Outcome Report

Symposium on Supply-chain Connectivity Measurement Framework
(Singapore, 31 March – 1 April 2012)

APEC Policy Support Unit
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Advancing Free Trade for Asia-Pacific **Prosperity**

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INTRODUCTION

APEC Ministers at the 2010 APEC Ministerial Meeting (AMM) endorsed the Supply-chain Connectivity Framework Action Plan (SCFAP), and committed to implement it in order to achieve an APEC-wide target of a 10 percent improvement by 2015 in Supply-chain performance. In moving towards the implementation of the SCFAP, the Committee on Trade and Investment (CTI) held a Symposium on Supply-chain Connectivity (SC) Measurement Framework in conjunction with the Second CTI Meeting from 31 March to 1 April 2012 in Singapore. This Symposium is a continuation of the last Symposium that was held in Sendai in 2010, which suggested using both quantitative and qualitative assessments and a mix of internal and external indicators to provide a holistic and balanced assessment of the Supply-chain Connectivity Initiative (SCI) performance.

The Second CTI Meeting in 2011 has endorsed the methodology proposed by the Policy Support Unit (PSU) on the use of internal and external indicators to measure progress towards the 10 percent target. On the development of external indicators, several indicators such as the Logistics Performance Index (LPI) from the World Bank, and the Enabling Trade Index from the World Economic Forum (WEF) would be applied to measure the progress of SCFAP implementation.

For internal indicators, the PSU has suggested using information in the Completion Reports (CR) for SC projects, including APEC funded and non-APEC funded ones. The information from the project CRs will form a good basis to track the implementation progress of individual actions in the Action Plan. However, such an assessment may not be able to capture all the efforts of APEC economies in working towards achieving the 10 percent target improvement in supply-chain performance. This is because information contained in the CRs may not be sufficient to provide evidence of progress.

To complement the information from the CRs, a self-assessment survey to collect economies' views on the impact of SC activities and projects on policy change and improvement in SC performance will be conducted to further establish the direct or indirect contribution of the Action Plan's implementation to the 10 percent target. The survey will also help to gather policy recommendations on how to improve the remaining actions under the Action Plan.

A well designed framework and questionnaire is crucial to the credibility of the assessment exercise and which is the reason for holding this Symposium on Supply-chain Connectivity (SC) Measurement Framework. The Symposium also serves as a forum to take stock of the implementation of SCFAP as well as to learn from other international organizations that are working on SC improvement issues.

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SYMPOSIUM OVERVIEW

The Symposium on Supply-chain Connectivity (SC) Measurement Framework was held on 31 March – 1 April 2012 in Singapore as a continuation of the 2010 Sendai SC Symposium. The main objective of the Symposium was to share experiences and exchange views on the measurement of supply chain connectivity from different perspectives (international organizations, private sectors, and academia), to take stock of the implementation of the Supply-chain Connectivity Framework Action Plan (SCFAP), and to discuss the self-assessment survey that was prepared by the Policy Support Unit (PSU). The survey is meant to complement the internal and external indicators that will be used to measure improvements resulting from the SCFAP implementation. The agenda for the Symposium is provided in Annex 1.

The Symposium lasted for one and a half days with more than 60 participants. It was structured into four sessions with different topics. The key discussions and outcomes from each session are captured in the following paragraphs.

SESSION I: INTERNATIONAL ORGANIZATION PERSPECTIVE – TOOLS FOR ASSESSING SUPPLY CHAIN PERFORMANCE AND PROGRESS

The first session had different organizations shared their experiences with assessing supply chain performance and progress, including the World Bank on the Logistics Performance Index (LPI), the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) on the Intra-regional Trade Cost Database and the Business Process Analysis Initiative, and the Economic Research Institute for ASEAN and East Asia (ERIA) on the Scoring Methodology for ASEAN Connectivity.

Session 1.1 Using the LPI to Measure Supply Chain Performance (by Ben Shepherd[1])

The LPI is currently the most comprehensive cross-country data available on logistics performance. It adopts a comprehensive quantitative and qualitative approach to supply-chain performance to measure some of the critical factors of trade logistics, including quality of infrastructure and logistics services, the transparency of government procedures, etc. The survey covers 1,000 mostly senior-level logistics professionals from both SMEs and large operators, collects nearly 6,000 individual economy assessments, and aggregates responses from 134 economies with usable data for 155 economies. The LPI covers twenty APEC economies.

The LPI has two segments. The International LPI asks respondents to evaluate foreign economies based on six qualitative components, i.e. efficiency of the clearance process, quality of trade and transport infrastructure, ease of arranging international shipments, competence and quality of logistics services, ability to track and trace shipments, and timeliness of deliveries. The Domestic LPI asks respondents about their own economies, including qualitative data on various aspects of logistics performance, and quantitative data on the time and cost of logistics operations and hard performance data.

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[1] The speaker made this presentation in a purely personal capacity.

In 2010, CTI agreed to use the LPI as part of the external indicators to track the progress of the Supply-chain Connectivity Initiative (SCI) or Supply-chain Connectivity Framework Action Plan (SCFAP). Based on the preliminary results of the LPI 2012 report, the overall LPI score of APEC is 3.39, which falls a bit short of the implicit target of 3.52 under the SCI. Disaggregating the LPI to the performance cluster level gives more or less the same results (table 1), with seven out of eleven scores falling behind the implicit target. This suggests that the logistics performance trend seems to be going in the right direction, but acceleration will be needed if the SCI target is to be met by 2015. The four indicators which met the implicit targets show considerable improvements in cutting red tape and reducing the rate of physical inspection in the region.

A comparison of the overall LPI scores of individual economies also shows that logistics performance continues to vary widely among APEC economies and across the board. All but two APEC economies are in the top 40 percent of global performers, with 11 in the top 20 percent.

Table 1 LPI 2012 actual scores and implicit targets

Supply-chain Connectivity Initiative **External indicators**	Direction of improvement	Baseline (2010)	Pro-rata benchmark (2012)	Actual (2012)	Target (2015)
LPI Overall Index (simple average)	↗	3.38	3.51	3.39	3.72
First Performance Cluster: Building infrastructure & capacity					
LPI Infrastructure Index	↗	3.29	3.42	3.35	3.62
LPI Logistics Competence Index	↗	3.30	3.44	3.33	3.63
LPI % Shipments Meeting Quality Criteria	↗	80.89	84.13	83.21	88.98
Second Performance Cluster: Streamlining procedures					
LPI Customs Index	↗	3.11	3.23	3.13	3.42
LPI Lead Time to Export	↘	2.17	2.08	2.10	1.95
LPI Lead Time to Import	↘	2.78	2.67	2.59	2.50
LPI Documents to Export	↘	3.53	3.38	2.66	3.17
LPI Documents to Import	↘	3.98	3.82	3.35	3.58
LPI Cost to Export	↘	681.29	654.03	692.89	613.16
LPI Cost to Import	↘	767.90	737.19	834.20	691.11
LPI % Physical Inspection	↘	10.95	10.51	9.67	9.85

Source: The World Bank, the Logistics Performance Index and its Indicators, 2010, 2012

Based on the analysis, the LPI 2012 report concludes with several important policy messages for economies, including the need to expand the traditional reform agenda beyond customs reform and infrastructure development, to improve the quality of logistics services and to increase border agency coordination, and to embark on comprehensive reform (processes, services, and infrastructure) with broad public and private support.

