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Enter

Implementing the e-APEC Strategy

- progress and recommendations for further action

pecc

A report by PECC to APEC Ministers
November 2004

With background papers in the attached CD ROM

Acknowledgements

About PECC

PECC is one of the Official Observers of APEC. It brings together representatives from business, government and research from 23 Asia Pacific economies to develop policy ideas for trade and development within the region.

Implementing the e-APEC Strategy

Progress and recommendations for further action

A report by the Pacific Economic Cooperation Council to APEC Ministers
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Preface

This report to APEC Ministers by the Pacific Economic Cooperation Council (PECC) was commissioned by APEC Senior Officials in 2004 to provide an assessment of progress in implementing the e-APEC Strategy.

ICT is the driving force of the e-APEC Strategy but it involves much more. The Strategy brings together a comprehensive set of policy actions required to make economies more productive and efficient and more able to provide services to the community. It involves all aspects of government, the business sector and education and training institutions.

The Strategy embodies many APEC goals and initiatives and gives them greater operational context. It provides the means to achieve an open and seamless trading environment, to establish good governance and transparency, to open more opportunities for small business and to give more choice to consumers and the labor force.

The Strategy can also profoundly change the development and capacity building process by providing new avenues for delivering information, education, health and other government services to more people at lower cost.

The e-APEC Strategy is therefore wide ranging and comprehensive. Many APEC economies are still at the early stages of implementation and, as a consequence, PECC has given more focus in this first assessment on the delivery and performance of e-infrastructure. The Brunei Goals on internet access are a cornerstone of the Strategy and PECC has examined progress toward the 2005 interim target set by APEC Leaders. The assessment reviews briefly progress on issues affecting trade facilitation, the use of e-commerce and e-government.

This hard copy overview report is supported by three detailed background papers in an attached CD. Mr Roy Lee, of the Australian National University, carried out the research and prepared the papers on e-infrastructure and its performance.

As developments in ICT and its applications are changing rapidly, the e-APEC Strategy is one of APEC's most important initiatives. It will continue to be relevant if it is frequently updated by APEC economies and assessed on a regular basis by stakeholders in the region.

David Parsons
Coordinator on behalf of PECC

e-APEC Strategy growing in importance

The e-APEC Strategy is now much more important to individual economies and the region than it was when initiated in 2001. It will continue to grow in importance. A key reason is that ICT is increasingly the means through which economic integration is intensifying.

The benefits of regional integration are therefore going to be greatest for economies that cooperate and coordinate through systems that ICT and the e-APEC Strategy are intended to provide.

Brunei Goals remain a fundamental cornerstone

The Brunei Goals on internet access are a cornerstone of the e-APEC Strategy because without effective access it is not possible to participate fully in these growing trends.

Effective individual and community-based internet access also provides the means to deliver better and lower cost public services and the necessary capacity building programs.

APEC will double rather than triple access by 2005

APEC is unlikely to achieve its goal of tripling internet access across the region by 2005 but will rather double the number with access. Addressing this shortfall in developing economies will depend on the widespread deployment of affordable new generation wireless and satellite technology for data access.

Improvements in e-Infrastructure

APEC economies have made significant improvements in establishing e-Infrastructure. The rapid deployment of the mobile sector has increased teledensity and phone coverage across nearly all economies. The delivery of broadband has given many users more effective access to the internet. This provides a valuable foundation for further progress in the e-APEC Strategy.

Competition and investment e-infrastructure

Increased competition and market-oriented policies have helped lead to innovation and further investment in e-infrastructure. Most APEC economies have become more open to international competition in the five years to 2003 and have gained benefits through improved teledensity and better services.

Market-oriented and pro-competitive policies will be crucial for further investment in infrastructure since it will be delivered largely by the private sector. These policies include establishing appropriate regulatory regimes which can be adapted as the structure of the industry changes and which also serve the interests of end users.

APEC economies among world leaders but some falling behind

APEC economies are among the world leaders in many facets of the e-APEC Strategy including the delivery of broadband, e-government services and mobile services. The performance in these leading economies has been facilitated by significant economy-wide ICT strategies.

Some APEC economies are falling behind. The

rapid pace of integration of ICT occurring in the region suggests that this is more serious than the simply-defined digital divide because these economies are lacking the efficient systems which the e-APEC Strategy is aimed at providing. These economies can benefit from the "demonstration effect" of APEC's leading economies. They also have the potential to advance by leapfrogging to higher levels of ICT integration.

APEC's contribution

APEC is providing targets and goals for all economies in key strategic areas of the e-APEC Strategy. Agreement upon these targets, complemented by information sharing, best practices, principles for action, and capacity building, is a valuable contribution which is often underestimated by business and APEC observers.

The agenda of the APEC groups contributing directly to the e-APEC Strategy is wide-ranging and significant. These groups provide economies with the key elements for advancing the e-APEC Strategy. APEC groups could cooperate more and be more strategic about the design of projects and activities.

Resources for building skills and capacity

Building skills and capacity is the most pressing need for APEC economies. With scarce APEC resources, it may be more beneficial to have fewer and more significant projects strategically designed around areas that will have a wider impact on the region's development. Some of these areas include developing regulatory regimes, e-government, distance learning, paperless trading and trade facilitation. Business is likely to be more willing to contribute to projects that it sees as strategically focused.

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An initiative of APEC Leaders

The e-APEC Strategy was built upon the initiatives of APEC Leaders in Brunei and Shanghai at the start of the new century (see Box 1). Information and communication technologies and the internet were profoundly changing the process of economic development and globalization and presented a challenge and an opportunity to all APEC economies.

APEC Leaders saw the opportunities in these developments and agreed that the region must fully embrace the emerging technologies and integrate them into the region's economic life. Their goal was to ensure that every APEC economy could be more productive, better prepared to compete in global markets and provide a higher quality of life and better living standards for their people.

