

Product Lifecycle Management Center Advisory Board Meeting

Fall 2012

Today's agenda

- 8:30 – 9:00 a.m. **Continental Breakfast**
- 9:00 – 9:30 a.m. **Center Updates**
- ***Nathan Hartman** – Associate Professor , Computer Graphics Technology;
PLM Center Director*
- 9:30 a.m. – 10:00 a.m. **Current Research Status**
 - *“Value Characterization across the Product Lifecycle to Support”*
Katherine Otegon – Graduate Student of **John Sutherland**
Fehsenfeld Family Head, Environmental and Ecological
Engineering
- 10:00 – 10:30 a.m. **Current Research Status**
 - *“Integrating Enterprise Systems and PLM – Fall 2012 Project Update”*
Henry W. Kraebber – Professor, Mechanical Engineering
Technology
- 10:30 – 11:00 a.m. **Break**

Today's agenda

- 11:00 – 11:30 a.m. **Current Research Status**
 - *“PLM ERP Integration”*
Kim Deranek and Jen Zheng – Graduate Students of **Edie Schmidt** Professor, Industrial Technology
- 11:30 – 12:00 p.m. **Michael Grieves**
 - *“An Ethnography Study of Real/Virtual Space Natives”*
- 12:00 – 1:30 p.m. **Lunch and Keynote Presentation**
 - **Doug Cheney** – Senior Consultant at ITI TranscenData
“Technical Road Blocks for a Model-Based Enterprise.”
- 1:30 – 2:00 p.m. **Greg Smith - PLM at Rolls Royce**
 - *“PLM – Roadmap to a Full Solution”*
- 2:00 - 2:30 p.m. **Break - Poster Set Up**
- 2:30 - 4:00p.m. **Poster Session**
- 4:00 p.m. **Adjourn**

Center Update

- Currently funding three seed grants: Sutherland, Kraebber, Schmidt
- One new member: Textron
- 7 seed grant proposals for 2013
- 10 posters for poster session on Tuesday – IAB will judge
- Changes in manufacturing activities at Purdue
 - IN-MaC Center
 - Indiana Polytechnic Institute
 - Product and Process Systems Integration Curriculum

IN-MaC CENTER

Center Structure: Programs + Facilities/Infrastructure

Programs

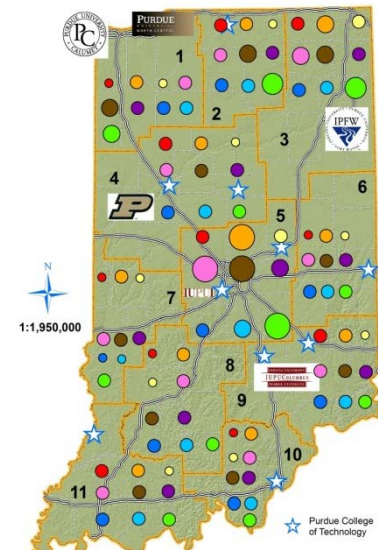
- Research as the foundation for next generation manufacturing
- Connecting research with practice
- Workforce development via education and training

Facilities/Infrastructure

- Living Laboratory
- Digital Manufacturing Infrastructure
- Product/Process Development Studios
- Systems Research & Education Facilities
- 90-100K ASF Phase 1 facility

