



**SMART &  
SECURE  
TRADELANES**

Walter Kulyk (Chair, ITS Experts Group),  
APEC Secure Trade Project Overseer  
Director, Office of Mobility Innovation,  
Federal Transit Administration, US DOT  
400 7th Street, S.W., Room 9402  
Washington, D.C. 20590

September 3, 2004

Dear Mr. Kulyk,

I am writing to you as the overall Program Manager and integrator of the Smart and Secure Tradelanes (SST), and on behalf of the Strategic Council for Security Technology (SCST), which initiated SST. This letter is to reiterate our willingness to collaborate with the APEC Secure Trade Project, and to welcome independent assessment of SST economics by an APEC contractor.

The goal of SST has been to test, demonstrate, and then deploy new technologies and business practices to achieve simultaneous improvements in supply chain security and efficiency. We believe it is possible to do this for both developed trades and developing trades. We believe that tying together efficiency and security will accelerate the voluntary implementation of better security practices and reduction of supply chain vulnerability to terrorism. We also believe this is a significant step towards both trade facilitation and economic development because it will reduce the risks of trade disruption and stoppage by terrorist events directed at the supply chain.

SST is the world's most substantial industry driven secure trade initiative. SST Phase I covered 18 tradelanes, 13 of which were in the APEC region. 65 shippers, terminal operators, transportation carriers, and third parties participated in projects costing about US \$8 million. We achieved significant results, as shown in our phase I report. There was one very positive but small-scale economic analysis in phase I that showed potential dollar benefits to shippers of about \$400 per container load from improved visibility and control associated with better security.

We are now moving towards the next stage in SST. Originally we spoke of this as "SST Phase II," but we have dropped the "Phase II" designation to emphasize our commitment to build on and build out demonstrated successes; we now simply speak of SST's continuing operations.

Independent assessment of SST would be a major contribution, especially the economic implications and potential business benefits of secure trade enhancements. For one thing, we recognize that independent assessments are more credible to outsiders and can help accelerate confidence in and adoption of new practices.

Because of this, we responded enthusiastically when APEC's Secure Trade Phase 2 contractor, Michael Wolfe of the North River Consulting Group, approached us about opening SST to

independent assessment as part of the APEC Secure Trade project. As you know, Mr. Wolfe was familiar with our work as a member of the SCST.

SST has been funded by industry participants in most cases. However, some regional projects have received some partial support from international government agencies. Nevertheless, I think you will see that the value of the just the private sector investment in the SST tradelane projects is significantly greater than the current proposed budget for the APEC Secure Trade evaluation. It seems fair to me that APEC considers our tradelane project investments as a cost-share with APEC: our costs represent what it could cost APEC to organize underlying pilot projects for your evaluation.

We understand APEC's resource limitations and we are flexible about selecting the SST tradelane projects that are best suited to the APEC evaluations. We are also continuing to grow the SST program, expanding the network of tradelanes, shipper participants, processes, and technical solution capabilities. As a result, we anticipate there may be more choices available to APEC should resources materialize to study further tradelanes. For example, we encouraged Mr. Wolfe to work with representatives of Canada to explore participation of port of Vancouver-related shippers in SST; we would welcome such participation in SST.

This table summarizes the four upcoming SST initiatives with the most advanced definition and planning.

SST Working Project Name	Tradelane	Primary Participants	SST Program Cost
Japan RFID	Hong Kong – Yokohama	Mitsui, Mitsubishi, Fuji-Xerox HIT, METI, MLIT, Savi, NYK	\$3,000,000
Nested Visibility	China - Hong Kong - Europe/US	Intel, HIT, Carrefour, Savi, HK-ANA	>\$2,000,000
SST II	Yantian – Seattle	Mitsui, Savi, YICT, Port of Seattle	\$250,000
Project Pakistan	Pakistan – Norfolk	Target Stores, Savi, Maersk Logistics, Port Qasm, Copas	\$400,000

Please regard this letter as a declaration of SST's intent and willingness to participate in the APEC Secure Trade project by providing operational test beds for independent assessment. If APEC funds the continuation of the Secure Trade project, we look forward to working with your representatives or contractors to definitize the arrangements. If you would like to set up a time to discuss this further, I can be reached at (408) 743-8094 in my office or on my mobile phone (415) 517-6981.

Sincerely,

/s/ Lani Fritts

Lani Fritts  
SST Program Manager  
Strategic Council for Security Technology  
Vice President, Savi Technology

Cc: Michael Wolfe, North River Consulting Group

# **FINAL DRAFT**

## **APEC Transportation Working Group**

**Steering Committee:**

**Safe and Environment-Friendly Transportation Systems**

**Intelligent Transportation Systems (ITS) Experts Group**

**In collaboration with**

**Intermodal Task Force and  
Electronic Commerce Group**

**FINAL DRAFT  
Project Proposal**

**02 September 2004**

**“Enhancing Secure Trade and Efficiency in the APEC Region with Intelligent  
Transportation Systems (ITS) And Electronic Commerce Technologies”**

**(“the APEC Secure Trade Project”)**

**PHASE 3-5 – An Evaluation of the Economics of Trade Security  
Enhancement via the Smart and Secure Trade Lanes (SST) Phase Two  
Initiative**

*Responding to Ministerial direction and capitalizing on Phases 1 and 2, this proposal builds upon and use the results of the Secure Trade Project Phase 1 and Phase 2 activities to continue the implementation of the STAR initiative. In particular, this effort will competitively award one contract to carry out the independent evaluation of selected tradelanes within the Smart and Secure Trade Lanes (SST) initiative and the development of a comprehensive methodology for performing evaluations of other similar, system focused initiatives. SST is a significant private initiative considering new technologies and new business processes to increase both supply chain security and productivity.*