The Leaders agenda is ambitious. It calls for all people of the region to have access to the services of the internet by 2010 and for a melding of knowledge, information and communications to transform the way the region's economies do business. It requires the use of technologies that are still being developed and adapted.

The e-APEC Strategy, laid out in 2001, aims to provide a framework for bringing all the necessary ingredients together: the enabling environment, the investment and infrastructure and the human skills and capacity building (see Figure 1).

In Bangkok in 2003, APEC Leaders instructed their Ministers to accelerate progress in implementing the e-APEC Strategy and the Brunei Goals on internet access in order to step up efforts to build knowledge-based economies. They were asked to do this in partnership with relevant stakeholders throughout the region.

The task of monitoring and assessing progress

In line with the directives of APEC Leaders in Bangkok, APEC Senior Officials asked the Pacific Economic Cooperation Council (PECC) to monitor and assess progress in implementing the Strategy.

While APEC governments have the central role in implementing the Strategy, significant progress can only be achieved in partnership and cooperation with business, educational institutions, citizens and many government and semi-government agencies. PECC believes that it is vital at this time that the wider APEC community gains a greater understanding of the importance and value of the Strategy. Some emphasis in this assessment is therefore given to outlining the strategic approach and potential benefits it has for all stakeholders.

Because implementation of the Strategy as a whole is still in its formative stages, this assessment gives relatively greater focus to monitoring developments in e-infrastructure. Infrastructure provides the backbone for the overall Strategy and access to the internet in particular.

Box 1: Brunei Goals and the e-APEC Strategy: What APEC Leaders said

In Brunei 2000, APEC Leaders set out what have become known as the Brunei Goals for access to the internet and an Action Agenda for the New Economy.

"We commit to develop and implement a policy framework which will enable the people of urban, provincial and rural communities in every economy to have individual or community-based access to information and services offered via the internet by 2010. As a first step toward this goal we aim to triple the number of people within the region with individual and community-based access by 2005.

Governments alone cannot achieve this vision. We recognise that it will require massive infrastructure development and human capacity building, and technologies which are only now in their formative stages. It will require a regime of outward-looking and market-oriented policies which can attract business investment and the cooperation and skills of our universities, training and research institutions, colleges and schools. We also recognise that the pace of development and implementation of the appropriate policy framework will vary in each economy because of the diversity among members and the widely different levels at which information and communication technology is now integrated.

We commit to working in partnership with the widest spectrum of the business community and those in education and training throughout the region to develop the policies which can make it happen…. Today, we also launch a wide-ranging Action Agenda for the new economy that outlines programs that will help our economies use advances in information technology to boost productivity and stimulate growth and extend services to the whole community."

http://www.apec.org/apec/leaders_declarations/2000.html

In Shanghai in 2001, Leaders announced the e-APEC Strategy:

"Building on work done in Brunei last year, we have made further progress by formulating and delivering a long-term, forward-looking and more action-oriented e-APEC Strategy for the development of the New Economy through the promotion of information and communications technology (ICT) and its application in our region. The goal is to build APEC towards a digital society, with higher growth, increased learning and employment opportunities, improved public services and better qualities of life by taking advantage of advanced, reliable and secure ICT and networks and by promoting universal access."

http://www.apec.org/apec/leaders_declarations/2001.html

In Bangkok in 2003, Leaders looked to further progress:

"Step up efforts to build knowledge-based economies. We instructed Ministers to accelerate progress towards the Brunei Goals on expanding Internet access, improvement of intellectual property rights facilitation, protection and enforcement, and implementation of the e-APEC Strategy, in partnership with relevant stakeholders."

http://www.apec.org/apec/leaders_declarations/2003.html
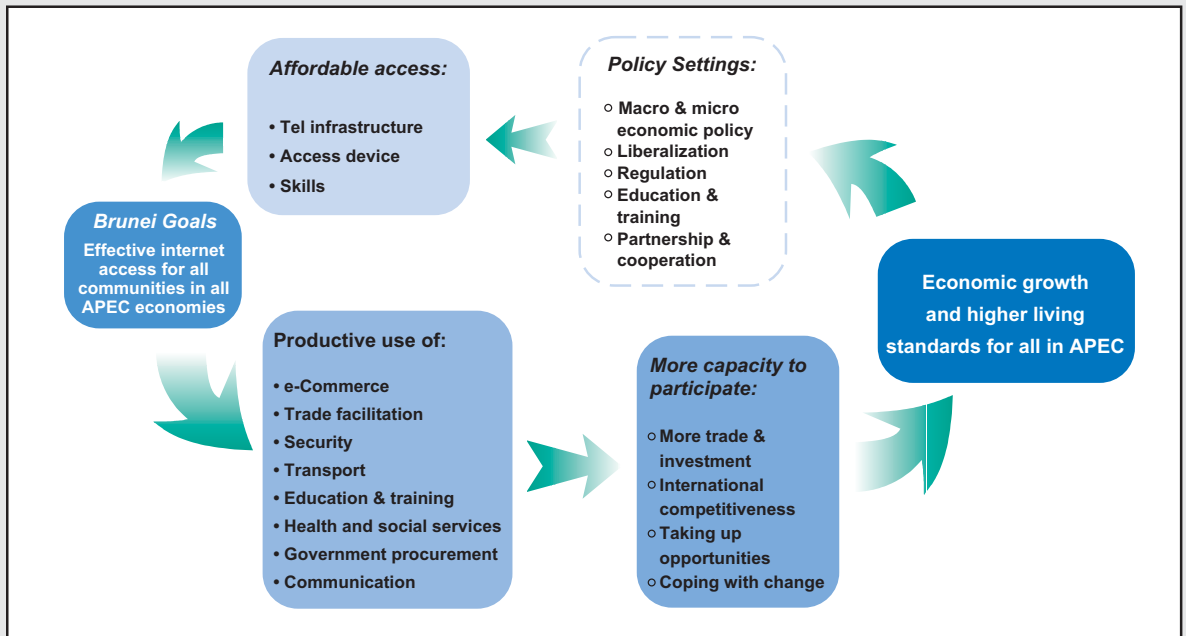
The importance of the Strategy in regional economic integration

The e-APEC Strategy is now much more important to the APEC region than it was in 2001. This is because ICT-driven systems are increasingly the means through which regional economic integration is intensifying.

