

Innovation creates economic growth: Stanford president

Stuart Hamby, Special to The China Post
October 31, 2002, 12:00 am TWN

John Hennessy, president of Stanford University, said yesterday in Taipei that partnerships between universities and the commercial sector would create a "win-win" situation for both parties, describing such cooperation as "crucial" for innovation.

Hennessy said that he would like to see Silicon Valley—or more precisely, the spirit of innovation that made Silicon Valley a hotbed of technological development—kept alive. This innovation leads not only to new businesses, but also sometimes to entire new industries.

But the question arises of how to transfer this innovation from the centers of research where innovations are made to the commercial sector, "where they can have positive impacts on economic growth." Hennessy spoke on this question at the seminar.

Hennessy began his speech by citing several examples of technological innovations that were developed at least in part by research institutes and later transferred to industry, where they spurred economic growth.

Semiconductors, for example, came from "fundamental work" at Bell Laboratories, the workstation and the modern PC were developed by Xerox PARC, Stanford, and other institutes.

The Internet grew out of developments in both industry and universities, and the biotech industry "has perhaps the strongest ongoing dependence on university research."

At the seminar the president also laid out key factors that promote innovation.

The first key to promoting innovation, said Hennessy, lies in choosing the right people for the right job. This is the "first and most crucial step," he explained.

The three types of people that make up the best innovative environment are "visionaries," who see possibilities before others do and before innovative technologies are developed, "explorers," who are driven by a sense that gaps in technologies can create new opportunities for innovation, and "uninhibited executors" (often students), who help carry out a vision by trying

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approaches that may not seem worthwhile pursuing because they are unaware of the potential pitfalls they face.

Another key to promoting innovation that Hennessy mentioned is "living on the edge of technology," by which the ground is set for future technologies. Likening innovators to a "lookout post," Hennessy explained that companies at the cutting edge of technology and science see and adopt new technologies sooner than the mainstream, and understand the impact of new technologies more deeply.

When these components are in place, the environment is like "fertile soil," he stated, continuing the metaphor by comparing technological breakthroughs to a seed waiting to be planted. He described the spirit of Silicon Valley as this kind of fertile soil, adding that the same environment exists in Taiwan, noting the Hsinchu Science Park as one location having "fertile soil."

Some of the challenges for technological innovation to overcome include reliability, availability, cost, and performance of technology. "Clearly the challenge for all of us," he stated, "is to find the killer application" that will induce consumers to purchase new technologies and to continually produce new technologies. This, he summed up, will continue to create a "stimulating environment for high technology."