# Briefing Paper

## IIC Asia Forum
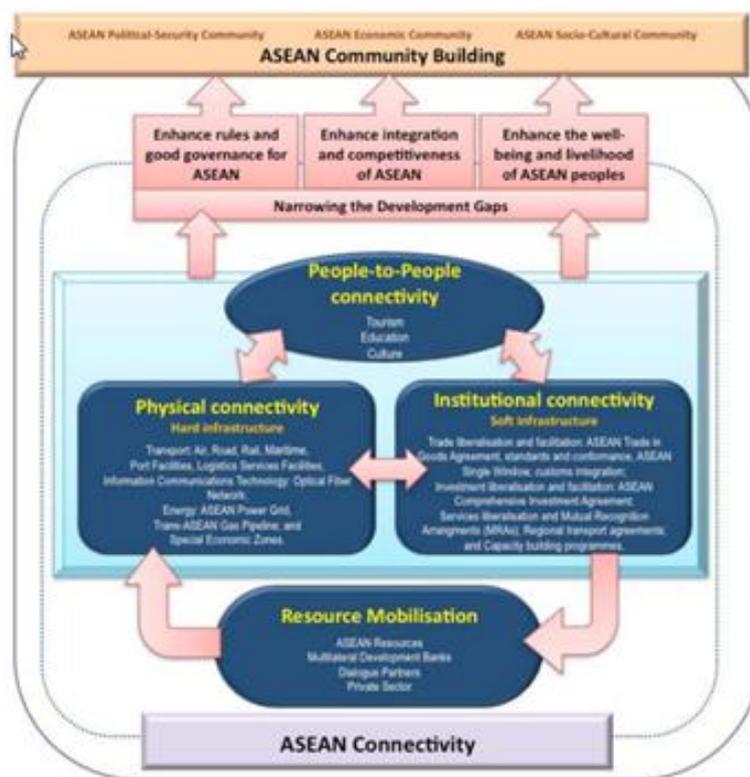
## (Singapore)

## ASEAN ICT Masterplan 2015

3rd April 2012

# ASEAN ICT Masterplan 2015

Since September 2003 the ASEAN Telecommunications and Information Technology Ministers (TELMIN)[1] have adopted various programmes for employing ICTs to strengthen and develop ASEAN economically, politically and socially. Economically, to reduce the transactions costs of intra-ASEAN trade and boost ASEAN international trade and investment; politically to develop a "people-oriented" approach to growth and development;[2] and socially to bridge the digital divide and open the door to equal opportunity to drive skills development, innovation and entrepreneurship. In broad outline, this is the ICT component of the vision ASEAN has for itself.

The vision is most comprehensively spelt out in the 2010 *Masterplan on ASEAN Connectivity: One Vision, One Identity, One Community (MPAC)*.[3]  The MPAC was drawn up in consultation with the Japan-initiated Asian Development Bank (ADB) and the Tokyo-based Economic Research Institute for ASEAN and East Asia (ERIA), UNESCAP[4] and the World Bank.

**Diagram 1**


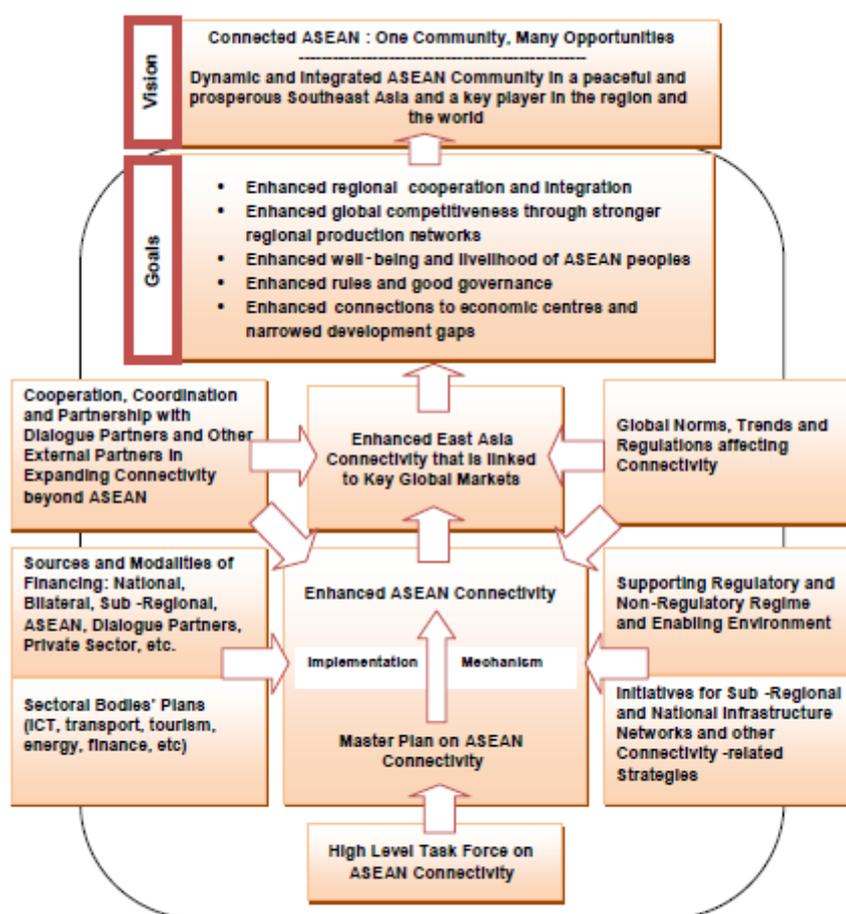
Source: Modified from ERIA

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[1] See the Singapore Declaration http://www.aseansec.org/19594.htm
[2] Note: not "people-centred" which rather begs the question of who decides.
[3] http://www.aseansec.org/documents/MPAC.pdf
[4] UN Economic and Social Commission for Asia and the Pacific. The Asia region of ESCAP embraces all ASEAN countries and ESCAP is almost alone among UN agencies with powers to convene inter-governmental meetings at regional and subregional levels.

Diagram 1 (MPAC Figure 1.1) which is adapted by ASEAN from ERIA illustrates the components of the MPAC which divided between Physical connectivity (including ICT infrastructure), Institutional connectivity (including policy and regulations) and People-to-People connectivity. Diagram 2 illustrates the ASEAN process through which the MPAC works upwards from the initial proposals of the High Level Task Force to the vision and goals of a 'Connected ASEAN: One Community, Many Opportunities'.

**Diagram 2: Vision and Goals of ASEAN Connectivity**



Source: Modified from Thailand's paper on "Possible Approaches towards Enhancing Regional Connectivity: A Preliminary View"

## ASEAN + 3

A feature of this diagram worth noting is the 3rd box up "Enhanced East Asia Connectivity that is linked to key Global Markets". Boosting connectivity with East Asia would certainly complement the goal of an integrated ASEAN trying to strengthen its international trade and investment links globally, and ASEAN + 3 (China, Japan and S. Korea) is recognition of the fact. The announcement of a Greater East Asia Co-Prosperity Sphere in 1940 by wartime Japan was a colonialist/imperialist version of the idea. In more recent peaceful times both Japan and South Korea have placed much emphasis upon connectivity with S.E.Asia in their

aid and assistance to regional agencies, such as the ADB, the APT, through APEC and others and directly to national governments. In part this has been promotion of their own ICT sectors into the region, in part recognition by their governments that the more trade and investment that connects through their gateways the better and in part a sense of keen competition between themselves.

