


IT Guidance Committee Meeting – June 16, 2006

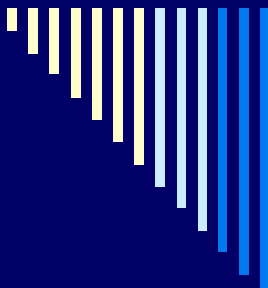
ITGC Web site:

<http://www.universityofcalifornia.edu/itgc/welcome.html>

Comments:

<http://www.universityofcalifornia.edu/itgc/itgccomments.html>

[Mailto: itgc@ucop.edu](mailto:itgc@ucop.edu)



Drivers: Core, business and administrative services

- ❑ Solve critical UC business problems
- ❑ Improve business processes
- ❑ Minimize irrational diversity & redundancy (of systems and information)
- ❑ Contain cost and improve efficiency
- ❑ Upgrade basic IT and systems infrastructure
- ❑ Use space effectively
- ❑ Accommodate growth



Drivers: Services supporting the academic mission

Many of the above **plus:**

- Research and learning
 - Enable highly local (often individual) distinctiveness and competitive advantage
 - Support continued and directionally uncertain innovation in research and teaching
 - Integrate computer science in support of “science”
 - Enable PIs to attract grant funding
- Recruitment and retention
 - Meet faculty and students’ changing information needs and communication behaviors



Frequently identified obstacles

- ❑ Policy environment emphasizes closed over open (e.g. intellectual property, copyright, security, identity management)
- ❑ Current funding models inhibit central IT investment and “catalytic” seed funding
- ❑ Inadequate incentives for system wide collaboration
- ❑ No mechanism to emphasize or even identify systemwide as opposed to campus needs and priorities
- ❑ Lack of formal governance and decision-making process for system wide initiatives



And commonly perceived tensions

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| □ Collaboration and resource sharing | ↔ | □ Local autonomy and constraint |
| □ Invest in enterprise-wide commodity services | ↔ | □ Invest in distinctiveness and innovation |
| □ Desire for leadership from OP | ↔ | □ Distrust of leadership from OP |
| □ Desire for leadership from the campuses | ↔ | □ Distrust of single campus's ability to represent the whole |
| □ Comprehensively upgrade and improve legacy systems | ↔ | □ Get to the next level |
| □ Desire to leverage | ↔ | □ Cost of collaboration |



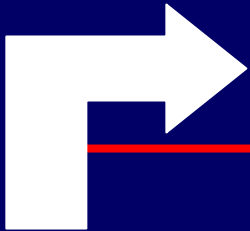
Cannot repress

- ❑ A palpable sense of timeliness and urgency or
- ❑ The fact that campuses see these common issues through very distinctive perspective lenses:
 - UCB – overcome financial constraint
 - UCI – accommodate enrollment growth
 - UCLA – accommodate extreme individualization
 - UCSC – deal with geographic isolation
 - UCSB – upgrade business systems comprehensively while building to supporting rapidly evolving research profile

Goal: seek efficiency in what's common to invest more in uniqueness

Adaptive Services Meet Local Needs to Build Competitive Advantage

- Support innovation in research, learning, patient care
- Support appropriately local business and administrative services
 - Tolerate/encourage diversity and uniqueness
 - Value heterogeneity, local configurability
- Collaboration characterized by information sharing and re-use



Utility Services Meet Common Needs

- Eliminate redundancies and artificial diversity
- Leverage investments to solve business problems
 - Lower costs, improve quality and reliability
- Collaboration characterized by use of reference architectures, standards, and by co-development



