

POPS 2.0 Use Cases

5 April 2013

Version 1.0



Table of Contents

- A. Document History
- B. Document Scope
- C. POPS 2.0 Use Cases
 - 1. Establish an Allocations Process
 - 2. Establish allocation review panel
 - 3. Add resources to allocations process
 - 4. Establish an allocation Submission Opportunity
 - 5. Submission of Allocation Request
 - 6. Manage review of Submissions to an Allocations Opportunity
 - 7. Submission of a Review
 - 8. Award or reject allocation request
 - 9. Allocation data reporting and access
 - 10. Customize allocation request data fields

A. Document History

Overall Document Authors:

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	Version	Date	Changes	Author
Entire Document	1.0	Apr 5, 2013	First public release	POPS 2.0 team

B. Document Scope

This document is both a user-facing document (publically accessible) and an internal working document intended to define user needs and use cases that fall under the general umbrella of POPS 2.0 within the overall activities of XSEDE. The definition of use cases is based on a template from Malan and Bredemeyer.¹ In general it is in keeping with the approaches and philosophy outlined in “Software architecture in practice.”²

This document is one component of a process that generates at least the following documents, some of which are user-facing, some are as of now intended to be internal working documents:

- ***This document***, a description of high-level use cases supporting the allocations process for cyberinfrastructure resources.
- A level 3 architecture decomposition, which describes the key components and service layer interfaces for the POPS 2.0 system.
- A detailed set of requirements for the POPS 2.0 services and interfaces compiled via interactions with a number of stakeholder groups, including reviewers and end users. This document is in process.

The use cases are presented here using the following format, derived from the Malan and Bredemeyer white paper¹ as follows:

Use Case	Use case identifier and reference number and modification history
<i>Description</i>	Goal to be achieved by use case and sources for requirement
<i>References</i>	References and citations relevant to use case
<i>Actors</i>	List of actors involved in use case
<i>Prerequisites, Dependencies & Assumptions</i>	Conditions that must be true for use case to be possible Conditions that must be true for use case to terminate successfully
<i>Steps</i>	Interactions between actors and system necessary to achieve goal
<i>Variations (optional)</i>	Any variations in the steps of a use case

¹ Malan, R., and D. Bredemeyer. 2001. Functional requirements and use cases. www.bredemeyer.com/pdf_files/functreq.pdf

² Bass, L., P Paul Clements, and Rick Kazman

<i>Quality Attributes</i>	
<i>Non-functional (optional)</i>	List of non-functional requirements that the use case must meet
<i>Issues</i>	List of issues that remain to be resolved

Current Term	Definition	Previous Terms
Funding Agency	External entity that provides funding for a Client Organization to operate an Allocations Process; for a Service Provider to operate Resources; or for Principal Investigators to pursue research activities.	Funding Agency
Client Organization	An entity that establishes a separate Allocations Process within POPS.	
Allocations Process	Within POPS 2.0, a separately established partition associated with a Client Organization and managed by the Client's Allocation Administrator(s) to accept and review Requests and award Allocations on Resources for a user community.	
Allocation Administrators	Persons from a Client Organization authorized to maintain/manage an Allocations Process.	Administrator
Opportunity	Policy-defined time period during which Requests for a particular Project Type can be submitted for Allocations on a set of Resources for review by a Panel or Panels.	Meeting
Project	Uniquely identified entity representing the collection of Requests, Actions, and resulting Allocations, usually associated with a single research activity, principal investigator, or line of research.	Project
Project Type	A policy-defined categorization of Projects within an Allocations Process, often associated with a specific Panel and/or Opportunity. (XSEDE examples: Startup, Research, Education)	
Project Status	The current state of a Project: Requested, Pending, Active, Expired, Closed, etc.	

