Deloitte.

Washington State Aerospace and Defense Industry Competitiveness

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Kitsap Aerospace and Defense Alliance

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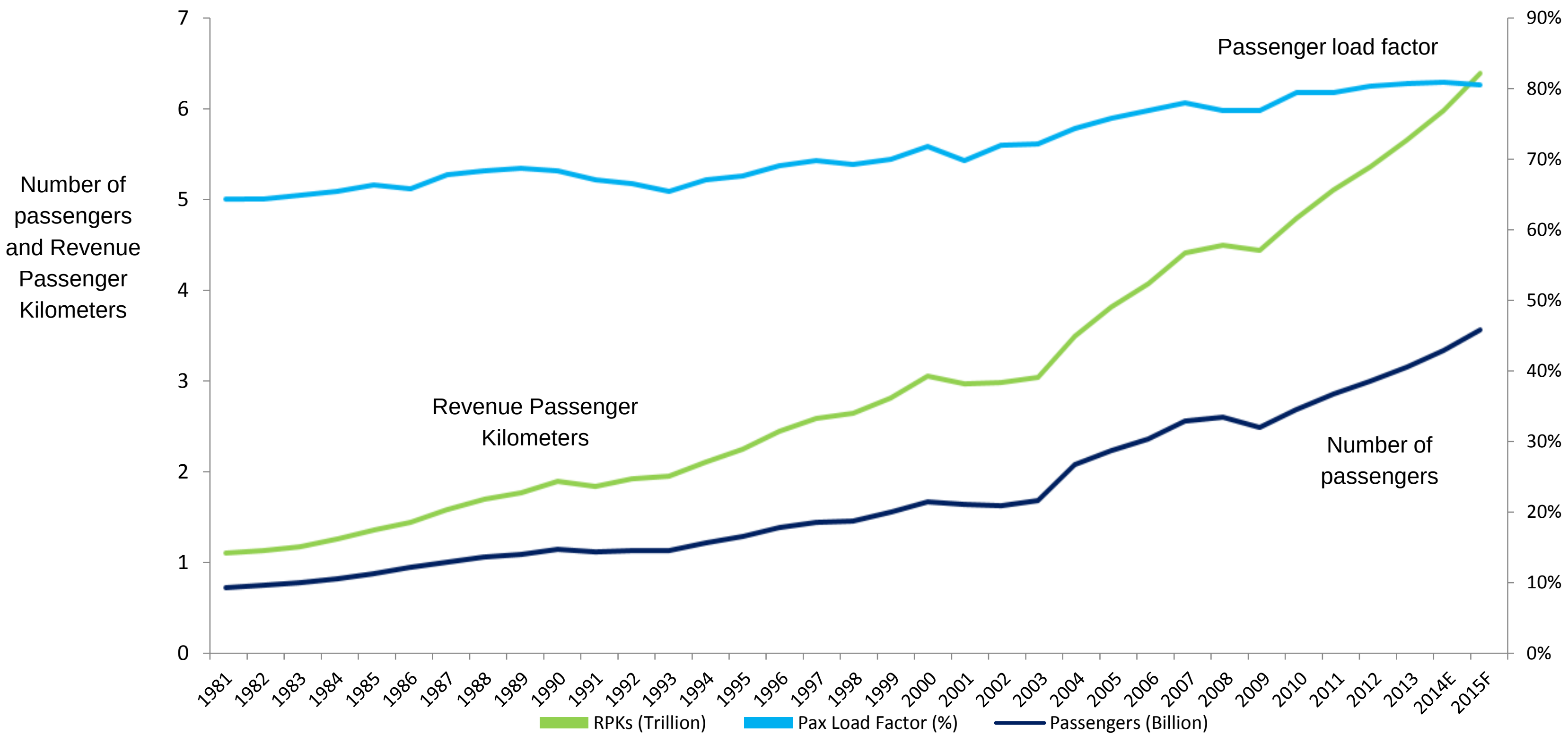
Agenda

1. What is causing the unprecedented increase in aircraft production?
2. What are the factors of competition that impact site selections?
3. How does Washington State stack up with other geographies?

