



**Asia-Pacific
Economic Cooperation**

Independent Assessment Report of the Telecommunications and Information Working Group (TELWG)

SOM Steering Committee on Economic and Technical Cooperation (SCE)

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List of Abbreviations

AHGSIE	Ad Hoc Steering Group on the Internet Economy
APEC	Asia-Pacific Economic Cooperation
DSG	ICT Development Steering Group
ICT	Information and Communication Technology
LSG	Liberalisation Steering Group
CAMRATF	Conformance Assessment and Mutual Recognition Arrangement Taskforce
PPWE	Policy Partnership on Women and the Economy
SCE	Senior Officials Steering Committee on Economic and Technical Cooperation
Si	Statesman Institute
SPSG	Security and Prosperity Steering Group
TELMIN	APEC Telecommunications and Information Ministerial Meeting
TELMIN9	9 th APEC Telecommunications and Information Ministerial Meeting
TELMIN10	10 th APEC Telecommunications and Information Ministerial Meeting
TELWG	Telecommunications and Information Working Group

1. EXECUTIVE SUMMARY

Si has prepared this independent assessment of the operations and structure of the TELWG.

Si has worked closely and cooperatively with the TELWG Program Director Ms Karen Yeo from the APEC Secretariat, APEC member economies and other relevant stakeholders.

Si and its high level project team have undertaken a robust analysis and have identified a number of issues and trends. Si has developed a set of recommendations for your consideration to improve the operations and effectiveness of TELWG.

At a high level, the TELWG aims to ensure that all people in the Asia-Pacific region have affordable access to ICT and the Internet. Internet access is one of most important economic and social development tools for business operation and growth and is an essential source of knowledge for education.

Si's approach to this assessment has been to consider at every stage whether TELWG is making a difference in the village and in the boardroom.

This independent assessment focuses on the period from 2012-15. This covers the period since the most recent independent assessment conducted by Perspectiva Integral (delivered on 20 July 2012).

During this period TELWG convened to meet on seven occasions, including the milestone 50th meeting hosted by Australia in September/October 2014. Telecommunications Ministers met twice during the review period, TELMIN9 in August 2012 and TELMIN10 in March 2015.

While TELWG has been operating for some 25 years since 1990, the last few years have seen some of the most rapid technological advances in the telecommunications sector ever. As TELWG worked towards the 2008 goal for universal access to broadband, access to, and use of smartphones, tablets and wireless devices has increased dramatically. Secure computer and mobile device networks connected to stable and reliable telecommunications infrastructure form the essential foundation for the development of the digital economy.

The period of this assessment from 2012-15 has coincided with an enormous growth in internet demand, development of smartphones, tablets and other mobile technology, and the emergence of social media and cloud services.

TELWG and APEC are key bodies to craft regional approaches to telecommunications and ICT policy, and for establishing common standards and practices, sharing information and best practice as well as remaining a strong and robust forum for fostering resilience, innovation and growth.

Governments are considering ways to overcome challenges to using the internet as the default platform for delivering all major government services. However, TELWG must constantly consider that ICT development is not government driven. It is driven by industry and is advancing at a very fast rate.

TELWG is very focussed on regulations and legislation, which are important. However, in general government and legislators cannot keep pace with technology. Uber is one example. Many "disruptors" are simply ignoring the law. Many laws are inadequate to keep up. For this reason industry engagement is important for TELWG.

TELWG is a forum where governments can talk about regulation and industry can share their knowledge. There is scope for more involvement from industry to share their experience.

TELWG's work is being driven by the dynamic speed of the digital revolution, and less by APEC and the governments of Member Economies.

In some cases the developed APEC economies have already adopted many of the ICT developments that TELWG is discussing. At the same time many of the less developed and smaller economies are falling behind.

Strengthening cyber security is a key priority for TELWG. Building trust in online services, and the privacy and security of personal and confidential information remains a barrier to growth in the sector, for professional services and other sectors.

The Internet of Things (IoT) is a new term that is redefining the way we live. Take the average household as an example. List the devices and machines that are connecting to a wireless network. It is not just computers, tablets and smartphones. Security systems, gaming consoles, energy meters, washing machines, refrigerators, lighting, garden sprinkler systems and even motor vehicles. These items are becoming essential for daily living tasks, safety, security, energy efficiency, entertainment, communication and education.

Research has found that the average family of technology enthusiasts in the UK and USA has about 7 wireless devices in their home, and 6.4 in Japanese homes. ¹ An OECD study found a typical family of 4 people in a developed economy had 10 devices connected in 2012 and predicts up to 25 devices connected in 2017 and 50 devices connected by 2022.

Effective use of technology and communications will likely be the most vital tools for economic growth across APEC member economies during the 21st century.

This reliance on technology for business operations to drive economic activity means that the work of the TELWG is more important than ever before.

TELOWG should lead by example to utilise technology to improve meeting participation and engagement by member economies.

TELOWG has an important role to guide member economies to turn innovation from a buzzword into a part of daily economic activity.

Si has uncovered two distinct periods for this working group, from 2012-14 TELWG was struggling to keep pace with the rapid changes in ICT.

There seems to be a renewed focus on the pertinent issues in 2015, in particular broadband and cyber security.

2012-14 Period

From 2012-14 TELWG seems to have lost focus, perhaps struggling to maintain pace with the rapid advances in ICT. The work in this period seemed lost, without direction, and at this point was quickly becoming a candidate for merger or abolishment. This would have been unfortunate given the central importance of ICT to economic development across the region.

It is not obvious that the working group was making tangible connections with the larger APEC priorities, particularly at the Leaders and Ministers level.

Si notes that in 2014 APEC Leaders formally recognised the role of the Internet Economy in promoting innovative developing and empowering economic participation, and endorsed the *APEC Initiative of Cooperation to Promote Internet Economy*, and instructed Ministers and officials to discuss the internet economy further. Si notes that the Ad Hoc Steering Group on the Internet Economy (AHSGIE) was established to guide APEC's work on the internet economy. These are positive initiatives, but more can be done.

2015 Period

Si has been encouraged by the renewed focus on the pertinent issues in 2015 complementing the work AHSGIE, in particular broadband and cyber security. TELWG has become much more relevant and organised, and this is reflected in positive feedback to the survey.

An examination of the activity, meeting papers and responses to the survey indicates that 2015 was a very positive year for TELWG. There was a refocussing of core issues.

The TEL Strategic Action Plan 2016-2020 and the most recent work plan is a solid document to guide the future work of TELWG.

Recommendations

¹ GSMA: *The impact of the Internet of Things, The Connected Home*, p4

A summary of Si's recommendations is listed below. Further elaboration on each point is provided from page 21 onwards in Section 3.

Recommendations for consideration by SCE to provide further instruction to TELWG

1. Increased resources for TELWG Projects.

- Given the importance of ICT to economic activity, the SCE should prioritise TELWG projects, where possible and appropriate, to benefit all member economies.

2. High-Level APEC Goal.

- SCE may request TELWG to propose a broader high level specific ICT goal in the top level APEC goals such as universal access to smart devices and the development of innovative Internet, electronic and digital economy in the APEC region.

3. Maintain a focus on Cyber Security.

- Encourage TELWG to continue prioritising work to build trust in online services, in particular the privacy and security of personal and confidential information, which remains a barrier to growth for professional services and other sectors.

4. Support Industry Engagement.

- Encourage and resource TELWG to better engage industry.

