

Next Generation Rail Supply Chain Connectivity

Welcome We will begin shortly

**Don't
FORGET!**



1. Please **mute** your phone
2. Please use **Chat Messaging** feature for questions
3. Please be advised that this webinar is being **RECORDED**

Next Generation Rail Supply Chain Connectivity

Webcast Agenda

- | | |
|---------------|---|
| 3:00pm | US DOT Introduction to the
Opportunities and Domestic Content Objectives |
| 3:20pm | Passenger Railcar and Locomotive Manufacturers:
Introductions |
| 4:00pm | NIST MEP Introduction |
| 4:15pm | Q&A |
| 4:30pm | ADJOURN |



U.S. Department of Transportation Introduction



The Honorable John D. Porcari
Deputy Secretary of Transportation

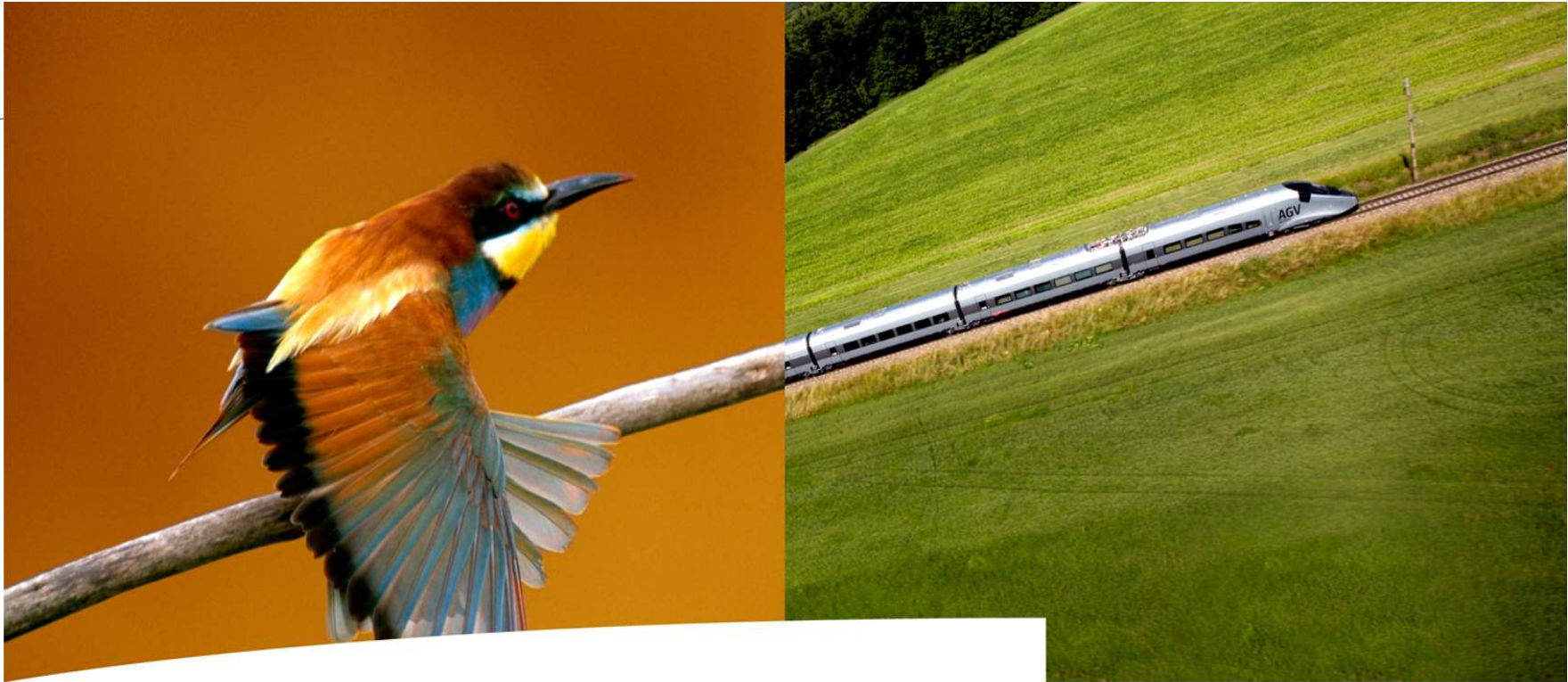
Passenger Railcar and Locomotive Manufacturers

