



ICC BASIS intervention at the UN Experts Meeting Advancing a Sustainable Information Society for All, 8-9 June 2015, New York

Commentary reflecting views and expertise of Joseph Alhadeff, Chair of ICC Digital Economy Commission, to accompany the submission on behalf of ICC¹.

ICC is the world business organization founded in 1919 with the vision of fostering business and trade between nations to promote peace and prosperity. Today it represents thousands of member companies in over 120 countries. ICC membership spans large multinational companies, SMEs, as well as chambers of commerce and, business and trade associations from all regions and across all sectors.

ICC convened business during the World Summit on the Information Society (WSIS) in Geneva and Tunis and the preparatory processes, and through ICC BASIS has since ensured business experience and expertise contribute to the post-WSIS activities including the Internet Governance Forum (IGF), the WSIS action lines forum and the CSTD, among others.

ICC BASIS thanks the organizers for the opportunity to participate in this important discussion. Our input for this meeting is an ICC document entitled, [ICT's and the Internet's impact on job creation and economic growth \(2012\)](#), that draws on ICC policy recommendations and economic data to help policy makers better realize opportunities for economic growth. The paper also provides some relevant examples and case studies, including on the green economy.

Reflections from a business perspective on the Advancing Sustainable Information Society for All background paper

At the outset, one must note that framing the question, *What are the principal risks to sustainable development which are posed by in the context of the information society?*, in negative terms is erroneous. ICTs and the information society must be evaluated holistically within the context of sustainable development as their role as essential elements to furthering sustainable development has been repeatedly demonstrated.

¹ Given the short timeframe to review and remark on the background paper for the UN Experts Group meeting on Advancing a Sustainable Information Society for All, 8-9 June 2015, ICC members submission is a previously prepared paper, *ICTs' and the Internet's impact on job creation and economic growth (2012)* http://www.iccwbo.org/Advocacy-Codes-and-Rules/Document-centre/2012/ICTs_Internet/ that reflects consensus views of the full ICC membership. However, the views expressed in this commentary by the Chair have not been developed by consensus and are put forward as his individual expertise to share a business perspective on the specific meeting reflections for discussion.



ICTs are merely tools that can be used or implemented – well or badly. Many factors are at issue in the selection of technology, its implementation and various considerations across its lifecycle and disposal. The most important concept was highlighted in the background paper for this conference in the ICT4D applications paragraph:

Experience has shown that the appropriateness of different tools depends substantially on contextual factors such as available resources and those changes rapidly as resources change.

Context is undoubtedly important, however, the nature and availability of resources is only one factor that makes up context. APEC developed a matrix of factors which collectively determine the potential of a country to be successful in the Digital Economy and Information Society. The matrix: The Digital Prosperity Checklist (DPC) was endorsed by APEC leaders in 2008. The DPC matrix consists of the following factors termed the *Six I's*:

1. **Infrastructure:** Physical, logistical, technical and regulatory.
2. **Innovation:** the ability to invent, support and protect innovation.
3. **Intellectual capital:** the skills of the population – linguistic, technical, entrepreneurial, management, etc.
4. **Investment:** from fluid capital markets to venture capital to microfinance to crowd funding
5. **Information flows:** data as the currency of the digital economy or new oil, what is your countries ability to use if locally and across borders
6. **Integration:** meaning trade at, across and behind the border.

Each country is at different levels of maturity across these factors and all factors continue to evolve. Success and accomplishment across these factors has to be gauged on a continuum with improvement across the factors being very important. Possibly the most important concept is that of the matrix and that actions on one factor impact the others; **they are highly interdependent.**

The context of what need is being served coupled with the right solutions and the proper framework across the *Six I's* create the preconditions for successful implementation of ICTs. The background paper provides a useful methodology of assessment for the relationship between ICTs and sustainable development. The terms “direct” and “indirect” impacts contain important distinctions, but considering the use and application of technology to only be an



indirect impact could be misleading. This definition creates the perception that the benefits are incidental to the use of ICTs rather than the causal output of the use. It narrowly focuses the discussion on the tool, rather than the different ways in which the tool may be put to use by local nationals to address local problems – which is where innovation is most valuable and can have the greatest impact on sustainable development. Too often economies are consumed with the need to provide a service, while in reality, the greatest leverage for the broadest range of companies, especially SMEs, may be in using or leveraging the service provided by others, including those outside the country.