5. Sharing Best Practice and Policy Problem Solving

- Encourage TELWG to become a forum for sharing best practice and policy and regulatory problem solving.

Recommendations for consideration by TELWG

A. Establish a Formal Induction for New Members

B. Raise awareness of TELWG activities at Leaders and Ministers Level beyond the work of AHSGIE to build on the 2014 APEC Initiative of Cooperation to Promote Internet Economy

C. Develop and execute an external engagement strategy

D. Establish a TELWG Industry Advisory Board - 15 representatives of multi-nationals

E. Target Audience - Identify the target audience in every TELWG document.

F. Revisit the idea of Friends of the Chair

G. Penetration Survey - Si recommends that there would be merit in undertaking a further and deeper penetration survey given that only 11 of the 21 member economies responded to this survey.

H. Projects - Si would like member economies to submit more self-funded project proposals.

I. Develop TELWG as a forum to solve policy and regulatory challenges.

2. KEY FINDINGS & ISSUES

The following chapter provides an in depth summary of the responses received to the survey combined with analysis from Si's examination of TELWG documentation, meetings papers and reports.

A comprehensive set of questions tailored specifically for this independent assessment was prepared by Si with support from the APEC Secretariat.²

The first half of the questions focus on process and meeting related issues. The second half of the survey considers issues of more policy and substance.

Some general points about the survey:

- There were 11 responses received from member economies.
- There were 5 responses received from interest groups.
- Two responses outside the structure of the survey were also received.
- Responses have been assessed in no particular order.
- A list of all respondents is provided at Attachment B.

The responses convey a general consensus that more resources are required for the working group, particularly for relevant projects, and that TELWG outputs need to be relevant and attractive to Leaders and Ministers.

There is also a general agreement that TELWG needs to be more deeply involved with industry.

One of the tangible tests of the impact of TELWG is the impact of its work on domestic policy making in member economies, which seems to be limited.

Further general observations and suggestions are listed in dot points underneath subject headings.

² *The complete list of questions is provided at Attachment A.*

2012 Independent Assessment

The 2012 review was a useful starting point. Si considers the recommendations of this review to still be relevant. That is the TELWG still need to focus on specific objectives, target audience and expected outputs.

Si considered the 2012 review to be very weak. There is limited evidence of outcomes and responses to the eight recommendations.

The report was soft and consequently limited action, if anything at all, has been taken on the recommendations. It appears that the recommendations were taken on board, and put to one side.

For example the 2012 review suggest that projects linger and there is little evidence of concluding papers or project summaries. Si has found that member economies would like to see more projects brought to a conclusion within a reasonable timeframe with achievable and actionable conclusions attached to them. TELWG would benefit from a mechanism to constantly review projects for relevance.

There has been some further discussion of recommendation 7 on remote participation and some limited trials. However, more can be done to formalise this opportunity.

Recommendations 8 on elaboration of a roadmap remains unaddressed and may include some of the topics identified by Si and member economies in this assessment.

Engagement in TELWG meetings and activities

- More preparation and participation from attendees should be encouraged
- More consistency in attendee representation (member churn)
- Some instances of last minute or short notice invitations to interest groups
- Consider developing an induction process for new TELWG members

In general relevant representatives attending TELWG meetings, steering groups, workshops and roundtables are sufficiently prepared to engage positively in meetings.

One member economy suggested stronger engagement from all attendees would improve the meetings and activities. Stronger engagement requires preparation and consistency in representation. It was observed that TELWG works best through building strong personal relationships and this can make it difficult for new participants.

Another member economy noted that attendee preparation participation varied and outlined a number of useful insights and suggestions. As TELWG procedures and protocols exist largely by convention, they are recorded through institutional memory of attendees. As there is no approved induction material explaining the history and purpose of TELWG, structure and opportunities/protocols, new attendees tend to rely on ad-hoc briefing materials provided by their home economy. As such, the preparedness of new delegates can vary. Given the reliance on institutional knowledge, those economies with low turnover amongst their delegations have a good chance at understanding how TELWG operates, and leveraging opportunities over the long term. A new delegate may likely need to attend at least one meeting of TELWG before they are in a position to start contributing confidently, and strategically. For example, by delivering presentations on behalf of their economy, by running or participating in TELWG projects, or by seeking governance positions. Leading projects, seeking governance roles, or influencing the design of the next TELWG strategic plan, necessarily involves formal approval processes which span multiple TELWG meetings. A new delegate at any given meeting may enter part-way through any one of these cross-meeting approval cycles; and may misunderstand the significance of key junctures of the planning and approval cycles, causing them to overlook opportunities to contribute or influence.

It was noted that the Secretariat and steering group convenors coordinate with attendees ahead of the meetings, but there have also been one or two instances when their participation (in a roundtable, for instance) was requested at short notice, only allowing one or less than a day to prepare. Generally the Secretariat makes available relevant documents, including meeting agendas, at least a few days prior to the meetings. Presentation materials are also distributed or made available for download as soon as these are submitted.

Another response noted that papers and agendas for the meetings can change right up until the meeting commences. In some cases documents are not received until only a few days before the meeting which limits consultation.

It was noted that the decision to restrict access to the AIMP collaboration system has made it more difficult for guests to prepare for the meetings.

One respondent noted that the APEC TELWG website and the archives could also be more comprehensive and more user friendly.

It is generally accepted that documentation at APEC is organised and simple to navigate. However, more can be done to help new attendees, such as providing an easy to understand presentation on the current focus at the start of each Steering Group session during TELWG for example.

Taking a closer look at specific workshops the Cyber Security Workshop convened by SPSG on 20 October 2015 included a series of pertinent presentations from the USA, Malaysia, China, New Zealand, US Department of Homeland Security, the

Malaysian Communications and Multimedia Commission and the Philippines Department of Science and Technology, Information and Communications Technology Office.

The New Zealand Department of the Prime Minister & Cabinet presentation by Liz Thomas which examined the “connect smart” program was a very useful demonstration on how that government has coordinated over 130 public, private and NGO sector partners. This would have been a useful learning exercise for economies who will be facing similar challenges in the near future. The majority of presentations were from government officials attending, Si would encourage more participation from industry, private sector and academia.

The Getting Connected: TV White Space Workshop 2015 included participation from Singapore, USA, Philippines and Japan. While the discussions were focussed on regulation and best practice sharing between officials, there were two industry presentations from industry giant Microsoft and also Power Automation. Si was encouraged by this industry participation and encourages fostering and encouraging more interaction of this nature.

Raising awareness for this positive work at the Leaders and Ministers level should be encouraged.

Focus on the application of technology to real world situations

- Greater focus on real world applications encouraged
- Focus on real world applications will highlight that TELWG’s work is more than policy and regulation
- Some positive evidence of real world applications such as IOT and OTT and in presentations and case studies from the private sector
- Interest groups have had positive and useful experiences at roundtables and workshops

Most of the member economies were satisfied that there was sufficient focus on real world applications.

Member economies generally consider TELWG activities to be relevant to the real world and practical situations. A sample of issues tackled in projects includes disaster management, ICT applications for vulnerable people, ICT infrastructure development, ICT implementation in E-Economy and safe and secure Internet.

It was noted that in recent years, TELWG has held several sessions on the application of and regulatory issues of emerging technologies such as IOT and OTT. Best practices has been shared in the application of technology, including IPv6 and 4G development.

