BUILDING INNOVATION INTO PRACTICE: KEEPING WHAT WORKS

- Robert M. Leicht, Director

The discussion at this year’s Advisory Board meeting often returned to the challenge and the balancing act of innovating while succeeding at the core and fundamental work of construction. The industry is ripe with innovation and firms applying cutting edge concepts from building information modeling to new tools or means and methods for delivery systems. The focus of PACE this year is to help strike the balance of evolving the state of the art and finding strategies and methods for incorporating what is today innovative into the best practices of tomorrow.

One of the obvious areas for this balance is often in the adoption and implementation of technology. Technology is often a source of innovation and the challenge of adopting and streamlining the practice for such tools is a consistent challenge of any industry. In the course of implementing BIM at DPR, I often found myself in the position of pushing forward the innovative opportunities for improving the process and use of the tools at hand. However, the ongoing need to train the personnel on each project using the tools and provide the training in a Just-in-Time manner was challenging both for myself in carrying out the work, as well as the project personnel with a full load of responsibilities already in place.

While it is often simpler for the most capable person or team to carry out a task, the long term goal and competencies are not furthered. The challenge of transitioning the entire model of how company personnel embrace and use BIM hinders on that approach and the capability to balance the future goals of the company with the daily demands of the project.

In similar vein, the rise of terminology, such as IPD “like” projects has arisen in the industry to reconcile the need and want to change, without fully committing to the change desired. Planning, testing, checking and assessing the movement towards company and innovation goals is as, if not more, important in the initiatives pursued within a company as it is in the progress we plan and track in the construction of a building. It also allows the opportunity to question the assumptions and approach we pursue.

As the GPIC Hub for Energy Efficient Buildings is beginning the process for year 2, the tangible goals of innovative energy solutions which are feasible, practical, and repeatable embodies this balance. The challenge of changing a company or an embodied practice within the industry is extremely challenging, and is a constant battle in which we all must participate to change the our industry for the better.
BIM Execution Planning Incorporated into National BIM Standard

In 2009, the BIM Project Execution Planning Guide Version 1.0 was released by Penn State’s Computer Integrated Construction (CIC) research program. The guide defined a structured, 4-step process to identify opportunities for BIM, assign team responsibilities and plan the incorporation of BIM into a project work flow. Recently, the National BIM Standard (NBIMS) committee approved an updated BIM Project Execution Planning Guide Version 2.0 for inclusion in an upcoming revision to the U.S. National BIM Standard. This document will provide an accessible reference for standard procedures used in developing execution plans, as well as emphasizing the need to develop comprehensive plans during early project planning phases. If you would like to learn more about the BIM Project Execution Planning Guide, or a continuing research project addressing BIM for Owners, please visit bim.psu.edu.

The CIC research team wishes to acknowledge the support of PACE members, the Charles Pankow Foundation, the Construction Industry Institute (CII), Penn State’s Office of Physical Plant (OPP) and the BuildingSMART Alliance (bSA) during the development of the BIM Execution Planning Guide.

For more information on this initiative please contact Ralph Kreider at: rgk5000@psu.edu

OPP Starts Down the Road to Integrated Delivery

In coordination with Penn State’s Office of Physical Plant (OPP), Lean and Green graduate students are assisting in the development of a “Collaboration Addendum” contract attachment to jumpstart team integration on several upcoming campus projects. The Addendum is designed to capture key principles of Integrated Project Delivery (IPD), including goal definition, cooperative decision-making, collocation and process transparency, and to initiate a transition away from traditional delivery methods. By promoting the formation of a collaborative project team, OPP hopes to create an environment of mutual trust and confidence that improves the value of campus construction projects. Pilot studies of the Addendum begin in Fall 2011.

For more information on this initiative please contact Bryan Franz at: bwf114@psu.edu

PACE WELCOMES NEW MEMBER:
MASSARO CONSTRUCTION
S:PACE Trip to Washington D.C.

A charter bus of approximately 50 members of S:PACE spent November 4th and 5th on an annual visit to tour Washington, D.C. jobsites. The group stopped at seven jobsites of PACE companies, as well as James G. Davis’s headquarters office. There were several exciting projects this year, which gave students an opportunity to learn from real-world applications and gain a better understanding of the construction industry. The toured jobsites included:

- Kaiser Permanente Project by DPR
- National Zoo Project by Forrester
- NPR Project by Balfour Beatty
- National Academy of Sciences Project by Gilbane
- Marriott Marquis Project by Hensel Phelps
- CBCC Essex Science Lab by Barton Malow
- Morgan State Project by Barton Malow

Penn State to Host AEI Conference in 2013

The Architectural Engineering Institute’s (AEI) mission is to serve the building community by promoting an integrated, multi-disciplinary approach to planning, design, construction and operation of buildings and by encouraging excellence in practice, education and research of architectural engineering. This unique conference includes several workshops, technical presentation and panel discussion to bring together community members to discuss the latest construction and design issues in research and industry practice. The conference and events are scheduled to be held at the Nittany Lion Inn in State College, April 3-5, 2013.

The conference is planned to be jointly hosted with the 2013 PACE Research Seminar, and is still in search of industry sponsors.

http://www.engr.psu.edu/ae/AEI-2013/index.asp

Thank you to 2011 Intern Workshop Speakers:

John Betchel
Keith Bush
Jonathon Dougherty
Shane Goodman
Justin Green
Trey Hooper
Rob Leicht

Chris Magent
John Messner
Andrew Rhodes
Jerry Shaheen
Nicholas Umosella
Abe Vogel
S:PACE took the annual trip to Washington D.C. on November 4th and 5th with a charter bus of approximately 50 S:PACE Members. The students stopped to tour seven PACE company job sites, as well as a visit to James G. Davis Construction’s Headquarters. There were a number of intriguing projects this year, including:

- Kaiser Permanente Project by **DPR Construction**
- National Zoo Project by **Forrester Construction**
- NPR Project by **Balfour Beatty**
- National Academy of Sciences Project by **Gilbane Building Company**
- Marriot Marquis Project by **Hensel Phelps Construction Company**
- CBCC Essex Science Lab and Morgan State Engineering Building by **Barton Malow**

We would like to thank the following companies for their support of PACE:

Thank you for your support of PACE’s 2011-2012 activities!

**LEADERS**
- Balfour Beatty
- Southland Industries
- Davis Construction
- Penn State Office of Physical Plant

**ASSOCIATES**
- DPR Construction
- Hensel Phelps
- Gilbane Building Company

**PARTNERS**
- Clark Construction
- Benchmark Construction
- Barton Malow
- Truland Systems
- Forrester Construction

**DONORS**
- Foreman Program and Construction Management
- Langan Engineering & Environmental Services
- Massaro Corporation
- McClure Company
- Reynolds Construction Management
- Trammell Crow Company