Rapid advances in technology and applications are enabling whole systems of production, services and international transactions to be conducted seamlessly. This is leading to significant reductions in costs and increases in competitiveness for economies and firms that integrate ICT systematically into their activities. This trend is set to compound in the years ahead and the benefits will go to those economies and businesses that cooperate and coordinate in the process.

This is the goal of the e-APEC Strategy.

Strategic approach necessary for seamless and open markets

The stakes for economies and firms not embracing a systematic and strategic approach to ICT have risen markedly during in the last three years. Implementing parts of the Strategy is no longer enough as the real value in regional economic integration comes from coherent systems that operate across the region.

The shape of developments, both regionally and globally, has already changed to a point where it is unlikely that APEC can effectively achieve its goal of having a seamless, free and open market in trade and investment without vigorously pursuing the e-APEC strategic approach.

For economies that are making rapid digital advances, an ongoing strategic and integrated approach is needed to translate the potential of

these advances into practical and productive business, government and community activities.

For economies that are less digitally advanced, the risks of not taking a strategic approach have risen because these economies face the prospect of stalling in development in a more serious way than the simply-defined digital divide would indicate. However, these economies can draw considerable benefit from the "demonstration effect" of developed economies and this gives them the opportunity to advance more rapidly by leapfrogging to higher levels.

Opportunities for education and wider development

The e-APEC Strategy also provides the foundation for unprecedented opportunities to bring whole regions and communities into the global development process.

Small enterprises can operate in a lower cost and more predictable environment and they can grow by trading beyond traditional borders through e-commerce and having greater access to information.

Governments can deliver a wide range of services including health services, at a lower cost to more communities and higher quality education can be available to provincial and rural schools, training centres and universities. Provincial governments, which are taking on greater responsibilities in many areas can be brought into the wider policy making process and become better informed about decisions necessary for provincial development.

A strong mutual interest in success

All economies in the region therefore have a strong mutual interest in the e-APEC Strategy becoming a fundamental part of their development. APEC itself can make a major contribution through capacity building efforts targeted at some of the most pressing areas which are common to all economies. The strategic approach provides APEC with a means to focus and add value to its sometimes compartmentalized efforts.

Progress in the Brunei goals – a cornerstone of the Strategy

APEC to double not triple access by 2005

The e-APEC Strategy cannot be implemented successfully without widespread access to the internet. In 2000, APEC set a goal of tripling the number of people in the APEC region with individual or community-based access by 2005 to give momentum to the Brunei Goals for 2010 set by Leaders.

While enormous progress has been made across the region, APEC is unlikely to achieve its goal of tripling the number of people with access from the 2000 base year. Some economies will more than triple the number with access. However, indications are that the total number of internet users is likely to double across the region by 2005.

These estimates are based on data provided by individual APEC members to the APEC Telecommunications and Information Working Group, which has been tracking progress since 2000 (see Figure 2).

This data may not provide the full extent of access, particularly the number of people who now have community or group-based access through internet cafes, schools and libraries and the workplace in government and business because this data is very difficult to obtain. Internet user penetration also appears better on a household basis than on a subscriber basis in many APEC economies.

In order for the region to triple internet access by 2005, the growth would have to occur mainly in developing economies where access is still at

Figure 2: Progress in meeting the 2005 Brunei Goals in the APEC region
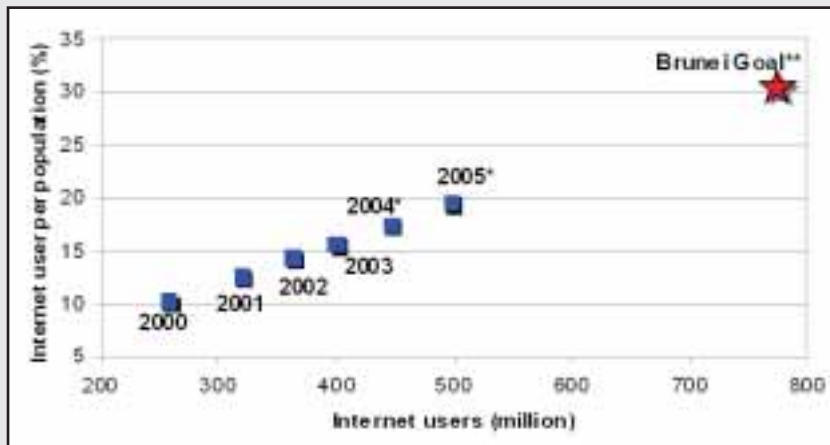
* Prediction based on compound average growth rate of 11.57% between 2000 to 2003.
** Brunei Goal of tripling internet access by 2005 based on 2000 value.
Total populations are used in this figure. A more accurate measure would be potential user populations.
Source: APECTEL, 2004

relatively low levels. While this goal is a region-wide target it should be noted that China and Peru have been outstanding performers with the increase in the number of users expanding as Leaders had envisaged.

Why is the 2005 goal unlikely to be achieved? Progress has been slower than originally expected because there has been no real expansion in fixed telephone lines across the region and this lack of fixed lines has not yet been taken up by mobile and wireless services. These services for internet access are now becoming available but are not yet affordable or widespread in developing economies.

No expansion in fixed lines a constraining factor
Since 2000, APEC economies have been constrained by virtually no expansion in fixed lines[1], especially in developing economies (see Figure 3).

In many developing economies affordability is also a constraint with the combined cost of connection and access making internet access relatively high in per capita income terms.

