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Bootstrapping Institutional Capability

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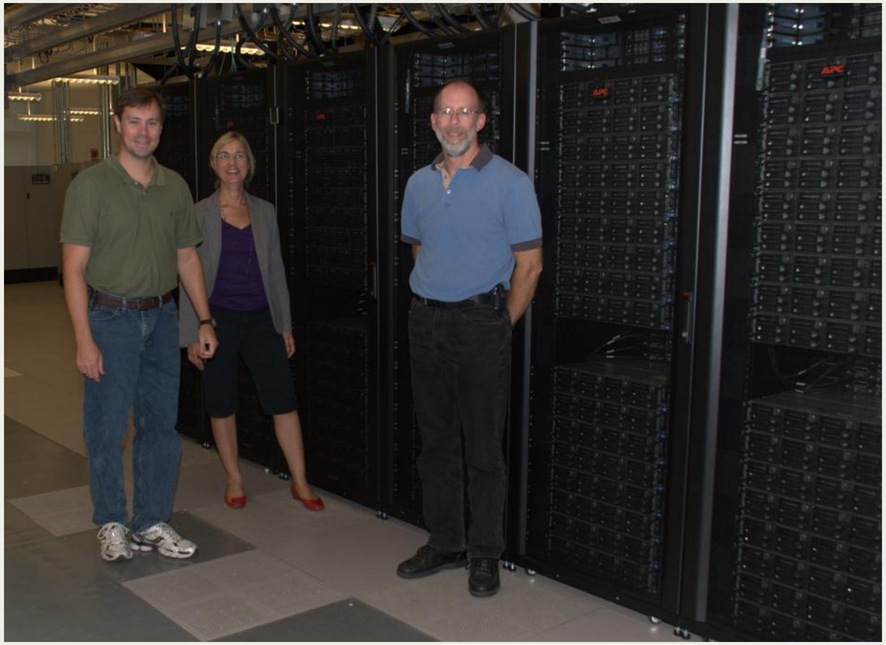
Joint Techs Winter Meeting

January 24, 2012

Research Computing @UNC



- Shared central compute & storage resources
- Systems team
- Engagement team
- Bio, physical, mathematical & social sciences, humanities

ITS Research Computing

Research Computing is...

› Computational Resources
High throughput, high performance and high capacity computing. Diverse platforms to fit research needs from single or multiple jobs to large memory and parallel computing.

› Training and Development
Courses targeted for researchers and students.

› Software
Licensed commercial software and compilers in addition to an extensive installed software base for technical computing.

› Technical Support
Support for compiling, porting, using tools, submitting jobs, software packages, storage, data management, and parallel computing.

› Consultation and Engagement
Computational scientists and specialists interested in collaboration and engagement opportunities.

› Data Storage
Mass storage tape archival, large file systems, data management and data storage expertise.

› Database Hosting and Administration
Dedicated DBA to support UNC-Chapel Hill Research databases.

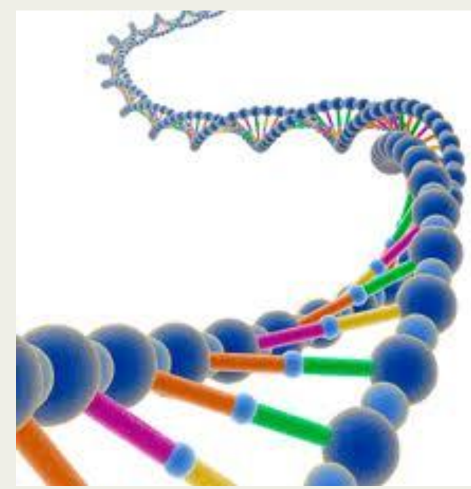
Centrality of Computing

"Excellence in research sustains the University's reputation, its ability to attract talented faculty and students, and its ability to compete for funding. Computing has become fundamental to all fields of research."

