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# CGrADS Management

## Overview & Issues

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Director

[http://hipersoft.rice.edu/stc\\_site\\_visit/talks/Management.pdf](http://hipersoft.rice.edu/stc_site_visit/talks/Management.pdf)

# Management Overview

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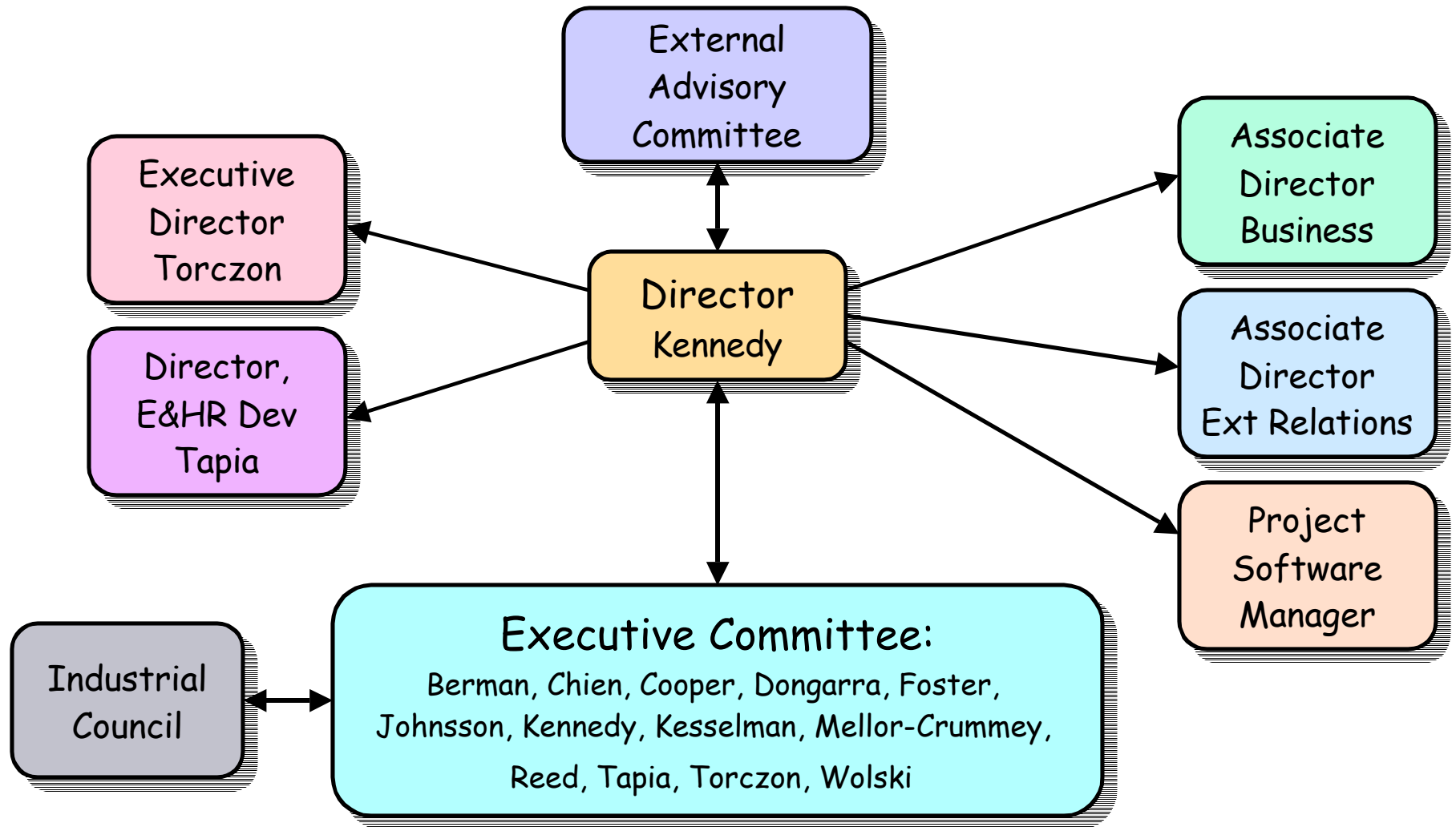
- Organization
  - Executive Committee
  - Operations
  - Oversight
    - External advisory committee
- Planning and Review
  - Annual cycle
- Meetings
- Planning Documents
- Information Dissemination and Outreach
- Budget

