



Ministry of Transport
and Communications

The Working Group on e-Government and PPPs
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FOREWORD

The Broadband Commission has a common vision for the accelerated achievement of the Millennium Development Goals (MDG's) by 2015. The vision is broadband inclusion for all which embodies effective and sustainable solutions to the global challenges in cases of poverty, health, education, climate change, gender equality and demographic shifts in youth and ageing populations.¹

At the end of 2010, the Broadband Commission formed seven subgroups, which concentrate on specific issues by deepening and concretising the Broadband Commission's action plans. The Working Group on e-Government and PPPs will provide an interim report in June 2011 which will introduce a duplicable pilot case on e-Government services including A) Enabling environment, B) Stakeholders' role, C) e-Government applications and D) Network infrastructure.

BACKGROUND

Governments are using ICT to provide services between government agencies and citizens, businesses, employees and non-governmental agencies. E-Government initiatives in developing countries are not only struggling with a lack of financial resources and incentive design, but also with restricted skills and capacity within the governments. An increasing number of initiatives are being employed to improve the delivery of public services to the people, and to tap the potential synergy from the interaction between new technologies, an educated population and an enabling environment for the attainment of knowledge-based economies.²

One of the key success factors for society is the ability to exploit the full value and potential of public sector information.³ The strategic objective in developing countries must be openness, accessibility and the possibility to easily utilise that information with a view to ensuring its high quality and continued availability.

Public-private partnership in e-Government projects have been practiced by many developed and developing countries since the early 1990s. Over the past several decades, governments have turned increasingly to PPPs as one means of financing and maintaining infrastructure and providing public services in the face of budgetary challenges⁴. However, it should be noted that the public private partnership scheme implementation has only recently started in developing countries.

PPP's help to bridge gaps in quality, speed, and efficiency of services delivered by the public sector and have a holistic approach in developing the broadband system. Public-private-partnerships create a competitive market with limited regulation and make markets more efficient with an enabling regulation environment (i.e. liberalising licensing regimes, facilitating access to radio spectrum, and allowing access to dominant operators' networks).⁵

International development on ICT is undergoing a fundamental shift towards a "process-like-approach". According to OECD, and especially Professor Richard Heeks, this means following⁶:

1. Less emphasis on what might be used (the Internet and PCs) and more on what is actually used (mobiles, radio, television),
2. Less emphasis on piloting and sustaining new applications and more on assessing and scaling existing applications.

The Working Group's joint issue paper – The Lapland Statement – is based on the process approach which will take into account arguments included in OECD report. The pilot case would include⁷:

1. Participation of beneficiaries in the design and/or implementation of the project.
2. Flexibility and improvisation in the implementation of the project.
3. Learning in order to improve implementation of the project (embracing both learning from past experience and iterative learning-by-doing during the project).
4. Utilising and building local capacities including those of local institutions
5. Competent leadership of the project that is able to promote the other four element

¹ Broadband Commission for Digital Development: A 2010 Leadership Imperative: The Future Built on Broadband. 2010.

² Bangladesh Enterprise Institute: Realizing the Vision of Digital Bangladesh through e-Government, July 2010.

³ Ubiquitous Information Society Advisory Board, Ministry of Transport and communications: Productive and Inventive Finland, 2010.

⁴ Kaliannan et. al: Public-Private Partnerships for E-Government Services: Lessons from Malaysia. International Journal of Institutions and Economics; Vol. 2, No. 2, October 2010, pp. 207-220.

⁵ Kim et. al: Building Broadband: Strategies and Policies for Developing World. The World Bank 2010.

⁶ OECD: ICTs for Development. Improving Policy Coherence. OECD publishing; The Development Dimension Series; 2009.

⁷ OECD: ICTs for Development. Improving Policy Coherence. OECD publishing; The Development Dimension Series; 2009.

1. ENABLING ENVIRONMENT

There are certain elements which form the optimal enabling environment in a country to develop cost-efficient, access-easy and secure ICT services. The key is connectivity, affordability, availability and security. Governments should play an essential role in creating useful e-Services and stimulate user-friendly e-content.

Sufficient financial and human resource mobilisation requires local, and international, as well as multi-stakeholder contribution.

1.1. GOOD GOVERNANCE

- Good governance in all its aspects, including that it follows the rule of law, improves the efficiency and accountability of the public sector, and is transparent, responsive, consensus oriented, participatory, equitable and inclusive, is essential in building a good environment for development. ICT can also make a significant contribution to this.
- Governments should promote an open and transparent communication and information society policy which promotes innovation and increases the welfare of the societies while creating clear and predictable business environment for competitive and open markets. An information society strategy with concrete goals is suggested and can work as an efficient mechanism in implementation.

