PSC-PMO Advisory Board Meeting

August 7, 2020

Attendees: J. Budd, H. Cease, J. Cross, M. Fisher, A. Haseeb, K. Jaje, J. McChesney, E. Peoples-Evans, G. Srajer, Y. Sun J. Toeller, M. White, K. Wootton

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- M. White asked about the value of ServiceNow.
- J. Cross walked through the PSC Portfolio Management web pages and demonstrated how to create an Idea in ServiceNow through the Idea Portal.
  - The Idea module was recently rolled out across the laboratory.
  - Idea is the first stage in ServiceNow's project pipeline (Idea > Demand > Project) and requires only a description and name for the proposed project.
  - If an Idea is determined by division management to be high priority and likely to be funded within the year, it is promoted to Demand and the Resource needs, scope, and risks are developed with support from the PSC-PMO.
  - Division directors present their highest priority Demands to the PSC Senior Management Team every two months. Based on the urgency of the work, the potential impact of doing/not doing the work, and the availability of resources, Demands are approved for execution and promoted to Project where a resource-loaded schedule is developed with support from the PSC-PMO, and the earmarked funding is allocated to the project.
- Y. Sun asked about what happens to an existing Demand in ServiceNow, which led to a lengthy discussion.
  - Cross stated the Demands do not go away unless a Division Director explicitly requests they be removed, typically for duplicates or for work that was completed outside of the SMT process. Existing Demands have already been migrated to the upgraded Demand module. The updates to Project will go into production on August 25.
  - Sun asked about follow-up when a Demand is submitted. How is it rated relative to other Demands? She said the contributor is left out of picture. Cross replied she should make sure her management knows the Demand is there and is paying attention to it. Management might not know if something is urgently needed. Those who submit a Demand do not know when discussions take place regarding promoting a Demand to a Project, so they do not know when to prompt management. Srajer said this is a challenge we face and would like to improve on. It is up to the initiator to inform division management that a new proposal is in Demand and to be an advocate so that it bubbles up to a division priority. Haseeb stated that before every Senior Management Team (SMT) meeting, we send a list of all active Demands to division management to review, set priorities, and send a list of which Demands they propose for execution. The requestor may need to do some "selling" regarding priority. Cross pointed to the web page—PSC Operations Portfolio Dashboard, which has active Demands grouped by Area (beamlines, accelerator, facility) and a dropdown menu to group the Demands by Priority, Urgency, Group, and Division.
  - Ideally priority is assigned by Division Director. Priority is not an editable field as it rolls up data of other fields such as Impact and Urgency.
  - Srajer has been working to transform the APS Strategic Plan into a framework for prioritizing what we fund. Slowly, it is taking hold.

- Sun asked if the following information is available on website: How can people who submit an Idea find out the status, e.g., when will the Idea be discussed? What is the result of the discussion, e.g., promoted as a Project.
  - Cross pointed out that collaborators can be added to an Idea watch list, and they will receive notification of state (draft, pending, review, approved…) and stage changes (Idea, Demand, Project).
  - White asked if there is a mechanism in ServiceNow so that the system e-mails if there is a status change after an Idea is submitted. That would partially address what Sun is asking. Haseeb thinks ServiceNow does e-mail the creator and those on the watch list.
  - **Action Item:** Follow up with entire committee on answers to these questions.
- It is critically important to communicate with division management.
  - XSD perspective - McChesney believes Demand priorities are presented at Group Leader meetings and it is up to the group leader to disseminate those priorities down the chain, which is often a roadblock. Fisher stated he sees what is presented and approved, along with what XSD might try to pursue with its own funds. He is not sure what gets transmitted down the chain. Usually is not a huge impact for his group as they are mostly on the Upgrade.
  - AES perspective – Toeller would have to check with other AES people to provide a better perspective. White thinks a lot of AES work is covered by recurring work that is not tracked, but she needs to check with group leaders as she does not know what is in the system. It would be useful to look through ServiceNow to see what is on the books for AES, in general.
- Please provide any recommendations for how to improve upward and downward communication.
- Peoples-Evans suggested a simple report on the web where everyone can see the priorities, what has been approved, and what has not been approved. At a minimum, people could find the information, if interested. Haseeb said we could give more information on the PMO web page, e.g., what we are taking to the SMT for approval. Srajer stated we provide outcome of the SMT meetings in BOX, but it is a restricted list of people. Information is also on the SMT Updates web page.

