IU INDIANA UNIVERSITY

IU News Room

IU News from all eight campuses

Tuesday, December 22, 2009

Last modified: Monday, December 21, 2009

SLIS researcher promotes Innovation Dashboard for policymakers during Capitol Hill visit

FOR IMMEDIATE RELEASE

Dec. 17, 2009

BLOOMINGTON, Ind. -- Work by Indiana University Katy Börner on visualizing knowledge and her Mapping Science exhibit have literally been around the globe -- on public display at the Chinese Academy of Science, on exhibit at Stanford University, and featured in the German Science Train's Expedition Zukunft (Expedition into the Future) in Europe that visited 62 cities over the previous seven months.

(http://newsinfo.iu.edu/asset/page/normal/8304.html)

IU School of Library and Information Science professor Katy Börner, above, makes a presentation on Capitol Hill earlier this month to Congressional and federal agency staff about using knowledge visualization tools to facilitate

decision-making related to innovation
performance and policy in the country.

[Print-Quality Photo
(http://newsinfo.iu.edu/asset/page/normal/8304.html)](http://newsinfo.iu.edu/asset/page/normal/8304.html)

IU's Börner on Dec. 10 presented her work, along with portions of the exhibit, where it may have more influence than ever -- The Rayburn House Office Building of the U.S. Capitol complex. The room was populated by an invitation-only group of congressional staffers and federal agency officials interested in understanding how members of Congress can utilize advanced data analysis and visualization techniques to track and communicate the flow of innovation in their respective states or voting districts.

Börner's "Mapping Innovation for Congress: Creating an Innovation Dashboard to Inform Policy Makers" presentation was the first in a series of Beltway meetings organized by the Alliance for Science and Technology Research in America (ASTRA) and The Science-Engineering-Technology Working Group (SETWG) for members of Congress, their staffers and for representatives from a variety of federal agencies.

Börner is Indiana University Bloomington's Victor H. Yngve Professor of Information Science, an adjunct professor in the IU Bloomington School of Informatics and Computing, an adjunct professor in the IU College of Arts and Sciences' Department of Statistics, and a research affiliate of the Biocomplexity Institute. She is also the founding director of the [Cyberinfrastructure for Network Science Center (http://cns.slis.indiana.edu)](http://cns.slis.indiana.edu) .

The informational sessions are being conducted by researchers and practitioners with strong backgrounds in data analysis and visualization to inform policymakers, and especially those tied to congressional committees associated with innovation policy, on how they can access and utilize existing data to improve their decision-making.

"Katy Börner did a masterful job of showing the participants some creative solutions through existing data maps and clever data visualization examples," said ASTRA executive director Robert Boege. "And in an online survey conducted prior to the event there was strong support for such an effort, even if many of the respondents were not quite sure what such a product or service would look like."

The opportunity allowed Börner to introduce concepts like Innovation Dashboards that could be used to access, understand and communicate state and congressional district metrics on innovation, research and development in nearly real time.

"Given high quality state-oriented research and development data, advanced algorithms, and sufficient computing power, visual Innovation Dashboards can be created that help identify pockets of innovation, show what pathways innovative ideas take to become competitive products, and

communicate how those innovations affect policy-influenced services like education, health care or business development," Börner said.

(http://newsinfo.iu.edu/asset/page/normal/8309.html)
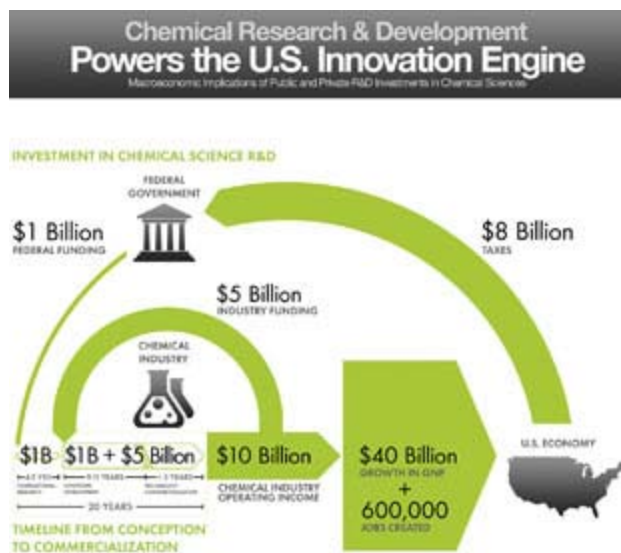
Chemical R&D Powers the U.S. Innovation Engine. Courtesy of the Council for Chemical Research. In "Places and Spaces: Mapping Science."

Using a combination of real data, advanced algorithms and computers, members of Congress could use visualizations like to the one above to determine and understand how innovation in specific states and voting districts influences policy and performances in areas as varied as health care, business climate and education.

Print-Quality Photo
(http://newsinfo.iu.edu/asset/page/normal/8309.html)

With maps visualizing "U.S. Vulnerabilities in Science," by Kevin W. Boyack and Richard Klavans, and "Chemical R&D Powers the U.S. Innovation Engine," by the Council for Chemical Research (see figure) -- both of which are part of the internationally-recognized Places & Spaces: Mapping Science (http://scimaps.org) collection -- as well as examples of her own work, Börner showed how science studies and maps can help answer temporal (e.g., trends, bursts of activity), geospatial (e.g., distribution of funding and publications in the U.S.), topical (e.g., what NIH institute funds what

research), or network (e.g., diffusion of knowledge via co-authorship) questions. The studies can be conducted and maps rendered at the individual, local (e.g., one institute, one funding agency), or global (e.g., world, all of science) level.

Subsequently, the group of more than 30 attendees was asked to envision and discuss what an Innovation Dashboard for their state or voting district might reveal about job growth or innovative education programs.

"This session was intended to introduce people to qualitatively new approaches to deal with massive amounts of statistical and technical data, to show concrete examples on how these approaches might be used to understand, improve and communicate state and congressional district innovation metrics, and to get first feedback from this very important user group," Börner said.

Börner's work on "Mapping Innovation for Congress," was supported in part by ASTRA, the Cyberinfrastructure for Network Science Center, the IU School of Library and Information Science, the National Science Foundation and the James S. McDonnell Foundation. To learn more about Börner's work visit "Mapping the Future of Knowledge (http://ivl.slis.indiana.edu/km/news-IU/2009-borner-research-iu.pdf) ," which appeared in the Spring 2009 edition of IU's *Research and Creative Activity* magazine.

To speak with Börner, please contact Steve Chaplin, Office of University Communications, at 812-856-1896 or stjchap@indiana.edu (mailto:stjchap@indiana.edu) .