

# 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

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



# U.S. Department of Transportation Introduction



The Honorable John D. Porcari  
Deputy Secretary of Transportation

# Passenger Railcar and Locomotive Manufacturers

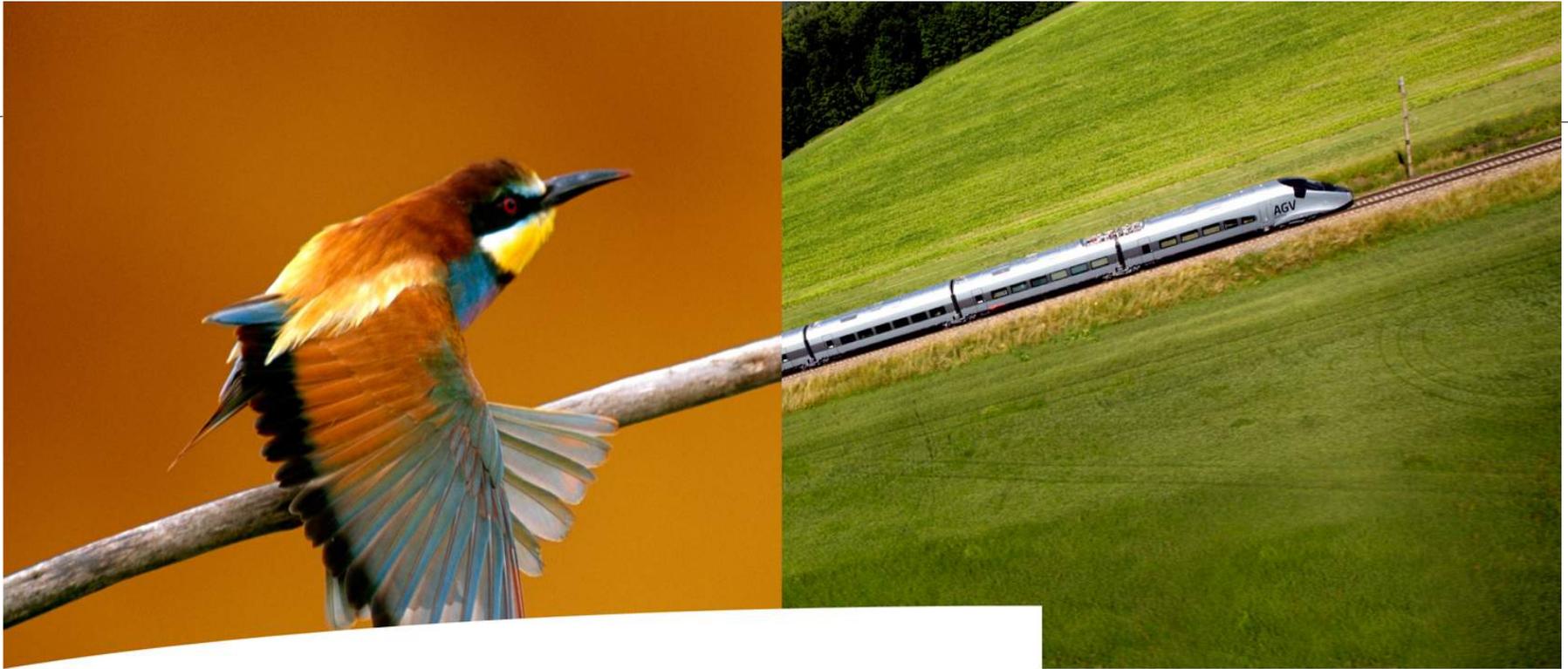
- Alstom\*
- Brookville Equipment Corp
- Bombardier\*
- CAF
- EMD\*
- GE\*
- Kawasaki\*
- Nippon-Sharyo
- Siemens\*
- Stadler Rail\*
- Talgo
- US Railcar\*



GE  
Transportation



(\* Presentation today)



# Alstom Transportation

Alstom Website: [www.alstom.com](http://www.alstom.com)

