> <p>When the customer accepts the BOT and it is put in production, the service request is considered fulfilled.</p> <p>Output: The activities and the remarks are recorded in ServiceNow ESRS system in the service request.</p>	
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14.0 IAS Maintenance Process

Process – IAS Maintenance		
Roles and Responsibilities	Action	Tips/Notes
<p><u>Step 1</u></p> <p>IAS Team</p>	<p>IAS Management Team is responsible for the following tasks:</p> <ol style="list-style-type: none"> 1. Manage access to Development and Production Systems 2. Control software licenses 3. Monitor, Schedule/ Orchestrate BOTs which are in production. Prioritize work using SLA's and manage surges based on demand 4. Monitor CCB changes and inform BOT trainers/developers 5. Monitor planned outages and communicate to stakeholders and process owners 6. Monitor the performance of all NSSC BOTs and publish monthly utilization and capacity reports 7. Assist in troubleshooting L2 IAS Incidents which are assigned by the ESD Help Desk and reassign to developers as needed 8. Maintain Knowledge Articles for ESD Agents and End Users 9. Conduct IAS Service Board activities 10. Collaborate with the IT Team regarding infrastructure issues, expansion and enhancements <p>Output: BOTs are maintained.</p>	<p>Additional details are noted in Incident Management, IAS Board and IAS Reporting Processes</p>

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15.0 IAS Backup and Recovery Process

Process – IA Work Instruction and System Backups and Recovery		
Roles and Responsibilities	Action	Tips/Notes
<p><u>Step 1</u></p> <p>IAS Team</p>	<p>IAS team is responsible for ensuring that all the Work Instruction backups are done properly.</p> <p>Team lead does the following: Instruct developers to provide a backup copy of the work instructions Create a backup location and save the backups Track work instruction changes and capture the newest versions for backup (Configuration Management)</p> <p>Output: Backups are properly archived for recovery purposes</p>	
<p><u>Step 2</u></p> <p>IAS Team</p>	<p>IAS team is responsible for ensuring that all the System backups are done properly.</p> <p>Team lead does the following: Ensures that the NSSC IT team does the backups of the IAS server and the server virtual desktops regularly Assist the IT Team in the event of system failures and the recovery is needed</p> <p>Output: Regular system backups are performed and archived for recovery purposes</p>	

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16.0 IAS Termination/Retirement Process

Process – Work Instruction Termination/ Retirement Management		
Roles and Responsibilities	Action	Tips/Notes
<u>Step 1</u> IAS Customer Submit Inquiry	IAS customers or contacts submit the Work Instruction Termination/ Retirement request in Service Now. The request should contain information such as which process, when to terminate and a brief justification. Output: Request Letter	IAS Process Owner should provide such requests through the ServiceNow portal.
<u>Step 2</u> IAS Control Board Agenda Discussion and Decision	IAS Control Board approve the request after determining that no adverse impact occurs. Output: Service Board approval	
<u>Step 3</u> IAS Team Decommission BOT	IAS Team coordinates with the developers to decommission the Work Instruction. Team Lead updates the license table. Output: Decommission request fulfilled	

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17.0 IAS Knowledge Management Process

Process - IAS Knowledge Management		
Roles and Responsibilities	Action	Tips/Notes
<u>Step 1</u> IAS Team Knowledge Articles	IAS Team writes all the knowledge articles which are necessary for the customers and the ESD Agents. The team submits the knowledge articles to IAS Service Office for approval. Output: Knowledge Articles created	Knowledge Creator role in ServiceNow is obtained.
<u>Step 2</u> AMSO Lead Approve Knowledge Articles	AMSO approves the Knowledge Articles. Output: Knowledge Articles approved	
<u>Step 3</u> IAS Team Submit Knowledge Articles	Once, it is approved, the knowledge articles are submitted to the Knowledge Team at the Help Desk for publishing through the ServiceNow Create Knowledge Tool. Output: Knowledge Articles submitted	The knowledge articles must be reviewed every six months.
<u>Step 4</u> ESD Knowledge Team Publish Knowledge Articles	ESD Knowledge Team evaluate the articles and publish them in ServiceNow Knowledge Base. Output: Knowledge Articles published	

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18.0 IAS Control Board Process