Administrative and business functions

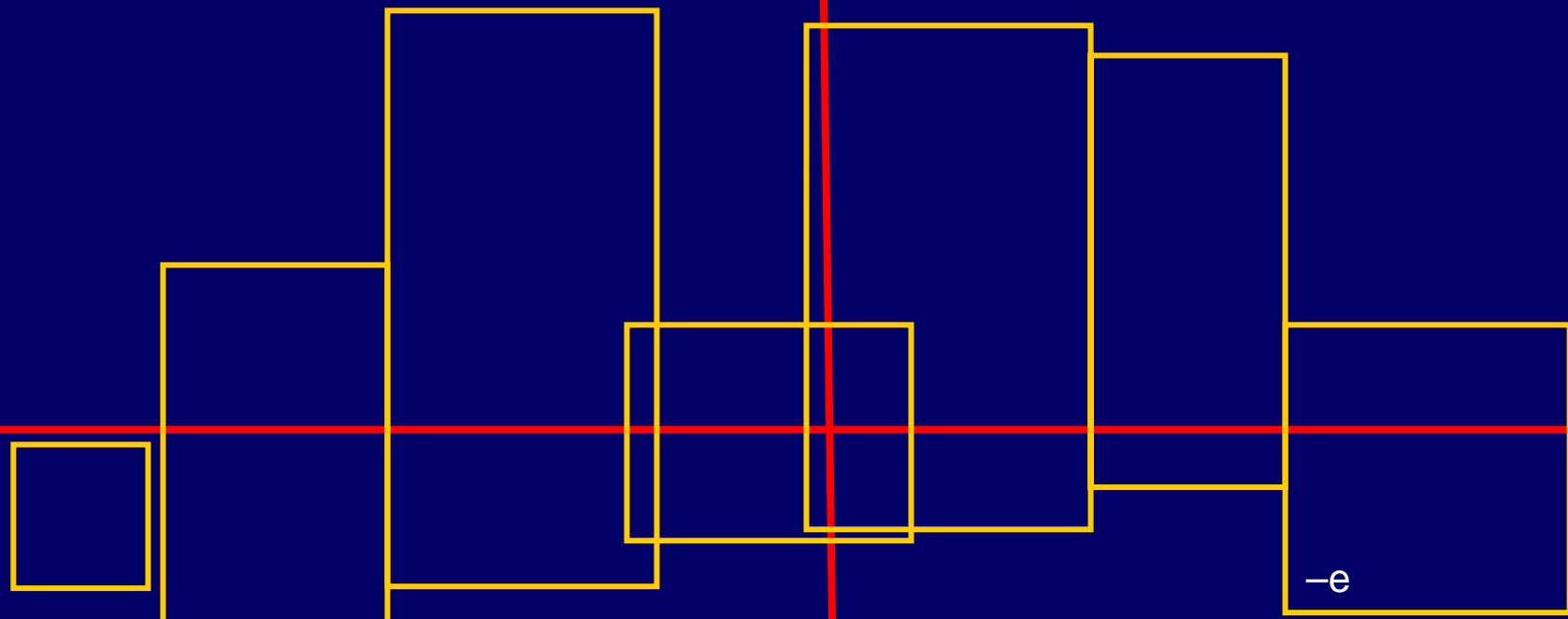
Research, teaching, learning, and scholarly communication

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| Mechanisms for governing and supporting collaborative efforts |
| IT policy, standards, good practices, guidelines |
| Network, disaster recovery, authentication, identity management |