- Alstom*
 - Bombardier*
 - CAF
 - EMD*
 - GE*
 - Kawasaki*
 - Nippon-Sharyo Rotem
 - Siemens*
 - Stadler Rail*
 - Talgo
 - US Railcar*
- (* Presentation today)



GE
Transportation





Alstom Transportation

Alstom Website: www.alstom.com

Supplier Portal:

<http://www.alstom.com/transport/supplier-portal/become-a-supplier/>

Alstom: 2010/11 Sales = \$27 Billion – 93,500 Employees in 100 Countries

Alstom Transport: 2010/11 Sales = \$7.5 Billion – 25,500 in 60 Countries

Sales based on 1.30 Euro to \$1.00 USD

Bombardier Transportation



- The Global Leader in the supply of passenger rail equipment
- Broadest product portfolio
- *ECO4* technologies for more sustainable mobility
- Worldwide installed base of 100,000+ vehicles; over 5,200 passenger rail vehicles in the US
- Revenues US\$ 9.1 bn ¹
- Order backlog US\$ 33.5 bn ²

Bombardier Transportation

101 Gibraltar Road, Suite 112
Horsham, PA 19044 USA

Supplier Qualification:

http://www2.bombardier.com/en/1_0/supplier_preselection/form.html

Extensive US Footprint

Manufacturing / Equipment Refurbishment Sites	Fleet Operations, Maintenance and Service Delivery Centers		Parts Distribution Center
<ul style="list-style-type: none"> • Plattsburgh, NY : manufacturing, assembly and testing • Pittsburgh, PA (2 sites) : both are manufacturing • Kanona, NY : refurbishment 	<ul style="list-style-type: none"> • Los Angeles, CA (Metrolink rail service) • Sacramento, CA (airport) • San Francisco, CA (airport) • Denver, CO (airport) • Orlando, FL (airport) • Miami, FL (TriRail service) • Tampa, FL (airport) • Atlanta, GA (airport) • Boston, MA (MBTA commuter rail service) 	<ul style="list-style-type: none"> • Las Vegas, NV (airport) • Las Vegas, NV (monorail) • Camden, NJ (RiverLine rail service) • Newark, NJ (airport) • New York, NY (JFK airport) • Pittsburgh, PA (airport) • Dallas/Fort Worth, TX (airport) • Houston, TX (airport) • Seattle, WA (airport) 	<ul style="list-style-type: none"> • Plattsburgh, NY



ECO4 is a trademark of Bombardier Inc. or its subsidiaries.







¹ for fiscal year ended January 31, 2011; ² as of January 31, 2011

BOMBARDIER

Our Products and Solutions

The Broadest Portfolio in the Rail Industry



Rail Vehicles	Transportation Systems	Services	Rail Control Solutions	Propulsion & Controls	Bogies
 <ul style="list-style-type: none"> ▪ Intercity trains ▪ High speed trains ▪ Locomotives ▪ Light rail vehicles ▪ Metros ▪ Commuter trains ▪ Regional trains 	 <ul style="list-style-type: none"> ▪ Intercity systems ▪ Monorail systems ▪ APM systems ▪ Light rail systems ▪ ART systems ▪ Metro systems ▪ Transit Security 	 <ul style="list-style-type: none"> ▪ Fleet management ▪ Operations & maintenance ▪ Material solutions ▪ Vehicle refurbishment ▪ Component reengineering 	 <ul style="list-style-type: none"> ▪ Integrated control systems ▪ Automatic train protection and operation ▪ Interlocking systems ▪ Wayside equipment ▪ Services 	 <ul style="list-style-type: none"> ▪ Traction converters ▪ Auxiliary converters ▪ Traction drives ▪ Control and communication 	 <ul style="list-style-type: none"> ▪ Portfolio to match entire range of rail vehicles ▪ Full scope of service over the lifetime of a bogie