*Note that SST will fund the technology trade lanes pilot projects and APEC funds will only be used for an independent evaluation of these pilot projects. SST industry partners have already spent US\$8,000,000 on SST and these pilot projects to date; project proposers estimate the value of*

*their in-kind contribution related to the evaluation project to be US\$400,000. SST is very open to APEC sponsoring an independent evaluation of their continuing program (formerly known as SST Phase Two) for the economic implications of improving trade security via better visibility and accountability – security, productivity, and profitability can be improved at the same time. It is an important issue in trade liberalization—addressing ways to improve security against terrorism that do not disadvantage developing nations and firms.*

*Phase One of SST tested 18 different trade lanes, most of them in the APEC community. (There is more information on SST in the appendix to the APEC Secure Trade Project Preliminary Conceptual Plan). The Strategic Council for Security Technology is the umbrella council that originated SST (www.scst.info).*

*SST plans to add active trade lanes that originate in Japan, South Korea, Chinese Taipei, Hong Kong, and likely in Indonesia, Malaysia, Vietnam, and Thailand. APEC will be able to draw important conclusions from the ability to compare and contrast results between, for example, a trade lane anchored in a developed economy such as Japan with a trade lane anchored in a developing economy such as Vietnam.*

## APEC PROJECT FORMAT

### Facesheet

<i>(Tick ✓ one)</i>	<input checked="" type="checkbox"/> <b>Project seeking APEC funding</b>	<input type="checkbox"/> <b>Project for self-funding</b>
	<input type="checkbox"/> <b>Progress Report</b>	<input type="checkbox"/> <b>Evaluation Report</b>

*(Tick ✓ one where applicable)*  **Operational Account**       **TILF Special Account**

Project number: <i>(To be filled in by Secretariat: )</i>	Date received by Secretariat:
<b>Name of Committee/Working Group:</b> <ul style="list-style-type: none"> <li>● Steering Committee: Safe and Environment-Friendly Transportation Systems</li> <li>● Intelligent Transport Systems (ITS) Experts Group</li> </ul> In cooperation with the Intermodal Task Force	
<b>Title of Project:</b> “Enhancing Secure Trade and Efficiency in the APEC Region with Intelligent Transportation Systems (ITS) And Electronic Commerce Technologies” (“the APEC Secure Trade Project”) PHASE 3-5 – An Evaluation of the Economics of Trade Security Enhancement via the Smart and Secure Trade Lanes (SST) Initiative	
<b>Proposing APEC Economy:</b> United States	
Co-sponsoring APEC Economy (ies): Canada, Australia & Japan (Canada and Australia were the co-sponsoring economies during Phase 2)	
Project Overseer: Name, Title and Organization (M/F) Walter Kulyk (Chair, ITS Experts Group), Director, Office of Mobility Innovation, Federal Transit Administration, USDOT (M)	

Postal address: 400 7th Street, S.W., Room 9402 Washington, D.C. 20590		Tel: US 202-366-4991 Fax: US 202-366-3765 Email: Walter.Kulyk@fta.dot.gov
	<b>Total cost of proposal (US\$):</b> \$650,000 <sup>1</sup>	<b>Amount being sought from APEC TILF Fund (US\$):</b> <del>\$250,000</del> \$ 249,500
Type of Project: <input type="checkbox"/> seminar/symposium <input type="checkbox"/> short-term training course <input checked="" type="checkbox"/> survey or analysis and research <input type="checkbox"/> database/website <input type="checkbox"/> others ( <i>Please specify</i> )		
Project start date: December 2004		Project end date: October 2005
<p>Brief description of Project, its purpose and the principal activities (including when and where) :</p> <p>Approximately 90 percent of the world's non-bulk cargo moves by container, over 48 million cargo containers move globally between major seaports each year, and 21 of the world's 30 top container seaports are in APEC economies. It is vital both from an economic and national security standpoint that the integrity of the goods in the containers remain intact throughout the supply chain. We must do our utmost to prevent terrorist events connected with the intermodal supply chain, since they might lead to trade closures that could be devastating to APEC economies.</p> <p>The overall project effort consists of multiple phases with overlaps among the phases to ensure effective transition:</p> <ol style="list-style-type: none"> <li>1. Analysis of Container Track and Trace Technologies</li> <li>2. Initial Planning and Concept Development</li> <li>3. Research, Coordinate and Develop Evaluation Plan</li> <li>4. Develop Detailed Test Plans, Collect Data and Begin Analysis</li> <li>5. Execute Analysis and Finalize Evaluation Report</li> </ol> <p>The purpose of the overall project is twofold: to enhance Secure Trade in the APEC Region (STAR), end-to-end, by accelerating deployment of effective technologies; and to use the security improvements to enhance the efficiency of supply chain and trade activities. The project is responsive to the Leaders and Ministers direction from the Shanghai, Lima (ministerial) and Los Cabos meetings: it provides for the early implementation of the STAR initiative in a rapidly evolving multi-phased approach, with each phase gaining momentum from the previous phase. In addition to being responsive to the STAR Initiative, it also demonstrates the effectiveness of Intelligent Transportation Systems (ITS) technology and facilitates the development of ITS standards that enhance interoperability amongst economies.</p> <p>Phase 1, Analysis of Container Track and Trace Technologies: As coordinated at APEC-TPT21 in Brisbane, the <i>Sea and Air Container Track and Trace Technologies: Analysis &amp; Case Studies Project</i> (the "APEC Track and Trace Project" for short) constitutes Phase 1 of this overall project. Phase 1 assessed the integration of track and trace tools across APEC economies, surveyed user needs for such tools, and developed several case studies. The Phase 1 final report contains a literature survey of track and trace technologies, a survey of industry, and three case studies. It also contains recommendations for best practices and further APEC activities.</p> <p>Phase 2, Initial Planning and Concept Development: This phase laid the foundation for subsequent work. It developed the concept for combining Phase 1 results, STAR goals, non-APEC-sponsored supply chain security initiatives, end-to-end demonstrations, standards development, and a possible transition to operational use of the project results. Efficacy, Economics, and Equity were identified as three substantive issues that are critical to the success of the project. Central to the concept is partnering with one or more on-going secure trade pilots to save time and money while achieving the project goals. This phase identified the on-going SST projects as the prime candidate as a partner/evaluation platform for the subsequent phases. A draft concept paper is in circulation and the final version is in preparation to document the findings of this phase and outline the subsequent phases. During Phase 2, the U.S. also organized an APEC Secure Trade Workshop, which was held on 21 April 2004 in conjunction with the regularly scheduled APEC-TPT meeting in</p>		

