

Computers alone won't create knowledge economy

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The "build it and they will come" approach to economic development won't create the next Silicon Valley, Penn State researchers say.

"Some people have the naive view that if a region gets fiber optic cables, computers and a university, then companies will come and a knowledge economy will flourish," said Eileen Trauth, professor of information [sciences](#) and [technology](#).

"The successful IT economies of Silicon Valley, Boston's Route 128 corridor and Ireland evolved because of a confluence of complex factors ranging from infrastructure to cultural attitudes," Trauth said.

Trauth presented her research today (Aug. 6) at the Tenth Americas Conference on Information Systems in New York in a paper titled "Infrastructural Challenges in Developing an Information Economy in Humboldt County, California." The paper was co-authored with Benjamin Yeo, a doctoral student in the Penn State School of Information Sciences and Technology (IST), and Perry Wong, with The Milken Institute, an independent think tank which funded the study.

The researchers studied rural Humboldt County in 2003 when the county had almost a 20-percent unemployment rate and an economy based largely on labor-intensive and seasonal industries. Information technology was seen as a means of enhancing existing companies' competitive edge and creating new business opportunities.

But while the area had a fiber-optic telecommunications infrastructure

through the state's One Gigabit Initiative, usage was poor. In addition, educational programs and employment weren't coordinated. Businesses didn't understand the merits of using the available IT infrastructure, so although the area's higher ed institutions had created new curriculums to graduate IT-skilled workers, they weren't being hired locally, Trauth said.

Face-to-face interviews with local business organizations and others also revealed the need to have public policy and economic development professionals talking to each other.

Trauth contrasted those findings from Humboldt County with earlier and ongoing research on Ireland's transformation from an agrarian economy to a high-tech one. That occurred through a coordinated, multi-pronged strategy that began in the early 1970s, said Trauth who has extensively studied Ireland's IT economy.

Ireland's initiatives included building new universities specializing in computer science, government training programs that provided technical training to adults and incentives for international companies to locate to Ireland.

"People want a magic bullet, but creating a knowledge economy involves more than infrastructure," Trauth said. "There has to be coordination among public policy, cultural attitudes and economic initiatives or efforts are fragmented."

In addition to more collaboration, the researchers also emphasized that Humboldt County should expand its economic development initiatives to the creation of an IT sector. Efforts to date had focused on creating IT jobs to support existing businesses.

Another recommendation was aimed at building the local population's

understanding and appreciation of IT by the local government promoting the development and use of IT for common administrative services.

Source: [Penn State](#)

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