



# MSSC Certification System

A Statewide Initiative of the  
Coalition of Manufacturing Education



## Bringing it Home to Minnesota

Minnesota State Colleges  
and Universities



Minnesota  
STATE COLLEGES  
& UNIVERSITIES



# The Fast Track Forward

## **FACT:**

**The creation of the Coalition of Manufacturing Education (CME), represents a paradigm shift in Minnesota State Colleges and Universities**



## Coalition of Manufacturing Education (CME)

### **VISION:**

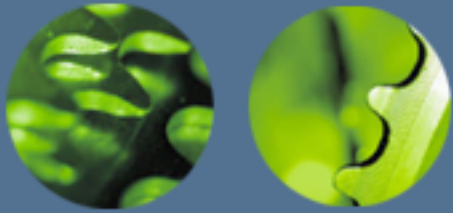
**“To create a model for Minnesota State Colleges and Universities through capacity-building for Manufacturing to advance the implementation of just-in-time manufacturing principles throughout Minnesota’s manufacturing community, and to facilitate the integration of the Manufacturing Skill Standards Council Production Technician Certification into statewide manufacturing curriculum.”**



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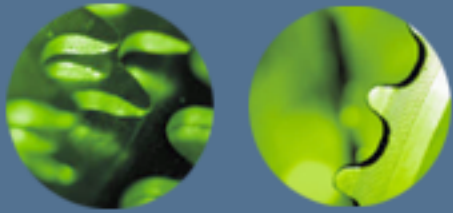
# Coalition of Manufacturing Education





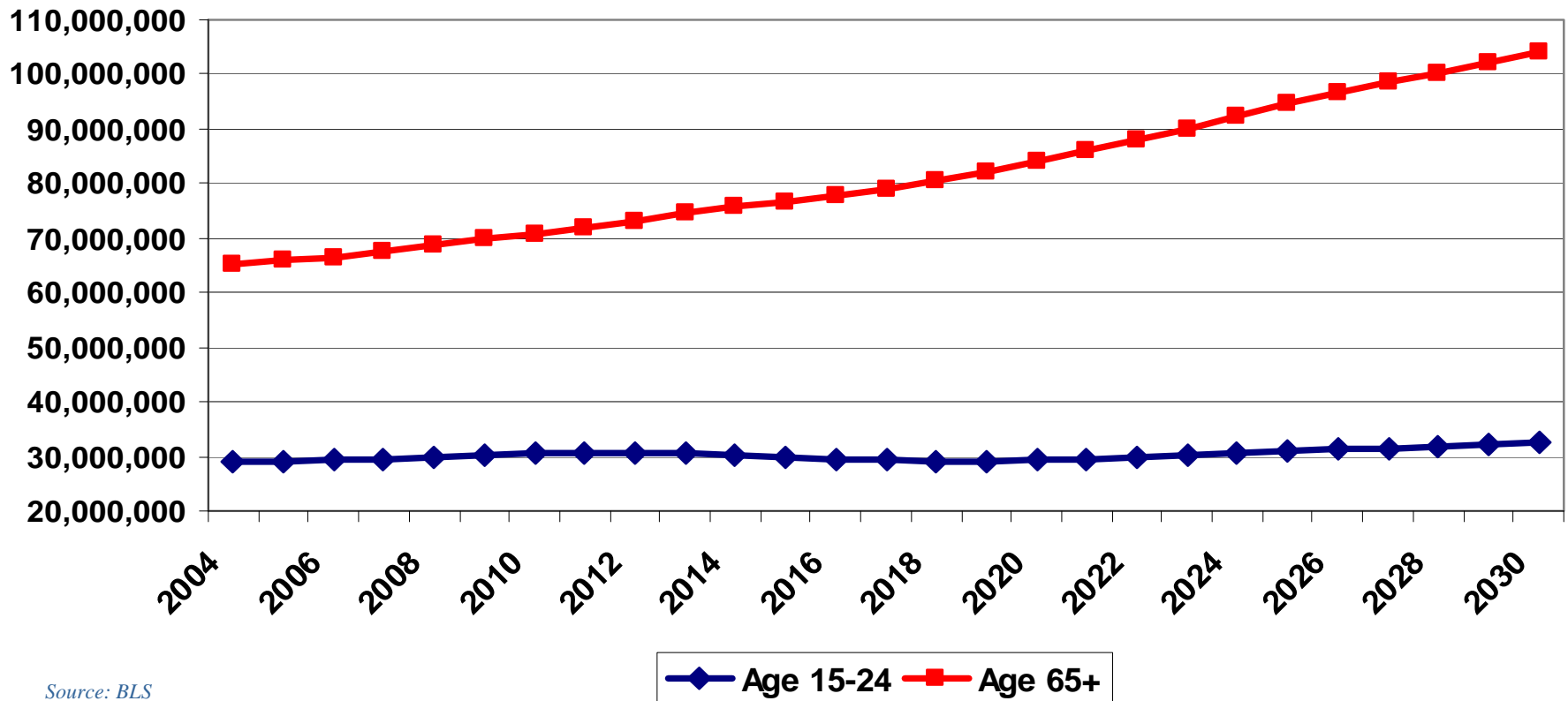
# Skilled Workers

- Hard to find now!
  - Colleges do not have uniform programs
    - MSSC as the vehicle
  - Manufacturing jobs have increased in skill requirements
- Manufacturing programs have not been updated effectively (cost share)
  - System wide sharing of curriculum.....
- Fewer students pursuing careers in Manufacturing
  - (PLTW, Dream It Do It, 360 Degrees COE)
- Stabilize/grow rural or outstate economies (reverse the rural to urban demographic trends)



