

# Aerospace Cluster Initiatives

# 1. RECOMMEND SHORT AND LONG TERM LEGISLATIVE ACTION THAT SUPPORTS THE AEROSPACE CLUSTER

## Initiative Champion\*/Implementation Team Members:

### Deborah Knutson\*

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## Description & Motivation:

Encourage suppliers to locate or expand in Washington by providing incentives focused on the broader aspects of aerospace.

## Objective:

### Near Term:

#### **PASS TAX INCENTIVES FOR NON-MANUFACTURING - AEROSPACE BUSINESSES - HB 1940 & SB 5864**

This proposal would extend two tax incentives contained in HB 2294 to persons engaged in the services of research, design, and engineering of airplanes and airplane components:

1. Sales and use tax exemption for certain computer equipment used primarily in the development, design, and engineering of airplanes and airplane components; and
2. A B&O tax credit for preproduction development spending.

#### **PASS B&O TAX CREDIT FOR PROPERTY TAXES - PAID BY AEROSPACE BUSINESSES - HB 2111 & SB 5972**

This proposed legislation offers a compromise for B&O tax credit for property taxes paid by aerospace businesses. The B&O tax credit would be limited to new buildings and the land, and the increase in assessed value of existing structures due to renovation or expansion, if the structures are used *exclusively* in the manufacture of commercial airplanes and components of such airplanes.

Passage of these two Bills will encourage business expansion.

### Longer Term:

Pursue longer-term legislation to provide broader support to the aerospace

## Obstacles and Impediments Likely to Affect Implementation:

1. Lack of progress in meeting baseline expectations from original aerospace initiatives package (HB 2294).
2. Current \$2.2B deficit within the state.

<b>Funding:</b>
<ol style="list-style-type: none"> <li>1. \$5,000 for media, letter writing, web support, etc. to cover out of pocket expenses to get the Bills passed.</li> <li>2. HB 1940/SB 5864 has an estimated fiscal impact of \$5 million over the next two years. However, the return on investment the state will realize from employment and income revenue will far exceed the projected impact to the state's general fund.</li> </ol>

<b>Outcome/Results:</b>
<ol style="list-style-type: none"> <li>1. Measure number of aerospace firms that have taking advantage of proposed bills. (Who)</li> <li>2. Using supplier information from 1 above, determine increased employment levels. (What) For example, if one supplier were to locate 50 employees here as a result of this legislation, they would bring in \$6.5M in earnings over two years to the economy. Using the accepted multiplier of 2 additional jobs, this number would be even greater.</li> </ol>

<b>Action Steps:</b>
<ol style="list-style-type: none"> <li>1. Assure passage of selective B &amp; O tax credits for manufacture of commercial airplanes and an excise tax relief for non-manufacturing aerospace businesses.               <ol style="list-style-type: none"> <li>a. Provide endorsement for Prosperity Partnership leadership. (Julie Sexton / Deborah Knutson)</li> <li>b. Provide media that can be used for a formal press release. (Julie Sexton / Deborah Knutson)</li> <li>c. Communicate importance with aerospace suppliers within the State. (Deborah Knutson)</li> <li>d. Using the EDCs, encourage passage with state legislature. (Deborah Knutson)</li> </ol> </li> </ol>
<ol style="list-style-type: none"> <li>2. Pursue longer-term legislation to provide broader support to the aerospace industry (beyond just commercial airplanes and beyond just manufacturing activities). Aerospace industry includes aircraft parts, aircraft maintenance/service, design, avionics, guided missiles, space vehicles, and technology (advanced composites, computer systems, etc.). Examples:               <ol style="list-style-type: none"> <li>a. Incorporate action items from other sub groups.</li> <li>b. Identify tools and processes that other states use that could be made available, through legislative action, to the State of Washington (e.g., Tax Incentive Financing)</li> <li>c. Identify need for an aerospace "Lobbyist" at the state level.</li> <li>d. Using the +600 Aerospace suppliers in Washington, ensure that all issues have been identified.</li> </ol> </li> </ol>

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
1. Provide draft letter of endorsement	Julie Sexton / Deborah Knutson	March 14, 2005
2. Provide draft press release.	Julie Sexton / Deborah Knutson	March 14, 2005
3. Provide EDCs with web based endorsement package for use with legislature.	Deborah Knutson	March 16, 2005
4. Send letters to all 600 aerospace suppliers in the state encouraging their support of bills.	Deborah Knutson / Robin Pollard	March 16, 2005
5. Provide passage of HB 1940 &	Robin Pollard	Second quarter 2005.