While TELWG is generally considered to maintain a focus on policy and regulation at the steering group level and member economies noted that workshops are largely driven by interested economies and consequently the scope is highly relevant to application of technology in the real world.

Workshops and industry roundtables, in particular, have been useful forums to examine case studies from member economies and in enabling the participation of guests and non-members in discussions around the practical uses of ICTs to solve socio-economic challenges.

For instance, the Industry Roundtable on ICT Connectivity 2015 convened on 19 and 20 October seemed very focussed and relevant. Industry participation was extensive and information present current and informative. Si commends and encourages presentations from industry such as the Crown Fibre Holdings (Graham Mitchell) presentation on Ultra-Fast Broadband in New Zealand, and also presentations from Northpower Fibre (Darren Mason), Spark New Zealand (Lindsay Cowley) and Network for Learning Ltd (Chris South).

The Australian presentation on the rollout of the National Broadband Network from the Department of Communications and the Arts (Jen Watson, Broadband Policy & Implementation) was also useful. Sharing these presentation more widely is encouraged.

It was important to have representation from the industry giant Google, in this instance it was Ross Young, Public Policy Manager for Google New Zealand. This program seems to be more on the right track and what Ministers will be interested in. Content of presentations from private sector is good, current and relevant. Furthermore the industry involvement from The Innovation Partnership, the Data Driven Innovation presentation from Sapere Research Group.

Banking and the changes to electronic payments systems, whilst maintaining confidence in the security of the systems is a key issue. Using the Innovating Together: A New Approach to Government Banking New Zealand should be used to engage banking industry leaders more broadly.

The presentation entitled Public-Private Collaboration in Digital Innovation – NZ’s Approach to the Digital Economy New Zealand, sums up the need for industry partnership.

Furthermore including interest groups like the Telecommunications Users Association of NZ (TUANZ) is commended. Innovation Partnership in NZ seems to be a positive model. Developing a digital NZ – collaborating with industry – government leading by example.

Industry and external engagement

- Decline in industry participation

- Lack of awareness of TELWG's work with industry
- TELWG's work must be relevant to industry
- TELWG must encourage and foster more industry engagement
- Consider developing a meeting summary for distribution to ICT leaders targeted at industry blogs and newsletters

The speed of technological advancement is an ongoing challenge for TELWG. Si has observed that APEC seems to work in 4-year cycles. However, the current pace of the digital revolution works on a maximum of 2 year cycles. For example, Cisco Systems factors in a 2-year cycle to their business models.

TELWG must find ways to be more agile and flexible. Industry is leading the way in the sector. Governments and regulators struggle to keep up. Industry engagement is more important in ICT sector than any other sector at this time of rapid digital advancement.

A number of the smaller economies are satisfied that their own domestic industry leaders are aware of APEC's work, but more can be done to publicise the relevance of TELWG's work to the industry.

It was noted that ICT leaders who have been involved in TELWG meetings and initiatives may have a good understanding of its work, but this has yet to extend to the industry at large, especially to leaders of emerging and fast-growing businesses.

Si support the suggestion for the distribution of a meeting summary to ICT leaders after the event designed for reproduction in newsletters and industry blogs.

TELWG engagement with universities and other multi-lateral organisations

- Previous interaction with OECD, WTO and ITU has not been sustained.
- More university interaction need. Current level of university interaction is limited.
- Further outreach to regional and local universities, think tanks and research organisations required, especially those based or working in developing economies
- Extension of APEC e-Government Research Centre at Waseda University cited as a positive example

Member economies would generally welcome increased engagement with universities, beyond the long term participation from one university.

It was noted that some professors and private sector representatives have joined meetings and projects of TELWG.

TELWG has a history of interaction with the OECD, the WTO and the ITU which unfortunately has not been sustained.

Si agrees that there is scope to increase engagement with non-government partners as long as it supports TELWG objectives and the strategic plan.

It was noted that guests are regularly present at TELWG meetings, from international organizations such as ITU, OECD, GBDe, APNIC, ISOC, INTUG, GSMA.

The extension of APEC e-Government Research Centre at Waseda University was identified as an example by more than one member economy. This project involved inputs from public sectors, universities and research centres across four economies, including Waseda University (Japan), Taiwan E-Governance Research Centre of National Chengchi University (Chinese Taipei), Infocomm Development Authority (Singapore) and E-government Agency (Thailand).

At the steering group level SPSG invited some multi-lateral organisations such as APNIC, APCERT and OECD to events.

Industry engagement and attracting co-investment in TELWG programs and initiatives

- TELWG must find ways to foster industry co-investment
- TELWG has yet to fully utilise the opportunities presented by interactions with the private sector
- The APEC Digital Opportunity Center project (ADOC) is one positive example. It has attracted investment from Chunghwa Telecom, Intel, Acer, Asus and other private partners.

A number of member economies suggested that relationships with industry could be improved.

One member went one step further to suggest that TELWG is not able to leverage industry relationships or co-investment. Si considers this to be a slight exaggeration given that a number of successful examples have been identified. The APEC Digital Opportunity Center project (ADOC) in Chinese Taipei has engaged industry with the aim of bridging the digital divide and creating job opportunities in the APEC region. It has attracted investment from Chunghwa Telecom, Intel, Acer, Asus and other private partners which further supports the project ADOC 2.0.

Si strongly encourages further leveraging of relationships for co-investment in projects.

Increased industry participation should lead to more sustainable programs and initiatives.

TELWG Focus and Scope

- TELWG scope is very broad and could be more focussed
- Strategic plan and objectives could be narrowed
- TELWG work is overlapping into areas covered by other fora such as the E-Commerce Steering Group and Ad-Hoc Steering Group on the Internet Economy
- There should be less focus on analogue technology and infrastructure

Generally member economies consider the current TELWG focus and scope to be sufficient.

In recent years TELWG's work has shifted in focus from the liberalisation to the security and development related work.

There is some concern that perhaps TELWG is taking on too much.

Some member economies consider the scope of TELWG's to be too broad, due largely to the expansive scope of its strategic work plan.

A number of aspects of TELWG's work fall outside the competency or responsibilities of TELWG and its members for example, data standards falls within the core remit of the APEC E-Commerce Working Group.

One member economy suggested that the strategic work plan could focus on a smaller set of goals that build on each other in an effort to reduce complexity and ambiguity. A smaller set of goals could help more succinctly guide the Steering Groups' wide mandates and project work pursued and outputs achieved.

One of the larger developed economies had some deeper insights. Rather than too broad or too narrow, TELWG's scope may be misaligned. Although many modern ICT/Internet issues are often considered in context of the working group, the TELWG's overall scope remains "trapped" in an analogue telecommunications world, with undue focus on underlying infrastructure.

Another member economy took a different view and suggested that the broad approach is necessary to capture the diverse nature of ICT issues. Furthermore, due to the unpredictable future of ICT development, a broad agenda-setting can provide more flexibility and inclusivity in fora discussions.