The rise of China as an economic as well as political power has added a new dimension with mixed consequences. On the one hand, China was widely regarded as an economic threat, and is still regarded as a political threat by several ASEAN countries with territorial disputes not only unresolved but with little sign of an agreed procedure to resolve them. The economic threat was most vividly seen in the undermining of the ASEAN "growth triangles" (GT) strategy of the late 1980s and 1990s as investment and manufacturing diverted to China.[5] On the other hand, China's rising demand for imports, and its own rising costs of manufacturing are creating a new investment landscape. Talk of growth triangles continues, supplemented now by "flagship projects" of the MPAC such as the SKRL rail project linking Singapore to Kunming (China) and subregional projects such as the Greater Mekong Subregion (GMS) Cross-Border Transport Agreement (CBTA) described as of "particular importance" in the MPAC (para 71). Like the EU, the motivations behind ASEAN were always first and foremost political, first to combat communism, later to secure a peaceful resolution of subregional conflicts. ASEAN+3 is a sensible step in that direction with China and a way to finesse the competing claims of these dominant economic powers. Growing the economic pie of ASEAN is seen as preferable to competing for it and the resources that give rise to it.

## ASEAN ICT Masterplan 2015 (AIM 2015)

At first appearance the *ASEAN ICT Masterplan 2015* or AIM 2015 looks like the implementation plan for the ICT components of the MPAC, including timelines. Indeed it has great similarities to Strategy 6 of the MPAC, including establishing a regional broadband corridor, an ASEAN Internet Exchange Network, developing common or compatible regulatory and technical frameworks, reviewing Universal Service Obligations, and prioritising the roll-out of broadband services to schools. In reality AIM 2015 came from the TELSOM Working Group (see diagram3) whereas the MPAC drew impetus from the 15th ASEAN Summit in Thailand in October 2009.[6]

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[5] The IMS-GT (Indonesia-Malaysia-Singapore, commonly known as the SIJORI Singapore-Johor-Riau Growth Triangle) was followed by the IMT–GT (Indonesia-Malaysia-Thailand covering contiguous areas of west Indonesia, north Malaysia, and south Thailand) and the BIMP-EAGA (Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area encompassing Brunei, west Indonesia, east Malaysia, and south Philippines). See Chia Siow Yue (1997) 'Regionalism and Subregionalism in ASEAN: The Free Trade Area and Growth Triangle Models' *National Bureau of Economic Research*, University of Chicago Press http://www.nber.org/chapters/c8603.pdf

[6] Strategy 6 includes a feasibility study for an ASEAN Single Telecommunications Market beyond 2015. No mention of it appears in AIM 2015.

AIM 2015 is far more detailed in terms of ICT targets, although despite timelines it remains to be seen how achievable as opposed to aspirational these targets really are. Some of them, like encouraging cooperation between appropriate line ministries are not truly targets at all, but processes, and the timelines are understood to be more like guidelines. As TELMIN meets only annually, the real work has to be done in through the Working Groups, and their progress can never be greater than the commitments at the local level.

AIM 2015 is not the first of ASEAN initiatives in the field of ICTs. Past initiatives include the e-ASEAN Framework Agreement, a database for National Information Infrastructure profiles, national Computer Emergency Response Teams (CERTS) in 2005, a Digital Divide Database and others.[7] AIM 2015 was agreed at the 9th ASEAN TELMIN meeting to "bring the ASEAN ICT sector to a higher level and to reinforce the role of ICT for ASEAN integration."[8] This was followed by an implementation plan and the official announcement of AIM 2015 at the 10th ASEAN TELMIN meeting in Kuala Lumpur in Jan 2011. Diagram 3 outlines the organizational process through which AIM implementation needs to go through and by which it will be monitored. A mid-term review is scheduled for 2013.

**Diagram 3: Governance Structure**
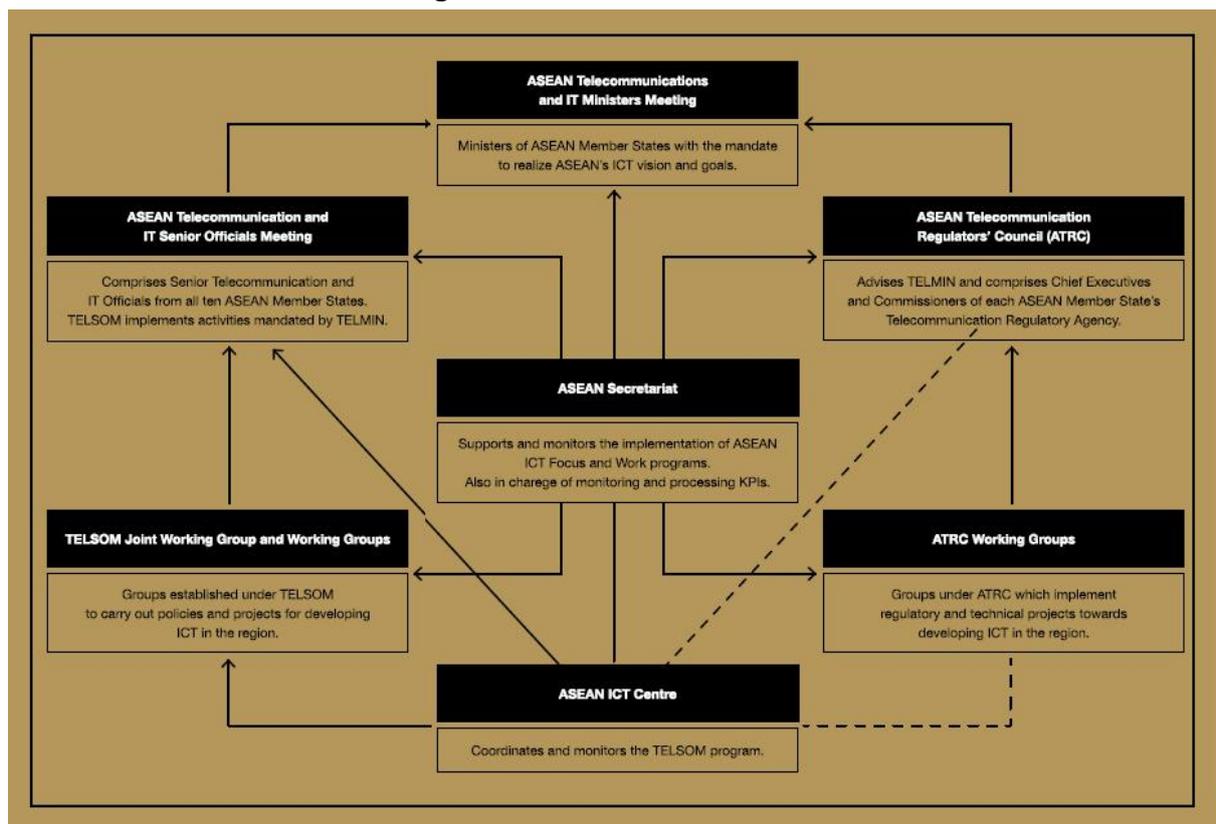


Policy decisions are taken by ASEAN TELMIN on the advice prepared by ASEAN TELSOM supported by the TELSOM Joint Working Group and Working Groups and processed by the ASEAN Secretariat. At the centre of the implementation process is the ASEAN ICT Centre