# Who will replace Retirees?

## US Population Projections 2004-2030, 15-24 years and 65+ years





# What they're saying



**“ Programs like MSSC and NIMS are coming to the aid of our “skill level” issues, raising the qualification level of graduates and bring real pride back to the art of being a manufacturer”**

*-Bruce Hanson, President, Minnesota Precision Manufacturers Association*

*Precision Manufacturing Magazine, Jan/Feb 2007*

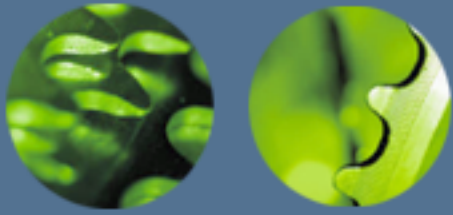




# CME

## The Building Blocks

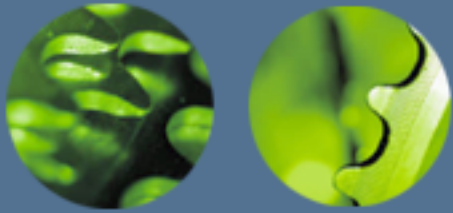
- Project Definition (Challenges)
- Applied Research Opportunities
  - **October 2005 – June 2006**, MJSP Planning Grant - \$50,000.
  - **Jan 2006** – awarded a Regional Business Services Acceleration and Integration Project - \$100,000 McKnight Foundation Grant.
    - Worked with PMAEF to develop FME curriculum.
  - **June 2006** – awarded a Minnesota Job Skills Partnership Grant (\$350,000) to complete the implementation of the MSSC with our business partners next 2 years.
- On-going best practices in incumbent workforce educational program development
  - MnSCU System wide
- Employer advisory group



# Foundations of Minnesota Manufacturing Excellence (FME)

- 4-30 hour modules aligned to the MSSC PTC credential
- Includes High Performance Manufacturing
- Could be converted to an 8 credit certificate
- Designed for incumbent workers
- On-ground, but integrates shop-floor project application
- Utilizes Qwizdom® technology in lectures



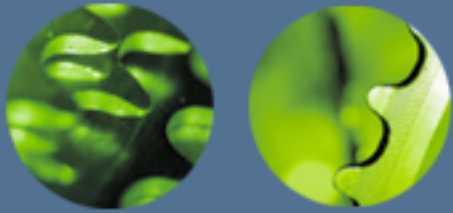


# CME

## The Building Blocks

- Alexandria Technical College
- Hennepin Technical College
- Northland Community and Technical College
- Alexandria Extrusion Co.
- Arctic Cat Inc.
- Dayton/Rogers Co.
- ITW Heartland
- Machinewell Inc.
- Toro Co.





# CME Spotlight (Project Results)

- 2 cohort groups of up to 30  
– all MSSC modules
- Sample Positions.....  
Supervisor; Lead  
Maintenance; Safety;  
Welding; Assembly Lead;  
Quality Assurance;  
Machinist; Mechanical  
Design/R&D; Tooling  
Supervisor; Assembly;  
Fabrication

- **Cohort #2 snapshot**

Safety Awareness –

- 92% passed pre test
- 50% passed post test
- Avg. score increase 11%

Quality and C/I –

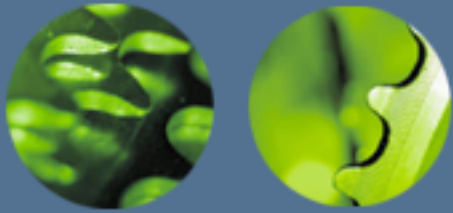
- 71% passed pre test
- 100% passed post test
- Avg. score increase 11%

Mfg Process

- 62% passed pre test
- 100% passed post test
- Avg. score increase 9%

Maintenance Awareness

Results pending.



# CME: Moving Forward

- Regionally in MN

- LM Glasfiber – Danish manufacturer of wind turbine blades with production facilities in Grand Forks, ND, and Little Rock, AR
- MSSC as pre-requisite for Certified Composites Technician (CCT)

- Nationally

- Continue to expose industry to the “system”
- Market Market and Market.....
- Build test center/proctor network
- Increase coordination at national level
- Align with other Cert’s



# Information

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