The fixed line sector in some of these economies is not open to significant competition or investment and they have not achieved the growth in fixed line penetration that was expected when APEC set its goals in 2000. It is clear that liberalisation in these economies is a particular challenge and will require a careful regulatory approach but the present policy settings have stalled expansion and are likely to continue to do so.

Mobile boom but not yet ready for data access
The boom in telecommunications in the region since 2000 has been in the mobile sector with widespread coverage and rapidly increasing penetration.[2] Mobile and wireless telecommunications will be the key to achieving the Brunei Goals but the technology currently in use is not capable of providing widespread data access to the internet at cost effective rates.

Figure 3: The number of internet users and fixed-line penetration in the APEC region since 2000

Source: APEC Tel and ITU.

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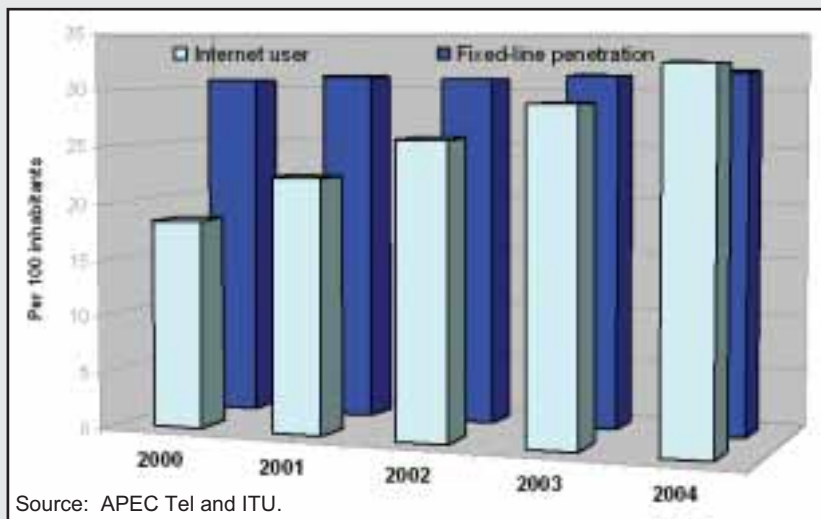
[1] See Part 1 of the background reference papers to see developments in each APEC economy.
[2] See Part 1 of the background reference papers.

As new generation technologies are developed, unused and new satellite capacity is made available and wireless technology becomes widespread, there will be a sharp increase in internet access across the region including from users in areas not yet serviced by other alternatives.

Open and competitive markets and high quality regulatory regimes will be needed by all economies to foster the private sector investment and innovation required to develop and tap the new generation technologies.

Significant achievements for users since 2000
APEC's significant achievement since 2000 has been lifting the quality of access and deepening the integration of the internet for new and existing users.

Korea has rapidly become a world leader in the penetration of broadband access and many other economies have markedly expanded broadband services through cable and direct subscriber line (DSL) technology.[3]

These developments are enabling users to make more effective use of the internet as an integrated tool for business and communication – a key development for progress in implementing e-APEC Strategy.

Considerable investment is also being made in the region in schools, universities and training institutions to lift the level of skills across the community. Many economies have developed innovative programs to bridge the digital divide for isolated communities and to ensure that senior citizens, women and small business operators and disadvantaged sections of the community are able to access the internet. While much of this is happening in economies where access is already widespread, developing economies are moving forward with programs that are often initiated by community-based groups.

Implications for the 2010 Brunei Goal
The 2005 interim target of tripling access across the region was intended to give momentum to the APEC Leaders' 2010 goal. This momentum is clearly underway in most economies.

Some developed economies claim that they already provide at least universal community-based access and the effectiveness of individual access has improved markedly with broad band. There are however some developing economies that have not made significant progress even in access for urban communities.

Mobile and wireless based technologies and infrastructure now provide the solution for achieving the Brunei Goal in 2010, especially in developing economies. With these technologies, widespread community-based access to the internet for provincial and rural areas, as well as urban communities, still remains possible for all economies.

The emerging technology is already becoming available at relatively affordable rates for communities and institutions but it will require new public-private partnerships, market oriented policies, good regulation and complementary regional development policies.

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[3] See Part 1 of the background reference papers.

Box 2: Priorities of Asia Pacific Telecommunications Users

APEC's responsiveness to the needs of end users of telecommunications is vital. The International Telecommunications Users Group (INTUG) is an active contributor to the work of the APEC Telecommunications and Information Working Group.

"Users of telecommunications in the Asia Pacific region understand the important role information and communications technologies and services play in achieving personal, community and economic goals. End users appreciate the commitment of APEC to the e-APEC agenda, and the work being done by various APEC groups to deliver these important outcomes for end users

The priorities for end users are:

1. Access to advanced, affordable, reliable communications information infrastructure, for all types of users, wherever they live and work
2. Particular focus on accelerating broadband access –using wired and wireless networks in order to achieve ubiquitous services.
3. Market liberalisation - to accelerate availability and affordability of communications infrastructure
4. Competition - to ensure effective, affordable choice for end users
5. Any to any connectivity - interconnection of networks (public, private, fixed and mobile) at fair prices and on non-discriminatory basis
6. Roaming between global mobile networks at fair prices, to facilitate business and trade
7. Elimination of Spam – to overcome the increasing cost and confidence problems associated with electronic communications
8. Regulators and policy makers who are focused on outcomes and benefits for end users, assessing these periodically and taking steps to improve performance by industry where necessary
9. Regulators and policy makers who seek input directly from end users when developing policies and programs to address the long-term interests of end users
10. Information, knowledge and skill development programs for end users to support their adoption and use of new technologies and services
11. Increased information sharing and cooperation between APEC regulators and policy makers, and with other international bodies, to ensure beneficial end user outcomes are achieved globally, regionally and nationally"

Rosemary Sinclair, Vice-Chair, Asia Pacific
International Telecommunications Users Group (INTUG)
http://www.intug.net

Steps for Accelerating Progress in the Brunei Goals

To step up progress to achieve the Brunei Goals APEC economies and APEC fora should:

- Focus on developing open and competitive markets to attract private investment and innovation in new generation technologies for wireless and satellite data access. This could be accomplished through predictable pro-competitive regulatory regimes.

