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**Submissions from entities in the United Nations system and elsewhere on  
their efforts in 2016 to implement the outcome of the WSIS**

**Submission by**

Internet Society

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# Flow of information of the follow-up of the World Summit on the Information Society (WSIS)



## ISOC Submission to the CSTD 2017 Consultation

6 January 2017

### **Part One: An executive summary (1/2 page) of activities undertaken by all stakeholders, progress made, and any obstacles encountered.**

Since the Tunis Summit, the Internet Society has been actively involved in supporting the implementation of the targets, recommendations and commitments of the WSIS as they pertain to the Internet. Significant progress has been made toward the vision of the people-centred, inclusive and development-oriented Information Society, and in this submission we would like to specifically underline lessons learned by the Internet Society in the areas of Internet access development and promoting a trusted Internet. We strongly believe that the continued implementation of the targets and commitments are dependent on a multistakeholder approach. Collaboration between stakeholders has become essential in addressing issues affecting the information society.

#### **Internet development**

The Internet Society (ISOC) devotes significant resources to initiatives supporting development, and particularly for capacity building. These efforts focus on technical and policy capacity building, infrastructure enhancement projects, and enabling access for underserved communities.

One of the most common misconceptions around Internet development globally is “if you build it, they will come”. Thriving Internet communities don’t simply appear once enough routers and switches have been deployed. Internet development requires a holistic approach and the creation of [an enabling environment](#) - the set of interrelated conditions that provide the foundation for development and adoption of the Internet. Our experience has shown that a focus on three overlapping areas is essential to enable the Internet’s power as an open platform for economic and social development: 1) Expanding Infrastructure; 2) Fostering Skills and Entrepreneurship; 3) Supportive Governance.

The need to foster skills and strengthen human capacity is sometimes overlooked, but a local community of technologists, innovators and early-adopters who can build, maintain and ultimately grow and sustain networks to their full potential and for the benefit of their broader local communities is critical. We have found that everywhere the Internet has flourished, it has done so thanks to the existence of a robust technical class of engineers, technicians and users who not only ensure the network keeps running, but also create the tools, forums and services that stimulate local demand.

There are still major challenges ahead for counteracting the wide disparities in Internet infrastructure development, and to address the fact that Internet adoption is still low in many countries – despite the fact that access costs are also falling. To address this requires a broadened focus that goes beyond supply of Internet access. It is important to also understand the demand-side issues, such as availability of local content, that are intrinsically linked to meaningful access.

#### **A Trusted Internet**

The open Internet offers economic and social opportunity for all. However, the Internet’s full potential will only be realized if it has a solid foundation in trust. Trust is a cornerstone for all successful connectivity strategies, in developing and developed countries alike.

Policymakers are facing an important challenge: How to fully embrace the digital revolution while, at the same time, ensuring the safety and security of their citizens.

User attitudes are also an important factor. For example, a recent [survey](#) from the NTIA found that 45% of US people had changed their online behaviour because of their fears. Internet users are indeed anxious about how their data is being used by governments and business, and feel a lack of control, and worry about profiling and discrimination. They also fear that they will become victims of data breaches, identity theft, and other forms of cybercrime. For some, this scenario has already become a reality. Internet users are also very troubled about the impact pervasive surveillance has on their privacy and other rights. All of these factors undermine the user trust that underpins online activity, and is a threat to the creativity and innovations that we see online.

Many governments are at the same time assessing the effects of the Internet on society, responding with stronger government controls, such as restricting access to content and impeding the use of social media channels. Some have imposed data localization measures to keep Internet traffic within their own borders. Others have considered banning key trust technologies (e.g. encryption) to facilitate the work of law enforcement, neglecting the new vulnerabilities it would create for activities such as online banking, trade or communications confidentiality for any Internet users. These policies unfortunately result in the opposite of what is actually needed: they further damage user trust, remove opportunities and stifle innovation.

Today, policymakers have an important choice to make about which path to take in developing Internet policies. One path leads to an open and trusted Internet with all the social and economic benefits it brings. The other path leads to an untrusted and increasingly closed off network that fails to drive growth. One path leads to opportunity, the other to stagnation. The key is trust, and how to sustain the Internet as a fundamentally vibrant and trusted space.

All stakeholders have a positive role to play in nurturing a trusted and open Internet. We need to work to secure core aspects of Internet infrastructure, to protect the confidentiality and integrity of the data that flows over it, and to ensure the right policies are in place to support the technologies, networks and actors that make the Internet work. We do this through collective responsibility and collaboration. ISOC is actively working to promote the technologies, processes and [policies](#) that support an open and trusted Internet that cultivates innovation, and creates opportunities for all. This year we have also developed a new framework to guide policies to this end, which is further described below.