<sup>1</sup> This total cost includes an estimated in-kind contribution of US\$400,000 from the SST initiative that Industry has already made and will continue to make over the course of the APEC evaluation project. Industry will fund the technology trade lanes pilot projects and APEC funds will only be used for evaluation of these pilot projects. Industry has already spent US\$8,000,000 on SST and these pilot projects to date. Back up of the for SST Industry share cost relative to the APEC assessment can be found in Annex B1.

Beijing to define the approach.

Since Beijing, the concept has been refined to reduce significantly the time and cost. This proposal reflects the streamlined approach, folding phases 3, 4, and 5 into a single phase 3-5, cutting total time for those phases from two years to one, and reducing the cost from \$1.6M to \$250K to reflect anticipated funding.

Phase 3 - 5 will build upon Phase 1 and 2 activities, broadening its scope and impact in three ways: first, leveraging the international SST effort that is using commercial funds in the process of applying technologies to intermodal container security in ways that also enhance trade; second, demonstrating end-to-end use of the tracking and tracing technologies and best practices, and third, facilitating the development of ITS standards that enhance interoperability among APEC economies.

It is significant to note the cost of the SST initiative that industry has already made. Industry will fund the technology trade lanes pilot projects and APEC funds will only be used for evaluation of these pilot projects. Industry has already spent US\$8,000,000 on SST and these pilot projects to date. An estimate for SST Industry share relative to the APEC assessment is US\$400,000.

Phase 3-5 consists of an independent evaluation of the trade facilitation economics and security impact of the Smart and Secure Trade Lanes (SST) initiative and the development of a comprehensive methodology for performing evaluations of other similar, system focused initiatives. SST is an extensive, practical security initiative for the intermodal cargo community. SST's overriding goals are to enhance global supply chain security while enhancing supply chain/trade efficiency. Phases 3-5 focus on evaluating SST's impact on the APEC region and will answer questions such as the following: do the technology and process initiatives provide measurable dollar benefits to shippers, carriers and others while improving security? do the initiatives have differing impact on established and developing APEC economies?; and what are the lessons of the initiative on international standardization?

In order to answer questions like these, Phase 3-5 begins with detailed planning for the evaluation and definitization of the relationship with SST. An important issue is which of the SST Phase 2 trade lanes will be targeted for APEC Secure Trade project evaluation. There will be two routes. One route will be a "developed trade" from Japan to North America, and a second will be a "developing trade", to be determined during the evaluation planning phase, Phase 3. An important goal of this project is to compare and contrast results from developing and developed trade lanes. The major product at this point is the evaluation plan.

The evaluations are for (1) the developed trade [old phase 4], (2) the developing trade [old phase 5], and (3) the comparison of the two. The evaluation utilizes anecdotal information from stakeholders and quantifiable data from the trade lane systems to yield and support findings. The final report will address those three topics plus the standards issues, plus the overall effectiveness of the ITS technologies used in SST.

The Evaluation Plan is due two months after start of work. Evaluations will begin 3 months after start of work. A major in process review will be held 7 months after start of work. The evaluation data collection will end 9 months after start of work. The draft report is due 11 months after start of work.

The principal (final) deliverable will be a stand-alone report of the results of the evaluation. There will also be an interim deliverable letter report due two weeks prior to the 7 month in process review. The letter report will assess the potential payoff from applying for added APEC funds to pursue additional trade lane evaluations. The letter report will present a rationale, conclusion, and if appropriate a recommendation for the size and scope of the added funds.

Signature of Project Overseer:

*(Separate written confirmation acceptable for email submission)* Date:

Signature of Committee Chair/WG Lead Shepherd: *(Not applicable to Progress Report and Evaluation Report)*

*(Separate written confirmation acceptable for email submission)*

Date:

**ECOTECH Weightings Matrix**

Criteria	Supporting Information (indicate paragraph number if details are in the project proposal)	Linkage (1 point per criterion)
Responds to a <u>specific</u> instruction from Leaders/Ministers <sup>1</sup>	Responds to direction of the Transportation Ministers to establish a project to demonstrate the effectiveness of ITS technology. (Paragraph 2)	1
Meets a core ECOTECH theme under the <i>Manila Declaration</i> <sup>1</sup>	Assuring secure supply chains supports strengthening economic infrastructure. Also responds to security priority expressed by Leaders in Shanghai and Los Cabos. (2)	1
Responds to the Common Policy Concepts, Activities and Dialogues identified in Part II of the <i>Osaka Action Agenda</i> <sup>1</sup>	Responds to Transportation Common Policy Concepts. (1, 2, 4)  Responds to Transportation Activities and Dialogues. (1, 2, 4, 8)	1
Responds to a <u>specific</u> ECOTECH Initiative <sup>2</sup>	APEC Blueprint for Action on Electronic Commerce. (6,8)  Declaration on an Asia-Pacific Framework for Strengthening Economic Cooperation and Development (4, 5, 6)	1
Improves skills, including in new technologies	Improves skills in multiple economies related to ITS and supply chain security. (4)	1
Builds capacity and strengthens institutions	Builds security capacity. (4, 5)	1
<u>Measurably</u> improves economic efficiency/performance <sup>3</sup>	Enhances efficiency related to security inspections--reflected in private business participation. (1, 4, 5)	1
Is of <u>practical</u> benefit to the private/business sector; has private/business sector <u>participation</u> ; and/or <u>funding</u> <sup>4</sup>	Builds on private/business security automation initiatives; has business participation. (6)	2
Assists economies attain sustainable growth and equitable development, while reducing economic disparities among APEC economies and improving economic and social well-being	Reducing the vulnerability of APEC supply chains to terrorism supports sustainable growth, and enhancing supply chain security in developing economies will reduce economic disparities. (4)	1

Supports a TILF objective, as laid down in Part I of the <i>Osaka Action Agenda</i> <sup>1</sup>	Supports TILF objectives, as laid down in Osaka Action Agenda 2002 Update including those found under Section B Economic and Technical Cooperation in Specific Areas; Subsection 12 Transportation.  Transportation objectives addressed by this project include: -promoting transport safety and security -promoting timely and rational investment in transport infrastructure	1
Disseminates information including through seminars/websites/databases <sup>5</sup>		
Outline the <u>outcome</u> and how members will benefit <sup>5</sup>		
	<b>Net Score (Maximum = 12)</b>	11

**Footnote**

- <sup>1</sup> Identify which instruction/ECOTECH theme/OAA element.
- <sup>2</sup> See <http://www.apecsec.org.sg/ecotech/index.html>
- <sup>3</sup> Policy outcomes that include development of energy efficiency guidelines, food safety standards etc
- <sup>4</sup> One point for each element up to a maximum of 3 points.
- <sup>5</sup> Not scored

**Remarks** (Please indicate if not applicable e.g., for TILF projects. Additional information in support of projects which do not score as highly as a lower-ranked project may also be provided here by the Lead Shepherd/Chair).

## **Details of the Project Proposal**

*Please provide your answers in point form or as succinctly as possible below each paragraph heading.*

### **A. Project Design**

#### **Project Objectives**

- 1) The purpose of the total project is two-fold: to begin implementation of the STAR initiative by accelerating deployment of ITS and eCommerce technologies to enhance end-to-end supply chain security among the APEC economies; and to use the security improvements to enhance the efficiency of supply chain and trade activities. Related project goals are to evaluate the effectiveness of ITS technology and further the development of appropriate international standards, in part by evaluating the development and implementation of standards.

This is a five-phase project, Phases 1 and 2 of which are being completed. Australia is the lead economy for Phase 1; the U.S. is the lead economy for Phase 2. The objective of Phase 1 was to develop track and trace best practice recommendations to improve supply chain efficiency and effectiveness. The objective of Phase 2 was to build the foundation for demonstration and evaluation activities.

Phases 3, 4, and 5 in the original plan are combined into Phase 3-5 reflecting the current scope and resources of the project. The objective of the Phase 3 segment is to definitize arrangements for the demonstrations and independent assessment.

The objectives of Phase 4 and 5 segments involve the evaluation of economic and trade implications of the smart container/security technologies as being implemented in the SST initiative. These technologies include automated container security devices (CSDs), throughout the supply chain; efficiencies in inspecting seals and facilitating the flow of cargo chain of possession information; integration of CSDs with other en-route ITS technologies; and the usefulness of electronic cargo manifests in both well-developed and traditional trade lanes.

Measurements of project success will be quantitative and qualitative. Some quantitative measures will be drawn from the underlying SST results, such as comparative measures of the effectiveness of CSDs in different environments (read rates at different speeds; false positives; chain of custody audit trail completeness). The more important quantitative measures for the APEC evaluation will include the impact on operating costs, delivery reliability, and inventory efficiency. Qualitative

measures will include evaluation interviews or surveys with cargo shippers, terminal operators, transportation carriers, customs officials, and transportation officials.

- 2) This project is responsive to the Leaders' counter-terrorism statements issued in Los Cabos, Shanghai, and Chile. It relates directly to and initiates the implementation of two of the cargo security aspects of the initiative to Secure Trade in the APEC Region (STAR). This project fully reflects priorities endorsed by SOM in February 2004 and ECOTECH priorities in the area of counter terrorism. The project supports a container security regime; supports provision of advance electronic information via electronic manifests; and promotes private-sector adoption of high standards of supply chain security. The project was developed at the direction of Ministers at the Third Transportation Ministerial Meeting held in May 2002 to "establish a project that will demonstrate the effectiveness of ITS technology and facilitate development of ITS standards that enhance interoperability amongst economies. The project will include elements of tracking container freight movements through intermodal port facilities to their ultimate destination and the provision of port clearance through customs using E-commerce."

Approximately 90 percent of the world's non-bulk cargo moves by container. Globally, over 48 million cargo containers move between major seaports each year and 21 of the world's 30 top container seaports are in APEC economies. It is vital both from an economic and national security standpoint that the integrity of the goods in the containers remain intact throughout the supply chain. We must do our utmost to prevent terrorist events connected with the intermodal supply chain, since they might lead to trade closures that could be devastating to APEC economies. It is also critical that any security measures which are adopted support effective and economical trade.