Specific ICT issues and topics that Member Economies would like TELWG to consider

Si notes that it is encouraging that the DSG is considering proposals on the following initiatives:

- Improvement of the living standards of socially deprived and vulnerable people through ICTs
- Earthquakes Monitoring System with the application of the Internet of Things (IoT)
- Policies and Regulatory Practices for Mobile Financial Services in the APEC Region

This is a very positive start. Through survey responses a number of topics were also proposed by member economies and interest groups:

- Big data, IOT, OTT, Communication Robot, Development of quality infrastructure, human resources in ICT, entrepreneurship in ICT, Digital economy indicators, regulatory approaches to convergence environment, consumer protection, disaster response, cyber security and encryption, inclusion of women, media and digital convergence
- Free Wi-Fi Internet Access in Public Places
- Extension of ICT Application for the People with Special Needs (Seniors and People with Disabilities)
- Regional, remote and rural access to the Internet and Digital Economy.
- Farming and fishing communities cutting out the middleman and going directly to market.
- ICT to enhance and improve access to education, particularly in regions

Initiatives of this kind will be of great interest to Leaders and Ministers. If TELWG can successfully coordinate these types of projects it will quickly become recognised as a critical working group by at the Leaders and Ministers level and support the work of AHGSIE.

TELWG will also develop a capacity to attract external finance and funding for these projects from the private, which will want to become involved with TELWG, reducing the need for financial input from member economies. This will make the work of TELWG more sustainable. TELWG should be a candidate for more resources for projects given the importance and anticipated growth in ICT and its importance to individuals, cottage industries, SMEs, large local companies, multi-nationals and the whole spectrum of the economy, across every industry.

Host Economy Setting and Resetting of Objectives

- Shifting focus of host economies is disruptive in some instances
- Priorities should be set by member economies rather than the host economy

A few member economies expressed some frustration that in recent years that shifting host economy priorities have required significant recalibration of priorities.

Provided there is large degree of continuity between the host economy objectives from year to year disruption appears to be minimal. For example the APEC 2014 focus on the Digital Economy required TELWG to consider and report on how its own work supported this topic, and provide secondary advice on other APEC Digital Economy initiatives held that year. By contrast, the APEC 2015 focus on the Blue Economy, Sustainability, and SMEs were all topics that were less relevant to TELWG, proved to be less disruptive.

The rapid changes in ICT technology means that TELWG is operating in a disruptive and changing environment all the time making the annual setting of objectives seem less apparent.

One member economy suggested that in some cases individual member economies have more impact on TELWG objectives than host economies.

Generally the host economy takes into account the former objectives and sets objectives adequately broad and general to accommodate various work of fora or working groups.

The annual reassessment by the host economy does provide an opportunity to introduce new technologies and topics.

Getting the balance right is key. It is important that continuity be carried between meetings rather than be determined by host economies.

Maintaining Pace with Rapid Advances in ICT

- TELWG is generally maintaining pace with advances in technology
- The latest technology advances are assessed and discussed
- There is a risk that this focus on the latest innovations is a distraction from other important issues such as infrastructure improvement and promoting a conducive regulatory environment for trade in ICT goods and services

Member economies were generally satisfied that TELWG is maintaining pace with real world ICT advancement.

Member economies have noticed in recent meetings that TELWG has shown a tendency to focus on understanding the most recent ICT trends and innovations. This is important information, but member economies do not want TELWG to become distracted from core issues of improving infrastructure and promoting a conducive regulatory environment for trade in ICT goods and services

At the steering group level the agenda setting has kept abreast of technological development. It is encouraging to note that there are proactive discussions about the appropriate regulatory framework for OTT services in LSG, IOT-based economy in DSG and Cybersecurity framework in SPSG.

Respondents were also pleased with the work on privacy in the age of machine-to-machine connectivity as well as the application of these technologies to socio-economic development.

Resourcing TELWG and Workload

- More resources are required to support high quality projects
- Additional support to the Chair would be helpful
- More relevant high quality projects are needed
- Projects with benefits for multiple member economies are required

It was noted with some concern that over past decade the quality of projects has declined. A lack of central funding has been suggested as a possible reason for the prevention of the progress of worthy projects. As a result, more time is spent progressing projects which are funded by an individual member economies, the self-funded projects. By their very nature these tend to be targeted at addressing the niche interests of the funder more than the needs of the wider APEC membership.

Due to the heavy TELWG workload, it was suggested that the APEC Secretariat provide more funding to support the operation and additional workforce in the Chair's office. They also recommend that the Secretariat provide more information regarding possible opportunities of TELWG's cooperation with other fora and international organizations.

Si would strongly recommend TELWG find alternate funding sources to complement the existing funding for project work. Si has addressed building relationships with industry and other external stakeholders later in this report.

2016 Strategic Plan

- Most member economies are comfortable with 4-5 year timeframe
- The strategic plan must remain flexible, and maintain the regular re-evaluation and have an ability to drop-off non-relevant goals.
- The strategic plan is good at a high level, but needs to delve down to the next level to find ways to implement some of these good intentions.

- Goals need to have a balance of motherhood statements and hard definitive achievable targets.

Member economies are generally satisfied that the strategic plan sets the broad strategic direction for TELWG and the annual work plan provides opportunities to reassess priorities to account for advances in ICT.

The four year planning cycle should be retained as it supports a stable environment to focus disparate APEC efforts and resources towards specific aims.

A shorter life cycle may create an environment with more frequently changing goals, potentially discouraging efforts to organise resources and efforts into particular areas to achieve real change over time.

Member economies noted that while the life of each plan is 4 years, planning for the subsequent plan takes two years across four TELWG meetings allowing for new ICT developments to be incorporated into the next draft.

Member economies will remain comfortable as long as the core ICT challenges such as cyber security, infrastructure deployment, and regulatory liberalisation continue to remain valid notwithstanding of changes in technology.

Flexibility is important, which allows the strategic plan to focus on specific technologies or projects, which date more quickly.

Recognition of TELWG work at Leaders and Ministers level

- There is room for improvement
- TELWG must do more to raise awareness of its work with Leaders and Ministers
- TELWG must consider the domestic priorities of ICT Ministers and how TELWG's work is supportive
- Build on the positive work of AHSGIE

A number of member economies would like TELWG to do more to demonstrate its value to Leaders and Ministers, in particular TELMIN.

TELOWG's work must find ways to support the domestic priorities of ICT Ministers.

TELOWG must bear in mind that Leaders and Ministers are very conscious of the cost and expense of travel to convene APEC meetings and are very keen to demonstrate value of their involvement to the public. TELWG has an opportunity to provide examples of this demonstrated value for Ministers and Leaders.

Si notes that in 2014 APEC Leaders formally recognised the role of the Internet Economy in promoting innovative developing and empowering economic participation, and endorsed the *APEC Initiative of Cooperation to Promote Internet Economy*, and instructed Ministers and officials to discuss the internet economy further. Si notes that the Ad Hoc Steering Group on the Internet Economy (AHSGIE) was established to guide APEC's work on the internet economy. These are positive initiatives, but more can be done.

A concentrated focus on these suggestions will allow TELWG to transition from sessions and meetings between government officials, which are subject to regular churn, to a front of mind working group for Leaders and Ministers, each time they attend APEC conferences.

While the TELWG produces much valuable information the demands on Minister's time will not ever allow them to fully digest all of the information that the working group produces. That is why targeted pilot programs to demonstrate TELWG work applied to real world situations, will allow Ministers to quickly digest the thrust of TELWG's work.

The work of the SPSG is critical to build confidence that online platforms are secure, particularly for financial transactions.

Programs and initiatives to demonstrate the value of TELWG work to Leaders and Ministers

- A range of programs and initiatives have been proposed
- Programs must deliver more tangible outcomes
- Possible collaboration with other working groups to demonstrate TELWG value
- Build on the positive work of AHSGIE

Member economies suggested a range of topics that would be of interest to Leaders and Ministers particularly the TELMIN Ministers.