**Part Two: A brief (1–2 pages) analytical overview of trends and experiences in implementation at the national, regional, and international levels and by all stakeholders, highlighting achievements and obstacles since WSIS. This could include information on the facilitation process of implementation, monitoring and cooperation among stakeholders.**

Although great progress has been made to achieve the WSIS goals over the past 10 years, there are still challenges to be overcome. For instance, today, roughly 53% of the world's population remains off-line. Given the Internet's role as a horizontal enabler for development, this digital divide presents a major challenge to meeting other related development goals, such as those formulated in the recently adopted 2030 Agenda for Sustainable Development.

**Access and Capacity Building:**

The efforts to bridge the digital divide, and to expand access to those currently offline will require increased collaboration and new approaches. Internet growth and adoption is conducive to the creation of an enabling environment founded on the three highly interdependent areas of: infrastructure; skills; and governance. As an example, there has been extensive progress on the development of Internet Exchange Points (IXPs), allowing Internet service providers to peer Internet traffic locally. Many of them are being developed in partnership with different stakeholders (government, content owners, service providers, research and education networks), and demonstrate the value of enhanced cooperation at the level of local and regional Internet communities. However, IXPs are only one piece of the puzzle, and similar collaborations are needed to ensure the further development of the infrastructure and skills required to bridge the digital divide.

To connect the remaining 53% globally and make universal and affordable access and use a reality, all stakeholders need to widen their focus and renew their efforts. Internet availability is necessary but not sufficient. The Internet will only be fully adopted, and its benefits universally shared, when infrastructure is deployed and there is compelling local content, made available locally, where people have the capacity to engage online in a meaningful way.

**Cooperation among stakeholders:**

From the perspective of a non-governmental organization such as ISOC, there can be no doubt that the WSIS has been a significant achievement for the international community, particularly in the way that it enabled unprecedented participation by stakeholders. The summit made a critical contribution by raising awareness of the importance of the multistakeholder approach to achieving good public governance, now increasingly reflected in other commitments such as the 2030 Agenda for Sustainable Development.

In particular, a more cohesive and representative Internet community has emerged as a result. Stakeholders from all sectors and countries have learned to work together in many fora, such as the Internet Governance Forum (IGF), and at the local level, a bottom-up movement has spread around the world to create locally designed and run Internet governance dialogues. These are important fora where communities can share ideas and recommend action to ensure that the Internet remains open, secure, and responsive to local concerns.

ISOC has long embraced this [collaborative approach](#) in its own work. We work with governments, intergovernmental and non-governmental organizations, civil society groups, the private sector, and academia to help them shape policies and reach decisions about the Internet that are consistent with our core values, experience and expertise. Examples of enriched international cooperation include ISOC's participation in the Internet-American Telecommunication Commission (CITEL) or the Internet Technical Advisory Committee (ITAC) of the OECD's Committee on Digital Economy Policy (CDEP). Through multistakeholder channels the Internet Society has been able to provide information and expert advice to assist policymakers and improve the public policy development process on issues such as information security, privacy, critical infrastructures (such as IPv6), Internet economy and innovation.

In addition, there is a demonstrated need to bridge the lexicon and understanding between technology and policy communities. We continue to see the need to discuss how to remove barriers to connectivity and "unleash" the Internet in many [regions](#). To that end, ISOC continues to facilitate the participation of governments, in particular from developing countries, into the existing processes and forums that shape Internet policies and the network's technical developments. The Internet Society is actively working to strengthen the connection between different communities, and has been offering fellowships for policy makers to participate to the Internet Engineering Task Force (IETF) meetings 2012. To date, more than 170 policymakers, from 53 different countries, has been provided the fellowship. In the same spirit and as the next billions come online, the Internet Society supports bringing new voices to the governance and standards forums. In 2016 the organization involved more one hundred young individuals as IGF ambassadors and as participants of IGF Youth to participate in the Internet Governance Forum in Guadalajara and 40 technologists from developing and emerging economies to the IETF, meetings that these individuals would otherwise not have been able to participate.

### **Openness and Human Rights:**

The Internet is a powerful enabler of Human Rights. As a medium of communication, the freedoms fostered by the Internet to express ideas, connect and associate with others, and exercise our human creativity and innovation are unprecedented. These freedoms are essential elements of personal autonomy, dignity, and basic human rights.

