NCSA Introduction

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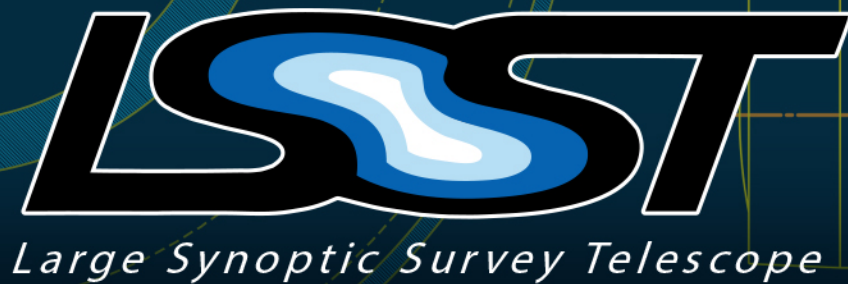# NCSA: team introduction

- NCSA is a national center:
  - Deploying large-scale production cyberinfrastructure (hardware & software);
  - Conducting research in interdisciplinary compute- and data-intensive science and engineering (CDSE);
  - Embedded in a leading public research university (UIUC);
  - Engaged in CDSE industrial partnerships & economic empowerment.
- Long history of engagement in data-intensive astronomy, recently Dark Energy Survey (DES) and LSST.
- Early commitment to join the project as the LSST Archive Center in 2003. Substantial financial and institutional commitment to the success of LSST.
- Goals in DM:
  - The success of LSST.
  - Delivery and performance.
  - Strong partnership with the DM and LSST subsystem.