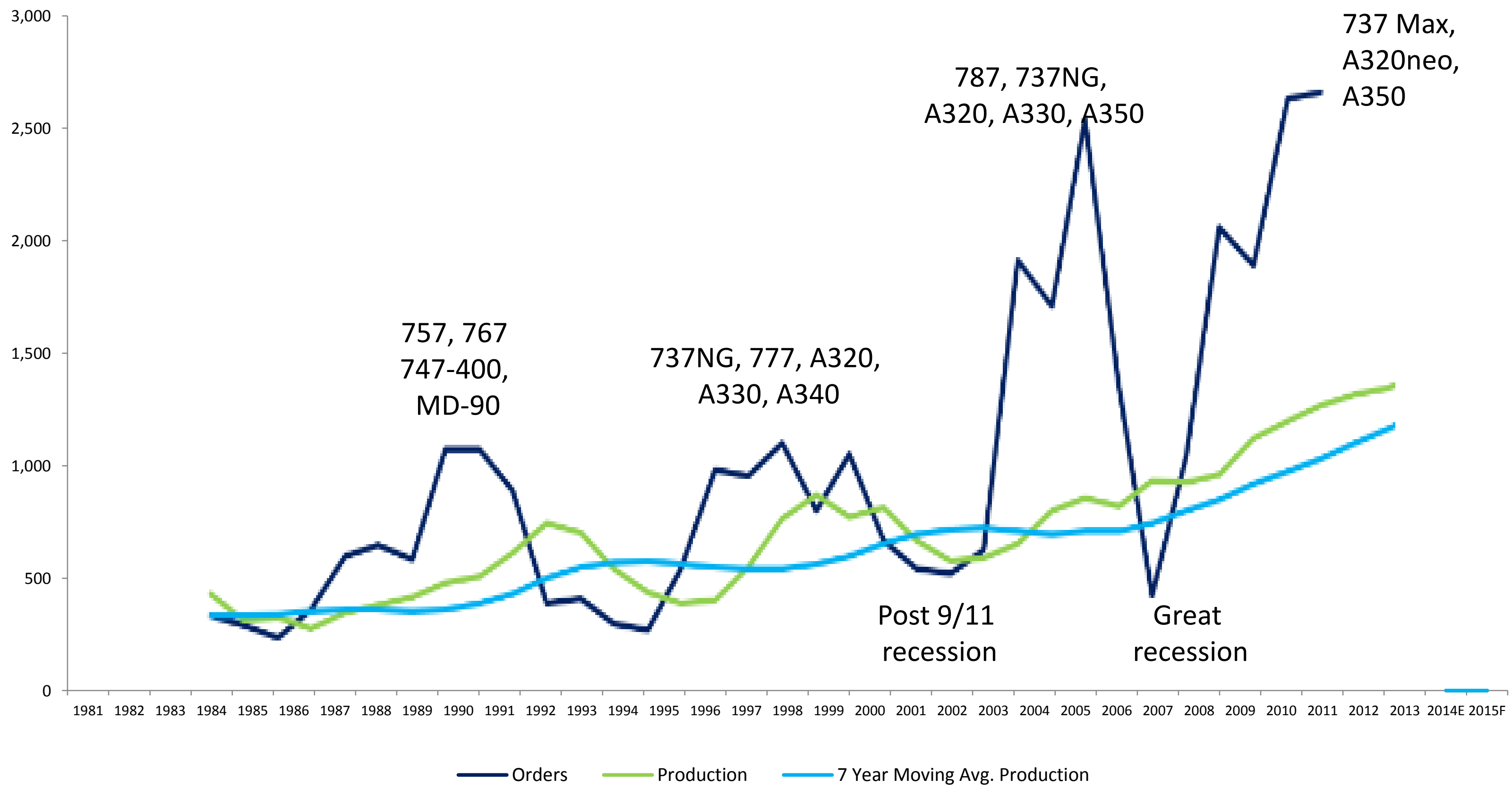
Long term increases in travel demand are due to global demographics and wealth creation