Working closely with the Human Rights community, the Internet Society has been a key contributor to the Human Rights Council's work, including the development of its 2016 resolution recognizing that Human Rights should apply online as they do offline. This multistakeholder cooperation at the crossroads of the technical and the Human Rights communities is expected to increase in the coming years. The new track of work led by the UN Special Rapporteur on Privacy to address online mass surveillance is one area among many where this cooperation will be needed.

In 2015, the Internet Society launched an [Internet and Human Rights Resource Center](#) to help information and best practices sharing across the Internet ecosystem. For those new to the Internet, all stakeholder groups must work together to safeguard our Internet users' ability to connect anytime, anywhere, to speak freely, to innovate without top down controls, and to share knowledge. For the Internet to thrive, it must allow users to choose between competing ideas and innovations. Freedom of expression is critical for the information society to reach its full potential.

### **Part Three: A brief description (1–2 pages) of:**

**a) Innovative policies, programmes and projects which have been undertaken by all stakeholders to implement the outcomes. Where specific targets or strategies have been set, progress in achieving those targets and strategies should be reported.**

Since its inception over 20 years ago, the Internet Society has been working with partners globally to make sure it addresses the wide range of policy issues that interfere with an open and sustainable Internet. Our multistakeholder nature confers a unique value to our policy recommendations that benefit from the expertise of

a wide range of constituencies. Over the past years, we have developed a series of [Policy Briefs](#) that provide a concise description of the Internet Society perspective on critical Internet issues such as IPv6 adoption and Privacy on the Internet. The purpose is to enlighten policymakers' decisions with technically grounded information. Other innovative tools that we know have been useful in supporting Internet policymakers' work are the preliminary findings on the [ISOC Scenarios on the Future of the Internet](#) that were kick-started in 2016.

ISOC has also placed significant emphasis on organizing, supporting, and participating in hands-on technical training for Internet engineers in emerging economies and developing countries. For example, ISOC hosts training and workshops on a range of network development and operational skills, including network administration and monitoring, bandwidth and critical resource management, advanced routing (IPv4/IPv6), wireless networking, and Internet services, among other topics, in various in-country locations ranging from Latin America and the Caribbean, Africa, and Asia. ISOC has also committed to scaling this expertise by developing a portfolio of online resources including those available on our [Deploy360 portal](#). As an example, ISOC has been able to increase the number of trained engineers in the African region by 40% from 2014 to 2016, including specific cohorts of women technologists.. In 2015, we also trained over 600 networking experts through peering and Interconnection forums and workshops.

In addition, ISOC also has an extensive [grants program](#) to support our community's work on the ground. Established in 2005 under the Community Grants programme, we have supported hundreds of initiatives in over 70 countries. Most projects are still active and continue to provide benefits to their communities. We estimate that through the Community Grants projects between 2005-2015: more than 300,000 people increased their awareness of Internet Governance issues; over 100,000 people gained access to the Internet.; at least 30,000 women and girls were empowered through the use of the Internet; over 30,000 people were trained on how to use the Internet; and more than 10,000 disabled people gained Internet skills to improve their quality of life.

In July 2015 we launched the [Beyond the Net program](#) to replace the Community Grants funding programme to address the changing needs of the Internet Society Chapters and reinforce the organization's commitment to development. In 2015, 38 Chapter events and small projects in as many countries, as well as 13 community projects from around the world received a total of over \$US 500,000 in funding.

Furthermore, in 2010, ISOC together with Digital Empowerment Foundation (DEF) launched the [Wireless for Communities \(W4C\) initiative](#) to create community-owned and community-operated wireless networks in rural and remote locations where mainstream Internet Service Providers (ISPs) are not willing to provide internet connectivity. In 2016 ISOC helped launch 3 community network projects in Columbia, Georgia and South Africa, and provided 15 fellowships to community network experts to attend the IGF.

Community network grants highlight a sustainable solution to address the connectivity gaps that exist in urban and rural areas around the world. Community networking is not a new issue, but there is a renewed focus on them as they are focused and effective. To this end, ISOC and APC brought community networking experts together in April 2015 in Bogota, Colombia to discuss key issues and organized the "First Summit on Community Networks in Africa" on 22 November 2016 in Nairobi Kenya within the AfriCHI conference. The Bogota meeting brought over twenty experts together. The Nairobi meeting brought together community network operators in Africa to share their experiences, and was aimed at increasing collaboration between community network operators in the region, and to increase engagement with other stakeholders.

