

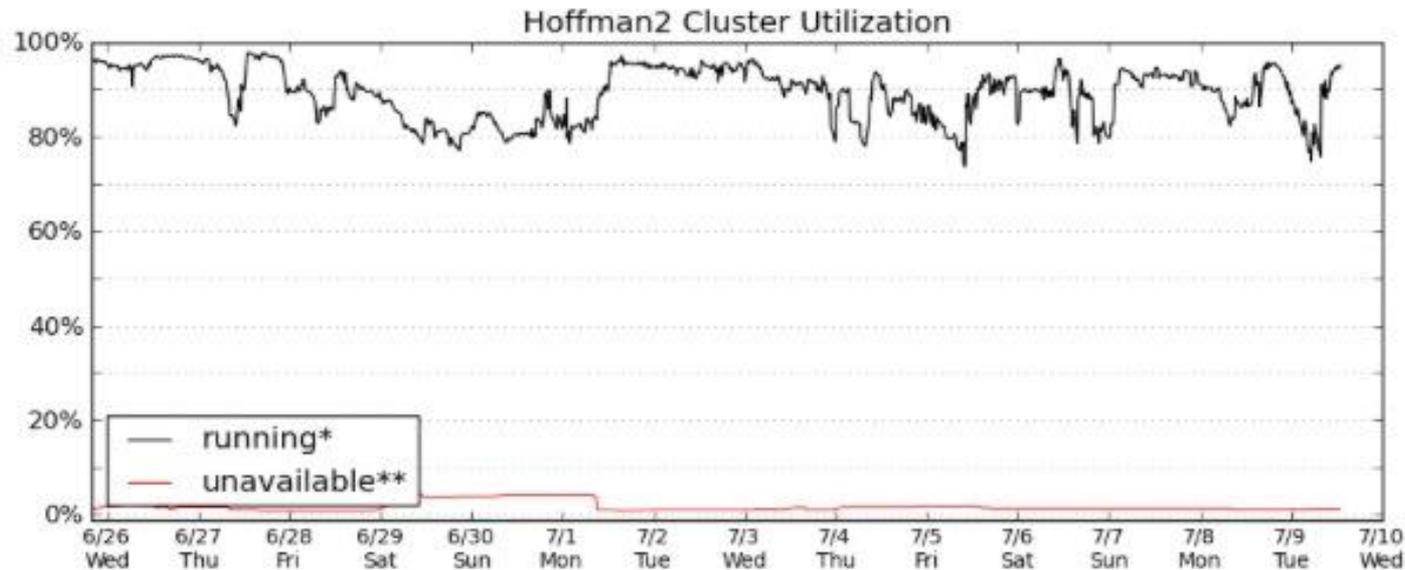
CASC Sustainability Workshop



Jim Davis VP-IT & CATO

- Currently 1,141 nodes, 11,052 cores, ~103Tflops. ~360Tflops
- 1,400+ users, 175+ research groups from 80 departments
- Processed 20 million jobs, 50 million core-hours in 2012

Load	Total Nodes	Unavailable Nodes	Total Cores	Running Jobs	Pending Jobs	Held Jobs	Peak Performance (TFLOPS)
95.1%	114	14	11052	4038	1622	24	102.8



Where is my focus and what keeps me up?

	OIT/IDRE Provided Services			Departmental Provided Services		
	FY 02/03	FY 12/13	Change	FY 02/03	FY 12/13	Change
Labor Costs	\$1,191.60	\$1,765.00	48%			
Infrastructure Costs	\$554.60	\$848.30	53%			
Total Costs	\$1,742.60	\$2,613.30	50%			
Labor FTE	11.4	12.7	11%			
Users Supported	150	1,200	700%			
Nodes	110	1,139	935%	989	285	-71%
Core/CPU's	166	11,056	6,560%	1483	22848	92%
Tflops	1.2	300	24,900%	5.3	28.3	435%
Storage (TB's)	10	2,000	19,900%	25	300	1,100%

