

National Visiting Committee Report for Year 1

Automotive Manufacturing Technical Education Collaborative (AMTEC)

A National Center funded by the NSF Advanced Technological Education (ATE) Program

Meeting Date and Location

- March 25-26, 2010
- KCTCS / Toyota Training Facility at Georgetown, Kentucky

National Visiting Team Members Present

- **Marilyn Barger**, PI & Executive Director, Florida Advanced Technical Education Center (FLATE)
- **Ken Carroll**, Vice President of Marketing & Revenue, Kentucky Association of Manufacturers
- **Lorna Finch**, Sr. Manager: Workforce Initiatives, Division of Workforce and Community Development, St. Louis Community College
- **Jorja Kimball**, Director, Strategic Research Development, Texas Engineering Experiment Station (TEES), Texas A&M University System
- **Rob Knight**, Assistant General Manager, Toyota Motor Manufacturing Kentucky
- **Craig McAtee**, AMTEC NVC Chair, Executive Director, National Coalition of Advanced Technology Centers (NCATC)

NVC Members Excused Absent

- **Clyde Hornberger**, Executive Director, Lehigh Career and Technical Institute
- **Bonnie Tura**, Director, North American Engineering, General Motors Corp.

NSF Program Officer

- **Dr. Gerhard Salinger**, National Science Foundation

Project Overview

The AMTEC National Center is currently a collaborative effort between 22 community colleges and 14 automotive manufacturing companies / suppliers seeking to demonstrate that a diverse group of public and private entities can work together effectively to implement innovative training solutions to assure that there is an adequate supply of skilled technicians to operate and maintain the complex and technologically advanced machinery used in today's North American automotive manufacturing facilities.

The center collaborative is currently lead by four core partners (Co-PIs): the Alamo Community College District, Henry Ford Community College, Macomb Community College, and Pellissippi State Technical Community College. The Kentucky Community and Technical College System (KCTCS) is the grantee and fiscal agent. Ms. Annette Parker of KCTCS is the principal investigator.

The AMTEC National Center intends to focus on four main goals:

1. AMTEC Curriculum/Course Development
2. AMTEC Career Pathways
3. Support & Sustain AMTEC Model
4. AMTEC Assessments & Certifications

Evaluation of Current Progress

The AMTEC Team has made excellent progress toward achievement of the original project objectives and the transition into the newly funded National Center. The NVC team found positive evidence of qualitative results. These results include:

Key milestones noted:

- 1) Selecting and organizing the AMTEC leadership team has been very well thought out and executed for maximum benefit of accomplishments from the original project team.
- 2) Goals of the new AMTEC National Center have been clearly articulated, documented, staffed, and project managed to meet the targets needed for the center.
- 3) Additional AMTEC Academies are being planned for 2010 at member-industry sites for maximum interest, exposure, outreach, and understanding of the automotive manufacturer's needs.
- 4) Continued AMTEC curriculum development for twelve (12) modular courses will be a key focus of year one for the Center.
- 5) The three-year AMTEC project has proven to be one of the most successful collaborations between education, industry, and government with a smooth and effective transition into year one of the new AMTEC National Center.
- 6) The value of AMTEC to the automotive industry has been demonstrated often over the last couple of years – however, the Center's future years will serve an even greater need for all involved – globally.
- 7) The competency-based education and training coupled with a mechatronics methodology for problem solving – is proving to be on target for the

automotive manufacturing industry and can easily be applied to other industries – as well.

- 8) Clear definition of the AMTEC Team’s roles, responsibilities, and action plans has been demonstrated and continues to be reinforced by weekly meetings.
- 9) A “**Center/Project Strategy Board**” (currently Toyota, GM, Ford, UAW) has been established to meet weekly and direct priorities from industry’s perspective.
- 10) Communication channels are very good throughout the AMTEC team structure and continue to be expanded for effective and efficient decision-making and progress knowledge.
- 11) A **Balanced Score Card** approach is being developed for AMTEC and will be deployed during year one – 2010.
- 12) Hiring a new AMTEC Center Director, Scott Jedele and Center Assistant, Kelley McKown has been a significant improvement for project leadership and in managing logistics.

NVC Recommendations

The AMTEC NVC grouped its recommendations into four distinct categories that can be linked to the four specific AMTEC Goals – as appropriate – by the AMTEC Management Team.

AMTEC Membership / Management

- Better understand the efforts of each partner/resource and tie them to the benefits and goals of AMTEC (i.e., Strategic goals of group)
- Better define the levels of AMTEC membership – affiliates, full partners, beneficiaries, etc. along with level of participation expected – both industry and education.
- Sustainability – plan on what will be considered, how it will be assessed, and who will pay what. (Curriculum, Professional Development, Assessments, Online training, Industry membership fees, etc.).
- Consider documenting “in-kind \$” from each organization (i.e., Rob @ Toyota). Assign this to internal data collection person.
- Consider documenting \$ leveraged by having the NSF / ATE grant from other funding sources. Assign this to internal data collection person.
- Grow active participation of more industry (VW, BW, Honda, Kia, etc.) and ask them upfront for incentives for students, such as internships, co-ops, etc.

- Develop a profile of each company/plant to meet their needs for training. Perhaps “new launch” plant profile will be different from standard production plants.
- Strategically select additional top 3-5 Tier 2 suppliers to link directly to each regional community college partner.