1.2. LEGAL AND REGULATORY FRAMEWORK

- The benefits of the communications markets should be seen broadly and from the sustainability perspective. Governments should form the regulation primarily taking into account the needs and rights of the citizens. Businesses providing services and other stakeholders should be consulted in the forming of the optimal legal framework.
- Governments should form a regulatory framework that promotes confidence and trust.
- Taxation of the telecommunication services should take into account that these are basic enabling services rather than luxury goods. The globally negotiated agreements eliminating all duties and taxes on telecommunication devices and network infrastructure equipment have proven to play a catalytic role for affordable information society services.
- The world has become wireless and mobile and therefore spectrum management is central. It is recommended to seek innovative ways of availing more spectrum for broadband.
- Legal framework should facilitate competition.
- Taking into account the requirements of diverse communities and stakeholders a mid- and long-term perspective is essential in forming a consensus for broadband and mobile investment and uptake. Governments should play a pivotal role in exploring innovative financing mechanisms and incentive strategies.
- Governments should guarantee and promote an open and secure access to all services for all users. e-Security and confidence among users is vital.

1.3. PUBLIC ADMINISTRATION

- Building up e-Government services for all is a horizontal and multilevel effort. Improving regulation, governments should show leadership by making sure that their various administrative departments and sub-national levels of government work together to use the infrastructure and to create relevant and useful e-applications.
- Service providers should be guaranteed a fair and non-discriminatory access to delivery networks and customers.
- Governments and Administrations should ensure and promote the basic education and necessary e-skills which are essential in exploiting the benefits of the development brought by the broadband and the mobile technology.

- Governments and Administrations are responsible for introducing and promoting the development of the user-friendly e-content for their services.
- Administrations should guarantee and promote open access to public information with due consideration of privacy issues. Legislation and resources must be reformed with a view to facilitating new digital practices that are based on the use of public information resources. This is beneficial in e-Data gathering, for instance.

1.4. COMPETITION AND TRANSPARENT MARKET ENVIRONMENT

- Competition between services and/or networks will always be the basic requirement for successful markets. Governments should adhere to the guiding principles of open access and fair competition – the regulation should be transparent.
- Open market conditions together with fair competition create a level playing field for all actors in the market.
- Fair and transparent regulation stimulates free competition, innovation, better service quality and low tariffs.

1.5. LOCAL NEEDS AND REQUIREMENTS

- Promoting local solutions/content based on local needs is an important starting point for information services.
- Governments must recognise that the success of ICT services will depend as much on the demand side in all its forms, including education, healthcare, ICT skills, availability of public e-services, etc. as on the supply side.
- A top-down approach matched with grassroots involvement and ownership is necessary for constructing a national digital economy. Public-private partnerships (PPPs) are an effective strategy to implement broadband in key public institutions (such as schools, libraries, post offices, hospitals and information society services). It is also important to stimulate developing communities which can significantly contribute to the development to the information society services.
- Local administration is encouraged to promote the importance of e-Learning and producing education at different levels.

2. STAKEHOLDERS' ROLE

Key elements for development are access to technology and service both in terms of coverage and affordability. With connectivity, amount of the services provided increases and creates new local innovations.

2.1. STATE/GOVERNMENT

STATEMENTS

- Governments should elaborate a plan in accordance with other Stakeholders
- Implementing local broadband projects requires a well-organised administrative system that stimulates not only the governments' engagement, but also participation from the local community. Governments need to raise public awareness and contribute to the stimulation of both demand for and supply of a well-functioning administrative system.
- Everyone should have access to a functional Internet connection in accordance with Millennium Development Goal 8 as well as to quality e-services. Governments should ensure equitable access for all. It is recommended that a pro-active approach be taken in stimulating and facilitating network roll-out in rural areas especially for the benefit of the groups that are easily excluded.
- Governments need to develop clear broadband strategies, as broadband is important as an economic stimulus and because of the social benefits it brings. Strategies should provide balance between government intervention and private sector investment and ensure a robust and enabling regulatory environment to allow competition to flourish.
- In many developing countries broadband access may be via mobiles or other wireless technologies, so governments should make adequate spectrum available at reasonable prices in a technology-neutral manner as expeditiously as possible. Governments themselves should take full advantage of broadband by making their services available online, increasing awareness and improving access.
- Governments should aim at promoting digital literacy, establishing enabling environments for private business and investment, learning and knowledge-based society, technology transfer, public-private partnerships and South-South and triangular (North-South-South) cooperation, along with providing local content.
- Governments should make markets work more efficiently, especially for the low income or remotely located people, and react against market failures e.g. through regulatory policy: liberalising licensing regimes, facilitating efficient access to radio spectrum and regulating market dominance.
- Balancing of the companies' commercial targets and the public sector's service-provision targets is of utmost importance for the success and sustainability of the PPPs.
- Governments' investments could be essential in rural areas to achieve access and basic services.