- Peoples-Evans suggested they need to work on reporting and what is shown in SMT meetings. Everyone is guessing what was approved.
- Wootton suggested that, although Ideas can be submitted at any time, a call for proposals sent out twice a year could focus people's attention and narrow the scope.
  - Fisher stated the proposals would still need to pass through division management to keep people informed on prioritization, and of what they want submitted.
- White asked about the difference between priority and urgency. A requestor would not know if someone changes it up or down. **Action Item:** show Priority and Urgency for each Demand in reports and on ServiceNow Dashboards.
- Feedback slide
  - Will send information or a link on some of the policies in the works.
  - We will follow up on communication issues and provide a written report (minutes, presentations, follow up with what we have done with input received). **Action Item:** Set up a committee web page will be set up for the PMO Advisory Board.
  - **Action Item for Advisory**: Please provide feedback for how we can do better, so we are more visible and can be more effective.
- White asked if there is a plan for this system to integrate with the money side. Srajer replied that from discussions with Christine McGhee, the Workday Financial system is going through

updates. One of the modules not in the original package was to track hours. We will follow up. Haseeb added that financial-related data is handled at the laboratory level. The PSC-PMO received a monthly digest of the project financials.

- Cease agreed that a reporting function and how to get information out of it would help.
- Haseeb stated we need to do better with the notifying the submitter ahead of a Demand going to the SMT for approval.

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7 AUGUST 2020

PSC-PMO ADVISORY BOARD MEETING

PSC-PMO TEAM

Argonne NATIONAL LABORATORY

AGENDA

- Introductions
- Missions
- Long Range Planning
- ServiceNow Updates
- PMO Web Pages
- Policy Overview
- Feedback

INTRODUCTIONS

Welcome Jessica McChesney

- PSC-PMO Advisory Board

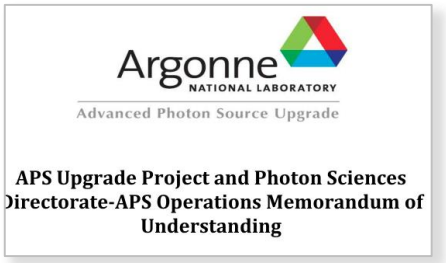
Member	Affiliation	Subject Area
Mike Fisher	XSD	Mechanical Engineering, Beamline Design
Jessica McChesney	XSD	Beamlines Operation, Physics
Elmie Peoples-Evans	APS-U	Project Management, Procurement
Herman Cease	APS-U	Mechanical Systems, Integration
Jason Budd	IS-PMO	Project Management, Construction, ANL
Kent Wootton	ASD	Diagnostic Requirements, Physics
Yine Sun	ASD	Linac, Accelerator Operations
Marion White	AES	Project Management, Linac, Accelerator Physics
Jeff Toeller	AES	Electrical Engineering

- PSC-PMO

Member	Affiliation	Roles
George Srajer	PSC	Deputy ALD for Integration and Planning, Leadership
Kelly Jaje	AES	Communications, Web Pages
Ahmed Haseeb	IS-PMO	Program Manager, Planning and Scheduling
Julie Cross	PSC	Project Portfolio Manager, Reporting

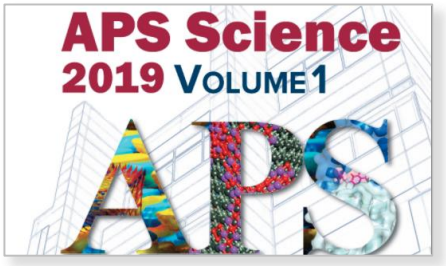
PSC-PMO MISSION

Develop and manage an integrated, multi-year, resource-loaded portfolio of Operations funded projects that meets collective commitment to the scientific mission of the APS



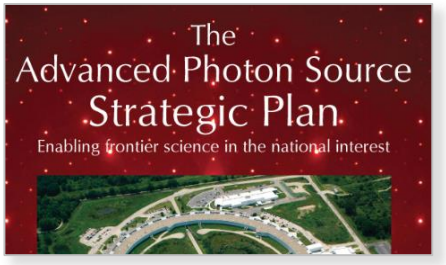
Upgrade Readiness

APS Operations is responsible for maintaining and incrementally improving all existing equipment in a manner consistent with current operating levels and such that the equipment can be used for the life of APS-U.



