

TGIF Taking Great Ideas Forward

Improving Northern Capital - Sustainable Development in the Northern Tier

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“Your theory is crazy, but it's not crazy enough to be true.”

-Niels Bohr-

MEETINGS and EVENTS:

Links will provide additional information. Dates for recent additions are in **bold**.

<i>What</i>	<i>Date</i>	<i>Time</i>	<i>Where</i>
Biodiesel Study Group	Mondays (all)	7:00-8:30 PM	Washburn Library
National Entrepreneurship Week Feb 23 – Mar 1			
Superior Days	Feb. 26-27	All Day	Madison
Great Lakes Day	Feb. 28 th	All Day	Washington DC
Inventors and Entrepreneurs Club	March 6 th	5:30	Casablanca Traders Coffeehouse (Hwy 2 & 63)
Fusion 2008	March 5-6	All Day	Madison, Fluno Center
BCEDC Board Meeting	March 10th	10:00 -Noon	Washburn Library
Sustainable Business Conference	April 24-25	All Day	Ashland
Business Development Conference	May 7 & 8	All Day	Cable, Lakewoods
Manufacturing Advantage 2008	May 21	All Day	UW-Stout
Green By Design Conference	June 12-13	All Day	Washington DC area
Northwest Wisconsin Lakes Conference	June 19 & 20	All Day	Cable, Telemark

LEAN and GREEN?

The eco-industrial development initiative in the Duluth Superior area, has been discussed for years, trotted to Madison and St. Paul for attention and generated a multitude of meetings. My escalating involvement for the past three years has been an exciting venture in learning. Eco-Industrial Development (EID) is an approach to business, economic development and particularly manufacturing, that recognizes that businesses can greatly benefit from cooperating with community partners to co-locate in a park or cluster. The result is improved profitability by channeling and reducing energy flows while assuring that materials are consumed and reused with minimal waste. The potential for EID to green the economy of a region has been demonstrated in Europe and Asia as well as locations in North America. Work in [Massachusetts](#) has taken the concept beyond theory.

Lean manufacturing (LM), in some ways a narrow precursor to EID, has been around for decades as a result of initiatives taken by **Toyota** and copied by many other manufacturers; first in the automobile industry and then in a multitude of other industries. Lean manufacturing is highly regarded for its reduction of wastes to improve, ultimately, customer value. Locating and doing something about waste requires a mind shift that looks beyond material waste to recognize that human activity can be wasted. **Shigeo Shingo** recognized that it is only the last turn of the bolt that tightens it – the rest is just movement.

Work can be value adding or work can be a component of a system that adds value. In other words, some work just keeps the system intact. Sometimes these “inefficiencies” are called “corporate load”, “management overhead” or, my favorite, “administrative convenience.”

An [impressive array](#) of Fortune 500 companies have implemented [Six-Sigma](#), a set of practices intended to systematically eliminate waste from defects in manufacturing. Originating at **Motorola** in the 1986, the applications of Six-Sigma there have been estimated to have saved over \$15 billion. One has to curiously wonder whether the estimates discounted or rewarded corporate management. Well, certainly 5-10% of \$15 billion fattened a few pay checks.

The key with both Six-Sigma and LM is looking critically at manufacturing systems to discover process improvements that improve the bottom line.

Now the interesting question; Can a system be redesigned to maximize value adding work? Or perhaps more interesting; How should a system be redesigned to add long term, sustainable values to work?

Years ago the late **Garrett Hardin**, famous for his essay *Tragedy of the Commons*, wrote an essay entitled “*In Praise of Waste.*” He emphasized that living systems greatly over produce in order to survive. Millions of salmon eggs are produced for every surviving adult. An ejaculate contains billions of spermatozoa to assure one will fertilize an egg. Waste, Hardin said, is essential for survival in the living world.

As much as we, who advocate for eco-industrial development, would like our industrial systems to mimic nature, maybe there are limits to mimicry when it comes to some considerations for waste. Or, are our limits only limits of our thinking? Perhaps Hardin's praise was only to superficial waste. The carbon, hydrogen, oxygen, nitrogen, sulfur and phosphorus of protein, nucleic acid, sugar and fat in those eggs and sperm are not wasted but are recycled in an endless chain of cyclic relationships in nature.

Do we need a redefinition of “waste?” **Google** employees are positively encouraged to goof-off 20% of their time. **Best Buy's Geek Squad** communicates and improves processes while playing multi-user games. The result is innovation that enabled the Geek Squad to grow from 60 employees and \$3 million revenue to over 12,000 employees and nearly \$1 billion in revenue – in just three years! Google's growth is legend already and has gigantic **Microsoft** struggling in a hostile takeover of Yahoo. Perhaps Microsoft is, after all, just another exploding, exploiting population blip in the 10,000 year history of the commercial ecosystem. Things are not looking good for **Chrysler**, **General Motors** and **Ford**. In nature, exploding populations die back, some survive and contribute to a stable system, some don't. Garrett Hardin throughout his professional life, asked uncomfortable questions about the exploding human population and its impact on the ecosystems of our delicate biosphere.

Ecosystems are so incredibly complex that we humans will never exhaust our quest for understanding. There is easily more complexity in an acre of prairie soil than in the entire man-in-space program of NASA. “Its not Eco-science,” we should say. Our questions about efficiency and effectiveness (not the same thing) in the industrial systems we humans create and recreate should also be never ending. Eco-Industrial Development may be most important as a good excuse or framework for asking those questions that enable sustainability. Questions that our great, great, great grand children can't attend a multitude of meetings to ask.

LIGHTER SIDE:

As with most jokes the original author is unknown. Whoever you are; “Thanks!” Names, when added, are intended to tease the innocent.

Many people remember reading about Elsa the lioness, but it seems few have heard of her great-great-grandmother, Laurie, whose main claim to fame was that she attacked and devoured England's chief poet, Alfred Lord Tennyson. In fact his fame exceeded hers, and to this day he's known as the poet Laurie ate.

Take care and enjoy a great weekend!

/BRUCE

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Bruce Lindgren is Principal of [B.Lindgren CONSULTING](#). The consulting practice serves small business, local government, school districts and non-profits providing support for research, grant development, technical writing, marketing support and project management. Bruce brings his background in biological sciences, education, small business and media technology to generate and implement ideas contributing solutions to mission critical challenges.

In addition Bruce maintains the following affiliations:

[Bayfield County Economic Development Corporation](#), (BCEDC) *Director*

[Inland Sea Society](#), (ISS) *Director*

[Lake Superior Binational Forum](#), (LSBF) *US Delegation Co-Chair*

[Raindrop Garden Gallery](#), (RGG) *Co-owner*

[IDEA Consortium LLC](#), *Owner*

[Chequamegon Institute, Inc.](#) *Initial Registered Agent*

[Coalition for Eco-Industrial Development](#), (CEID) *Work Group Member*

[Northwest Wisconsin Workforce Investment Board](#), (WIB) *Member*

The encircled fractal triangle represents an integrated cluster of seven ideas – economics, ecology, equity, ethics, experience, education and energy – that may be considered a core for sustainability studies. Bruce is available to present illustrated lectures and facilitate discussions about role of education in Industrial Ecology, Sustainable Development and the Sustainability Revolution.