- 900 million to 3+ billion PAX annually, from 1981 to 2015
- 1 trillion to 6+ trillion annual RPKs over same period
- Load factors at all-time high



Resulting in increased orders and production volume

- Respond to rising PAX demand
- Replace obsolete aircraft
- Deliveries increasingly destined for China, Middle East & India

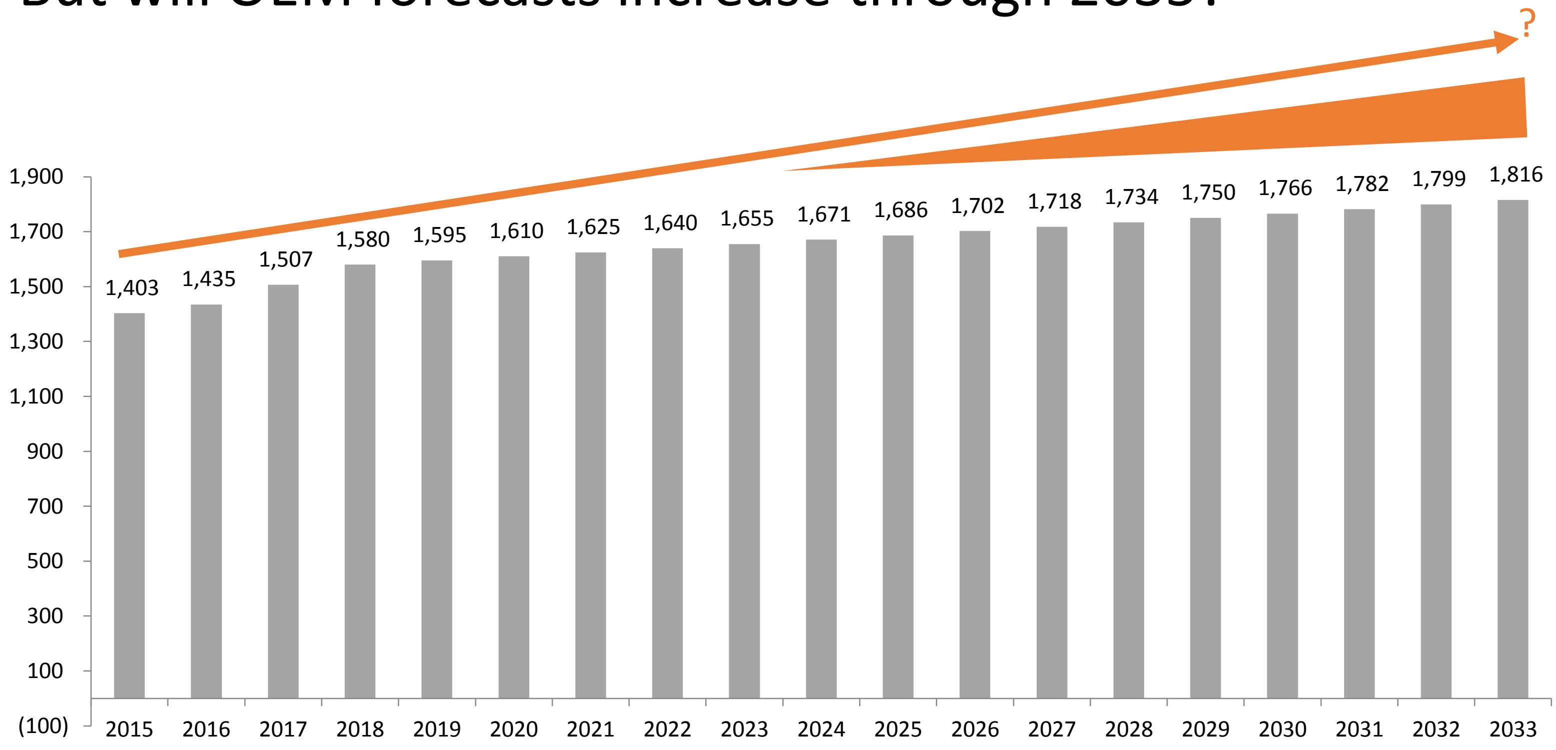


Backlog and deliveries are doubling in 8, 10, 12 years

Year	Backlog	Deliveries	Years of Backlog