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[7] For details see http://www.aseansec.org/about_ASEAN.html
[8] http://www.asean.org/TELMIN/JMS-TELMIN-9.pdf

comprising home-based seconded officials from ASEAN Member States to strengthen the management and coordination mechanisms in the implementation of programmes. The current chair of the ICT Centre which is rotating is Myanmar, the Philippines holds the vice-chair. Dialogue partners including the public and private sectors are included at most levels, including funding proposals.[9] A CIO forum, postponed due to flooding in Bangkok in November 2011, will take place 19th-20th April 2012.

At TELMIN 2004 an ASEAN ICT Fund was announced with an initial "quantum of USD 5 million with equal contributions by all ASEAN members. The Fund will be used to accelerate the implementation of the ASEAN ICT Work Programme."[10] In 2011 the ASEAN Infrastructural Fund (AIF) was created with backing from the ADB which aims to leverage "more than US$13 billion" to "support the ASEAN Economic Community by 2015" and to "make the Master Plan on ASEAN Connectivity (MPAC) a reality."[11]

The Work Programme of AIM 2015 consists of three pillars on three foundations.

**Diagram 4: The 3 Pillars and the 3 Foundations [12]**
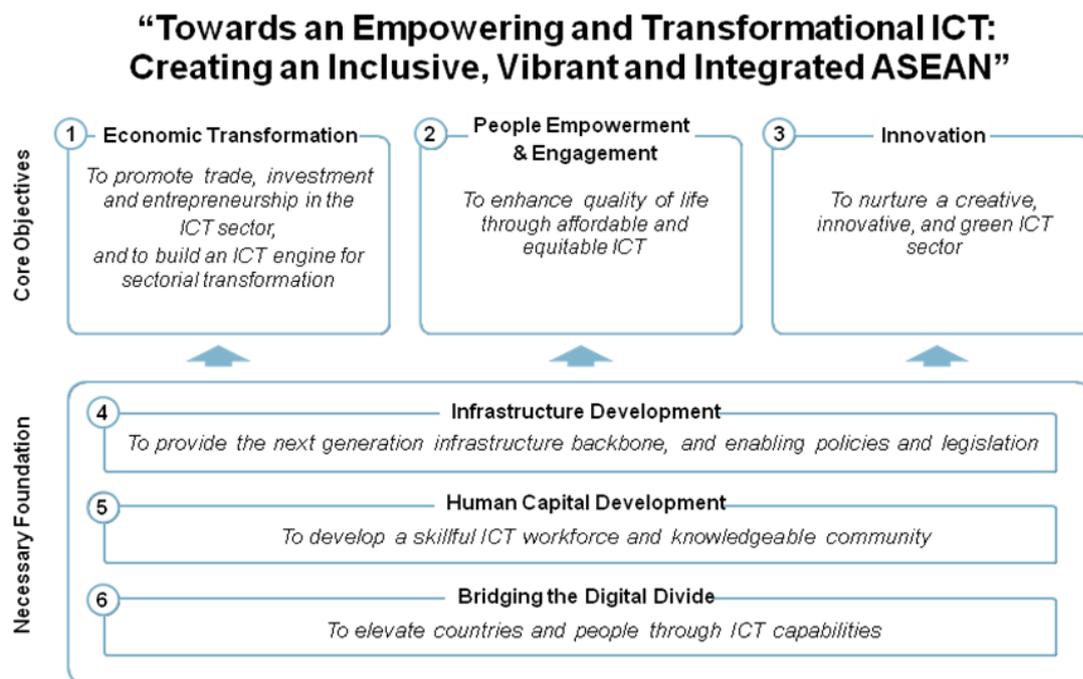


Source: MPAC Industry Consultation at:
http://www.google.co.th/url?sa=t&rct=j&q=asean%20broadband%20corridor&source=web&cd=5&ved=0CEA
QFjAE&url=http%3A%2F%2Fwww.aseansec.org%2FTELMIN%2FQuestionnaire-ICT-
2.doc&ei=2XBhT8GdMaOtiAL11aWzBA&usg=AFQjCNH0j9ShVkEbhzVO8iXw8p-w_dhLcw&cad=rja

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[9] Private partnership dialogue is discussed at http://www.aseansec.org/26500.htm
[10] http://www.aseansec.org/16296.htm
[11] http://www.aseansec.org/26643.htm. The ADB estimates ASEAN countries need USD60 billion annually for infrastructure projects: http://www2.adb.org/Documents/RRPs/REG/45097/45097-001-reg-rrp.pdf
[12] http://www.asean.org/documents/ASEAN%20ICT%20Masterplan%202015.pdf

AIM 2015 is built around six strategic thrusts of 3 pillars of 'economic transformation', 'people empowerment and engagement', and 'innovation' supported by 3 foundations of 'infrastructure development', 'human capital development' and 'bridging the digital divide'. These are shown in diagram 5. Together, the key outcomes envisioned include ICT as an engine of growth for ASEAN countries, recognition for ASEAN as a global ICT hub, enhanced quality of life for peoples of ASEAN and contribution towards ASEAN Integration.

**Diagram 5: The Details of the Pillars and Foundations**

| Action | Description |
|---|---|
| **3 Pillars and 3 Foundations of the ASEAN Masterplan: the details** | |
| **1.1 Pillars – Economic Transformation : Create a conducive environment where businesses can grow leveraging ICT** | |
| Facilitate sharing and exchanging of business information amongst ASEAN countries | • Engage the business community to identify their ICT needs and requirements<br>• Leverage existing initiatives and nurture the development of content and applications to facilitate information exchange and accessibility to data<br>• Develop a conducive ICT environment for business |
| Develop a framework to facilitate transparent and harmonized ICT regulations | • Harmonize regulatory practices and ICT standards |
| **1.2 Pillars – Economic Transformation : Develop PPP for initiatives for the ICT industry** | |
| Share various PPP models and practices among ASEAN countries to formulate PPP models for the implementation of ICT projects | • Determine best practice models most suitable for partnerships between the government and the private sector across ASEAN<br><br>• Adopt best practice PPP models for ICT projects to promote clarity and transparency between governments and the private sector in ASEAN[13] |
| **2.1 Pillars – Economic Transformation : Ensure affordable broadband access to every community** | |
| Study to lower intra-ASEAN roaming charges | • Analyse how intra-ASEAN roaming charges are derived and can be made cheaper to promote the use of mobile broadband access across the region |
| **2.2 Pillars – Economic Transformation : Ensure affordable ICT products** | |
| Enhance implementation of MRAs | • Ensure that all technical standards are in the ASEAN working language (English)<br>• Adopt common standards to reduce time-to-market for ICT products |
| **2.3 Pillars – Economic Transformation : Ensure affordable and seamless e-services, content and applications** | |
| Survey and study to identify gaps and | • Identify relevant e-services to be developed, considering in particular the cost of such e-services and location of content |