Although the results of the LPI 2012 report should not be over- interpreted due to the role of sampling error as in any survey exercise, these results tend to suggest that APEC economies should intensify their efforts towards the SCFAP or SCI's overall goal in the coming years.

Session 1.2 Measuring Supply-Chain Connectivity and Trade Facilitation Performance (by Yann Duval)

Although much progress has been made in developing trade facilitation/costs indicators, existing indicators are limited in their ability to provide a comprehensive measure of international trade costs, in providing information on bilateral/regional/south-south trade costs, and in capturing differences in trade efficiency across products and trade routes. Therefore, the United Nations Economic and Social Commission for Asia and Pacific (ESCAP) has developed a database of bilateral and intraregional trade costs (at the macro level), as well as launched a Trade Process Analysis Initiative (at the micro level).

The Comprehensive Trade Costs (CTC) estimates in the ESCAP Trade Cost Database capture all additional costs involved in trading goods bilaterally relative to those involved in trading goods domestically, such as international shipping and logistics costs, tariff and non-tariff costs, and costs from differences in language, culture and currencies. The Database contains bilateral trade costs between 107 economies from 1994 to 2009, with a disaggregation between Agriculture CTC and Manufacturing CTC. The CTC excluding tariffs are also calculated.

Analysis of the CTC data shows that it is easier and cheaper for economies in Asia to trade with partners outside Asia than to trade with partners within the region. It also reveals the factors behind the changes in trade costs across economies in Asia and the Pacific. For example, between 60 to 90 percent of total costs could be explained by policies related to non-tariff trade costs, of which 25 percent are related due to liner shipping connectivity (port and maritime services efficiency).

As part of ESCAP's support for paperless trade system development, standardized Business Process Analyses (BPAs) of import and export procedures for specific products and trade routes have been initiated in recent years, based on the United Nations Network of Experts for Paperless Trade in Asia and the Pacific (UNNExT) BPA Guide for the Simplification of Trade Procedures[2]. BPA provides detailed mapping, timing and costing of a process. Some of the procedures covered BPA for trade facilitation are: signing of contract between buyer and seller, import/ export document preparation, inland transport and handling, customs and related clearances at border/port, and payment process.

The BPA studies already conducted by ESCAP revealed that document preparation took the most time, followed by transport and handling issues. Large variations were seen in time and cost across products, transport routes, destination, and firm size. In many cases, different countries required different documents and information for the same export product, which confirmed the critical importance of harmonizing procedures and documentary requirements.[3] The regular conduct of standardized cross-border BPA of trade procedures for products of common interest was recommended as a way to better measure supply-chain and trade facilitation performance among countries.

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[2] Available at http://www.unescap.org/unnext/
[3] A synthesis of the results is available at: http://www.unescap.org/tid/publication/tipub2615.asp

Session 1.3 ASEAN Connectivity: Progress and Challenges (by Ponciano S. Intal Jr.)

ASEAN Connectivity has three components: people-to-people connectivity, physical connectivity, and institutional connectivity. People-to-people connectivity focuses on cooperation in education, culture and tourism. Physical connectivity emphasizes on hard infrastructure, i.e. transport and information communication technology. Institutional connectivity addresses soft infrastructure such as trade and investment liberalization and facilitation along with customs integration.

In the case of institutional connectivity, ASEAN has specified ten enhancement strategies and ERIA developed a scoring methodology using qualitative project data to track the progress. The scoring approach covers two groups of measures: liberalization measures that look at the percentage of goal attainment, and facilitation and support measures that look at the percentage of completion of key steps to implement and operationalize the measures. This scoring system, while different, complements the ongoing ASEAN Economic Community (AEC) Scorecard.

For each strategy, the scoring steps are specified, and the required data are then collected to benchmark progress. Based on the results, it is recommended that ASEAN economies should: put forward a stronger political commitment and establish or strengthen a national level coordinating-cum-monitoring committee/authority/commission, conduct a more intensive and extensive information dissemination, and make available more resources and funding for inter-related national initiatives.

SESSION II: BUSINESS PERSPECTIVES ON MEASURING SUPPLY CHAIN PERFORMANCE AND PROGRESS

The private sector is one of the key stakeholders of supply chain connectivity and thus their inputs and opinions are of great importance to the implementation of the SCFAP. In Session II, four speakers provided the private sectors' experiences of supply chain connectivity as well as their perspectives and expectations on improving the supply chain performance.

Session 2.1 DHL Global Connectedness Index (by Tom Wheelwright)

The Global Connectedness Index (GCI), developed by DHL, provides a comprehensive view on globalization by considering the flows of merchandise, capital, information and people. It offers an assessment of the state of connectedness in 125 economies over the years from 2005 to 2010, providing a wealth of data on each one and indicating emerging connectedness trends. In addition, it looks at how connectedness is related to prosperity and indentifies opportunities to enhance global welfare. With the ranking of economies based on their connectedness, DHL aims to contribute to the globalization debate and to re-emphasize the importance of global commerce.

The difference between GCI and other indicators is that it shows how much of 'globalization' (depth of integration) could be considered as 'regionalization' (geographical breadth). Based on hard data, the GCI analysis shows that globalization is still not as advanced as most people believe, and still has enormous room to expand even among the most 'connected' economies. The strength of GCI lies in many aspects, such as underscoring the tangible benefits of connectedness, fostering a more accurate understanding of actual level of connectedness, identifying headroom for growth, and providing input to policy-making and business strategies.

GCI measures connectedness in two dimensions. The first dimension is on depth, meaning the economic intensity of relations. It refers to the size of an economy's international flows as compared to a relevant measure of the size of its domestic economy. The second dimension is on breadth, meaning the geographical extensity of relations. It measures how closely an economy's distribution of international flows across its partner economies matches the global distribution of the same flows in the opposite direction.

Connectedness is manifested as cross-border flows of merchandise, capital, information and people. The four flows are composed of 12 components with different weights attached to each (table 2.1).

