



**Asia-Pacific
Economic Cooperation**

2015/SOM2/PPSTI/008

Agenda Item: 10

PPSTI Annual Work Plan for 2015

Purpose: Consideration
Submitted by: Chair



APEC
PHILIPPINES
2 0 1 5

**5th Policy Partnership on Science, Technology
and Innovation Meeting
Boracay, Philippines
16-18 May 2015**

Working Groups and SOM Taskforces Draft Work Plan Template

Proposed Work Plan for 2015

Fora: Policy Partnership on Science, Technology and Innovation (PPSTI)

The PPSTI's strategic aim is to enhance economic growth, as well as social progress, in harmony with sustainability, through the development of an enabling environment for market-based innovation policy in support of commercialization, the promotion of innovation capacity, and the facilitation of science, technology and innovation cooperation among member economies, which is closely related with the Leaders/Ministers/SOM/SCE Priorities and Decisions of recent APEC meetings.

In 2014, the STI cooperation promoted by PPSTI has obtained rich cooperation achievements. The Innovation Initiative endorsed by PPSTI—*Towards Innovation-driven Development* has gained close attention and endorsement by APEC leaders, which was also emphasized in the 2014 APEC Leaders' Declaration asking PPSTI to continue “to foster a pragmatic, efficient and vigorous partnership on science, technology and innovation (STI)”, “to strengthen collaboration amongst government, academia, and private sector stakeholders to build science capacity, to promote an enabling environment for innovation and including by establishing training centers for the commercialization of research, and to enhance regional science and technology connectivity, with respect for intellectual property rights and trade secrets.” PPSTI will actively promote and carry out relevant work according to APEC leaders' instructions.

Furthermore, as APEC Tasking Statement (for 2015) has proposed several requirements for PPSTI in S&T, SMEs, Women, Emergency Preparedness, also considering the theme and priorities of APEC 2015, PPSTI will set “*Science, Technology and Innovation for Inclusive Growth*” as its annual theme for 2015. Based on existing cooperation, PPSTI will especially encourage and support S&T industry, including SMEs through multiple channels and platforms to participate in the APEC STI cooperation on various levels and in different fields, which will give full play to the strong points of collaboration between government and academia and realize the goal of Asia-pacific inclusive growth through joint efforts. PPSTI will also conduct its work through three Subgroups: Subgroup A on Building Science Capacity, Subgroup B on

Promoting Enabling Environment for Innovation, Subgroup C on Enhancing Regional Science and Technology Connectivity. All the Subgroups' programs and projects would work to highlight this annual theme.

1. Proposed Work Plan for 2015 in Response to Leaders/Ministers/SOM/SCE Priorities and Decisions, and to ABAC recommendations

1.1 Overall Plan

First, in order to best implement Leaders/Ministers/SOM/SCE Priorities and Decisions, PPSTI will enhance its self-building. PPSTI will further enhance its overall planning and arrangement, including improving its operation, finalizing the Strategic Plan, organizing the APEC Innovation Policy Sharing Seminar, clearing and implementing 2015 PPSTI cooperation theme and priorities.

1.1.1 Improvement of PPSTI Operation

Considering the change of managerial portfolio by the end of 2014 and in 2015, to guarantee the working progress, PPSTI will continue to complete its working mechanism, mainly including

- 1) To clarify the governing board composition and working responsibilities (i.e., clearly divide the relevant work including drafting the annual work plan, assessment and implementation of PPSTI strategic plan, organization of two PPSTI annual meetings, preparing agenda and minutes etc.)
- 2) To decide on candidacy of the chair and vice-chair for each PPSTI subgroup, clarifying the chair and vice-chair's responsibilities and their working procedures.
- 3) To improve the working relation between PPSTI and ABAC
- 4) To increasingly focus on the coherence and integrity of PPSTI's achievements during 2015 (i.e., planning in a more integrated manner with other international groups and fora, working step by step to regularize the annual theme and priorities to be set by the governing board, unfolding the subgroups' works based on the annual theme and priorities, regularizing the annual theme and priorities and thus assisting PPSTI in clarifying its core and aligning with its Strategic Plan).

1.1.2 Progress on developing/implementing the strategic plan

In order to finalize and implement the PPSTI strategic plan, PPSTI will formulate a new version on the basis of the current draft and take APEC Secretariat's Discussion Points into consideration. PPSTI members will discuss and finalize the strategic plan and set it as the guiding document for PPSTI future actions.

Moreover, PPSTI will conduct comprehensive assessment and review of all the activities since 2013 to summarize experiences and make recommendations to enhance effectiveness of activities to better realize the strategic plan.

The proposed 2015 activities/projects' action items, specific process and their outcomes are congruent with the strategic plan. They allow converting the vision and goals in the strategic plan into concrete and influential activities. In the future, each year's theme and priorities of PPSTI will be in accordance with the strategic plan. PPSTI would take the strategic plan as its assessment criteria in the selection of 2015 PPSTI activities.

1.1.3 To hold the APEC PPSTI Innovation Policy Sharing Seminar (to be further discussed with all members)

In 2015, as instructed by the leaders' declaration, PPSTI will hold the APEC PPSTI Innovation Policy Sharing Seminar to be attended by government, academia and S&T industry, including SMEs. Experts from APEC member economies will discuss existing S&T innovation strategies, plans, programs and their effective implementation. All economies will start a dialogue about their own S&T innovation policy development and challenges during the seminar.

This program coincides with APEC's goals by enhancing the policy dialogue and information sharing on research, technology and innovation, so as to enhance regional connectivity on S&T policy resources. The program will also encourage the development of member economies' innovation capacity through seeking common approaches to promote innovation, R&D, and technology dissemination and commercialization.

