

ITS Joint Program Office

**Building the Future Transportation
Workforce: Expanding Learning
Opportunities**

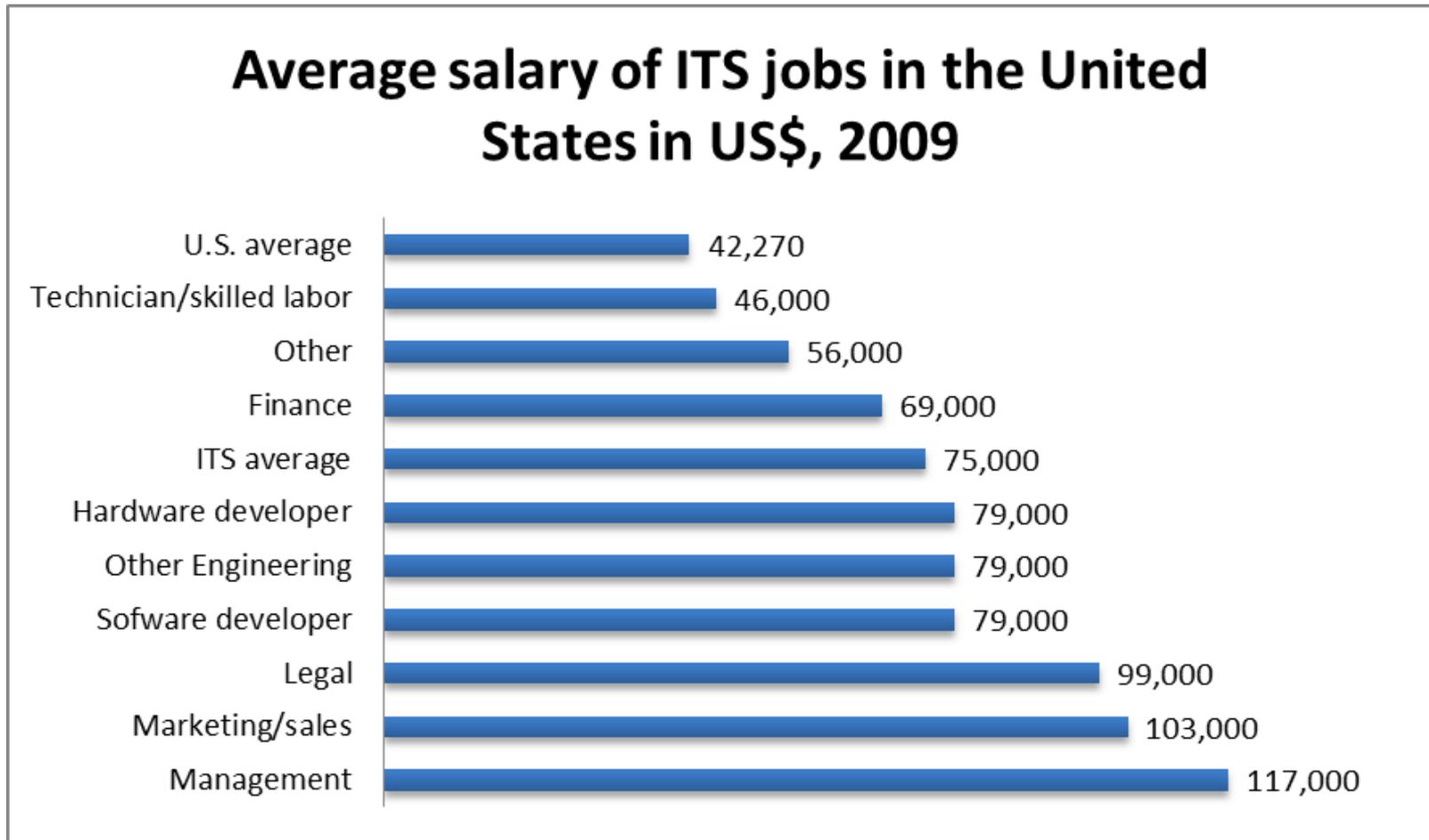
Mac Lister, ITS PCB Program Manager and Liz Greer, Noblis
January 15, 2013