[Co-] Principal	The User designated as the primary responsible	<i>NCAR term:</i>
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Investigator (PI)	party for the activities associated with a Project. <i>Also:</i> A person designated in this named role for a Supporting Grant from a Funding Agency.	<i>Project Lead</i>
Allocation Manager	A User authorized to be responsible for initiating Actions or Operations on an existing Project.	<i>NCAR term:</i> <i>Project Admin</i>
Submitter	The User who completes a Request on behalf of a Principal Investigator (may or may not be the PI).	
Project code	A unique and user-visible string that uniquely identifies a Project	Project Number
Resource	An entity within an Allocations Process for which Users can make Requests for Allocations	Machine
Resource Type	One of a set of categories for classifying Resources. HPC, HTC, Visualization, Storage, etc.	
Allocation	Authorization for a Project to consume a specified amount of Allocable Units on a Resource during a specified time period. Allocations on a given Resource cannot overlap in time.	
Request	A submission from a Principal Investigator to be evaluated for creating or modifying an Allocation or Allocations on a Resource or Resources	Proposal
Request Type	<i>New:</i> Request creates a new Project <i>Renewal:</i> Request for new allocations associated with an existing Project	Proposal Type
Action Type	<i>Supplement:</i> Request from an existing Project to increase an Allocation amount during an Allocation period. <i>Appeal:</i> See separate definition. <i>Transfer:</i> Request from an existing Project to move Service Units from one Allocation to another <i>Extension:</i> Request from an existing Project to move the end date of an Allocation into the future <i>Update:</i> Request to change non-Allocation information about a Project (PI, Supporting Grant, co-PIs, etc.) <i>Final Report:</i> A summary of outcomes for a Project not accompanied by a Request for further Allocations.	Proposal Type
Appeal	An Action by which a Principal Investigator is able to	Justification

	petition a Panel regarding a Request to increase the original Allocation awards.	
Request Status	The current step in the review process for a given Request. E.g., Incomplete, Submitted, Under Review, Awarded, Rejected.	
Request Document	The main Document (.pdf, .docx file) submitted as part of a Request or Action. Other Documents may also be submitted depending on policy requirements.	Proposal (document)
Operation	Create, Update/Edit, Delete, Close, etc., a Request	
Panel	A set of persons designated as Reviewers and tasked with evaluating Requests and recommending Allocations on Resources	Board
Reviewer	A member of a Panel, assigned to evaluate Requests	Reviewer
Conflict of Interest	A relationship between a Reviewer and a Request that indicates the Reviewer is not eligible to review or see information about or Reviews for a Request.	
Conflict of Interest Type	<i>Major:</i> The Reviewer is the PI, co-PI or direct collaborator on the Request. <i>Minor:</i> The Reviewer has other relationships with a Request that constitute a Conflict of Interest.	
Meeting	Physical meeting of a Panel's members for reviewing Requests	Meeting (but in a much broader sense)
Allocable Units	Numeric value of Resource use requested and allocated by an Allocation Process.	
Allocable Unit Type	Allocation currency for a Resource, such as Service Unit, Gigabyte, etc.	
Accounting Service	A Client Organization's system for managing projects, users, allocations and usage.	XDCDB "acct" schema for XSEDE
Identity Service	A Client Organization's authoritative source of people; provides unique person identifier.	Person Database/ people table
Reporting Service	External Service used by a Client Organization's Allocation Process for producing reports of Allocation activity.	E.g., XDMod for XSEDE

Discovery Service	XSEDE service from which POPS retrieves Resource information and to which POPS publishes Allocation Process information. Currently IIS/RDR.	
Permission (POPS Role)	POPS Admin, Allocation Administrator, Service Provider (SP) Administrator, Submitter/User, etc.	
Project Roles	PI, CoPI, Allocation Manager, Submitter. Persons in these Project Roles can see/submit Requests on behalf of the Projects for which they have one of these Roles.	
POPS database (POPS DB)	Data for the POPS system. Currently in Sybase at NCSA.	proposaldb

C. POPS 2.0 Use Cases

We present 10 use cases related to allocations.

