

Industrial Sustainability Initiative
Wichita State University
November 12, 2009

Wichita State University has initiated a series of research, industrial collaboration, and education activities focused on the emerging issue of sustainability. The Industrial Sustainability Initiative (ISI) will use WSU's advanced expertise to help Kansas and the nation prosper without compromising the quality of life of future generations. Industrial sustainability balances long-term growth with responsible stewardship of human, shareholder, and societal resources. Achieving corporate sustainability is not just about "going green," but a combined approach that incorporates

- Business excellence
- Effectiveness of people and ideas
- Technology and innovation
- Environmental improvement

This College of Engineering Initiative is to foster significant research on important sustainability issues, such as achieving benefit from wind energy and helping the aviation industry with its transition to new materials and manufacturing processes. ISI will use life cycle knowledge and technology to achieve manufacturing solutions that do not push adverse impacts to other industries, places, or people.

The Wichita State University College of Engineering's goals for the Industrial Sustainability Initiative are to:

1. Launch interdisciplinary research on new technology, materials, or processes that encompass life cycle thinking, a focus on sustainability improvement, and the complexity within the principles of sustainability.
2. Establish joint projects among WSU Colleges including Engineering, Business, and Liberal Arts & Science to unite faculty in extramural research projects that emphasize the emerging field of sustainability. This will build faculty strength in this emerging field as an enhancement to traditional WSU research expertise.
3. Develop a national program on corporate sustainability through a series of projects of industry/university cooperation that expand the number of corporate sustainability programs, better establishes sustainability improvement, and utilizes results in industry from the College of Engineering's sustainability research.
4. Expand the life cycle database on materials, products, and processes as a means to aid industry and academia to utilize life cycle thinking as the primary language of sustainability
5. Establish educational mechanisms for students, targeted at the small, but emerging career opportunities in sustainability.
6. Build a communication process that furthers the goals of sustainability by keeping corporate, academic and public partners informed of developments in the field of industrial sustainability and the work at WSU.

7. Become a resource for Kansas government bodies to utilize sustainability principles to aid in long-term improvements for the State and its citizens.
8. Partner with the WSU Foundation to provide awareness and information about the WSU Industrial Sustainability Initiative with interested alumni and other potential financial supporters.

The Wichita State University focus on industrial sustainability, especially to support the Kansas aviation manufacturing, fills a substantial area not addressed by existing sustainability efforts at KSU and KU. This distinctive WSU mission represents an opportunity for WSU to engage faculty at other Kansas universities in broadening the funding of all those involved in sustainability research. This is also a distinctive university mission nationally, although some areas of the WSU Sustainability Initiative are found at a few leading universities and hence represents areas for collaboration.

Currently, the direct budget for the Industrial Sustainability Initiative over the five years 2009 – 2014 is from the Bloomfield Foundation. The five-year budget supports a full time Chair in Sustainability and an operating budget.

To encourage collaborative efforts in sustainability, a Board chaired by the Dean of the College of Engineering and including the Dean of the Barton School of Business, the Dean of the Fairmount College of Liberal Arts and Sciences, and the Dean of the Graduate School will guide this effort. The board will provide strategic input, facilitate the multi-disciplinary research agenda and catalyze large scale funding opportunities.

Additionally, a Faculty Research in Sustainability Committee will establish a creative agenda of multi-disciplinary research in which sustainability is used to augment and broaden areas of existing Wichita State University expertise. The committee will work to fulfill this agenda through research grant proposals, industry collaboration, annual sustainability speakers and educational opportunities. Faculty from the three Colleges will serve on the Committee, chaired by the Bloomfield Professor in Sustainability.

The operating plan for the College of Engineering's Industrial Sustainability Initiative is built on support from:

1. Industrial members, based on projects they have authorized.
2. WSU and the Bloomfield Foundation.
3. State and Federal government agencies and private foundations.

Dr. Michael Overcash will lead this Initiative within the University; Dr. Jan Twomey will direct its academic initiatives.

Within this Industrial Sustainability Initiative are a series of short- and long-term projects in which a substantial degree of university/industry interaction leads to a more thorough understanding of the direct and hidden benefits of sustainability improvements; that is, the business case. In addition, an emphasis on communicating progress in sustainability improvement will be a focus of this Initiative. Life cycle, as the quantitative language of sustainability, will also be widely used. The initial operations are based on principal projects, primarily for noncompetitive topics that improve the sustainability performance of manufacturing companies, while also better communicating this progress to stakeholders. The initial project focus will be on the aviation industry, but our goal is a national focus on all industrial sectors.

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