Agenda

- Background on ITS Job Market
- Role of ITS PCB
- New Offerings for 2014
- Future Plans
- Research Needs
- Discussion



Positive Outlook for ITS Job Market



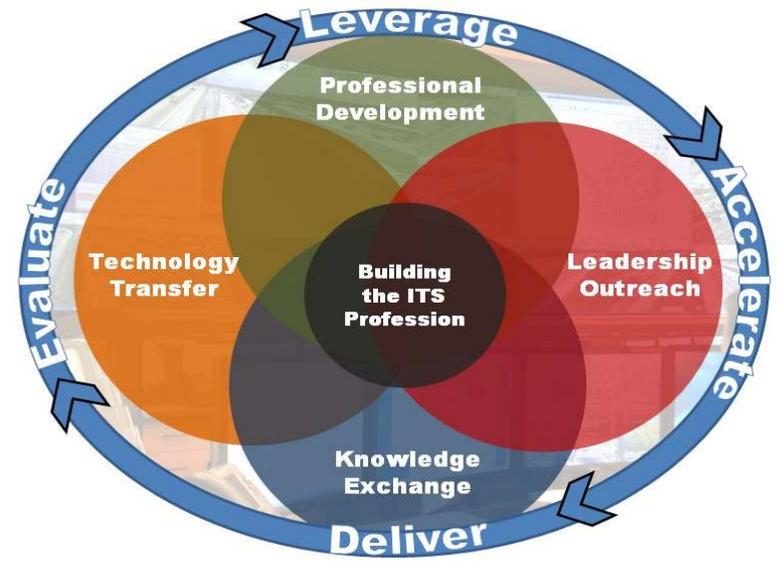
Source: Sizing the U.S. and North American Intelligent Transportation Systems Market: Market Data Analysis of ITS Revenues and Employment. The Intelligent Transportation Society of America. August 2011.



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Role of the ITS PCB Program

- Part of U.S. DOT RITA ITS Joint Program Office (ITS JPO)
- Authorized by Congress in 1996 to develop the workforce competencies to transform the transportation infrastructure through ITS
- Reauthorized by Moving Ahead for Progress in the 21st Century (MAP-21)
- In 2010 embarked on new strategic direction:
 - Develop new ITS content and fill gaps in existing content.
 - Build partnerships to direct learning to the right audiences.
 - Move to cost-effective, engaging delivery methods.



Broadening the Audience

- Traditional ITS Roles:
 - Decision Makers
 - Program Managers
 - Designers/Engineers
 - Planners
 - Technicians
 - Academics:
 - Faculty
 - Researcher



Role matters more than organization in designing learning.

Use new channels to reach these audiences.



- New Focus on:
 - Students
 - Multi-modal
 - Early Adopters
 - Connected Vehicle



Expanding the Program Content

Tier 1: Emerging Technologies

- Connected Vehicle:
 - V2V
 - V2I
 - Safety Pilot
 - Real Time Data Capture & Mgmt.
 - DMA
 - AERIS
 - Road Weather
- Technology
- Policy

Tier 2: Current Research

- Short-term Intermodal Research
- Research Initiatives
 - ICM
 - MSAA
 - Clarus
 - IVBSS
 - EFM
 - Smart Roadside

Tier 3: Existing Technologies

- Arterial Management
- Freeway Management
- Crash Prevention & Safety
- Road Weather Management
- Roadway Ops & Maintenance
- 9 others

Tier 4: Foundational Topics

- Standards
- ITS Architecture
- Systems Engineering
- Telecommunications
- DSRC
- Data Collection & Mgmt.
- Security
- Data Communications