UCP2 1.0 <i>Establish an Allocations Process</i>	
<i>Description</i>	An Allocation Administrator interacts with the POPS 2.0 service to request creation of an allocation process
<i>Actors</i>	<ul style="list-style-type: none"> Allocation Administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> Client Organization has been authorized by XSEDE to establish an Allocations Process in POPS. Allocation Administrator is authorized to establish the Allocations Process on behalf of a Client Organization.
<i>Steps</i>	<ul style="list-style-type: none"> Allocation Administrator submits request to create allocation process, specifying: <ul style="list-style-type: none"> minimum information needed to define Allocation Process (Client Organization, Process Name, Process Description, URL for policy documents, etc.); additional users to serve as Allocation Admin for the Allocation Process; and relevant support services that will be used by this Allocation Process (e.g., Accounting Service, Identity Service, Reporting Service, Submission domain) Allocation Administrator customizes Allocations Process-wide rules according to Client Organization's policies. POPS establishes Allocations Process and publishes the Process's description to

	<p>XSEDE’s Discovery Service (currently IIS/RDR).</p> <ul style="list-style-type: none"> POPS establishes Admin GUI with which Allocation Administrator will manage the Allocation Process.
<i>Variations</i>	<ul style="list-style-type: none"> Allocation Administrator can update Allocations Process information, including rules defined by Client policy. In a general SaaS model and XSEDE policy permitting, POPS 2.0 could allow any Client Organization to assign an Allocation Admin to establish an Allocation Process. POPS may provide Allocations Admin with the ability to customize or “skin” the GUI for the Allocation Process.
<i>Quality attributes</i>	<ul style="list-style-type: none"> Assuming Client Organization has gotten necessary approvals to establish an allocations process, the configuration in POPS should be completed within two days.
<i>Non-Functional</i>	<ul style="list-style-type: none"> This use case is infrequent and, modulo infrequent updates, executed only once per Client Organization and/or Allocation Process. An Allocation Process may be established via interpersonal interaction (email, phone) between Client’s Allocations Admin and POPS Administrators. The metadata required to establish an Allocation Process includes: <ul style="list-style-type: none"> Client Organization Process Name (may be different than Client Organization) Description URL for policy documents Supporting service locations/interface information Resource eligibility restrictions (if any) — e.g., Resources must be from Client Organization Allocations Admin (at least one)
<i>Issues</i>	<ul style="list-style-type: none"> Determine how interfaces to supporting services (such as accounting) should be declared.

UCP2 2.0	<i>Establish and manage allocation review Panel</i>
<i>Description</i>	An Allocations Process typically requires at least one review Panel for review of Submissions. The Allocation Administrator will set up one or more Panels and designate Reviewers for the Allocation Process through the POPS-admin GUI.
<i>Actors</i>	<ul style="list-style-type: none"> ● Allocation Administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Allocation Administrator has established an Allocations Process
<i>Steps</i>	<ul style="list-style-type: none"> ● Allocation Administrator authenticates to POPS Admin GUI and requests “Create review panel,” supplying information needed to define Panel (Panel name, Panel description, etc.). ● Allocation Administrator adds Reviewers to Panel, based on their Client Organization identities. <ul style="list-style-type: none"> ○ POPS will maintain a minimal set of non-authoritative information about each Reviewer, including Name and Institution, to enable POPS to provide reporting, meeting management, and display information if Client Organization’s Identity Service is unavailable. ● Allocation Admin uses POPS to maintain necessary allocations-related information; in particular, each Reviewer’s field of expertise and term start and end dates.
<i>Variations</i>	<ul style="list-style-type: none"> ● Allocation Administrator needs to modify Panel information and/or Panel membership.
<i>Quality attributes</i>	<ul style="list-style-type: none"> ● Establishing a Panel should take less than 1 minute, plus the time required to complete the required data entry. ● Adding a Reviewer to a Panel should take less than 2 minutes, allowing for time to search/verify Reviewer identity and provide field of expertise and term dates. ● Editing Reviewer information should take less than 1 minute. <p>Creation step should happen during the course of an interactive web session, with appropriate interactive response.</p>
<i>Non-Functional</i>	<ul style="list-style-type: none"> ● The metadata for establishing a Panel include: <ul style="list-style-type: none"> ○ Panel Name ○ Panel start date ○ Panel end date (may be indefinite) ○ Panel type (scientific, technical, etc.) ● The metadata for establishing a Reviewer include: <ul style="list-style-type: none"> ○ Unique identifier ○ Name

