

Keeping the Boeing 787 Second Line (But it's Bigger than That)



Economic Development Council
of Snohomish County

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Disclaimer

- Forward looking statements:
 - Every prediction is based on conditions as they exist today in Washington State and any change in conditions could change any or all predictions.
 - The opinions expressed do not necessarily represent those shared by anybody else anywhere in the world—but many probably are.



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4/21/2009

Beyond Boeing

- The topic today is about Boeing
- But—
- The top issues go well beyond Boeing and are applicable to other businesses, industries
 - Washington Business Climate
 - Education

787 Line 2 Required



- Boeing needs Second 787 line
- Delays extend to 2020
- Few if any new customer slots
- Question is “Where?” and “When?”

787 Line 2 Required

- Will Line 2 locate in Everett?

787 Line 2 Required

- Will Line 2 locate in Everett?
- My Answer: Probably not

787 Line 2 Required

- Will Line 2 locate in Everett?
- My Answer: Probably not
- Why Not? Key elements:
 1. Washington Business Climate
 2. Labor relations
 3. Education important but subservient to 1 and 2

787 Line 2 Required

When is 787 line 2 likely?

- (Assumption in this estimate: 10/mo by 2012)
- Increase to 12 or 14/mo by 2013/14 (est.)
 - Need to get production line running smoothly
 - Supply chain needs to gear up
 - Some capital investment, facility construction required
 - Decision required probably by 2010, may come late 2009
 - But: economy, other factors may slow decision

Location, Location, Location

Location, Location, Location

- Boeing's Carson: "Location is a Choice"
 - "Companies have to make investment and expansion decisions based on remaining competitive," said Carson. "Location makes a difference."
 - BCA President Scott Carson, speaking to Prosperity Partnership meeting, November 6, 2008

Location, Location, Location



Top Issues

Top Issues

- Carson's "Location is a Choice" got the headline, but it's only part of the story
 1. Globalization
 2. Increasing competition
 3. Outsourcing "means jobs at home"
 4. Location is a choice
 5. Customers expect reliability (i.e., no strikes)
 6. Improve Washington's business climate

Crying Wolf?

Is Boeing crying wolf?

- "Don't cry 'wolf', shepherd boy," said the villagers, "when there's no wolf!"
 - Boeing has been complaining about Washington business environment for decades, yet still here

Is Boeing crying wolf?

- Bill Boeing first threatened to leave Seattle if it did not build an airport for the company.
 - Boeing Field was constructed as a result (1928)



Is Boeing crying wolf?

More recently:

“The Boeing Co. -- Wandering Eye --
Aerospace Company May Be Rethinking
Commitment To The Puget Sound Area”
– Seattle Times, December 1, 1991

Is Boeing crying wolf?

- Alan Mulally on Washington business Climate:
 - “I think we suck.”
 - Seattle Times, October 10, 2003
- Nonetheless, Everett selected for 787 assembly site a few months later

Is Boeing crying wolf?



- “Later, he saw a REAL wolf prowling about his flock. Alarmed, he leaped to his feet and sang out as loudly as he could, ‘Wolf! Wolf!’
- “But the villagers thought he was trying to fool them again, and so they didn't come.”

Is Boeing crying wolf?

- “There really was a wolf here! The flock has scattered! I cried out, ‘Wolf!’”
- But it was too late.

Is Boeing crying wolf?

- *Wake up!* The Flock is already scattering.
- **Boeing *is* leaving Washington!**

Is Boeing crying wolf?

- 2001: Boeing moved headquarters to Chicago
- Boeing's "Move to the lake" in Renton
- 787 assembly site nearly awarded to the South
- 787 outsourced to unprecedented degree
- Engineering Centers in Moscow, China, India

Is Boeing crying wolf?

- 787 finishing site in San Antonio
- The *only* Boeing-produced structure on 787 in WA State is the Vertical Tail
- 747-8 outsourcing
 - Engineering
 - Fuselage sections
- Work has been disappearing for decades

737 Classic



757



747 Classic



Colored areas are what our IAM Members generally make!