1998	3,092	792	3.9
1999	2,957	914	3.2
2000	3,238	802	4.0
2001	2,932	852	3.4
2002	2,598	684	3.8
2003	2,514	586	4.3
2004	2,551	605	4.2
2005	3,948	668	5.9
2006	4,930	832	5.9
2007	6,759	894	7.6
2008	7,308	858	8.5
2009	6,863	979	7.0
2010	6,995	972	7.2
2011	8,208	1,011	8.1
2012	9,055	1,189	7.6
2013	10,639	1,274	8.4
2014	12,175	1,352	9.0

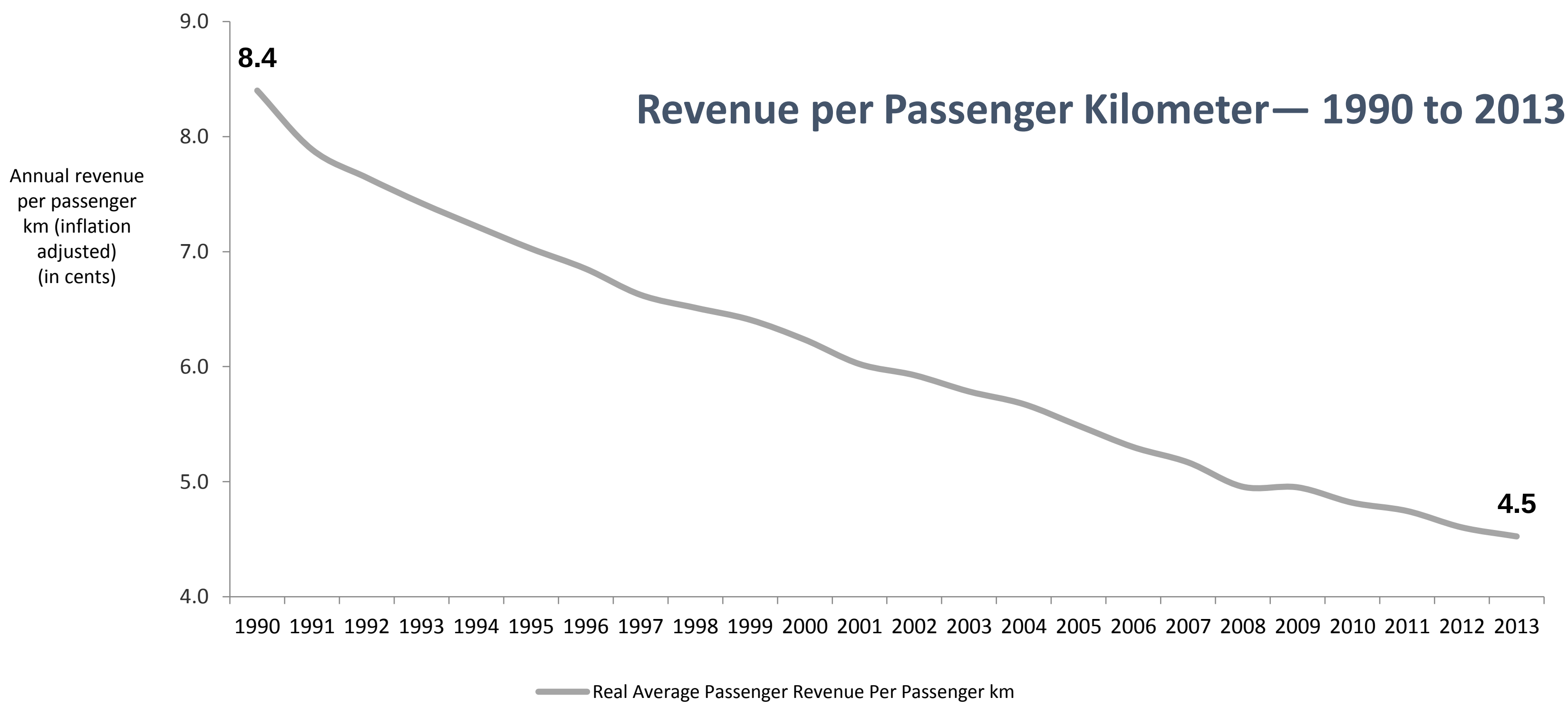
However, aircraft production forecasts show declining rate of growth starting in 2019