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
SB 5864		
6. Provide passage of HB 2111 & SB 5972	Robin Pollard	Second quarter 2005.

## 2. CREATE AN AEROSPACE ENTERPRISE CONSORTIUM FOR SMALL AND MEDIUM-SIZED (SME) BUSINESS

<b>Initiative Champion/Implementation Team Members:</b>	
<b>Rosemary Brester*</b> Elaine King Doug Roulstone Mike Hudson Cyndi Schaeffer Ralph Ibarra Joan Davies Mike Smoody, Chair PNAA	
<b>Description &amp; Motivation:</b>	
To support the development of consortiums of SME aerospace manufacturers and partners to bid on larger projects within the aerospace sector worldwide. To establish a powerful base of manufacturers and partners.	
<b>Objective:</b>	
The consortiums of Aerospace SMEs will be able to maintain and grow by adding jobs and increasing payrolls. The newly formed consortiums will increase the ability to work on larger projects and will integrate the world aerospace market to Washington State and PNW region -- With expertise developed locally and our contacts with the global manufacturers made more affordable for the SME's. Initially focusing on the top 15-20 A&D manufacturers with the objective to gain maximum value for the SME's. The value statement needs to be clear for the SMEs, the Tier 1 / 2 Manufacturers and their customers (be that a manufacturer, airline or defense company).	
<b>Obstacles and Impediments Likely to Affect Implementation:</b>	
Obstacles and impediments likely to affect implementation will be financing, risk sharing, marrying the right companies to form the consortiums. Who will act as the physical agent for the Aerospace SME cluster group? Communication of timely information between OEM's and consortium members. Having a place at the table.  Sub-1st Tier suppliers (i.e. 2nd Tier, 3rd Tier, etc.) lack in-depth knowledge and understanding of the new "rules of engagement" being put into play by the major aerospace corporations. The Boeing Company has made it clear that it is transforming itself into an assembler of airplanes, and that its reconfigured supply chain for the 787 relies on 1st Tier "partners" that in turn are responsible for aligning the right combination of suppliers. This monumental paradigm shift demands that information and details be readily available about what a potential sub-tier supplier must do to access contacts from the 1st Tier/Partners (with many located in other states as well as other countries). Moreover, a systematic approach to continually keeping existing aerospace suppliers informed is warranted, along with the distribution of relevant and critical knowledge in a timely manner. The Boeing company has historically collaborated with its suppliers to help them adjust to dramatic changes in its business operations and requirements. Now more than ever, it is essential for all Washington aerospace suppliers to have the information and knowledge they need to sustain their businesses so they can contribute to achieving the goal of 100,000 additional jobs.  The need to collaborate as a cohesive group of SMEs.	

<b>Obstacles and Impediments Likely to Affect Implementation:</b>		
Lack of resources – the labor, tooling including software to compete profitably.		
SME’s should consider hiring a lobbyist to represent their interests in Olympia, and SME’s should be willing to testify when needed.		
Who and how will the Aerospace Cluster Group keep itself funded for the long term?		

<b>Funding:</b>		
Funding the initiative phase of the project would require a minimum of \$ 1,000,000. The ramping up phase will also require \$500,000. On going costs will need to be determined. Funds may come form various sources; Workforce training funds, DOL, Washington Manufacturing Services, Institute for Workforce Development and Sustainability, Foundations, OSPI – Job Skills Program. Port Job.		

<b>Outcome/Results:</b>		
1. Outcome/Results: We will know that we have achieved our objective when the first SME consortium is developed and operational and has success in securing contracts with tier 1 & 2 suppliers or becoming a tier 1 or tier 2 supplier dealing directly with the OEM. We will have a list of top companies we will target, both for the consortium (SME) membership and companies to do business with.		
2. We are successful when we are known worldwide as a region of choice by OEM’s for our expertise in aerospace development and manufacturing.		