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GE Transportation

GE Transportation Overview



- Established more than 100 years ago
- Global HQ: Erie, PA (USA)
- Workforce: Approx. 10,000 (65% US, 35% Int.)
- Industries/Propulsion Systems: Rail, Signaling, Mining, Marine, Oil Drilling, Wind

• Contacts:

- ✓ Alex Artman: alexander.artman@ge.com
- ✓ Graciela Trillanes: graciela1.trillanes@ge.com

Website: www.getransportation.com

Locomotive Product Portfolio



- **Freight:** Heavy haul AC, DC, lightweight
- **Passenger:** Leader in intercity locos in NA
- **Services:** >10,000 locomotives under service agreements; >60 service sites

Experience & Scale to Meet Customer Needs

US & International Customers/Locations



- ~17,000 locomotives in more than 50 countries
- ~ 10,000 locomotives under service agreements
- ~ 300 locomotives in intercity passenger service



Company name:

Kawasaki Rail Car, Inc.

(subsidiary of Kawasaki Heavy Industries, Ltd.)

Website address:

<http://www.khi.co.jp/english/index.html>

<http://www.kawasakirailcar.com>

Point of contact:

Mr. Tadashi Doi, Manager - Marketing

(dbe@kawasakirailcar.com)

Mr. Ken Takeda, Asst Manager - Marketing

(kawasakirailcar@kawasakirailcar.com)

Company's U.S. location:

Yonkers, New York

Lincoln, Nebraska



Current product lines and markets:

Kawasaki Rolling Stock Company provides various rail cars around the world, including: **high speed rail cars, commuter rail cars, rapid transit cars, subway cars, electric & diesel locomotives, freight cars, monorails and automated guided transits.**

In the U.S., Kawasaki has provided **hundreds of commuter rail cars and thousands of subway & rapid transit cars.**

Total number of passenger cars, transit cars and locomotives delivered in the U.S. and around the world:

Over **3,000 commuter/subway/rapid transit cars delivered** in U.S. with **over 1,000 rail cars on order.**

Globally, Kawasaki has **delivered over 90,000 rail cars** since its inception in 1906.