- Step up liberalization of the fixed line sector since expansion of internet access, including broadband, still depends heavily on fixed lines.

- Develop the new infrastructure and technologies in conjunction with comprehensive regional development policies so that there are wider incentives for investment.

- In order to step up human capacity in areas of significant need APEC economies should place a high priority on accelerating access to provincial and rural areas through community and institution-based access for education and training institutions, and provincial and local governments. Innovative programs could be developed to allow small business owners and farmers to share access to these facilities.

- Work with the region's leading tertiary institutions including the Association of Pacific Rim Universities, the Global Development Learning Network and other regional networks to foster more extensive use of distance learning.

Strengthening the enabling environment

The e-APEC Strategy identifies the complex mix of macro and microeconomic policy settings and actions that are required to establish the environment for both establishing and integrating ICT effectively. It also lays out the importance of strong governance and regulation.

APEC has a comprehensive work program to foster improvements in this environment. It has included setting down APEC to Enhance Competition and Regulatory Reform and Non-Binding Investment Principles as key guides and considerable work on strengthening markets including the legal infrastructure. Given APEC's diversity, emphasis is placed on a best practices approach, training and information sharing and greater transparency through standardized information. These programs are laid out on APEC's web site, www.apec.org.

APEC economies have continued to make improvements in both the investment climate and in policies for competition and regulation. This still varies widely across the region. Most APEC economies are developing competition policies and competition laws. Some have implemented comprehensive policies that apply across the whole economy while others are taking a sectoral approach through specific regulatory agencies. Exemptions of some sectors or industries from competition policy remains a concern to investors and even more so if the future course of policy making remains uncertain.

Background analysis supporting the World Development Report 2005 "*A Better Investment Climate for Everyone*[4] indicates that policy

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[4] Mary Hallward-Driemeier and David Stewart, *How do Investment Climate Conditions Vary Across, Countries and Firms,* September 2004

uncertainty is the leading overall constraint to investment in East Asia and Latin America. The analysis acknowledges wide variations across the regions but one in three firms reported policy uncertainty as a major or severe constraint in East Asia.

The analysis reports that macroeconomic instability remains the second ranking constraint in East Asia and third in Latin America. Corruption is listed in the top three constraints for both regions and the report notes that the mix of policy and uncertainty leads to unpredictable interpretation of regulations.

Growing global and regional competition for investment means that the relative performance of APEC economies in transparency, predictability and governance are of increasing importance.

In 2002, APEC Leaders raised the priority for greater transparency in APEC economies with a comprehensive Statement on Implementation of the Transparency Standards laid out the previous year in the Shanghai Accord. Implementing these principles across all APEC economies will be onerous but transparency works directly against the tendencies for corruption and unpredictability in interpretation of regulations.

In 2002 APEC Leaders also moved to maintain open markets and supporting policies to boost growth in the digital economy with a Pathfinder initiative to implement APEC Policies on Trade and the Digital Economy. This is a key initiative supporting the e-APEC Strategy and one that is intended to provide leadership in the WTO.

The state of e-infrastructure

E-infrastructure is basic to an e-economy because it provides the means for *access.* It requires very large investments in both the physical infrastructure and in the associated technology. The telecommunications sector is now undergoing significant change and it requires policy settings that meet the demands for ongoing change and innovation.

Expanding and improving e-infrastructure remains a central issue for many APEC economies but it is the most pressing issue for the region's developing economies. Developed economies which are well served with infrastructure must still meet the demands of changing technology.

For this assessment, PECC has prepared extensive background reference papers on the state of e-infrastructure reviewing teledensity, internet access, affordability, liberalization and regulation. These are available in an accompanying CD.

Performance on the provision of e-infrastructure

Traditional fixed line networks remain important for access as new technologies are being developed to meet the demand of data access.

While teledensity is still very low in some developing APEC economies it is improving. Big disparities in access between urban and rural areas are one of the most critical policy issues which must be addressed. Affordability also varies, with some developing economies locked in high cost access relative to income levels.

The mobile sector is the high flyer in all APEC economies regardless of levels of economic development. Mobile network penetration in many economies is higher than fixed line penetration

(see Figure 4). As new generation technologies develop, mobile networks are likely to become effective for data access. The mobile sector was not subject to the same entry restrictions and most economies now have competitive mobile sector markets. Affordability is generally greater in the mobile sector.

Internet user penetration looks much better on a household basis than on a subscriber basis in many APEC economies. More work needs to be carried on the role of public and community access points to determine how important they are in the region in overall internet access. Many economies have greatly reduced internet charges. In some

are made. Due to the diversity of APEC economies, many economies have still some way to go to reach ITU international "goalposts".

Liberalisation moving ahead in most economies

A significant process of market liberalisation in the fixed line sector has been going on for the past five years with most economies opting for more open competition. This has yielded benefits for economies and their business sectors and has generally contributed to greater affordability and access. For some economies, there is still much further to go.

Figure 4: Comparison of APEC fixed-line and mobile subscribers
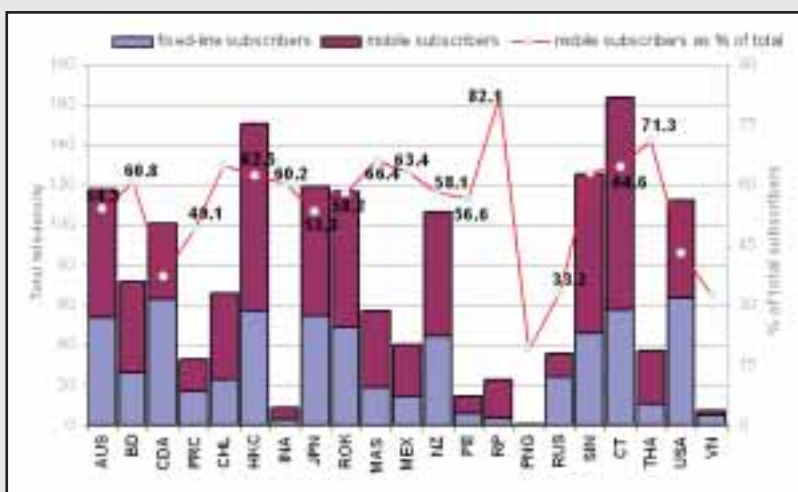

Source: ITU, 2003

economies, the telephone charge is still a large component. Broadband is growing rapidly in many economies with the development of DSL.

