



Michigan Academy for Green Mobility

Hybrid Electric Vehicle Battery Engineering



Pre-Bid Webinar

May 14, 2009



AGENDA

- Michigan Green Jobs Initiative Overview.
- Michigan Academy for Green Mobility Overview.
- HEV Battery Engineering RFP Requirements.
- Q & A



Green Jobs Initiative

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- **Provide well-trained, highly skilled workers**
 - **Grow a more diverse, sustainable economy for Michigan**

Targeting Employer Needs

- Short-term, targeted education & training opportunities,
- Innovative and flexible delivery of education & training,
- Hands-on, practical experience.



Michigan Academy for Green Mobility



Academy for Green Mobility Mission

*Provide rapid skill growth in
green technology solutions
for advanced mobility to
meet industry needs.*

Academy for Green Mobility Objectives

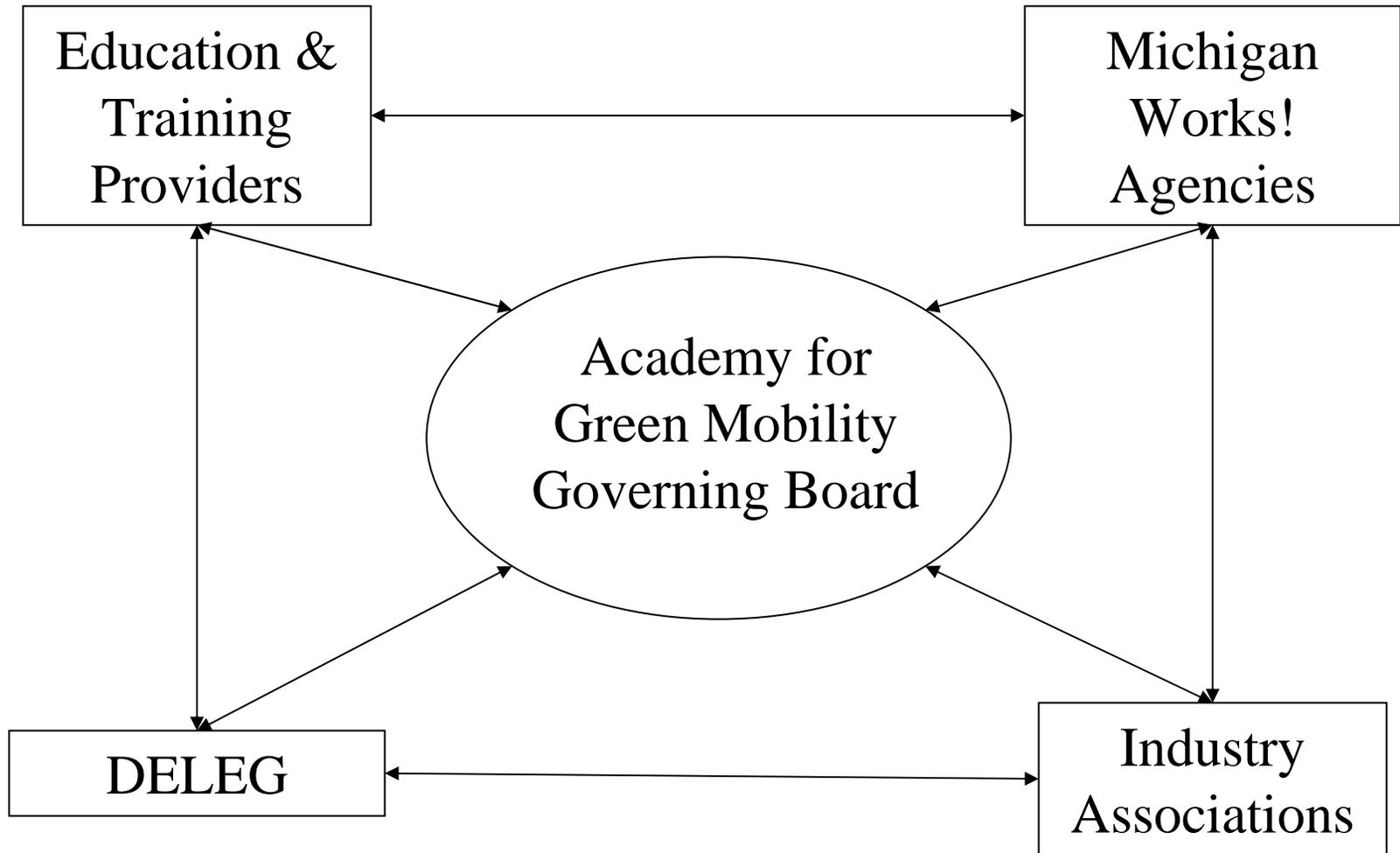
- Prepare individuals for emerging technologies in vehicle propulsion and vehicle component design, manufacturing, and maintenance through rapid / accelerated training and re-training.
- Training in the academy targets incumbent engineers, engineering students, incumbent technicians, and technician program students.