Finally, PPSTI will build on the seminar's outcomes to help formulate policy recommendations and inform APEC leaders on potential S&T development and reform. The seminar will try to improve the ability of the PPSTI to provide policy advice and initiating relevant projects beyond specific technical fields of cooperation. It will also try to complete APEC's STI cooperation consulting report which would hopefully become part of leaders or ministers' meeting papers.

1.1.4 To clarify and implement PPSTI theme and priorities for 2015

In 2015, PPSTI will set its annual theme to **"Science, Technology and Innovation for Inclusive Growth"**.

Based on the theme, the annual priorities will include the following (to be confirmed after subgroup discussion):

- 1) To enhance STI policy dialogues;
- 2) To encourage SMEs to participate in their own economies' drafting and implementation of STI strategy,
- 3) To cultivate STI talent,
- 4) To best leverage STI's role in promoting Asia-pacific region to share the development dividend,
- 5) To build an enabling environment for SMEs to adopt STI and invest in R&D.

1.1.5 To cooperate with consultants assigned by SCE to complete the independent assessment of PPSTI

1.2 Proposed Work Plan of three PPSTI's subgroups for 2015 work plan is listed below:

1.2.1 Subgroup A : Building Science Capacity

PPSTI will support opportunities for cooperation among APEC member economies in order to promote STI capacity building, including Human Capacity, Science Integrity, and its related activities on Science Awareness and Technological Cooperation.

GOALS/ OBJECTIVES	ACTION ITEMS/SPECIFIC PROCESSES/ACTIVITIES	RELEVANCE WITH LEADERS/MINISTERS/SOM/SCE PRIORITIES AND DECISIONS AND TO ABAC	TIME FRAME	ORGANIZING/ COOPERATING PARTY	FUNDING TYPES
Enhance Human Capacity	APEC Research & Technology (ART) 2015 Program One of three formal policy dialogue mechanism as listed in the PPSTI TOR. Hold workshop to discuss STI	Aligned with APEC 2015 Priority, “Investing in Human Capital Development”	March 9-13, 2015	Republic of Korea/STEPI	Self-Funded

	policy issues and feed the results into the PPSTI policy discussion.				
	<p>APEC S&T Mentoring Center for the Gifted in Science</p> <p>1. Operating On-off line Education Activities for perspective human resources in the field of Science & Technology</p> <ul style="list-style-type: none"> • Mainly for Senior High School Students and Undergraduate students • Supporting Cross Mentoring Research Activities (on-line activity) • Publication of APEC Youth Scientist Journal • Hosting APEC Future Scientist Conference (off-line activity) <p>2. Outcome Sharing and International Cooperation</p> <ul style="list-style-type: none"> • Reporting project progress at APEC PPSTI meetings as an 	<p>1. Ministers' ECHOTECH Priorities; Cooperation with ASEAN</p> <ul style="list-style-type: none"> • APEC Future Scientist Conference attracts gifted students and teachers in science & technology field, who will engaged in sharing their various experience and knowledge. • Main participating countries of the APEC Future Scientist Conference are ASEAN nations such as Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam. • It will be a role as an education mediator between developed APEC economies and ASEAN nations <p>2. OSAKA Action Agenda: Part II</p> <ul style="list-style-type: none"> • Strengthening APEC Cooperation in Key technologies • Connect research and innovation 	August 1, 2014-July 31, 2015	Republic of Korea; (APEC S&T Mentoring Center for the Gifted in Science)	Self-Funded

	<p>on-going project</p> <ul style="list-style-type: none"> • Preparing joint cooperation among other international organizations such as ASEAN, UNESCO and UN • Introducing AMGS Program at various international conferences and activities • Working with major counterparts such as NTU (Chinese Taipei), NSM THAILAND(Thailand), BPPT (Indonesia) <p>3. Taking the role as a hub for the prospective human resources in field of S&T Field</p> <ul style="list-style-type: none"> • Operating a pool among Mentors and Mentees • Network Building among educational institutes for positive cooperation • Acting as an official channel to invite prosperous human 	<p>across APEC economies</p> <ul style="list-style-type: none"> • Building human capacity for S&T for new economy <p>3. FIFTEENTH APEC Economic LEADERS' MEETING</p> <ul style="list-style-type: none"> • Strengthening APEC: • “We particularly recognized the benefits that have flowed from sharing experiences among our diverse economies and the provision of economic and technical assistance to assist in the implementation of APEC commitments.” <p>4. 2007 APEC Senior Officials Report on Economic and Technical Cooperation</p> <ul style="list-style-type: none"> • Promoting the development of knowledge-based economies. <p>5. APEC Agenda for Science and Technology Industry Cooperation into 21st Century</p> <ul style="list-style-type: none"> • Improved human resource development: 			
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	resources to Korea	<ul style="list-style-type: none"> • Needed solutions for enhancing prospective students into science and technology fields • APEC cyber education system and on-site camp for GiS being suggested <p>6. 4th APEC S&T Ministers Meeting (Christchurch N.Z., March 2004)</p> <ul style="list-style-type: none"> • ‘Human being is economy’ was a topic for invited lecture. The lecturer emphasized on science education for prospective students for strengthening APEC future economy. • Increasing concerns on cooperation for building APEC network for the gifted in science. 			
	Training and nurturing young scientists (theoretical physicists) in the Asia Pacific area	<p>1. The commitment made by Leaders at the 2013 and 2014 Leaders Meetings</p> <ul style="list-style-type: none"> •To strengthen comprehensive connectivity and infrastructure development <p>2. The APEC Connectivity Blueprint</p>	2015 (This project is an extension of the existing program run by the APCTP so there is no certain set time-frame)	Republic of Korea / APCTP	Self-Funded