Siemens Industry Inc. – Rail Systems Division

SIEMENS

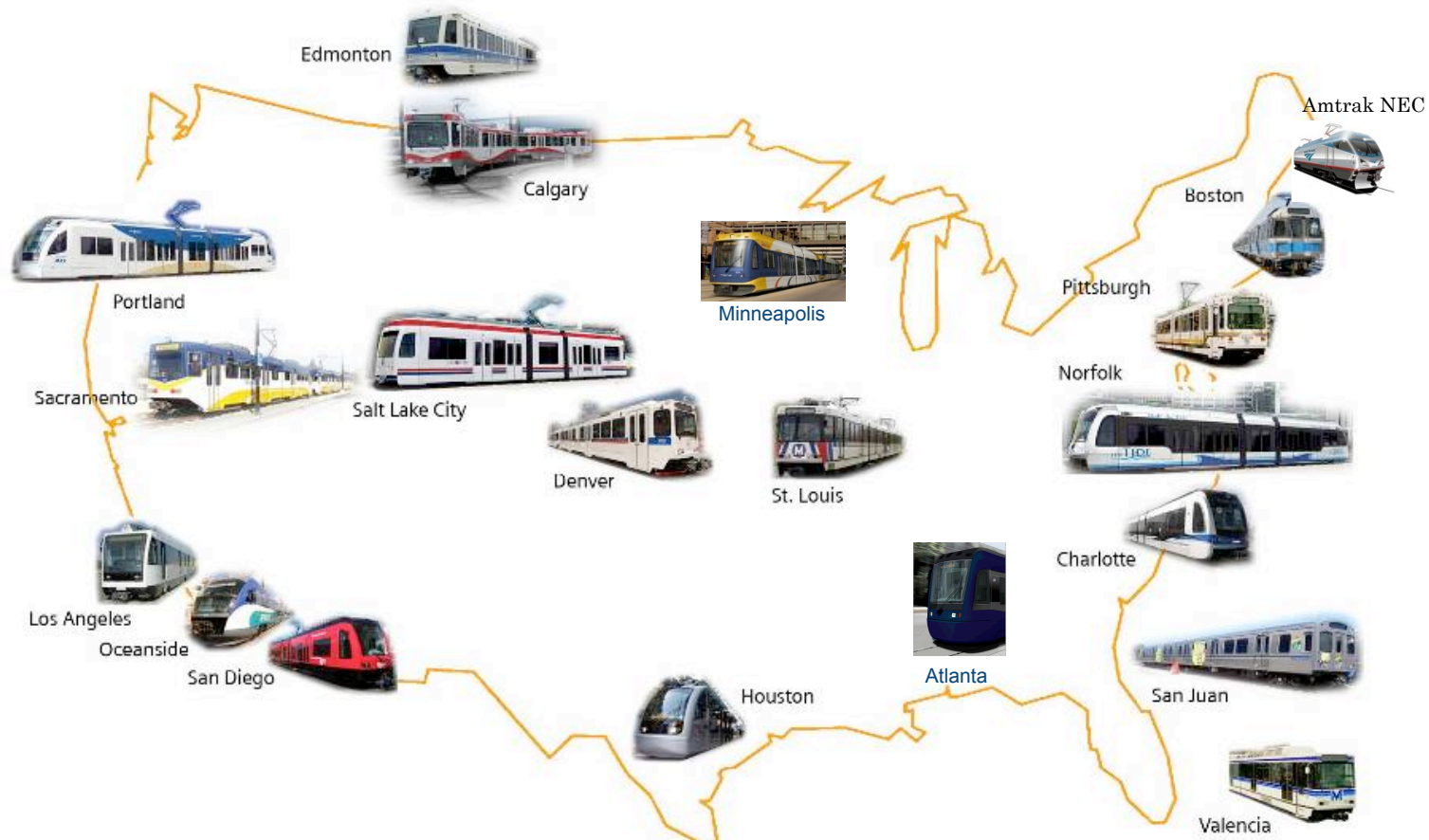
Locations in U.S. – Employing about 1,180 people



Industry Sector, Mobility Division

**Siemens supplied more than 1,000 mass transit vehicles
in 17 US locations and Canada**

SIEMENS



<http://www.mobility.siemens.com/usa>

Armin Kick

armin.kick@siemens.com

Industry Sector, Mobility Division

Individuality in rail traffic



Contact:
Stephen.Bonina@Stadlerrail.com

Product portfolio:

•Railway vehicles

Over 2,400 sold



RS1
3 cars/train



GTW
3 cars/train



Tango
3 cars/train



Locomotives



Narrow gauge railway



FLIRT
4~6 cars/
train



KISS
4~6 cars/
train



Variobahn
3 cars/train



Passenger coaches



Rack-railcars



Talgo Inc

Response to FRA DOT - Next Generation Rail Supply Chain Connectivity Forums –
12/15/11

Company Name: Talgo Inc

Website Address: <http://www.talgoamerica.com/>

Points of Contact:

Ferran Canals - Capital Projects Division Manager

FCanals@talgo-inc.com

Joshua D. Coran – Director of Operations

JCoran@talgo-inc.com

US Locations:

Head Quarters

505 5Th Ave South – Seattle, (WA)