APS Operations

Maintenance, repairs, and obsolescence mitigation work to ensure reliable beam delivery for APS users.



Full Optimization

Execution of strategic improvements and R&D that will maintain the APS position as the world-leading hard x-ray synchrotron source

ADVISORY BOARD MISSION

Provide observations, recommendations, and guidance to maximize the overall effectiveness and impact of the PSC-PMO

Subjects include

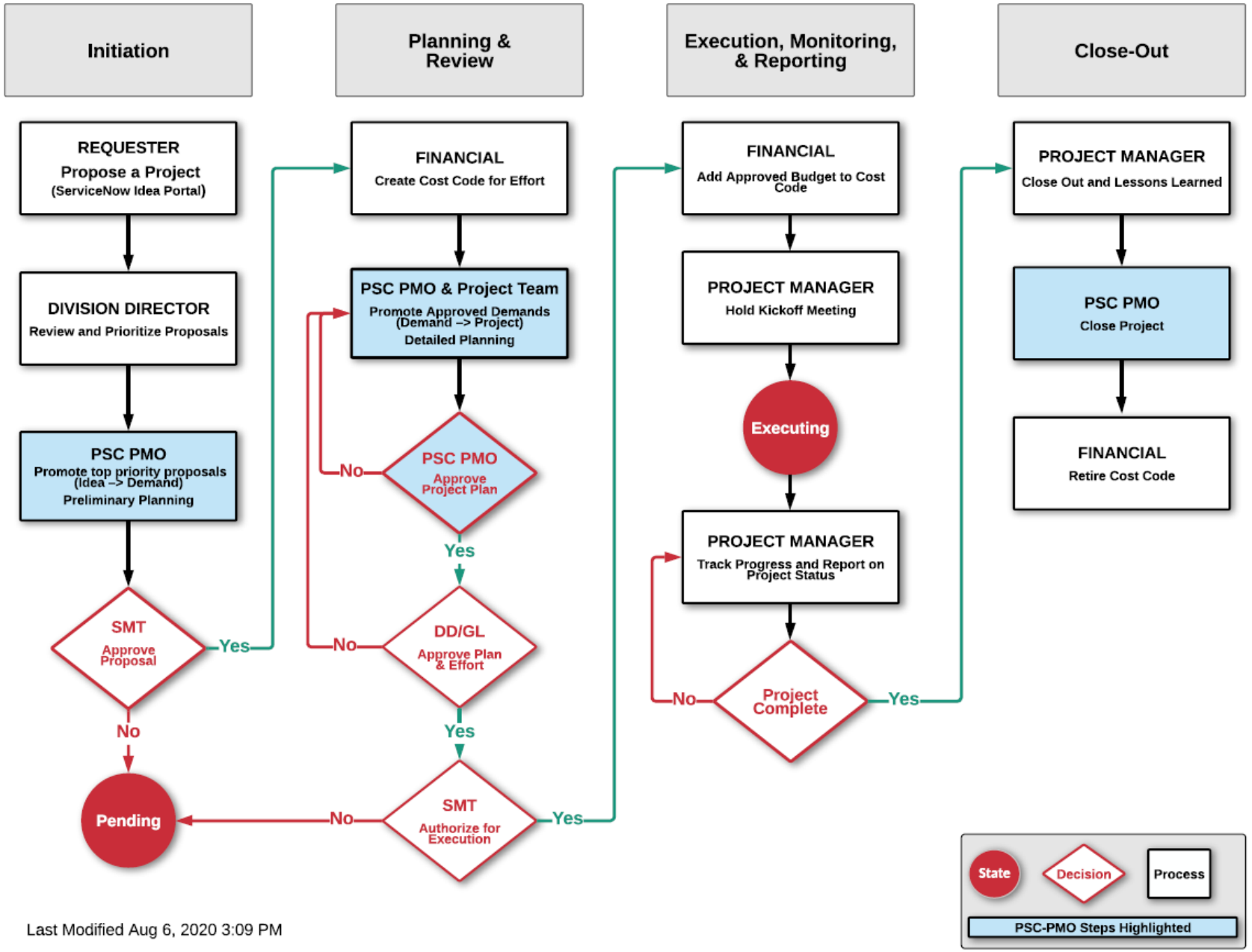
- Processes and policies
- Identification of gaps
- Portfolio execution strategy
- Best practices
- Project performance metrics
- Stakeholder engagement
- ServiceNow platform
- Communication

