

July 29, 2009

Dear Board Member,

Please take a moment to review this month's briefing on recent activities and accomplishments in sustainability. On page two, I introduce you to Professor Brad Allenby, a noted leader in sustainable engineering and industrial ecology.

Highlights on ASU's sustainability activities

- *The Princeton Review*, which publishes one of the nation's most widely read guides to colleges and universities, has named ASU one of the nation's 15 "greenest" universities for the second straight year, giving ASU the highest possible score both times. Criteria for the rating include campus quality of life, preparation of students for a world defined by environmental challenges, and overall commitment to environmental issues. [ASU story here.](#)
- Approximately 50 underserved Arizona middle school students studied sustainability at ASU July 12-24 at the free ExxonMobil Bernard Harris Summer Science Camp. Erin Frisk, a doctoral student in the School of Sustainability, served as curriculum specialist and lead instructor for the camp, which also featured a visit from founder Bernard Harris, a veteran astronaut, scientist, physician, and educator. Among the topics studied at the camp was how energy from the sun affects life on Earth. [ASU story here.](#)
- Walmart announced its financial support for an ASU-led consortium that will develop a unique open-source sustainability index for assessing the impacts of consumer goods. News of the ground-breaking index was picked up by 229 media outlets — including 42 *Business Journal* affiliates, 132 television stations, and 55 other news organizations — and was featured in the *New York Times*, *Wall Street Journal*, *Los Angeles Times*, *Huffington Post*, *Christian Science Monitor*, and on NPR's "[Morning Edition](#)."
- Dr. Jerry Lin, professor in the School of Mechanical, Aerospace, Chemical and Materials Engineering, won a \$650,000 grant from the U.S. Department of Energy to make the next generation of power plants more sustainable. His project aims to capture the carbon dioxide normally released during the combustion of coal, natural gas, or biomass to produce hydrogen for generating electricity and thereby reduce greenhouse gas emissions and increase the efficiency of hydrogen production. [ASU story here.](#)
- Dr. Bruce Rittmann, professor in the School of Sustainable Engineering and the Built Environment and director of the Center for Environmental Biotechnology, was recently honored with the prestigious [Simon W. Freese Award](#) for his team's innovative technology to use microbes to clean contaminated water. The Freese Award is the highest honor bestowed by the Environmental Engineering Division of the Environmental Water and Resource Institute, a specialized affiliate of the American Society of Civil Engineers.

You can reach me at rob.melnick@asu.edu or 480-965-5233 with any questions or comments about this July briefing. Following is the interview with Dr. Allenby.

Best regards,



Rob Melnick
Executive Dean

cc: Jim Buizer, Teresa Forst

Q&A With Dr. Brad Allenby

International Authority on Sustainable Engineering

Dr. Brad Allenby is Lincoln Professor of Engineering and Ethics, Professor in the School of Sustainable Engineering and the Built Environment, and Professor of Law. He is also Founding Director of the Center for Earth Systems Engineering and Management and an affiliated faculty member of the School of Sustainability. In 2008 he was named a Carnegie Foundation U.S. Professor of the Year. His research addresses Earth systems engineering and the ethical and social issues of emerging technologies.

How did your early career lead you to “sustainability” as a field of work?

More than 15 years ago, a few of us at AT&T and elsewhere began working on the ideas of industrial ecology and design for environment. From there, it was a natural extension to address sustainability issues because industrial ecology techniques provided a bridge between the practical worlds of business and engineering and the more theoretical frameworks of sustainability.

What is the most important sustainability-related research project you are currently working on?

First, I'm working with the IEEE (formerly known as the Institute of Electrical and Electronics Engineers), the world's leading professional association for the advancement of technology, to focus on sustainability issues related to technology and technology systems, areas seldom addressed elsewhere. Second, I have recently been appointed a Stockdale Fellow by the U.S. Naval Academy, where I will be exploring the ethical and sustainability implications of emerging technologies in the military, such as robotics, controllable insects, and miniaturized surveillance mechanisms. This work is particularly important because so many technological breakthroughs with significant social implications occur in a military context.

How do you think your sustainability-related research could affect policy?

My work with the IEEE and with emerging technologies for the military has the potential to affect many far-reaching policy decisions. Overall, however, I think the challenge is not to focus on the impact of individuals, but on the slow transformation of institutional and cultural frameworks.

What is the world sustainability challenge that concerns you most?

Emerging technology and national security are often overlooked as sustainability threats, but when you weigh their potential for significant disruption of cultural, social, economic, and environmental systems, they are probably more important than anything else – including climate change.

What has your work in sustainability taught you?

We sometimes get the idea that we know what we're talking about — that we can control current trends and plan future social and environmental states. This is a serious overestimation of our capabilities. A little more intellectual humility and less ideology would help our thinking considerably in this area.



Dr. Brad Allenby



Notion of a controllable insect for surveillance



Allenby and students discuss a case study about population densities