While considering the third pillar of relationship assessment, societal impact, we must work collectively and collaboratively to promote the use of technology to address pressing emerging country needs and to further societal benefit, while respecting local social and cultural norms. Too often, ICTs, especially emerging technologies like Cloud, Internet of Things and Big Data are seen only as the purview of first world countries. ICTs specifically, and science and technology generally, have been shown, through repeated examples, as key enablers of development. Direct references to the catalytic power of ICTs for development are cited as specific targets in four of the 17 goals (in targets related to education, gender empowerment, universal affordable access to ICTs/internet in LDCs and as a means of implementation). However, we consider the majority, if not all, of the sustainable development goals would be served by the application of ICTs, both using emerging and existing technologies. For example, in the area of health and well-being the use of even basic communication technologies can supplement rural diagnostics and treatment of disease as well as the causes of disease which may come from issues of livestock, environment etc. The larger the bandwidth and more sophisticated the technology, the more advanced the support. Enhance that with sensors that may be able to provide more detailed patient monitoring and further benefits accrue. Further enable cloud services and the use of analytics and transformative solutions can be put in place. The same techniques can be applied to agriculture, education, environment, sustainable consumption, smart cities, urban and rural planning, and e-government/citizen services just to name a few areas of application.

Indeed ICTs and their benefits are not without cost or risk. Processing takes electrical power which can cause pollution. Efficient systems can cause job dislocation. Greater visibility into data may create risks to privacy and opportunities for surveillance. Technology related security is an ever-growing issue. We should not consider these elements in isolation or without consideration of the related benefits. New cloud data centres consume energy, but they are often much more efficient than existing facilities when considering consumption per processing operation. Cloud service providers are also actively seeking alternative sources of energy such as solar or wind. Dislocation of jobs that have been replaced by more efficient



systems were, perhaps, jobs that were not optimal in terms of social utility. While not a comfort to the displaced employee, we must all work collectively to enable those employees to find more productive engagements of their talents. It may well be technology supporting remote education and lifelong learning that is used to provide them with the skills updating or training they need to adapt, and access opportunities that may not otherwise be available. While Big Data, Internet of Things and Cloud may pose challenges to how we address data protection and privacy, significant and collaborative work is being undertaken across communities to address these issues, including the use and development of privacy protective technological measures. Similarly in the area of security, organizations, both public and private sector are working together to improve processes and defences while at the same time identify appropriate information sharing practices to help make responses more effective and in some cases help prevent exploits from occurring.

Technology changes at a rapid pace as do the business and organizational models that rely on technology. The pace of change is at a rate that outpaces the vast majority of regulatory and public policy development processes. In light of this pace of change, policy and regulatory frameworks such as those related to the *Six I's* matrix should be drafted at a high enough level to enable needed adaptability and flexibility. Such frameworks are most effectively drafted by being principle-based, as opposed to top-down and overly proscriptive. Furthermore, focusing on desired outcomes-based policy or regulatory regimes is key. Focus organization on what they need to accomplish at the level of principles and appropriate guidance frameworks, but allow them to determine the flexibility of how to accomplish these objectives to preserve the variety across business models which fuel business choices for consumers and enable them to innovate across those models. Such principle-based and outcome-driven policies will also facilitate potential interoperability of frameworks, which have become essential in the cross-border world of today's technology.

Technology can, however, also be part of the solution to the problem. Increased availability and granularity, and diversity of data can both support the policy/regulatory development process with better economic and performance based data as well as help measure the effectiveness of policy and regulation by identifying efficiencies generated, related service performance and time as well as environmental, societal and economic consequences. The diffusion of e-government systems, coupled with continually expanding mobile and smart phone penetration, can help in the diffusion of information about government initiatives, the use of the programmes as well as citizen feedback on the benefits or issues with the solutions that have been implemented. In terms of urban planning, sustainable consumption, agriculture optimization, climate change and many other issues facilitated by sensors in the Internet of Things and data analytics, the information may be generated by objects rather than



associated to people so the societal and economic benefits can be achieved without having to rely on personal or sensitive information.

This non-personally identified data can be used to improve the metrics related to the how well the SDGs are being implemented and accomplished. Where personally identifiable information is in the relevant data sets, developers are looking at the ecosystem as a whole to join technical measures with contractual obligations and organizational policies and practices to help assure a level of de-identification (including anonymization and pseudonimization) appropriate to the nature of the information and its use. Technological solutions may include encryption where needed, better analytics to understand the possibility and specific elements of re-identification, wizard-based systems of de-identification to help those with less expertise address these issues as well as emerging solutions such as differential privacy.

In the preceding paragraphs we have tried to just address the perceived risk vis-a-vis the direct benefit as well as drafting and policy solutions, but have not addressed the broader societal benefits that may ensue from personalized medicine, improved urban planning, smart devices and cities, better information on environmental factors and controls, information of soil, weather patterns and water to aid agriculture, food supply optimization and conservation. We must consider the ecosystem and not just the particular tool.

ICT ecosystem considerations: Broadband and investment

As we noted in the description of the *Six I's*, infrastructure plays an essential role in a country's success in the digital economy and information society as does investment. These two factors are joined inextricably in the need for a broadband connectivity infrastructure, which may be wired, wireless or satellite-based as appropriate to the location and circumstances. There is a clear and positive correlation between investment in the Internet and other ICTs, and the growth of economic activity.

Investment in high speed networks and ICT services create a platform for economic growth, job creation, and greater competitiveness. Studies show a positive impact on productivity, on GDP contribution and on job creation in ICT-enabled business sectors.