767



777



787



787 Line 2: Stay or Move?

Benefits of Staying

- Established factory, infrastructure
- Consolidated 787 assembly facilities
- Experienced workforce (IAM, SPEEA)
- Extensive supplier base established in Puget Sound

Benefits to Moving

- Right-to-work state
- Lower cost of living
- Lower cost of doing business
 - Taxes, tax incentives, regulations, workers comp, insurance costs, etc.
- Less-stringent environmental rules
- Lower, if any, impact fees
- Better road, transportation infrastructure

Challenges to Moving

- Additional supply-delivery issues
- Establishing and training a new work force
- Exacerbating already tenuous labor relations in Puget Sound; fending off unions in new sites
- Building or acquiring new facilities, equipment
- New supply base required
 - Similar to Puget Sound base

Barriers to Moving

- Not many
 - 787 Tax Incentives do not bind Boeing to second 787 line here
Source: Leeham interview with former Gov. Gary Locke
 - **Nor do the Tax Incentives mandate the first 787 line remain here**
 - Boeing would forfeit future tax breaks if moved
Source: Leeham interview with former Gov. Gary Locke
 - Paine Field facilities leased to 2041
 - But Boeing could just take write-off, pay and leave

Missing the Big Picture

Missing the Big Picture

- It's not just 787 Line 2 and Snohomish County
- It's keeping Boeing in *Puget Sound*

Missing the Big Picture

- ***Benign neglect*** on aerospace engineers
 - Airbus, Boeing crying for engineers
 - Successive series of governors, legislatures have done nothing to bolster professional training

Missing the Big Picture

- WA has more engineers than anywhere
 - But it graduates the fewest engineers
- Washington's aerospace engineering focus:
(From EDC of Snohomish County Website)
 - [University of Washington School of Engineering](#)
 - [Lake Washington Technical College \(Engineering Graphics\)](#)
 - [Green River Community College \(Drafting & Design\)](#)
 - [The Business & Training Center](#)

Missing the Big Picture

- Top 5 aeronautical engineering colleges
 - 2009, UN News & World Report
 - [Embry Riddle Aeronautical University Daytona Beach, FL](#)
 - [United States Air Force Academy USAF Academy, CO](#)
 - [Embry Riddle Aeronautical University--Prescott Prescott, AZ](#)
 - [United States Naval Academy Annapolis, MD](#)
 - [Cal Poly--San Luis Obispo San Luis Obispo, CA](#)

Missing the Big Picture

- Notice who's missing from that list
 - Not one Washington State college or university or program is in Top 5, Top 10 or Top 15 aerospace engineering design schools
 - Not UW
 - Not WSU

Missing the Big Picture

- Furthermore, current state budget crisis “solutions:”
- Olympia proposes:
 - Cutting 10,500 student slots from state colleges and universities
 - Cutting >\$1bn from education
 - Teachers remain poorly paid
 - Increasing class sizes

Missing the Big Picture

- Education
 - Boeing is a long-time advocate
 - Frank Schrontz sat on Governor’s education committees as far back as 1991
 - 1996, Ron Woodard said:

Missing the Big Picture

Education

- “...25 percent of Seattle’s high school students dropped out of school in 1995 — that’s a frightening prospect for Boeing or any other company here to consider.
- “... To continue to be the world’s No. 1 manufacturer of commercial airplanes, Boeing must have the best educated and mostly highly skilled people in the world working for us.”

Missing the Big Picture

- Olympia doesn't get it!
 - Not today
 - Not yesterday
 - Not 20 years ago

The Psyche

The Psyche

- Sun Tzu in “The Art of War” says, “Understand the enemy.”
- You *must* understand Boeing to win your battle

The Psyche

- Philosophy of Jim McNerney
 - Outsource, Outsource, Outsource
- While at 3M
 - Outsourcing production, R&D cut costs, saved hundreds of millions
 - Outsourcing *off-shore* a key element
 - Keen interest in China, Europe, Emerging Markets



The Psyche

- McNerney's philosophy
 - 18 Years at GE
 - GE is about outsourcing
 - GE is about cost-cutting
 - GE is about global enterprise
 - This is McNerney's culture, mindset

The Psyche

- McNerney's philosophy
 - Named Boeing CEO July 2005
 - In November 2005, McNerney said:
 - Boeing needs to be more of a "global enterprise"
 - He desired greater productivity gains by off-loading greater amounts of development and sub-assembly

The Psyche

- McNerney's philosophy
 - Reduce risk to Boeing by outsourcing
- My prediction in January 2006:
 - “McNerney will look for continued opportunities to cut costs through production efficiencies and *outsourcing overseas.*”
- McNerney remains committed to outsourcing despite 787 problems

The Psyche

- Why was the 787 outsourced? Boeing says:
 - Strategic reasons
 - Global market, spread the business to gain sales
 - Washington State business climate
 - Labor costs

The Psyche

- Why was 787 *really* outsourced?
 - COST, COST, COST
 - Spreading the financial risk was a requirement for 7E7 go-ahead
 - Stonecipher, McDonnells ready to veto 7E7 if costs, risks don't come in below 777 development
 - Ironically, McNerney worried overemphasis on bottom line could cost Boeing chance to pull ahead of Airbus