APEC includes some of international leaders in areas like broad band delivery when comparisons

PECC researchers have prepared a Market Access Indicator[5] to measure the level of openness in APEC economies. This is used to compare changes in market access for each economy in both the fixed line and mobile sectors between 1998 and 2003.

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[5] The methodology and values for each component of the Indicator for each economy is included in the Appendix of part 2 of the background papers in the accompanying CD. The main feature of the MAI Index is that its offers a simplified and overview view of market opening performance by narrowing down a wide array of information into a few values. Given the diverse historical, legal and political characteristics of APEC economies, the inclusion and omission of variables is a delicate and balanced act between depth and inevitably involves some qualitative judgement.

Figure 5: Changes in market access (1998-2003)
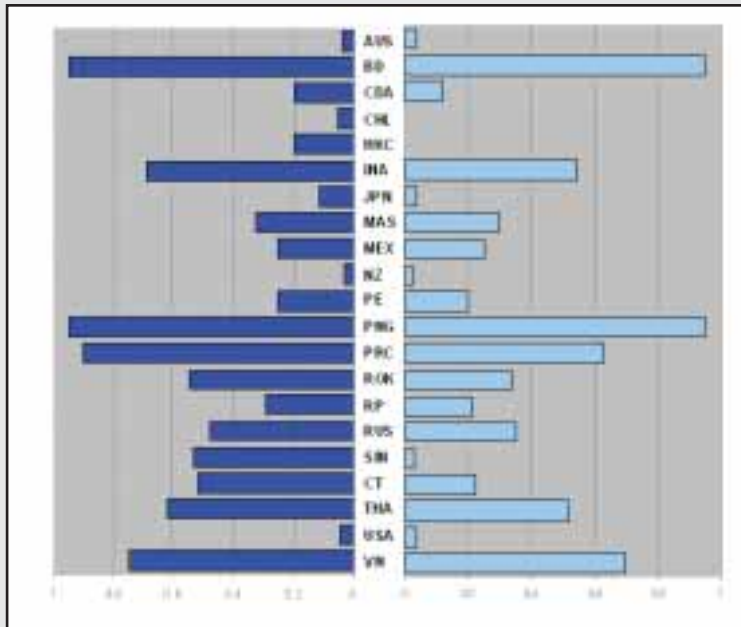
Note: A score of zero equals most accessible

Figure 6: Improvements teledensity in selected APEC economies
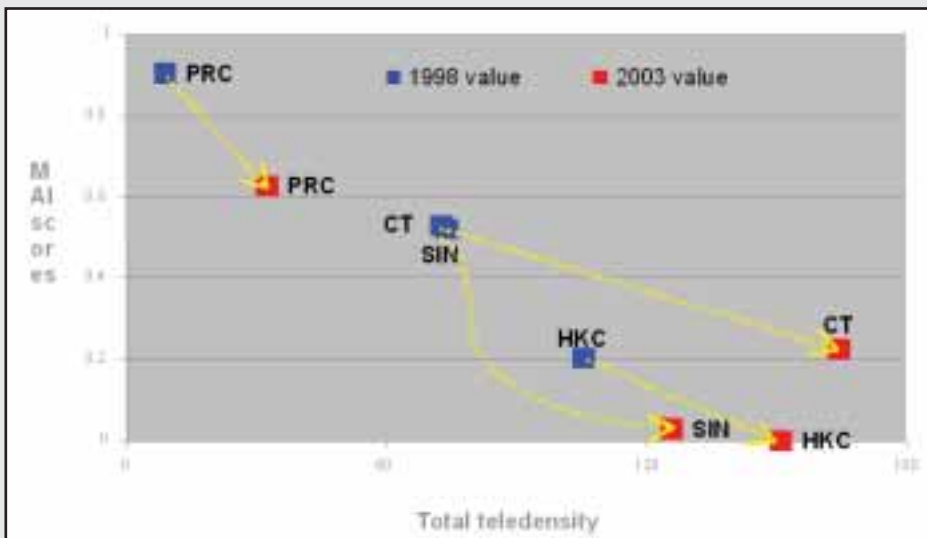
The Indicator shows there have been improvements in most APEC economies but that Singapore and Hong Kong, China have led the way in opening markets from 1998 to 2003. Chile scores a zero which denotes most accessible. Increased competition is a feature now of both the fixed line and mobile sectors although the mobile sector was more open from the outset.

This trend toward open competitive markets will continue to be important to allowing economies to increase their teledensity and attract new technologies. Figure 6 shows that the moves toward greater market access have been associated with significant increases in teledensity in some of the leading economies.

Regulation a vital partner with liberalization
The importance of good regulatory regimes increases as markets are opened to more competition.

Regulation is still required to preserve the outcome of liberalisation in the e-infrastructure sector. Due to both historical and technical reasons, regulation is needed to prevent incumbent operators from misusing market dominance. Regulation is also needed to ensure that public interest objectives (e.g. sector development, any-to-any conectivity, service quality, pricing and Universal Service) are accomplished. Without proper design, regulation can also be a major impediment to liberalisation and competition.

APEC has agreed that the WTO Reference Paper on Basic Telecommunication offers the basic template for establishing such regimes. More subtle and operational practices may be needed to facilitate transitional APEC economies.