		<p>for 2015-2025</p> <ul style="list-style-type: none"> •To establish long term collaborative links between the next generation of research leaders in APEC economies to benefit their research communities <p>3. The Human Resources Development Ministerial Meeting and the Action Plan (2015-2018) on Quality Employment and Strengthening People-to-People Connectivity through Human Resources Development</p> <ul style="list-style-type: none"> •To support capacity building of young promising researchers 			
	APEC Green Video Festival	The project focuses on the joint efforts between academic community and private sector; the festival can be regarded as a model to close the gap between academic research and marketable application.	Dec. 2014~Dec. 2015	Chinese Taipei	Proposal (To be confirmed by Chinese Taipei)
	High Level Policy Dialogue on Science and Technology in Higher Education(HLPD-STHE)	To be completed by the Philippines		the Philippines	Self-Funded To be completed by the

	APEC Young Scientist Workshop on Effective Science Communication in the 21st Century	To be completed by Malaysia	Feb, 2015	Malaysia	Philippines APEC Funded
Improve Science and Technology Capacity	APEC Cooperation for Earthquake Simulation(ACES) (http://www.aces.org.au/) ACES is a multi-lateral grand challenge science research cooperation of APEC (the Asia Pacific Economic Cooperation). ACES aims to develop realistic supercomputer simulation models for the complete earthquake and tsunami generation process, thus providing a "virtual laboratory" to probe earthquake and tsunami behavior. This capability will provide a powerful means to study the earthquake cycle and offer a new opportunity to gain an understanding of the earthquake nucleation process	ACES coincides with the 2013 and 2012 APEC Economic Leaders' Meeting and APEC Ministerial Meeting to combat, mitigate, and prevent natural disasters through cooperation by sharing information and technologies, enhancing alarming network. ACES makes full use of the research achievements and data by earthquake experts in Asia-pacific region. ACES works to improve earthquake and tsunami hazard forecasting, and to develop earthquake and tsunami early warning alarm mechanisms, so that these destructive natural disasters can be prevented to the maximum extent possible.	2015	Australia, China Japan, USA, and APRU	Self-Funded

	and precursory phenomena. ACES has been meeting at venues around the Pacific Rim since 1999, and has sponsored numerous symposia reporting research on earthquakes and tsunami science, as well as a variety of other natural hazards.				
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1.2.2 Promoting Enabling Environment for Innovation

PPSTI will support opportunities for cooperation among the APEC member economies in order to seek solutions for financing issues, to promote tax policy, incentives, intellectual property protection, innovation ecosystem, entrepreneurial education, and science park development.

GOALS/ OBJECTIVES	ACTION ITEMS/SPECIFIC PROCESSES/ACTIVITIES	RELEVANCE WITH LEADERS/MINISTERS/SOM/SCE PRIORITIES AND DECISIONS AND TO ABAC	TIME FRAME	ORGANIZING/ COOPERATING PARTY	FUNDING TYPES
Accelerate Commercialization of Science and Technology	<p>An Exhibition and STI Policy Workshop on Intelligent Transportation (Internet of Vehicles--IoV) Standardization in the Asia-Pacific Region</p> <p>1. Based on “APEC Internet of Vehicles White Paper” published in 2014, the new</p>	<p>The 2014 and 2013 APEC LD and JMS have highlighted the crucial role of quality transport, electric vehicle standards and new automotive technologies, which are essential for the promotion of building inclusive economic growth, and building a better world in the APEC region. This program demonstrates the</p>	2015	China	(Proposal; requesting APEC funding)

	<p>concern becomes regional standard integration of IoV technology;</p> <p>2. As well as the 5th PPSTI, to organize a workshop in finding how “Inclusive Economies” may benefit from STI policies. This workshop will promote IoV standardization;</p> <p>3. In 2016, to hold an exhibition and demonstrate Intelligent Transportation under an acceptable standard.</p>	<p>necessity of multi-stakeholder collaborations and build sustainable and resilient communities in the Asia-Pacific region. The program could greatly raise public awareness to the intelligent transportation which is closely related to a series of core APEC issues such as urbanization, environment and safety</p>			
Promote Public-Private -Partnerships for Science and Technological Innovation	<p>APEC PPSTI Innovation Policy Sharing Seminar Government, Academia and SMEs make joint effort to formulate STI policy</p> <p>Development of Methodology and Analysis of STI Co-operation in APEC Region In the frameworks of the proposed project the following</p>	<p>In recent years, APEC leaders stressed several times PPP model and the importance of Innovation.</p> <p>2. The project fully conforms with the Annex A “Towards Innovative Growth” to 2012 Leaders' Declaration where leaders agreed to “strengthen co-operation among innovators of APEC economies to</p>	2015	All PPSTI Members	To be held in the margin of PPSTI 5
			The project should be implemented in 8 steps from January 2015 to November 2015.	The project should be desk-based research and methodology should be chosen	APEC Funded