# Management Introduction

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- **Our Credentials**
  - **HiPerSoft: A Rice Research Development and Management Organization**
    - **Ken Kennedy (Director), Linda Torczon (Executive Director)**
  - **Managed CRPC, a distributed STC with 7 sites**
    - **Cited for exemplary management by NSF and NAPA**
  - **Currently manages the GrADS project**
    - **9 sites, 13 PIs**
- **CGrADS: a major challenge**
  - **Integrated Research Project**
    - **Goals include building major software infrastructures**
  - **Many sites involved in research**
  - **Extensive planning required**

# Management Organization



# Management Vehicles

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- **Workshops**
  - Three research workshops per year
    - Summary of progress, discussion of technical direction
  - Workshops include planning meeting by Executive Committee
- **Executive Committee Teleconferences**
  - Approximately one per month
- **Subproject Teleconferences**
  - Often weekly
- **Documentation Series**
  - Numbered design and planning documents

# GrADS Planning Documents

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- **GrADS Compiler/Library/Scheduler Interaction Scenario.** UCSD (Dail, Sievert, Berman), UTK (Petitet, Dongarra), Rice (Mazina, Mellor-Crummey), June 2000.
- **Contract Renegotiation.** UCSD (Sievert), January 2001.
- **GrADSoft - A Program-level Approach to Using the Grid.** Rice (Mazina, Mellor-Crummey), UCSD (Sievert, Dail, Obertelli), March 2001.
- **Specifying and Monitoring GrADS Contracts.** UIUC (Aydt, Mendes, Reed, Vraalsen), April 2001.
- **Numerical Libraries and the GrADSoft,** (Vadhiyar, Dongarra), August 2, 2001.
- **GrADSoft and its Application Manager: An Execution Mechanism for Grid Applications.** Rice (Kennedy, Mazina, Mellor-Crummey), UIUC (Aydt, Mendes), UCSD (Dail, Sievert), October 2001.

# Establishing Budget and Priorities

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- Setting project direction and allocation of resources will be the responsibility of the Executive Committee and the Director
  - Part of the annual planning cycle
  - Advice from the External Advisory Committee and the Industrial Council
- Stability of Executive Committee membership
  - Establish and evolve a team vision
  - Spin out subprojects involving groups of investigators
- Evolution of subprojects
  - As new projects are devised, resources will be transferred from projects being phased down or out
  - We will seek supplementary funding for efforts that need special resources
    - Partners can be added via this mechanism

# Administrative Operations

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- Director
- Lead Institution Staff
  - Executive Director
  - Associate Director Business
  - Associate Director External Relations
  - Project Software Manager
  - Education and Human Resources Development Administrator
    - Associate Director EHR Development (Cynthia Lanus)
- Administrative Points of Contact
  - Non-PI administrator at each location
    - Respond to requests for information, reports, etc.