Table 2 DHL GCI composition

Flows	Component	Weight	
Trade flows (products and services)		**35%**	
	Merchandise Trade		75%
	Services Trade		25%
Capital flows (investment)		**35%**	
	Foreign Direct Investment (FDI) Stocks		25%
	Foreign Direct Investment (FDI) Flows		25%
	Portfolio Equity Stocks		25%
	Portfolio Equity Flows		25%
Information flows		**15%**	
	Internet Bandwidth		40%
	Telephone Call Minutes		40%
	Trade in Printed Publications		20%
People flows		**15%**	
	Migrants (foreign born population)		33%
	Tourist (departures and arrivals)		33%
	International Students		33%

Source: DHL, Global Connectedness Index 2012, 2011.

The data of GCI shows that the benefits of connectedness are accessible to a broad range of economies, and not only to small trading hubs that lead most other globalization indexes. The average global connectedness score generally increased between 2005 and 2010, with a sharp decline in 2008 and a slow recovery in 2009. In terms of breadth, the scores are much steadier than depth scores because of the slow evolution of geographic distribution of international flows. In terms of depth, the decline in 2008 and recovery in 2009 are quite evident, due to volatility of flow volumes.

In the depth dimension, three APEC economies are among the top 25 leading economies: Hong Kong, China; Singapore and Malaysia. In the breadth dimension, seven APEC economies are among the top 25 leading economies, with the United States and Japan among the top 10.

Some key insights can be drawn from the analysis:
- Increasing the depth of global connectedness can spur economic growth worth hundreds of billions of Euros.
- Structural and policy factors shape globalization.

- Europe is the most connected region thanks to the 'four freedom' (free movements of goods, services, capital and people) promoted by the European Union.
- Spread of knowledge, increased differentiation of available products and intensified competition are also some of the benefits from a high degree of connectedness.

Session 2.2 Measuring Efficiency: APEC Supply Chain Performance (by Shiumei Lin)

The presentation by UPS focused on the measurement of supply chain connectivity from an industrial perspective. As mentioned in a McKinsey report, streamlining the supply chain can unlock cash through a 20 to 50 percent reduction in working capital (primarily inventory) across the value chain, lower costs through a 15 to 40 percent reduction in supply chain-related expenses (e.g. inbound logistics, production costs, outbound warehousing and logistics), and increase revenue by 5 to 15 percent through better service levels and higher customer satisfaction.

UPS noted that the nature of modern supply chains is changing over the years. Instead of forecasting demand, nowadays the suppliers tend to respond to demand, and the supply chain visibility is becoming more actionable than static. Compared with previous competition on product and price, now more and more cases show that suppliers are competing on responsiveness; this requires collaborative decision making rather than the previous single silo decision making. Therefore, speed, visibility, control and cost are important factors for logistics, i.e. modern supply chains.

For a logistics company, there are three critical drivers: transport network efficiency, border clearance efficiency, and operational efficiency. Table 3 below shows chokepoints that hamper the different types of efficiency, and the corresponding indicators that are in place to track the performance.

Table 3 Chokepoints and performance indicators of logistics efficiency

Critical Drivers	Factors	Chokepoints	Performance Indicators
Transport Network Efficiency	Cost	-Air rights -Time slots -Space	-Time in transit -On-time departure -Network cost/kg
	Control	-Cross-border access -Cross-border transit -Safety -Security -Paperwork	-Time in transit -On-time departure -Checkpoint processing time
Border Clearance Efficiency	Speed	-Customs documentation (import) -Security and data reporting (export) -Regulatory agencies (import) -Inspections (import)	-On-time release -Man hours per non-doc -Warehouse holds -Regulatory exception frequencies
Operational Efficiency	Control	-Ownership restrictions (cost, quality control) -Transparency -Inter-agency coordination	-Operating leverage, affected by variable costs -End-to-end service reliability

Moving towards efficient supply chains, UPS recommended cooperation among APEC economies in four areas. First, on across the border transportation, UPS recommended an open skies arrangement to enhance route choices for airlines so that space utilization can

become more efficient; it also called for a cross-border land connectivity with mutual recognition of trucks, drivers, safety requirements, documents, and AEO programs. Second, on behind-the-border agencies, UPS highlighted the advantage of a single window for approvals from control agencies and the gains from liberalizing full scope of services including non-core logistics services. Third, regarding at-the-border issue, UPS confirmed the benefit of the de minimis approach that a USD 100 de minimis baseline for 21 APEC economies would bring in a net saving of USD 13.02 billion. Lastly, a whole-of-government coordination is needed to design and implement these policy recommendations.

Session 2.3 Assessing the Real Business Impact of Supply Chain Efficiency (by Ralph Carter)

Federal Express (FedEx) began its presentation by emphasizing the importance of trade facilitation. It noted that the 'hidden cost' of international trade is equivalent to an 18 percent tax on APEC trade, and a single day of delay will reduce trade by 1 to 4 percent. A study found that if APEC members with below-average LPI scores were to improve their performance half-way to the APEC average, then intra-APEC trade could increase by 21 percent and average per capita GDP could increase by 4.3 percent. FedEx stressed that the global supply chains depend on fast and reliable transport services, and a simpler, more transparent customs procedures would help the SMEs.

Real business examples were given to demonstrate the role of trade facilitation in moving goods across borders. The first example was on healthcare. The global healthcare industry has grown to USD 1 trillion and is still growing. New technologies and services are the main driver of new transportation requirements such as time and temperature for bio-medicines and other drugs. For example, blood and tissue samples cannot be retained in customs for several days. Facilitating the movements of these new goods across borders will thus drive economic growth and improve public health.

The second example given was on cross border e-commerce. Global e-commerce market is estimated to be at the level of USD 1 trillion. A forecast research shows that online retail sales in Europe, Asia and Latin America will increase 67 percent from 2011 to 2015, which indicates a huge market potential. Therefore, there will be significant economic gains if cross-border e-commerce is made easier and more transparent.

The third example was on global production and rapid innovation. Globally disbursed manufacturing and rapid innovation increase the complexity of supply chains. Lower inventories and faster speed of transferring innovation to product markets have become the competitive advantages for firms, so many new business models depend on fast and efficient border systems. In this sense, more efficient customs services will not only mean an increased efficiency in collecting customs duties, but also in better strengthening the competitiveness of an economy.

FedEX noted that 30 to 40 percent value of global trade moves by air, and world air cargo traffic will triple over the next twenty years. Managing this growth will require efficient customs systems and capable personnel. The south-south trade has been growing at a high speed, and this poses challenges on the customs administrations.

Based on the data, FedEX made suggestions about customs efficiency. The first suggestion was for customs to adapt to the speed of the modern economy. Modern supply chains operate

24/7, but most customs operate from 9am to 5pm. Adapting customs procedures and resources to match the speed of modern business will thus improve supply chain performance. There are successful public-private partnership models about sharing the administrative costs of a round-the-clock operation as well as on dedicated clearance procedures for express shipments. FedEX suggested that the APEC Sub-Committee on Customs Procedures holds seminars to discuss about ways to improve express cargo clearance procedures.