Generally there will be an interest in work that demonstrates the value of sound regulatory and policy settings for telecommunications services to enable these services to be leveraged for social and economic benefit.

Some of the specific topics proposed were:

- Collecting and collating statistics/data metrics for ICT sector/infrastructure development across member economies and identify trends.

- Comparing policy frameworks and developing shared regulatory norms. This should take into account the trend towards regional trade agreements or FTAs.
- TELWG could produce regular publications on key regional metrics, and policy best-practice guidance. While not high-profile over time it provide a credible knowledge base to demonstrate to APEC Leaders and ICT Ministers the barriers, risks, and opportunities for individual and collective action to improve access to ICTs within the region.
- Artificial intelligence, Innovation and Economic Growth by ICT.
- Emergency response, regulatory toolkits for emerging technologies and support for regional integration.
- Digital Healthcare, perhaps in collaboration with other working groups.
- Increasing broadband connectivity, cyber security, smart cities, and the digital economy.

One member economy suggested that the annual TELWG work plan could be useful tool to keep Leaders and Ministers informed, and it could become a reference for the drafting of Ministerial statements. The Strategic Plan could be used in a similar way.

Supporting Less Developed Economies

- Need to find more ways to support less developed economies
- Relevant high-quality TELWG projects can achieve this
- Need more of the less developed economies to lead discussions and initiate projects
- APEC Digital Opportunity Centers (ADOC) have been successful in 8 economies

In general less developed economies have been less involved in TELWG meetings and activities, but more involved in project work.

One respondent noted that less developed economies tend to be under represented in TELWG meetings leading to discussions which focus on the experiences and developments in more advanced economies. TELWG needs to find ways to encourage less developed economies to lead discussions and initiate projects. Regular attendance and active participation of less developed economies in TELWG projects is positive, but there is scope for TELWG to better engage with and assist less developed economies.

TELWG should consider coordinating and funding pilot programs in less developed economies. These may involve partnerships between two or three economies focusing on some of the topics raised earlier in this assessment. These projects can then be targeted at Leaders and Ministers and form examples of TELWG's work.

An example project could focus on farmers in remote and regional locations using smart phones to determine optimum planting and cropping times. Projects that focus on disadvantaged groups will be of particular interest to Leaders and Ministers.

If successful industry could partner in these projects and may even consider providing financial support.

The content of these projects would from the content of a TELWG external relations strategy.

The businesses and corporates could be developed into third party endorsers for the TELWG and its work

Many invited corporates meet and mingle with leaders at the events associated with the APEC meetings.

The project content must be high quality and address issues relevant to less developed economies. For example the IPv6 Deployment Strategies paper and disaster information targeted less developed economies.

The ADOC project is another positive example which addressed issues of the digital divide in APEC economies and set up APEC Digital Opportunity Centers in urban and rural areas in collaboration with local organizations. It is understood that over the life of this project, 53 ADOCs have been established in 8 economies (including Viet Nam, Indonesia, Mexico, Peru, and Chile) and more than 70,000 people have been trained to improve digital capacity and improve regional competitiveness.

One of the less developed economies proposed that TELWG focus on the institutional arrangements necessary to foster ICTs, specifically in developing economies, because in some cases there are no specific government agencies or entities focused in fostering all aspects of ICTs such as the software industry and capacity building.

There is an opportunity for TELWG to do more to promote regional economic integration in order to integrate less developed economies with more developed economies, on issues such as technical cooperation for example.

Steering Groups

- Current Steering Group structure is generally sufficient
- More focus required in some instances to avoid ad-hoc outcomes
- Steering Groups activity scope should be reviewed to narrow focus
- More linkages between Steering Group activity and projects
- Leaders and Ministers level awareness of positive work of Steering Groups would be beneficial

The majority of responding member economies consider current steering group structures and focus to be sufficient.

In general the Steering Groups have wide mandates, which tends to disperse the focus leading to potential ad-hoc initiatives.

Member economies thought that there may be merit in reviewing the scope of activity for each group to ensure greatest focus on core TELWG functions, in line with recommendations to narrow the scope of the TELWG strategic plan.

The work of the SPSG and LSG could be improved by the development of more projects.

It was encouraging to note that the LSG has addressed regulatory and competition issues regarding OTT, TV White Space, and spectrum sharing. Also the DSG has promoted projects in implementing advanced technologies such as IPv6 and clouding computing, ICT applications for socio-economic development such as e-Health, disaster management, broadband deployment and IOT.

SPSG is drafting a Cybersecurity Framework and continued their work in confidence building in the use of ICT for trade and business.

Member economies also noted the positive contributions of TELWG to the discussions at the Ad Hoc Steering Group on the Digital/Internet Economy.

Projects and Selection Process

- More resources are needed for quality projects
- Project quality has declined
- Relevance and value of projects is inconsistent
- Some instances of project duplication
- More support from secretariat required
- Projects must deliver tangible outcomes and recommendations
- More robust and rigorous project development, including scoping methodology and deliverables
- Projects should require more supporting economies in order to move on to the selection process
- Project Directors should have more topical expertise and more engagement with project design at the onset
- Find ways to promote project outcomes beyond the TELWG community
- A clearer understanding of the project selection process is required
- Earlier consultation, prior to concept note development
- Review of current process and practice may be necessary
- A simplified and less complicated process would be welcomed

Projects are an important way for TELWG to demonstrate its value and engage with key stakeholders. However, a number of issues were raised about projects during this review.

Member economies would like to see more projects brought to a conclusion within a reasonable timeframe with achievable and actionable conclusions attached to them.

TELWG would benefit from a mechanism to constantly review projects for relevance. The 2012 review suggest that projects linger and there is little evidence of concluding papers or project summaries.

The project selection process could be simplified. A three stage evaluation process of Concept, Business Case and Approval seems appropriate. The process must also be staged, open and transparent. Proposals must demonstrate that they can add value and that they work towards strategic plan objectives.

As mentioned previously concerns were raised that over past decade the quality of projects has declined. Some member economies would like to see greater support from the Secretariat in providing advice at an early stage, with developing concept notes and project proposals and then seeing the projects through to completion might be beneficial.

Moreover, member economies would like to see more robust and rigorous project development, including scoping methodology and deliverables. It was suggested that project proponents should engage earlier and more thoroughly with interested economies.

Member economies found that the relevance and value of TELWG projects varies widely and that this may be in part linked back to the broadness of the TELWG strategic plan. The broad scope of the plan allows economies flexibility to develop projects which are aligned with their domestic priorities.

It was observed that due to the small pool of central APEC funding for project work most projects do not achieve resolution at the funding application stage. The result being a varied approach to project planning. In this context self-funding projects have a stronger prospect of being realized.

Member economies would like to see fewer, higher-quality projects which are better aligned with APEC's goals and which offer gains to the maximum spread of APEC members.

One of the large member economies does not consider projects to be delivering outcomes and adding value. Their experience has found that project proposals have generally deteriorated over the last several years. The low threshold required for project

approval at the working group level was identified as a contributing factor. It was also suggested that projects should require the support of more economies in order to move on to the selection process.

Finally, it may be beneficial for Project Directors to have more topical expertise and more engagement with project design at the onset.

Projects and Collaboration with industry and other external stakeholders

- Limited collaboration in recent times
- More collaboration should be encouraged
- APEC Digital Opportunity Centres (ADOC) is one successful example demonstrating engagement of ICT industries and local stakeholders

At TELWG50 the Chair encouraged more delegates from industry and academia to participate in TELWG and that this may stimulate their interest to collaborate.