	<ul style="list-style-type: none">○ Institution○ Field of expertise○ Term start date○ Term end date (may be indefinite)
<i>Issues</i>	

UCP2 3.0 <i>Add resources to allocations process</i>	
<i>Description</i>	POPS will find Resources that have declared themselves available for an Allocations Process and support a confirmation process between the Allocation Administrator and the SP Administrator. The SP Administrator will also be able to customize allocations-specific properties of a Resource.
<i>Actors</i>	<ul style="list-style-type: none"> • Allocation Administrator • Service Provider (SP) Administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> • SPs have a mechanism to publish information to the XSEDE Discovery Service. • The Allocation Administrator has created a named Allocations Process.
<i>Steps</i>	<ul style="list-style-type: none"> • SP Administrator publishes Resource description to the Discovery Service, including required allocations metadata. The metadata must include the name(s) of one or more published Allocations Process(es). • POPS service checks Discovery Service at least daily for new allocable Resources or changes to Resources. • When POPS finds a new resource or resource change: <ul style="list-style-type: none"> • SP Administrator receives acknowledgement that POPS has identified a new Resource or changes to an existing Resource. • Allocation Administrator notified via email and POPS Admin GUI of pending changes to existing Resources; after verification by Allocation Administrator, POPS accepts and applies changes. • Allocation Administrator notified via email and POPS Admin GUI of new Resources; after verification by Allocation Administrator, POPS adds Resource to Allocations Process and Opportunities. • SP Administrator notified that Resource has been verified (or rejected) for the specified Allocation Process. Notification includes link to confirm Resource details and, if applicable, customize resource options (TBD) specific to the relevant Allocation Process. • SP Administrator visits POPS-admin site to configure allocation-specific Resource options prior to opening of user submission opportunity.
<i>Variations</i>	<ul style="list-style-type: none"> • POPS receives notification of new resources or resource changes from the Discovery Service.
<i>Quality attributes</i>	<ul style="list-style-type: none"> • A Resource or Resource changes will be ingested into POPS for verification within 24 hours of the Resource's information being published to the Discovery Service. • Once verified, the Resource will appear within current designated Opportunities as available for Requests within 1 hour.
<i>Non-Functional</i>	<ul style="list-style-type: none"> • The following metadata are required/optional for describing a Resource for an Allocations Process: <ul style="list-style-type: none"> ○ SP Organization

	<ul style="list-style-type: none"> ○ Unique identifier ○ Common name ○ Vendor/architecture description ○ Description ○ Resource type ○ Allocable Unit type ○ Documentation URL ○ Pre-production start/end date (accepting allocation requests) ○ Production start date ○ Post-production date (no longer accepting allocation requests) ○ Decommissioning date ● The following metadata are configured within POPS for a Resource: <ul style="list-style-type: none"> ○ Available service units ○ Minimum/Maximum/Default amount ○ Resource’s dependencies (example: if a compute/vis resource is requested then a storage resource has to be requested)
<i>Issues</i>	