The second suggestion was related with the tracking and analysis of customs hold data for air cargo. Every day, thousands of air cargo shipments are held up in customs; thus tracking and analyzing government and private sector customs hold data will help both customs and shippers to improve their performance. FedEX proposed several parameters such as the percentage of shipments hold, duration of hold, and reasons for hold. As such, an APEC public-private seminar to discuss methodologies and metrics for measuring customs hold data was also suggested.

At the end of the presentation, FedEX mentioned about the de minimis study that was done specifically for APEC. An example was given on a 5 percent tariff on a USD 100 import. In this case, the tariff revenue was USD 5, but the time and resources that the shipper and the government spent to classify the item, fill in the forms, submit the forms and pay the duty, far exceeded the USD 5 duty. There are thus net benefits for economies to raise the de minimis level, because it will improve the flow of goods and allow the customs to better utilize their resources for other uses.

Session 2.4 Business Perspective of Supply Chain Efficiency (by Gerhard Roux)

The last presentation by Dairy Farm was from the perspective of the retailer industry, and focused on the consumer goods supply chain in Asia. The consumer goods supply chain has four basic components: supplier, distribution center, store and consumer. Supply chain technologies have been applied in the process through the years, but Asia has been slow in adopting these technologies especially for border management. It is recognized that managing the systems in a manual way is becoming less and less feasible, but still some good supply chain management technologies have yet to be adopted.

Inefficiencies exist on both the sides of the supplier and retailer, which increase the end-to-end cost of products. These inefficiencies include shrinkage, stockholding, truck turnaround time, packaging materials, etc. Analysis shows that it is impossible for either the supplier or retailer to eliminate the inefficiencies alone, so collaboration is highly necessary. From a retailer's perspective, another hot topic is about direct sourcing. This is because direct sourcing can save up to 30 percent on landed cost compared to indirect sourcing as margins are imposed on each step along the supply chain when goods are sourced indirectly.

There are five big concerns on managing the supply chain in Asia, namely wastage in the supply chain, bad location and design of distribution center, improper distribution practices, transportation inefficiency, and low quality data management. These concerns are elaborated below.

- On wastage in the supply chain, fresh products and cartons are wasted everyday in Asia, which is a huge cost when comparing the different cost components. This can be

addressed at the industry level or economy level, by introducing standard materials and retainable containers.

- On the bad location and design of distribution centers, Dairy Farm noted that sometimes the location of distribution centers does not factor in nodes, transportation cost, and non-duplication with suppliers, and the design usually does not meet scientific standards (e.g. height, number of windows, etc), which in turn makes it difficult to utilize space and run the materials at an optimum level.
- Regarding improper distribution practices, it is currently still used more for recording rather than for management purposes. Volumes are not stable across time and only proper distribution practices can help to smooth the operations.
- Due to misalignment of volume growth and infrastructure, transport inefficiency also incurs a hidden cost on supply chain. Improved truck turnaround time can result in substantial cost savings for the companies.
- Low quality data system and management as well as improper maintenance of these systems do not help in cost reduction efforts.

SESSION III: POLICY AND QUALITATIVE PERSPECTIVES FOR MEASURING APEC SCFAP PROGRESS

There are qualitative and quantitative aspects in assessing the progress of SCFAP implementation. Many indicators constructed by international organizations could help in capturing the quantitative aspect of progress, but in qualitative terms, discussions and sharing of experiences will still be required in order to provide a comprehensive and holistic assessment. The four speakers in session III shared their experiences on measuring supply chain performance in qualitative terms as well as on the methods used to combine both qualitative and quantitative measurements.

Session 3.1 Combining Quantitative and Qualitative Assessments to Measure Progress (by Ruth Banomyong)

This presentation covered the experiences of Thailand and the region on measuring and managing supply chains. The presentation was structured into two parts: logistics performance assessment and supply chain performance assessment.

It was mentioned that one of the biggest problems in assessing the logistics or supply chain is regarding the unit of measurement and how it can be measured. Traditionally, logistics or supply chain was a firm level concept, but has over time expanded to the economy level, regional level, as well as global level, thus increasing the difficulty of measuring performance.

The conceptual framework on logistics performance assessment developed by Professor Banomyong has three dimensions (cost, time, and reliability), and nine logistics activities (order processing and logistics communication, customer service and support, demand forecasting and planning, purchasing and procurement, material handling and packaging, inventory management, transportation, facilities site selection, warehousing and storage, return goods handling and reverse logistics). This results in a total of 27 Key Performance Indicators (KPIs). However, not all KPIs are of equal importance. They could be streamlined to nine core KPIs to reflect the overall logistics performance (table 4). For example, the three KPIs on costs can capture about 90 percent of the total logistics costs.

Table 4 Nine core KPIs on overall logistics performance

Cost	Time	Reliability
Transport	Order cycle time	Delivery in full & on time
Warehouse	Delivery cycle time	Forecast accuracy
Inventory	Inventory days	Return rate

Around 200 enterprises were surveyed in Thailand based on the industry standards and international classification code. Among the pilot industries were food, textile, electronics and electrical, automotive, and plastics. The data for the nine KPIs were collected and composed into an aggregate index, and this aggregate index is then compared with the World Bank LPI. In some instances, the scores are quite close, as in the case for 'timeliness'. In other instances, the scores do not go together, such as in the case for customs, infrastructure, and international shipment indicators. The LPI 2010 gave Thailand a score of 3.29, while the 200 Thai companies gave a perceptual score of 3.45, and the composite index based on the nine KPIs provides a score of 3.07. The differences are due to the different levels of understanding of the respondents about the Thailand context.

On supply chain performance assessment, a famous quote goes, 'A supply chain is only as strong as the weakest link'. Supply chain performance in general covers infrastructure perspective, institutional perspective, etc. Professor Banomyong developed a model to capture the supply chain performance which includes the time or cost dimension and the distance dimension. He examined the connectivity between Bangkok to Yunnan Province in China through different routes, and found an inverse relationship between the money paid at the border and the time it takes to cross the border; i.e. the more money that is paid at the border, the shorter the time the goods will stay there.

In conclusion, the presentation demonstrated that performance can be measured in either a quantitative or qualitative manner, and combining both approaches can provide a holistic assessment of the supply chain performance. The cost/time model can be further enhanced with a qualitative assessment of the various supply chain corridors in their perception of reliability.