Process – Intelligent Automation Control Board		
Roles and Responsibilities	Action	Tips/Notes
<p>Step 1</p> <p>IAS Workforce Manager</p> <p>Meeting Preparation and Execution</p>	<p>IAS Workforce Manager does the following:</p> <ol style="list-style-type: none"> 1. Prepare the Change Review Packet containing the meeting agenda, description summary, and the list of the request numbers for the service requests 2. Email the packet to the IAS Service Board members the day before the scheduled meetings 3. Schedule meetings 4. Maintain a formal record of meeting minutes which will include: <ol style="list-style-type: none"> a. Meeting date and time b. Attending members and proxies c. Agenda items including service request for review d. Each item's: Primary initiator and key stakeholders, Brief description of the request or report, Previous IACB decisions (if applicable), Synopsis of the IACB's discussion, Final decision or outcome Reason for denial and/or reason for tabling request <p>Output: Agenda and Meeting Minutes</p>	<p>Acceptable documents for the Agenda are Service Level Agreements, Process Description Document, Implementation and Rollback Plans, Work Instruction Index Verification, Root Cause Analysis</p>

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<p>Step 2</p> <p>Intelligent Automation Control Board (IACB)</p>	<p>IACB meet one to two times a week.</p> <p>Formally authorize the proposed changes to the Enterprise Services Intelligent Automation Services baseline production infrastructure.</p> <p>Evaluate the functional and operational impacts of implementing a new/updated BOT work instruction, and approve or disapprove for use in the production environment.</p> <p>Post Configuration Control Board (CCB), the IACB approve any changes to its baseline infrastructure. If any CCB changes may have a negative impact on IAS the Enterprise Services Division Chief or a designated representative should coordinate with the NASA Chief Information Officer.</p> <p>Validate that:</p> <ol style="list-style-type: none"> 1. The process owner confirms all test results are acceptable 2. The CIO confirms applicable agile reviews are complete 3. Security agrees the BOT is ready for the production environment 4. IAS Management Service Lead has prepared and submitted Knowledge Articles for publishing 5. IAS SB Chair confirms the Service Level Agreement is signed with the process owner 6. The BOT trainer has submitted the Process Description Document <p>Review</p> <ol style="list-style-type: none"> 1. Root Cause Analyses (RCA) and accept or reject the findings. 2. The IT Business Continuity Plan (BCP) every 6 months to assess how BOTs fit into the overall operations process of the IRD and if necessary provide an annex to the IT Business Continuity Plans (BCP) when BOT information is not part of the line of business BCP <p>Output: Strategic Decisions are made</p>	<p>For more information refer to NSSC Intelligent Automation Services Service Board documentation. NSPWI-2800-00XX</p>
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The IACB includes Intelligent Automation Services, IRD and functional representatives as noted below in Table 18.1.

Decision Authority	Automation Management Service Office Manager (CS)
Recording Secretary	IASO workforce manager (SP)
Voting Member	LOB Process Owner (CS)
Voting Member	IASO Manager (SP)
Advisor	Center Information Security Officer (CISO) (CS/SP)
Advisor	Technical Specification & Adherence (TSA) rep (SP)
Advisor	NSSC CIO (CS)
Advisor	Enterprise Architect

Table 18.1 - IACB Members

IACB Voting Members are responsible for performing the IACB duties described herein. The EA and CISO have special responsibilities and duties as follows:

Center Information Security Officer (CISO)

The CISO is responsible for advising with respect to the IT Security posture of any work instruction's impact to information system changes.

Enterprise Architect (EA)

The EA is responsible for confirming information system changes align with business strategic objectives and target architectures as defined by the NSSC and NASA. **Error! Reference source not found..**

19.0 IAS Survey Administration, Analysis, and Reporting Process

The ESD performs 100% customer satisfaction surveys regarding associated incident and service requests as processed via the ESD. The ServiceNow system is used to deploy, collect, and analyze these "point" activities.

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The AMSO is responsible for providing survey tool, analysis, and reporting for ESD initiated Customer Satisfaction surveys, developing, deploying, analyzing, and reporting on IA broad-based surveys, and coordinating corrective action plans.