The APEC Telecommunications and Information Working Group is making a significant contribution to improving understand of regulatory issues for the telecommunications sector. As well as sharing information on regulatory changes twice a year, the economies have provided the APEC TEL with progress in implementing the WTO Reference Paper.

This stocktaking process recently reported to the APEC TEL revealed both a weakness in understanding what is meant by implementation and different interpretations of implementation. This lack of clarity poses difficulties for the business sector. APEC TEL is now embarking on developing best practices for implementation of the WTO Reference Paper and this is a significant contribution to enhancing regulatory performance in the region.

Facilitating seamless trade: a key component of the Strategy

The region is already benefiting from the application of e-APEC Strategies to facilitate and secure trade.

Paperless trading
APEC has set a target to reduce or eliminate the requirement for paper documents needed for customs and other cross-border trade administration and other documents and messages relevant to international sea, air and land transport, that is, "Paperless Trading" in goods, where possible, by 2005 for developed and 2010 for developing economies, or as soon as possible thereafter.

Fifteen APEC economies now have explicit to achieve the goal. APEC has also begun pathfinder

initiatives for electronic sanitary and phytosanitary certificates and electronic certificates of origin.

APEC economies have developed systems that began with Electronic Data Interchange (EDI) to systems that utilize the internet so that business users can interface readily interface with customs and other authorities. Further cooperation is underway to develop a "single window" approach for all relevant transactions.

This strategic approach has required significant levels of cooperation from a wide range of agencies and private sector representatives and is already resulting in large economic benefits for business, port authorities and related government agencies.

APEC will seek formal Ministerial approval in November 2004 for a new framework mapped out by Officials entitled *APEC's Strategies and Actions toward a Cross-Border Paperless Trading Environment.* This strategic plan involves capacity building, collaboration with other organizations, public private partnerships and strengthening technical capacity. It aims to provide a comprehensive paperless trading environment that enables the electronic transmission of trade related information across the region within the timetable of the Bogor goals. The strategies and actions being taken provide a model approach to the e-APEC Strategy on a domestic and regional level.

APEC should also be encouraged to step up its initiative to work with the logistics sector so that benefits already achieved can be further expanded. This approach provides the means for APEC to achieve its goal of substantial reductions in transactions costs in international trade and the immediate target of cutting transactions costs to business by 5 percent by 2006.

More secure trade requires the same approach
The same strategic e-APEC approach is being used in the APEC STAR (Secure Trade in the APEC Region) Initiative to guard against the potential for threats of terrorism to the trading system and provide more secure trade.

Following the terrorist attack of September 11, 2001, business was concerned that procedures to secure shipping and ports would impose added costs to their supply chain through disruptions to the transport system. Many economies are now cooperating in several international and APEC economy-led initiatives including the US-led Customs-Trade Partnership against Terrorism (C-TPAT), Container Security Initiative (CSI) and the 24-Hour Advance Cargo Manifest Rule which applies to cargoes entering ports in North America.

These and many other initiatives for enhancing inspection and port security, use ICT to provide and transmit information and require the business sector to have the capacity to interface electronically.

While some businesses are incurring early setup costs to gather and provide relevant information in a timely way, research[6] shows that these initiatives will reduce transaction costs and make the supply chain more seamless. Some of the technology is being adapted to ensure better supply chain management.

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[6] Draft PECC Study on the Mutually Supportive Advancement of APEC's Trade Facilitation and Secure Trade Goals post September 11 perpared for presentation to APEC, 2004

Building the environment for e-commerce

Increasing adoption of e-commerce within the region depends on the integrity and security of the e-commerce system as well as effective access to the internet.

APEC is working at an economy level, with business and with the OECD to ensure that there is a bridge between efforts being undertaken within the region and international work.

There is a major focus on data privacy to protect personal information of consumers. APEC is completing the difficult task of developing a set of privacy principles and implementation mechanisms to facilitate exchanges of information on data privacy within individual economies.

APEC is also engaged in capacity building efforts to assist APEC economies implement APEC's Voluntary Consumer Protection Guidelines for the On-line Environment agreed upon by APEC Ministers in 2002. These cover international cooperation, education and awareness, private sector leadership, on-line advertising and marketing and the resolution of consumer disputes.

APEC is initiating a survey to determine the extent of the problem of SPAM throughout the region and to determine the adequacy of national enforcement laws and agencies.

Many of these issues can be most effectively addressed with cooperation between individual APEC economies, international organizations and the APEC groups working on interrelated activities. APEC fora in particular should be encouraged to find synergies in their work to ensure that the results for individual economies take a more strategic focus.

Stepping up integrated e-Government services

APEC includes several of the world leaders in international assessments of e-government and many other economies are moving rapidly to establish comprehensive e-government services. The UN e-Government Readiness Rankings show that many economies have also improved their rankings over 2001.

Table 1: UN e-Government Readiness Rankings		
APEC economies listed by UN	Ranking 2003	+/- Change in relative position from 2001 to 2003
USA	0.927	---
Australia	0.831	---
Canada	0.806	+2
Singapore	0.746	---
Korea	0.744	+1
New Zealand	0.718	-3
Japan	0.693	+1
Chile	0.671	+1
Mexico	0.593	-2
Philippines	0.574	+4
Malaysia	0.524	---
Peru	0.463	---
Brunei	0.459	---
Thailand	0.446	+4
Indonesia	0.422	---
China	0.416	+1
Vietnam	0.357	-1
Russia	0.223	-8
PNG*	0.170	NA

Source: Asia Oceania Electronic Market Place Association: http://www.aoema.org/E- Government /Benchmarking_and Assessment_Tools.html
Includes UN members from APEC

APEC is therefore well positioned to step up cooperation efforts among its members to tap the "demonstration effect" of the leading economies. This will bring tangible benefits to the domestic development process and to the domestic and international business sector.

