

## RCI Workgroup Input “Ask”

November 9, 2015

We are seeking input regarding RCI needs in your discipline or school to provide material that will help us draft components of an initial RCI vision statement. We will then bring this back to the group for additional discussion and refinement. Input in any form would be helpful, but below we provide some questions that you can use to help structure your response.

Please emphasize what you feel the priority needs are in your discipline or school, perhaps based on either what you see as the greatest impediments to your research, or what would have the most value to your research going forward.

### **(1) Infrastructure**

*Please indicate what RCI you currently rely on in your research, what the unmet needs are, and how you expect them to evolve over time. Feel free to express your needs in any way convenient for you; please be specific where possible, but general requirements are helpful as well. Below are some types of infrastructure you might consider.*

#### Computing, Networking, Storage

- Computational access beyond desktop computing capabilities; multiple compute clusters configured to facilitate categories of research and education; baseline compute facilities available to all campus researchers, augmented by grant funding
- High-speed network connectivity on-campus and externally; extend UCI-Lightpath to additional buildings, increase bandwidth to 40 Gbps; add 100 Gbps external link
- Longer-term storage: large, robust, accessible by others, indexed/tagged/etc to make information discoverable by others, and to facilitate collaboration among campus and external researchers
- Data Center facilities to house research computing equipment

#### Working Environment

- Software, including preferred operating system(s) (e.g., Linux, Mac, Windows) and applications (licensed at a cost, open source, locally developed)
- Databases and other data sources (licensed at a cost, resources shared with/from elsewhere at no cost)
- Other licenses to resources and services
- Collaboration tools and services

#### Cyber-facilities and Access

- Access to HIPAA/FISMA/dbGap/etc compliant compute cycles and storage
- Visualization
- “Presentation” spaces to interactively share information and educate
- Access to national/international research resources

### **(2) Staff Services**

*Please indicate which of the following or other expertise/service needs you have. Which do you rely on now, what are the unmet needs, how would they evolve over time? If UCI added*

*some number of research computing specialists, what expertise would they need to have to facilitate your research goals?*

- “Concierge” service to guide researchers to available services
- Discipline-aware and other research computing specialists; well versed in key scientific software and techniques (including GIS, Visualization, Stats, Cloud resources)
- Programmers with various specialties including parallel processing, database, etc.
- Web site assistance (the Web is the connection between what UCI researchers are doing, other researchers, granting agencies, and the public we serve)
- Security assistance: meeting stringent FISMA, HIPAA and other security requirements; compliance assistance for Open Data publication initiatives

### **(3) Education and Training**

*How are graduate students and others in your field “trained” in RCI skills currently? What types of training should be readily available on campus to undergraduates, graduates, researchers, or faculty? What courses should be added to the undergraduate or graduate curriculum?*

- Undergraduate and Graduate training in computational, data analysis, Linux, open-source tools, and other “cyber” skills
- Computation, data analysis and other RCI tool curriculum for undergraduates

### **(4) Organizational Considerations**

*Please share any thoughts you have regarding the questions below.*

- What leadership and other mechanisms should we put in place to further Research CI momentum?
- How do we fund Research CI infrastructure and services?
- How should this discussion be connected to campus strategic planning and other initiatives?
- Relative Research CI roles of individual researchers, research groups, schools, and campus entities such as OIT, UCI Libraries, Data Science Initiative, Statistical Consulting Center, Office of Research
- Potential value in establishing an “institute” or other cross-functional construct in providing Research CI services
- How do we leverage our participation in the March 2015 UC Research CI conference and corresponding UC-wide Research CI planning efforts?

### **(5) Other**

*Please share any input you have regarding the following:*

- What fraction of the faculty in your school would you estimate require RCI beyond basic desktop computing and network connectivity? How do you expect this to evolve over the next several years?