<b>Action Steps:</b>		
1. Secure phase one funding		
2. What do the tier 1 & 2 Aerospace companies and OEMs to need to fill their requirements		
3. Develop a database on ALL aerospace companies and their supply chains within the State of Washington. (What do they list as their core competency)		
4. Develop a model for consortium development using the tools developed by EDS. (This would be contractual) they are experts in this field.		
5 Bring the prospective SME’s together for collaboration and partnering.		
6. Marketing our results with a Global Aerospace Manufacturing Conference Who: CTED, International Chambers of Commerce, International Business Councils, Aerospace OEMs		
7. Introduce legislation that would encourage College students to enter the field of Aerospace and Aerospace Engineering. We view this as a window of opportunity to develop a progressive aerospace and engineering program for the State of Washington. The Aerospace Engineering Mentor-Protégé legislation would provide B&O tax credits to Aerospace manufacturers and Aerospace Engineering companies who hire and provide hands on learning to Junior and Senior Engineering Students enrolled in Washington States 4 year institutions. These credits would be used to assist the companies when additional time and staff is used to provide the learning process. What better way to learn real time manufacturing and engineering practices than working in actual work environments. This legislation would provide an opportunity for aerospace engineering students to work in an environment that is conducive to their field of study. This legislation would provide the opportunity for SMAEs to develop engineering capabilities within their companies.		

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
1. Gather contact and capability information on small and medium aerospace vendors and suppliers in	Cyndi Shaeffer	April – June 2005

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
Washington State.		
2. Identify resources available through governmental agencies, EDCs, and Prosperity Partnership Partners.	Bob Drewel, Puget Sound Regional Council, Prosperity Partnership Partners	April – June 2005
3. Develop a prospect list for financial contributors to SME consortium and its work plan. Contact and request financial support.	Bob Drewel and Prosperity Partnership Partners	May – December 2005
4. Write a scope of work for consultant to guide the development of SME consortium, including all legal and financial documents.	Mike Hudson, Rosemary Brester, Bob Drewel	April – June 2005
5. Form planning committee for SME conference to share the vision of consortium opportunities and challenges.	Rosemary Brester, Joan Davies, Washington Manufacturing Services	June – July 2005
Conduct SME conference.	CTED and Prosperity Partners	September – October 2005
6. Develop a marketing package for SME consortium that includes capabilities, experience, and key selling points for use with Tier 1 and 2 manufacturers.	Contract out	August – September 2005
7. Prepare marketing plan for Global Aerospace Manufacturing Conference.	All	To be determined
8. Prepare legislative situation analysis, key objectives, and draft legislation. Issue RFP for a contract lobbyist to assist ACWG with legislative agenda. Conduct grass roots meetings with legislative and Congressional leadership to sell legislative agenda.	All All All	May – June 2005 June 2005 To be determined
9. Develop an outline (goals, purpose, membership, staffing, funding, home, and structure) for an Aerospace Industry Association (either a revitalized PNAA or a new association) to promote the regional and state industry and advocate for change where needed (legislation, new technology, education and work force, marketing, etc.)	Rosemary Brester, Ralph Ibarra	May – June 2005 (to be presented to CWG at June 10 meeting)

### 3. DEVELOP AN AGGRESSIVE WORKFORCE DEVELOPMENT INITIATIVE

Initiative Champion*/Implementation Team Members:	
<b>Rin Causey*</b> Linda Waring Jesse Cote Mel Oleson Doug Roulstone	

Description & Motivation:
There are recognized skills shortages today and in the future that are born both from rapidly changing technology and aging workforce. To complicate this even further, there is an insufficient number of workers in the educational pipeline to address current shortages let alone those forecast as future needs. Competitive practices have hindered cooperative solutions. Proprietary protection and competitive advantage, which are typical and legitimate concerns, are difficult obstacles to bridge in seeking solution to shared problems and the action plan development.