Session 3.2 Inventory Approach to Improve Supply Chain Connectivity (by Hamid Alavi)

The World Bank is conducting a study on improving supply chain connectivity within APEC economies through the use of an inventory, or list of agreed policies/procedures/actions to be considered by member economies. One key point of the inventory approach is that it can be traced over time. The primary deliverables in this proposal are 1) the development of a supply-chain connectivity checklist or inventory to address the lack of awareness of regulatory issues affecting logistics in the APEC region, and 2) two diagnostics reports that identify variances between economies' current policies and what is suggested in the inventory. These deliverables will help to narrow the gaps in chokepoint 1 of the SCFAP. The inventory will be supplemented by capacity building efforts and new data work to support APEC's ongoing trade facilitation efforts.

The project is devised to achieve four goals. It will contribute to APEC's work to improve supply-chain connectivity in the region, build up research regarding the potential gains to economies from addressing supply–chain productivity issues, develop a practical tool to

track/monitor and develop policy consensus around trade facilitation and necessary reform, and act as a model to strategize on how to address other chokepoints in the SCFAP through a more specific and quantifiable set of actions.

The supply chain inventory will include the existing elements from the SCFAP for chokepoint 1 under the three areas, i.e. advance rulings, sharing best practices for national logistics associations, and improving economies' understanding of how various policies affect supply chains. In addition, new elements based on the goal of improving transparency, awareness and coordination of policies related to the cross-border movement of goods affecting the logistics sector identified for chokepoint 1 will be included in the checklist.

Five key themes that will be targeted or included in the inventory/checklist are: (a) coordination of policies (b) stakeholder engagement; (c) publications and communication; (d) anti-corruption and (e) business certainty.

The expected outcomes of the inventory approach are for APEC economies to consider the inventory or checklist with highlights on effective reforms to enhance supply chain productivity; the inventory will also serve as a useful tool to coordinate reform policy and benchmark progress; the inventory approach also functions as a blueprint for other chokepoints, and the study would contribute to the APEC-wide target of a 10 percent improvement by 2015 in supply chain performance.

The presentation also covered some previous studies of the World Bank on trade facilitation and some interesting findings. The study titled "Transparency and Trade Facilitation in Asia-Pacific: Estimating the Gains from Reform" used the counterfactual simulations from a standard gravity model of international trade, and suggested that the potential intra-regional trade gains from improved transparency were substantial compared with alternative policies: approximately USD 148 billion or 7.5 percent of baseline (2004) trade; and assuming non-discriminatory implementation of policy reforms, the overall gains will be larger once extra-regional trade is taken into account.

The study on the assessment of the impact of foreign aid on trade facilitation indicated that aid spent on promoting trade is positively associated with global trade. Based on elasticities estimated over 16 years of trade and aid data for 40 donor countries and about 170 country trading pairs, the results suggested that a 1 percent increase in aid-for-trade facilitation (of about USD 220 million in 2008) correlated to about USD 290 million of additional exports from the aid receiving countries. An additional aid of USD 1 for trade facilitation was associated with an additional export of USD 1.33. Other World Bank research in 2011 showed that reducing the time to export by one day could increase industrial exports by 3.38 percent, and agricultural exports by 4.51 percent.

Session 3.3 Measuring Supply Chain Performance (by Gary Dolman)

The APEC Transportation Working Group (TPTWG) reported the outcomes of the Focus Group on Supply Chain Connectivity and examined the utility of the agreed framework using the available data from Australian ports in this session.

On February 17 and 18 this year, the focus group on supply chain connectivity held a meeting (sponsored by Canada) to take inventory of supply chain performance measurements that are practiced in member economies. The meeting also helped to identify achievable performance

indicators common to members and prioritized indicators around the supply chain competitiveness, i.e. time, cost, and uncertainty.

In the focus group meeting, the participating economies agreed to the following set of guiding principles for performance indicators:

1. Utilize the corridor approach
2. Understand uncertainty as reliability
3. Phased implementation of container/air/bulk shipping
4. Prioritize operational indicators
5. Productivity built into indicators
6. Consider need for capacity building
7. Establish a data map early
8. Limit cost – focus on what is simple, doable and affordable

Based on these principles, the focus group meeting discussed the existing indicators within APEC economies on measuring the supply chain performance, and examined the practicability of these indicators.

Table 5 Potential supply chain performance indicators

	Ocean	Port	Customs	Landside
Time	-Transit time	- Crane rate -Vessel turnaround - Dwell time	-Documentation process (with/without inspection) -Dwell time with inspection - Border crossing time	-Rail or truck transit performance - Truck turnaround
Cost		- Cargo handling fees		- Rail/road freight rates - Value-added to logistics capabilities (3PL/FF) *
Uncertainty / Reliability			- Rate of inspection*	- Truck supply (age of fleet) - Accident rate (road/rail)

Among these indicators, crane rate, vessel turnaround, cargo handling fees, documentation process (with/without inspection), truck supply (age of fleet) and accident rate (road/rail) are considered achievable internal indicators, which means they can be implemented straightaway. Transit time, and dwell time are possible to achieve but may require significant effort. The rest of the indicators are considered as difficult and unlikely to be achieved within the available timeframe for all APEC economies; but for rate of inspection and value-added to logistics capabilities, the World Bank LPI data could be used as an alternative.

The second part of the presentation looked at Australia's supply chain management using the set of agreed indicators. For comparison purpose, the presenter started with the World Bank LPI. LPI measures the logistics performance from the customer perspective, which is based on a survey on logistics service providers and freight forwarders. Australia's LPI shows a mixed performance, although the overall LPI score confirmed a slight improvement.

Following the LPI, the list of potential supply chain performance indicators was discussed individually. First on crane rates, defined as the number of containers a crane at ports moves in one hour, Australia has an overall positive trend that continues post 2001. One interesting

observation is that the recent application of new technology, initially resulted in decreased productivity which improved once the technology had been fully implemented.

The second indicator is 'container handling costs'. In Australia, the cost has been declining in the long term across the five major ports and showed an improved performance. One observation here is that the container handling costs increased significantly for Melbourne during the period of 2006 to 2010; this is due to recouping the costs of channel deepening and other costs of providing new port infrastructure. As part of the monitoring process on customer and border protection process, the data on average time from arrival of goods at the border to clearance for pick-up by customer and the distribution of containers by status (released, ready to pay, impeded, and documents incomplete) at time of arrival were collected. According to Australian Customs Annual Time Release Study, in Australia, 53 percent of containers are cleared before they arrive at port, and the sea cargo status at arrival also showed a gradual progress from 2007 to 2010. The only indicator on the land side is the average truck turnaround times (minutes) from gate-in to gate-out at Australian ports. The result of this indicator pointed out some issues in this area: several larger ports saw the increase of turnaround time over the last five years, but smaller ports showed little change as their performance was already adequate.

