Informatics Strategic Planning Workshop Summary

The Informatics Strategic Planning (SP) Workshop was held August 27th and 28th at UA’s Biosphere2. Forty-six participants gathered for the session from colleges across campus. Participants were identified for their expertise and diversity across information, computer, data, and social sciences.

The Informatics reception included welcome remarks by Dr. Jennifer K. Barton and a presentation on “Analyzing the Language of Food and Social Media” by Dr. Stephen Kobourov, Professor, Department of Computer Science at UA.

Breakout discussions on the second day consisted of the following topics:

1) Cloud Commons and Persistent Data  
2) Heterogeneous Dataset Integration  
3) Data Analytics: Visualization, Text Mining, Statistical Analysis  
4) Necessary Infrastructure

Each breakout session was held twice, and was moderated by an expert in the field. Session leads reported back to the full group on the opportunities for growth, new strategic capabilities, proposed project time horizons, resources required, program risks, and strategic issues, focusing on what UA could and should do to ensure success.

The following represent the primary recommendations identified during the full-group discussion:

1. **Consider a shared knowledge-infrastructure for informatics, computing, and data science needs across campus.** A reoccurring theme between breakout sessions was the request from research active faculty for access to research scientists capable of conducting and assisting with cutting-edge data science. The faculty envisioned a **shared knowledge network** for faculty seeking additional assistance in information management, statistical analysis, and computing – including knowledge of and access to the available national shared research computing systems. Participants did not specify whether they viewed this infrastructure as a core facility or as a service of ORD. However, they did feel that this service should be distinct from the current UITS mission of providing telecommunications and general computing support for campus. In addition, participants suggested that the individuals associated with the knowledge network be located in a distinct facility to encourage cross-collaboration and interdisciplinary research. Finally, participants suggested that the network could provide data science training to research faculty. It should be noted that this recommendation was made again, with slight variations, in several of the other ORD Strategic Planning workshops.

2. **Nurture, maintain, and add to UA’s research infrastructure.** Participants identified many of UA’s unique resources, both physical and personnel, and recognized that resources require nurturing, maintenance, and eventually, additions. Specific suggestions included:
   a. **Build upon UA’s success in working with high-value datasets and data expertise.** Specifically, UA is well positioned to build upon our existing expertise in large, high-value datasets including those related to iPlant, iMicrobe, Tara Oceans, Large Synoptic Survey Telescope, and Catalina Sky Survey. Additionally, UA has existing capabilities in bioinformatics; genomics, particularly ecosystem genomics; and networks, particularly cybersecurity and social networks. Each of these areas could be further cultivated.
b. **Provide investment in critical research infrastructure.** Participants identified the need for additional infrastructure on campus, including:

i. A secure computing facility and data network for research, particularly for work on ITAR, HIPAA, and Security Clearance related research.

ii. A campus-wide research data archive with a convenient catalog system for exploration and discovery of data resources on campus. Additional functionality may include private storage of data prior to publication, preparing data for publication, and enabling data re-use. This would also assist with the implementation of data management plans for funded proposals.

iii. A virtual network for collaboration and sharing of best practices.

iv. Facility for an institutional unit or umbrella organization focusing on large scale analytics, informatics, and research computing (see recommendation 2).

c. **Provide additional resource information on existing infrastructure.** It was suggested that ORD could provide additional information on UA’s existing research computing infrastructure, including training and access information for that infrastructure. Access to this information was also requested by faculty pursuing large, complex proposals.

d. **Encourage and promote faculty interested in leading large, complex proposals.** Participants suggested that current promotion and tenure requirements at the UA be modified to best encourage and support those junior researchers interested in leading large, complex research proposals and centers.

e. **Increase promotion of UA’s expertise with funders.** In order to promote UA’s vast research capabilities, participants indicated an increasing aspiration for participation on federal advisory committees. To facilitate this, participants suggested additional notifications on open opportunities as well as guidance on how to become engaged with the committees. Workshop attendees were interested in additional engagement with UA’s Federal Agency Relations team, Lewis Burke & Associates.

3. **Continue support for interdisciplinary follow-on meetings and ongoing strategic planning.** Session participants sincerely valued gathering as an interdisciplinary group, particularly since the workshop spanned so many disciplines. Participants recognized that many researchers on campus do not interact with faculty outside of their core department and that additional communication channels should be supported to encourage further collaboration. Suggestions included:

   a. Organizing follow-on meetings revolving around the core breakout sessions, open to all interested researchers on campus, and (initially) supported/organized by ORD.

   b. Proactively planning for and participating in campus-wide discussions on core research data and computing infrastructure.

   c. Connecting faculty with existing services across campus, including UA Libraries and UITS.

In immediate response to suggestion 3a, groups based upon the breakout discussions will continue meeting through the 2015/2016 academic year to further define initiatives, craft reports and prepare internal proposals, and lay the groundwork for externally-funded projects. For information on the breakout session groups, including how to participate in follow-on meetings, please contact the group lead:

- *Cloud Commons and Persistent Data, John Hartman, Associate Professor, Computer Science, jhh@email.arizona.edu*
- *Heterogeneous Dataset Integration, Yves Lussier, Associate Vice President for Health Sciences, yves@email.arizona.edu*
• Data Analytics: Visualization, Text Mining, Statistical Analysis, Bryan Heidorn, Director, School of Information, heidorn@email.arizona.edu
• Necessary Infrastructure, Nirav Merchant, Director, Information Technology, Arizona Research Labs, nirav@email.arizona.edu

For additional information on the workshops, please contact Jennifer Barton at barton@email.arizona.edu or Neal Armstrong at nra@email.arizona.edu.