- Provost's Task Force on Research Computing

Research initiatives with IT implications

Carolina announces $245 million public-private investment in genomics



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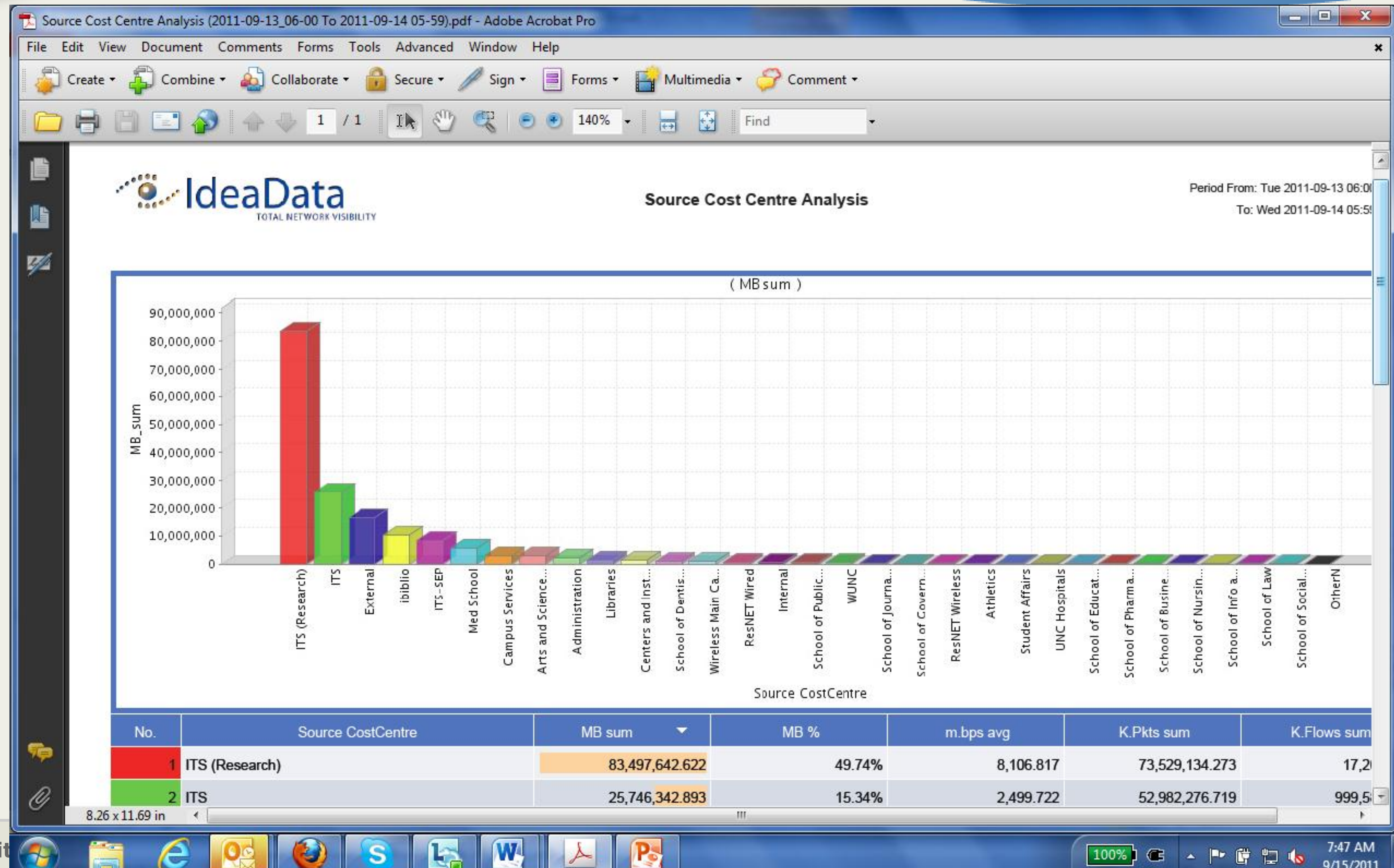
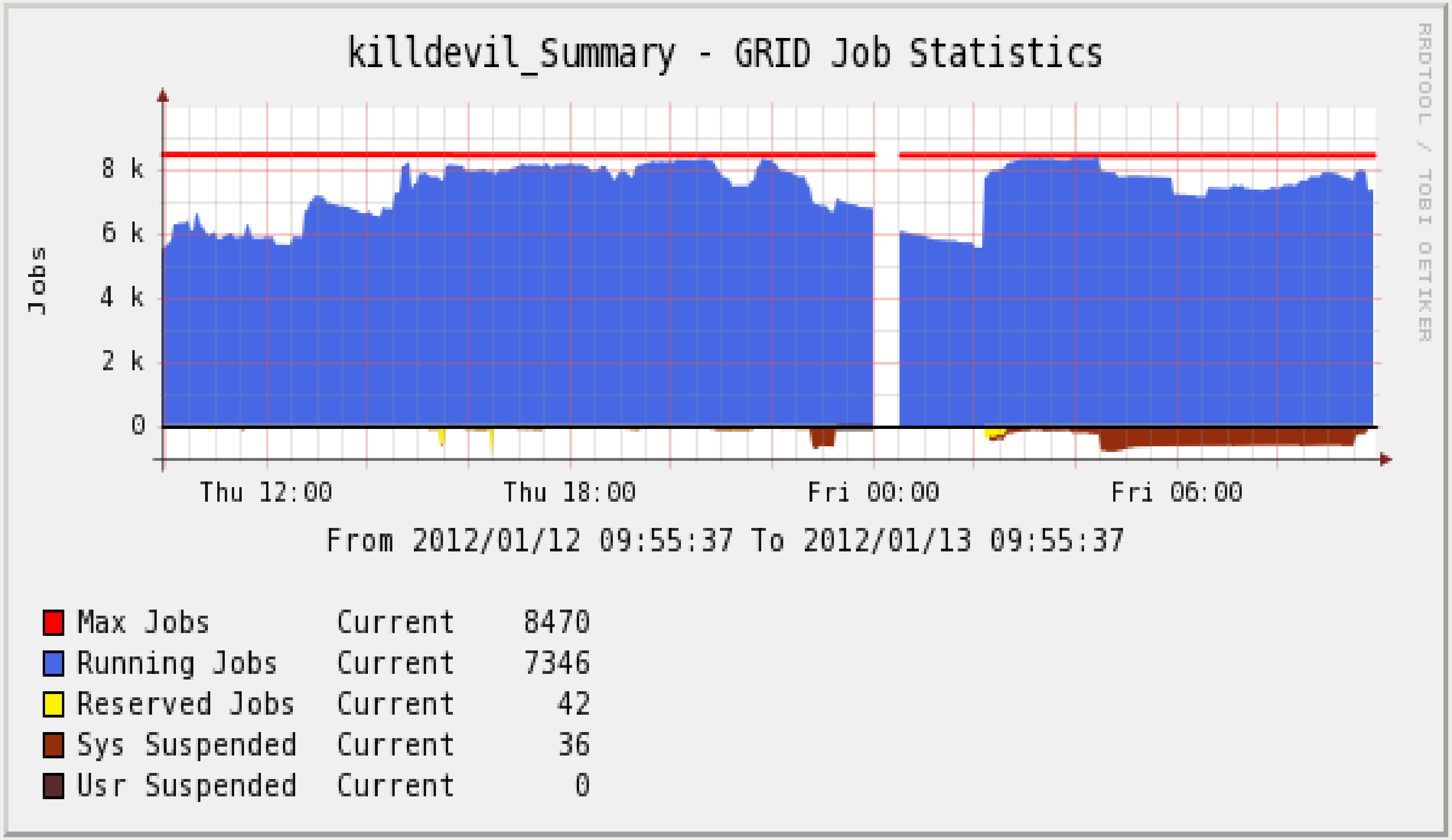
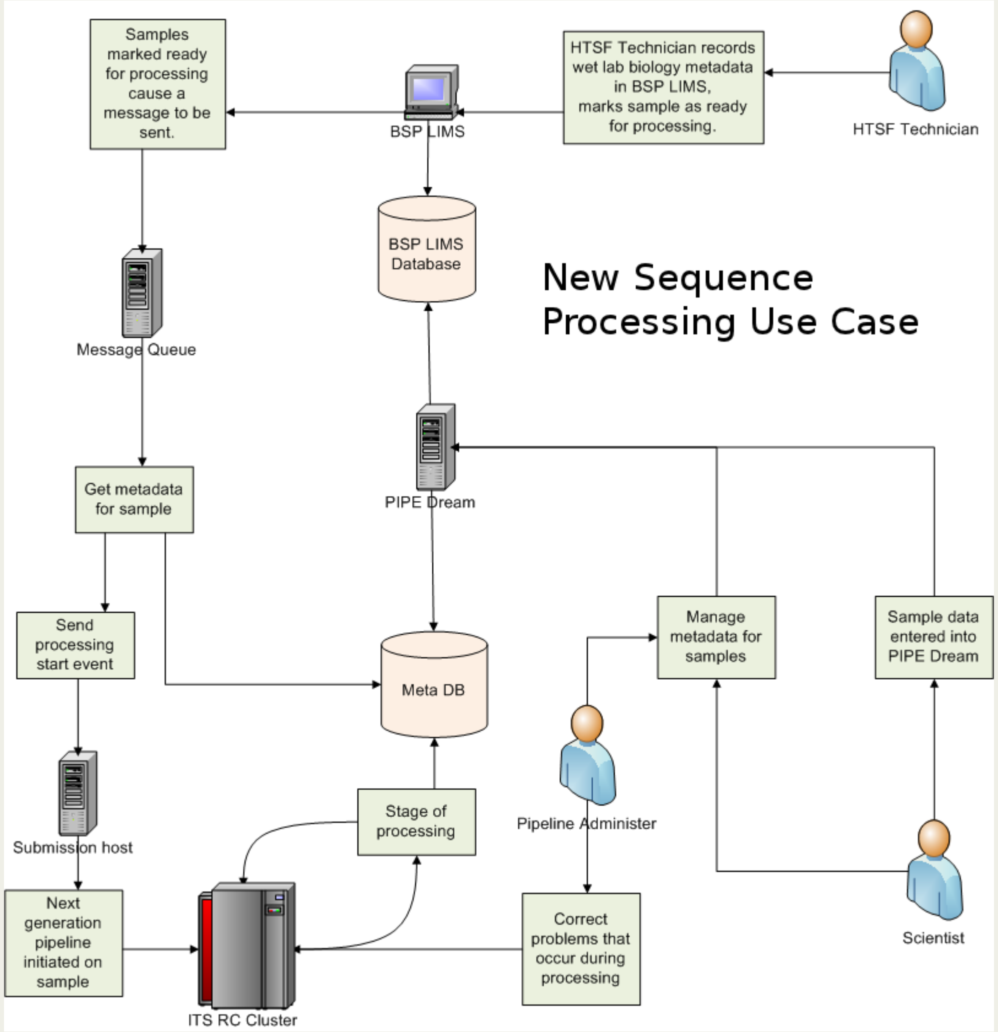
More data