**Research Programs/Real-time Impact
Informatics/Mobility**

Chief Academic Technology Officer

2009-10
Governance, Policy and Planning
Academic Technology Services
IT and Communications Infrastructure Planning
Campus-Wide Academic Applications
Security, Policy and Compliance Practice
Administration and Operations
Architecture and Practice

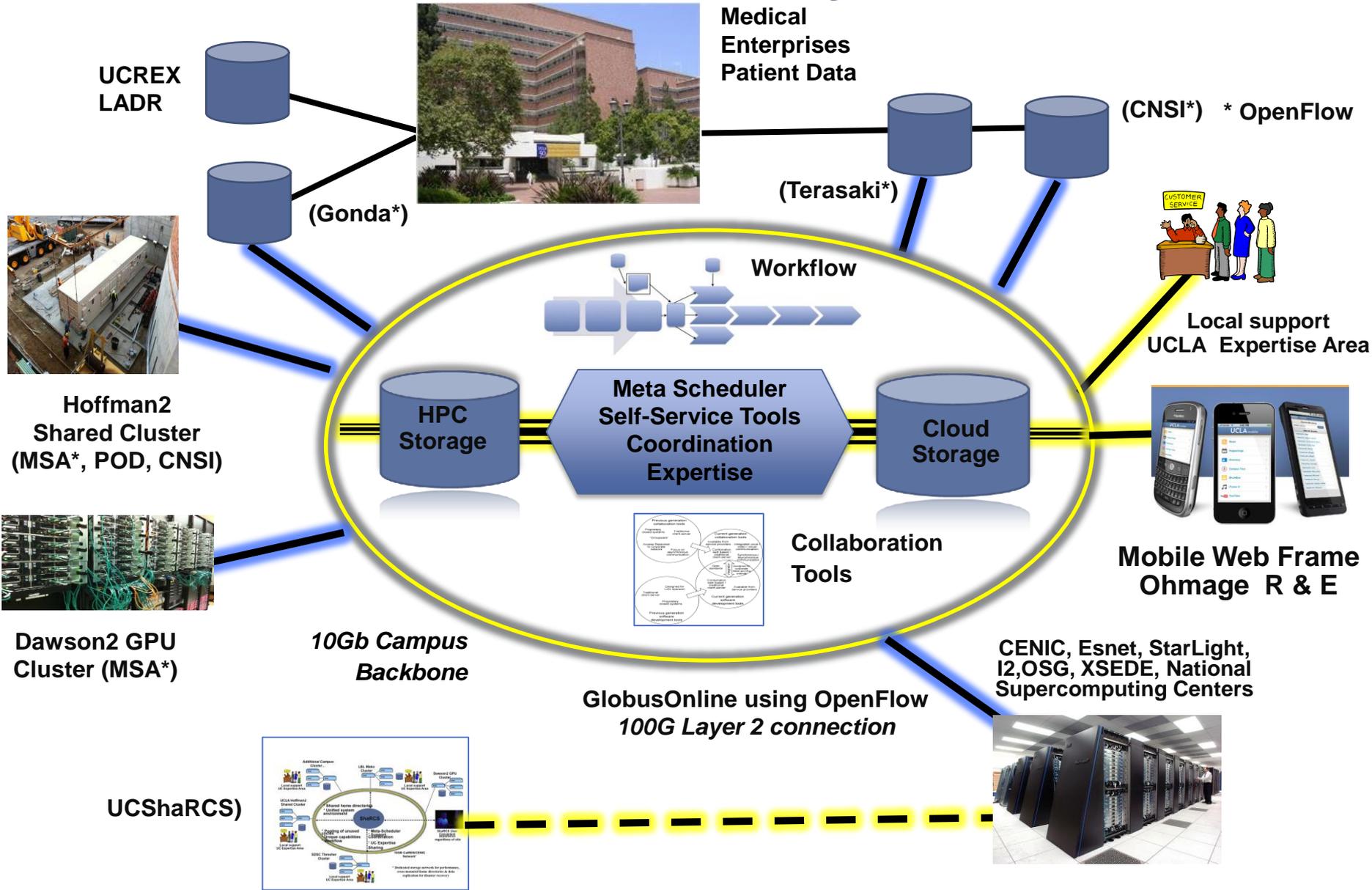
2013-14
Campus IT Planning, Infrastructure Alignment & Governance
IDRE (Institute for Digital Research and Education) Research Technology
Learning & Research, Web & Mobility Technology Practice
Educational Technology Systems & Administration
IT Strategic & Privacy Policy
Grant, Stewardship and Licensing Administration
Community Partnership Programs & Digital Citizenship