Objective:
<ol style="list-style-type: none"> <li>1. Address the workforce skill shortages faced by the region now in the aerospace industry</li> <li>2. Address future workforce skill shortages</li> <li>3. Look at out of the box ideas for developing new job opportunities and grow industry options for people with transferable skills in demand occupations.</li> </ol> <p>The task group proposes to undertake the following activities:</p> <ol style="list-style-type: none"> <li>A. Have the Snohomish County Workforce Development Council develop and host a statewide single day conference inviting aerospace employers and their WDC counterparts from across the state to join us for the day, to go over the entire picture of Prosperity Partnership recommendations for the Aerospace cluster, and develop action items that could be locally undertaken and developed as statewide initiatives that address the workforce needs and related issues of the aerospace industry. A possible agreement to meet again within a year for purposes of updating the action plans and identify problems or celebrate successes of the local work groups.</li> <li>B. Build a model for hosting a virtual or real guidance center for developing new suppliers for Boeing, or other Tier one Employers. This could also be part of a “Clearinghouse” concept for how suppliers do business with any of the top Tier 1 Companies or Original Equipment Manufacturer (OEM) such as Boeing or Airbus.</li> <li>C. Development of a virtual business or series of business limited partnerships where multiple employers come together to form a business chain of offerings that enhance what each as individuals could bring to the overall package – much like many medical doctors do today where you have a small team that oversees HR, payroll/billing, and administrative functions, but each deliverer of service is only loosely part of the business.</li> <li>D. Build a list of all of the aerospace training initiatives to connect K-12 through 20 to career opportunities. Pieces of this are already completed so one would just have to spend the time to ferret out the rest and put it together. Then we would have some sense of where we are right now and what is needed to bridge the upcoming “skills” gap.</li> </ol>

<b>Obstacles and Impediments Likely to Affect Implementation:</b>
<p>Many initiatives are already under way, some publicly known, others not yet available for disclosure. The group must develop options that meet a broad sector need, not simply a Boeing specific solution. Additionally, the group feels that most solutions may need to be statewide in focus and not just regional. Conducting a thorough assessment of what exists, what's needed, and what opportunities there are may cost money, resources and time, as well as significant buy in from other cooperating partners not yet known or contacted.</p>

<b>Funding:</b>
<p><b>Initiative A – Aerospace Conference</b>            “Design Phase” - \$3000            Convening Stakeholders and arranging for planning meeting            Development of Statewide Aerospace Conference and Action Planning Meeting</p> <p>“Ramp Up Phase” \$20,000            Implementation of Conference planning includes locating a venue, arranging for speakers, and marketing of the event,</p> <p>“Hosting the Event” - \$15,500 + the cost of speakers (TBD)            Approx. 100- 150 Participants</p> <p>Follow up meeting – half day session - \$1500            Total cost of the Aerospace Conference and Planning Meeting = \$40,000</p> <p>Development of <b>Initiatives B, C, and D</b> – Initial phases = \$40,000 additional funding for implementation phases TBD</p>

<b>Outcome/Results:</b>
<p>Conference and Planning Meeting will be held, aerospace companies and suppliers will identify most pressing issues, action plans will be developed to address identified issues, follow up activities will be scheduled. Conference attendees will be asked to complete an online survey to indicate their thoughts on the success of the conference and the action planning session.</p>

<b>Action Steps:</b>
1. Identify and Convene Stakeholders – Spring/Summer 2005 – Sno. Co. WDC
2. Develop conference planning Schedule – Spring/Summer 2005 – Sno. Co. WDC
3. Arrive at Consensus re Conference Plan – Spring/Summer 2005 – Sno. Co. WDC and Stakeholders
4. Implement Conference Plan – Fall 2005
5. Host Aerospace Conference – October/November 2005

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
1. Convene Stakeholders, Conference Planning and other aspects of this initiative	Linda Waring / Rin Causey	As described above
2.TBD		

## 4. FORM CENTERS OF INNOVATION IN AEROSPACE TECHNOLOGY (CITAS)

<b>Initiative Champion/Implementation Team Members:</b>	
Jerrilee Mosier Jack Oharah Alex Pietsch John Warner Tom Captain	

<b>Description &amp; Motivation:</b>
<p>The CITAs will build on the momentum of the Advanced Materials and Manufacturing Innovation Center that is currently proposed in Snohomish County (See attachment A). By identifying other emerging technologies and key technology challenges, the Prosperity Partnership will champion the development of additional centers of innovation/excellence focused on these opportunities throughout the region. Higher education and industry professionals will collaborate in the CITAs to advance the application of new technologies to the aerospace industry and help solve the manufacturing challenges encountered by the aerospace industry. In turn, this network of centers will help researchers spin off their discoveries in to new business opportunities and enterprises through strong technology transfer and entrepreneurship programs.</p>