ACADEMY GOALS

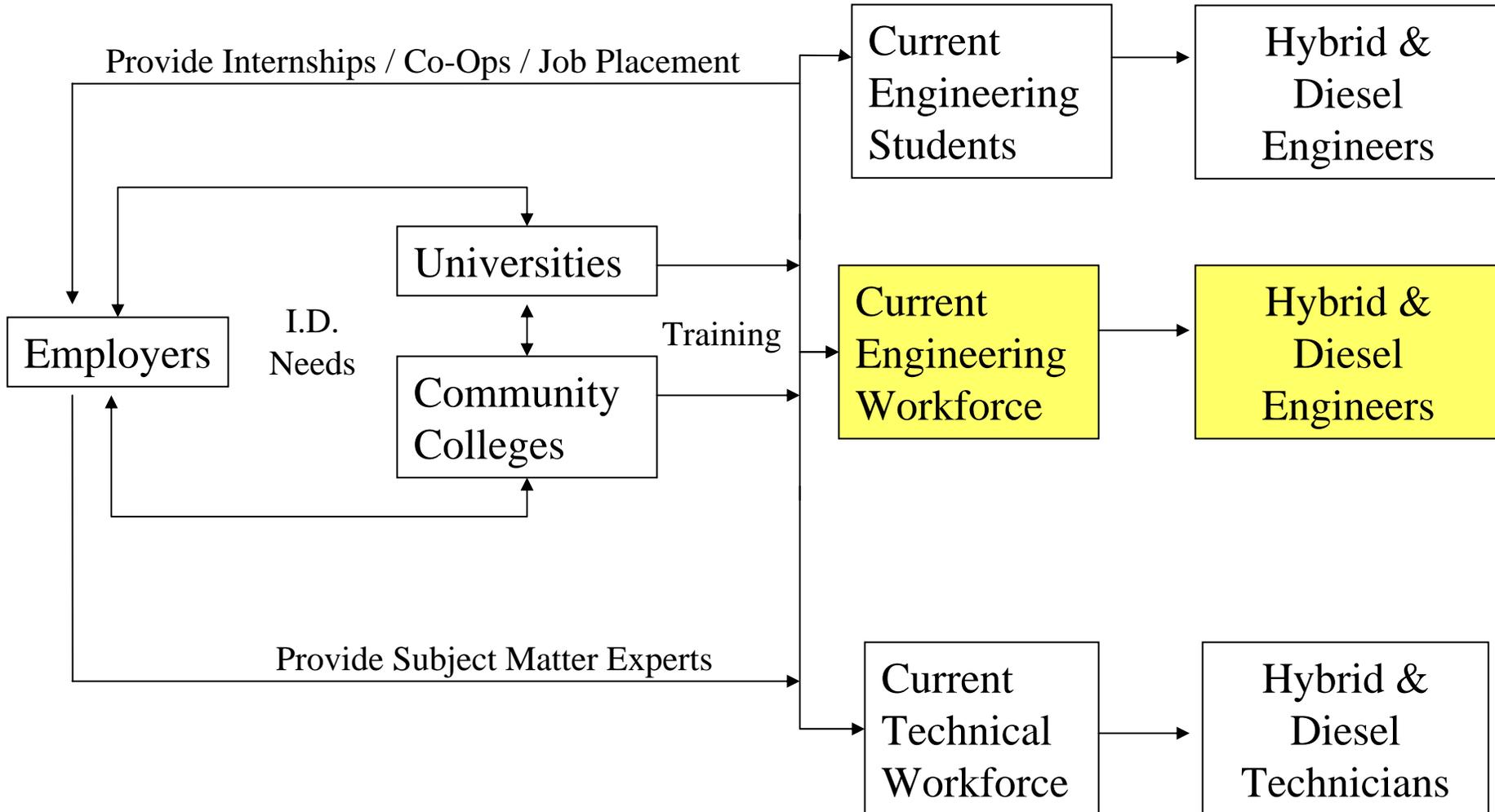
- Collaboration
- Curriculum Enhancement
- Employer Recognized Certificate Programs
- Continuing Education
- Technician Certification
- Shared Knowledge and Resources
- Hands on training and co-op opportunities



Academy Structure



PROCESS FLOW



REQUEST FOR PROPOSALS

- Hybrid Electric Vehicle Battery Engineering;
- Issued April 23, 2009;
- Due 5:00 p.m., Tuesday, May 26, 2009.

REQUEST FOR PROPOSALS

- Eligibility
- Michigan Academy for Green Mobility Application

LEARNING OBJECTIVES

- Vehicle and powertrain systems requirements, design, implementation, calibration, and validation and verification (overview),
- Energy storage system principles including cells, batteries, and preferred chemistries,
- Hybrid electric vehicle powertrain systems,
- Batteries and application to hybrid electric vehicles,

LEARNING OBJECTIVES

- Hybrid vehicle battery systems development,
- Hybrid vehicle battery cell behavior,
- High voltage electrical systems,
- Thermal management,
- Control systems, Matlab/Simulink environment,
- Diagnostics and limp-in strategies.

COURSE DELIVERY

- 25% lab/practical experience,
- Team-based, hands on learning opportunities,
- 14 weeks (or less),
- No more than 14 weeks long,
- No more than 4 hrs/week during normal business hours,
- Accommodate 100 – 200 students.

ASSESSMENT AND CREDIT

- Students should be assessed through a combination of tests and practical projects.
- Graduate level credits are preferred.

EXPERIENCE, PARTNERSHIP, AND ALIGNMENT

- Knowledge, Experience, and Expertise,
- Partnerships,
- Vision Alignment.

PROPOSAL REVIEW

- Governing Board Review,
- Open to negotiation and/or modification,
- Notification within 30 days of proposal due date.

QUESTIONS



Launching the Academy



PROPOSAL SUBMITTAL

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