



Overview: Common Engineering Environment (CEE)

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Overview Areas

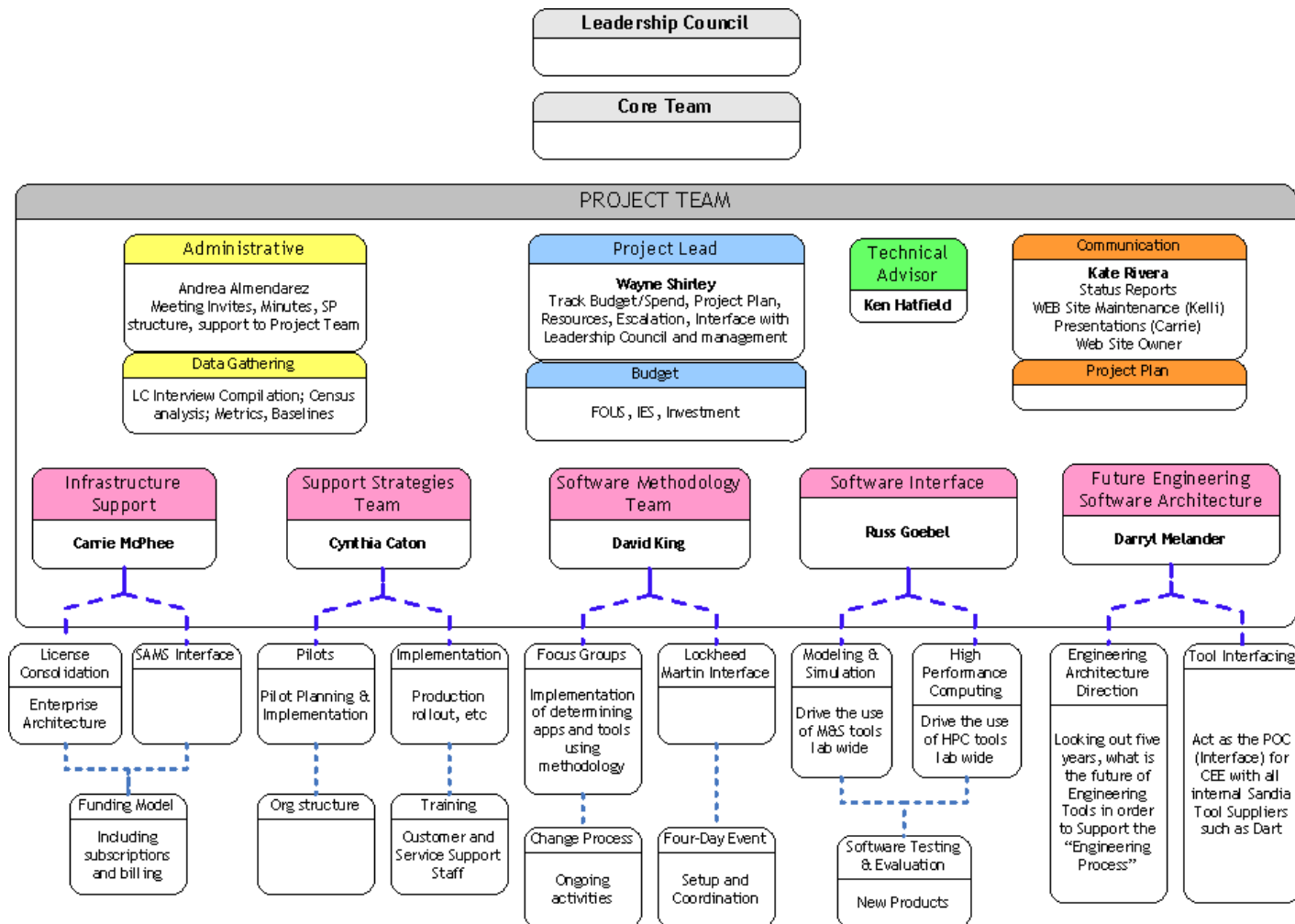
- **History of the CEE Project**
- **Team Structure**
- **Problem/Need for CEE**
- **Current activities identified**
- **EPI Center Trip: Meeting goals**



History of CEE Project

- **CEE Project identified as a formal project in 2006**
- **Project Champion, Team Lead, Vision identified**
- **Funding began in 2007**
- **Team restructured in 2007 with subteams established**

CEE Teams





The Need for CEE

Sandia's Science and Engineering Community needs to produce high quality and cost effective products in a changing environment. This community needs transparent and consistent access to resources

Software:

- Availability (what to use), Where to obtain, how to use,

Support:

- Stealth Support (cost not accurately reflected)
- Access to training

Information Architecture:

- Unable to access data
- Resources are unknown
- Data storage
- Knowledge sharing/transfer
- Quality Assurance: No assurance of outcome
- Cost: current state is not cost effective
- Efficiency:-
 - No central management of licenses
 - Slow delivery of software to customer
 - Lack of access to project metadata/artifacts



CEE Vision

The Common Engineering Environment (CEE) is a set of preferred engineering software, support services, and infrastructure. The CEE is being created to improve the engineering environment through easier access to engineering tools, including simulation-based engineering and high performance computing resources. This integrated environment will enable lab-wide efficiencies.



Requirements Gathering

- Senior managers provided direction through a series of interviews
- A census of the engineering community took place to provide benchmarks
- Four Day event.....A group meeting occurred in June with the project team and engineering representatives to align on the need and identify future state
- Current requirements gathering exercise will result in updated deliverables in early October



CEE Goals

- CEE Project: provide consistent support for engineering tools in the standard set. This consistent support is the "leap" in service that will increase the efficiency of the engineers. It will provide an incentive to engineers to use a standard set of software, increasing their ability to collaborate with one another and provide more opportunities for infrastructure and high performance computing service providers to meet their needs.
- SAMS Project (two high level goals):
 - tracking of software licenses in which Sandia has an interest and enable reapplication of software licenses across the enterprise. Through the SAMS project, the Common Engineering Environment will provide centralized licensing of desktop software, including engineering software, allowing unused licenses to be "recycled" to other users, and providing greater leverage over software vendors by consolidating Sandia's purchasing power.
 - provide a single location for CEE users to purchase, download and install, and check in un-needed CEE software.



2008 Activities

- Choose a set of software that CEE project plans to support
- Choose three appropriate pilots, developed detailed pilot plans and deploying pilots
- Evaluate pilots and planning pilot continuation, expansion, redirection, or decommissioning
- Perform two evaluations of software and methods of increasing the use of modeling and simulation and high-performance computing tools by engineers
- Plan and deploying connections to existing support structures for CEE software not chosen for piloting
- Plan methods to enable greater user collaboration
- Developing communication and data management plans
- Partnering with the SAMS project:
- Begin license consolidation for CEE software:
 - Creation of User Profiles (engineer, designer, e.g.) to enable CEE
 - Customer acquisition of licenses real time (may require manual process)
 - Automatic installation of acquired licenses
 - Reassignment of licenses to new users
 - License scavenging based on transfer of the owner or a machine taken out of the population
 - Checking unused licenses into the license pool



Sandia Meeting Goals for EPI Center Visit

Primary goal of obtaining best practices and lessons learned and to gather information for each of the formal agenda items from the following perspectives:

- **processes/metrics**
- **easy wins/low hanging fruit (what can we take (quickly and easily) from EPI and use/apply/leverage?)**
- **communications**
- **organizational structure**
- **funding (how do you keep this going?)**
- **future plans: where you are going/future plans/architecture**
- **configuration and change management**