UCP2 4.0 <i>Establish an allocation submission Opportunity</i>	
<i>Description</i>	To begin accepting allocation requests, the Allocation Administrator must establish one or more submission Opportunities.
<i>Actors</i>	<ul style="list-style-type: none"> ● Allocation Administrator ● SP Resource Administrators
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Allocation Administrator has established Allocations Process and necessary allocation review Panel(s). ● Resource information has been published and ingested into the Allocations Process. ● The Allocation Administrator has defined necessary submission data entry fields.
<i>Steps</i>	<ul style="list-style-type: none"> ● Allocation Administrator authenticates to POPS and requests “Create Submission Opportunity,” specifying: <ul style="list-style-type: none"> ○ metadata needed to define Submission Opportunity <ul style="list-style-type: none"> ■ continuous/periodic ■ Project Type (resulting from awards) ■ announcement/visibility date ■ start date for submissions ■ end date for submissions (deadline) ■ submission grace period (deadline extension, if any) ■ Meeting date ■ URL to request for proposals ■ default allocation period for awards ○ the review Panel (or Panels) that will be responsible for reviewing the submissions, and ○ policy rules that apply to this Opportunity and Project Type. The rules may include, e.g., that valid Requests are Automatically Approved and initiated. ● POPS creates submission Opportunity ● POPS presents Allocation Administrator with list of active Resources for this Allocations Process. ● Allocations Administrator selects some or all Resources to be included in the Opportunity. ● Selection by Allocation Administrator initiates email notification to each associated SP Resource Administrator to confirm their Resource’s availability for the Opportunity. Email includes link back to POPS. ● SP Resource Administrator follows link, authenticates, verifies Resource’s availability (or declares it unavailable), and provides any resource details specific to this Opportunity (e.g., available SUs for allocation). ● On and after announcement/visibility date, POPS makes the opportunity visible to POPS Submission GUI (as “upcoming”). Visibility info includes list of Resources

	<p>to be included, start date for submissions, submission deadline, etc.</p> <ul style="list-style-type: none"> ● On and after start date for submissions, the Opportunity is open and the Submission GUI can accept submissions. ● On and for two weeks after the deadline (plus grace period, if any), POPS will show the opportunity as “Closed” to the Submission GUI.
<i>Variations</i>	<ul style="list-style-type: none"> ● Opportunity may need to be opened with partial/incomplete confirmation from SP Resource Administrator(s). E.g., Resource shown as “tentatively available” or with available SUs “tbd”. ● SP Resource Administrator may need to confirm/update Resource information after Submission Opportunity is opened. ● Any “override” capability will be provided for the Allocation Administrator, e.g. to submit late submissions to a “closed” Opportunity. ● An Opportunity may be defined to require no review Panel (or perhaps an Automatic/No-op/Rubber Stamp Panel).
<i>Quality attributes</i>	Once metadata entry for the Opportunity is completed, the Opportunity should be visible to the Submission GUI (if defined by visibility date) within 5 minutes.
<i>Non-Functional</i>	
<i>Issues</i>	

UCP2 5.0 <i>Submission of Allocation Request</i>	
<i>Description</i>	Once an allocation submission Opportunity has been established, a Submitter uses the POPS Submission GUI to submit an Allocation Request.
<i>Actors</i>	<ul style="list-style-type: none"> • Submitter (end user making allocation request)
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> • Authentication and user identity determination is handled by XSEDE User Portal (or, in the case of non-XSEDE allocation process, the front-end interface selected by the Allocation Administrator). • Allocation Administrator has established Allocations Process, accepted Resources into the process, set up a review Panel, and opened a submission Opportunity. • In general, the POPS Submission GUI is a “lightweight” interface that queries POPS, where the allocations business logic resides. POPS and GUI walk through submission steps, with GUI flexibly displaying what POPS provides.
<i>Steps</i>	<ol style="list-style-type: none"> 1. Submitter authenticates via Submission GUI. <ol style="list-style-type: none"> a. GUI allowed to determine whether Submitter must be the PI or is allowed to submit on behalf of a PI. 2. Submission GUI queries POPS for relevant Opportunities and associated Submissions (if any) from the Submitter. POPS will provide Submission GUI with valid set of options. 3. Submission GUI presents possible submission options to the Submitter. This includes Opportunities accepting new submissions or existing Submissions that can be modified. 4. Based on the Submitter’s choice, POPS provides Submission GUI with the data fields needed to complete a valid submission. Submission GUI presents Submitter with and walks Submitter through the appropriate data entry screens. Look and feel, user experience, field value verification, is determined by Submission GUI. 5. Submission GUI verifies that submission has all mandatory values for a complete submission. 6. Submission GUI relays completed submission, including required documents, to POPS. 7. POPS verifies that submission is complete and provides a Project Code to the Submission GUI in an acknowledgment. 8. Submission GUI provides visual confirmation, including Project Code, to Submitter that submission has been accepted. 9. Either Submission GUI or POPS (tbd) sends email confirmation to Submitter, PI, and co-PIs.