LONG RANGE PLANNING: FY21 - FY24

APS OPERATIONS FY19 - FY24 PORTFOLIO					
FY19	**$ 3,528,331**	**FY21**	**$ 4,277,150**	**FY23**	**$ 9,518,277**
Long Trace Profiler Upgrade	$ 256,200	ACIS Upgrade - Phase II - FY21	$ 1,237,273	160kW Solid State Amplifier #1-2	$ 4,911,900
Beamline Single Mode Fiber - Phase I	$ 440,217	Upgrade Acc. CoreNetwork Switches for SR	$ 732,692	160kW Solid State Amplifier Utilities #1-2	$ 1,123,462
Windows 7 to 10 Upgrade	$ 275,355	SR Double Sector Interlock Relay Rack Gespac Replacement	$ 237,061	Linac RF Station #2	$ 1,158,975
Business Operations Windows Servers	$ 335,817	Beamline Sector Network Switch Capacity - Phase I	$ 457,933	Beamline Sector Network Switch Capacity - Phase II	$ 457,933
Linac RF Station #1	$ 1,382,741	Upgrade CAT Beamline Network Core	$ 122,115	ACIS Upgrade - Phase II - FY23	$ 882,162
Replace Valves in the LINAC and PAR	$ 36,635	XSD Priorities & Detectors	$ 427,404	Replace Water Skids - LINAC	$ 683,846
Rigaku Ultrafast Detector for XPCS	$ 348,784	Linac RF Windows, High Power Vacuum RF Switches	$ 116,950		
Lambda 750k CdTe Detector	$ 348,784	Temperature Stability in SR Tunnel	$ 445,721		
Robot Detector Arm for SNOM	$ 103,798				
		Other Projects - TBD/Contingency	$ 500,000	Other Projects - TBD/Contingency	$ 300,000
FY20	**$ 10,414,498**	**FY22**	**$ 914,240**	**FY24**	**$ 6,640,650**
ACIS Upgrade – Phase I	$ 529,380	Replace DI H2O Control System for Linac/Booster/PAR	$ 158,750	160kW Solid State Amplifier #3-4	$ 4,911,900
PAR Kicker Magnet Vacuum Chambers	$ 333,680	Accelerator MCR and Distributed Workstation Upgrades	$ 168,519	160kW Solid State Amplifier Utilities #3-4	$ 1,123,462
Small Pixel Detector	$ 122,380	Xray Virtual Server System Refresh - Phase 1	$ 286,971	Beamline CAT LOM Network Switch Upgrade	$ 305,289
32-ID Shimadzu HPV-X2 Detector	$ 162,413				
4-ID Cryopump Replacement	$ 153,120				
Business Operations Linux Servers	$ 195,808				
Single Sign-on for All APS web and Oracle Applications	$ 61,058				
Storage Ring Relay Rack Gespac Replacement	$ -				
LEA Infrastructure	$ 200,000				
Germanium Pixel BNL	$ 122,115				
Storage Ring Power Supply Water Isolation Valves	$ 91,587	Other Projects - TBD/Contingency	$ 300,000	Other Projects - TBD/Contingency	$ 300,000
200kW Solid State Amplifier - Prototype	$ 2,865,275				
200kW Solid State Amplifier Utilities - Prototype	$ 561,731				
Linac RF Modulator #2	$ 700,531				
High Power Linac RF Test Stand	$ 789,949				
Utility/Water Shed	$ 512,885				
Temperature Stability in SR Tunnel	$ 322,385				
Beamline Single Mode Fiber - Phase II	$ 498,231				
Accelerator Single Mode Fiber Infrastructure	$ 635,000				
Eiger2 S 9M Vacuum (12-ID-B)	$ 305,289				
Fizeau Interferometer - OPT	$ 335,817				
LensAFM System (34-ID-C)	$ 85,481				
Femtosecond Laser - MM	$ 219,808				
Universal Proposal System	$ 610,577				
				FY19 - FY22 TOTAL COST (LOADED)	**$ 35,293,146**