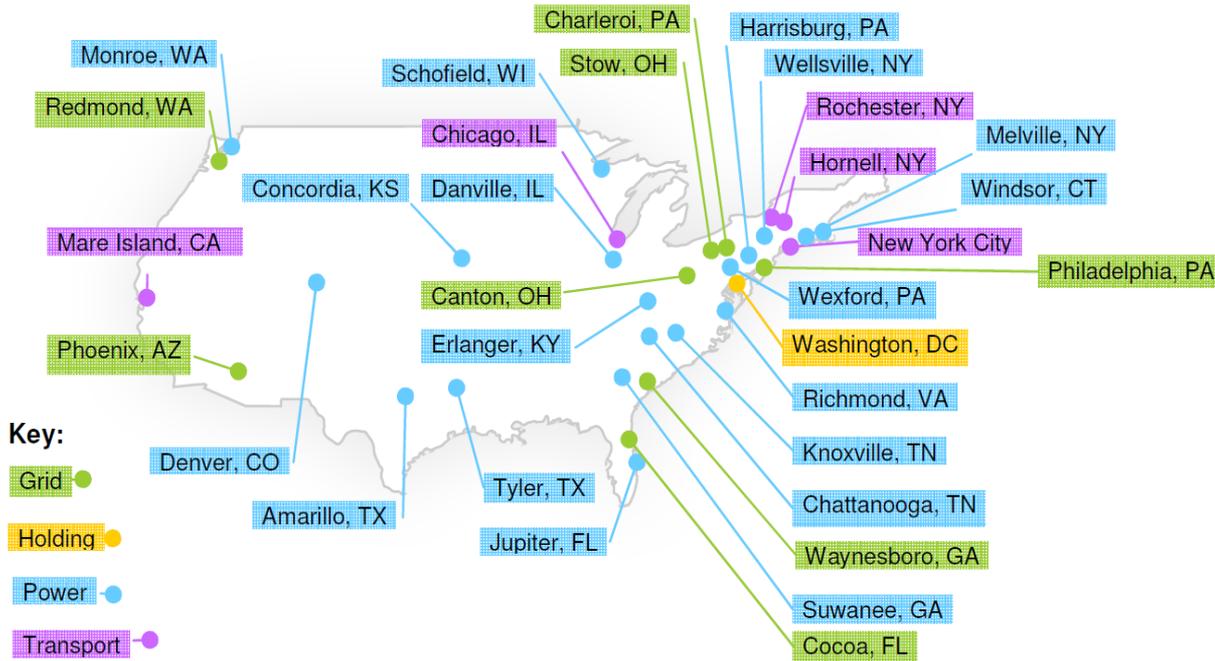
Supplier Portal:

<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



US Locations: Over 6,000 permanent employees in 47 states and the District of Columbia  
 10,000+ employees including contract workers

Rolling Stock : From LRV's to Very High Speed Trains  
 Over 50,000 Vehicles Produced



**ALSTOM**



## Brookville Equipment Corporation

- American Manufacturer of Rail Transport Equipment (Locomotives & Streetcars)
- Established in USA in 1918
- Located in Brookville, Pennsylvania



Contact : Joel McNeil, Transportation Sales  
jmcneil@brookvillecorp.com

[www.brookvillecorp.com](http://www.brookvillecorp.com)



## Complete USA Design/Build Process

Engineering - Design - Manufacturing

### Locomotive Division



Customers:

- Metro North Railroad (New York)
- C-DOT (Connecticut)
- Staten Island Railway (New York)
- Tri-Rail (Florida)

### Streetcar Division



Customers:

- SEPTA (Philadelphia, Pennsylvania)
- NORTA (New Orleans, Louisiana)
- SFMTA (San Francisco, California)