	<p>activities should be carried out:</p> <ol style="list-style-type: none"> 1. Study of methodological approaches to measure STI activities developed in international organizations, statistical standards for STI used in APEC economies. 2. Development of measurement framework which reflects STI co-operation activity between APEC economies; collection, processing and preparation of adequate information. 3. Analysis of the development of intra-APEC STI co-operation and its influence on the economies' innovation systems. Publication of special informational and analytical report. 4. Workshop for APEC economies to discuss the results of the analysis and make recommendations to enhance STI co-operation within APEC. 	<p>boost the accumulated innovative potential and improve innovation capacity of the APEC region”.</p> <ol style="list-style-type: none"> 3. The project will contribute to the realization of the Annex A “Promoting Effective, Non-discriminatory, and Market-driven Innovation Policy” to 2011 Honolulu Declaration where leaders instructed “to develop capacity-building activities that will further assist economies to promote effective, non-discriminatory, and market-driven innovation policy”. <p>The project is in line with the PPSTI goal “to discuss potential mechanisms to evaluate the level and impact of innovation co-operation within APEC to better develop policy recommendations” that is emphasized in PPSTI Terms of Reference.</p>		<p>in close collaboration and consultation with international organizations, for example OECD, WIPO, UN, World Bank. The best methods and indicators would be identified and described. The main methodological aspects of the project would be discussed at TIP and NESTI groups of the OECD. The project staff should be in contact with the PPSTI and representatives of APEC economies,</p>	
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				<p>especially co-sponsoring economies, for the exchange of information and the identification of methodological specificity and practices of measuring STI activities and for the clarification of information. The project participants, experts and representatives of APEC member economies and international organizations will receive prepared Methodological guidance and a draft of the report for their</p>	
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				<p>comments and approval. Representatives of APEC member economies, related APEC fora and International organizations should attend the workshop, make presentations, take part in discussions, defining future activities, results and summary of the workshop. The final report and publications will be distributed among the APEC member economies and the workshop participants. The listed</p>	
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				activities will be performed by project participants during the workshop to take place in Moscow.	
	<p>APEC Workshop on Commercialization and Popularization of Research and Market-based Innovations through Policy Translation</p> <p>(original title) Translating S&T Innovations Activities to Policy Statements and Recommendations</p>	<p>This project is linked to Rank 1 in the 2015 APEC Funding Criteria, as it focuses on human capital development through capacity building of APEC member economies for policy development at the same time promotes regional economic integration through information sharing and communication. Likewise, the project is under Rank 2, which will directly support the APEC Leaders' Growth Strategy through innovation policy and research cooperation which will redound to inclusive growth. The R&D and S&T experiences and best practices of the APEC member economies will be translated to policy statements and</p>	2015-2016	Philippines Co-sponsors: (TBC)	<p>Proposal (To be confirmed by the Philippines)</p>

		recommendations which will inform the APEC leaders on the possible growth strategies to pursue.			
	APEC Workshop on Strategies to Address Non-communicable Diseases (NCDs) through S&T and Innovation: Nutrigenomics Approach	<p>The project is in line with the Priority projects for 2015, Rank 2 Secure Growth on Healthy Asia-Pacific 2020</p> <p>And the 2014 Tasking statement for 2015 on Non-communicable Diseases under Promoting Innovative Development, Economic Reform and Growth</p>	2015-2016	Philippines Co-sponsors: Russia, Chinese Taipei Indonesia	Proposal (To be confirmed by the Philippines)
	Establishment of Regional Database on Herbal Medicine	<p>The project is in line with the Priority projects for 2015, Rank 2 Secure Growth on Healthy Asia-Pacific 2020</p> <p>And the 2014 Tasking statement for 2015 on Promote understanding on the safe and effective use of traditional medicine and similar products.</p>	2015-2016	Philippines Co-sponsors: (TBC)	Proposal (To be confirmed by the Philippines)

GOALS/ OBJECTIVES	ACTION ITEMS/SPECIFIC PROCESSES/ACTIVITIES	RELEVANCE WITH LEADERS/MINISTERS/SOM/SCE PRIORITIES AND DECISIONS AND TO ABAC	TIME FRAME	ORGANIZING/ COOPERATING PARTY	FUNDING TYPES
To facilitate the exchange of forecasting technologies to support disaster management; to share best practices in disaster management using forecasts; and to build capacity in flood hazard mapping	<p>Use of Weather and Climate Information for Efficient Disaster Management</p> <p>Collect best practices in using weather and climate information for disaster preparedness; organize symposium oral presentations; conduct tutorial session on flood hazard mapping</p>	<p>The project is aligned with 2015 SCE Rank 1 priority to build sustainable and resilient communities and Rank 2 projects that support human security. It is also aligned with the host economy priority on sustainable and resilient communities.</p>	<p>Jan 1 - Dec 31, 2015, (Symposium Date: Nov 16 - 18)</p>	<p>APEC Climate Center (Korea), Philippine Atmospheric, Geophysical and Astronomical Services Administration (Philippines)</p> <p>Proposed by: Korea</p> <p>Co-sponsors: Australia, Brunei, Chile, Chinese Taipei, Indonesia, Malaysia, Philippines, and Thailand</p>	<p>Proposal</p> <p>To be confirmed by Korea and the Philippines</p>
	<p>Seminar/Workshop on Data Sharing and Knowledge Management for Disaster Risk Reduction (DRR)</p>	<p>The training workshop is aligned with the 2010 Yokohama Declaration where APEC Leaders committed member economies to strengthen their resilience and capacity to manage emergencies and natural disasters. Moreover, the project is aligned to</p>	<p>2015-2016</p>	<p>Philippines</p> <p>Co-sponsor (TBC)</p>	<p>APEC support fund</p>

		the PPSTI goal on exchange of forecasting technologies to support disaster management and to share best practices in disaster management using forecasts.			
Promote and empower collaborative cross-economy STI activities to address current and future challenges	<p>APEC Science Prize for Innovation Research and Education(ASPIRE) with the 2015 theme "Disaster Risk Reduction: Understanding the Role of Climate Change and Variability"</p> <p>To strengthen international science and technology networks; enhance economic growth, trade and investment opportunities in harmony with sustainable development, through policies, innovative R&D and technologies, and knowledge sharing; and improve linkages and efficiency between research and innovation.</p>	ASPIRE reflects the 26th APEC Joint Ministerial Statement which encourage members to promote regional science and technology collaboration	2015 (Annual award)	USA PPSTI Program Director, U.S. Government, APEC Host Economy, Wiley, Elsevier	Self-Funded