<i>Variations</i>	<ul style="list-style-type: none"> ● POPS will support saving of partial/incomplete submissions, for submitter to return to complete at later time. ● POPS will support Submission Actions that include renewals, supplements, appeals, extensions, and transfers, and final reports for existing/awarded Projects, and Operations (editing options) for submitted Requests.
<i>Non-Functional</i>	<ul style="list-style-type: none"> ● Submission GUI
<i>Issues</i>	<ul style="list-style-type: none"> ● TBD: Does Client Organization/Allocation Process get to define Project Code format, or does POPS format get translated by the Client Organization to a corresponding project number or code used by their accounting system? ● TBD: Should email notification be in POPS or in Submission GUI? For email notification of status changes, it would likely need to be in POPS, which implies that POPS also needs to get an email address from Submission GUI.

UCP2 6.0 <i>Manage review of Submissions to an Allocations Opportunity</i>	
<i>Description</i>	Once submitted, the Allocations Administrator must manage review of Submissions either while the Opportunity is open or after it has closed. This includes assigning reviewers, as well as managing the Panel meeting (if applicable).
<i>Actors</i>	<ul style="list-style-type: none"> ● Allocation Administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Allocation Administrator can authenticate to POPS, has created Allocation Process, review Panel, and Opportunity. ● Submission(s) have been received and are awaiting review.
<i>Steps</i>	<ul style="list-style-type: none"> ● Allocation Administrator initiates request to “Prepare allocation requests for review.” ● POPS displays list of Opportunities, highlighting those with pending Submissions. “Pending” Submissions are those not yet awarded or rejected. Past (closed) submission Opportunities are also displayed. ● Allocation Administrator can select a submission Opportunity. ● At this point, Allocation Administrator may manage several settings or view information that affect or apply to all Submissions within the opportunity. The following tasks can be carried out: <ul style="list-style-type: none"> ● “Make Review Assignments Visible” with all, some, or no Submissions having had reviewers assigned, etc. ● “Notify reviewers of review assignments” (POPS shows date of any prior notifications, and includes only assignments not completed.) ● “Show summary of requests by Resource” ● “Show/export current Conflicts of Interest” ● “Show/export current Review Assignments” (including Reviews complete/incomplete) ● “Export review panel/meeting materials” (must appropriately deal with Conflicts of Interest) ● “Enter reviewer attendance” ● In addition, POPS displays sortable list of Submissions (sortable at least by submission date or by PI name). List includes indication of Submission’s status (COIs identified, reviewers assigned, reviews received, awarded/rejected). ● Allocation Administrator can select a Submission. ● POPS presents interface that allows Allocation Administrator to <ul style="list-style-type: none"> ● Indicate if any reviewers (or “none”) have a COI with Submission ● Assign one or more reviewers to the request, and optionally identifying one as the “lead” reviewer ● View submission data and documents ● Indicate that Submission has passed administrative review ● Allocation Administrator saves details about Submission, and is returned to list of