19.1 IAS Survey Management

Process – IAS Survey Management		
Roles and Responsibilities	Action	Tips/Notes
<p><u>Step 1</u></p> <p>IAS Customer or Contact On Behalf Of</p> <p>Answer Incident – Resolve or Elevate Ticket</p>	<p>Once the Service Request is fulfilled or Incident Ticket is resolved, the IAS Service Requester or the caller receives an email with a link to an automated Survey from ServiceNow.</p> <p>If customer responds “YES” to the initial question, “Are you satisfied with the service you received?” or “Was your incident resolved?” the survey form will open with additional questions. The answers gets captured in ServiceNow and can be accessed on demand.</p> <p>If customer responds “NO” to the same question, an incident ticket is created automatically for the service request or the incident gets reopened. ESD Agent assign the incidents to IAS L2 group.</p> <p>IAS customers can also use the “Feedback” option in Tier 0 to submit feedback. The system will automatically create an incident and the ESD Agent will assign the incident to IAS L3 for review.</p> <p>Output: Survey or Incident created.</p>	<p>The survey responses should occur within 6 days after the email notification. If no action is taken by the customer, the Service Requests and the Incident Tickets close automatically in the system.</p>
<p><u>Step 2</u></p> <p>Automation Management Service Office (AMSO)</p> <p>Respond to Customer and Close Ticket</p>	<p>AMSO reach out to the customer to discuss the matter and look for a resolution. Proper actions are taken to correct the problems.</p> <p>Monitor the feedback incidents, the survey responses and the customer satisfaction data.</p> <p>Output: Incident resolved.</p>	<p>Survey Reports can be run in ServiceNow anytime, and on demand.</p>

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19.2 IAS Survey Administration, Analysis, and Reporting

IAS – Survey Administration, Analysis, and Reporting		
Roles and Responsibilities	Action	Tips/Notes
<u>Step 1</u> IAS Team Analyze survey results	Prepares monthly IA survey analysis and reporting. Output: Report is created and analyzed.	Customer Satisfaction Survey reporting occurs monthly. Broad-based surveys occur bi-annually after stabilization.
<u>Step 2</u> COR/CO Reports analysis	Reviews survey analysis and takes corrective action as indicated by survey results. Output: Corrective action, detailed analysis, and reporting as applicable.	

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20.0 Records Management

Process - IAS Records Management		
Roles and Responsibilities	Action	Tips/Notes
<p><u>Step 1</u></p> <p>IAS Team</p> <p>Capture pertinent information</p>	<p>IAS Team is responsible for capturing and maintaining all the Documentation associated with the work instructions including;</p> <ol style="list-style-type: none"> 1. Attach all the necessary documentation to the Service Requests 2. Collaborate with the developers and the process owners in obtaining the process diagrams and key stroke videos 3. Index work instructions for key word searches 4. Maintain lessons learned documentation 5. Maintain the list of special requirements specific to the NASA networks 6. Maintain the list of POC's and process owners 7. Record and maintain Service Board Meeting minutes and packets 8. Maintain specialized reports 9. Maintain a list of system changes which effect the servers and virtual desktops 10. Maintain SLAs for each work instruction 11. Maintain BOT version list <p>Output: All the documentation is captured</p>	
<p><u>Step 2</u></p> <p>IAS Team</p> <p>Archive Documentation</p>	<p>The team archives all the documentation in a shared drive or tech docs as applicable.</p> <p>Output: Documentation is archived</p>	

ServiceNow will be the system of record for service requests/proposals and attachments. These records will be maintained in accordance with NRRS 1441.1, NASA Records Retention Schedules and listed on the Support Operations Directorate Master Records Index.

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21.0 IAS System Components

IT System Title	IT System Description	Access Requirements	IT System Interfaces
SAP	NASA's Core Financial System	User Role for digital workforce and developers	
NAMS	Controls Access to IA Business Systems	IAS Staff Digital workforce	Various
SharePoint 2010	System for storing and tracking performance data	SharePoint License	Future: ServiceNow, ESD, other NASA reporting systems
TechDoc	Stores electronic documents used in NSSC's workflow and processing systems	User Role	AWMS
Intelligent Automation Server	BOT Scheduler/Orchestrator software is hosted	BOT Administrator License, NDC and PIV Credentials	NSSC Network, NASA Network, Virtual Desktops and Laptops
Virtual Desktops and Laptops	BOT Software and Work Instructions are hosted and performed	BOT Licenses, NDC and PIV Credentials	IA Server, NSSC Network, NASA Network, Internal and External Web Sites.
ServiceNow NSSC Service Request System	ServiceNow NSSC Service Catalog	NDC and PIV Credentials, and Service Request Fulfillment Role	Web server for customer submits via Tier 0/ESD Portal.
ServiceNow NSSC Incident Management System	Documentation and tracking of customer inquiries to the ESD	Read/write access for Tier 1, IAS L2, and IAS L3	Web server for customer submits via Tier 0/ESD Portal.
ServiceNow Reporting Module	Module is used to report on key customer service metrics	Read/write access for Tier 1, IAS L2, and IAS L3	Tier 0, ServiceNow Console
ServiceNow Knowledge Management	Create, maintain and share up-to-date knowledge articles for Tier 0/ESD Portal and Tier 1 ESD IT Support Agents	Knowledge Submitter Role in ServiceNow	Tier 0, ServiceNow Console