According to the World Bank report "Information and Communications for Development 2009", access to telecommunications and the Internet boosts global economic growth, and for every ten percentage-point increase in high-speed Internet connections there is an increase in economic growth of 1.38 percentage points for developing countries. Note that broadband



delivers more returns than simple Internet access, which in turn delivers more returns than basic fixed or mobile connectivity.

To seize the opportunities presented by the increased use of ICTs and the Internet, global business supports policies that promote market entry and investments, and aim at attaining greater geographic coverage of networks. Governments may achieve this through the following actions:

Encouraging investments in broadband infrastructure

Governments should promote a business climate conducive to investment in broadband infrastructure, services and products enabling higher bandwidth and enhanced service quality. They can do so by:

- Ensuring a competitive market
- Ensuring efficient and effective frequency allocation and management processes
- Promoting access in rural, remote and under-served areas
- Stimulating demand for broadband infrastructure

Governments can also act as a demand-side driver for investment in ICTs, in particular in areas where they play a key role. Methods which may be used to stimulate demand for broadband infrastructure include:

- Liberalizing products and services delivered via broadband and simultaneously adopting legal frameworks that limit licensing and restrictions for content and service providers.
- Adopting broadband for public services (e.g. via e-government services).
- Consolidating demand where it may have not existed otherwise, without distorting the market.



Other public policy issues related to ICTs

In formulating public policy, governments must collaborate with other stakeholders to promote a culture of security, with appropriate legislation in place to combat cybercrime. Similarly, appropriate policies and legal frameworks related to data protection and privacy are also essential to assuring that consumers and citizens can continue to trust in engaging in transactions and using services online. They must also conciliate the protection of intellectual property rights with freedom of expression, as well as encourage investment in the next generation of broadband technologies.

Innovation opportunity for developing countries

The convergence of mobile services, broadband Internet and cloud computing may create an opportunity to drive availability and adoption of services, particularly in developing markets. However, for these services to achieve their potential, the regulatory framework must create an enabling environment for investment, and it may do so e.g. by encouraging access to new radio spectrum to enable the expansion of mobile networks in developing countries or by encouraging cloud computing by addressing public policy issues relating to cross-border data flows.

The role of ICTs and the Internet in building a more sustainable green economy

Economic growth and environmental responsibility must reinforce each other while supporting progress on social development through efforts by actors on all levels.

The multi-stakeholder ecosystem

Business considers that a clear lesson from the last ten years is that the best formula for success is for all stakeholders to work collaboratively toward common goals.

Business believes it is important that multistakeholder partnerships continue to build on policy development and coordination, infrastructure deployment, standards design and financing ICT for development, at global, regional and national levels. The robust growth in the ICT sector in the past 10 years has been enabled in large part by the success of stakeholders working together within these existing mechanisms.

Business drives innovation and the development of technologies and invests, thus has an essential role in addressing development goals.



At the heart of achieving these goals is the multi-stakeholder approach to developing policy, legal and regulatory frameworks with the input and cooperation of all stakeholders (governments, business, the Internet technical community and civil society) that promote innovation for sustainable development and that will help bring Internet access and capacity to people around the world.

Conclusions

Expanding access to Internet has enabled new services essential for economic growth and of great societal benefit. Cloud computing has driven down the cost of computing and democratized access to computing for both individual and commercial users. The Internet of Things and machine-to-machine computing means the world is more interconnected than ever with sensors enabling new interaction between objects, persons and their surroundings. Finally big data – that combination of data in greater volume, ever more variety and increasing velocity of information change – coupled with powerful analytics is enabling new insights, treatments and personalization in medicine and health care, new and powerful information about transportation, how we use resources and how we impact our environment to improve urban planning, resource management, agriculture and sustainable consumption. These benefits are not limited to the industrialized countries and some aspects of these applications are within reach of even the least developed countries especially in terms of addressing critical issues of water supply and land planning and management.

As Internet broadband becomes more accessible around the world, understanding these opportunities and the needed policy approaches to data and related regulatory environments is critical.

Along with these opportunities come responsibilities; governance and accountability are essential elements of both government and corporate structures. Policymakers can benefit from close cooperation with business and other stakeholders to ensure that the legal, policy and regulatory approaches implemented will prepare them to maximize the Internet broadband and data opportunities. Multistakeholder collaboration is essential to maximising the potential of ICT while addressing issues that are relevant locally and respecting local cultural and social norms.

These great leaps forward are a testament to the great contribution the development of the information society has made in the past 10 years. Business acknowledges that greater efforts still are needed to improve affordable access to ICTs in developing countries. There remains a need for more extensive deployment of broadband networks, complemented by



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sharing of best practices and other financial and technical support aimed at building capacity from the ground up. The WSIS process and the underlying principles of the Geneva Declaration and Tunis Agenda have created an atmosphere for dialogue and action that have preserved and promoted the flexible Internet that allows for the freedom to innovate and connect. This continued cooperation and a flexible policy environment will be critical in supporting the progress we strive for from here.

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