- 3) Facilitating trade is one of the main objectives of APEC. In theory, well-designed and effectively implemented new container monitoring and tracking technology can enhance both security and overall intermodal container supply chain efficiency. The independent evaluation of technologies that are standards based will assist APEC economies in selecting policies and technologies that best support the shared goals of security, trade facilitation, and economic development.

The main beneficiary stakeholder groups of an independent evaluation of this nature investment by will be managers of international shipping services, port and transport planners, governments and government agencies, port authorities and other organizations whose futures are tied to dealing with heightened security concerns while at the same time reducing costs, improving visibility and efficiency. Well-structured, consistent evaluations can reduce over-investment in assessments and business planning for stakeholders in the intermodal supply chain.

### Linkages

- 4) Direct and indirect benefits will accrue throughout the supply chain. Direct benefits include enhanced security and improved efficiency in the APEC economies. The indirect benefit will be the increased awareness of customers, trading partners, and government agencies that a participating firm is serious and effective about security, which supports both business growth and greater credibility. Thus the private sector beneficiaries include participating shipper/receivers (factories and distribution centers); transportation/ocean terminal operators; and transportation carriers. Public institutions will benefit as well: Customs and law enforcement agencies will benefit from an additional layer of supply chain security protection; and transportation managers will enjoy an added source of ITS flow information. Economies and individuals will benefit through skill development in new technologies.
- 5) The deliverables include (a) an overall evaluation methodology and detailed test plans; (b) an interim letter report that assesses the potential payoff from applying for added APEC funds to pursue additional trade lane evaluations; and (c) a final evaluation report.

The evaluation will address questions including:

- how might the initiative impact established and developing APEC economies?;
- what are the likely long range impacts on intermodal cargo movement in the APEC region?; and,
- what are the lessons of the initiative for international standardization?

This evaluation will address well-developed and traditional trade lanes, with the necessary infrastructure in place via the industry-funded continuation of the Smart and Secure Tradelanes initiative.

- 6) The business/private sector will be active participants in this project. SST is commercially driven, focused on marine containers, and plans continuing operations. SST managers repeatedly indicated their interest in partnering with the APEC Secure Trade project on an independent assessment that focuses on SST economics. (SST will provide the underlying pilot and collect performance measures, and APEC will provide the independent assessment resources. No formal or binding commitment has been made in APEC's name).
- 7) Given the importance of trade to the APEC economies, this project will add value in an area of paramount importance to the APEC member economies. The project will fit new technologies and best practices to the context of APEC economies and business practices. It will address efficacy, economics, and equity.

- 8) This project will both draw on and contribute to other projects. An example is Operation Safe Commerce (OSC). OSC is a major supply chain security initiative that includes Europe, North America, and Asia. Begun with U.S. government funding, OSC includes 18 trade lane pilots via 3 U.S. load center ports, and multiple business process and technology initiatives to enhance security. Two of the three U.S. load centers in OSC—Los Angeles/Long Beach and Seattle/Tacoma—are critical to the STAR initiative.

**Methodology**

- 9) The Phase 3 segment is the detailed planning and design phase, designed to lay the foundation for assessment of SST innovations on developed and developing trades, which were formerly Phases 4 and 5. Phase 3-5 begins with the award of the contract to the independent evaluation contractor. The evaluator will research and outreach to completely understand the SST initiative; establishing working relationships with key stakeholders; developing an evaluation plan and choosing specific APEC region trade lanes for data acquisition. Preliminary investigation and outreach indicates that there are adequate viable APEC region trade lanes for consideration and that stakeholders are willing to participate in the Project. Phase 3-5 is complete when the evaluation plan is finalized and initiated.

The evaluation contract will be awarded in accordance with the requirements of the organization that will provide the funds. The subtasks, methodology, and scheduling are in the following table. Actual calendar dates may vary based on the availability of funding and authorization to start work.

<b>Phase 3-5 (3), - Research, Coordinate and Develop Evaluation Plan</b> Subtasks for Evaluation Contractor		<b>Schedule</b>
Eval. 3-A	<p><b>Evaluation Strategy</b></p> <ul style="list-style-type: none"> <li>Develop evaluation strategy briefing outlining evaluation goals and objectives, preliminary evaluation hypotheses, proposed approach, expectations, and data needs.</li> <li>Present evaluation strategy at an evaluation kickoff meeting with project manager, project overseer, and project partners.</li> </ul>	-Start of work - assume December 2004 -1 week after start
Eval. 3-B	<p><b>Evaluation Planning</b></p> <ul style="list-style-type: none"> <li>Develop draft evaluation plan with evaluation goals, hypotheses, measures of effectiveness, methods, and evaluation schedule. Develop draft test plans appropriate to the scope of the project.</li> <li>Coordinate draft evaluation plan with project manager, project overseer, and project partners. Revise and deliver final evaluation plan.</li> </ul>	-2 months after start

<b>Phase 3-5 (4) - Collect Data and Begin Analysis</b> Subtasks for Evaluation Contractor		<b>Schedule</b>
Eval. 4-A	<b>Data Collection</b> <ul style="list-style-type: none"> <li>Collect “before” data as necessary.</li> <li>Establish software, data archiving capabilities, and analytical tools needed to carry out remainder of the evaluation.</li> <li>Complete data collection</li> </ul>	-3 months after start  -9 months after start
Eval. 4-B	<b>Begin Analysis</b> <ul style="list-style-type: none"> <li>Examine data and determine any “holes in data”.</li> <li>Determine where any anecdotal evidence is required.</li> <li>Begin evaluation analysis.</li> </ul>	-4 months after start
Eval. 4-C	<b>In-Process Review</b> <ul style="list-style-type: none"> <li><b>Focus on quality of data generation and collection and any needed fixes</b></li> <li><b>Deliver interim deliverable letter report</b></li> </ul>	-7 months after start