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22.0 IAS Metrics and Reporting

The Metrics and Reporting are as follows:

IAS Metrics and Reporting
<p>The IAS Team is responsible for obtaining the following reports every six months and/or annually:</p> <ol style="list-style-type: none"> 1. Estimate Labor Cost Savings to NSSC and NASA (Based on Process owner defined average rate, processing time, and frequency included in the service request) 2. Expense report for associated costs running the IAS program (Licensing, Developer, In-house Labor, Hardware, Software etc.,) 3. Customer Satisfaction Survey Reporting
<p>The IAS Team is responsible for capturing and creating the following reports daily, weekly, and monthly:</p> <ol style="list-style-type: none"> 1. BOT Performance and Utilization (Weekly, Monthly, Annually) 2. ServiceNow IAS/ BOT Incident Tickets (Weekly, Monthly, Annually) 3. ServiceNow IAS Service Requests (Weekly, Monthly, Annually) 4. Vendor Incident Tickets (Weekly, Monthly, Annually) 5. BOT Work Instruction Development Progress from start to finish (Weekly, Monthly) 6. BOT Scheduler Snapshot (Daily, Weekly) 7. BOT Outages and Failures (Daily, Weekly, Monthly) 8. License Utilization (Monthly)

23.0 Cancellation/Supersession of Previous Documents

This document is the initial version of NSSDG-2800-0004 Basic Version 1.0. There are no previous versions.

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APPENDIX A – ACRONYM LIST

Acronym	Definition
AI	Artificial Intelligence
AMSO	Automation Management Service Office
BOT	Robot
CIO	Chief Information Officer
CISO	Chief Information Security Officer
CMP	Continuous Monitoring Program
ConOps	Concept of Operations
COR	Contracting Officer Technical Representative
CS	Civil Servant
ESD	Enterprise Service Desk
ESRS	Enterprise Service Request System
FY	Fiscal Year
IAS	Intelligent Automation Service
IASB	Intelligent Automation Service Board
IASO	Intelligent Automation Service Office
IT	Information Technology
KA	Knowledge Article
KPI	Key Performance Indicators
NAMS	NASA Access Management System
NASA	National Aeronautics and Space Administration
NCSO	NASA Communications Service Office
NFS	NASA FAR Supplement
NSSC	NASA Shared Services Center
OCFO	Office of Chief Financial Officer

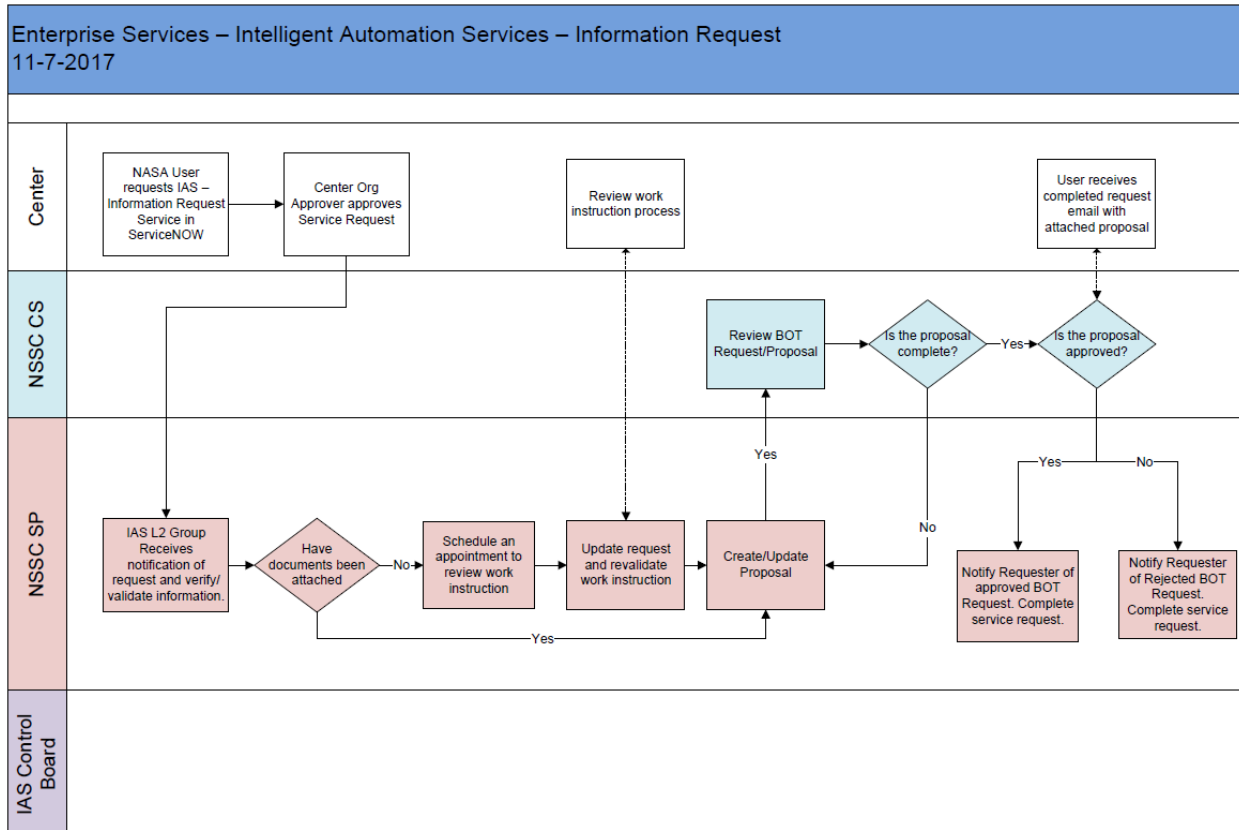
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OCIO	Office of Chief Information Officer
OHCM	Office of Human Capital Management
OP	Office of Procurement
SLA	Service Level Agreements
SR	Service Request
SDG	Service Delivery Guide
SLI	Service Level Indicator
SP	Service Provider
WCF	Working Capital Fund