Manufacturing of Passenger Trainsets

3533 N. 27th Street - Milwaukee, (WI)



Talgo Inc

Core Business

Design, Manufacture , Maintenance of

- Passenger Trains - High Speed , Super High Speed Trains and Intercity Passenger Trains
- Maintenance Equipment
- Automatic Dual Gauge Systems
- Maintenance Services

Passenger Cars Delivered in the US and Around the World

- 67 Intercity Cars in service on the Northwest Corridor
- 26 Intercity Cars being manufactured for Oregon DOT
- 31 Intercity Cars being manufactured for Wisconsin DOT
- Over 3,000 passenger cars around the world

US Railcar Company

COMMITTED TO PROVIDING HIGHEST U.S. CONTENT OF ANY RAILCAR MANUFACTURER

- Ohio-based, U.S. owned, purchased the assets of Colorado Railcar
 - Intellectual property (IP)
 - Tooling, fixtures/jigs
 - Manufacturing drawings, patents, etc.
- Service Proven railcar designs
- Product portfolio includes:
 - DMUs, both single and bi-level (a total of 12 car types)
 - Luxury Private Coaches
 - Tourism cars
 - Specialty cars
- 12 DMUs in revenue service with satisfied customers
 - **TriRail** in Miami, Florida
 - **Trimet** in Portland, OR
 - **Alaska Railroad** in Anchorage, AK
 - **FRA** (single-level track geometry car)
- Key staff with extensive rail experience
- Network of federal, state and local rail leaders



US Railcar Company

COMMITTED TO PROVIDING HIGHEST U.S. CONTENT OF ANY RAILCAR MANUFACTURER

Points of Contact:

Sales, Customer Relations & Buy America

Jolene M. Molitoris – President

jolene.molitoris@USRailcar.com

(614) 246-9465 x 2602

Supplier & Technical Inquiries

Ted Schaefer – VP of Operations

ted.schaefer@USRailcar.com

(614) 246-9465 x 2060

919 Old Henderson Rd. Columbus, OH 43220

www.USRailcar.com



MEP: SUPPLIER SCOUTING to Help Increase Next Generation Rail Domestic Content



WEBCAST

Next Generation Rail Supply Chain Connectivity

December 15, 2011



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Manufacturing Extension Partnership (MEP)
National Institute of Standards and Technology (NIST)
U.S. Department of Commerce

MANUFACTURING EXTENSION PARTNER

The National Institute of Standards and Technology (NIST)

Mission: To promote U.S. innovation and industrial competitiveness by advancing

- measurement science,
- standards, and
- technology

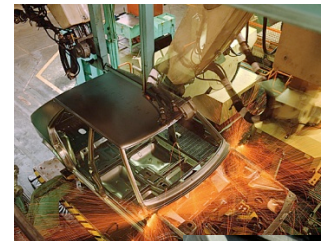
in ways that enhance economic security and improve our quality of life

NIST Programs

- Measurement Laboratories, **Manufacturing Extension Partnership (MEP) Program**, Baldrige Performance Excellence Program

NIST Assets, Products, Services

- 2800 employees, 2600 associates and facilities users, >1300 field staff in MEP partner organizations
- Unique User Facilities: Center for Neutron Research, Center for Nanoscale Science and Technology
- 100 different types of Standard Reference Data, 1,300 Standard Reference Materials
- 18,000 calibration tests, 2,200 publications, 800 accreditations per year



Courtesy Steuben

THE MEP PROGRAM IN SHORT....