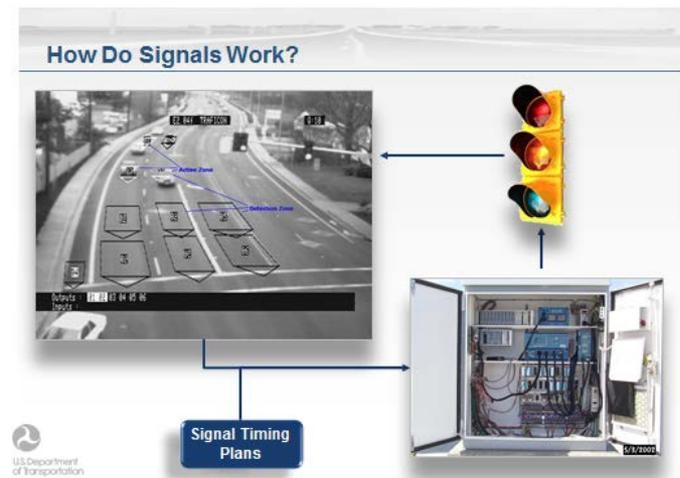


Developing New Learning Resources

- ITS Resources for problem-based learning:
 - ePrimer – online December 2013
 - ITS Case Studies
 - Adaptive Signal Control
 - National Architecture
- Online learning:
 - ITS Standards – 36 modules
 - ITS Transit Standards – coming soon
 - New eLearning Courses from CITE:
 - Telecommunications and Networking Fundamentals
 - Network Design and Deployment Considerations for ITS Managers
 - Professional Certificate programs:
 - ITS Project Management
 - Traffic Engineering and Operations
 - ITS Systems
 - Road Weather Management



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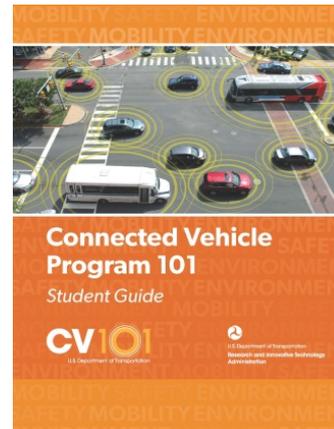
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Developing New Learning Resources

- Expanded T3 program, with improved T3 archive
- Expanded workshops at ITS America state chapter meetings
 - Connected Vehicle 101
 - ICM, Procurement, Improving Safety
 - Student participation welcome
- University Workshop, Sept. 2013 and Spring 2014



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Participants in ITS PCB University Workshop, September 27, 2013, Source: U.S. DOT