	Submissions.
<i>Variations</i>	<ul style="list-style-type: none"> ● If processing or usability dictates, instead of handling one Submission at a time, POPS may present all Submissions for each phase (COI assignment, reviewer assignment, admin review). ● Allocations Process policies may dictate two Panels for a single Opportunity.
<i>Quality attributes</i>	
<i>Non-Functional</i>	
<i>Issues</i>	<ul style="list-style-type: none"> ● TBD: Determine what “Export review panel/meeting materials” should entail, e.g. <ul style="list-style-type: none"> ○ Meeting agenda (sorted list of Request summaries) ○ Meeting “book” (sorted list of Requests and reviews) ○ Meeting spreadsheet (for tracking recommendations/decisions)

UCP2 7.0 <i>Submission of a Review</i>	
<i>Description</i>	For each Submission, assigned Reviewers will review the submitted materials and information and enter a review and recommendation via the POPS Review GUI.
<i>Actors</i>	<ul style="list-style-type: none"> ● Reviewer (member of Panel)
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Requests have been submitted and completed. ● The Reviewer has been assigned to the Request. ● The period to review Requests is open (if applicable). ● Reviews authenticate to POPS with their Client Organization identities.
<i>Steps</i>	<ul style="list-style-type: none"> ● Reviewer authenticates to Review GUI. ● The POPS Review GUI queries POPS about existing requests assigned to Reviewer, according to associated Opportunity or Project Type. ● Based on choice, GUI presents Reviewer with contents of Request. <ul style="list-style-type: none"> ○ Request metadata ○ Request documents, individually for viewing and in one PDF for printing. ○ Other reviews for this request ○ Past usage ○ Previous relevant Requests and Reviews ● GUI presents Review form to be completed <ul style="list-style-type: none"> ○ Rating of Request (Excellent ... Reject) ○ Review text ○ Recommended Resource Allocation amounts ○ Recommended Allocation period ● GUI relays completed review to POPS
<i>Variations</i>	<ul style="list-style-type: none"> ● Upon final discussion, review consensus or updates can be entered via GUI interface.
<i>Quality attributes</i>	
<i>Non-Functional</i>	
<i>Issues</i>	<ul style="list-style-type: none"> ● Determine if reviewers need real-time communication during the request review process.

UCP2 8.0	
<i>Award or reject allocation requests</i>	
<i>Description</i>	Following appropriate review and synthesis of other relevant input, the Allocation Administrator will add allocation amounts to a Request or reject the Request. Allocation Award information is sent to the Client's specified Accounting Service, and PIs are notified of Allocations.
<i>Actors</i>	<ul style="list-style-type: none"> ● Allocation Administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Review Panel has met (or appropriate reviews entered) and made recommendations as to which requests should be awarded/rejected.
<i>Steps</i>	<ul style="list-style-type: none"> ● Allocation Administrator selects Opportunity for which decisions are to be entered. ● Allocation Administrator enters Opportunity-wide comments, etc. ● Allocation Administrator selects Request to award/reject ● Allocation Administrator enters <ul style="list-style-type: none"> ○ Request-specific comments, ○ Allocation amounts (or Rejection), ○ Allocation dates (if different from default) ● POPS checks for Resource dependencies and generates necessary automatic awards, such as storage. ● Allocations Administrator can review/verify a summary of Awards entered, and correct entries if needed. ● Allocation Administrator initiates Awards with Client Organization's Accounting Service via appropriate AMIE messages, either for a specific Request or for all Requests within the Opportunity. ● Allocation Administrator sends award/reject notification to appropriate parties, either for a specific Request or for all Requests within the Opportunity.
<i>Variations</i>	<ul style="list-style-type: none"> ● Optionally allow Allocation Admin to choose to be cc'd on Award/Reject notifications.
<i>Quality attributes</i>	
<i>Non-Functional</i>	
<i>Issues</i>	<ul style="list-style-type: none"> ● Determine overall review panel metadata (notes) to be collected. ● TBD: Determine who is notified: PI and CoPIs, NSF program officers, others.