2.2. PRIVATE ENTERPRISES

STATEMENTS

- Equipment and service providers alongside other private sector actors should work cooperatively with countries via PPPs to reduce delivery costs, to accelerate broadband deployment and adoption of the Internet, to provide e-Government applications, to build local capacities and to bridge the digital divide. Cooperation possibilities can be sought from the funding instruments and cluster-based work of the State Administration (e.g. Ministry of Employment and the Economy, Ministry for Foreign Affairs) as well as from private sources.
- Private enterprises should determine sustainable business models across multiple sectors of the local society and economy.
- Private companies should follow best practices in marketing and other business operation in all markets.

2.3. CIVIL SOCIETY (including NON-GOVERNMENTAL ORGANISATIONS (NGO'S))

STATEMENTS

- Local authorities should set up a website or other means of gathering local input which allows people to engage in projects by identifying and promoting the best practices in local ICT development.
- Support should be given in promoting the capability to use the service including literacy and ICT skills as well as usability, accessibility and educational activities.
- Local communities should support partnerships between the civil society, the public sector and private sector to produce services and to promote the capability to use them, including literacy and ICT skills as well as usability, accessibility and educational activities. Support for the above-mentioned partnerships should be given to develop new innovations, products, services and business models, especially for the low income people and the Base of the Pyramid populations.
- Civil society should be encouraged and given tools in order to effectively participate as an equal player.

2.4. INTERGOVERNMENTAL ORGANISATIONS (IGO'S)

STATEMENTS

- IGO's such as the United Nations, the World Bank and the OECD should strengthen practical support systems (websites, e-mail) to make the best practices accessible and available on the global bases.
- The actors in public and private sectors should find ways for new kinds of PPPs which could be used to ensure as wide-ranging broadband coverage and attainability of the services as possible. The actors should also ensure the funding of PPPs.
- Cooperative and coordinated international standards for interoperability should be strengthen to boost market growth in devices, networks and software through economies of scale.
- Because there are a lot of issues which are multi-sectoral in nature, multi-stakeholder partnerships must be based on global international coordination.

3. e-GOVERNMENT APPLICATIONS AND NETWORK INFRASTRUCTURE

With the right choices developing countries have a fair chance to make even faster progress than developed countries as they have fewer old, inflexible legacy systems and can thus in many cases start from a clean table. Developing countries can now deploy more economical cloud services which from the outset are designed for multiple users in networked service environments – including elements from both public and private entities. Cloud services can interconnect different transaction streams and databases in ways that are very difficult to achieve with traditional IT applications.

Open data is one of the key success factors in deploying more economical cloud services. Data opening starts with the evaluation of the database of each organisation. Through data inventory, organisations can establish strategies and define goals in maximising the availability and deployment of the data. This way different actors can develop new services and business models.

Costs can be lowered by using open source solutions and global standards. By offering the services through technology in use, i.e. mobile devices, it is possible to serve citizens irrespective of time and space. Another important benefit is that developing countries can learn from mistakes made elsewhere, such as lack of service interoperability and competition, complicated user interfaces, disregard for the citizen's context and departmental approach.

Much effort should be put in spreading proven best practises. As the services from the public sector are seldom used with any frequency, it is of utmost importance that the user logic and the language are simple and that the tools deployed are familiar from other services. Best practices also include the use of international standards, transparent pricing of services, and measures to encourage local business to support necessary regulation (“co-regulation”) along with action programmes against the grey economy.

3.1. NETWORK INFRASTRUCTURE

STATEMENTS

- With the rapidly expanding number of technologies and opportunities there is an accentuated need to focus on application and business model innovation, i.e. taking the technology in use – making it an innovation.
- The OECD reported in December 2009 that broadband networks can pay for themselves within ten years, because of the savings made in delivering services. For emerging economies and countries where the infrastructure is difficult to build, the solution is in mobile broadband — using a mobile phone to connect to the information society. By improving education, medical services, trade and more, broadband Internet access can make a tremendous difference. High-speed networks can lead to high-speed growth.
- Mobile devices have many advantages: (i) most have them and almost all will soon, (ii) mobile communication networks are less costly to establish, especially in remote areas, archipelagos, mountains and other difficult terrains, than fixed line communication networks in most developing countries. (iii) they are almost always on which is important for the “real time economy” (iv) standard phones can be used for interactive e-business and e-Government services, (v) smart phones will bring additional features, etc.