Administrative and business functions

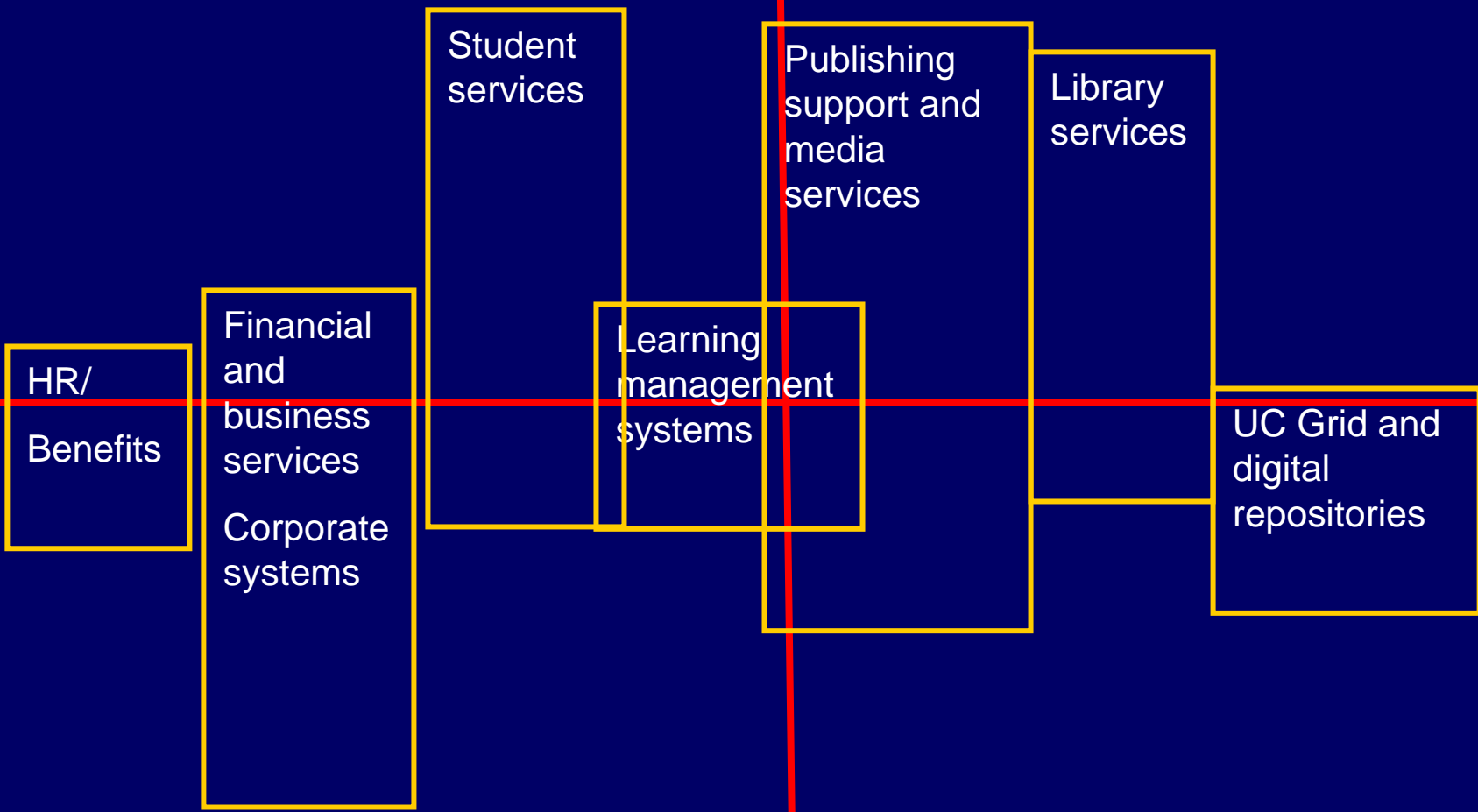
Research, teaching, learning, and scholarly communication

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Critical success factors

Funding – long-term systemwide support creates incentives for and builds trust in collaboration

Organization – surfaces, designs, and implements collaborative efforts

Leadership – facilitates cross-functional discussion, identifies and prioritizes common initiatives, and supports culture change

Staff recruitment and retention – ensures necessary IT skills and competencies

Governance – oversight of and decision-making for processes as well as projects

Communication – identifies opportunities and incentives for collaboration, builds consensus, informs, and supports stakeholders

More experience - more successes; more learning; more trust



Articulate and support models for collaboration that:

Comprehend **different** *modes of*

development: open-source, community source, out-source...

service provision: central, hybrid, campus-based, sourced from 3rd party (campus application service providers?)

campus participation: tier 1 (all campuses), tier 2 (some campuses)

funding: central, cost-shared, funded by early adopters

governance: independent and market-driven; shareholding partners; UC cartel



Articulate and support models for collaboration that:

- Leverage existing strength
- Are adapted to suit different needs and circumstances
- Don't require 100% campus participation

Frequent references for successful collaboration:

- At Your Service Online
- CENIC
- Libraries
- Effort Reporting System
- UC Trust (federated ID management)
- Community source (Sakai)
- System wide IT licensing and contract/vendor management



ITGC needs decision-making criteria.