- Calculated rate of growth is decreasing, based on current market forecasts by OEMs, but…
- Market forecasts keep increasing each year, which now total ~33,000 aircraft delivered over the next 20 years
- But will OEM forecasts increase through 2035?



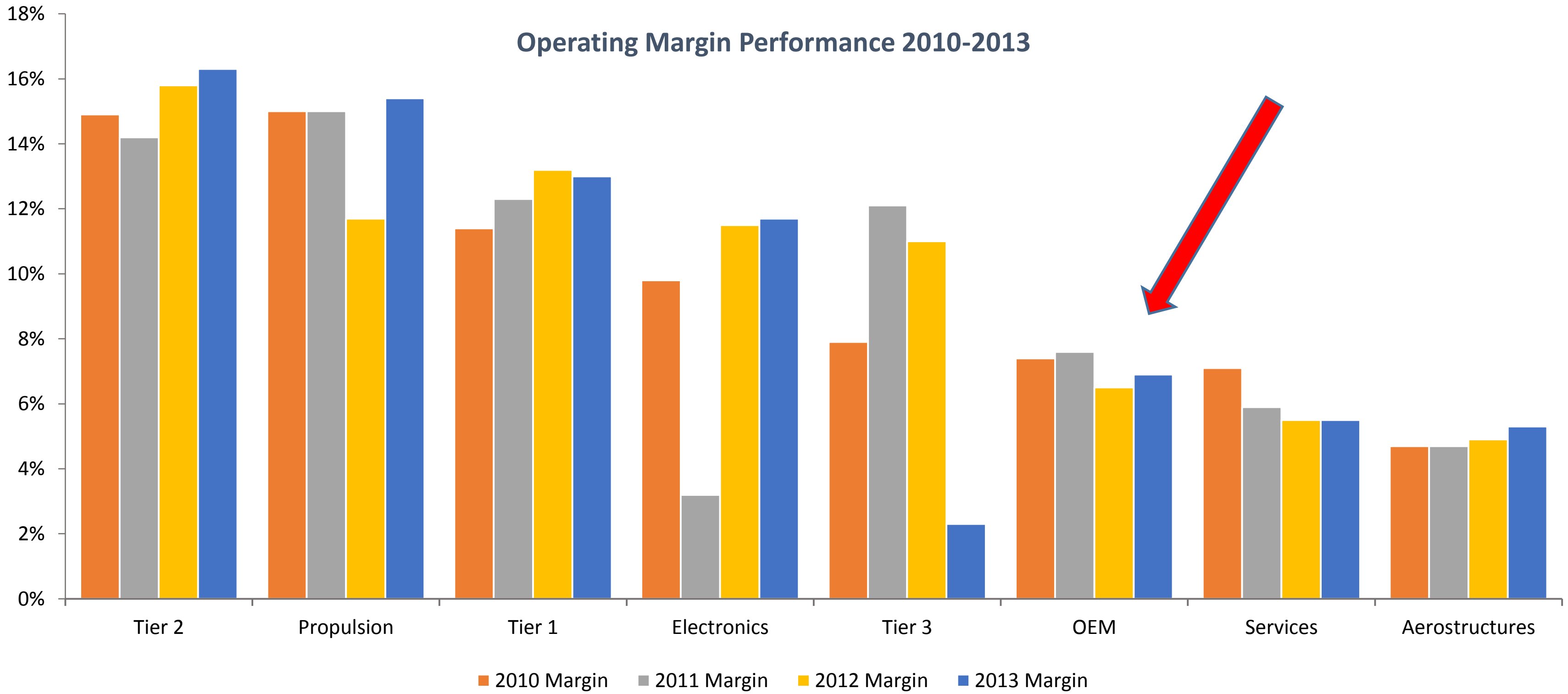
Value chain economics starts with falling airfares that impact suppliers and geographies…..

