

**SRF 2016**

**Southeast Rail Forum**

District of Columbia • Virginia • North Carolina • South Carolina • Georgia • Florida

*Preparing for Change...Planning for Success*

## Lack of Consistent Funding

*David Staplin, Senior Project Director, Philadelphia, PA*

**HNTB**



*Advancing Women in Transportation*  
NC Triangle Chapter

# Projects require team work

- Owner
  - Agency, if its public and/or
  - Corporation, if it's private
- Designer
- Contractors
- Suppliers



# Lack of consistent funding hurts team effort

- Strategic planning for mega-projects, which are the sum of smaller projects
- Project development
- Project execution
- Management of resources:
  - Budgets
  - Especially people

# Strategic planning

- What the process should look like
  - Starts with “vision,” vetted with public
  - Divide “vision” large projects into constructible segments
  - Order of magnitude costs
  - Prioritization
  - Comparison with funding stream to develop implementation schedules
- With funding lapses, process gets drawn out and:
  - “Vision” becomes cloudy
  - Priorities change
  - Competition for funding may appear
  - Tendency to overreach/underfund
  - Inflation drives costs up (“Line in the sand...”)



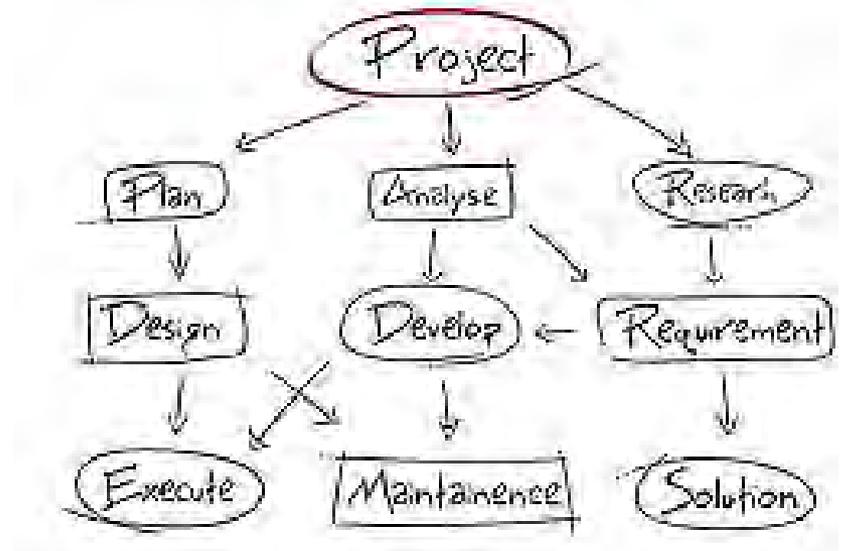
# Project development

- What the process should look like:

- Concept
- Preliminary design
- Vetting with public
- Environmental work
- Detailed design
- Reliable cost estimates with realistic contingencies
- Funding

- What happens with insufficient funding

- Process compromised because steps are skipped to make up schedule
- Budget gets set before detailed design...
- Conflict between partners going forward
- Projects go to construction underfunded with insufficient contingency



# Project execution

- What the process looks like
  - Specification
  - Bids
  - Evaluation
  - Award
  - Build
- What happens when project development process compromised
  - Bids come in high
  - Contractors bid jobs based on expecting “extras”
  - Costs go up
- Subsequent reporting of problems in media undermines public confidence



# Management of resources - Money

- Budget competition
  - For infrastructure, dollars required for:
    1. Routine repair and maintenance
    2. Capital repairs
    3. Development of new functionality
  - What happens under inconsistent funding
    1. Items 1 and 2 eat up the money and 3. doesn't get done
    2. 3. Gets done, maintenance suffers
      - System functionality drops
      - Cost of repair goes up, minor ones become major
    3. Repairs needed on early segments as new ones go to construction
    4. Job starts then stop then restart, with costs of remobilization



# Management of resources - People

- People, project development
  - Rail is an order of magnitude smaller than highways and other modes
    1. Education in rail is way behind other fields
      - Scarcity of skilled people
        - » Technical
        - » Planning
      - Movement of talent among partners is a zero sum game
      - Freight rail, once a source for some skillsets now more stable
    2. Blending of new standards with old is a very large issue



# Management of resources - People

- People, construction
  - Key trades, especially electrical
    1. Certification can take up to two years
    2. Leadership skills can take five years to develop
    3. Customers don't want to pay for training (\$100,000 per year)
  - Once trained, loss to other key industries (utilities)
- Other consequences
  - Key people get overloaded
  - Overtime becomes an issue with hourly employees
  - Turnover when workload declines
    1. People prefer stability and leave
    2. Terminate staff
- Relative size of rail to other modes not likely to change
- All members of the team are impacted