Metrics for Success after 3 Years

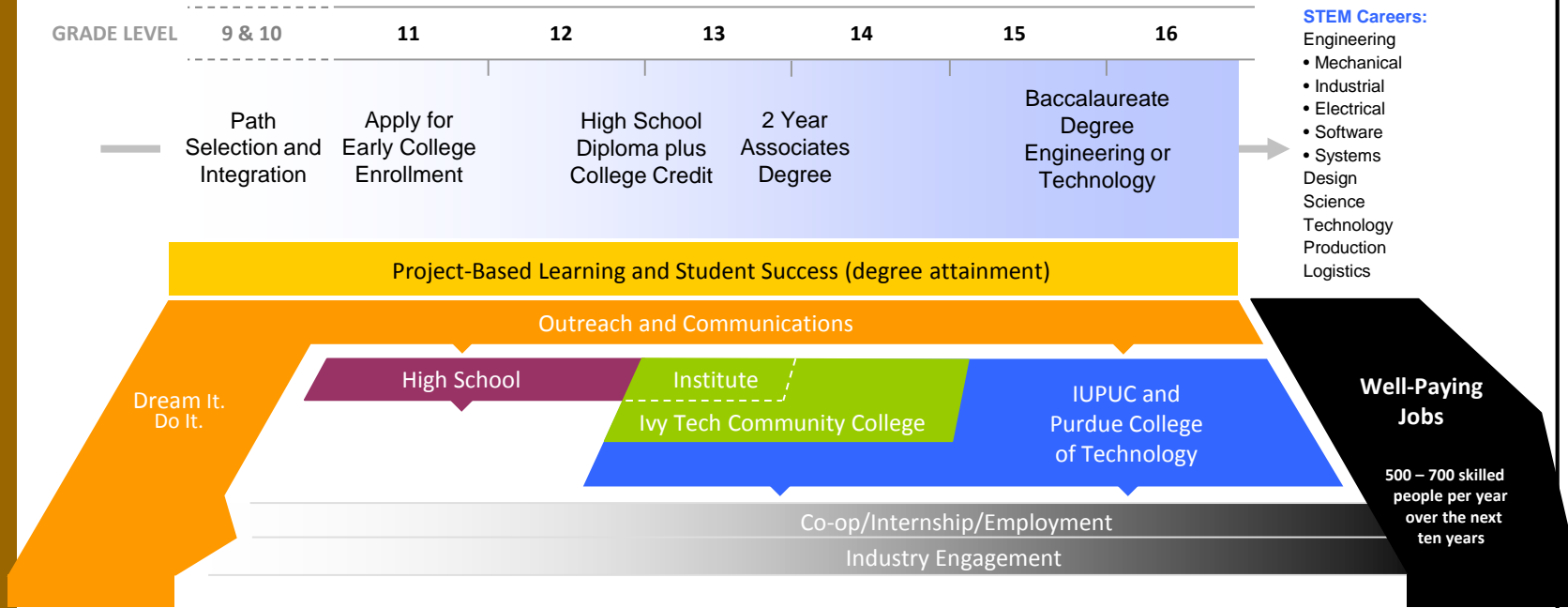
- *Industry partners*: 5-6 large companies, 10-15 medium-scale, 30-40 SMEs
- Impact on >1000 *Indiana employees* annually through education/training
- Touch > 2000 *Indiana students* annually through courses and research
- >20 *collaborative projects with Indiana companies* annually
- 5 • >\$25M in *externally funded research* over the first 4 years



Indiana Polytechnic Institute

- Few students in career and technical education programs actually do choose to go on to college
- Indiana educators need to re-build traditional paths of education---to cross the divide between high school and college and to lead more directly into good technical careers.
- The **Indiana Polytechnic Institute** links secondary and postsecondary education in a single framework.
- Indiana has key attributes that make it possible to create the Polytechnic Institute.
 - Ivy Tech system
 - Statewide Technology
 - Purdue's College of Technology
 - IN-MaC initiative
 - Strong industrial base

Indiana Polytechnic Institute



PPLM

New manufacturing curriculum

- Combination of modeling, interoperability, systems, supply chain, production methods, and MRO
- Would involve elements of 4 departments within CoT
- Mixture of virtual and physical elements
- Start students with more hands-on, physical learning experiences and end with more virtual, design-oriented experiences.
- Would appreciate industry feedback

Product and Process Systems Integration

Common core 80% of each respective course in each blue box; 5% each of the other four courses

Common Core

Product and Process System Sustainment

Supply Chain and PLM

Production Systems and PLM

Systems Development

Model-based Enterprise and PLM

Project-based Capstone Course

Technical Depth

System operations components

Enterprise elements

Production processes

System requirements

Modeling

Work instructions

Distribution/logistics

Production planning and control

Process mapping

Interoperability/Standards

QMS/RMS/risk analysis

Purchasing/procurement

MRP/ERP/Lean/Quality

Testing/validation/verification

Data management

Repair/overhaul/recycling

Inventory management

Automation/controls

Systems development/simulation

Simulation/visualization

One full vertical plus 2/4 from three others

Current Seed Grant Status Presentations

LUNCH

12:00 – 1:30 p.m. Lunch and Keynote Presentation

Doug Cheney – Senior Consultant at ITI TranscenData

“Technical Road Blocks for a Model-Based Enterprise.”

Poster Session

Wrap-up...