- 46% decrease (CPI-adjusted) in airfares since 1990—creating demand for travel
- 150+ bankruptcy filings 1998-2003 caused by overcapacity, unaffordable cost structure and pension obligations



Which is disrupting the business model of where profit is distributed

- Even though airlines are finally making profits, falling airfares are having a disruptive influence on the value chain
- Different supply chain tiers have varying operating margins



Factors impacting site selection

- OEM’s are taking aggressive steps to improve competitiveness by lowering costs; labor, CAPEX, facilities, overhead, logistics
- States and sovereign nations offering tremendous deals, cannot be ignored
- Competitive tactics being used
  - Lower labor costs in right to work states
  - Lower workers’ compensation insurance rates
  - Friendly regulatory environment
  - Lower cost of living and housing
  - Skilled workforce, higher education support
  - Government economic incentives

Sample of other states' actions

Economic Incentive	US state
Legislature created $295M **Texas Enterprise Fund (TEF)**, to attract businesses & new jobs. Awarded $41M to assist aerospace expansions thru 2013. In 2014, state offered $2.3M from TEF, for SpaceX's commercial rocket launch facility.	Texas
Legislature established $200M **Texas Emerging Technology Fund (TETF)**, to enable commercialization of emerging technologies. $8.8M from the TETF awarded to aerospace and defense-related startups thru 2013.	Texas
Corporate income tax credits apply to 50 percent of a company's state tax liability in a given year, but offset up to 100 percent of corporate income tax as well as payroll withholding liability.	Georgia
Sales tax and use tax exemption (amounts to a 5-8 percent savings on purchases), Inventory tax exemption (no state property taxes on inventory)	Georgia
Capital investment tax credit of up to 5% of capital cost per year for 20 years to eligible new and expanding companies.	Alabama
Arkplus, a **discretionary income tax credit** of 10% of total investment for new or expansion projects. The credit may be used to offset 50 % of income tax liability.	Arkansas
Military reuse zone credit, for net increases in employment within a designated military reuse zone. The program targets aerospace industries willing to locate on a former military base.	Arizona
Local Agency Military Base Recovery Areas (LAMBRA) provides similar incentives extended to Enterprise Zones. To attract investment and employment in former military bases	California
Net Operating Loss (NOL) Tax Treatment: Since 1993, new businesses can carry over 100% of their losses that occurred during the 1st year of operation for up to 10 years. Existing businesses can carry over 50 % of their losses for up to 5 years.	California
Research and development credit has 2 major components: a regular research credit, and an alternative incremental research credit (AIRC) for qualified research and development expenses.	California