NCSA: organization and roles
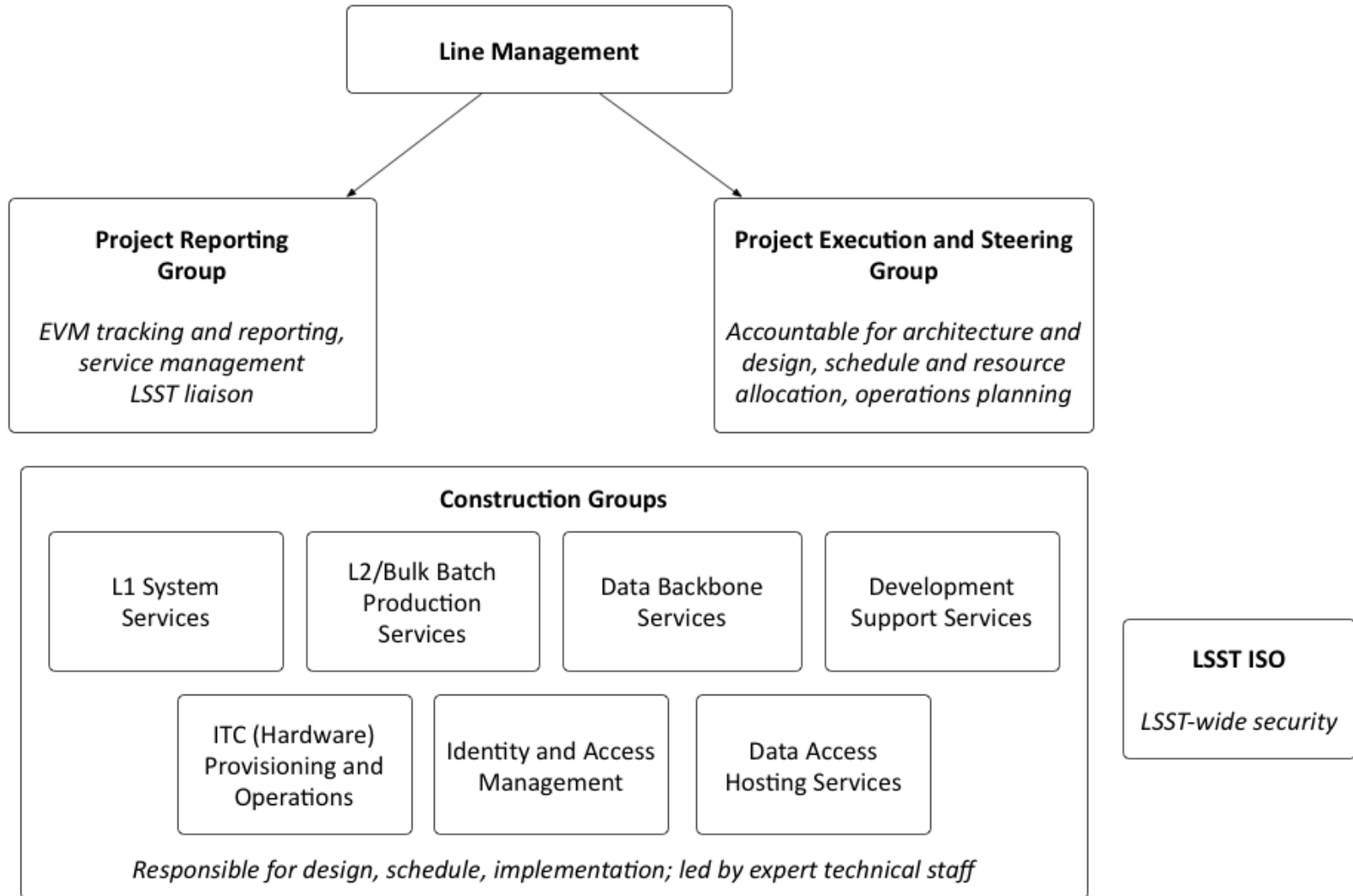
NCSA: constructing DPP services
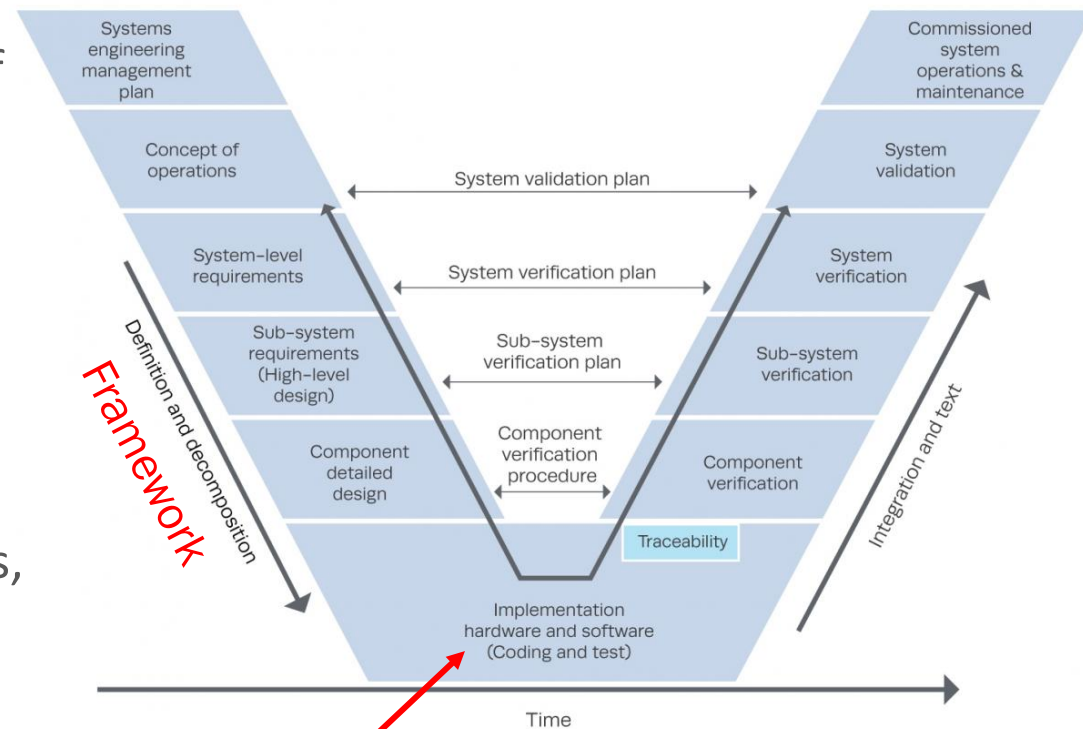
NCSA: experiences
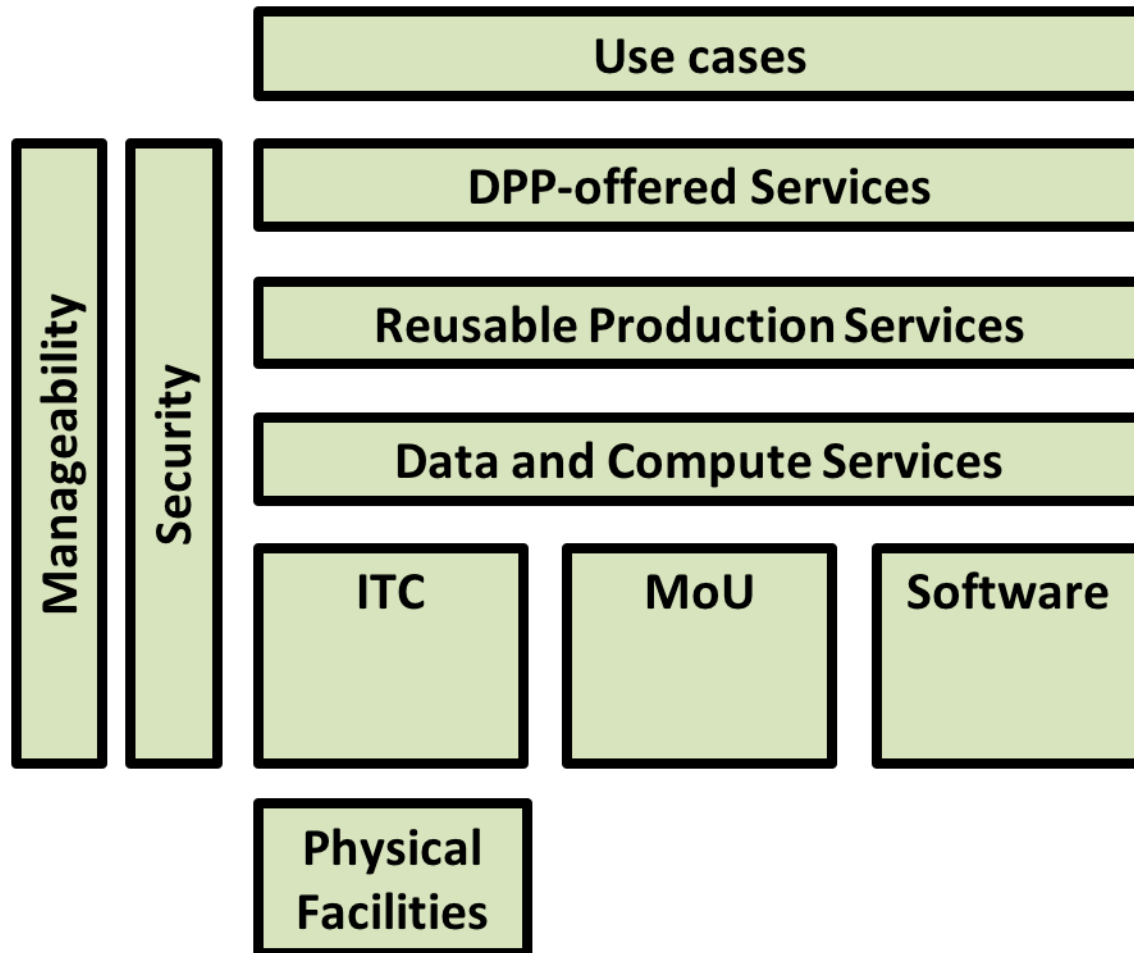
- Existing DM design needed re-baselining.

- We broke down the DPP system in terms of services that need to be provided to the users and within the project.

- Focused effort on integrating operations into the re-baselining process.

- Key goal is well-understood costs, traceability to requirements, and delivery on time within budget.

- Framework for value engineering and scope control.

How we do agile

- The NCSA software construction tasks are diverse. Each technical area is led by a senior person with one or more staff. Construction groups can be as small as 2-3 people, and the formalism has not shown to be useful.

- The steering group (when not over-burdened by planning ☺) oversees at the level of stories within epics and by periodic steering meetings involving questions and demonstrations, and plays the role of the product owner.

- The reporting group approximates the role of the scrum master by periodically visiting staff and discussing story progress. This reporting group has been strengthened to ensure accurate and timely reporting to the LSST/DM PM team.

- We have construction activities which we do not understand fit into an agile framework, e.g., annual hardware provisioning and operation of services needed for construction. However, these activities are planned in the story framework.

How to improve agile

- A real EVMS framework with a well-defined baseline that gives a complete roadmap and milestones through delivery of the project is needed to provide project context for detailed agile activities and to assure delivery of a working system. The working system also includes items typically supplied by non-agile activities, such as setting up the facility and production processes.

- Project-level processes.

- Good fences make good neighbors.