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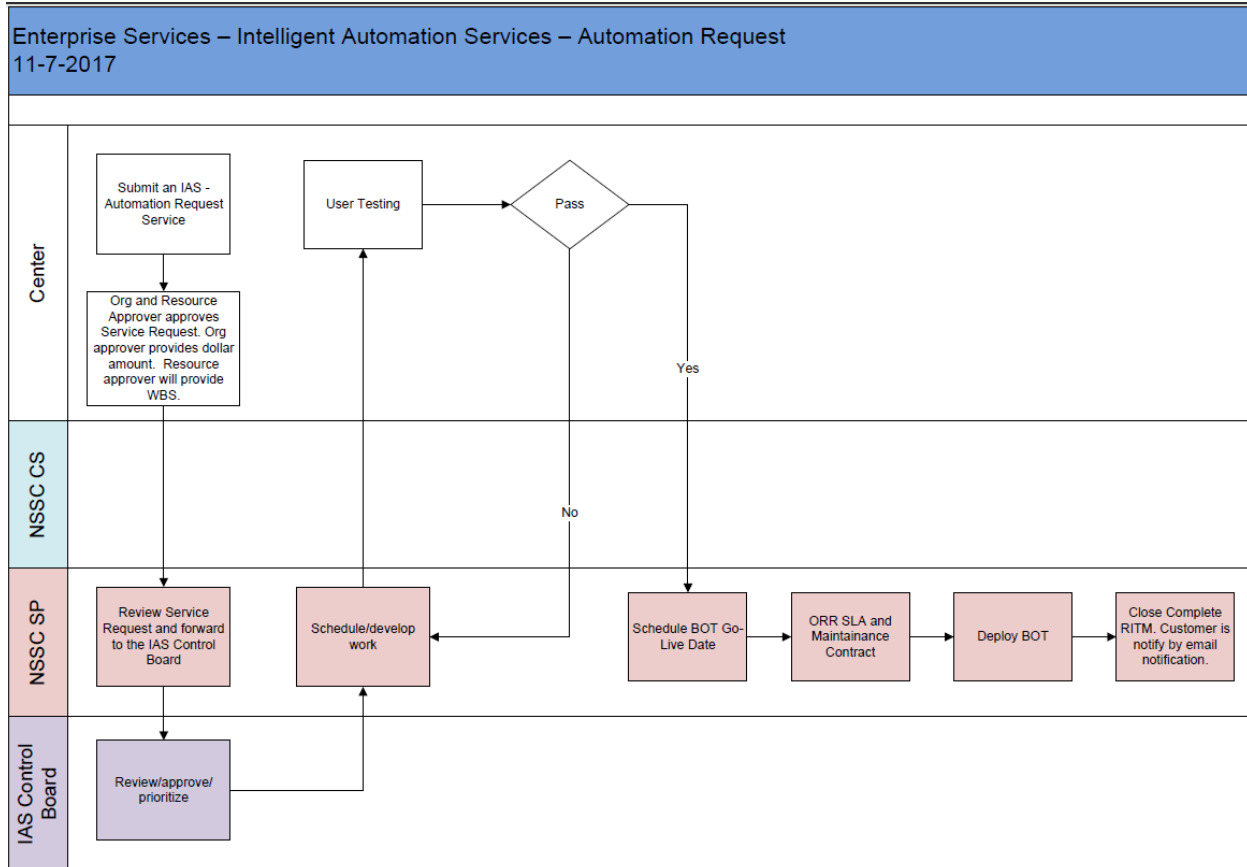
APPENDIX B – IAS WORK PROCESS FLOW DIAGRAMS