Research Informatics Strategic Plan – Strategic Themes

1. **Big Data**
2. **Citizen Scholar**
3. **Enabling a Broader Base of Researchers**
4. **Cross-Disciplinary Collaboration**
5. **Multi-Use Data**
6. **Mobile Technology & Social Networking**
7. **Real Time Dynamic Data**
8. **Image Data**
9. **Data Visualization**
10. **rEcosystem**

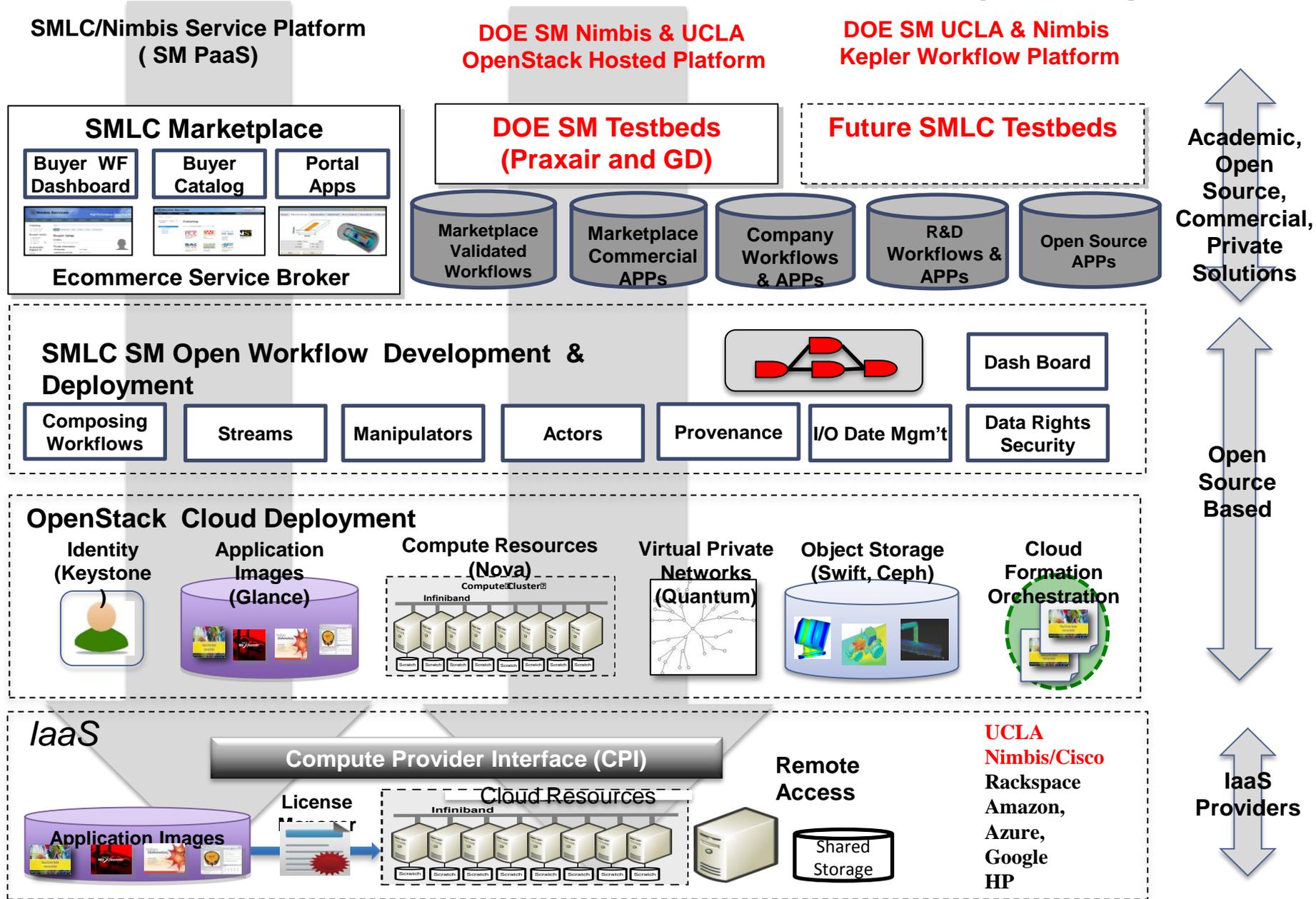
Challenges	Libraries, Theatre, Film & Television, Arts & Architecture	Health Sciences: Medicine, Dentistry, Nursing & Public Health	Physical Sciences, Life Sciences & Engineering	Management, Law & Public Affairs	Social Sciences: Humanities, Education & Info. Sciences
Campus research informatics expertise not known/not accessible		X	X		
Standards for data archival		X			
Inadequate local storage		X	X		
No standard protocols for cataloging/preserving code or solutions	X		X		X
Data lost/inaccessible because of formats or technology upgraded	X				X
No mechanisms to support research equipment staff between grants	X				
Data backup systems not standardized				X	X
No mechanisms for researcher collaboration and data sharing				X	
No inventory of database subscriptions				X	

