

- Capabilities planned for procurement and for decommissioning are described in the Annual Acquisition Strategy.
- Capabilities to be procured are grouped into procurement activities.
- Procurement planning activities are scheduled in the EV project.
- Estimated arrival of equipment is scheduled into the EV project.
- Installation activities are scheduled in the EV project.

- The replan baselines the evolution of the Data Facility.
 - This is reflected in PMCS.
 - Capabilities are organized by logical technical architecture.
- AURA's contract with NCSA specifies
 - NCSA supply the project with an Annual Acquisition Strategy document, which outlines capabilities to be procured or decommissioned, consistent with the baseline plan, and only budgetary amounts for each, by October 1st.
 - AURA reviews and approves for primarily budgetary reasons, as the content reflects the baseline plan.
- UIUC and AURA contract officers negotiate the incorporation of the amendment, along with adding contract terms that support the annual acquisition strategy.
 - When difficult contract issues arise, elements causing difficulty might be deferred to a second set of amendments.
 - e.g., handling inventory tagging for LSST capabilities in NCSA common infrastructure.
- The number of capabilities in FY18 is 18.
 - Naively, this means we are provisioning a new capability every 2-3 weeks.

- A procurement activity is a detailed specification, supported by quotes, which addresses one or more capabilities.
 - A capability may require several procurement activities.
- LDF management prioritizes and schedules procurement activities as part of the six-month rolling-wave plan.
- NCSA systems administrators are responsible for developing specifications and quotes.
 - Consultation about specifications for a procurement activity varies according to the nature of the procurement activity.
 - For physical supporting infrastructure (e.g., racks, power supplies) – occurs within NCSA facilities group and is consistent with the general direction for ITC support within NCSA.
 - For commons (e.g., batch system, file systems, etc.) – has been with special infrastructure meetings dealing with futures.
 - For dedicated test stands (e.g., PDAC, L1 Complete Test Stand) – supporting specific activities is with the activity leaders.
- Quotes are reviewed by LDF financial staff for consistency with efficient business processes.
- A description of the procurement activity and quotes are reviewed by LDF management, and are tendered to AURA primarily as a check for consistency with federal circulars, as per contract.
- Quotes are entered into the UIUC procurement system. UIUC reviews for contract compliance and compliance federal and Illinois procurement law. Upon approval, UIUC procurement deals with the vendors.
- On receipt, AURA tags are applied, goods are entered into the NCSA and UIUC inventory systems, reboxed, and made available for installation.

Procurement Activities Timeline



- Approximate timing of a procurement activity:

1. Obtaining and Review of Quotes	1-2 days
2. Writing and Review of Procurement Activity at NCSA	5-8 days
3. Approval of Procurement Activity from AURA	2-3 days
4. Approval of Requisition from UIUC	3-5 days
5. Processing by vendor	7-21 days
6. Shipping	~5 days

- Installation is projected in the plan based on these timeframes.

- The forward plan is to make an epic for each installation activity.
- Installation is scheduled in the rolling-wave plan, but is subject to delays, e.g., vendor shipment.
- Default installation template:
 1. Unbox, verify items received, rack machines
 2. System-level configuration: network configuration, IP addresses, OS installation, admin management, Puppet, security vetting
 3. Application-level configuration: configure for purpose (DB, PDAC, DAQ, etc.)
 4. System verification: testing network communication, reboot, power cycle, application, authorized access
 5. Roll into production, system documentation, early lifetime support

- An out-of-band procurement is a capability not specified in the Annual Acquisition Strategy, and therefore is a change to the baseline plan due to business need. LDF management makes a recommendation to DM management. Upon analysis, an approved change alters the capabilities needed in one of three ways.
 - An expansion of a capability in the Annual Acquisition Strategy beyond budgeted amount.
 - An emergent need for a capability not covered in the Annual Acquisition Strategy.
 - A need to supplement the Minor Expense budget.
- A need not covered by the Annual Acquisition Strategy plan requires that documentation from AURA authorizing the change be submitted to the UIUC post-award and procurement offices via LDF financial management.
 - If additional funding is needed, this approval gives certainty of eventual funding, and procurement can proceed.
- If more funds are needed, the contract modification process is invoked.
- The baseline is updated in PMCS. Work is scheduled in the rolling-wave plan.

FY18 Acquisition Strategy Capabilities



- Core Kubernetes Installation
- L1 Complete Test Stand
- PDAC Additions for MyDB
- Establishing Data Transfer Between Sites
- Amazon Web Services
- Chilean and Related Test Stand Deployments
 - AA and Network Security Monitoring deployment at Summit
 - Base Site File Systems
 - Commissioning Cluster
 - Support for Spectrograph Archiving and EFD ETL
 - Enhancement to support remote administration and operability
 - Support for Tucson Spectrograph test stand
- LSST Central Core Networking
- Build-out of physical infrastructure
- Development and Integration Updates
- Administrator Test Infrastructure
- Power and Cooling
- Miscellaneous Maintenance and Renewal
- Minor Expenses, Including Minor System Evolution