<b>Objective:</b>
<p>The objective is to create Centers of Excellence in innovation that will bring together creative minds to advance the technology capability in this region, ultimately attracting jobs in the Aerospace Sector. While the work of such centers is not constrained to where the knowledge is applied, true technology transfer occurs when people move from the R&amp;D activity to the implementation activity. People tend to remain in one location, and the implementation activity has the largest potential for job creation. The Puget Sound region needs to capitalize on the high concentration of skilled aerospace engineers and information technology minds to explore new technologies that will advance the work of aerospace companies, spin off new companies, and create the jobs and skilled workforce in the emerging segments of the aerospace cluster.</p>

<b>Obstacles and Impediments Likely to Affect Implementation:</b>
<p>Obstacles include:</p> <ul style="list-style-type: none"><li>✓ Identifying the key technology challenges and opportunities that are needed by the aerospace industry. By creating centers focused on unique, but high demand technologies, they will be competitive in attracting funding from industry and government.</li><li>✓ Up front investment to attract the best minds to these Centers is significant. There will be a need to attract high profile scientists and researchers.</li><li>✓ Funding. Significant political support will be essential to securing federal and state funding. Industry will need to contribute to the effort by providing grant funding, loaning or gifting facilities (and/or land) and talent, etc.</li><li>✓ Location and affiliation of the Centers will be regionally competitive. These decisions will require collaboration and compromise.</li></ul>

<b>Funding:</b>
Initial costs will be for facilities, equipment and annual operating expenses. The cost for the Advanced Materials and Manufacturing Innovation Center is approximately \$10,000,000, which does not include a donation of architectural and engineering costs for building re-model by Puget Sound Energy. This cost will vary based upon facility availability and its suitability for the identified program of research and/or training activities. Additional funding would come from federal research grants, industry, and training grants. CITAs could be located in existing, but underutilized aerospace facilities throughout the Puget Sound region.

<b>Outcome/Results:</b>
Short-term success will be achieved when funding and a centralized home for the Advanced Materials and Manufacturing Innovation Center has been secured and the conceptual model realized. Over the long term, the CITAs will further establish the Greater Seattle area's reputation as a world leader in aerospace. CITA discoveries will further Boeing's tradition of innovation in aerospace technology and, in turn, stimulate the creation of new companies that employ smart, creative people and pay them high wages. Other outcomes and results that may be expected include new business start-up or expansion of product lines that have occurred in existing businesses as a result of work done at the CITAs.

<b>Action Steps:</b>
1. Advocate for and support the "Advanced Materials and Manufacturing Innovation Center location in Snohomish County based upon the current activities and programs that have been implemented through education, government and industry partnerships. (See Attachment B). Identify next steps to establishment of Center. –Prosperity Partnership-April 15
2. Conduct a half-day Summit with the technology leaders of local aerospace companies and educational institutions to determine what other technical areas have the greatest likelihood of being staffed locally, and which have expected high impact on the future of aerospace job creation. May, 2005
3. Research national and international examples of centers with similar activities. Identify their programmatic structure, key elements of the Centers activity and their funding structures-
4. Create an implementation strategy to include engaging industry, governmental, legislative, and higher education support in the political and financial support of the CITAs
5. Match up key constituents with key technologies and sites. Develop individual business models as each site will likely present unique factors.
6. Identify funding sources
7. Secure funding
8. Begin operation

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
1. Secure Prosperity Partnership support for the "Advanced Materials and Manufacturing Innovation Center" in Snohomish County.	Aerospace Innovation Center Committee	April 2005
2.ID needed technologies for aerospace industry	John, Tom	Q2 2005
3.Develop constituency/champion	John, Tom	Q3/Q4 2005

<b>Timeline:</b>		
<i>Step</i>	<i>Key Person</i>	<i>Timeline</i>
groups		
4.Create regional implementation strategy	Alex, Jerrilee, others	Q1 2006
5.Secure funding for Advanced Materials and Manufacturing Center	Jerrilee, Jack, Partners	Q3/4 2005
6.Advanced Materials and Manufacturing Innovation Center site development	Jerrilee, Jack, Partners	2006
7.Secure additional CITA funding for other identified aerospace technologies	All	???