Report on the Innovation Ecosystems Symposium @ UC Davis

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If an ecosystem is a biological community of interacting organisms and their physical environment, an innovation ecosystem consists of individuals, organizations, resources, policies, and networks that enable knowledge flows, technology development, and innovation. A thriving innovation ecosystem can lead to extraordinary creativity, new products, economic growth and jobs, on a sustainable basis, as is the case in Silicon Valley and other regions in the US and the world.

Having gone through a pilot 2-year grant successfully, the NSF-sponsored Ecosystem for Biophotonics Innovation (EBI, http://ebi.cbst.ucdavis.edu/home) program at UC Davis organized a symposium on innovation ecosystems on September 25, 2013, to engage thought leaders and practitioners and discuss best practices for creating and sustaining innovation ecosystems. The agenda integrated invited talks and panel discussions. Symposium participants included entrepreneurs, scientists, business executives, academics, students, economic development organizations and government representatives, composition illustrative of the diversity of innovation ecosystems players.

We were delighted to have Greg Horowitt of T2 Venture Capital, Dr. Barbara Kenny of the National Science Foundation, and Michael Cohen of UC Berkeley as invited speakers. They discussed innovation ecosystems from the vintage points of a venture capitalist / innovation ecosystem architect / writer, a government agency, and a fellow UC campus director for innovation ecosystem development, respectively. Two panel discussions focused on technology, intellectual property, university startups and roles of diverse players in innovation ecosystems as relevant to UC Davis and the larger Sacramento region.

What are some of the things we learned? Greg Horowitt, serial entrepreneur, venture capitalist, and author of "The Rainforest: The Secret to Building the Next Silicon Valley" (http://www.therainforestbook.com/), drove home the message that we can engineer serendipity through design, which is another way to say that we can provide an environment that is nurturing of all things entrepreneurial. Importantly, the key is to focus not only on actions, but also on beliefs and behavior – for example, "trust and be trustworthy". Today's knowledge economy shifts the economic paradigm from one of resource scarcity to one of abundance, abundance of opportunities and possibilities. It is worth remembering the rules of the rainforest that Greg Horowitt shared with us, as they provide a framework for fostering economic growth and prosperity.

Rules of the Rainforest

1. Break rules and dream.
2. Open doors and listen.
3. Trust and be trustworthy.
4. Experiment and iterate together.
5. Seek fairness, not advantage.
6. Err, fail, and persist.
7. Pay it forward.

Among federal agencies, the National Science Foundation has played a very proactive role in fostering innovation ecosystems, in alignment with its vision for "a nation that capitalizes on new concepts in science and engineering". The agency's investments reflect its commitment to connect research it funds with the needs of society, thus supporting both **discovery *for* innovation** as well as **discovery *to* innovation**. Our plenary speaker, Dr. Barbara Kenny, Program Director at the National Science Foundation, described NSF programs that support translational research at different points on the innovation spectrum between research and commercialization.

Last but not least, our third keynote speaker launched his talk with a provocative premise: to continue its advance toward the top-tier of research universities, UC Davis must establish a world-class hyper-local innovation ecosystem. Michael Cohen, director of innovation ecosystem development at UC Berkeley, posited that strong hyper-local innovation ecosystems bolster research, education and technology transfer, and increasingly play an important role in attracting and retaining top faculty and students. Furthermore, a robust hyper-local innovation ecosystem is a strategic asset that supports holistic integration of the university's education, research, and service mission, for "total mission integration" (as coined by the University of Utah).

After the symposium, many participants attended the SARTA MedStart Connect Mixer, a great forum for new connections to form and existing ones to strengthen, over appetizers and other refreshments. As the nexus that links entrepreneurs, inventors, technology leaders, investors, service providers, community organizations, and educational institutions, SARTA plays a major role in strengthening the region's innovation ecosystem.

We will apply what we learned to our future work, including a public-private partnership program funded recently by a new NSF grant and matching funds from external partners. Furthermore, we look forward to working with others towards a vibrant innovation ecosystem and prosperous economy.

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