- If you need funding for a critical, high priority project, propose a project using ServiceNow and speak to your management

PROJECT APPROVAL WORKFLOW



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SERVICENOW UPDATES

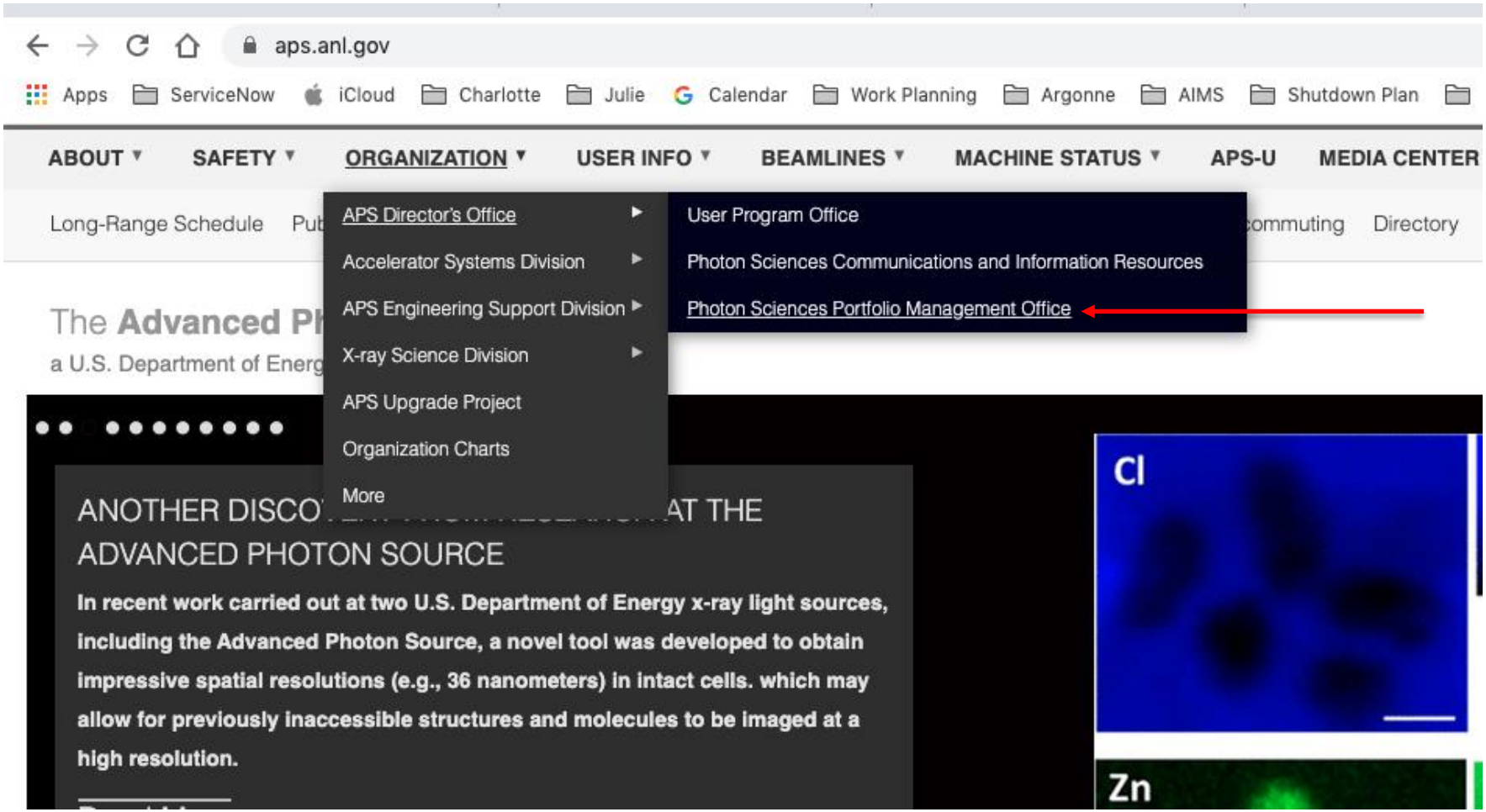
The Laboratory is removing customizations to multiple applications including Demand, Project, and Change