<b>Phase 5 - Execute Analysis and Finalize Evaluation Report</b> Subtasks for Evaluation Contractor		<b>Schedule</b>
Eval. 5-A	<b>Execute Analysis</b> <ul style="list-style-type: none"> <li>Execute the analysis as specified in the detailed test plans in accordance with evaluation plan.</li> </ul>	
Eval. 5-B	<b>Finalize Evaluation Report</b> <ul style="list-style-type: none"> <li>The final report will go through drafting, comments and finalization.</li> <li>The final report will also be presented to key stakeholders.</li> <li>The final report will include sections dealing with the overall evaluation plan, detailed test plans, analysis, findings and lessons learned.</li> <li>Develop a brief concept proposal for follow-on project funding to expand or extend the analysis. This second final product is only intended to be a memo or letter deliverable with a recommendation and outline for a future project.</li> </ul>	-Deliver draft final report 11 months after start.

Travel for the contractor is included in the cost estimates.

- 10) The SST initiative is entering continuing operations (originally known as Phase II) and will have active trade lanes that originate in Japan, South Korea, Chinese Taipei, Hong Kong, and likely in Indonesia, Malaysia, Vietnam, and Thailand.

APEC will be able to draw important conclusions from the ability to compare and contrast results between, for example, trade lanes anchored in a developed economy such as Japan with trade lanes anchored in a developing economy such as Vietnam.

SST in Japan appear likely to involve two major trading companies. Tradelanes include Nagoya to Los Angeles for consumer electronics; Yokohama to LA for

business electronics; Kobe to a US port for automotive products. There is also a possibility of a Japan to Vancouver trade lane for auto parts. The Secure Trade project will not be able to study every tradelane because of resource constraints, but the project can make a valuable impact with several available options.

### **Dissemination of Project Output**

- 11) The output will be distributed electronically, plus some xerographic distribution. The project output of most visibility will come from phases 4 and 5. The Phase 3 deliverables will address implementation plans for those phases. In addition to traditional hard copy and Internet methods.

### **Gender Concerns**

- 12) The objectives of the project -- enhancing trade security and efficiency -- provide indirect benefits for women by strengthening the growth in the member economies.
- 13) During Phase 3, participation of women will be sought in the planning, management, and execution of Phases 4 and 5.
- 14) As a minimum, women will be able to participate equitably in the development and implementation of the project because of their professional roles in many of the businesses and agencies that will be involved in the project.
- 15) The project will not collect or use sex-disaggregated data to measure the project's effects on women.
- 16) In developing the communication and publicity plans during Phase 3 consideration will be given to the value and options of disseminating the results to women's organizations.
- 17) None of the Phase 3 budget will be earmarked for the specific needs of women.
- 18) The evaluation will assess the impact of the project on women as part of the Phase 4/5 project evaluation.

### Budget

- 19) Total funding for Phases 3 through 5 is estimated to be \$250,000. See Annex 1 for a detailed breakdown.
- 20) The timetable for the drawdown of APEC funding for Phase 3-5 is shown below.

Date	Stage/Event	Amount(US\$)
January 2005 (2 months >start)	Delivery of draft evaluation plan and test plans	\$40,000
4 months >start	Initiation of analysis	\$50,000
7 months >start	Deliver interim report and hold in-progress review	\$40,000
9 months >start	Completion of data collection	\$50,000
11 months >start	Delivery of draft final report	\$40,000
TBD	Acceptance of final report; completion of project	\$30,000
Total		\$250,000

- 21) No requests for waivers are anticipated.

It is urgent that evaluation project start in close proximity to the start of the SST continuing operations in the fall/winter of 2004-2005. The evaluation project would benefit from starting in close proximity to the start date of the SST because it would enable evaluators to closely coordinate with SST project managers and determine early what data could be available and collected as well as coordinate the timelines for evaluation.

The Phase 3-5 evaluation project will involve SST project stakeholders, including those involved with the SST project and members of the economies impacted. Some specific stakeholder groups that are expected to be involved include:

- Port Authorities in North America, Japan and a developing APEC economy;
- Transportation agencies involved with the intermodal freight movement;
- Supply chain domain experts involved in the SST project;
- Major shippers and importers;
- Terminal operators at those ports chosen for the evaluation;

- International carriers involved in the SST project;
- Service providers working on the SST project;
- Technology providers working on the SST project
- International Organization for Standardization (ISO);

### **Assessment of Project**

- 22) Quantitative and qualitative criteria for measuring the short and long-term results of the SST pilots are integral to this project. The evaluator will come on board during at the onset of Phase 3-5 and will prepare a plan for an independent assessment of project results, including some method to establish comparative baseline data.

**APEC TILF Special Account  
Itemized Budget for Financial Years 2005<sup>2</sup>  
(All Payments Expected in CY 2005)**

[Industry will fund the technology trade lanes pilot projects and APEC funds will only be used for evaluation of these pilot projects. Industry has already spent US\$8,000,000 on SST and these pilot projects to date. An estimate for in-kind contribution for the SST industry share relative to the APEC assessment is US\$400,000. Details of this estimate can be found in Annex B1.]