3.2. e-LEARNING

STATEMENTS

- Adopting ICTs for educational purposes requires combining micro-level planning at the smallest unit (classrooms), to the highest level of macro-planning (basic infrastructure policies, connectivity policies, communication policy for the nation as a whole).
- The information overflow society and technology proficiency by children and students require a new approach and policy coherence in pedagogy and teacher training, technology and telecommunication infrastructure. Policies may then be translated into initiatives and schemes by public and private providers through different mechanisms. Initiatives specific to ICTs for education have several critical elements such as capacity building, content development and monitoring and evaluation strategies.

Case ZMQ

The project uses mobile phones and focuses on Hindi-speakers in India. Popular regional content is converted into engaging m-learning material for under-privileged and semi-literate people (i.e. preventing the spread of HIV/AIDS in villages).

3.3. e-FINANCE/e-BANKING

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- Adopting ICT for business processes (e-ordering, e-invoicing, e-payments, e-accounting, e-VAT, e-customs etc) are driven by the need to improve service levels, productivity and real time view of financials. Efforts should be made to provide enterprises with easy to use browser-based generic e-services for these purposes. Global ISO-standards should be deployed when available.
- Digitising business processes, especially documentation, greatly improves makes public sector services more user-friendly and efficient.
- e-Banking has opened up many new opportunities for development which includes e-business services that interconnect customers with services like e-id, e-signatures of agreements, e-commerce payments, e-invoicing and e-salary. There is a clear need for promoting these and policy coherence amongst ministries, regulators, donors and service providers.
- Development in bidirectional mobile notification services, mobile device security elements and near field communication will lead to a growing use of non-card payments.
- The target should be that every citizen has access to safe storage of surplus funds (bank or other accounts) and access to cost-efficient payment transfer services

Case Split Payment VAT

The EU Commission Green Paper on VAT Collection suggests that invoice payments are split into VAT to Tax and net amount to seller. This model is already deployed in some countries and can become the harmonized way in the EU.

3.4. e-IDENTIFICATION

STATEMENTS

- Citizens often need strong e-id tools for accessing e-Government services. For example several European public sectors let citizens use their e-bank id as e-id tool when accessing e-health, e-tax, e-pension etc services.
- To increase competition and innovation in this field the following should be agreed: 1. Tool neutrality (one-time pass word, certificate at present), 2. Service provider neutrality (banks and others – for example tele-operators who have strong enough tools and supervised attachment procedures) and 3. Platform neutrality in mobile devices (SIM-cards, multimedia cards and security elements in device)
- The strong e-id can also be used when accepting work-role-related mandates and tasks.

3.5. e-DATA GATHERING

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- In countries with rough, difficult-to-cross terrain and weak governance structures, data gathering is often a challenge for both the citizens and the public sector. The new technology could play a significant role in efficient data gathering and, hence, advance reducing poverty and facilitate the emergence of more stable social structures in these countries.

Case Nacer, Peru

Nacer is a phone- and web- based information and communication system for maternal and child health that allows health professionals in remote locations to communicate and exchange critical health information between themselves, medical experts, and regional hospitals. All reported data is recorded in a central database, and is available to health officials in real-time for analysis and decision-making. Health workers in locations without Internet connectivity can access the system using any phone (satellite, fixed-line, mobile, or community pay phone).

OUTCOME

The UN has set 8 Millennium Development Goals. The achievement of these goals can be accelerated if every citizen has access to an Internet connection and if governments put in place efficient, high-quality, affordable e-Services. As goal 8 is to develop global partnership for development, the aim of the subgroup is to search for a new model to improve and secure cost-efficient, access-easy e-Government services in the developing countries. There is a lot of experience already and the exchange of good practices is very widely recognised as a major accelerator in the achievement of successful e-Government services.

There are certain elements which form the optimal enabling environment in a country to develop ICT services. The key is connectivity, affordability, availability and security. Good governance is essential in building a good environment for development. Governments should play an essential role in creating useful e-Services and stimulate user-friendly e-content. Sufficient financial and human resource mobilisation requires local, and international, as well as multi-stakeholder contribution.

