



TECHNOLOGY & INNOVATION IN MANUFACTURING EDUCATION

TIME center

An NSF sponsored ATE center



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N E W S L E T T E R

Volume One

IT'S THE RIGHT TIME ...

In October, 2003 the National Science Foundation awarded a \$3 million grant to establish the Technology and Innovation in Manufacturing Education—TIME—Center. This four-year grant charges TIME Center's educational and business partners to develop initiatives that meet the educational needs of Maryland's manufacturers while improving the industry image.

Advisory Committee Evaluates the TIME Center

"Strong collaboration seems to exist among TIME Center partners; a necessary element in overcoming what may be the TIME Centers biggest challenge — changing the industry image".

That was one of many comments made by the TIME Center Regional Industry Advisory Committee (RIAC) at the conclusion of its inaugural meeting. The RIAC is comprised of nine industry leaders representing the spectrum of manufacturing in Maryland, and chaired by Monica Pfar, Director of the National Center for Manufacturing Education at Sinclair Community College. The purposes of the committee are to: (1) provide advice and perspective on the needs of manufacturers, and (2) evaluate the effectiveness of TIME Center initiatives and actions in meeting grant goals.

The RIAC also offered positive comments regarding the strong state support for manufacturing, the thoroughness of the project plan and the experience of the project team. Going forward, they suggested the

Center adopt a common language—one understood by industry, identify key measures for success and explore innovative delivery systems.

RIAC member companies are: AAI Corporation; GRAFCO PET Packaging Technologies; Independent Can Co.; International Steel Group; MDL Manufacturing Industries, Inc.; Naval Surface Warfare Center; Perdue Farms Inc.; Qiagen Sciences, Inc.; and Quest International.



Experts Develop Industrial Maintenance Skill Standards

Twelve experts representing various manufacturers gathered on June 22 & 23 to develop technical and workplace support skill standards for the Industrial Maintenance Technician. The skill standards information reviewed during the session included previous DACUM job profiles, Manufacturing Skill Standards Council standards and the Instrumentation, Systems and Automation Society (ISA) Industrial Maintenance Mechanic certification.

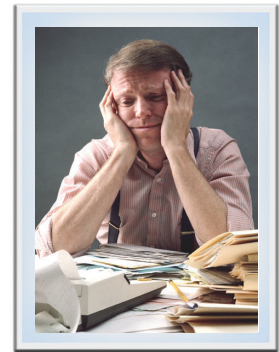
Using this information as a baseline, the industrial maintenance experts:

- developed a detailed description of the duties, tasks and technical skills required of workers at the entry, full performance and lead technician levels.
- provided detailed information on the knowledge and skills to perform these tasks, and the tools and equipment required.
- used the WorkKeys profiling process to identify the workplace support skills needed to insure successful job performance.
- provided insight into the future trends and directions facing this occupational area.
- recommended factors to consider in building a more flexible and responsive training delivery system.

The participants included maintenance technicians, engineers and human resources professionals from: Vulcan Hart; Northeast Foods; GRAFCO PET Packaging Technologies; Becton Dickinson; W. R. Grace; GM Powertrain, Baltimore Transmission; Naval Surface Warfare Center; Kaydon Ring and Seal; Northrop Grumman Electronics Systems; GM Assembly Plant; and Quest International.

Academics Study Lean Thinking

High school and community college faculty joined with manufacturers in two separate TIME Center sponsored events to learn about lean manufacturing. The first event, co-sponsored with DBED, the World Class Manufacturing Consortium (WCMC) and the Regional Manufacturing Institute (RMI), was a three-hour event lead by WCMC consultant Greg Fields. The second event, co-sponsored by the Maryland Technology Extension Service, lasted a full day and included simulation exercises. The 53 people who attended the two sessions spoke highly of the workshops and the need for additional lean thinking.



Lean thinking has also been a prominent topic of discussion with the Regional Industry Advisory Committee and the Industrial Maintenance Technician Skill Validation groups. Their input suggests a necessary and important role for the TIME Center in assisting manufacturers adopt lean manufacturing principles in improving traditional manufacturing processes.

Aberdeen High School Faculty Member Completes Industry Internship

To prepare for a new manufacturing curriculum being developed at Aberdeen High School in Harford County, faculty member Rachel Barnett took advantage of an internship offered through the TIME Center. Ms. Barnett spent the majority of July learning more about manufacturing careers, production



processes, quality assurance, operations, distribution and human resources with TIC Gums, Inc., Independent Can Co., Custom Direct, Inc., and GM Powertrain, Baltimore Transmission. "Too many people think that manufacturing is all assembly line work, but I've learned that there is much more to it than that" said Barnett.

The TIME Center thanks participating manufacturers for their interest and willingness to support the professional development of faculty. Internships are available each year for faculty members interested in learning more about modern manufacturing or in enhancing their skills in teaching manufacturing concepts and skills.

It's TIME for a Challenge

"Manufacturing is Technology" is the theme of the new student 'challenge' competition being developed by the Baltimore Museum of Industry and the TIME Center for 2005. The competition will introduce students to manufacturing through an innovative challenge — design and manufacture a working model of a product. The goal is for students to understand modern manufacturing and the role of technology in the process. Volunteers are needed for the challenge design committee. Contact the TIME Center if you are interested in helping shape the manufacturing associates of the future!



TIME Purchases AIM Curricula

The TIME Center purchased 61 manufacturing instructional modules developed at the Advanced Integrated Manufacturing Center at Sinclair Community College in Ohio for use in regional high school and community college manufacturing programs. The modules include design, manufacturing processes, lean manufacturing, electronics, robots and PLC's, machining, plastics and numerous other content areas.

Project Lead the Way Funded by TIME

As part of its commitment to help develop the professional expertise of secondary and post-secondary faculty, the TIME Center recently provided funds to support training for five high school faculty for Project Lead The Way. PLTW is a statewide initiative of the Maryland State Department of Education to support the adoption of the PLTW curriculum at high school and middle schools. The PLTW curriculum is a strong, academically sound set of courses focusing on engineering and engineering technology.

TIME Center tapes RMI's "Modern Manufacturing" Forum

The TIME Center has made a commitment to provide up-to-date information on Maryland manufacturing to interested stakeholders. The recent Regional Manufacturing Institute forum — "Modern Manufacturing: The Facts, The Future, The Forum" is the latest installment of videotaped events. It is available on RMI's web site at www.marylandmanufacturing.info.

TIME Partners with Baltimore County Tech Ed

Two TIME Center faculty, Mike Ehrlinger (CCBC) and Randy Jones (HCC), have been working with Mike Dodd-O, Technology Instructor at Perry Hall Middle School, on a Middle School Advanced Technology Education (MSATE) project through the Advanced Manufacturing Center at Cleveland State University. Mike Dodd-O is developing lesson plans in two areas, BioRemediation and Robotics, for national distribution through this NSF-funded project as well as for use with Baltimore County Tech Ed faculty and students.

UPCOMING EVENTS

- September 17—Time Center Steering Committee meets from 10:00 am to 12:00 noon at the Catonsville Campus of CCBC
- October 5—RMI's Manufacturing Month Celebration luncheon featuring Governor Robert Ehrlich and the "State of Manufacturing" (www.marylandmanufacturing.info)
- October 13-15—National Science Foundation Advanced Technological Education Conference, Washington, DC (www.aacc.nche.edu/2004ATE)
- October 15-17—National Council for Workforce Education Conference, Baltimore MD (www.ncwe.org/conference)
- Fall—Regional Manufacturing Skills Validation Sessions—Baltimore and Eastern Shore regions

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