Items			APEC TILF Funding (USD)	Self Financing <sup>3</sup> (USD)
<b>Direct Labour</b>	No. of Hours	Unit Rate (\$USD)		
- Speaker's Honorarium			-	
- Consultant (including Researcher) Fees	See Annex B1	See Annex B1	215,000	
- Consultant's Secretary Cost				
<b>Travel (see attached detail)</b>				
- Per Diem (including accommodation and "additional payment")			11,000	
- Airfare			19,000	
	No. of Copies	Unit cost		
<b>Publication of report (including distribution)</b>				
Photocopying	10,000	\$0.10	1,000	
Communications (Phone/ Fax/ Mail/ Courier)			<del>2,500</del> 2000	
Other (Hosting meeting to get buy-in from potential participants and to reach agreements on partnerships and in-kind contributions.			1,500	
<b>Total for Phase 3-5</b>			<del>\$250,000</del>	\$400,000 <sup>4</sup>

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- 2 If project straddles more than one year, please indicate the amount of funds required for each of the two financial years in question.
- 3 An estimate for the in-kind contribution that makes up the SST Industry share relative to the APEC assessment is US\$400,000. Annex B1 contains a complete breakdown of all project cost.
- 4 \$400,000 Represents an in-kind contribution.

**Please note that the table below presents locations and cost estimates based on initial investigation of the SST initiative and correspondence with SST stakeholders.**

**These locations could be subject to change as the project enters the evaluation planning stage of the locations and trips will be finalized.**

<b>APEC Secure Trade Project - PHASE 3-5 Detailed Travel Cost Estimates</b>										
Country	Location	Trips	Days per Trip	Lodging <sup>1</sup>	Meals & Incidental Expenses <sup>1</sup>	Total Per Diem <sup>1</sup>	Total Per Diem Per Trip	Estimated Airfare <sup>2</sup> per Trip	Estimated Total Airfare <sup>2</sup>	Estimated Cost Per Trip
				\$USD	\$USD	\$USD	\$USD	\$USD	\$USD	\$USD
Canada	Vancouver	2	4	\$144	\$99	\$243	\$1,458	\$800	\$1,600	\$3,058
Hong Kong	Hong Kong	1	5	\$203	\$126	\$329	\$1,316	\$1,500	\$1,500	\$2,816
Indonesia	Jakarta	1	5	\$127	\$68	\$195	\$780	\$2,000	\$2,000	\$2,780
Japan	Nagoya	2	5	\$196	\$121	\$317	\$2,536	\$1,500	\$3,000	\$5,536
Thailand	Bangkok	1	5	\$125	\$57	\$182	\$728	\$2,000	\$2,000	\$2,728
USA	Seattle/Tacoma	2	4	\$79	\$35	\$114	\$684	\$750	\$1,500	\$2,184
USA	Washington DC	2	4	\$150	\$51	\$201	\$1,206	\$700	\$1,400	\$2,606
Vietnam	Ho Chi Minh or Hanoi	1	5	\$92	\$91	\$183	\$732	\$2,000	\$2,000	\$2,732
TPT Meetings	To Be Determined	2	4	\$125	\$75	\$200	\$1,560	\$2,000	\$4,000	\$5,560
<b>TOTALS:</b>							<b>\$11,000</b>		<b>\$19,000</b>	<b>\$30,000</b>
<b>Notes:</b>										
<sup>1</sup> Per diems drawn from US government employee guidance										
<sup>2</sup> Airfares from search engines for advance purchase fares										

**Annex B1 Contains a Detailed Breakdown of the APEC TILF Amount Requested by Labor Hours, Month and Phase. (Expands on Annex A1)**

**Annex B1 Contains a Breakdown of the APEC TILF Requested Travel Budget Estimate by Location and Trip (Same as in Annex A1)**

**Annex B1 Contains a Breakdown of the SST In-Kind Contribution Estimate (Expands on Annex A1)**

**APEC TILF Special Account**

**Itemized Budget for Financial Year 2005**

**(All Payments Expected in CY 2005)**

**Detailed Labor Cost Estimates for TILF Funds - APEC SST Evaluation Project**

Month After Project Start  (months)	Project Staffing				Hourly Rates			COST SUBTOTAL per Month	COST SUBTOTALS per Phase	
	Principal	Senior Analyst	Administrative Assistant	HOURS SUBTOTAL per Month	Principal	Senior Analyst	Administrative Assistant		PHASE	(\$USD)
	(hrs/m)	(hrs/m)	(hrs/m)		(\$USD)	(\$USD)	(\$USD)			
1 (Jan 2005)	120	160	60	340	\$ 80.00	\$ 80.00	\$ 30.00	\$ 24,200.00	PHASE 3 Evaluation Planning	\$ 44,600.00
2	120	120	40	280	\$ 80.00	\$ 80.00	\$ 30.00	\$ 20,400.00		
3	80	120	20	220	\$ 80.00	\$ 80.00	\$ 30.00	\$ 16,600.00	PHASE 4 Detailed Test Plans, Data Collection & Analysis	\$ 94,600.00
4	80	100	20	200	\$ 80.00	\$ 80.00	\$ 30.00	\$ 15,000.00		
5	40	80	20	140	\$ 80.00	\$ 80.00	\$ 30.00	\$ 10,200.00		
6	40	90	20	150	\$ 80.00	\$ 80.00	\$ 30.00	\$ 11,000.00		
7	40	100	20	160	\$ 80.00	\$ 80.00	\$ 30.00	\$ 11,800.00		
8	80	100	20	200	\$ 80.00	\$ 80.00	\$ 30.00	\$ 15,000.00		
9	80	100	20	200	\$ 80.00	\$ 80.00	\$ 30.00	\$ 15,000.00		
10	120	120	40	280	\$ 80.00	\$ 80.00	\$ 30.00	\$ 20,400.00	PHASE 5 Complete Analysis & Report	\$ 75,800.00
11	150	160	80	390	\$ 80.00	\$ 80.00	\$ 30.00	\$ 27,200.00		
12 (Dec 2005)	160	160	85	405	\$ 80.00	\$ 80.00	\$ 30.00	\$ 28,150.00		
<b>TOTALS</b>	<b>1110</b>	<b>1410</b>	<b>445</b>	<b>2965</b>	<b>TOTAL LABOR DOLLARS FROM APEC</b>			<b>\$</b>	<b>215,000.00</b>	

**Detailed Travel Cost Estimates From TILF Funds - APEC Secure Trade Project - PHASE 3-5**

Please note that the table below presents locations and cost estimates based on initial investigation of the SST initiative and correspondence with SST stakeholders.