# 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 <sup>1</sup>
- Order backlog US\$ 33.5 bn <sup>2</sup>

## Bombardier Transportation

101 Gibraltar Road, Suite 112  
Horsham, PA 19044 USA

### Supplier Qualification:

[http://www2.bombardier.com/en/1\\_0/supplier\\_preselection/form.html](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"> <li>• Plattsburgh, NY : manufacturing, assembly and testing</li> <li>• Pittsburgh, PA (2 sites) : both are manufacturing</li> <li>• Kanona, NY : refurbishment</li> </ul>	<ul style="list-style-type: none"> <li>• Los Angeles, CA (Metrolink rail service)</li> <li>• Sacramento, CA (airport)</li> <li>• San Francisco, CA (airport)</li> <li>• Denver, CO (airport)</li> <li>• Orlando, FL (airport)</li> <li>• Miami, FL (TriRail service)</li> <li>• Tampa, FL (airport)</li> <li>• Atlanta, GA (airport)</li> <li>• Boston, MA (MBTA commuter rail service)</li> <li>• Las Vegas, NV (airport)</li> <li>• Las Vegas, NV (monorail)</li> <li>• Camden, NJ (RiverLine rail service)</li> <li>• Newark, NJ (airport)</li> <li>• New York, NY (JFK airport)</li> <li>• Pittsburgh, PA (airport)</li> <li>• Dallas/Fort Worth, TX (airport)</li> <li>• Houston, TX (airport)</li> <li>• Seattle, WA (airport)</li> </ul>	<ul style="list-style-type: none"> <li>• Plattsburgh, NY</li> </ul>



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

<sup>1</sup> for fiscal year ended January 31, 2011; <sup>2</sup> 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"> <li>▪ Intercity trains</li> <li>▪ High speed trains</li> <li>▪ Locomotives</li> <li>▪ Light rail vehicles</li> <li>▪ Metros</li> <li>▪ Commuter trains</li> <li>▪ Regional trains</li> </ul>	<ul style="list-style-type: none"> <li>▪ Intercity systems</li> <li>▪ Monorail systems</li> <li>▪ APM systems</li> <li>▪ Light rail systems</li> <li>▪ ART systems</li> <li>▪ Metro systems</li> <li>▪ Transit Security</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fleet management</li> <li>▪ Operations &amp; maintenance</li> <li>▪ Material solutions</li> <li>▪ Vehicle refurbishment</li> <li>▪ Component reengineering</li> </ul>	<ul style="list-style-type: none"> <li>▪ Integrated control systems</li> <li>▪ Automatic train protection and operation</li> <li>▪ Interlocking systems</li> <li>▪ Wayside equipment</li> <li>▪ Services</li> </ul>	<ul style="list-style-type: none"> <li>▪ Traction converters</li> <li>▪ Auxiliary converters</li> <li>▪ Traction drives</li> <li>▪ Control and communication</li> </ul>	<ul style="list-style-type: none"> <li>▪ Portfolio to match entire range of rail vehicles</li> <li>▪ Full scope of service over the lifetime of a bogie</li> </ul>

© Bombardier Inc. or its subsidiaries. All rights reserved.

# 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](http://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](mailto:dbe@kawasakirailcar.com))

Mr. Ken Takeda, Asst Manager - Marketing

([kawasakirailcar@kawasakirailcar.com](mailto: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