UCLA's IDRE rEcosystem Build

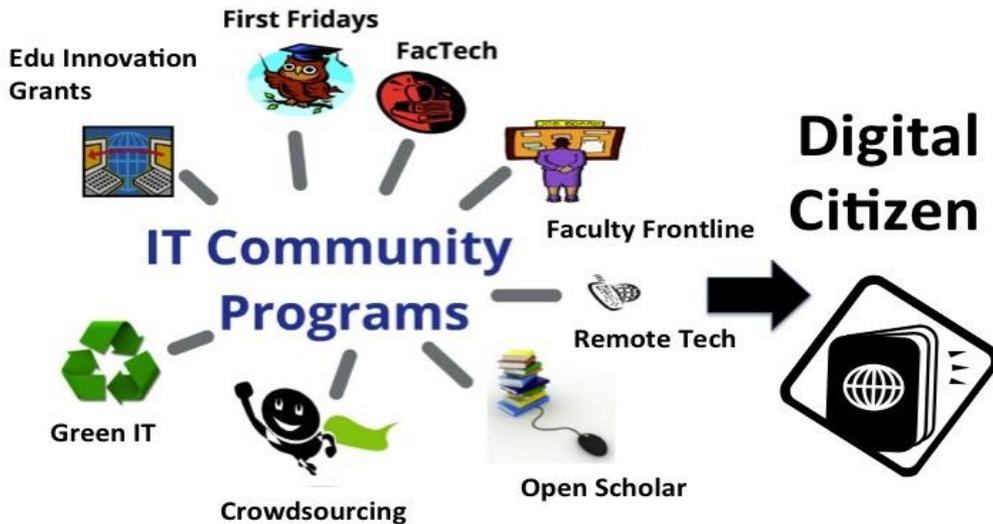


Public-Private Partnerships

Real-Time Workflow as a Service (WfaaS)