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[13] There is a misprint in the official published version which simply repeats the entry for 1.1. Thanks to IDA for the correct text.

| | |
|---|---|
| determine e-services to be developed | • Nurture an environment to facilitate the development of affordable e-services<br>• Promote e-services that can be adapted for local usage |
| Provide incentives or grants to promote e-services and content development | • Develop criteria to provide incentives to develop ASEAN-wide e-services and content<br>• Provide incentives to individuals and businesses to engage in e-services and content development |
| **2.4 Pillars – Economic Transformation : Build Trust** | |
| Promote secure transactions | • Develop MRAs for cross-certification of digital certificates within ASEAN<br>• Promote the use of two-factor authentication |
| Outreach to promote awareness of cyber-security | • Create public awareness through education about online security<br>• Forge joint collaboration with industry and other stakeholders<br>• Ensure personal data protection |
| **3.1 Pillars – Economic Transformation : Create Innovation COEs for R&D of ICT services** | |
| Establish networks of COEs | • Establish COEs across ASEAN to promote R&D, innovation and transfer of technology<br>• Connect COEs to facilitate the exchange of ideas and promote greater collaboration amongst ASEAN ICT experts |
| Develop ASEAN digital content exchange | • Develop platform to facilitate and promote the exchange of content |
| Promote IPRs at ASEAN level to safeguard innovation | • Promote IPR enforcement through sharing of best practices, guidelines and frameworks across ASEAN to safeguard innovation<br>• Provide incentives for R&R efforts as well as to acknowledge, recognize and reward ICT experts |
| **3.2 Pillars – Economic Transformation : Promote innovation and collaboration amongst government, businesses, citizens and other institutions** | |
| Recognize and reward ICT innovators | • Develop ASEAN ICT awards to promote creativity and encourage innovation<br>• Provide incentives for R&D efforts to acknowledge, recognize and rewards ICT innovators |
| Launch the ASEAN CIO forum | • Develop platform to promote sharing of best practices and collaborations among CIOs |
| **3.3 Pillars – Economic Transformation : Nurture innovation and creativity at schools** | |
| Ensure every child has access to broadband internet | • Promote access to broadband internet so that every child can remain engaged, connected and informed |
| **4.1 Foundations – Infrastructure: improve broadband connectivity** | |
| Action | Description |
| Establish an ASEAN broadband corridor | • Identify and develop locations in each ASEAN Member State which offer quality broadband connectivity<br>• Enable seamless usage of broadband services and applications across ASEAN to further connect and enhance the development of ICT and other sectors<br>• Promote the diversity of international connectivity among ASEAN Member States |
| Establish an ASEAN Internet Exchange Network | • Establish a regulator-operator forum to develop a platform to facilitate intra-ASEAN internet traffic<br>• Facilitate peering amongst ASEAN Internet access providers to improve latency and speeds as well as lower costs |

| 4.2 Foundations – Infrastructure: Promote network integrity and info security, data protection and CERT cooperation. | |
|---|---|
| Develop common framework for network security | • Establish common minimum standards for network security to ensure a level of preparedness and integrity of networks across ASEAN<br>• Develop a network security "health screening" programme for ASEAN to be implemented at regular intervals<br>• Develop best practice models for business continuity and disaster recovery for all sectors<br>• Establish the ASEAN Network Security Action Council (multi-stakeholder) to promote CERT cooperation and sharing of expertise amongst others |
| Develop common framework for information security | • Share best practices on the protection of data and information infrastructure across ASEAN |
| **5.1 Foundations – Human Capital Development: Build Capacity** | |
| Develop a registry of experts and innovators | • Establish database of ICT experts and innovation within ASEAN<br>• Forecast ICT manpower demand |
| Create ASEAN ICT Scholarship Programme | • Develop scholarship criteria and identify funding sources<br>• Encourage and attract ASEAN talents to make ICT their career of choice<br>• Support individuals with strong aptitude for ICT |
| **5.2 Foundations – Human Capital Development: Develop skills upgrading and certification** | |
| Establish MRA for skills certification | • Develop ICT skill standards for ASEAN to ensure quality of ICT talents<br>• Promote movement of ICT human capital within ASEAN |
| Develop ICT certification and skills upgrading programme | • Adopt certification of ICT skill sets (e.g. certification of cyber-security experts and trainers)<br>• Promote marketability of certified ICT experts<br>• Develop a competitive ICT workforce through skills upgrading to meet the demand for ICT resources |
| **6.1 Foundations – Bridging the Digital Divide: Review USO or similar policies** | |
| Review of USO or similar policies | • Review USO or similar policies with a view to include IT components and training as part of USO funding<br>• Ensure that infrastructure covered under USO or similar programme should be broadband internet capable. |
| **6.2 Foundations – Bridging the Digital Divide: Connect schools and advocate early ICT education** | |
| Prioritise roll-out to schools | • Establish collaboration between ICT and education sectors to provide broadband internet access to schools within ASEAN<br>• Include ICT as part of ASEAN school curricula to promote early ICT education |
| Collaborate between ICT and education sectors in ASEAN | • Provide comprehensive ICT training to teachers to encourage the use of ICT in education<br>• Exchange ICT exchange programmes for teachers and students<br>• Promote joint collaboration activities to raise awareness of ICT |
| Promote ASEAN integration through exposure to different cultures with ASEAN at an early stage | • Replicate the ASEAN Cyberkids camp across ASEAN<br>• Educate children to use ICT creatively and effectively beyond the school environment in an interactive manner<br>• Encourage the positive use of Internet<br>• Creat similar camps for teachers |

| 6.3 Foundations – Bridging the Digital Divide: Improve access and relevance of information | |
|---|---|
| Collaborate with relevant ministries | • Develop platform within the ASEAN institutional framework to identify relevant content for different communities and sectors within ASEAN<br>• Facilitate access and relevance of information to promote ICT adoption<br>• Promote public education on ICT for community development |
| **6.4 Foundations – Bridging the Digital Divide: Bridge the digital divide within ASEAN** | |
| Bridge the digital divide with ASEAN | • Integrate and review current efforts to promote ICT access and adoption to bridge the digital divide<br>• Leverage on USO or similar policies<br>• Facilitate access to ICT devices such as laptops, smartphones and computers<br>• Provide sustainable measures (e.g. training) where appropriate<br>• Harness and maximize resources to leverage on best practice models to promote ICT adoption |

The timelines or roadmap for the accomplishment of these goals is shown in diagram 6. The key question is: how attainable are they and is the timescale realistic or set as a guideline?