These performance indicators complement the LPI. They enable timelier monitoring, identification of supply chain issues, and better understanding of anomalies. Australia's experience shows the value of monitoring. In some aspects, achieving a 10 percent improvement over five years is achievable, but it is harder to further improve once performance rises. The TPTWG proposed to include the six achievable indicators in the SCFAP Self-Assessment Survey as supplementary measures.

Session 3.4 Customs Trade Facilitation in APEC Region (by Mr. Alexey Dyshlyuk)

The Chair of the Sub-Committee on Customs Procedures (SCCP) presented the outcomes of the first SCCP meeting in Moscow, and the goals of the Federal Customs Service (FCS of Russia) for their participation in APEC activities, especially on trade facilitation.

At the first SCCP meeting, the members proposed for further development and implementation of Single Window System in the APEC economies, implementation of AEO in developing APEC economies, enhancement of the role of customs in trade recovery process, and further development of customs information technologies.

The primary goal of the FCS of Russia within APEC is through the unification of information systems of customs services in the Asia–Pacific region which will enable the customs services of APEC economies and of Russia to: (1) promote effectively further development of foreign trade in APEC region, especially the reduction of cost and duration of goods delivery, increase of safety of global trade and attractiveness of Russia for foreign investors; (2) Reveal areas of economic violations on the basis of risk management which entail non-receipt of customs duties and taxes to budget; (3) fully implement the potential of foreign trade regulation as a tool of facilitation or competitiveness of Russian procedures; (4) Maintain customs administration in the APEC region with the help of unification of information standards and technologies, set up close cooperation between customs administrations of APEC economies as well as between their business communities.

Moreover, for the establishment of Single Customs Information Space within APEC, the FCS Russia has offered to set up an exchange of information on contents of Register of IPR objects between customs administration and on IPR violations in foreign trade that are revealed by customs.

In addition, the FCS of Russia has drafted various regulations to facilitate trade, such as the new procedure of electronic declaration of goods and customs officials' actions in the case of electronic declaration.

SESSION IV: UPDATES ON SCFAP AND SELF-ASSESSMENT SURVEY

During session four, Friends of the Chair (FOTC) of CTI and the leading economies on the 8 chokepoints provided updates on the progress of SCFAP implementation, and discussed the self-assessment survey that was proposed by the APEC Policy Support Unit (PSU) to complement the internal and external indicators.

Session 4.1 Lessons learned and updates on SCFAP

Hong Kong, China- Friends of the Chair Lead

Hong Kong, China as the FOTC Lead highlighted that by 2013, most of the activities included under the SCFAP matrix will be completed. Economies would need to think of additional activities beyond 2013 to be included in order to achieve the 10 percent target by 2015.

With the assistance of PSU and through contributions from member economies, APEC has agreed on several mechanisms, such as the adoption of internal and external indicators as well as the adoption of a self-assessment questionnaire, to demonstrate the progress towards the 10% target. There is a solid progress in the implementation of the action plans to address the 8 chokepoints. On the basis of updates from leads of the chokepoints received, from the total of 33 action plans, 14 have been completed while 19 are in the pipeline. Of the 14, 10 will be completed this year; another 6 in 2013 and 3 will be actively pursued after 2013.

In 2011, the specific key activities in addressing various chokepoints are explained in the following part:

- For chokepoint 1, a trade policy dialogue on advanced rulings, increasing certainty and predictability in supply chain was held to help economies better understand the benefits of advanced rulings and to identify the steps to promote the use of advanced rulings.
- For chokepoint 2, a workshop on performance measurement of supply chain was held to determine the status of performance measurement of supply chain and the situation leading to the identification of bottlenecks for an optimization of interregional supply chain within APEC. Experiences of experts, from the OECD and World Bank, on their assessment and measurement tools on connectivity and logistic performances were also shared.
- For chokepoint 3, a project on enhancing the capacity of APEC local and regional logistics providers, comprising of a survey and a seminar were completed and held, respectively. Constraining issues faced were discussed and recommendations for further enhancement efforts were generated

- For chokepoint 4, the APEC pathfinder to enhance connectivity by establishing a Baseline De Minimis Value was endorsed to take forward the initiative of establishing commercially useful De Minimis Values. In addition, capacity programmes are to be developed with the goal of increasing the participation of economies in the pathfinder.
- For chokepoint 5, the APEC self-certification of origin capacity building programme was completed. Three economies self-certification workshops were held.
- For chokepoint 6, work is underway to implement the supply chain visibility initiative, to recommend a set of standards for member economies for the purpose of realization of the SCV.
- For chokepoint 7, a trade policy dialogue on trade benefits of submarine cable protection was held to raise awareness of the importance of international submarine telecommunication cables; and on the risks to trade in goods and services and international financial markets posed by submarine cable disruptions.
- Chokepoint 8, the development of a set of custom transit guidelines for APEC FTAs is in progress. The objective is to develop a common understanding for APEC customs administrations and trade operators about the most suitable way to regulate direct transition of goods with a view to trim preferential tariff treatments.

Most of the SCFAP projects will be completed by 2013 and there will not be much activities remaining towards 2015. In addition, the assessment using LPI methodology suggested that improvements made by APEC as a whole were not on target in achieving the 10% target by 2015. Suggestions are made to intensify efforts in the supply chain initiatives overall goals in the coming years. In order to sustain the momentum, Hong Kong appealed to members to come up with new projects for the SCFAP.

Australia—Action Plan for Chokepoints 2 and 7

As the leading economy for Action Plan 2 and Action Plan 7, Australia provided updates on both plans and highlighted several lessons. For Action Plan 2, APEC is still on track to deliver analytical work on efficient transport infrastructure. Studies on energy transport, environmental benefits, transit-oriented development, travel-time of goods' vehicles on economic corridors, and the contribution of road transport, manufacturing and household sectors are currently underway. Even though the Finance Ministers Process (FMP) dealt with the setting of Private-Public-Partnership (PPP) Implementation model two years ago, PPPs as a financing tool for transport or other infrastructural work has not attracted sufficient analytical attention. PPPs are potentially an important means of overcoming hard infrastructure deficiencies but their complexity requires collaboration within APEC streams, such as FMP, with APEC CTI.

For Action Plan 7, there was a mixed performance from the three different elements. On submarine telecommunications cable protection and repair, the initiative got off to a good start in San Francisco but next steps have proven to be difficult to coordinate. It was understood that telecommunications carriers and cable operators encountered problems with cable break downs and this was found to be a 'hidden' chokepoint. The PSU study on the economic and trade flow impacts of the submarine cable network will put the spotlight on this 'hidden' chokepoint. On the international mobile roaming capacity building exercise, even though there were problems with the initial launch, the project is still on track for implementation. The road safety measures project is a good practical exercise that is directly relevant to supply chain issues and have attracted a strong level of participation from developing economy members.

