**Shared Learning**

**Next Generation of Learning and Innovation Requires Collaboration**

As learning and innovation shift into communities and networks, associations have a head start on becoming effective facilitators of these emergent forms of collaboration.

Most associations already have made the initial investments in learning and communication technologies and have volunteers and staff with the competencies to be conveners of collaborative learning communities and technology innovation networks. The Institute for Alternative Futures studied the drivers behind these shifts in learning and innovation and identified best practices for ASME, an international mechanical engineering society. This research is now available on the ASME website.

Collaborative learning communities are individuals joining together to accelerate new knowledge through dynamic use of social networking and collaboration technologies. In 2006 these learning communities can be found in communities of practice, list servers and chats, standards and technical committees, action learning, Wikipedia and interactive blogs, and blended learning (virtual combined with face-to-face experiences).

Companies are finding high performing teams are far more effective than the brightest individuals, and collective intelligence is essential to high performance. Knowledge technologies organize information with greater context and promote participation through easy access, linking, and retrieval capabilities. The best way to boost the productivity of knowledge workers is to help people get to the people who know faster. In a global world, those people could be anywhere. The global race for talent is placing a premium on knowing how to learn through collaboration. Young people are especially at home in this wired world of collaborative learning.

Technology innovation networks are interrelated systems of organizations that share technical knowledge and skills across geographic, disciplinary and corporate boundaries to create new products and processes. Current examples of these innovation networks are the Human Genome Project, the Joint Strike Fighter and Linux.

The forces of globalization and collaborative technologies are shifting the focus of innovation from regional clusters to networks that span geographic, organizational and disciplinary boundaries. These networks are complex webs of relationships among firms, universities, government agencies, and other organizations. Due to economic diffusion and the effect of new technology, the world is experiencing an
unparalleled increase in global competition and innovation is the differentiator that allows companies to thrive in a global environment. Emerging economies, especially in Asia, are increasingly looking to science and technology for the next stages of their economic development. The next wave of innovation is building around bio and nanotechnology, and more than any other wave, it relies on networks for innovation.

IAF will be working with the ASME Board of Governors later this summer to explore options for taking advantage of this next generation of learning and innovation to keep its programs and services relevant for members. ASME engages in ongoing environmental scanning for strategic issues of concern to mechanical engineers and the association.

### Emerging Issues

#### The Looming Diabetes Crisis: Can It Be Prevented?

If recent trends in obesity and diabetes continue, the U.S. faces a very challenging and tragic future. If nothing is done to prevent this looming crisis:

- In 2025, 15% of Americans will suffer from diabetes.
- In 2025, diabetes will contribute to 622,000 deaths—triple the number of deaths attributed to diabetes than in 2000.
- In 2025, diabetes will cost America $351 billion (calculated in 2002 dollars) in direct medical and indirect societal costs, more than double the amount we are currently spending.

The Institute for Alternative Futures and a panel of experts on diabetes and obesity will explore this looming crisis in its next Foresight Seminar on Health and Innovation. The seminar will present and explore four scenario factors that show the challenge and the opportunities for reversing the diabetes epidemic. The panel of speakers will address key questions for policy-makers such as:

- What population-focused strategies can be used to prevent diabetes?
- How can we empower patients to prevent and manage diabetes?
- What emerging technologies will be available for diabetes care?
- How can the health system effectively treat the growing number of people with diabetes?
- What can be done to prevent the obesogenic environment that causes diabetes?
- How can we prevent the enormous disparities in diabetes prevalence in the poor and underserved?

The Foresight Seminar panelists will be Francine R. Kaufman, R. Stewart Perry and William Rowley. Kaufman is the best-selling author of *Diabesity: The Obesity-Diabetes Epidemic That Threatens America--And What We Must Do to Stop It*. Perry is vice chair of the American Diabetes Association (ADA) Board of Directors and has type 2 diabetes. William Rowley, M.D. is the chief operating officer and senior futurist at IAF. He is co-author of the IAF report: *Diabetes & Obesity 2025: Four Future Scenarios for the Twin Health Epidemics*.

This Foresight Seminar will be held June 23 from 12:00-2:00 at the Rayburn House Office Building. Space is limited, so call 703-684-5880 or go to [http://www.altfutures.com/foresight_reg.asp](http://www.altfutures.com/foresight_reg.asp) to register.
**Intriguing Ideas**

**Radiology Evolving into Therapeutic and Preventive Functions**

Radiology is rapidly evolving through advances in other disciplines and technologies to combine diagnostic and therapeutic functions, according to Institute for Alternative Futures President Jonathan Peck speaking May 3 to the American Roentgen Ray Society in Vancouver.

Peck described National Cancer Institute work on nanotechnology contrast media for imaging that could be both diagnostic and therapeutic. This nanotechnology could identify single metastatic cells and then destroy them.

Radiology is poised to make a significant contribution to prevention, as IAF discovered in working with the Academy for Radiology Research on a blueprint for the future of imaging science. Molecular imaging is making it possible to view inside the cell and someday understand how to avert molecular changes that lead to disease.

As these advances in imaging contribute to health, Peck said, they are creating the conditions for economic growth and an ethical evolution for society. Healthy people are more creative and productive than sick people. A healthy economy supports greater political legitimacy and leads to a higher level of ethical development. What has intrigued scientists most from IAF’s 2029 Project on the future of biomedical research, Peck said, is this potential to move to a higher ethical level that embraces individuals, communities and countries in a shared potential for health.

Peck’s address at the American Roentgen Ray Society annual conference in Vancouver served as the distinguished Caldwell Lecture. He is writing an article for the Society’s journal based upon this lecture.

**Social Work in Healthcare Explores Different Futures**

Changing values in the U.S. can transform the role of social work in health. Working with the leaders of the Society of Social Work in Healthcare, IAF Founder Clem Bezold created four future scenarios to explore the possibilities.

The society identified these major forces of change over the last ten years:

- Health care cost and insurance constraints
- Increases in case management
- Decreases in discharge planning
- Elimination of social work departments in hospitals
- Declining pay for social work
- Social work schools finding less interest in health care settings
- Society largely undervalues social work today
- Growing client population of illegal aliens and Medicaid patients

The scenario *Just Another Day* illustrated what could happen as these trends play out to 2016. Demand for social work grows in some settings (i.e. nursing homes, retirement communities), but declines in other settings (hospitals). A growing immigrant population returns some social workers to the profession’s roots.

An aging population and rising healthcare costs could mean that *Social Work in Health Vanishes into the Night*. In this scenario, many functions of social workers are automated or cut entirely as society looks to cut the rising costs of healthcare.

However, if society changes to focus on social justice, the role of social workers in healthcare will be transformed. In the *Guiding the Way* scenario, social workers use their “person in the environment” focus to establish their effectiveness in certain forms of case management, counseling/mental health services, group counseling, and community interventions.
In the Creating More Health scenario, social workers take on new functions in supporting quality control, assisting individuals and institutions to manage needs, identifying critical gaps in prevention services, and as healthcare navigators and personal health advocates. In this scenario social workers are vital in pushing prevention activities back further into the community.