# What to do?

- While funding will always be subject to overall economic conditions, a base funding level would greatly reduce inefficiencies
- Highways could be used as an overall model
  - Funding still varies, but it is never zero
  - Projects fully developed and truly “shovel ready”
- Improved public understanding of rail
  - Rail faded from the public view after World War Two
    1. In the race to expand other modes
    2. Appears now in frustration when grade crossings are blocked
  - There is a selling job to be done to educate the public
    1. Role as a low-cost alternative
    2. Role as an environmentally friendly mode
  - Public more likely to fund projects which it understands and believes in

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# HARSCO

RAIL



## Harsco Rail

*Craig Fairley*

*Director of North American Operations - Columbia, SC*



*Advancing Women in Transportation*  
NC Triangle Chapter

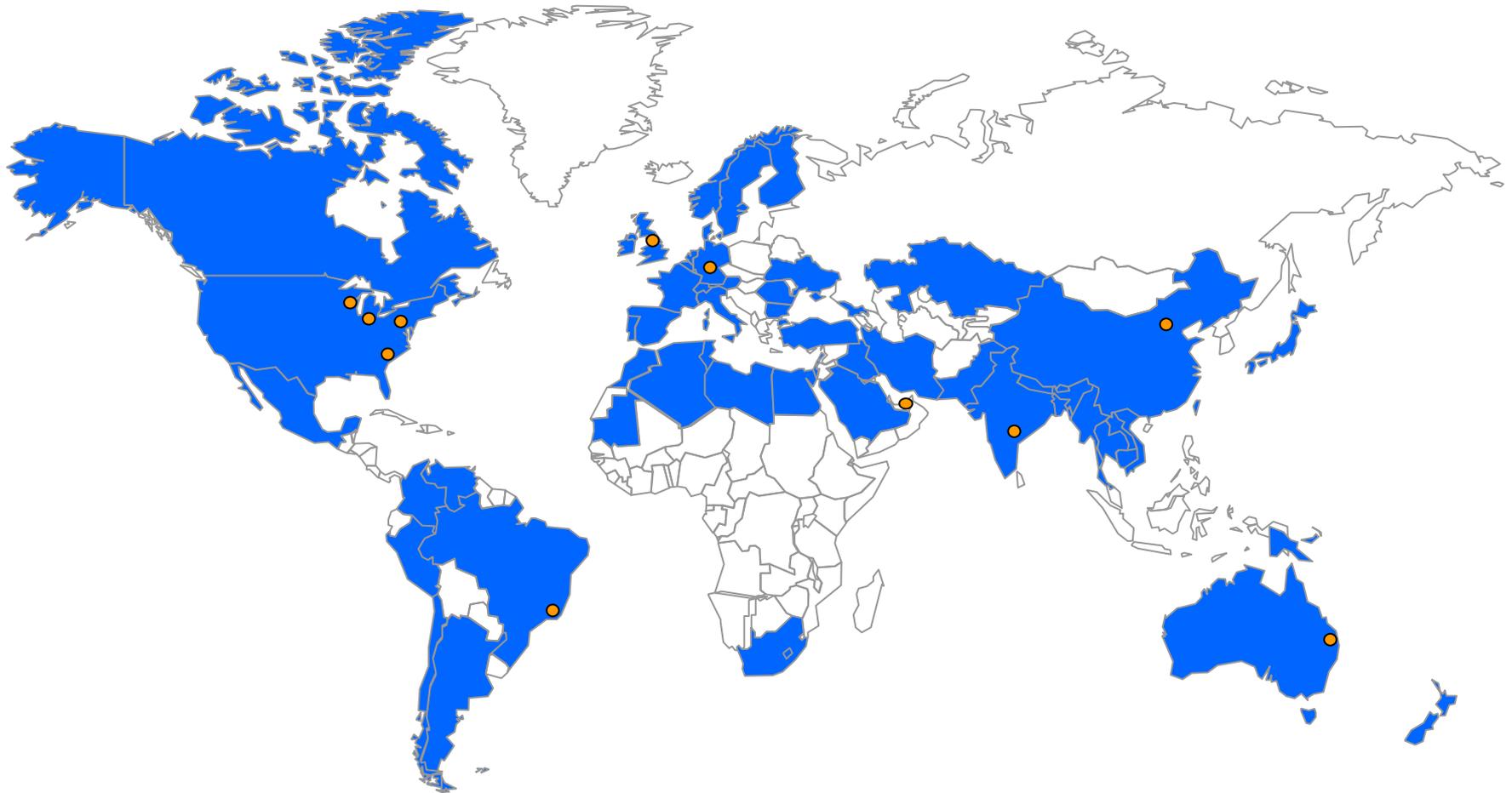
# Harsco Rail Profile



- A global leader in state of the art equipment and services for virtually every aspect of railway track maintenance and new track construction
- Providing integrated, total track solutions that maintain track at peak operating efficiency for lower operating costs, higher speeds and improved safety
- Major customers include Class I and national railway systems, short lines, and urban transit systems throughout the world
- Market-leading presence in North America and successful geographic expansion into China, Brazil, and other international markets

# Global Presence

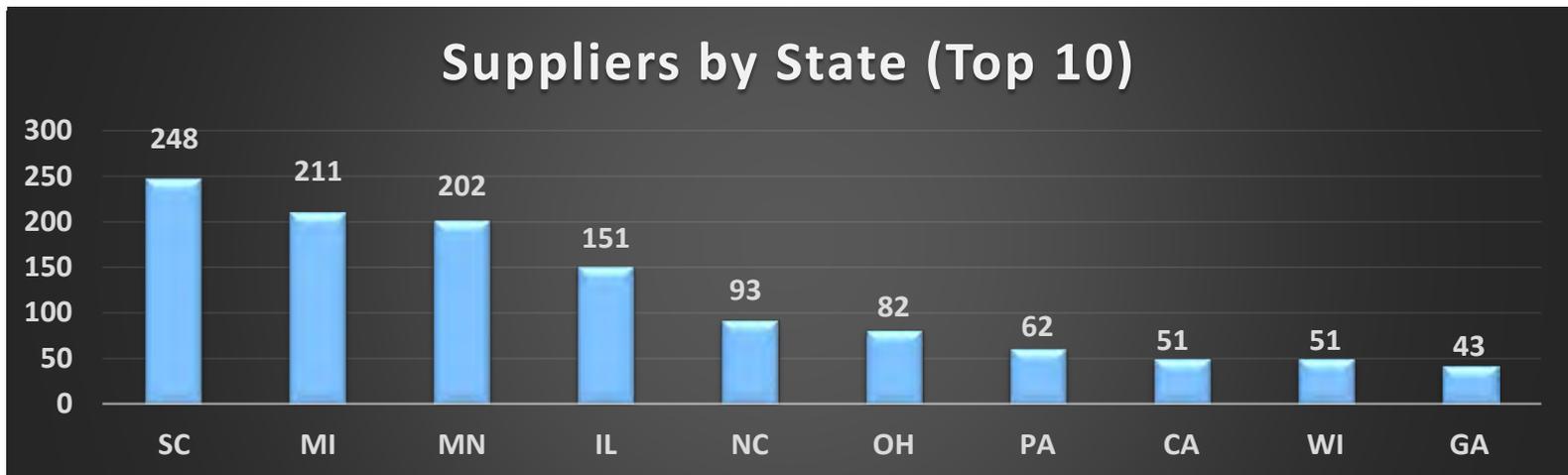
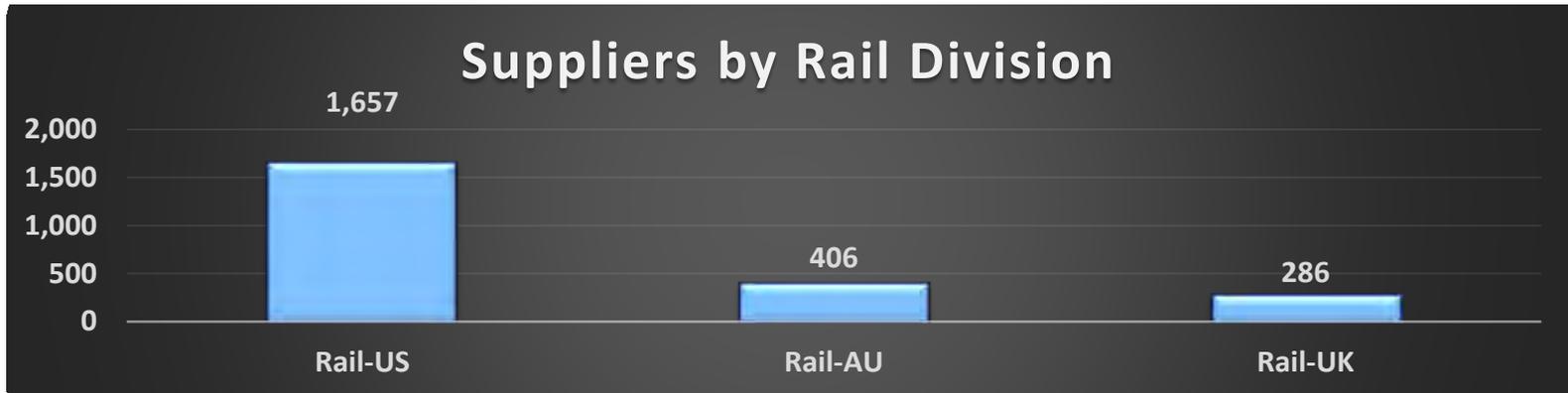
1100 Employees with Presence in 50+ Countries