In terms of lessons learnt, it is questionable whether Action Plans 2 and 7 have addressed the supply chain connectivity chokepoints identified. It is important that the Supply Chain Connectivity Framework Action Plan (SCFAP) remains a living document as this allows new work to appear in response to perceived areas of need. Australia also mentioned some areas for future contemplation, such as the lack of development of a full mechanism that incorporates outcomes and lessons learnt from specific actions to parent Action Plan, long lead time from initial inclusion of specific actions on SCFAP to the commencement of work due to difficulties in virtual coordination and the problem of what to do with completed actions.

<u>The United States—Action Plan for Chokepoint 1</u>

The United States took stock of the SC actions of chokepoint 1, and as part of a new initiative designed to take a more systematic approach to addressing chokepoint 1, identified the five categories under the three objectives of chokepoint 1. The five categories identified are Coordination of Policies, Stakeholder Engagement, Publication, Anti-Corruption, and Business Certainty.

There are currently four actions that fall under chokepoint 1:
(a) APEC Guidelines for Advance Rulings is aimed at enhancing certainty and predictability in the trading environment. The ministers endorsed the set of APEC Guidelines in 2010 and a string of activities took place thereafter. The United States put together a general survey of economies with regard to advance rulings and held a trade policy dialogue to help identify capacity building needs in this area. From the trade policy dialogue, advance ruling was identified to be the most effective in lowering trade transaction cost and there should be a focus on expanding the use of advance rulings. The United States agrees with Australia that there should be follow-ups on completed activities.

(b) Compendium of Best Practices of National Logistics Associations (NLA) is to serve as a reference for economies to establish industry-based NLA. Several workshops were held over the last couple of years. Two were held in Melbourne and Bangkok, respectively, while a third will be held in Hanoi. The compendium of best practices serves as a reference for economies, e.g., Papau New Guinea, to establish industry-based NLA, which serves to improve the collaborative relationship between the government and the industry. Moving forward, the focus should be placed on building on the outcomes of the compendium of best practices for NLA.

(c) Improving the understanding of logistics services is to provide guidance on policy coordination and how policy decisions can affect various elements in supply chains. There has been no activity in the area of Improvement in the Understanding of Logistics Service.

(d) Initiative to advance the Action Plan for chokepoint 1 as a new, more systematic, approach to address the objectives of chokepoint 1 that builds on the existing actions. The first step is to develop a supply chain inventory for chokepoint 1 based on the objectives under chokepoint 1 of transparency, coordination, and awareness of policies and practices affecting the logistics sector. Based on these objectives, the five categories identified are Coordination of Policies, Stakeholder Engagement,

Publication, Anti-corruption and Business Certainty. These categories simplify the organization of policies and practices that fall under the objectives of chokepoint 1. The United States encouraged other lead economies to think about how the above mentioned approach can be expanded to other chokepoints. The second step is to work with the World Bank on the first of two diagnostic reports based on the supply chain inventory for chokepoint 1. Results of the first diagnostic report will be reported in 2013 at CTI 1 and it will be the basis of targeted capacity building to address chokepoint 1. The completion of the second diagnostic report at the end of 2014 will provide a platform for comparison between both reports to better understand the progresses made and for future directions to be taken.

In terms of lessons learnt, the United States built on the Australia's comments. For any activities under any chokepoint, it is important to establish clear objectives for these activities. In addition, adequate follow through is the key to making progress. And coordination is important.

China—Action Plan for Chokepoint 3

China presented the completed project under chokepoint 3: Enhancing the capacity of APEC Logistics Sub-Providers (2011) as well as the ongoing multi-year project, Enhancing Logistics Performance through Training and Networking for APEC Local/Regional Logistics Sub-providers (2012-2014).

The objective of the project on APEC logistics sub-providers is to improve the understanding on the current situation of local logistics, explore ways to enhance competitiveness of sub-providers in the region, and examine ways to help raise the quality of APEC economies' logistics services and management affecting the business environment in the logistics sector. The report provides a basic understanding of the logistics situation of local/regional logistics sub-providers in the APEC region, and summarizes the key growth issues that these SMEs are facing. The study also reflects the evolving focus of APEC initiatives from resolving border issues to investigating and resolving behind-the-border issues to trade.

The project can be summarized into three main activities: survey, seminar and study. The survey attempted to conduct a situational review of SME LSP while the seminar aimed to seek inputs of stakeholders in the above mentioned area. The study report was based on the outcomes of the survey and the seminar, and provided recommendations for future directions.

The coverage of the study is quite comprehensive, as shown in table 6.

Table 6 Coverage of the study

Logistics service providers	Logistics services	Barriers covered	Custom services covered
-Trucking shipping -Storage and warehousing -IM/EX processing/customers broker -Freight forwarder, representative -3rd party service provider -Internet based logistics	-Bonded logistics services -3rd party logistics -Integrated services -Logistics web-based services -Port services -Dock services	-Different business environment in various APEC economies -Different import/export processing requirements in various APEC economies -Lack of international logistics standard in APEC economies -Difficult to set up the integrated services partner chain cross	-Reduce logistics cost -Reduce order to delivery times -Reduce transit time -Better IT solution to your clients -Provide fully integrated services -Improve response

service platform	-Customs	borders	times on orders
-Integrated logistics services	declaration	-Too costly to set up branches in	-Better tracking in all
-Extra port warehouses	services	other APEC economies	steps of the logistics
-Counselling & consulting	-freight	-Inefficiency of government	process
-Infrastructure & equipment	forwarding	agencies at the border	-More standardized
-Movement & control of	services	-Lack of bonded logistics	management of
materials	-city-wide goods	services or facilities locally	logistics
-Freight security	distribution	-Monopoly by the large or	
-Transshipments	-warehousing	multinational logistics	
	services	companies	

Source: China Federation of Logistics and Purchasing, Enhancing the Capacity of Local/Regional Logistics Sub-provider, 2012

Based on the results, the study proposed two activities to address chokepoint 3: awareness building and enhancement of SMEs Logistics Service Provider (LSP) capacity for adaption of technology and best practices (2012-2013); and the establishment of the International Logistics Support (ILS) Pilot Network (2012-2014).

Due to the changing nature of the globalised supply chain, the logistics service needs constantly change. In order for LSP to be equipped with adaptation ability, the capability building will be mainly focused on the various international business models, advance logistics technology and modern supply chain practices. As it will be complicated to train all SME LSP, China will take on the 'train the trainers' approach, where mainly the logistics associations in each economy will be trained. China will also develop the International Logistics Support Pilot Network. It was found from the study that one of the constraints that SME LSP faced is the lack of knowledge about the existence of resources on logistics.