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



⇒ Rail Automation

Minneapolis, MN  
25 Employees



⇒ Motors

Norwood, OH  
400 Employees/100Rail



⇒ Rail Automation  
Headquarters

New York, NY  
92 Employees



⇒ Rolling  
Stock Plant  
⇒ Mobility  
Headquarters

Sacramento, CA  
850 + Employees



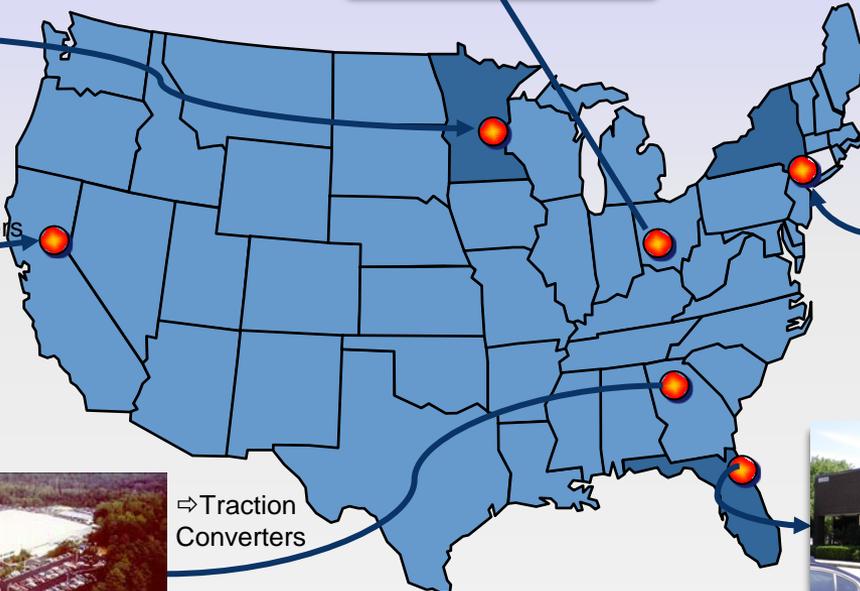
⇒ Traction  
Converters

Alpharetta, GA  
600 Employees/80 Rail



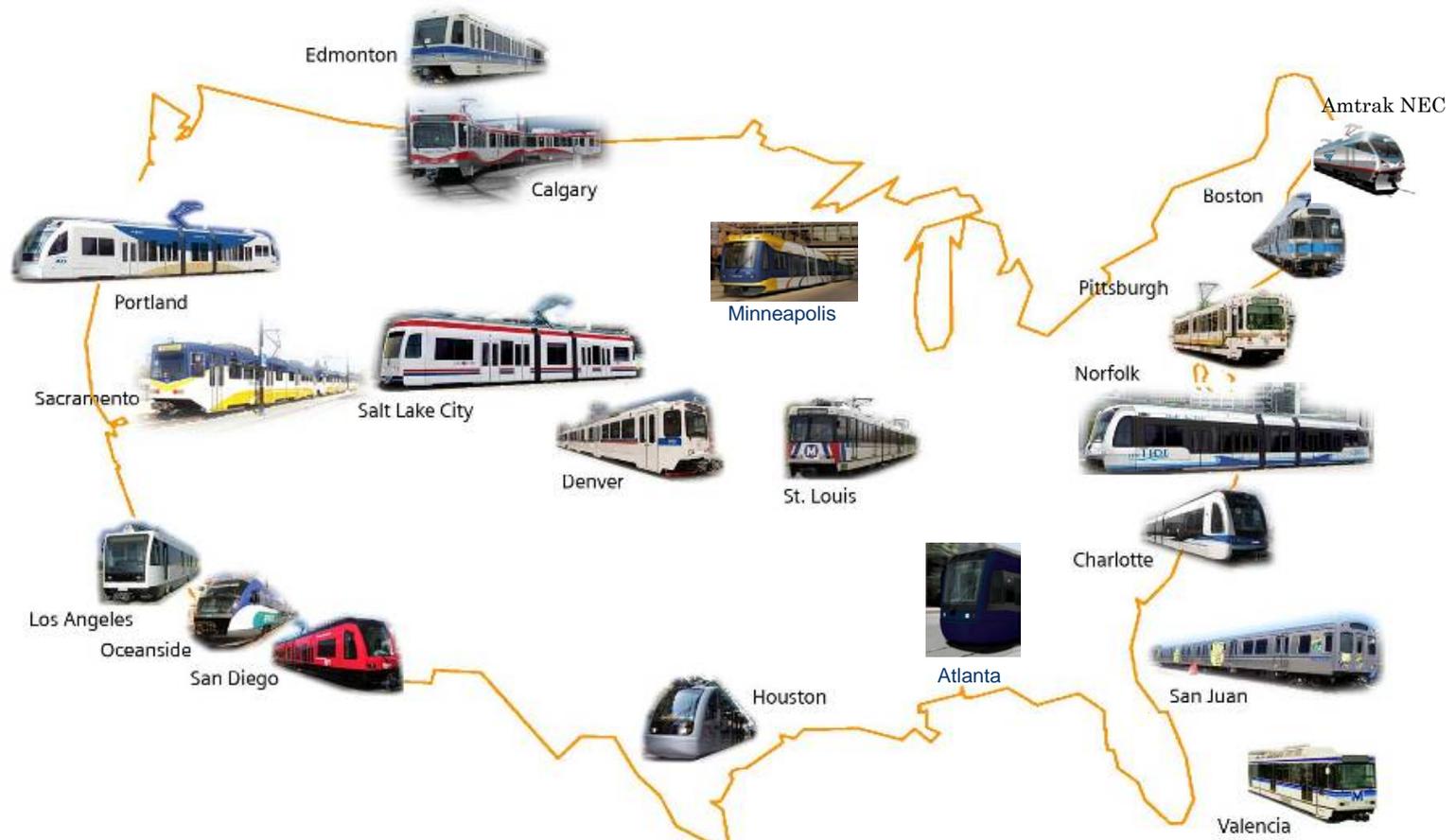
⇒ Rail Automation

Jacksonville, FL  
37 Employees



# 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

# Individuality in rail traffic



Contact:  
[Stephen.Bonina@Stadlerrail.com](mailto:Stephen.Bonina@Stadlerrail.com)