	<p>APEC Typhoon Symposium</p> <p>1. Conduct the Asia-Pacific Weather Radar Network Workshop (Typhoon related) in Taipei</p> <p>2. Publish ACTS Newsletter</p> <p>3. Conduct a training workshop</p>	<p>Supports the 2012 Leaders' Declaration to bring together the three key groups of innovation stakeholders – business, government, and academia – to address common challenges, enhance innovation capacity</p>	<p>Oct. 2014~Dec. 2015</p>	<p>Chinese Taipei</p>	<p>Self-Funded</p>
	<p>Renewable Energy and Climate Change Metrology and Technology Challenges Workshop</p>	<p>To contribute to the advancement of renewable energy technologies and low carbon economic growth. The program focuses on identifying the measurement challenges associate with climate science and renewable energy and developing measurement capabilities to address those challenges, which in line with APEC Leaders' instructions in recent years to address climate change and reduce fossil energy consumption.</p>	<p>Proposed Workshop in November/ December 2015 in China</p>	<p>USA & China (partners: NIST, National Institute of Metrology (NIM) and Asia</p>	<p>Proposal; requesting APEC funding</p>

	<p>Promoting innovative and high value-added recycling production technologies for sustainable development of APEC's regional connectivity</p> <ol style="list-style-type: none"> 1. Design and build a demonstration system 2. Conduct the forum and the 3-day short-term training course 	<p>In response to the theme of the 2013 APEC Leaders' meeting, "Resilient Asia-Pacific, Engine of Global Growth," as well as the goals of "Promoting Connectivity" and "Promoting Cross-Border Education Cooperation" as declared by the Ministerial Meeting in Bali, Indonesia</p>	<p>Sep.2014~Dec. 2015</p>	<p>Chinese Taipei</p>	<p>Proposal To be confirmed by Chinese Taipei</p>
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	<p>APEC Smart City Forum and Exhibition on Information Technology</p> <ol style="list-style-type: none"> 1. Dialogue and experience sharing about Asia-pacific smart city and smart industry development 2. Smart industry SME developments inside APEC 3. Connectivity through IoT/smart things, clouding computing and big data on enhancing physical, institutional and people-to-people connectivity 4. Smart industry/products technical standards discussions. 5. Internet economy through information technology and digital economy, including e-commerce and ICT infrastructure. 	<p>This Forum is based on the 2014 leaders declaration, APEC realize that sustained and healthy development of urbanization is conducive to promoting innovative growth and realizing robust, inclusive and sustainable development in the Asia-Pacific. This forum aims to build smart city, a new-type of urbanization, it is a kind of sustainable city development, featuring green, energy efficient, low-carbon and people-orientation. The forum will also discuss new and promising economic growth areas such as the Internet Economy, and connect smart city building and internet economy to promote green, circular, low-carbon and energy-efficient development finally.</p>	2015	China;	Self-Funded
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Exchange environmental technologies and products and then increase the green economy through the focus on developing countries and SME's environmental industry	APEC Virtual Center Project Develop an website (Gateway) and collect database regarding environmental information (technology brokerage, research papers, market trend etc.) in APEC region Conduct international cooperative research on: Estimation of the Economic Value in APEC Regional Environmental Technology Development	This project directly supports the APEC Leaders' Growth Strategy and is aligned with 2015 SCE Rank to promoting regional economic integration via capacity-building SMEs	2013-2017 Proposed Workshop in September	Republic of Korea Co-Sponsor: Japan, Australia, Chile, Malaysia, Vietnam, Philippines, Chinese Taipei	Proposal requesting APEC Funding
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1.2.3 Enhancing Regional Science and Technology Connectivity

PPSTI will support opportunities for cooperation among the APEC member economies in order to promote Physical, Institutional, Human to Human, Data Sharing, Research Infrastructures, and Voluntary Market Driven Technology Dispersion.

2. Anticipated Activities and/or Proposed Work Plan with outside organizations in response to Leaders' and Ministers' calls for greater engagement with:

2.1 Business Sector

Firms of all size will take STI as a way to build resiliency and achieve growth. Additionally, the sound development of STI policies and programs by governments will take into account the business sector's view, given their proximity to markets. The financial support,

technological edge and talent advantages are also reliable backups for continuously promoting STI development. PPSTI, therefore, has always emphasized the importance of enterprises' participation in STI cooperation, and has implemented a number of projects led or attended by enterprises. For example: in 2014, APEC Smart City Innovation & Technology currency Forum was mainly carried out by enterprises and the overseer of the forum is a business man. The ASPIRE Prize was also initiated by enterprises, simultaneously participated in by government, business and academia. It is a good example of PPP cooperation. In addition, the 1st PPSTI Cooperation Achievements Exhibition demonstrated the major achievements of PPSTI during 2013 to 2014, made business sector including entrepreneurs know more about the work of PPSTI, and increased their interest of participation in APEC STI Cooperation.

In 2015, given ABAC's decision to withdraw from its official role in the PPSTI, the PPSTI's governing board will assess the possibility of re-engaging ABAC to PPSTI, by focusing on business-relevant activities such as the proposed APEC PPSTI Innovation Policy Sharing Seminar. PPSTI delegates could additionally attend and observe ABAC meetings to assess fields of particular interest and stronger alignment with PPSTI activities.