IAS Information Request



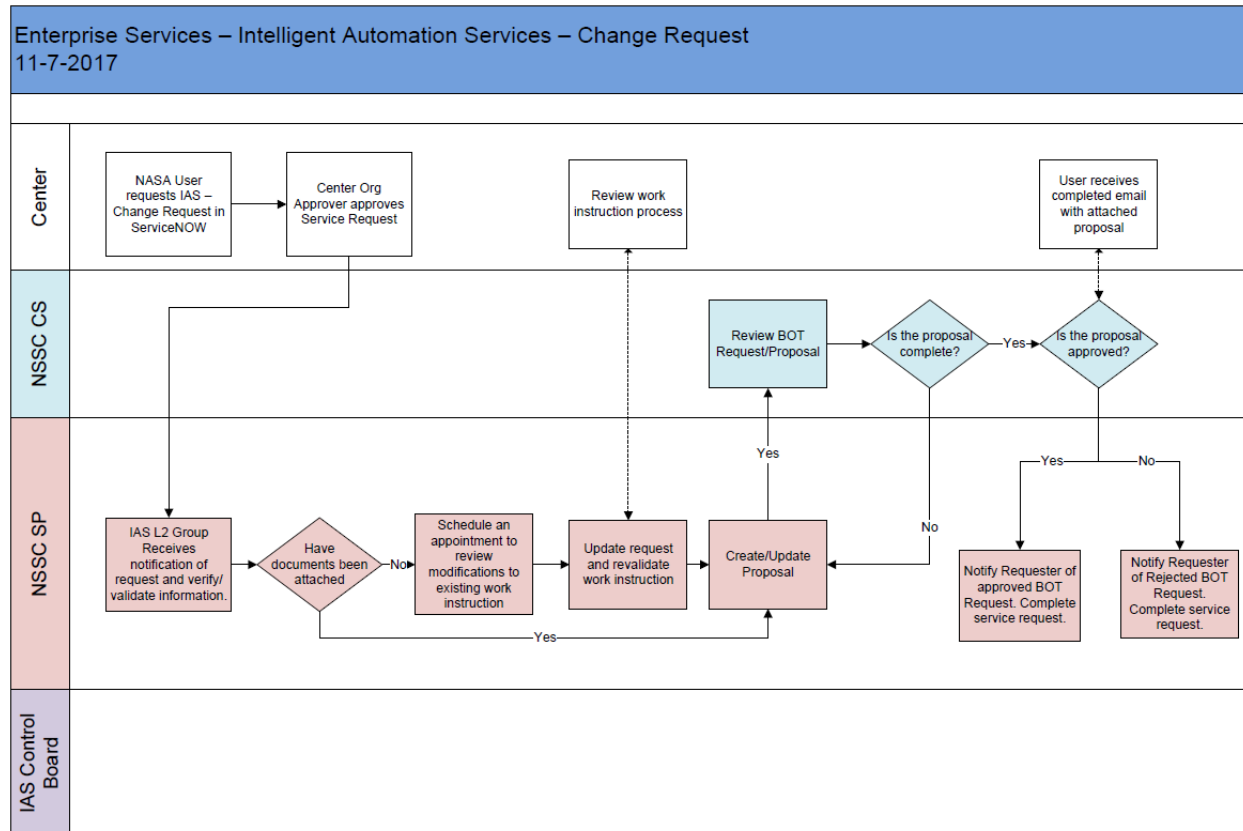
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IAS Automation Request