Legal and regulatory framework should take into account the needs and rights of the citizens. Businesses providing the services and other stakeholders should be consulted in forming of the optimal legal framework. Taxation of telecommunication services should take into account that these are basic enabling services rather than luxury goods. Legal framework should facilitate competition. Good mobile e-services require policy makers to make sufficient spectrum available quickly.

Governments should form a regulatory framework that promotes confidence and trust and also play a pivotal role in exploring innovative financing mechanisms and incentive strategies. Public-private partnerships (PPPs) are one way to finance the uptake of infrastructure and services. Administrations should promote open and secure access to all information services for all users. Governments should have good national and international frameworks ensuring cyber-security. They should also ensure the acquisition of basic education and necessary e-skills. Open market conditions together with fair competition create a level playing field for all actors in the market. Fair and transparent regulation stimulates free competition, innovation, better service quality and low tariffs.

Promoting local solutions and content based on local needs is an important starting point. Both a top-down approach and grassroots involvement and ownership are necessary for constructing a national digital economy. PPP is an effective strategy to implement broadband. Non-governmental Organisations have a variety of expertise concerning the local environment and these best practices are useful to other players in the market.

Conclusion 1: *The optimal enabling environment to develop e-Government services should recognise the importance of connectivity, affordability, availability and security.*

“e-Agora”

There is a variety of ways to create access and solutions for example utilising cloud services containing information elements.

With the rapidly expanding number of technologies and opportunities there is an accentuated need to focus on application and business model innovation i.e. taking the technology into use – making it innovation. Furthermore, in order to best meet the needs of specific community, emphasis should be placed both on what is actually used, as well as what might be

used. For emerging economies and countries where the infrastructure is difficult to build, the solution should be based on efficient combination of fixed and mobile broadband or other wireless solutions.

Cloud services can interconnect different databases in ways that are often very difficult to achieve with traditional IT applications. For example mash up services as open data applications can be the answer for different needs. In providing information for end-users, mash ups visualise, filter and gather data from different sources. Platforms of the services are designed for multiple users in networked service environments – including elements from both and public and private entities.

Therefore open data should be considered one of the key success factors in deploying more economical cloud services. Digitising business processes, especially documentation makes public sector services more user-friendly and efficient. Governments and organisations should evaluate database of their own. Furthermore, governments and organisations should establish strategies and define goals in data evaluation for the development of new services and business models.

Conclusion 2: *Governments and businesses should work together to create a digital society with shared, interactive access to information.*

RECOMMENDATIONS

- 1) The Broadband Commission has established an online database open to all which features different case studies, best practices, reports and policy recommendations. The Subgroup of e-Government and PPPs encourages different stakeholders and governments to use the Broadband Commission website tool.
- 2) Many international organisations, such as the OECD, have extensive experience and valuable information on good policy practices on broadband. This is available to all countries, who are encouraged to use this expertise and be more associated with the OECD work.
- 3) The public and private international financial institutions are encouraged to contribute to the funding of broadband investments.
- 4) It is recommended to improve definitions along with relevant databases and measurement of broadband penetration, usage, coverage, prices, speeds and services taking into account the local elements.
- 5) To get a sustainable base for dynamically evolving e-Government services certain principles, enablers and starting points should be established. These include for example a common framework for network technology, standards, scalable business models, target setting and measuring of results. On this basis interoperable cloud services should be available – supporting all devices and channels with bidirectional messaging. Service provisioning should be based on technology neutrality – in the area of e-id services based on (i) id-tool neutrality, (ii) service provider neutrality and (iii) certificate platform neutrality – to further competition and interoperability.
- 6) e-Government service roll-outs should start from those that are often needed by many locally (to create the e-habit) and that also improve efficiency and create value for the public sector. The following e-Government service roll-outs are recommended:
 - Education related messaging (including parents)
 - Health services related messaging
 - VAT-collection with for example split-payment methodology
 - Government to citizen payments
- 7) The public-private partnership model should aim at both sectors using the same solutions (to create economy of reuse, economy of scale and economy of scope) and making it possible for citizens to use the same tools (for example e-id tools) creating economy of repetition and economy of trust. Recommendations for scalable and secure infrastructure:
 - Full public sector integration
 - Generic platforms for messaging
 - Strong e-id
 - Secure payment standards and platforms
- 8) The basic enabler for e-Government services is network reach, affordability and sufficient capacity. This growth is driven by parallel progress in several layers. The most important drivers are the services and content – created in public-private co-operation in an “e-Agora” – driven by the holistic needs of citizens. These are enabled by cloud services connected to increasingly mobile and dynamically developing mobile devices.