Member economies are also encouraged to invite their own ABAC members to participate in PPSTI activities and seek common interests between ABAC and PPSTI. ABAC's increased participation in PPSTI activities and discussion with PPSTI members would also help both mechanisms achieve the concrete results and the great potential of cooperation.

2.2 Other Organizations/Stakeholders

The activities under PPSTI shall be conducted in alignment with international frameworks for STI.

To this end, PPSTI will engage in the following endeavours:

- Where appropriate, pursue regional cooperation, in accordance with international agreements that regulate activities under the PPSTI, such as those issued by the United Nations and other international organizations, such as WTO, WIPO. In PPSTI 5, WIPO's participation presents a great opportunity to enable the innovators to raise their awareness of IP and enhance their skills of exploiting these potential assets, especially for SMEs, who were often rich in IP but low in terms of awareness and skills.
- Where appropriate, identify areas for alignment with international frameworks and review, on a regular basis, member economies' activities, with a view, where appropriate, to align them with international frameworks.
- Where appropriate, complement the work of specialized international or regional bodies in the development and review of STI. For example, in cooperation with the OECD.
- Identify and discuss issues, bottlenecks, or incidents, either domestic, within APEC or international fora which might be of vital importance to, and impact on the activities of the PPSTI, or which the PPSTI might be able to influence.

The PPSTI strives to be relevant to regional and multilateral organizations and have impact on the activities of regional or multilateral

organizations such as the ASEAN Committee on Science and Technology (COST). In addition, the PPSTI's work is aimed at developing a more coherent regional perspective for articulation in broader international bodies.

3. Identify cross cutting issues and explain how they will be coordinated across fora.

PPSTI, with its focus on science, technology and innovation matters, is dealing with cross-cutting issues which other APEC bodies are also engaged in. Therefore, PPSTI should strive to improve communication and coordination with these working groups to ensure complementarity and promote synergies.

For example, APEC Cooperative Forum on Internet of Vehicles (IoV) and Its Worldwide Application Implementation had connections with the following groups: TELWG, TPTWG, and Automotive Dialogue. Additionally, ACES could cooperate with EPWG. The High Level Policy Dialogue on Science and Technology in Higher Education should also consider the linkage between PPSTI and HRDWG activities and interests.

4. Capacity building activities planned for 2015.

4.1 Science Capacity Building Policy Recommendations

Currently, PPSTI members have recognized the importance and the achievements of capacity building and have taken a positive attitude toward its development. This is also the reason why PPSTI has established the science capacity building subgroup. In 2015, the PPSTI will continue to reinforce its capability building in the execution of particular program for each particular workshop, and the concrete actions are as follows:

4.1.1 To reform the current capacity building mode, which is centered by short-term workshops. It does not mean that short-term workshops are useless. It is no doubt that they are still efficient in several fields of capability building, especially when it comes to arouse the attention of each participant on some important issues. However, the real capability building calls for a long-term and more targeted mode.

4.1.2 To make sure that the projects and activities have specific goals and requirements in terms of technical knowledge and the professional knowledge of those beneficiaries. With a large scope of beneficiaries, the current capability building projects for technological innovation is too general to provide professional knowledge for a certain group of people in their daily work. We should try to make a change and establish a

specific goal for each project and define the concrete scope of beneficiaries. The key to the change is to make clear whose capability should be improved and what kind of result we got at last and what is the best way to achieve our goal.

4.1.3 The overseers of projects on science capacity building are strongly encouraged to select qualified participants well-fitted for their projects. The project guidebook notes that the project overseer will be responsible for ensuring that all participants, experts and speakers, are appropriately briefed on their roles, entitlements, and obligations before they agree to participate in a project. Participants are to add value to the event, for example by providing descriptions of relevant practices in their own economies and help disseminate the knowledge gained upon returning to their economies. The project overseers should also clearly outline the proposed selection criteria for participants and how they will be engaged in the project concept note and full proposal.

4.1.4 To provide all kind of online-training and self-learning courses or materials by using remote technology. Since the coverage of the APEC and the chances it provided are limited, remote technology is no doubt the best way to tackle those problems. We can stimulate participants to finish their distance training by providing proper incentives and certification for participants who have finished their courses. If it can be carried out successfully, distance training can be used as an economic way to supply training chances for people in large groups. However, capability building include not only distance training and the latter is just a small part of basic training for the former.

4.1.5 Participants generally agreed that if possible, the STI training and seminars' interactivity should be strengthened through case studies, discussion or simulations. We should make full use of the valuable communication opportunities among participants and those with resources. We should especially pay attention to early-period trainings, which could not only spread basic knowledge but also clarify complicated questions, exchange opinions and experiences.

4.1.6 To provide the participants with network and interactive activities featuring foresighted facilitated services through organizing seminars and follow-up activities. Network building is one of the most important goals of capacity building. PPSTI will explore and make use of such resources to the most extent. The effective method to facilitate STI network construction includes a platform to communication attended by participants from all economies, and to maintain the vigor of the network through follow-up activities.

4.1.7 As a way to motivate participants, PPSTI will consider to issue certifications for participants who have finished some specific courses and meanwhile invite participants who have finished their training courses to take part in relevant activities.

One of the problems we found in our investigation is that government officials are so busy with their daily work that they can hardly spare any free time to participate in our capability-building activities, especially when it comes to attending distance education courses and the relevant subsequent activities. To offer certifications only to participants who have finished the training courses instead of to all will encourage them to finish their courses. Another effective way of stimulation is to invite those who finished their courses to attend the relevant seminars and classes for further studies.