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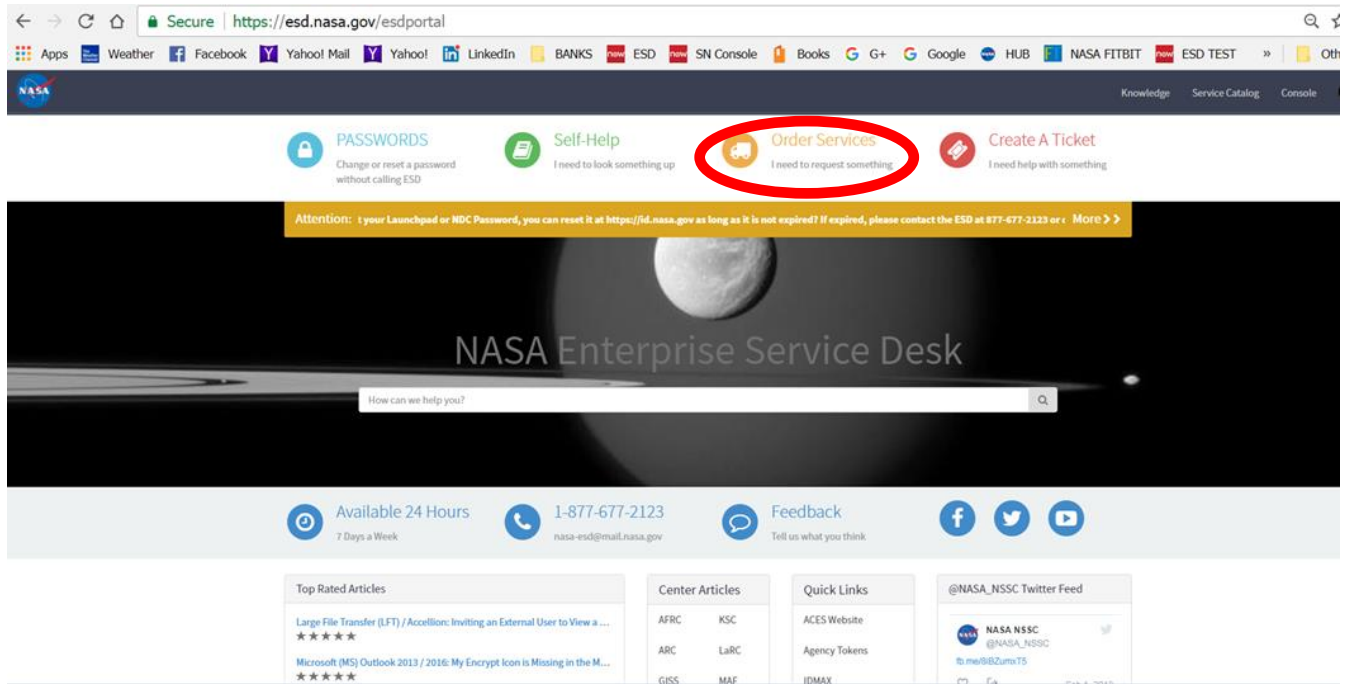
IAS Change Request



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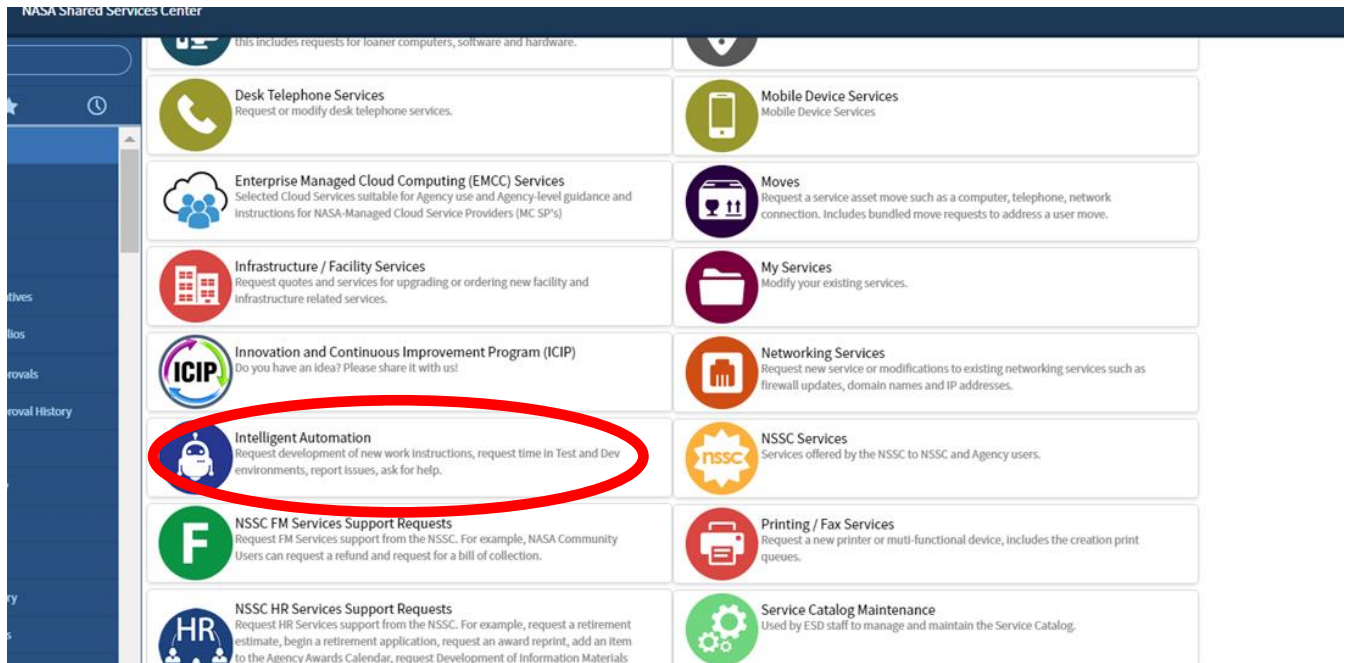
APPENDIX C – SERVICE CATALOG SCREEN SHOTS

