Driving LEAN into Construction at Boeing

Report out to NWCCC
March 28, 2009
The Nine Tactics

1. Understand how value flows
2. Balance the line
3. Standardize work procedures
4. Put visual controls in place
5. Put everything at point of use
6. Establish feeder lines
7. Radically re-design products and processes
8. Convert to a pulse line
9. Convert to a moving line
737 Programs

737 BPS Implementation Strategy
- Implementation Benefits -

Site Services – Regional Services CM

Final Assembly

Factory Flow Time Reduction 50%

Inventory Reduction

Stores Inventory 73%

Work in Process Inventory 55%

Unit Hours Reduction 40%

Footprint (ft) Reduction 21%

Hazardous Waste Reduction 31%

(Per Airplane (1999-2003))

Final Assembly and Suppliers

Cost of Quality Reduction 61%

Renton Site

Acreage Reduction (366 to 278) 41%

Floor Space Reduction (7.0M to 4.1M) 41%

Power Reduction (1999-2003) 52%
Waste – Our Definition

Waste is…

Any action, process or product that adds cost, without adding value as perceived by our customer

Value-Added

Changes fit, form and function of product

Product transformation has value to customer (customer would be willing to pay for it)
Changing our perspective...

Typical Company

Traditional Improvement

AIW Waste Reduction

Minor Improvement

Original Lead Time
Construction LEAN Activities

- **2006 Focus**
  - LEAN Education
  - Employee Involvement
  - LEAN Certifications

- **2007 Focus**
  - Standards
  - Project Management
  - Requirements
  - LEAN +
Standards

- Construction Project Process
- Design Standards
- Drafting Standards
- Parts Standards
- Contract Language
- Computing Standards