- The entry point proposing a new project is the Idea Portal. The requirements are
  1. Title
  2. Description
- The proposal backlog is prioritized by Division management.
- Ideas are promoted to Demand based on priority
- Demands approved by the Senior Management Team are promoted to Project for detailed planning

Project Stage	ServiceNow App	Who	What
Initiation	Idea Portal	Anyone	Title and Description
Preliminary Planning	Demand	Project Manager, PSC-PMO, Stakeholders	High Level Scope, Estimate Budget & Effort
Detailed Planning	Project	Project Manager, PSC-PMO, Collaborators	Scope, Schedule, Budget & Effort, and Risks
Execution, Monitoring & Controlling, Close-Out	Project	Project Manager, Project Team, Collaborators and Stakeholders	Project updates with actuals, status reports, documentation, etc.

PSC-PMO WEB PAGE

https://inside.aps.anl.gov/portfolio-management-office/projects



POLICY OVERVIEW

Each policy includes the ‘why’, ‘when’, ‘how-to’, and ‘who’ requirements for specified area of Project Management

- Project Approval & Workflow
- Schedule
- Project Change (PCR)
- Risk
- Project Kickoff
- Project Reporting

FEEDBACK

- Feedback
  - Review and provide feedback on policies, templates & workflows

- Discussion
  - How to improve communications?
  - What gaps need to be addressed?
  - How can the PSC-PMO be better?

BACKUP SLIDES

OVERVIEW OF THE PSC OPS PORTFOLIO

- Ops portfolio projects do not impact KPPs and do not add scope to APS-U
- APS-U scope is well defined but it does not replace all the systems
  - Example: Access Control Interlock System (ACIS) Ops responsibility to upgrade
- Ops portfolio was developed because of the collective commitment to the scientific mission of the APS

Program	Number of Active Projects	Total Approved Budget ($M)	Proposals in the Pipeline	Total Proposed Budget ($M)
APS Ops	31	$6.7	63	$16.8
Upgrade Readiness	7	$2.5	8	$4.8
Full Optimization	2	$4.1	2	$42.0
Totals	**40**	**$13.3**	**73**	**$63.6**

Active Projects

Project Title	Approved Budget	State
3382 Improved temperature monitoring	$198,800.00	Work in Progress
46199 Long Trace Profiler Upgrade	$210,000.00	Work in Progress
Beamline Network Single Mode Fiber Infrastructure Phase II	$408,000.00	Planning
APS02070804P: PAR Kicker Mag Vac Chambers	$263,775.00	Planning
Replace Fizeau Interferometer	$275,000.00	Approved
Accelerator Single Mode Fiber Infrastructure	$520,000.00	Planning
3553 ACIS Upgrade Phase I	$640,000.00	Work in Progress

Note: All costs are unloaded

Proposals in the Pipeline

Name	Capital outlay
Update Existing Radiation Monitors	$2,043,500.00
ACIS Upgrade Phase II	$1,735,600.00
Replace kicker HV power supplies Booster and PAR	$410,000.00
Improve Temperature Stability in SR Tunnel	$401,000.00
Accelerator MCR and Distributed Workstation Upgrades	$138,000.00
Simulator for training operators on MBA	$90,000.00
Upgrade PAR Kicker Magnets	$0.00
Replace Cherenkov Monitor Cables	$0.00

FULL OPTIMIZATION/LONG-TERM STRATEGY

- Linac: Upgrade all RF stations with 50MW klystrons, solid state modulators, and digital LLRF systems
- Storage Ring: Transition from klystron to solid-state technology and digital LLRF
  - One 200kW prototype solid state power amplifier (SSPA) unit funded in FY2020
    - Bids are due 8/25/2020; contract award by 10/5/2020
  - Additional twelve 160kW production SSPA units are planned for funding starting in FY23 at 2 SSPA units/year

Project	Unit Cost ($M)	Total Cost ($M)	Status
Linac RF Upgrade	$1.2	$8.4	Delivery of the 1st station in Feb. 2021
Storage Ring Solid State RF Upgrade	$ 2.6*	$ 33.6*	Prototype in Procurement

*Estimated costs