The APEC concept note format encourages consideration of external collaboration at the project commissioning stage. Nevertheless, in practice most projects are government-centric, and collaboration with external stakeholders is less common.

A number of member economies noted a decline in industry and external collaboration in recent times. Rather than central support from the secretariat for collaboration member economies are left to identify ways to collaborate with industry and external stakeholders on their own.

Si notes that in the case of sponsorship, the APEC Sponsorship Policy and Guideline provides scope of sponsorship application. As for professional and technical collaborations, they are welcome in TELWG projects.

ADOC was identified as one successful example demonstrating engagement of ICT industries and local stakeholders.

There is an opportunity for industry and other stakeholders to leverage on their strengths and available resources to scale up initiatives and increase their impact.

TELWG Cross-Fora Work

The most appropriate focus for TELWG's cross fora work should be AHSGIE which was established in response to the 2014 APEC Initiative of Cooperation to Promote the Internet Economy. AHSGIE provides a forum for interaction on internet economy issues with representatives of numerous stakeholders including CTI, EC, ECSG, GOS, HRDWG, IPEG, PPSTI, PPWE, SCCP, SCE, SCSC, SMEWG, TELWG and relevant fora and subfora.

Si notes that AHSGIE currently has a two-year mandate until end of 2017.

The focus areas seem very relevant such as disruption, enabling platforms, digital KYC (know your customer), Interoperability and consumer protection.

As agreed at the first AHSGIE meeting the group must avoid duplication of the existing work of the various work streams within APEC.

Meeting Agenda

- Meeting agenda is generally satisfactory
- Rescheduling parallel sessions and online information sharing may allow more participation

Member economies are generally satisfied with meeting agendas.

A number of member economics would welcome a simplified meeting agenda to make TELWG more efficient.

There is some evidence of overlap in the discussions taking place in the steering group meetings and the plenaries.

It was suggested that the challenge is the meeting structure, rather than the agenda. Much of the meeting is split into three parallel sessions, across multiple meeting rooms. This model allows meetings to cover a great deal of material in a short number of days, however, it precludes economies with small delegations (less than 3 persons) from participating in all TELWG meeting sessions.

Si agrees with the suggestion that there is merit in minimising parallel sessions as delegations, especially those from developing economies are quite small, making it a challenge for guests and some member economies to monitor and participate in multiple steering groups. Online information sharing for timelines, report and updates may assist to reduce meeting length. Reduced meeting length may reduce the need for conducting parallel sessions.

Chair's Role and Report

- A simplified Chair's report would be welcome by a minority of member economies
- Chair's reports should be provided sooner after meetings
- Transitional chairmanships make achieving change difficult

Member economies are generally satisfied with the length and format of the Chair's report.

It would be preferable for the report to be compiled and released in the immediate aftermath of a TELWG meeting.

A minority of member economies and interest groups would welcome a simplified Chair's report.

Si's examination of TELWG papers found that in some cases transitional chairmanships make achieving change difficult given the wide scope of issues being addressed.

Inter Session Engagement

- Inter session engagement is satisfactory
- Room for improvement on project updates

It is acknowledged that the secretariat forwards information and documents for TELWG's consideration or action via frequent and effective email communications. However, much less information is made available on the progress of TELWG projects.

Member economies would like to receive regular progress updates on work items and also on project progress from the secretariat between meetings.

There is a view that member economies need to show more engagement between meetings in order to achieve the objectives discussed at TELWG.

There is room for improvement for inter-session communications on administrative matters such as organising travel.

Reporting of TELWG activities and outcomes back to Member Economies

- Mixed and inconsistent processes across member economies
- Consider developing a standard meeting report aimed for reproduction in industry blogs and newsletters

It is important for TELWG's work to reach interest groups and all relevant government agencies and regulatory bodies.

In general member economies promptly relay central directives or feedback from the APEC Secretariat.

A number of member economies noted that publication of the reports of the TELWG Chair is often delayed.

A number of member economies make a genuine and coordinated efforts to ensure information gets back to relevant bodies in a timely manner. In some cases this occurs within 30 days. Si would like to see this happen consistently across all members.

One respondent suggested developing a standard meeting report aimed at reproduction in industry blogs and newsletters managed by interest groups.

Impact on domestic policy decisions in Member Economies

- Limited impact on domestic policy in larger and more developed member economies
- Beneficial for some of the less developed economies
- Current focus on developing economies
- TELWG provides opportunities to learn about domestic policy priorities for other member economies
- Some take TELWG into account or use it as a reference point

TELOWG broadly assists member economies to better understand the policies of all APEC members and provide useful information to support better decision making.

However, survey responses suggest that TELWG's work has had a very limited impact on domestic policy development in a number of member economies. This is particularly the case for the more developed economies.

There is an impression that TELWG's work currently has a developing economy focus.

In some instances member economies have observed the reverse happening. Individual member economies bring domestic policy experiences and priorities to TELWG, seeking to share experience with others, or to promote favourable domestic policies within the region.

Some economies take note of government and policy structures of other member economies as part of their own policy development.

In general information and experience sharing is helpful. TELWG provides a forum for member economies to share and learn best practice from around the region.

For instance it was noted that the work of the MRA taskforce has impact on domestic policy decisions, supporting regulatory authorities to develop methods to reduce the time for products to reach the market.

Regulation & Legislation

As one would expect TELWG is very focussed on regulation and legislation. There are reports and updates on these matters at every TELWG.

However, the reality in many circumstances is that governments and legislators cannot keep pace with technology.

Many “disruptors” are simply ignoring the law and many laws are inadequate to keep up.

Si suggests that a consideration of industry examples of disruption would be valuable to member economies. An examination of specific examples of ICT disrupting and changing traditional industries may include:

- Advertising (online marketing)
- Uber – Taxi Industry
- Online freelancing and consulting – professional services
- Netflix, Stan – traditional free-to-air television broadcasting
- Media - Social Media, Newspapers

Weightwatchers is an interesting example of being digitally disrupted. Their business was impacted by an uptake of the FitBit which enabled people to manage their own exercise regimes.

Electronic payment systems and methods are changing customer behaviour in the banking system. People are discouraged from going to bank branches in person whereas online banking, mobile phone apps and pay wave systems allow remote transactions which results in less cash floating around in economies.

Remote Participation

It is encouraging to see that there has been some consideration of the 2012 review recommendation for remote access.

Note that at TELWG 50 in Australia there was a trial remote participation with APNIC for those members who were not able to attend the meeting in Brisbane. This was organised for elected TELWG 50 sessions including the Plenary.

Without discounting the value of face to face meetings, TELWG may consider using technology to enable remote participation in working group meetings and activities.

Remote participation could promote more participation from TELWG members and sustain its ongoing work.

Preliminary discussions were held at HOD and ExComm level according to TELWG49. A trial remote participation was agreed to run at workshop sessions of TELWG meeting in 2014/15.

[Note: Remote participation was available at TEL52 and TEL53 too.]

TELWG over the next four years to 2020

- Room for improvement
- More structured and targeted
- More focussed
- Deeper engagement from all member economies
- Improved dissemination of project results
- Follow-up conference calls between meetings
- More active involvement of industries (including SME's)
- More active involvement of other APEC foras representatives in TELWG activities
- Improved press and media coverage of TELWG activities
- Rollout of regulatory roadmap
- More opportunities for remote participation via video conferencing

Member economies would like to see the TELWG agenda feature more prominently in the ministerial and leaders statements.

