

# *Usage Models, Training, Education, and User Support*

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# Breakout participants

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## Processes (scope of activity)

- What needs to be done?
  - Requirements gathering to inform procurement effort
  - Develop usage model (description documents, policies, procedures, allocation info, support info, integration plan, data management)
    - This document informs the CD decision making process
  - Transition users/codes to new system
    - Develop/deliver training (roadshow, virtual training, collaborate with other labs)
    - Documentation for transition
    - Tutorials
    - Early users/early science/early access
  - Prepare user documentation

## Processes (scope of activity)

- What needs to be done?
  - Integrate system into infrastructure (accounts, reporting, ticket system, etc.)
  - Ensure system is usable and works as promised. Work with vendors/admins to make sure everything is functioning as outlined in the usage model (software, libraries, compilers, tools)
  - Develop and implement tools needed for new system

## Processes (scope of activity), cont.

- What begins first: timeline for activities (before or after hardware)?
  - Requirements gathering before procurement
  - Participate and advocate for users in the procurement process
  - Draft usage model (available before hardware hits the floor)
  - Staff readiness
  - Early access for user support teams and users to development systems
  - Training should begin when there is access to development systems and continue throughout the life of the system

## Processes (scope of activity), cont.

- What begins first: timeline for activities (before or after hardware)?
  - Provide access to the user support teams to final system after system integration and before the first friendly users are put on the system
  - Give friendly users early access
  - Finalize usage model prior to production
  - Run benchmarks throughout the life of the system to be proactive
  - Communicate with users
    - Roadshow with usage models

## Processes (scope of activity), cont.

- What is the role of early hardware access (either locally or remotely) and prototype systems?
  - Critical
    - Many points already noted on previous slides
    - Staff readiness
    - Need time on the system to learn, test, and develop documentation
    - Necessary for effective training
    - Necessary to get the user environment ready

## Processes (scope of activity), cont.

- What is the role of vendor partnerships?
  - Leverage expertise for training/documentation
  - Having multiple channels to communicate user issues to vendors, both system provider as well as third party vendors
  - Provide vendors access to our systems to solve issues that they may not be able to replicate on their systems
  - Onsite vendors can be valuable (not all sites share the same experience)
    - They have leverage to escalate issues
    - Provide help to users
    - Bring perspective/tips from other sites
    - Expertise in their specialties

## Processes (scope of activity), cont.

- What are the roles of research and design and engineering?
  - R&D/NRE funding is used to target specific usability, functionality, or performance issues
  - Development of Centers of Excellence to partner with host institution to address particular challenges

## Processes (scope of activity), cont.

- What resiliency activities are executed (for example, redundancy)
  - As system evolves, documentation and training should too
  - Include in the documentation and training how users can best cope with failures

## Organization and management

- What is the structure of the integration and preparation teams? What are the necessary skills for the activity team?
  - The structure of the teams varies from lab to lab. But, we need people who have these skills:
    - Understand the user problems and how users will use the system
    - Ability to communicate
    - Good training and documentation skills
    - Ability to bridge gap among different disciplines
    - Previous experience with deploying systems
    - A diversified set of HPC technical skills
    - Recruiting people with these skills is a big challenge

## Experiences and lessons learned

- What were the good experiences?
  - Act of defining usage model
  - Strong collaboration with other labs
  - Early workshops
  - Early access for both user support and users
  - Routine calls with users
  - Strong documentation is critical
  - Integration of user support team at the beginning

## Experiences and lessons learned

- What were the bad experiences?
  - Failure to communicate the usage model with all parties
  - No access to prototype system and/or development system
  - Immaturity of tools and software for new system

## Experiences and lessons learned (Best Practices)

- What were the lessons learned?
  - Creation and communication of the usage model is critical
  - Collaboration among sites
  - Access to other labs' systems
  - Access for user support and users to small development systems that closely match the final systems for application and support team readiness
  - Access to the final system by the user support team before the system enters production
  - Friendly user period

## Experiences and lessons learned, cont.

- What were the most productive activities?
  - Tri labs working groups communicate on a regular basis.
  - The contract should include access to vendor experts for staff and user training
  - Application readiness teams have been and will continue to be important for future deployments
  - Gathering lessons learned from the application readiness teams and integrate those lessons into the training and documentation

## Experiences and lessons learned, cont.

- What were the resiliency experiences?
  - N/A

## Experiences and lessons learned, cont.

- What was the highest risk? Was it a surprise or expected?
  - The system is not usable by the target users

## Most significant observation

- Provide a summary statement for the most significant observation
  - Having user advocates involved in the process from before the project begins, through procurement and implementation is crucial.
    - Requirements gathering
    - Ensure the requirements are met through the procurement process
    - Having a well thought out and documented usage model that starts once system is announced.
    - Implement the usage model and have adequate time to do so.
    - Skill mix is very hard to find

## Effort estimate

- How big of an effort was this?
  - This is very difficult to answer because it draws from so many parts of the organization
  - This varies depending on the how disruptive the technology