**Diagram 6: The MPAC Roadmap**
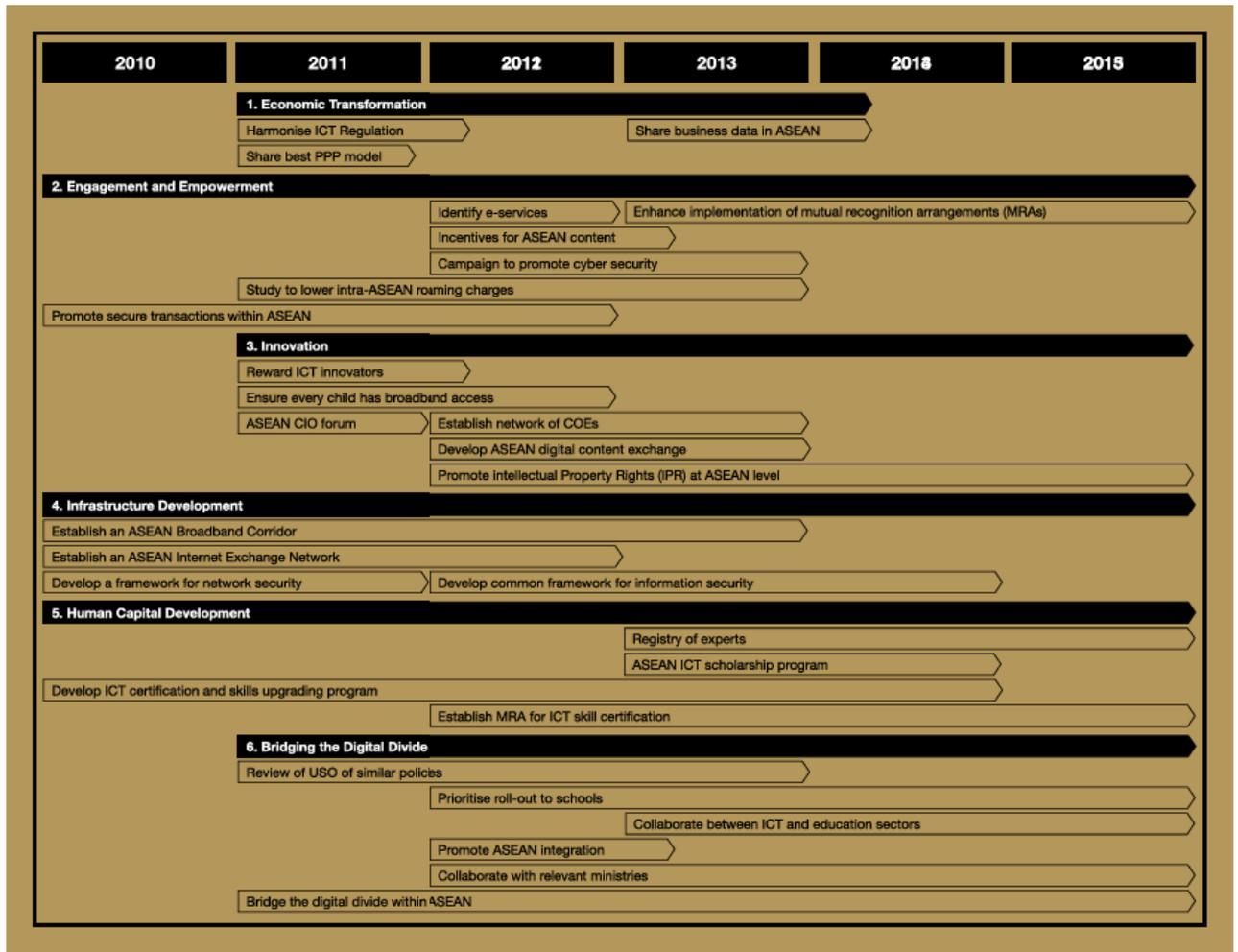
## The Pillars

o    Under "Economic Transformation" the harmonization of ICT regulations is targeted for 2011-2012, a rather optimistic target. Harmonization here refers to national regulations not supranational. This is one of the key areas in which input from the private sector takes place, but usually through channels such as the US-ASEAN Business Council. The sharing of best experiences of PPP models was scheduled for 2011. 'Best practice' assumes that there is one. 'Good practice' is more appropriate in light of the many different national agendas involved. For example transparency is 'good' practice because it is more likely to guarantee the costs and the benefits are well understood and are equitably shared leading to better policy decisions.[14]

o    Under "Engagement and Empowerment" a study to lower mobile phone roaming charges is under way, and Singapore and Malaysia have already reached such an agreement.[15] Unlike the EU, ASEAN has no legislature to enact regulatory powers to a Commissioner or a super-regulator. Identifying appropriate e-services across ASEAN, promoting online content and a campaign to promote cyber security are all issues for 2012. ASEAN countries plus dialogue partners such as Australia, China, India, Japan, Korea and at least one EU member State, are running annual cyber-security "drills" over a 5 year period. ICT Awards are currently under study to promote ASEAN content development. An informal experts group meeting in Jakarta, the HQ of the ASEAN Secretariat in 2011, explored the potential for ASEAN's own website to play a role here.[16] The promotion of secure transactions within ASEAN has been an ongoing objective since 2010 planning for the adoption of two-factor authentication.

o    Under "Innovation" the ASEAN ICT Innovation awards are set to be launched in Q2 of 2012 with the award ceremony scheduled for the 12th ASEAN TELMIN in the Philippines at year end. Brunei's Authority for Info-communications Technology Industry (AITI) is in charge of hosting and developing the framework for the awards.[17] Broadband access for every child is a policy being adopted across ASEAN but has a way to go. In Thailand, for example, the 'one tablet per child' project has been mired by contract issues.[18] In low-income countries there is still very little broadband available. The CIO forum is under way. In 2012 it is proposed to create/recognize R&D Centres of Excellence in each country, develop an ASEAN digital content exchange and promote IPRs at the ASEAN level. A sub-text to this must be the creation of data protection which will also help to encourage the setting up of data

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[14] Corruption is a serious economic as well as social and moral issue across many areas of ASEAN and PPP is no guarantee against it or of greater efficiency; it is does take expenditure off the books of the state.

[15] Other countries have also welcomed the adoption of the Addendum on ASEAN Telecommunication Regulators Council (ATRC), the Intra-ASEAN Mobile Roaming Rates to the record of intent by the 17th ATRC.

[16] One of the authors of this Briefing doc participated.

[17] Currently 5 categories have been proposed: Public Sector, Private Sector, Corporate and Social Responsibility, Start-up and Digital Content.