- **MISSION** – “To act as a strategic advisor to promote business growth and connect manufacturers to public and private resources essential for increased competitiveness and profitability. “
- Program started in 1988 to address “market failures” affecting competitiveness of small U.S. manufacturers.
- 60 centers with >370 field locations
 - 501 c3 non-profits, university-based, embedded in state government agencies
 - System wide, Non-Federal staff is > 1,300
 - Contract with over 2,300 third party service providers
- MEP System budget ~ \$300M – Federal / State / Industry
 - 1/3 Federal (\$128.4M FY12), 2/3 State and Industry (fees for services)
- MEP Program and Center performance measured per impact of services on client firms.
 - >34,000 manufacturers served in FY2010 (projects, workshops, etc.)
 - Aggregate impacts include \$8.4B increased/retained sales; \$1.9B new client investment; \$1.3B cost savings; 72,075 jobs created and retained *



MEP • MANUFACTURING
EXTENSION PARTNERSHIP

**Based on 2010 independent survey of clients w/projects completed in*

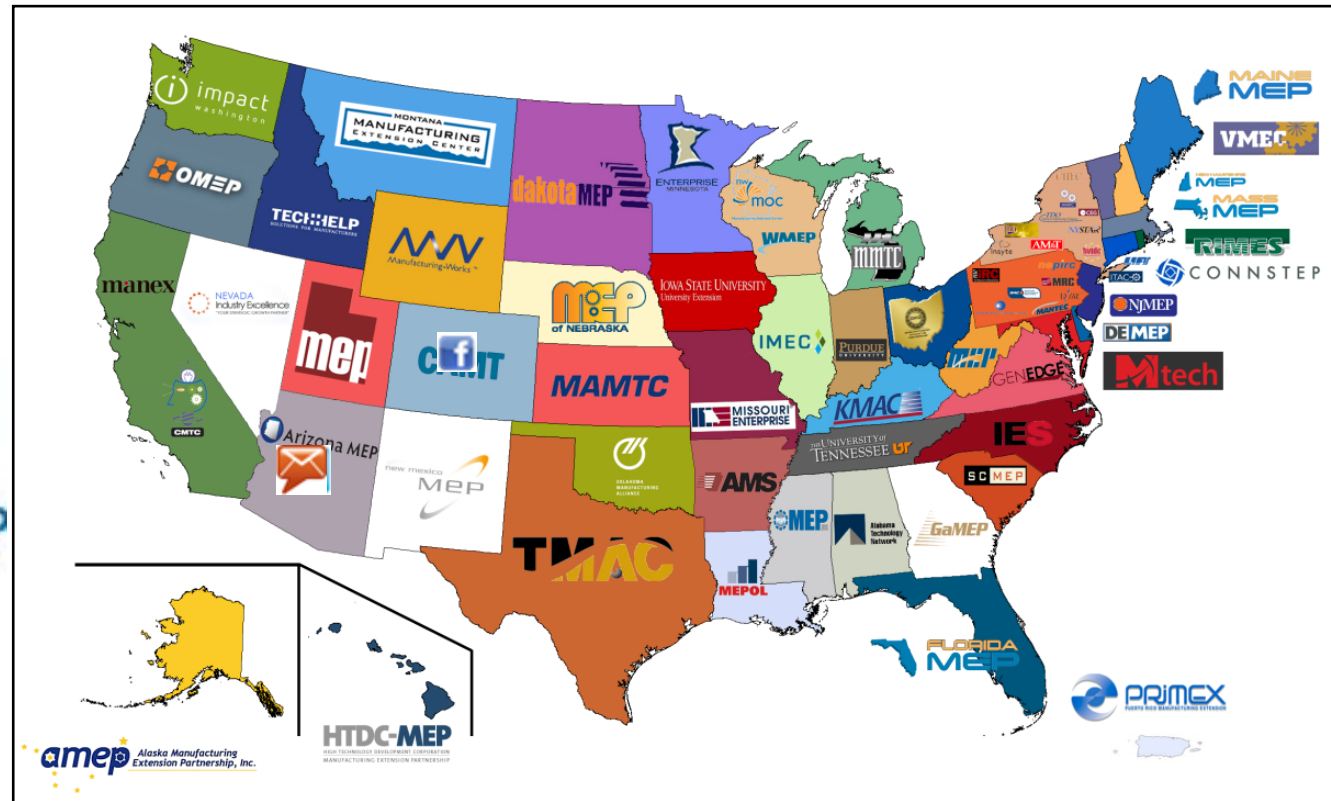
FY09

MEP Nationwide Network of Centers

www.nist.gov/mep

– or –

800-MEP-4MFG



MEP Strategies

- **OVERARCHING MEP STRATEGY:** Increasing manufacturers' capacity for innovation, resulting in profitable sales growth.
- **APPROACH:** Provide framework that capitalizes on cost-reduction strategies – historically MEP's core services – to enhance productivity and free up capacity for business growth, focused on development of
 - *new sales, new markets, new products*
- The 5 key MEP strategies for increasing manufacturers' profitability:
 - **Continuous Improvement**
 - **Technology Acceleration**
 - **Supplier Development**
 - **Sustainability**
 - **Workforce**



MEP: *Connecting and Assisting U.S. Manufacturers*



- Enhance business opportunities for U.S. manufacturers by *connecting the capabilities, capacities of U.S. (small) manufacturers with supply needs of government agencies, OEMs*
- Provide assistance to manufacturers, including:
 - ✓ *Market Diversification*
 - ✓ *Manufacturing Strategy and Scale-up*
 - *Lean and Quality*
 - ✓ *Production Optimization, Integration and (Re)tooling*
 - ✓ *Innovation and Product Development*
 - ✓ *IP Management*
 - ✓ *Financing*

MEP Make it in America: Supplier Scouting