4.1.8 PPSTI will develop and make use of external resources in a larger scope, including all kinds of distance education courses and excellent expert networks. In the implementation of capability building in science and technology innovation, PPSTI has established a set of systematic resource network which is available. However, due to the limited resources, PPSTI will continue to seek for and make full use of external resources of knowledge which is relevant with our current external resources network of knowledge including the knowledge of network construction, the knowledge of management and experiences in curriculum.

4.1.9 Follow-up assessment on operation mechanism

PPSTI would consider to conduct follow-up in-depth and systematic assessment on overall operation in certain years after current science capacity projects being carried out, in order to reassess the influence of science capacity building activities.

4.2 Capacity building through the cooperation with business sector, other international organizations and other APEC forums

To enhance closer cooperation with outside organizations, such as business sector, other international organizations and other APEC forums, member economies will endeavor to:

- Collaborate with specialist regional and multilateral bodies;
- Consider, where appropriate, joint action within appropriate international and APEC fora towards shared objectives;
- Coordinate the PPSTI's work program with, where appropriate, and draw upon the expertise and the experience of regional and international bodies, including business sector, other international organizations and other APEC forums;
- Foster an effective interaction between business sector, other international organizations and other APEC forums; and
- Ensure that the PPSTI work builds upon, rather than duplicates, the work undertaken in business sector, other international organizations and

other APEC forums

4.3 Science Capacity Building Projects

Several economies have proposed influential and effective projects for science capacity building, such as the ASPIRE prize by the U.S. to encourage the groundbreaking researches by young scientists; APEC Green Video Festival by Chinese Taipei to appeal youth to use ICT technologies and internet skills to enhance S&T communication; as well as various projects on cultivating science skills and capacity in various research fields.

5. Expected Outcomes/Deliverables for 2015

OBJECTIVES	PROGRAMS	OUTCOMES/DELIVERABLE
<p>5.1 Enhance human capacity in policy development and best practice sharing</p>	<p>APEC Green Video Festival</p> <ol style="list-style-type: none"> 1. An empathic learning to appreciate quality video programs with Green Energy, Green Building, or Green Technology as theme. 2. A Sharing of developing science axis, of innovation and creativity, means of telling story, form of presentation, and effectiveness of communication about the displayed video program. 3. A thorough discussion, taking globalization and infotainment as premises, appealing strategy, program genre, storytelling, presentation creativity and other key factors for producing quality science video programs. 4. A searching of future collaboration to co-produce video programs under the Green Energy, Green Building, or Green Technology as theme. 5. A recommendation of quality video science program in the festival with proper global communication nature. 	<p>Learning process, enhance communication skills and ICT skills, enhance scientific awareness on environmental issues</p>

**APEC Cooperation for Earthquake Simulation(ACES)
ACES workshop 2015 in China during August 10-14 focuses on
the following capacity building:**

(1) Numerical simulation of earthquake generation and seismic wave propagation. There are many modeling procedures of earthquake faulting and seismic wave propagation. However, there are very few trials to integrate the simulation system from plate subduction to strong motion prediction. To make a useful and reliable forecasts and predictions, numerical simulation based on the observation is needed. In the past, presentations have been based on the integrated simulation which is directly related the prediction of strong ground shaking and damage and loss estimation. These systems have proven quite useful for planning the mitigation of earthquake disasters.

(2) Numerical simulation of tsunami generation and propagation. The computation of tsunamis due to large earthquakes is based on the shallow water equations which are not always valid, especially for very large tsunamis such as that from the M9.1 March 11, 2011 event. Past symposia have considered techniques that solve the explicit deep water equations, which have greatly improved the accuracy of tsunami simulation and hence the prediction of tsunami disaster.

(3) Assimilation of numerical modeling to predict future natural hazards. The numerical modeling approach to date has been mainly focused on the development of methodology. Assimilation of observational data into the numerical modeling has been shown to be important for the prediction of future natural hazards. In past

(1) Develop realistic supercomputer simulation models for the complete earthquake and tsunami generation process, and strengthen the ability of earthquake and tsunami forecasting by the technology of assimilation of numerical modeling.

(2)The models, simulations, data and technology of a Global Navigation Satellite System (GNSS) tsunami early warning system may be the new exploration of the ACES 2015 workshop .

	<p>symposia, papers on this subject were presented and discussed for application to different geographic regions around the Pacific Rim.</p> <p>(4) Consideration of technologies that can be used to develop earthquake early warning systems (EEW) and tsunami early warning systems (TEW). Both EEW and TEW are recognized as critical infrastructure needs for developing and developed economies. The ACES meeting in August 2015 will consider how to move forward on these critical technologies.</p>	
	<p>APEC Science Prize for Innovation, Research, and Education (ASPIRE)</p>	<p>Recognize young scientists who have demonstrated a commitment to both excellence in scientific research, as evidenced by scholarly publication, and cooperation with scientists from other APEC member economies.</p>
	<p>APEC S&T Mentoring Center for the Gifted in Science</p>	<ol style="list-style-type: none"> 1. To promote Cross Mentoring Research Activities through a network between Mentors & Mentees. 2. To build and operate the Mentor-Mentee pool among scientist, science education professionals and gifted students in science from APEC Economies for continuing exchange programs and joint research activities.