[18] The OTPC policy was an election promise not directly related to a broadband connectivity plan, which is part of the problem of course. See http://www.telecomasia.net/blog/content/thailands-otpc-project-will-be-mess

centres and establish ASEAN as a potential data centre or cloud computing hub. The COS and digital exchange programmes are seen as extending into 2013, while the challenge of an ASEAN-level IPR regime is understandably seen as extending to 2015. Between now and then who knows what BTAs will complicate the issues with a "noodle bowl" of principles and protocols.[19]

## The Foundations

o    Under "Infrastructure Development" all three main targets are set for accomplishment starting 2010. An ASEAN broadband corridor by 2013, which does not mean an actual physical "corridor" running like a road or railway line throughout ASEAN, but rather designated points of interconnection to provide a broadband matrix covering the entire region. The national level 'infill' is not raised as an ASEAN issue *per se*. Establishing an ASEAN Internet Exchange Network is a long-standing aim to avoid an unnecessary and costly round-trip of emails and online traffic from one ASEAN country to another ASEAN country via the USA. This target is due to be met 2012. Developing a framework for national security and a common framework for information security is an ongoing joint target ambitiously set for 2014.

o    Under "Human Capital Development" only the development of ICT certificates and a skills upgrading programme has been set to begin from 2010. Malaysia has already run into problems with what many in industry saw as an ill-judged attempt to establish purely national IT certified standards as a job entry/work permit requirement. The proposals are undergoing further consideration. Establishing a Mutual Recognition Arrangement (MRA)[20] for ICT skill certification, due to be realized in 2012 will prove a very tricky proposition. Thailand is currently tabling a proposal through the TELSOM Working Group and the views of the private sector, which are rather vital in this area, will be solicited. From 2013 an ASEAN ICT scholarship scheme should be established which may complement other such schemes, such as APEC scholarships. And a registry of ICT experts is due to be compiled, although how exactly this might be used in practice remains questionable.

o    Under "Bridging the Digital Divide" a review will take place of what is included in USO policies and how they are administered. For example, in some cases a USO fund works well, in other cases it can be an invitation to sticky fingers. The metrics are also important. Are USO payments based on build-out (supply) or take-up (demand) for example? What is universally agreed is the aim to provide broadband access to schools. These targets are

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[19] Several ASEAN countries, namely Brunei, Singapore, Malaysia and Vietnam are involved in the Trans-Pacific Partnership (TPP), with the latter two negotiating to join the group. The TPP while focused on increased trade through wider liberalization is also heavily focused on enforcing stricter IPR.

[20] MRAs are usually "arrangements" but can become "agreements" if countries sign onto them in which case skills become transportable across borders. Mostly "arrangements" apply to issues such as equipment type approval which obviates the requirement for components and devices to be tested multiple times for stands compliance when involved in trade. See APEC MRA http://publications.apec.org/publication-detail.php?pub_id=1103

aimed to bridge the digital divide within ASEAN, by which it is assumed means across ASEAN. Promoting the integration of ASEAN is stated as a target from 2012 but in reality is the vision. Collaboration with the relevant line ministries is also stated as a target, but in reality is a process and means to the ends. From 2013 onwards collaboration of ICTs and the education sectors is stated as a target, but it surely can be assumed that this is a process already well advanced in some countries and already an aim of the others.

## How Realistic?

As an example, take AIM 2015 initiative 3.3 of ensuring every child has broadband access by 4Q 2012. Table 1 provides a breakdown of broadband Internet penetration rates of ASEAN countries in 2010, and government targets where available; these measure per head of population. By household the data would look slightly better and if mobile broadband access were included (Malaysia now officially includes mobile in its national broadband data) even better, but still nowhere near the UN's Millennium Develop Goals [21] for the lowest income countries. Initiative 3.3 is also the agenda of initiative 6.2, which prioritises the roll-out of broadband to schools, but while 3.3 focuses on promoting broadband access to children in schools, initiative 6.2 focuses on network rollout which would explain their contrasting timelines, 2015 in the latter case. Both look ambitious; both are necessary.

### Table 1: Fixed Broadband Internet Subscribers

| Fixed broadband Internet subscribers per 100 inhabitants | ITU (2010)[22] | World Bank (2010)[23] | Government targets |
|---|---|---|---|
| Brunei | 5.44% | 5.44% | |
| Cambodia | 0.25% | 0.25% | |
| Indonesia | 0.79% | 0.79% | 30% Broadband penetration by 2014 |
| Laos | 0.19% | 0.19% | |
| Malaysia | 7.32% | 7.32% | 75% Broadband penetration by 2015 |
| Myanmar | 0.03% | 0.03% | 15% Teledensity for fixed line and broadband by 2015 |
| Philippines | 1.85% | 1.85% | - |
| Singapore | 24.94% | 24.77% | 95% Household and commercial |

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[21] http://www.un.org/millenniumgoals/bkgd.shtml and especially http://www.un.org/millenniumgoals/pdf/MDG%20Report%202010%20En%20r15%20-low%20res%2020100615%20-.pdf#page=73 (p.71)

[22] ITU Telecommunications Development Sector (2011). Key 2000-2010 Country Data, Fixed Broadband subscriptions. ITU website. Retrieved 2 Feb 2012. http://www.itu.int/ITU-D/ict/statistics/material/excel/2010/FixedBroadbandInternetSubscriptions_00-10.xls

[23] World Bank (2010). Fixed Broadband Internet subscribers (per 100 people). Data Indicators. World Bank website. Retrieved 2 Feb 2012.http://data.worldbank.org/indicator/IT.NET.BBND.P2

| | | | coverage by mid-2012 |
|---|---|---|---|
| **Thailand** | 4.61% | 3.87% | 95% Broadband penetration by 2020 |
| **Vietnam** | 4.13% | 4.18% | 20-30% Broadband penetration by 2015 |

## Conclusion

Masterplans are usually considered as "top" documents setting out the grand design of governments, but are then judged according to the capacity of governments to fulfill them. The challenge for ASEAN is all the greater because (i) so many governments are involved, and crucially, (ii) the capacity of governments varies enormously. At one extreme is Singapore which has its own Masterplan and a highly developed mixed-market economy with excellent infrastructure; at the other is Myanmar with very little economy and even less civilian telecommunications infrastructure. In between there is a spectrum which runs roughly as: Lao Republic, Cambodia, Vietnam, Indonesia, Philippines, Brunei Darussalam, Thailand and Malaysia.

MPAC and AIM 2015 represent the new thrust of ASEAN in the 21st century to forge an economic community to underpin regional political stability in exactly the way the EU set out to do. In light of this it is appropriate that 2012 is also the year of the 'ASEAN-EU Year of Science, Technology and Innovation'. Under the EU's 7th Framework Programme for Research and Technology Development (FP7) launched in 2007 will offer up to €10 billion for R&D projects including ICTs. In 2003 the EU launched the Regional EU-ASEAN Dialogue Instrument (READI) and part of its current mission is to support the MPAC and "develop a monitoring and evaluation system for the implementation of the strategy".[24]

Although the timetable for AIM 2015 maybe impossibly ambitious in some areas, in a sense that should not matter so long as significant progress is made using the framework overseen by the ICT Council and endorsed by TELMIN; crucial will be the scope of private sector involvement. There are obvious gaps in the programme, for example government procurement issues are not addressed although they are at the WTO level.