There is some evidence of an appetite for broader changes across the entire scope of the working group's activity which may include a reconsideration of TELWG's strategy, structure, and mode of operation to make it leaner, more targeted on the latest

technologies, and supporting cooperation and understanding on only the most universal policy issues, which are most aligned to APEC's goals.

Deeper engagement from all member economies should be fostered, and a mechanism to improve the dissemination of project's results and follow-up conference calls between meetings.

Project work should focus areas of the Strategic Action Plan 2016-2020.

Industry engagement must remain a priority, in particular the active involvement of SME's.

Improved media coverage of TELWG activities would be welcome.

Implementation of the regulatory roadmap, originally identified and recommended in the 2012 review should be completed in the period leading to 2020.

Remote participation, which was recommendation 7 of the 2012 review, should be implemented to maximise participation in a way which can take into account the time-zone differences.

This may be one way for member economies to share their developments in ICTs technology, infrastructure and services, and all regarding electronic commerce.

The MRA taskforce is producing some valuable work, which could be adopted by a wider range of member economies.

Visitors and guests should receive timely pre-meeting information to avoid limitations to their participation. Si suggests the formalisation of a new member induction process to be the most effective method to address this issue.

Attendance

A number of member economies were keen for a record of attendance to be included at TEL in recent years. This is a list of absentees for TEL meeting since 2013:

- TEL53, Jun 2016: Chile; New Zealand; Papua New Guinea (Singapore and Brunei Darussalam participated via remote participation)
- TEL52, Oct 2015: Canada; Chile; Peru
- TEL51, June 2015: Canada; Chile
- TEL50, Oct 2014: Canada; Chile; Mexico
- TEL49, Apr 2014: Canada; Chile; Mexico; Papua New Guinea; Peru
- TEL48, Sep 2013: Canada; Chile; Indonesia; Papua New Guinea; Peru
- TEL47, Apr 2013: Australia; Canada; Chile; Mexico; New Zealand

Chile has not sent any delegate to TEL since 2013 and Canada did not send any representatives from TEL48 to TEL53.

3. RECOMMENDATIONS

Recommendations for consideration by SCE to provide further instruction to TELWG

1. Increased resources for TELWG Projects.

- Given the importance of ICT to economic activity, the SCE should prioritise TELWG projects, where possible and appropriate, to benefit all member economies.

○

2. High-Level APEC Goal.

- SCE may request TELWG to propose a broader high level specific ICT goal in the top level APEC goals such as universal access to smart devices and the development of innovative Internet, electronic and digital economy in the APEC region.

3. Maintain a focus on Cyber Security.

- Encourage TELWG to continue prioritising work to build trust in online services, in particular the privacy and security of personal and confidential information, which remains a barrier to growth for professional services and other sectors.

4. Support Industry Engagement.

- Encourage and resource TELWG to better engage industry.

5. Sharing Best Practice and Policy Problem Solving

- Encourage TELWG to become a forum for sharing best practice and policy and regulatory problem solving.

Recommendations for consideration by TELWG

A. Establish a Formal Induction for New Members

Having a more formal induction process in place will enable new members and participants to become aware of TELWG work much faster, and will allow more active participation in meetings and forums.

B. Raise awareness of TELWG activities at Leaders and Ministers Level beyond the work of AHSGIE to build on the 2014 APEC Initiative of Cooperation to Promote Internet Economy

TELWGs work must contribute to Leaders and Ministerial objectives in particular TELMIN. Note that the Si review team includes former Ministerial representatives at APEC in the Foreign Affairs and Trade portfolios, including a Minister who attended APEC during the period of this review.

Si notes with some concern that the majority of the action and grunt work is happening at the foothill level in workshops and roundtables. However, there is little evidence that TELWG work is percolating up to the Leaders and Ministers level beyond AHSGIE. This is disappointing given the importance of ICT to economic cooperation across the 21 APEC member economies.

There is substance occurring at the workshop and steering group level, particularly in 2015. TELWG must find a way to raise the profile and awareness of this work.

The aspects of TELWG work that is important to Ministers is not reaching them.

TELWG must acknowledge and understand that:

- Ministers don't have time to read extensive documents and attachments
- Ministers rely on officials and advisers to finalise the details
- Ministers are there at the start of many APEC meetings and forums, for a short time, and this serves the purpose that Ministers have "endorsed decisions."

TELWG must also recognise that there is growing scrutiny on Leaders and Ministers to justify the significant cost to travel to and participate in APEC meetings. There is considerable coverage and analysis from international media, particularly on Leaders.

TELWG must recognise that leaders are desperate for serious announcements. TELWG must find ways for the important aspects of its work to contribute to Leaders' meetings and statements

TELWG, and other working groups, must produce tangible outcomes otherwise Leaders and Ministers will start to reconsider their attendance at APEC.

There is an increasingly desperate anxiety for APEC meetings to be more than talk fests.

TELWG must identify ways for its work to inform and contribute to announcements for Leaders and Ministers.

TELWG need to understand their work and outputs in the broader APEC meeting context.

C. Develop and execute an external engagement strategy

TELWG should develop a more effective external communications plan to reduce financial reliance on APEC to fund projects by encouraging and fostering more industry partnerships.

TELWG is actively engaged with industry and other international organisations. Many TELWG projects have been initiated and driven solely by the private sector, and others are joint private-public sector initiatives in collaboration with international organisations such as the Organisation for Economic Cooperation and Development (OECD), the Global Business Dialogue on e-Society (GBDe), the Asia Pacific Network Information Centre (APNIC), the Internet Society (ISOC) and the International Telecommunications Users Group (INTUG). This is a positive start however, much more can be done.

TELWG must tap into the expertise which resides with key industry leaders. TELWG must engage these companies and seek their involvement and possible sponsorship or co-investment in TELWG projects.

An external engagement strategy should:

- Target major multi-national companies such as Google, Microsoft, Cisco, Tesla and PayPal
- Engage major telecommunication providers.
- Engage smaller technology companies directly and through industry and interest groups.
- Bring in external people to challenge existing ideas.
- Include in the next TELWG a day devoted to – addressing these challenges – Perhaps have 10 industry leaders come in to present on the key areas of progress in ICT.

D. Establish a TELWG Industry Advisory Board

- 15 representatives of multi-nationals
- Must have very specific tasks
- Identify sources of external finance
- Encourage "buy in" from big corporates – pay an amount into a pool, which then goes towards funding projects.

E. Target Audience

Identify the target audience in every TELWG document:

Indicate who it is intended for? (Internal/External)

- APEC Leaders & Ministers

- Other APEC Working Groups
- Industry Leaders
- Academics
- Other international organisations (OECD, ASEAN)
- Government Agencies in Member Economies (Officials, Policy Makers)
- Elected Government Representatives in Member Economies (Ministers, Decision Makers)

F. Revisit the idea of Friends of the Chair

This idea was raised at TELWG 49 (Chair's Report).

- This advisory panel concept designed to retain the knowledge of outgoing Steering Group convenors, seems to be a worthwhile concept.
- If working effectively it will retain the knowledge of outgoing Steering Group convenors, at least for the period of the two forthcoming TELWG meetings.