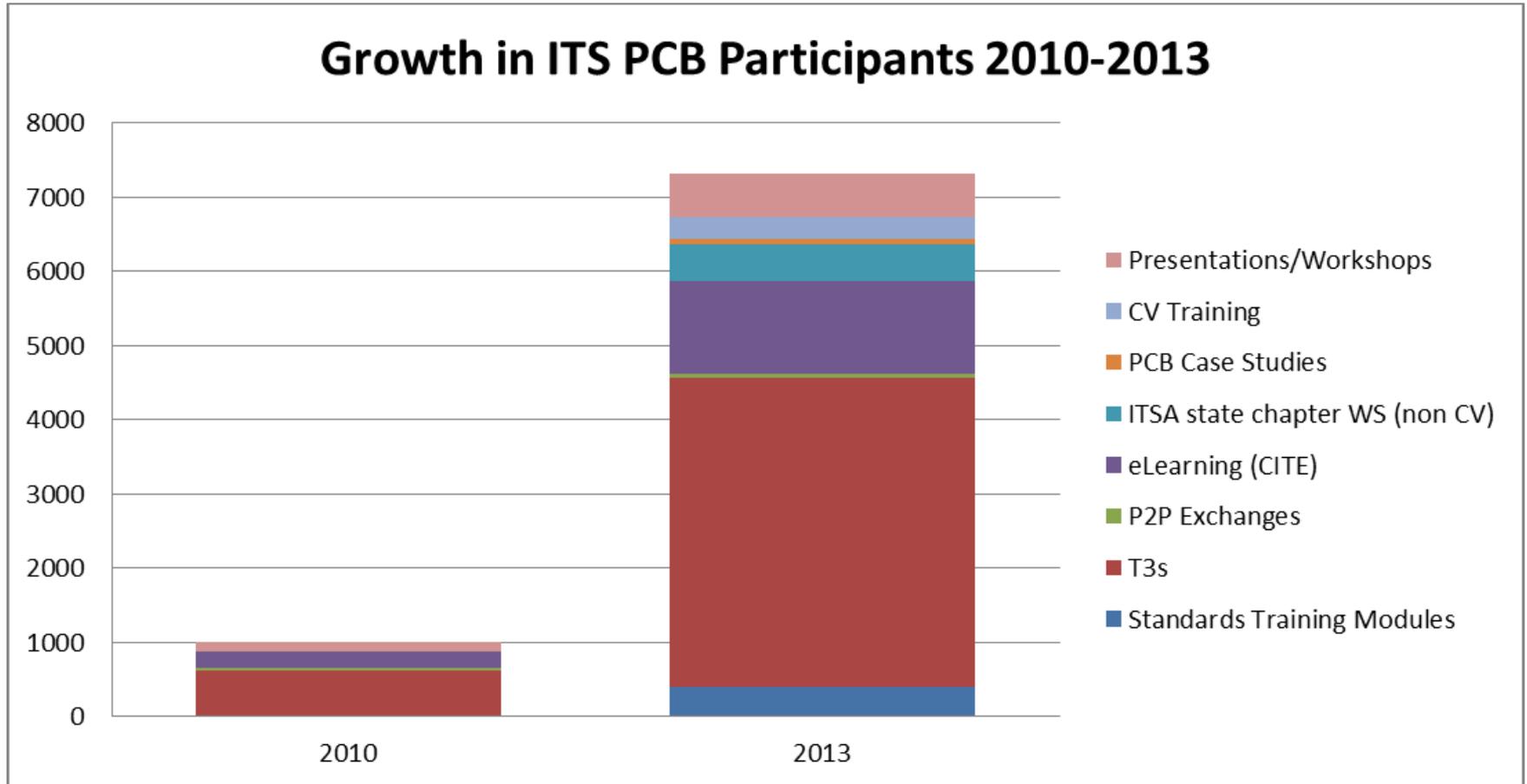
Upcoming T3 Webinar : University ITS Education, hosted by Mohammed Hadi, Ph.D.
Date: Thursday, February 6, 2014
Time: 1:00 PM – 2:30 PM ET
Cost: All T3 webinars are free of charge
PDH: 1.5

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Increasing Impact



ITS PCB Future Plans

- Develop three credit introductory ITS course
 - Online or instructor-led
 - Course designs for undergraduate and graduate civil engineering students
- Develop an ITS curriculum using the skills and competency structure
 - Supplemented by ITS learning resources
- Develop additional ITS resources for problem based-learning
 - Additional ITS PCB case studies
 - Guest lecture videos
- Develop pilot with a university to offer credit for an online ITS course
- Continue dialogue with Operations Center of Excellence
- Continue dialogue with university partners – Spring 2014 workshop



Research Needs

- Gather data on:
 - ITS skills and competencies needed by public and private sector employers
 - Current and future hiring needs
- Update and expand ITS Competencies and Skills table categories:
 - Include next generation ITS technologies (connected / autonomous vehicles)
 - Add ITS-related professional competency areas (standards, communication and collaboration)
- Provide guidance on updated ITS Competencies and Skills tables:
 - For academic institutions, learning providers, and instructional designers
 - To inform development, and delivery of education and training courses and programs.