Institutional Emphasis on People



Digital Citizenship

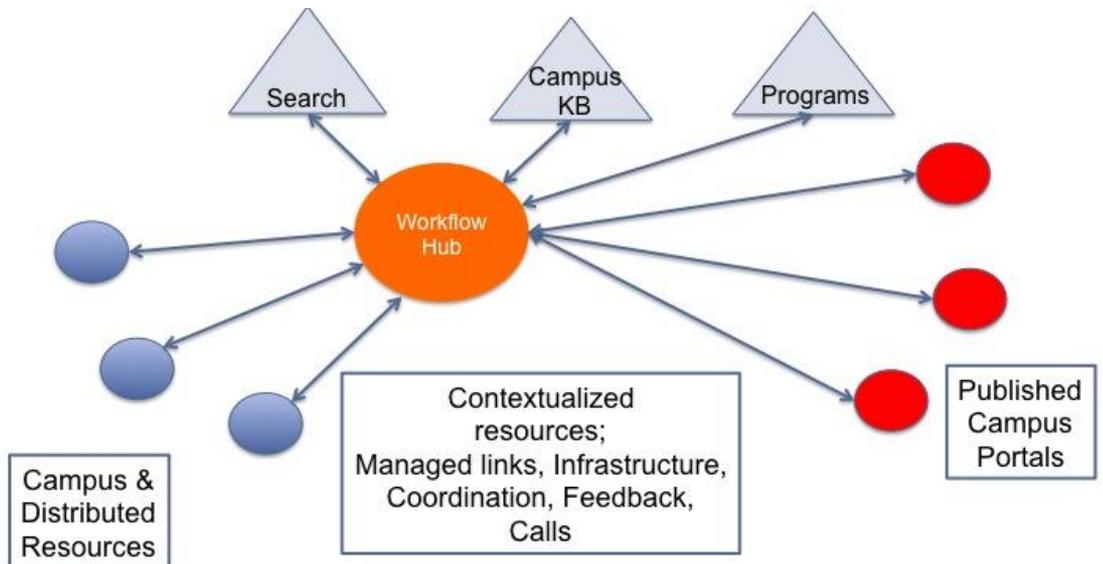
Innovation with IT

“The Community Supporting the Community”