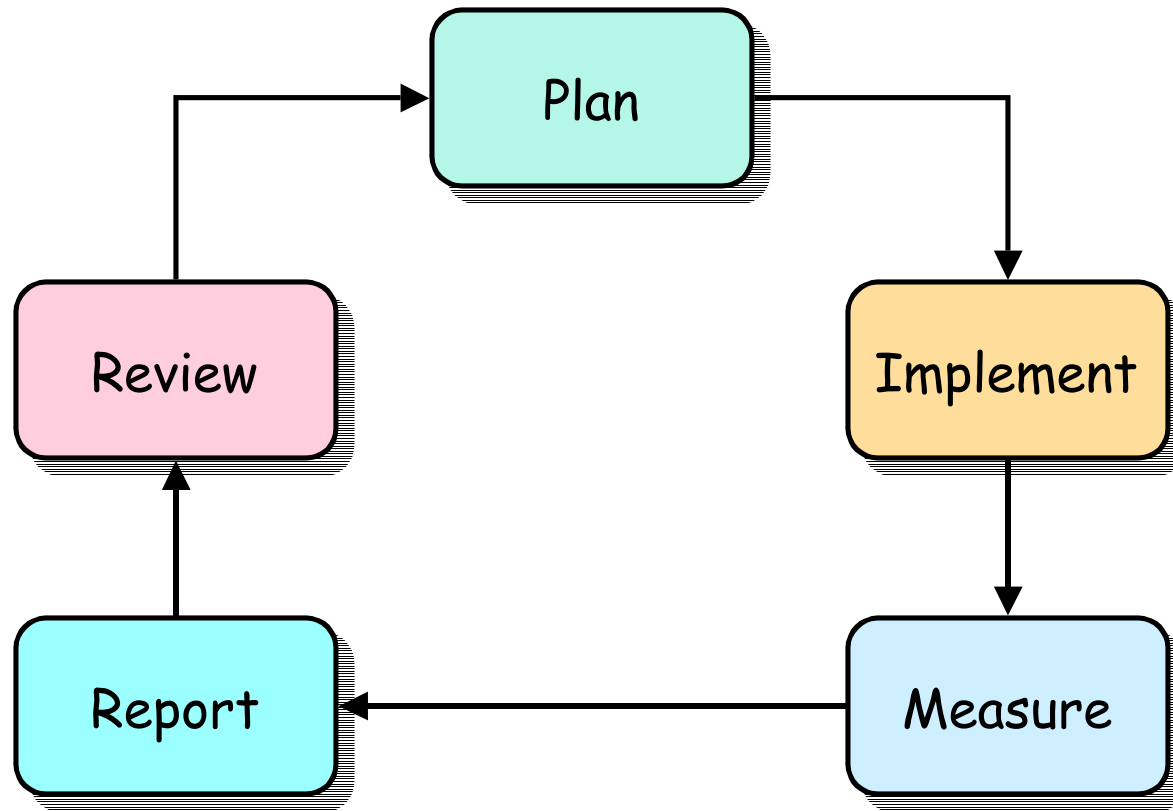
# Software Development Management

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- **Project Software Manager**
  - High level employee, with extensive software management experience
  - Coordinates software development and release at all sites
  - Coordinates with local software development managers
  - Reports to Director
- **Professional Programming Staff**
  - Employed at most sites
- **Principal Investigators**
  - Supervise local software development staff
  - Oversee student research software development

# The NAPA Management Cycle

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# Management Cycle Details

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- **Plan**
  - Executive Committee
    - Input from Review process and from advisory committees
  - Subprojects and Education Programs
    - Participants
  - Numbered planning documents
- **Implement**
  - Subproject and EHR teams
    - Weekly telecons
    - Workshops
    - Reporting back to Executive Committee via involved PIs

# Management Cycle Details

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- **Measure**
  - Experiments and demonstration projects
  - Statistics about center activities
- **Report**
  - Annual report
  - Subproject progress reports
  - Technical reports and publications
  - Newsletter and Web site
- **Review**
  - Executive Committee meetings, External Advisory Committee
    - Decisions on priorities for next phase of planning

# Information Dissemination and Outreach

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- CGrADS Web Site
  - Information on all aspects of the Center activity
    - Access to reports and public planning documents
- Newsletter
  - Three hardcopy issues per year
- Focused Technical Workshops on Specific Topics
  - CGrADS researchers and members of the technical community
- Collaborations
  - With industrial sponsors and collaborators
    - Industrial Council a mechanism for feedback
  - With other academic and lab researchers
    - Managed by individual points of contact

# Budget

Category	Yr 1	Yr 1 Grads = Ed	Yr 1 @ 70%	Yr 1 @ 70% Grads = Ed
Admin	365	365	304	304
Education	251	995	251	934
Knowledge Transfer	288	288	73	73
SW Infrastructure & Middleware	631	494	477	340
Execution System	1544	1172	1017	676
Tools	725	490	541	336
Totals	3804	3804	2663	2663

# Summary

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- Management presents significant challenges
  - Integrated project, distributed team
- The CGrADS team has extensive experience
  - CRPC
  - GrADS project
- Organizational strategies are important
  - Executive Committee
  - Focused subprojects
  - Administrative Committee
  - Workshops
  - Planning document series
  - Annual planning cycle