Sample of other states' actions

Economic Incentive	US state
Aviation Sales Tax Exemption: Exempts all Oklahoma aerospace companies from collecting the sales taxes on the sales of aircraft engine repairs, modification and replacement parts, aircraft frame repairs and modification, aircraft interior modification etc. **Aerospace Industry Engineer Workforce Tax Credits:** Provides engineers who are hired by Oklahoma aerospace companies with a state income tax credit of up to $5,000 per year for five years.	Oklahoma
Tax incentives and infrastructure improvements: 4 percent (instead of 10.5%) city and county tax rate and road improvements in exchange for the Boeing's commitment to add another 2,000 jobs and make an additional $1 billion investment by 2020.	South Carolina
Income tax and cost incentives in the form of: • **Kentucky Business Investment (KBI) program** - up to 100 percent credit against the Kentucky income tax imposed on corporate income • **Kentucky Reinvestment Act (KRA)** - 50 percent of the eligible equipment and related costs; and 100 percent of the job skills upgrade training costs can be recovered • **Kentucky Enterprise Initiative Act (KEIA) -** refund of sales and use tax paid for building and construction materials, R&D equipment, electronic processing equipment purchases totaling a minimum of $50,000…..subject to certain conditions.	Kentucky
Total **financial incentives** to Rolls-Royce ~ $57 million • Virginia is providing a half-dozen incentives, the priciest of which is a $35 million performance grant. • Virginia had pledged a total of $6 million from the so-called Governor's Opportunity Fund. • Prince George County, too, is sweetening the pot, providing five-year tax breaks on machinery, tools and the company's business license. The locality will connect the factory's utility service at a 50 percent discount and waive the fee for processing the rezoning of the plant site.	Virginia

Importance of Aerospace & Defense in Washington

- Direct employment – 140,000, second behind California, ahead of Texas
- Total direct and indirect employment – 470,000
- Total company sales revenues - $64B
- Total payroll - $14B
- Average annual wage - $102,000
- Business income tax - $2.1B, ranked #1
- Exports - $44B, #1 state

Washington balanced scorecard

Washington State advantages:

- Incumbency – epicenter of the global aerospace industry
- Skilled workforce, universities
- Infrastructure, logistics, proximity, quality of life, cultural amenities

Washington State disadvantages:

- High cost of labor
- High cost of housing
- Right to work – Union tensions

Competitive strategies:

- Economic development aid
- Workforce and skills development assistance
- Willingness to overcome disadvantages with creative incentives

Aerospace & Defense in Kitsap

- Direct employment in defense industry – 35,000
- Median annual wage – $65,000
- Operational economic impact - $6,000,000,000
- Primary employer, DoD, does not pay state B&O taxes

Source: Kitsap Economic Development Alliance

Kitsap balanced scorecard

Advantages:

- Established regional defense industry – Naval Shipyard & Maintenance Facility (PSNS-IMF)
- Related infrastructure and logistics
- Proximity to both Puget Sound and Pacific Ocean ports
- Skilled workforce with defense industry experience
- Affordable housing, little traffic congestion, outdoor recreation
- Available real estate, large tracts, zoned for manufacturing use
  - Difficult to find elsewhere around Puget Sound

Perceived disadvantages:

- Less (urban) cultural amenities
- Dependent on ferry schedule
- Limited higher education institutions, training centers
- High cost of labor in Washington state

Kitsap opportunities to consider

Potential competitive tactics:

- Continue marketing & sales through EDA and other entities to emphasize advantages
- Workforce and skills development assistance
- Economic development aid
- Customize creative incentives
- Pursue “big employer” anchor in addition to DoD
- Expand shipping industry

U.S. level scorecard

- 2.65 percent of GDP
- 5.5 percent of exports - largest net exporting sector in the U.S.
- Direct & indirect employment of 4.23 million
- Pays twice the national average in annual wages per employee
- Contributes $53.22 billion in corporate and individual income-based taxes to local, state, and federal government
- Bottom line - A&D sector is essential to the well-being of the U.S. economy. Fundamentally responsible for the way we travel, communicate, live, shop and when necessary defend our way of life.

Thank you