## Product portfolio:

- **Railway vehicles**

Over 2,400 sold

- **Streetcars**

Over 400 sold

- **Custom rail vehicles**

Over 250 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](mailto:FCanals@talgo-inc.com)

Joshua D. Coran – Director of Operations

[JCoran@talgo-inc.com](mailto:JCoran@talgo-inc.com)

## US Locations:

### **Head Quarters**

*505 5<sup>th</sup> 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](mailto:jolene.molitoris@USRailcar.com)

(614) 246-9465 x 2602

### Supplier & Technical Inquiries

Ted Schaefer – VP of Operations

[ted.schaefer@USRailcar.com](mailto:ted.schaefer@USRailcar.com)

(614) 246-9465 x 2060

919 Old Henderson Rd. Columbus, OH 43220

[www.USRailcar.com](http://www.USRailcar.com)



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



## WEBCAST

*Next Generation Rail Supply Chain Connectivity*  
*December 15, 2011*



### **David C. Stieren**

Manager, Technology Acceleration  
301-975-3197  
[david.stieren@nist.gov](mailto:david.stieren@nist.gov)

### **Carroll Thomas Martin**

Program Manager, Supplier Scouting  
301-975-5031  
[carroll.thomas@nist.gov](mailto:carroll.thomas@nist.gov)

### **Samm Bowman**

Business Specialist  
301-975-5978  
[samm.bowman@nist.gov](mailto:samm.bowman@nist.gov)

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

# 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*

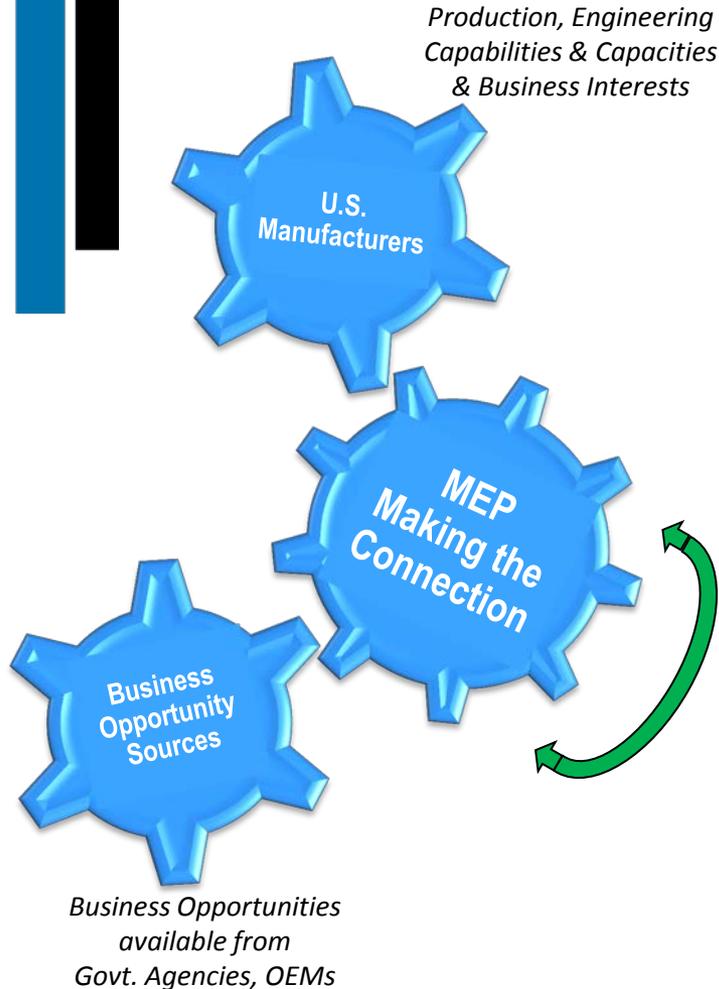


## MEP Strategies

- **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