As most economies do not have sufficient resources to engage in the educative process, the International Logistics Support (ILS) Pilot Network will act as a central hub, to bridge the gap between SME LSP and the available resources on logistics. The central hub will be a one-stop shop, which consists of different nodes. These nodes can be hyperlinks from all the different APEC economies, APEC logistics websites and custom-related websites created by SCCP. The ILS Network will seek to provide information on advance logistics technology and modern supply chain practices to LSP.

China is currently translating their existing logistics websites into English to contribute to the development to the central hub. The pilot program will choose five to six interested participating economies and integrate their existing resources into the central hub. Based on the results from the pilot program, China will decide on how to develop an APEC-wide integration process.

Session 4.2 Proposed draft framework and questionnaire for APEC SCFAP Self-assessment Survey

In this session, PSU presented the general methodology for the mid-term assessment, with an emphasis on the questionnaire for the self-assessment survey.

PSU has developed a three-track approach on performance assessment for the consideration of member economies. The approach combines internal indicators, a self-assessment survey, and external indicators from publicly available international sources. One key feature is that it is based on multi-criteria indicators, quantitative outcome indicators and qualitative input

indicators to enable a holistic assessment. It will be an evaluation of APEC's progress as a whole and engage members in the process.

The overall objective of the SCFAP/SCI is to reduce trading time, cost and uncertainty. Some internal and external indicators are identified to capture these elements; however due to the inter-linkages among them, the assessment is far less straightforward. A self-assessment survey is designed to collect economies' views on the impact of SCI activities and projects on policy change and on improvement in supply chain performance. It will gather policy recommendations in improving the remaining actions under the Action Plan and to link internal indicators with external indicators.

Regarding the respondents of the self-assessment survey, it is proposed that the CTI representatives from each member economy as well as the chair/convener of the nine coordinating/involved sub-fora be the primary respondents of the survey. Through the survey, the PSU will gather evidences of performance stories and case studies, rate the level of success for completed SCI projects in terms of effectiveness, efficiency and outcomes/impacts (on skills, knowledge, policy, time, costs, and uncertainty criteria), identify best practices and lessons learnt, and collect feedback on how to improve the SCFAP implementation.

CONCLUSION OF THE SYMPOSIUM

The Symposium ended with a conclusion from the CTI chair on the work that will need to be done in order to move forward. APEC member economies would provide comments on the draft of the self-assessment survey inter-sessionally with a view of finalizing it for endorsement at CTI 3 (2012) in Kazan, Russia. The survey is due to commence from CTI 3 (2012) onwards.

ANNEX: PROGRAM FOR THE SYMPOSIUM

DAY ONE: 31 March 2012, Saturday
09.00 – 09.20 Registration (20 minutes)

09.20 – 09.50 **Introduction and Overview**
 	
   • **Welcome speech** (20 minutes)
     Monica Rosales, CTI Chair
   • **Overview of the day's proceedings** (10 minutes)
     Moderator

09.50 – 10.10 Coffee break (20 minutes)

10.10 – 11.40 **Session One: International Organization Perspectives – Tools for Assessing Supply Chain Performance and Progress**
 	
   • **Using LPI to measure supply chain performance** (20 minutes)
     Ben Shepherd, Co-Author
     Logistics Performance Index 2012
   • **Supply-chain connectivity and trade facilitation** (20 minutes)
     Yann Duval, Acting Chief
     Trade Facilitation Section, Trade and Investment Section, UNESCAP
   • **Connectivity in ASEAN: progress and challenges** (20 minutes)
     Ponciano S. Intal Jr., Senior Researcher
     Economic Research Institute for ASEAN and East Asia
 	
     Q&A (30 minutes)

11.40 – 13.40 Lunch

13.40 – 14.50 **Session Two: Business Perspectives on Measuring Supply Chain Performance and Progress**
 	
   • **DHL Global Connectedness Index (GCI)** (20 minutes)
     Tom Wheelwright, Head of Public Policy
     Asian Pacific & EEMEA Deutsche Post DHL
   • **Measuring efficiency: APEC supply chain performance** (20 minutes)
     Shiumei Lin, Director
     Public Affairs, UPS Asia Pacific
 	
     Q&A (30 minutes)

14.50 – 15.10 Coffee Break (20 minutes)

15.10 – 16.20 **Session Two: Business Perspectives on Measuring Supply Chain Performance and Progress (continued)**
 	
   • **Assessing the real business impact of supply chain efficiency** (20 minutes)
     Ralph Carter, Managing Director
     Legal, Trade & International Affairs, FedEx Express
   • **Business perspective of supply chain efficiency** (20 minutes)
     Gerhard Roux, Group Chief Information Officer/Supply Chain Director
     The Dairy Farm Group (HKC)
     Q&A (30 minutes)

16.20 – 16.30 **Summary and wrap up of day one** (10 minutes)
    Moderator

DAY TWO: 1 April 2012, Sunday

09.00 – 09.05 **Overview of the day's proceedings** (5 minutes)
    Moderator

09.05 – 10.45 **Session Three: Policy and Qualitative Perspectives for Measuring APEC SCFAP Progress**

- **Combining quantitative and qualitative assessment to measure progress** (20 minutes)
  Ruth Banomyong, Associate Professor | Director
  Centre for Logistics Research, Thammasat University
- **An inventory approach to improve supply chain connectivity** (20 minutes)
  Hamid Alavi, Regional Trade Coordinator
  East Asia & Pacific Region, World Bank
- **Measuring supply chain performance** (20 minutes)
  Gary Dolman, Head of Bureau (representing APEC TPTWG)
  Dept of Infrastructure and Transport, Australia
- **Customs trade facilitation in APEC region** (20 minutes)
  Alexey A. Dyshlyuk, Russian Expert | APEC SCCP Convenor
  Customs Cooperation Department, FCS Russia

  Q&A (20 minutes)

10.45 – 11.00 Coffee break (15 minutes)

11.00 – 12.40 **Session Four: Updates on SCFAP and Self-assessment Survey**

- **Lessons learned and updates on SCFAP**
  Hong Kong, China (FOTC); Australia and United States (leading Economies) (each 10 minutes)

  Wang Hui, Director
  China Federation of Logistics and Purchasing, Zhongwulian Logistics Planning Academy (to present on China's updates on chokepoint 3: "*Enhancing the Capacity of Local/Regional Logistics Sub-provider*") (15 minutes)

- **Proposed draft framework and questionnaire for APEC SCFAP Self-assessment Survey** (15 minutes)
  Akhmad Bayhaqi, Senior Analyst
  APEC Policy Support Unit

  Q&A (40 minutes)

12.40 – 13.00 **Conclusion and Next Steps**

- **Summary and wrap up of day two** (10 minutes)
  Moderator
- **Discussion on next steps** (10 minutes)
  Monica Rosales, CTI Chair