Marketing / Dissemination

- As a National Center – there is a greater need to become “nationally recognized” – need to initiate marketing of AMTEC as a “national network” with all partners’ logos, etc.
- Consider engaging national, regional, and state level manufacturing associations (i.e., NTMA, PMA, PMPA, KAM, etc.)
- Consider engaging regional and state level economic development agencies (ED, Commerce, Bluegrass PR, etc.).
- Fine-tune the marketing of AMTEC modular course approach with credit leading or applying to a 2-year degree (A.A.S or A.S.) via career pathways. Even though workforce development is part of the pathway – the academic approach needs to be moved to a more prominent place in your overall presentation of AMTEC.
- Keep up on social network focus for students, i.e. Facebook – but realize that many industry and education organizations have locked their employees out of these tools.
- Work toward making the “**AMTEC Brand**” the training solution preferred by industry – quality, flexibility, cost and timeliness of delivery. A Branding type campaign that shows the Center is the “go to” place in the country for auto-manufacturing training is highly recommended.
- Document and share the best practices for recruitment of K-12 students and incumbent workforce for career pathway and market to others for success stories (Toyota, KAM, Alamo, etc.)
- Document / interview the success story of “*Willy @ Ford in Ohio*” working with Cuyahoga CC that saves money, time, and improves quality and make it a centerpiece for AMTC marketing.

Products / Curriculum

- Refine or create a timeline for development and delivery of the 12 courses into more manageable, realistic chunks that can have the product out in phases with a logical flow. Minimum divide in half – preferably in quarters and target completion over possibly 2-3 years, with understanding that

refinements will occur and all the bells and whistles don't need to be in an initial version of a module.

- Academies have been very powerful for AMTEC in the past – they keep everyone pulled together, build stronger relationships, trust, commitments, and active professional development. Set a target goal of the optimal number to host each year, develop a timeline to report and market to – so that this is one of your visible impact metrics. If this is critical to success and growth make it a prominent part of presentations.
- Define and document the actual rollout of each product – partner implementations, timeline, what does that look like, what will happen if a deadline is not met, etc.
- Focus on the Automotive Service Technician (AST) as a “pilot” at Gateway CC and use AMTEC templates / curriculum processes as a gap analysis template to refine AST curriculum. This could create an AST beta test and also serve as a launching point for additional, future funding in this area.
- Focus on core/foundational curriculum being ready for industry – then consider adding specialized, higher technical skills modules/courses in later years – as needed. Bottom line – get “Phase 1” Curriculum out there.
- Define the “part of the puzzle” at the “Service Technician” fits into AMTEC national center, how it aligns, and how it can easily be transferred.
- Integrate “service technician” goals and impact metrics into AMTEC Goals 1-4 – where appropriate instead of listing it as a separate “tag on” goal.
- Review AS & AAS degrees at each partner colleges (4 for pilot) to see/define how each can/will articulate into 4-year college programs. Work with partners that already have existing, working articulations and relationships with 4-year colleges.
- Explore and develop less traditional articulations with less linear/traditional degree programs at 4-year colleges.
- Identify potential 4-year university partners for each partner college as AMTEC completes 2-year program so they are ready so that these partnerships might have articulations plans/agreements in years 3-4 of the Center.

QUESTION: Are soft skills integrated into the technical AMTEC training? Are you going to assess for these skills? If so, how and with what instrument will you measure? (WorkKeys, NOCTI, Custom, etc.) Have industry partners in the past and/or previous initiatives stressed the need for soft skills? These could be addressed within a module or course termed “Industry Communication” as we are not 100% confident that most “canned” soft skills assessments fit well.

Assessment / Data Collection

- Finalize & Deploy the Balanced Scorecard >> Dashboard – tied to goals for impact metrics at implementation phase.
- Add gender / under represented (NSF definition of African American, Hispanic, Native American) data on student participants to database information.
- Become more familiar with the NSF on-line reporting system so that data needed may be collected upfront and in a compatible format. NOTE: NSF has contracted with Western Michigan Evaluation Center for Meta-evaluation. This will be another required reporting for the Center, and often has different data input from that used in the NSF on-line report forms.

QUESTION: what is the plan/resource to collect and aggregate the enrollment data from all partners into a report format and who will assist the PI with this?
Impact metrics, Lists to be developed for dashboard:

How many students are enrolled in each AMTEC partner college program?

Number of academies and participants by industry/education? (sign in sheets are a big plus)

Curriculum developed and delivered – where, when, how per partner?

Summary

The NVC continues to be impressed with AMTEC's accomplishments and progress towards meeting and exceeding their defined goals. It is evident that every member of the AMTEC Team is contributing to the group's success.

Overall, the NVC was very pleased with the progress made in the first six months of Year 1 of the AMTEC National Center and has found no areas of significant concern. All Center goals stated above have been assigned to a leader with significant tasks and timelines developed, and project management tools deployed. We find the Center in good standing, with excellent leadership and continue to see great promise in its mission and vision.

Last year the NVC made eighteen (18) recommendations that have all been worked on or into the future goals, outcomes, and deliverables of the AMTEC National Center. In the spirit of continuous improvement in our global marketplace – the NVC salutes the AMTEC Team for its progress, future plans, and positive impact on the automotive manufacturing industry.