While there is work being undertaken in APEC in specific areas like government procurement, a significant effort is needed to help establish comprehensive e-government services in all APEC economies that have the capability of being expanded and development over time. This includes a focus on provincial and local governments.

Box 3: Improvements for investors in Singapore through e-Government

The e-government initiative launched by Singapore in 2000 included business registration and licensing procedures. It provides an online application system for business registration and licensing and a one-stop online application system for certain special licenses that previously required separate submissions to as many as 12 regulatory authorities. The integrated approach reduced the cost of incorporating a new company from anywhere between US$700 and US$20,000 to a flat fee of US$175. What used to require two days now requires less than two hours.

Quoted from the World Bank's World Development Report 2005, p.54

Skills and training remain the constraint to more rapid progress in most economies embarking on e-government. APEC, in cooperation with training institutions and the business sector, would benefit from making this a higher priority focus for its human capacity building work.

Key issues from PECC- associated research indicates that:

• e-Government is a core element of government structural / financial reform and there is a need to accelerate its implementation.
• Promotion of e-Government is essential to enhance international competitiveness in the national economy.

• Application of business management models to e-Government is a key for success.

• e-Government brings about synergy effects on regional industrial development.

• Innovation contributes to technology–oriented community development and the need for more emphasis on R&D.

• Information security is an emerging issue for obtaining the confidence of users.

• IT capacity building is important for digital opportunities in e-Government and the training of Chief Information Officers should be a foundation for further human capacity building efforts.

• Leadership is needed to establish global standards for an e-Government framework.

• The integration of activities between central and local governments should be made a high priority.

Ensuring that APEC projects add strategic value

APEC has a vast range of projects, seminars and meeting on issues that relate to the e-APEC Strategy and these are outlined in matrices and work programs on the APEC website. Listing and assessing all of these projects is beyond the scope of this assessment.

While these activities may be valuable, many are developed and executed in an ad hoc manner with outcomes that only benefit those who take part directly in the activities. APEC itself has relatively scarce resources and project initiators should consistently give thought to how these projects might add to a more strategic approach within APEC.

APEC's reporting of activities through matrices tends to present APEC's work without a sense of its priority or significance and there is a risk that implementing the e-APEC Strategy will be seen as a compilation of projects.

Value adding comes from strategically connecting the various parts of APEC's work and building upon the outcomes so that in turn APEC can build a more seamless and interconnected economic environment.

Priorities for skills development

Perhaps the most significant challenge for APEC and its member economies in implementing the e-APEC Strategy is to raise the level human skills and the ability of all stakeholders to operate in a rapidly changing and interconnected environment.

APEC's resources for human capacity building are spread very thinly across many projects which are small in scale and which often have no multiplier effects beyond the activity. One off meetings or seminars, for example, are likely to have much less benefit than regular dialogues which are directed at wider outcomes. Strategically targeting the resources around key elements of the e-APEC Strategy is required.

Key areas for more focused APEC-funded capacity building activity for the e-APEC Strategy include some of the principal topics covered in this assessment: developing better regulation, e-government systems, distance learning, paperless trading and trade facilitation. Carefully prepared programs in these areas are likely to be investments which have compounding impacts within the APEC region. The business sector and other institutions and bodies have a large stake in improved skills in these areas and are likely to contribute if they see it as part of a strategic effort.

Cooperation between APEC groups

The scope of the agenda of individual APEC groups is understandably constrained by the Ministerial and departmental portfolio responsibilities. Effective cooperation between APEC groups on some key issues like paperless trading is occurring and the results are giving APEC the capacity to make a major contribution. More cooperation between the APEC TEL and the Electronic Commerce Steering Group is likely to benefit both groups. This cooperation need not be bureaucratic but rather should be focused around substantive issues with the aim of developing more strategic outcomes. There are other APEC groups which are less closely related but who would benefit from complementary cooperation on emerging issues.

Box 4: Key groups in APEC addressing the e-APEC Strategy

APEC's agenda on issues relevant to implementation of the e-APEC Strategy is carried out in many fora including APEC Finance Ministers process. Four APEC groups are contributing directly to the Strategy

APEC Telecommunications and Information Working Group
The APEC TEL's Program of Action covers implementation of the e-APEC Strategy, implementation of the Digital Divide Blueprint for Action, promoting policy and regulatory measures to liberalise trade and investment in the telecommunications and information sector, e-security, e-government, mutual recognition arrangements for the conformity assessment of telecommunications equipment, human capacity building and an active dialogue with the business community.

Electronic Commerce Steering Group
The ECSG's program to maximise the benefits of e-commerce for business in the APEC region includes work on data privacy, consumer protection, cyber-security, paperless trading, trade facilitation and spam. Economies have also approved a revised structure for the group and agreed to increase cooperation with the Organisation for Economic Cooperation and Development (OECD) and the Global Business Dialogue on Electronic Commerce (GBDe). Information on upcoming meetings and workshops can be found at www.export.gov/apececommerce.

Committee on Trade and Investment
The Committee on Trade and Investment works to reduce impediments to business activity in 15 key areas outlined in the Osaka Action Agenda - tariffs and non-tariff measures, services, standards and conformance, customs procedures, intellectual property rights, competition policy, government procurement, deregulation, rules of origin, dispute mediation, mobility of business people and implementation of World Trade Organization (WTO) obligations. These areas are a vital part e-APEC Strategy. Its work on trade facilitation and secure trade and its cooperation on the paperless trading agenda through its group on customs procedures provide direct components to the Strategy.

Economic Committee
The Economic Committee conducts research on economic trends and issues in the APEC region in support of APEC's priority agendas. It also serves as a forum for APEC Member Economies to exchange information and views on economic trends and issues. The Economic Committee has carried extensive work on the New Economy and Knowledge-based Economy (KBE) issues, including Patterns and Prospects of Technological Progress in the APEC Region, and Development of Industrial Clusters towards KBE. It has published an extensive report on The Drivers of the New Economy: Innovation and Organizational Practices.