Factors to consider:

- Synergistic – where the system achieves in a manner not possible for any of the campuses
- Value investing – bang for the buck whether measured by efficiency gain, opportunity cost, or academic quality and competitiveness
- What's missing (invest after gap analysis)
- On the basis of principle
 - Monetarist – invest in high-end and expect benefits to trickle down
 - Utilitarian – ensure baseline uniformity
 - Communist – support historically under-funded and underprivileged
- Achievability (because results build trust and experience) so emphasize
 - New over legacy (because legacy investments are harder to change)
 - Initiatives that leverage extant resources and expertise
 - Low-hanging fruit
- Investments above or below the line



Early successes grow experience in collaboration but require resources

- ❑ Benchmarking, guidelines, adopted standards, information exchange
- ❑ Clearinghouse of critical, trusted and timely information about new tools, approaches
- ❑ Registries of various kinds, of web service components, of software modules, a UC “Sourceforge”
- ❑ Practical projects that help assess and demonstrate the value of collaboration



Advanced Networking Services:

- ❑ Next generation intra- and inter-campus network capabilities
- ❑ Greater network bandwidth and reliability requirements for faculty research
- ❑ Equal support for high speed connectivity for all campus
- ❑ Technologies to balance security and access
- ❑ Leadership in national advanced network development
- ❑ Value added services enabled by the network (e.g. back up and recovery services; hosted repositories)
- ❑ Ubiquitous mobility-related technologies (e.g. wireless)



Instructional Technology :

- ❑ Faculty development for the use of IT in the classroom
- ❑ Adoption of (and adapting to) new instructional technologies
- ❑ Focus on IT to achieve learning outcomes (metrics)
- ❑ Smart classrooms
- ❑ Centers of excellence and competency centers for teaching and learning (“incubators”)
- ❑ Funding strategies for instructional technology
- ❑ Integrate research into teaching
- ❑ Student portals and e-portfolios
- ❑ Infrastructure for University-wide courses
- ❑ Campus support for student owned computers



Common IT Systems and Infrastructure:

- ❑ Data center consolidation for reduced cost and greater economies of scale
- ❑ UCwide IT licensing and vendor management
- ❑ Data security
- ❑ Next generation research administrative system capabilities
- ❑ Open source development strategies
- ❑ UCwide identity management
- ❑ Disaster recovery and business continuity investments
- ❑ Common infrastructure for academic and administrative computing: standards and data protocols
- ❑ Develop reference IT architectures for collaboration and interoperability



High Performance Research Computing:

- ❑ Shared, managed clusters at campus and inter-campus level
- ❑ Development of new research computing facilities to address space, power and cooling challenges
- ❑ Develop a UC grid portal with shared services
- ❑ Development of analysis and discovery tools for researchers
- ❑ Petascale computing, data storage
- ❑ Successful industry partnerships



Scholarly Collaboration

- ❑ Tools to support academic collaboration, “converged” technologies for voice, email and other personal productivity services
- ❑ Shared information, research, publications
- ❑ Integration of application and information delivery via user-facing portal and content management technologies
- ❑ UC open content gateway for sharing of Intellectual property



Stewardship of Digital Assets

- ❑ Tools, technologies and processes to create, host, manage, preserve and share research data
- ❑ Repurposing / sharing of information in teaching, research, administration
- ❑ Archiving of images and visual resources (museum informatics)
- ❑ “Inverting IP”: moving to a position of greater openness and sharing of intellectual property and content
- ❑ Addressing the legal, policy, and regulatory constraints affecting the creation of, access to and use of information for academic purposes