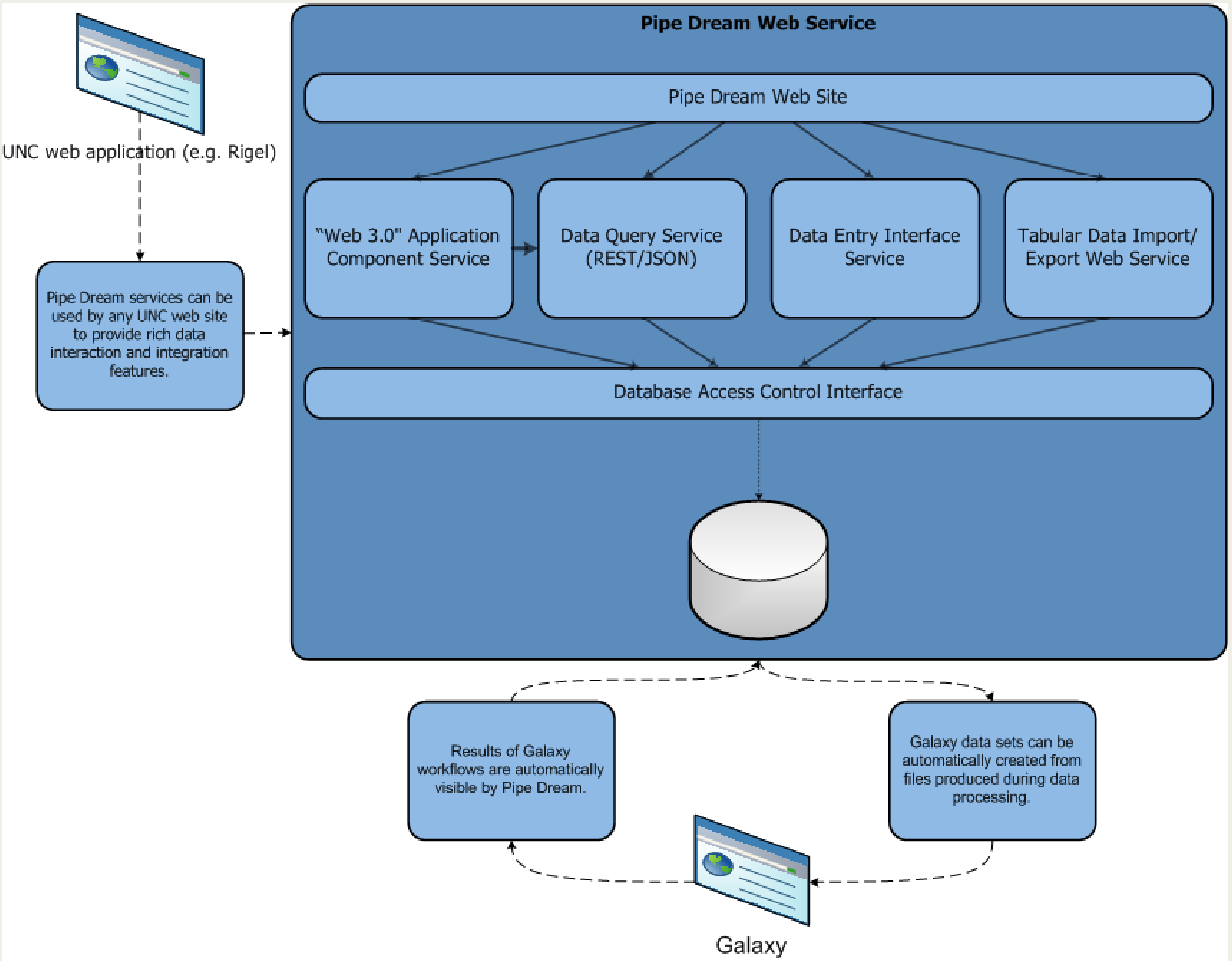
More computing



More complex problems



More capabilities required to solve those



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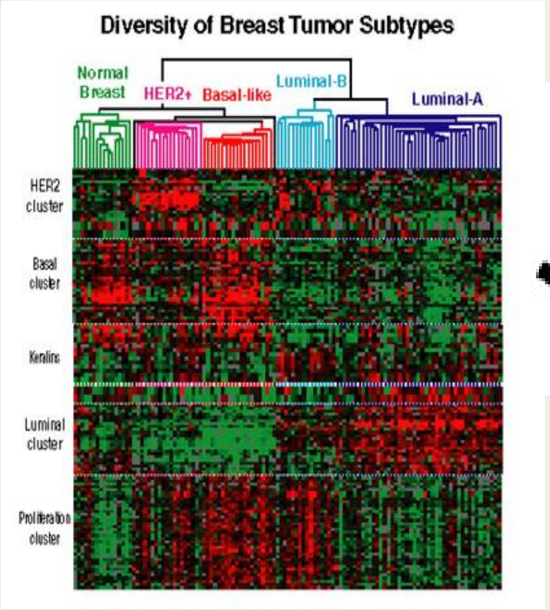
Excellence in research is the goal, not IT



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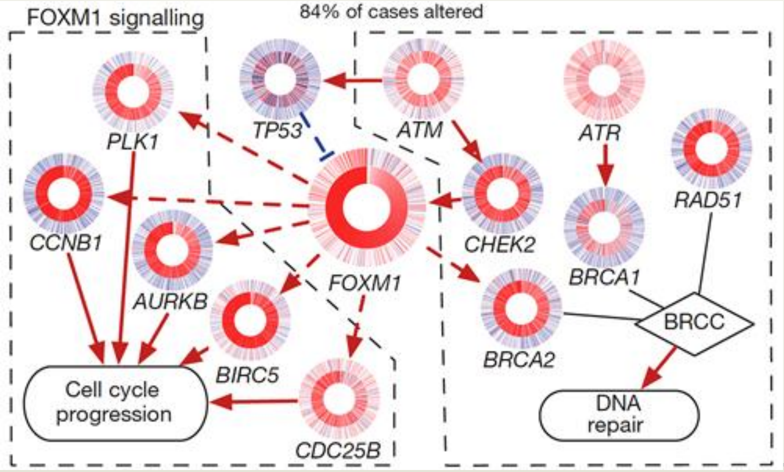

Challenges

- Hard to quantify future demand
- Needs vary widely and wildly
- People & things move around
- Multi-institutional collaborations
- Security
- Data management
- Sustained funding
- Translating science needs into IT requirements