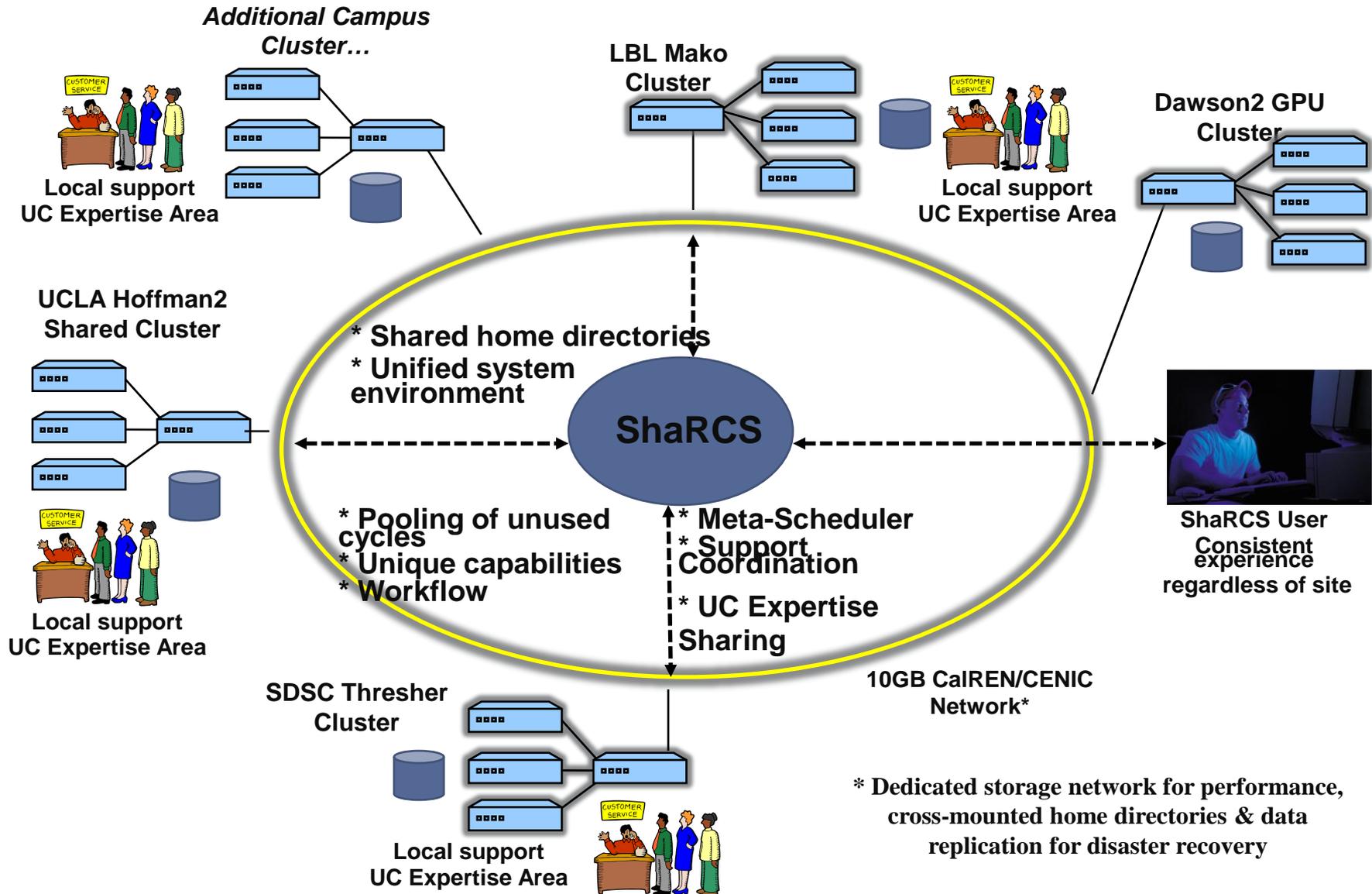
Network of Resources Hub

How to take action

Workflow



UC System Shared Research Computer Services



UCLA Data and Research Informatics

Medical Informatics	Collected and Observational Data	Computation and Simulation Data	Library
HIPAA – De-identification Digital Imaging Common data indexing strategies Basic and translational informatics	Modeling and version control Multiple digital formats Large database tools Curation Data management and analysis tools	Large data - beyond TB Visualization/Simulation Large-scale datasets Cloud Computing Common Workflows	Managed academic content/publishing High-value archives Data curation and management University resources for scholarship

Informatics and Computational Data Development Proposal

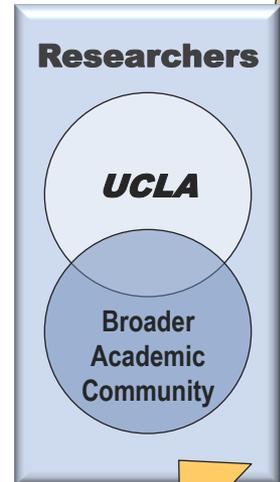
Campus Enterprise Decision Data	Individual Centers, Schools, and Divisions	Individual & Group e-Portfolios, Education Archives
Data warehouse Access architecture Reporting and access tools	Discipline-specific data archives Topic-specific research data Project data/results.....	Instructional content Content creation and management Preservation

Academic Resources and Content

GOALS

- Facilitate innovative and impactful use of UCLA research
- Foster and facilitate innovative research
- Build search engine prominence
- Facilitate discovery through data accessibility
- Engender broad public reach

New forms of IT-enabled scholarship reinforce UCLA's core research strengths ...



Searchable, Accessible data and research results ...

Digital (Web) Presence

Public, Press, Gov't & Inst. Marketing	Recruiting And Program Promotion	Research Collaboration Hubs	Data Hubs	Publications Linked to Data Sets	Education Portfolios, Collaborations	Enterprise Info., Training, Resources
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Content Management, Survey, Voting, On-Line Meetings and Management, Webinars, Shared Documents, Comment, Registration Validation, Workflow, Publishing, Portfolio Management, Templates

Dissemination of data and research results through...