- MEP is operating a proven set of processes that brings business opportunities to U.S. manufacturers.
 - ✓ MEP leverages its knowledge of local manufacturers to
 - ID potential suppliers for federal and OEM sourcing needs
 - provide technical assistance to firms as relevant to specific supply chains; often involves market diversification for manufacturers
 - ✓ MEP Supplier Scouting includes assisting federal agencies' compliance with **Buy America / Buy American Provisions** of federal funding programs.
 - ✓ MEP scouts for U.S. manufacturers able and interested in supplying products ID'd as only having foreign sources – resulting in increased U.S. made products within federally funded programs
 - ✓ Multi-faceted approach to connecting manufacturers with opportunities
 - ✓ Key to success is the MEP Network – not the tools utilized
- Current MEP Supplier Scouting partners:
 - ✓ **DOD (NAVAIR/VA, DLA), DOE, NIST, non-rail OEMs + DOT**





MEP Supplier Scouting and Supply Chain Development for Next Generation Rail

- The nationwide MEP Network will actively assist during 2012 in development of more robust domestic supply base for next generation rail equipment in U.S.
 - ✓ Memorandum of Agreement and Interagency Agreement between NIST MEP and DOT
 - ✓ NIST MEP to handle national, system-wide management, coordination of MEP efforts
 - MEP Center Supplier Scouting: 10 Regional POCs, 100+ Center POCs
 - ✓ MEP Supplier Scouting to ID manufacturers both **capable of** and **interested in** supplying needed manufactured goods
 - To likely include suppliers currently serving rail industry + manufacturers from other sectors (auto, defense, aero, industrial controls / electronics, others ?)
 - ✓ MEP also available to assist potential domestic suppliers (especially from other sectors) with diversification into rail supply chains



Next Generation Rail Supply Chain Connectivity

Next Steps



- Today's Webcast

- ✓ Interested manufacturers may contact participating OEMs about potential supply opportunities, including partnering on responses to 2012 procurements
- ✓ NIST MEP to post webcast slides for access by participants, interested entities

- Next Connectivity Events



- ✓ 2 Regional Next Generation Supply Chain Connectivity Forums in early 2012
 - Sacramento, CA, and Chicago, IL – targeting last week of Jan / first week of Feb
 - Details to be disseminated by NIST MEP



Thank You for Your Participation !

Q & A