These locations could be subject to change as the project enters the evaluation planning stage of the locations and trips will be finalized.

Country	Location	Trips	Days per Trip	Lodging <sup>1</sup>	Meals & Incidental Expenses <sup>1</sup>	Total Per Diem <sup>1</sup>	Total Per Diem <sup>1</sup>	Estimated Airfare <sup>2</sup> per Trip	Estimated Total Airfare <sup>2</sup>	Estimated Cost Per Trip
			(days)	(\$USD)	(\$USD)	(\$USD)	(\$USD)	(\$USD)	(\$USD)	(\$USD)
Canada	Vancouver	2	4	\$ 144.00	\$ 99.00	\$ 243.00	\$ 1,458.00	\$ 800.00	\$ 1,600.00	\$ 3,058.00
Hong Kong	Hong Kong	1	5	\$ 203.00	\$ 126.00	\$ 329.00	\$ 1,316.00	\$ 1,500.00	\$ 1,500.00	\$ 2,816.00
Indonesia	Jakarta	1	5	\$ 127.00	\$ 68.00	\$ 195.00	\$ 780.00	\$ 2,000.00	\$ 2,000.00	\$ 2,780.00
Japan	Nagoya	2	5	\$ 196.00	\$ 121.00	\$ 317.00	\$ 2,536.00	\$ 1,500.00	\$ 3,000.00	\$ 5,536.00
Thailand	Bangkok	1	5	\$ 125.00	\$ 57.00	\$ 182.00	\$ 728.00	\$ 2,000.00	\$ 2,000.00	\$ 2,728.00
USA	Seattle/Tacoma	2	4	\$ 79.00	\$ 35.00	\$ 114.00	\$ 684.00	\$ 750.00	\$ 1,500.00	\$ 2,184.00
USA	Washington DC	2	4	\$ 150.00	\$ 51.00	\$ 201.00	\$ 1,206.00	\$ 700.00	\$ 1,400.00	\$ 2,606.00
Vietnam	Ho Chi Minh/Hanoi	1	5	\$ 92.00	\$ 91.00	\$ 183.00	\$ 732.00	\$ 2,000.00	\$ 2,000.00	\$ 2,732.00
TPT Meetings	To Be Determined	2	4	\$ 125.00	\$ 75.00	\$ 200.00	\$ 1,560.00	\$ 2,000.00	\$ 4,000.00	\$ 5,560.00
<b>TOTALS:</b>							<b>\$ 11,000.00</b>		<b>\$ 19,000.00</b>	<b>\$ 30,000.00</b>

<sup>1</sup>Per diems drawn from US government employee guidance & <sup>2</sup>Airfares from search engines for advance purchase fares

<b>Other Administrative Costs from TILF Funds</b>			
Photocopying	No. of Copies	Unit cost	
	10,000	\$0.10	
Communications (Phone/ Fax/ Mail/ Courier)			\$ <del>2,000.00</del> 2,000
Other (Hosting meeting to get buy-in from potential participants and to reach agreements on partnerships and in-kind contributions.)			\$ 1,500.00
This amount represents an estimate of the cost for hosting meeting to get buy-in from potential participants and to reach agreements on partnerships and in-kind contributions. This budget would only be used to engage SST "public-entity" project stakeholders – like Departments of Transportation and Port Authorities. \			
<b>TOTALS</b>			\$ <del>5,000.00</del> 4,500

<b>Total APEC TILF Operational Account Funds Being Sought</b>	
Labor	\$ 215,000.00
Travel	\$ 30,000.00
Administrative	\$ <del>5,000.00</del> 4,500
<b>Total APEC TILF Special Account Funds Being Sought</b>	\$ <del>250,000.00</del> 249,500

<b>Estimation of In-Kind Contribution Being Supplied by U.S. (through U.S. Industry portion of SST initiative during the project)</b>	
US Labor in-kind = contribution is estimated at >1% of the SST II and Japan RFID projects seen in the table below	\$ 10,000.00
US Equipment in-kind = contribution is estimated at 10% of the SST II and Japan RFID projects seen in the table below	\$ 325,000.00
US Data Collection Activity and Systems in-kind = contribution is estimated at 2% of the SST II and Japan RFID projects seen in the table below	\$ 65,000.00
<b>Total In-Kind Funds Supplied by U.S. Industry funded portion of SST initiative</b>	<b>\$ 400,000.00</b>

\$400,000 is estimated by taking:

less than 1% for in-kind labor such as planning, meetings and helping to review deliverables;  
 approximately 10% for in-kind equipment; and,  
 approximately 2% in-kind for data collection

from each of these two SST projects: SST II (Yantian - Seattle @ \$250,000) and Japan RFID (Hong Kong - Yokohama @ \$3,000,000).

<b>This table summarizes the four SST initiatives with the most advanced definition and planning. APEC might choose to assess the SST projects we call "SST II" as a developing trade and "Japan RFID" as a developed trade.</b>		
<b>SST Component</b>	<b>Trade Lane</b>	<b>Project Component Cost</b>
Nested Visibility	China - Hong Kong - Europe/US	\$ 2,000,000.00
SST II	Yantian - Seattle, US	\$ 250,000.00
Japan RFID	Hong Kong - Yokohama	\$ 3,000,000.00
<b>TOTAL</b>		<b>\$ 5,250,000.00</b>