Screenshot 1: Enterprise Service Desk (ESD) Homepage

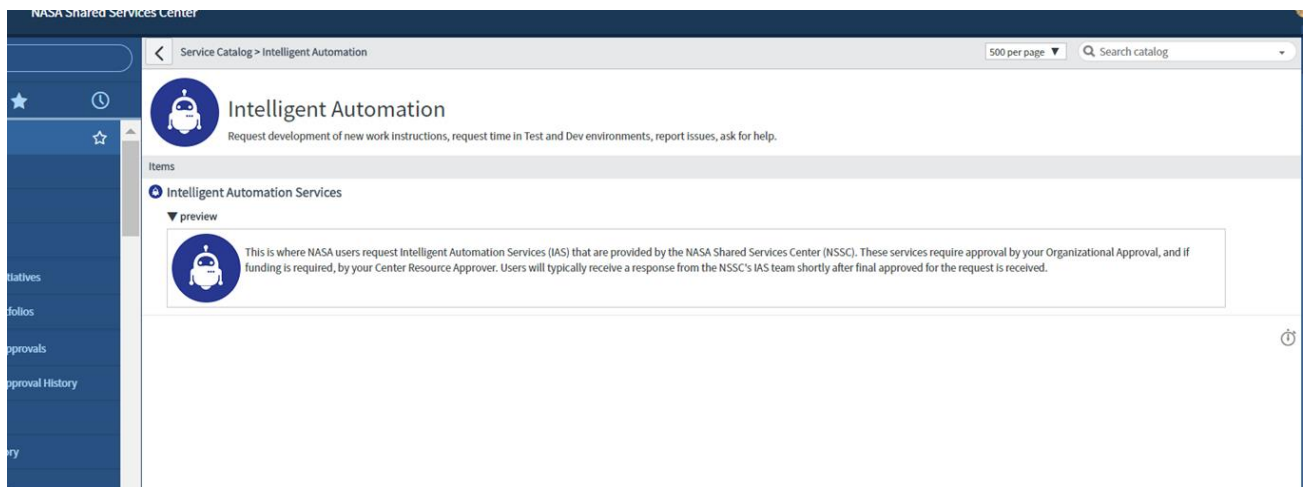


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Screenshot 2: Service Catalog



Screenshot 3: Submitting a request



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Screenshot 4: Request Entry

NASA Shared Services Center

Order guide - Intelligent Automation Services Choose Options

Describe Needs Choose Options Checkout

This is where NASA users request Intelligent Automation Services (IAS) that are provided by the NASA Shared Services Center (NSSC). These services require approval by your Organizational Approval, and if funding is required, by your Center Resource Approver. Users will typically receive a response from the NSSC's IAS team shortly after final approved for the request is received.

Order Information

* Requested On Behalf Of: Pinar Moore

* Organizational Approver: NSSC XD050

* Ship To: NASA Shared Services Center

Ship To Building: 1111

Ship To Room: 106C-2

* Select the services requested

- Intelligent Automation - Information Request
- Intelligent Automation - Automation
- Intelligent Automation - Change Request