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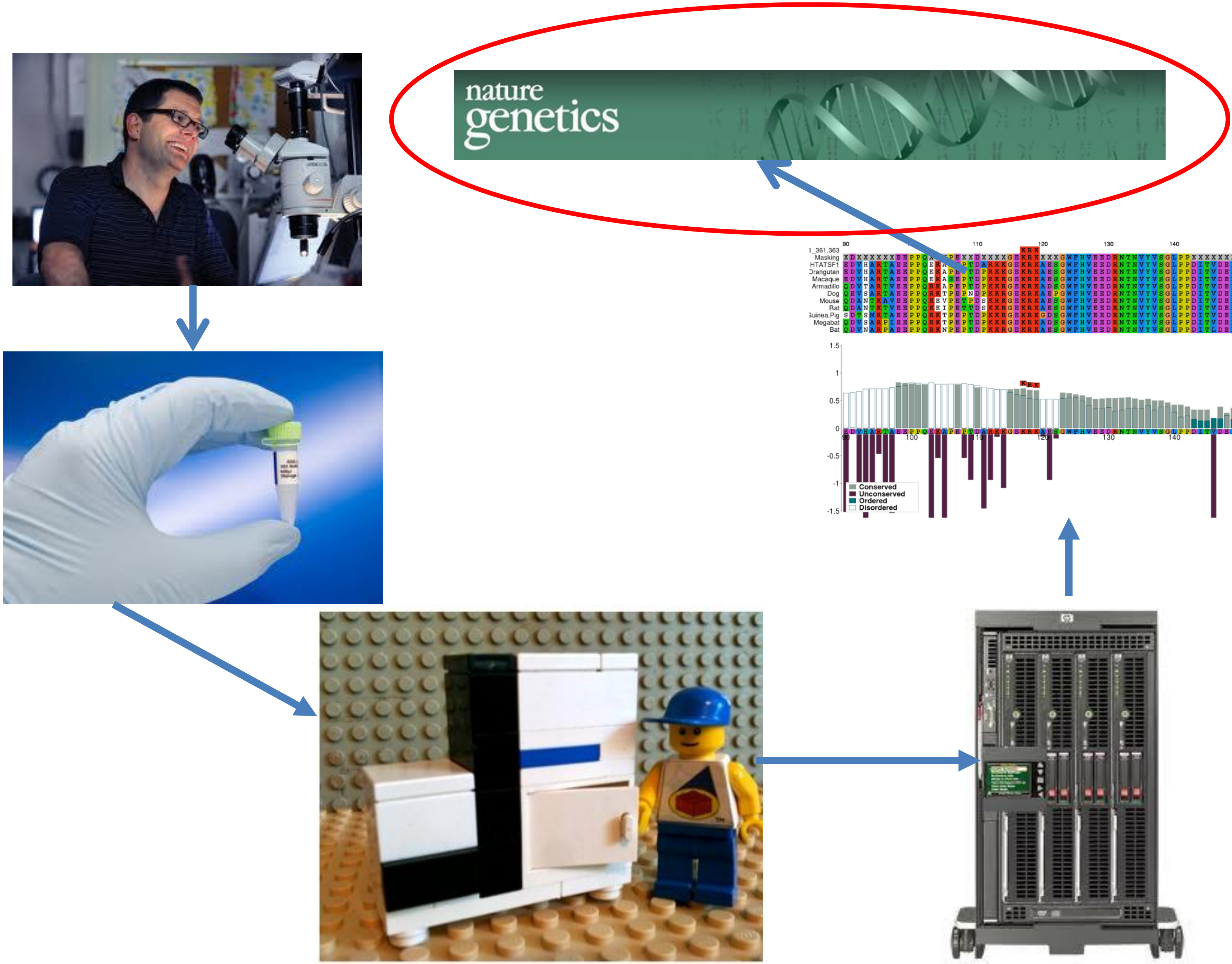
Observations

- Campus capabilities may be more important to more researchers than regional/national capabilities … at least in the short run
- Institutional leadership is key
- Partnerships with faculty are critical
- Be at the table as early as possible
- Learn to tell the story well,

  in different ways


nature
genetics
HTATSF1
Orangutan
Macaque
Armadillo
Dog
Mouse
Rat
Guinea.Pig
Megabat
Bat
Masking
Conserved
Unconserved
Ordered
Disordered

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Thank you

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