G. Penetration Survey

Si recommends that there would be merit in undertaking a further and deeper penetration survey given that only 11 of the 21 member economies responded to this survey. Perhaps a more extensive penetration survey should form part of the external engagement strategy and pose questions to:

- 5-6 key government representatives in relevant government agencies in a selection of member economies (mix of developed, less-developed)
- 5-6 key government representatives in relevant companies/industries (mix of developed, less-developed)
- NGOs
- ICT Providers Universities

The report on the survey should assess the responses and inform the external engagement strategy.

H. Projects

Si would like to member economies to submit more self-funded project proposals. Every effort to improve concept notes and overall project quality should be encouraged. Delivering high quality projects is important. The concept note process should be an opportunity for member economies to provide feedback on proposed projects and this feedback should be considered seriously.

I. Develop TELWG as a forum to solve policy and regulatory challenges

TELOWG is a very useful forum for sharing best practices and regulatory updates between member economies. TELWG may consider taking this one step further. Rather than just presenting recent experiences member economies could put forward issues or challenges that they are facing and allow other economies to assist and provide solutions and advice to solve problems.

4. CONCLUSION

Si has appreciated this opportunity to work with APEC to ensure that working groups are efficient and effective to support robust policy development across the region.

To have an effective organisation, it must have strong vertical accountability and minimal hierarchy. It is more difficult for multi-lateral forums, which don't fit the norm.

Adopting some of these recommendations could raise TELWG out of the period from 2012-14, where the group struggled to maintain pace with rapid advances in technology, and lock in the improvements achieved since 2015. If TELWG can successfully adopt and implement some of these recommendations, then it may generate a case to receive more funding and resources and be more relevant.

This group could again be at risk of amalgamation if it reverts back to the work produced from 2012-14. At the end of 2014 this working group was certainly looking like a candidate for merger or abolition. It will be interesting to see how TELWG is able to collaborate with AHGSIE on internet economy issues.

The positive benefits created for members and attendees since 2015 is very positive.

At a high level TELWG must focus on four key issues:

- Hardware, software – Bandwidth
- Cyber Security, Privacy, Data Analytics
- Industry and external engagement
- Globalisation of commerce, through ICT

The 2016 Work Plan includes an encouraging starting point for engagement with industry and other organisations.³ This includes industry and regulatory roundtables to provide TELWG member economies' and different stakeholders with the opportunity to discuss issues and challenges in business and regulatory activities. Si is encouraged that all projects that are conducted in APEC TELWG will be organised to help coordinate both public and private stakeholders.

Si is also encouraged that TELWG will continue to invite different international, public and private stakeholders to participate in its meetings as well as projects, such as the project Project on ICT Applications for People with Special Needs (Ageing and Disabilities), which involves Waseda University (Japan) and the Infocomm Development Authority of Singapore (Singapore). This work should be communicated to the Leaders and Ministers level.

TELOWG need to build on the momentum of 2015 and develop a targeted external engagement program to consolidate and reach out further to the private sector. Then leverage these relationships to build partnerships and programs, between member economies and the private sector applying new technologies to specific case studies. This will be of interest to Ministers, and raise the profile of TELWG's work with Ministers.

OBSERVATIONS FROM TEL 53

Si's attendance at TEL 53 has been very valuable for its work on the independent assessment.

Si would like to thank delegates for their assistance and willingness to share information, thoughts, opinions and ideas during TEL53.

As mentioned during the presentation to the TEL53 Plenary session it was noted that rapid changes in communication technology are having deep impacts across many industries.

During attendance at a number of roundtables and presentations these interesting points were noted.

- There are more connected devices in the world than people.
- 78% of data security breaches take weeks to months to be discovered by organisations and just as long to contain

³ TEL Work Plan 2016, page 5

- In Russia 70% of people prefer e-government services
- China has 1.28 bn mobile phone subscribers
- 60% of Latin American music production content is not digitised

This demonstrates the diversity of issues that TELWG is dealing with.

Generally, industries taking advantage of the changes are IT, Healthcare, Finance Tech, the Service Industry and Personal Transportation.

Lagging industries are education, logistics, shipping, construction, oil, mining and petroleum.

The majority of the APEC working groups focus on one sector. However, telecommunications is critical for all industries, which means the scope of TELWG's work is broad.

While the Si representative at TEL53 attended the formal scheduled activities, roundtables and steering group meetings and learned many new developments in formal presentations it was clear that TELWG delivers much more than just these structured meetings. TELWG creates very valuable networking opportunities and informal discussions for delegates between sessions and at social events. This is where relationships are built. These often become long-term trusted relationships.

The Vice Minister's words at the DSG Roundtable outlined what TELWG's role should be. An opportunity for member economies to gain primary knowledge from industry to inform government policy responses.

Si would also reaffirm the comment made by the Chair at Plenary 1 on 13 June regarding projects.

Si would like to see economies submit more self-funded project proposals. Every effort to improve concept notes and overall project quality should be encouraged. Delivering high quality projects is important. The concept note process should be an opportunity for member economies to provide feedback on proposed projects and this feedback should be considered seriously. A new recommendation has been added regarding projects.

Si commends the Chair for initiating a revision of the Terms of Reference for the first time since 2009, which was considered at TEL53.

It was pleasing to hear the Chair and others intention to focus TELWG's work on social inclusion and social responsibility. For example the ITU's involvement in the social inclusion seminar for people with disabilities. It is alarming that there are 1.1bn people at risk from hearing impairments alone, not to mention other physical and vision impairments.

The industry briefings were interesting and useful for member economies. The content generated numerous questions from member economies which confirms that the information is of interest. The briefings bring industry and government together, as per the Si recommendations, and generate many more questions and discussions after formal sessions. Industry engagement is important and it was very positive to observe presentations from Microsoft, Ericson and Azteca during the roundtables. It was good to see strong industry representation from Uber, IBM, AT & T, Alibaba, Baidu, and Huawei.

There was tremendous value in the panel session which proved to be an effective structure to identify policy needs for industry from government.

Si sincerely hopes that member economies can extract knowledge from the panel to feed into government policy making. Policy Suggestions included:

- Open mindedness from policy makers
- Trial and error, rather than, over regulation - Over regulation can kill new borns
- Review existing regulation for traditional services
- Transforming vertical government structures, breaking down silos
- More R&D investment
- Reducing risk for start-up initiation and exit
- Foreign Direct Investment rules should consider access to capital for start-ups
- Encourage risk taking – failure should be acceptable and considered a learning opportunity

- PPPs – Public Private Partnerships

It is worth reiterating the Chair's comments at the close of the first industry roundtable that he would like to see the tangible results emerge from the presentations, that is the actual development and commercialisation of products that were showcased.

Si's found that TELWG is a very useful forum for sharing best practices and regulatory updates between member economies. TELWG may consider taking this one step further. Rather than just presenting recent experiences member economies could put forward issues or challenges that they are facing and allow other economies to assist and provide solutions and advice to solve problems. A number of TELWG members expressed an interest in this idea during the week. A new recommendation has been added to propose this idea.

Engaging Leaders and Ministers is another point emphasised in the interim report. It was pleasing to see the Vice Minister for Communications Mr Javier Coronado Saleh attending to endorse, support and participate in TEL 53.

Taking the lead from the G7 ICT Ministers meeting in April 2016 may be worthwhile. Their approach based on social prosperity, innovation growth and key issues such as medicine, education, agriculture and disaster prevention – may provide a useful blueprint for TEL to monitor and follow. They have a multi-stakeholder approach covering industry, government and academia.