The MPAC sets out the broad vision leading up to the creation of an ASEAN Economic Community (AEC) in 2015 envisaging "the following key characteristics: (a) a single market and production base, (b) a highly competitive economic region, (c) a region of equitable economic development, and (d) a region fully integrated into the global economy."[25] Through a separate process, AIM 2015 sets out to meet ICT targets. As the saying goes,

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[24] READI Sectoral Update(ICT). But for a view that the EU pays insufficient attention to relations with ASEAN see Gauri Khandekar (2011) 'The EU's mistaken approach to ASEAN' *FRIDE Policy Brief* No.85 http://www.fride.org/publication/930/the-eu%27s-mistaken-approach-to-asean
[25] http://www.aseansec.org/18757.htm

"where there is a will there is a way" and indeed, despite the many challenges ahead, it does seem that ASEAN is resuscitating itself. The greatest challenge until recently was a sense of political inertia in many ASEAN countries and an uncertainty as to whether China would divert trade and investment eastwards. As noted above, the trade and investment landscape is now changing again. Economies like Indonesia, Vietnam, Philippines for example are hesitantly looking healthier, and the progress Myanmar is making towards a more normal and hopefully more democratic society is helping to revive an interest in ASEAN globally.

The big problem is that ASEAN finds it difficult to move at a pace faster than its slowest member. The countries of IndoChina have been offered a dual-track entry into the ASEAN Free Trade Area (ATFA) but for the AEC itself 2015 is the year. This was noted at the inaugural meeting of the ASEAN Economic Community (AEC) Council in 2009 despite the global recession.[26] Although recession typically encourages protectionism there seems to be a widespread recognition in ASEAN that future strength lies in Community which means creating intra-free trade as a means of withstanding the impact, and taking advantage of, international free trade. With an economy estimated at around $1.5 trillion ASEAN integration could clearly provide the region and the global economy with a considerable boost. The role of ICTs may not be decisive, but will be significant.

But the biggest challenge of all will not be any of these as such, but the domestic economic, social and political capacity of each country to handle the changes. Free trade, for example, can open the doors to a massive outwards flow of funds (legal and illegal) unless local investment opportunities are very real. Transparency and putting in place institutions that can provide it and enforce it will be fundamental. These issues are well known with ASEAN and diplomatically never addressed openly. That should and must change if the AEC is to avoid the Greek problem!

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[26] http://www.aseansec.org/22311.htm

**Diagram 6: Relationship between the percentage of the national population using Internet (2010) and GDP per capita (2008): Selected Economies – ESCAP**
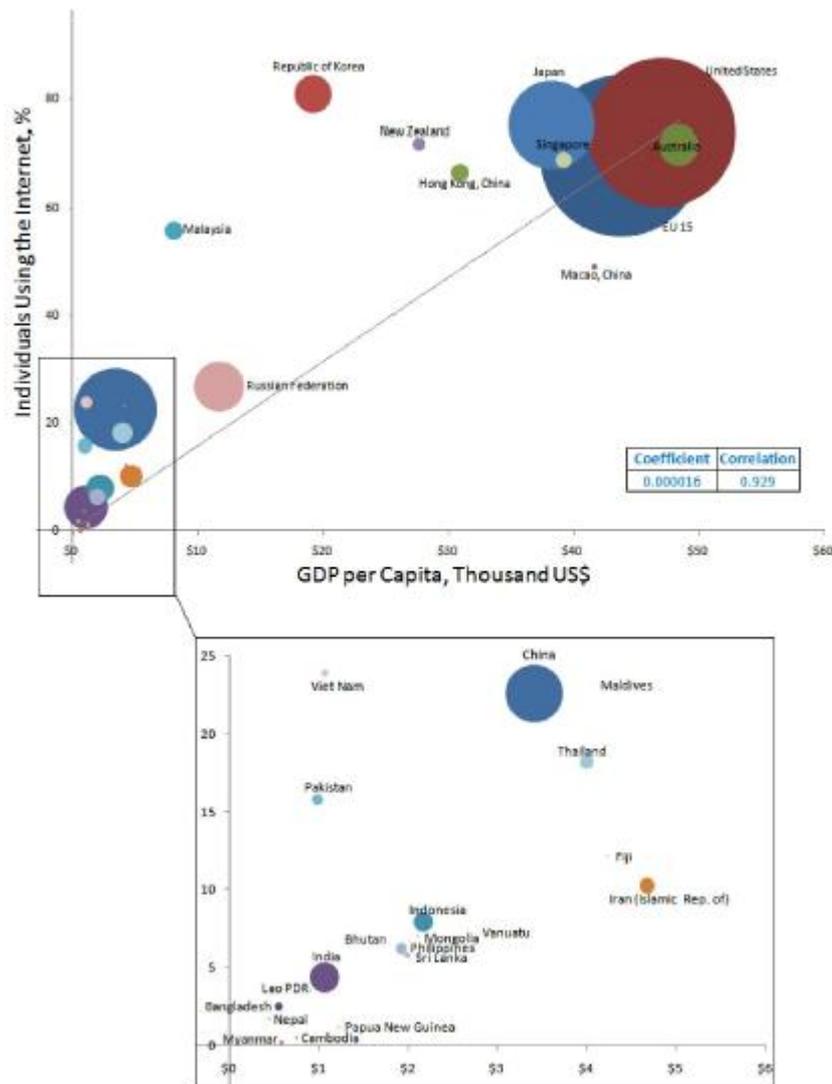


Source: http://www.unescap.org/idd/working%20papers/Vizualizing-ICT-Indicators.pdf

**The size of the bubble refers to nominal GDP per capita 2008, current US$.** Source: ESCAP. Data on GDP per capita from World Bank National Accounts data files, and OECD National Accounts data files, accessed at data.worldbank.org; data on Internet usage from the International Telecommunications Union, World Telecommunication/ICT Indicators Database 2011