UCP2 9.0	<i>Allocation data reporting and access</i>
<i>Description</i>	POPS will allow each Allocation Process to specify a Reporting Service (XSEDE's is XDMoD) that will be authorized to extract and produce reports of the allocations data. For Allocations Processes without a Reporting Service, simpler export tools will allow the Allocation Administrator to manually export allocations data.
<i>Actors</i>	<ul style="list-style-type: none"> ● Allocation Administrator ● Reporting service administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Allocation Administrator has established Allocations Process, Requests have been submitted and reviewed, and Awards made to Projects.
<i>Steps</i>	<ul style="list-style-type: none"> ● If not already established at the creation of the Allocation Process: <ul style="list-style-type: none"> ○ Allocation Administrator authenticates to POPS and initiates request to update or enter "Reporting service" information. ○ Allocation Administrator supplies information needed to identify reporting service and permit reporting service to connect to POPS. ○ Allocation Administrator saves information and notifies Reporting service Admin. ○ Reporting service Admin verifies that Reporting service can connect to the POPS reporting web-service API. ● Reporting service Admin configures reporting service to query POPS at appropriate intervals via web-service API to extract new POPS allocations data or allocations data for a specified time period.
<i>Variations</i>	<ul style="list-style-type: none"> ● Allocations administrator may provide Reporting Service information when establishing an Allocations Process. ● Allocations Administrator may export reporting data for Requests/Awards within a given Opportunity to a small set of common file formats, including CSV.
<i>Quality attributes</i>	<ul style="list-style-type: none"> ● Because of the confidentiality of allocation request information, connection between POPS and Reporting Service must be secure.
<i>Non-Functional</i>	
<i>Issues</i>	<ul style="list-style-type: none"> ● Determine queries and responses for reporting Web-service API. Note that in the general case, different allocations processes may have different data fields required for submission and thus the reporting API may not be able to return the same data fields in all cases. ● API needs to handle cases such as supplements, transfers, or extensions, which may represent modifications to allocation data that has already been reported.

UCP2 10.0	<i>Customize allocation request data fields</i>
<i>Description</i>	Because not all Allocation Processes or policies are the same, the Allocation Administrator will likely want to customize the data fields for the possible submission types. This customization may include different submission data for different Review Panels.
<i>Actors</i>	<ul style="list-style-type: none"> ● Allocation Administrator
<i>Prerequisites & Assumptions</i>	<ul style="list-style-type: none"> ● Allocation Administrator has established allocations process ● POPS has defined “default” data fields and types for the various submission types.
<i>Steps</i>	<ul style="list-style-type: none"> ● Allocation Administrator authenticates to POPS-admin and initiates request to “Customize data fields for submissions.” ● POPS presents option of selecting one of the Submission types: New/Renewal, Supplement, Transfer, Extension, Appeal, and Final Report. ● Allocation Administrator selects appropriate option. ● POPS presents form-building interface, seeded with “default” (or most recently saved) version of the submission type’s data fields ● Allocation Administrator has option to add, remove, edit, and “group” data fields and documents, as well as specify them as required or optional. ● Allocation Administrator saves modified form.
<i>Variations</i>	<ul style="list-style-type: none"> ● Allocation Administrator can “restore default fields” in the submission form builder. ● POPS can define certain fields as required and non-modifiable to ensure a “minimal” submission.
<i>Quality attributes</i>	
<i>Non-Functional</i>	<ul style="list-style-type: none"> ● POPS GUI retains control over how to display and collect user input. ● This is not /may not be the place/tool for modifying resource information, which should be handled as resources are added to the process.
<i>Issues</i>	<ul style="list-style-type: none"> ● Determine metadata required to be included in each of the default submission types and the minimum/non-editable fields. ● POPS need to deal with changes to submission forms/data over time as well as disallowing changes at certain times, such as in the middle of a submission opportunity.