Source: Wall Street Journal, April 21, 2003

Boeing's future in Puget Sound

Boeing's future in Puget Sound

- 787 Line 2: Decisions 2009 (?), 2010
 - *The clock is ticking*
- 737, 777 replacements
- Lessening interest in <150-seat aircraft
 - Japan, China, Russia: 70-90 seat RJ
 - Bombardier, Embraer: 110-149 seat mainline jets
 - Japan, China aspire to >150-seat aircraft
- *McNerney remains committed to outsourcing*

Boeing's future in Puget Sound

- Caveat: 737 Enhancement Plans affect 737RS
- 737RS
 - EIS 2018-2020
 - 5-7 year lead from launch to EIS
 - Launch, Location decisions required (2018 EIS): 2011-2013
 - Decisions required (2020 EIS): 2013-2015

Just 2-6 years from now: ticking clock for stakeholders

Boeing's future in Puget Sound

- 777RS more murky
 - Depends on A350 promises
 - 20% efficiency gains over 777
 - 2013 EIS for A350-900 (777-200)
 - 2015 EIS for A350-1000 (777-300)
 - 777-200 EIS: 1995; 777-300 EIS 1998
 - Young by industry standards by 2013/2015 for replacement; typically at least 25 years old
 - Followed MD-11 by 5 years, A340 by 2 years
 - Follows A350 by 2015-2020?

Boeing's future in Puget Sound

- 777RS
 - Launch, location decisions required by 2010-2015
 - 2010 unlikely—2013/2015 more likely
- Additional consideration for 737/777RS:
 - IAM, SPEEA contracts amendable in 2012

Boeing's future in Puget Sound

- 737RS-777RS
 - Boeing faced with two development programs simultaneously
 - R&D costs est. \$20bn-\$30bn (today's dollars)
 - Too much for Boeing to bear alone
 - This means outsourcing (like 787) to spread financing risk *and fewer jobs for Puget Sound*
 - *McNerney remains committed to outsourcing*

What needs to be done

What needs to be done

- **Improve the business climate (no surprise)**
- **Improve labor relations**
 - (seems like no-brainer, but all are in respective corners)
- Improve education
 - No more lip service
- Establish world-class engineering school right here in Puget Sound
- Establish centralized Technical Training Center in WA

What needs to be done

- What is the Governor and Legislature doing this session?
 - Creating an aerospace council
 - Tweaking junior college programs, making Edmonds Community College the “lead”
 - Yet Olympia proposes cutting community college funding
 - Some action on Unemployment Insurance
 - That’s about it
 - *More Benign Neglect*

What needs to be done

Above all:

- ***Focus on McNerney's commitment to outsourcing***
 - You can fix business climate, labor, education (traffic can't be fixed any time soon, if ever) and you still have to deal with McNerney's psyche about outsourcing
 - He's here to 2015 (age 65) and will make the decisions

Predictions

Predictions

- By 2020 Boeing will be assembler, not producer, across all BCA product lines
 - This means *fewer* direct Boeing jobs in Puget Sound even if Boeing stays here
- At best for Puget Sound:
 - Boeing will be a shadow of itself
- At worst for Puget Sound:
 - All new airplane programs will be elsewhere

Predictions

- Late 2009 or 2010: 787 Line 2 sited elsewhere
- Line 2 Production begins 2013
- 2013/14: Line 1 *could* close in Everett, shift to new site
- 2011-2015: Decisions to launch, locate 737/777RS-and not in Puget Sound
- 747-8 remains in Everett; 767 future depends on tanker, but this line could move, too

Predictions

- By 2020, Boeing assembly/production could be in position to leave Puget Sound
- Exodus could begin in 2013 with Line 2
 - Coincides with Washington Research Council Phased Scenario

Predictions

- Stakeholders have 2-6 years *or less*
 - To make serious, meaningful progress on the issues
 - To effectively convey the message to Boeing (especially McNerney) and the industry that Washington is serious about change
- Plan B *is required*

Predictions

- Plan B must include “Best” and “Worst” cases
- Plan B should include commercial service at Paine Field
 - Airline services generate jobs, business-commercial development
 - Airline services are economic engines
 - See Chicago’s Midway Airport



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- Scott Hamilton has been part of commercial aviation since 1979. His career includes employment by airlines in management positions, consulting to airlines, and aviation publishing and conferencing. He is a regular contributor to Commercial Aviation Online and Armed Forces Journal magazines.

Resources

- Deloitte Aerospace Competitive Report
 - <http://leehamnews.wordpress.com/2009/04/09/washington-state-lags-competitively/>
- Washington Resource Council: Economic Impact of Boeing
 - <http://www.researchcouncil.org/washace-publications/Boeing%20Impact%20Final.pdf>