● Operating locations

# Supply Chain

1657 Suppliers with Presence in 47 States



# North American Manufacturing

- Our North America Manufacturing Sites support the design and construction of our machines by offering a full range of heavy fabrication, welding, machining, assembly, and paint capability
- Welding expertise extends from mild steels to alloys, stainless steels, aluminum and structural materials. Procedures and personnel meet various welding codes, including AWS and EN15085
- Our Assembly operations range from simple mechanical assemblies to highly complex mechanical, electrical and hydraulic systems

<b>COLUMBIA, SC</b>	
<b>EMPLOYEES</b>	<b>340</b>
<b>Departments</b>	
Quality	Fabrication
Purchasing	Machining
Planning	Assembly
Supervision	Materials
Engineering	Welding

<b>LUDINGTON, MI</b>	
<b>EMPLOYEES</b>	<b>180</b>
<b>Departments</b>	
Quality	Fabrication
Purchasing	Machining
Planning	Assembly
Supervision	Materials
Engineering	Welding

# Key Customers

- Class I's (USA & Canada)
  - Norfolk Southern
  - Burlington Northern Santa Fe
  - Union Pacific Railroad
  - Kansas City Southern Railway Company
  - Canadian Pacific
  - CSX Transportation, Inc.
- Network Rail – UK
- Queensland Rail – Australia
- Israel
- Vale (Brazil)
- Ministry of Railways - China

# Products – Tampers & Surfacing

- Superior workhead designed for exceptional ballast compaction and high-speed capability
- High production rates while achieving high quality results
- Mark IV and Mark VI feature integrated Jupiter Control System and the “System V” alignment and correction system



**Over 5000 Tampers Sold**

# Products – Production Grinder

- Creates proper rail profile which lowers noise, increases rail life, reduces wheel wear
- Available in 48 and 96 stone configurations
- Equipped Jupiter Control System provides real-time display and storage of rail profile measurements
- Optional rail corrugation, dust collection, laser profile measurement and fire suppression modules available



Over 50 Production Grinders Sold

# Products – Track Renewal & Construction



- Over 12,110 km of new track construction
- Over 19,650 km of track renewal
- Over 471,400 km of grinding



**Over 19 times around the world!**

**Over 25 Renewal & Construction Units Sold**

# Products – Drone Anchor Adjuster

- Remotely operated anchor adjuster automatically squeezes all four anchors on each tie
- Squeezes all types of anchors at a rate of at least 21 ties per minute on 90-147 lbs rail
- No set-up time and able to be towed to/from worksite - ready for work in under 5 minutes



Industry Leader in Unmanned MOW Equipment

# Products – Others

**Switch Undercutter**



**Continuous Track Lifter**



**Track Stabilizer**



**TR10 Tie Exchanger**



**Spiker**



**HY-RAIL®**



# Contracting Services

## Rail Grinding



## Track Renewal



## New Track Construction



## Rail Renewal



## Rail Straightener



## *Who is OneRail?*

### *National rail organizations (operators, sponsors, suppliers)*

- American Public Transportation Association
- American Short Line & Regional Railroad Association
- Amtrak
- American Association of Private Railroad Car Owners
- Association of American Railroads
- National Railroad Construction and Maintenance Association
- Railway Supply Institute
- States for Passenger Rail Coalition

### *Rail Labor*

- SMART/United Transportation Union
- Teamsters Rail Conference (BLET & BMW)
- Transportation Communications International Union
- Brotherhood of Railway Signalmen

### *Corporate*

- Alstom
- AECOM
- Caterpillar
- GE Transportation
- HNTB
- Parsons Transportation
- Siemens
- WSP Parsons Brinckerhoff

### *Rail Advocacy*

- National Association of Rail Passengers
- Surface Transportation Policy Project
- Natural Resource Defense Council

*U.S. Rail Supply Industry*  
*2,698 facilities*