	<p>APEC High Level Policy Dialogue on Science and Technology in Higher Education (added by the Philippines)</p>	<p>Will highlight the role of S&T in Higher Education in fostering inclusive growth through various strategies such as cross border education and inter-university collaboration; S&T mobility and capacity building through twinning programs. Will translate various PPSTI researches and innovation activities into a market-driven policies</p>
<p>5.2 Accelerate S&T knowledge sharing to strengthen regional connectivity as an enabler for innovation</p>	<p>APEC Smart City Forum and Exhibition on Information Technology</p> <p>Participate in dialogue and share experience about Asia-pacific smart city Internet Economy & ICT development.</p> <p>Development report for smart cities and the connectivity between smart city building and internet economy.</p>	<p>1.Through sharing experience and best practice, it is hoped to deepen APEC economies cooperation and technology sharing in the smart City building and the Internet economy.</p> <p>2.Cooperation opportunities in smart technology and internet economy among APEC economies would also be explored on both the research and product level, and may extend even to government strategic policy making.</p> <p>3. The public awareness in the capacity building would be also raised through a series of publications, media promotion and a new official website.</p>
	<p>Renewable Energy and Climate Change Metrology and Technology Challenges Workshop</p>	<p>Promote in the APEC region the adoption of best measurement practices and methodologies to measure GHG and for the promotion of Renewable Energy Technologies.</p>

Development of Methodology and Analysis of STI Co-operation in APEC Region

The main objective of the project is to apply a measurement framework that would reflect development of co-operation between APEC economies in the sphere of STI and its influence on the development of economies' innovation systems. Realization of the project will afford to:

- assess strengths and weaknesses, and best practices within APEC STI co-operation;
- identify STI fields notable for intensive international STI linkages;
- evaluate benefits for APEC economies gained from international co-operation in STI;
- develop joint actions to intensify STI co-operation in the APEC region towards a seamless regional economy, in order to link economies and markets together;
- provide information to contribute to open policies that foster competition, promote access to technology, and encourage the creation of innovations and the capacity to innovate, which is necessary for regional growth.

The project will allow APEC to create tailor-made capacity-building tool and strengthen the ability to work towards increasing region-wide co-operation in innovation, removing barriers to trade in new goods and services, promoting effective and market-driven innovation policy while maintaining flexibility in national policies aimed at fostering innovation. By creating relevant and reliable system of indicators, the project would help to set strategic targets for innovative development in the Asia-Pacific region and, as a result, contribute to the achievement of the goal of innovation-based integration within APEC.

On the basis of these indicators, it is possible to track the progress of the economies and the development of integration processes in STI sphere based on the annual evaluation. Within this activity, it will be possible to form an action plan for capacity-building and sharing best practices in development and increased innovation-based co-operation in order to foster innovative growth in the region, thus contributing to the quality of economic growth in the region and creating favorable conditions for further liberalization of trade and investments. The establishment of a relevant and reliable system of indicators would

		<p>help to set strategic targets for innovative development in the Asia-Pacific region and, as a result, contribute to achieving the goal of innovation-based integration within APEC. These indicators will be an additional tool of effective regional STI policy. On this basis, it will be possible to identify the contribution of a factor of STI integration in the economic development of the APEC region, to reflect weaknesses and points of growth in every sphere of activity (publication, patenting, technology and commodity trade, etc.) and STI as a whole in terms of co-operation between the APEC economies.</p>
	<p>Use of Weather and Climate Information for Efficient Disaster Management Collect best practices in using weather and climate information for disaster preparedness; organize symposium oral presentations; conduct tutorial session on flood hazard mapping</p>	<p>Knowledge and experience sharing, finding better solutions for efficient disaster management, enhance regional cooperation and connectivity for common challenges</p>
	<p>APEC Typhoon Symposium 1. To promote scientific understanding on typhoons and heavy rainfall 2. To promote researches on the socio-economic impacts of typhoons 3. To develop human resource capacity-building programs 4. To foster regional research interactions and cooperation through regular symposiums, visiting scientist programs, and publications</p>	<p>Knowledge sharing, capacity building, enhance cooperation and communication on disaster relief</p>

	<p>Promoting innovative and high value-added recycling production technologies for sustainable development of APEC's regional connectivity</p> <p>1. Create a framework for exchanging experience and research findings relating to sustainable resources production technologies, so as to enhance communication about innovations and dissemination of technologies among APEC economies.</p> <p>2. Promote mentorship between young scientists & engineers and experienced innovators.</p>	<p>Training of young scientists on high value-added production technologies; enhance cooperation and exchange; experience and best practice-sharing</p>
	<p>APEC ART 2015 Tentative Program</p> <p>Organized 10 sessions; Out of 5 introduces innovative agendas driven from APEC members' own economies, and the rest focused on group discussions. Session Topics are in an area of; Talent Mobility, Technology Transfer and Commercialization, Global Challenges, and Global Value Chain.</p>	<p>Expect to provide an innovation platform for theoretical foundation for articulating a specific agenda among APEC stakeholders for further implementation. Moreover, possible solutions to the problems identified in the sessions would be introduced.</p>
<p>5.3 Accelerate Commercialization of Science and Technology</p>	<p>An Exhibition and STI Policy Workshop on Intelligent Transportation (Internet of Vehicles--IoV) Standardization in the Asia-Pacific Region</p> <p>Despite dialogues and discussions, several bilateral and multilateral experiment-demonstration based on key developed IoV technologies will be built. This will be shown on the exhibition in 2016. In the end, those technologies will later be adapted to and promoted in all member economies, especially those suffering from severe traffic problems. Our initiatives focus on strengthening the promotion of regional science and technology collaborations through PPSTI and</p>	<p>1.To popularize STI policy's directive significance on IoV technology standardization and share experience over member economies in applying IoV technologies;</p> <p>2.To enhance greater connectivity between technology and commercialization for inclusive growth and design a sustainable IoV application model under APEC framework;</p> <p>3.To foster SME's participation in IoV regional and innovative markets and benefit member</p>

	cross collaborations with other sub-APEC foras such as TELWG, TPTWG and the Automotive Dialogues.	economies the promotion of the relevant trade and investment in IoV realm.
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