**Diagram 7: Fixed (Wired) Broadband Internet Subscribers (2010) and GDP per capita (2008): Selected Economies – ESCAP**
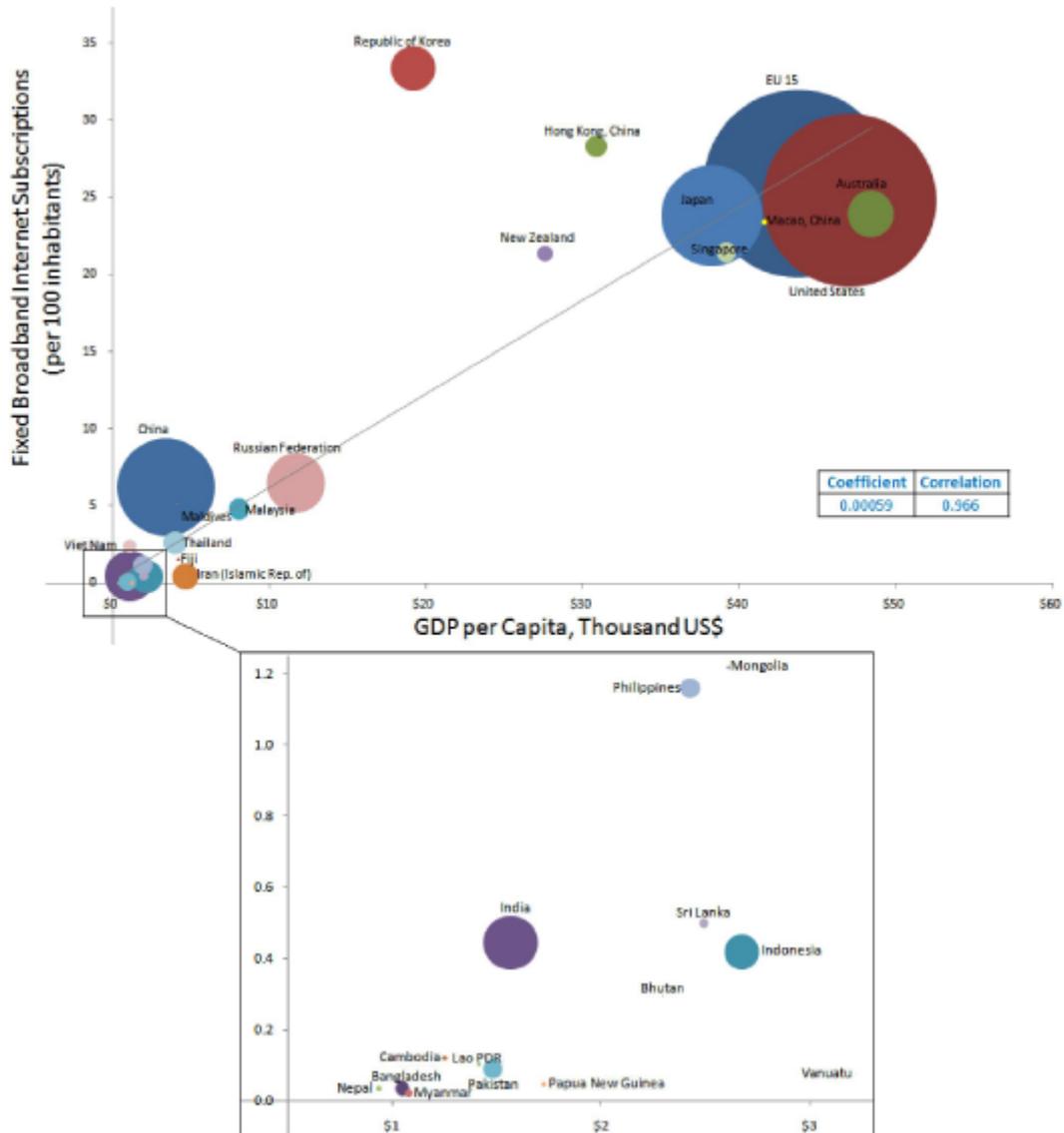
**The size of the bubble refers to nominal GDP per capita 2008, current US$.** Source: ESCAP. Data on GDP per capita from World Bank National Accounts data files, and OECD National Accounts data files, accessed at data.worldbank.org; data on Broadband from the International Telecommunications Union, World Telecommunication/ICT Indicators Database 2011

**Diagram 8: Mobile cellular telephone subscribers (2010) and GDP per capita (2008): Selected Economies – ESCAP**
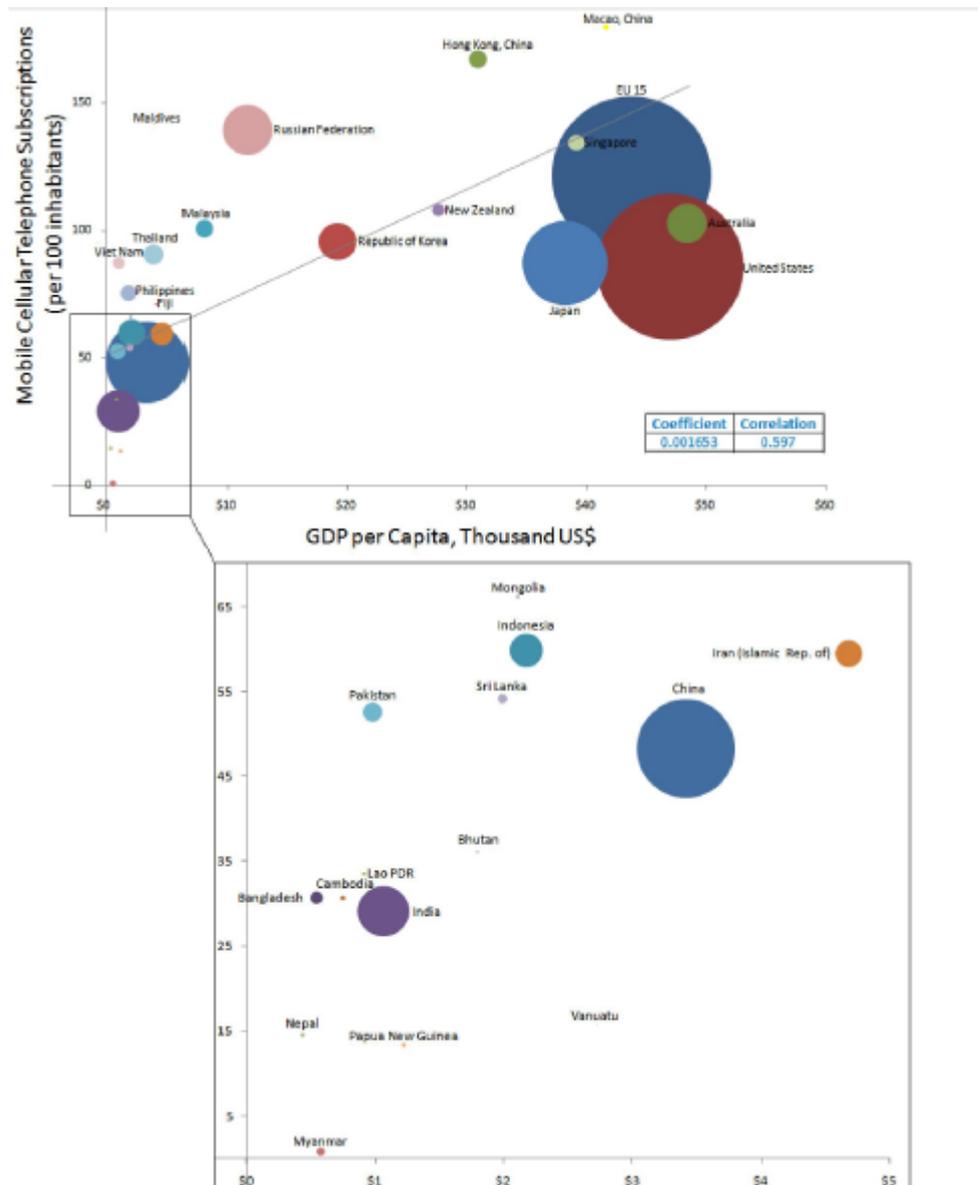
**The size of the bubble refers to nominal GDP per capita 2008, current US$.** Source: ESCAP. Data on GDP per capita from World Bank National Accounts data files, and OECD National Accounts data files, accessed at data.worldbank.org; data for mobile subscriptions are from the International Telecommunications Union, World Telecommunication/ICT Indicators Database 2011