**b) Future actions or initiatives to be taken, regionally and/or internationally, and by all stakeholders, to improve the facilitation and ensure full implementation in each of the action lines and themes, especially with regard to overcoming those obstacles identified in Part Two above. You are encouraged to indicate any new commitments made to further implement the outcomes.**

In light of the challenges mentioned above (see Part One and Two), ISOC suggests ways to prioritize and overcome these difficulties, collected below in three separate but intrinsically linked areas:

#### **Collaboration for access, human empowerment and a sustainable development**

Achieving the goal of universal Internet access will only be successful and sustainable if the fundamentals for access growth are strong, what we call the "[Access enabling environment](#)". In light of the challenges related to Internet development, ISOC has developed a policy framework for enabling Internet access, which describes the set of interrelated conditions across infrastructure, governance, and human capacity that provide the foundation for development and adoption of the Internet in any country or location:

- **Expanding Infrastructure:** There must be infrastructure and enough bandwidth for new offerings, and efficient and competitive local interconnection. Governments have a key role in promoting private

investment and, where private investment is unlikely, to provide public investment to ultimately increase choice and competition. Getting the next 53% of people online also means understanding the interaction between additional infrastructure development, connectivity, cost, content and services. There is a need to widen the focus from access infrastructure to include content infrastructure, such as data centers and content delivery networks, and support the ability to host content locally and use IXPs for access to content.

- **Fostering Skills and Entrepreneurship:** To promote a strong local ecosystem of infrastructure, content and services, human capacity-building is essential. The benefits of investing in human capacity are clear; a local technical human-infrastructure to develop local infrastructure, high quality, sustainable jobs that bring wider prosperity and stability, and the chance to be creators and not just consumers in the global digital economy.
- **Supportive Governance:** Overall policy has to be multi-dimensional and inclusive, and allow for and take advantage of the expertise and commitment of the range of stakeholders involved in the Internet. Policy developed largely or solely through a single ministry or communications regulator may focus too narrowly on access infrastructure and not enough on developing and promoting content and services. Policy developed without broader stakeholder input risks putting rules and regulations in place that stifle development, innovation, and local Internet ecosystems.

Underpinning these efforts is the need to create strong Internet communities that can build, maintain and ultimately grow and sustain networks at the local level. It is the basis of a successful ecosystem where all stakeholders recognize their collective responsibility towards the network, and the critical component to develop and adapt to new challenges over time.

### Collaborative security and trust

The Internet's openness has been the driver of its success, and the determinant factor of the innovation that spurs its continued evolution. However, there will always be risks and downsides to an open network system, where malicious actors will find ways to exploit vulnerabilities. The good news is that the Internet's openness is also the means to protect it by facilitating robust, flexible and agile solutions. But, it demands a collaborative approach to security that recognizes the global interdependency of the system, where no single stakeholder can solve the issues on its own. We share a collective responsibility for the security of the Internet.

Examples of the benefits of this collaborative approach in action are found throughout the existing Information Society and must be replicated. For instance, Computer Security Incident Response Teams (CSIRTs) around the world bring together representatives of government, industry, educational institutions and other organizations to collaborate on improving the security of their individual systems. CSIRTs also cooperate and exchange insights among themselves on how to improve Internet security through the IGF Best Practices Forums. Another example is the Mutually Agreed Norms for Routing Security (MANRS – <http://www.manrs.org>) project where network operators have agreed to work together collaboratively to improve the overall security and stability of the Internet's routing infrastructure.

Measures such as these, and many others like them, are critical to raise the level of trust in the Internet as a means of communication, connection, collaboration and commerce. People must trust in the security, privacy and availability of their connections in order to fully realize the opportunities available to them in the Information Society, and all stakeholders have a role to play.

In our recent publication "[A policy framework for an open and trusted Internet](#)" we outline an approach for addressing the complexities of building trust in an open and interdependent environment such as the Internet, based on four interrelated dimensions that need to be considered when developing policies for the Internet:

- **User trust:** How and why Internet users – including government, private sector and citizens - trust the Internet, and how to build that trust.
- **Technologies for trust:** The technical building blocks for establishing and maintaining trusted networks, applications and services, such as the ability to provide confidentiality, ensure integrity and the ability to authenticate;
- **Trusted networks:** The Internet's strength is that it is an ever-evolving collection of interconnected networks with distributed ownership and control. Trust is the glue that keeps networks connected and exchanging data, and the foundation of its global reach.
- **Trustworthy ecosystem:** How the Internet is governed and how it deals with Internet issues ensure a systemic trust.

In our [2016 Global Internet Report](#) we also examine the economics of building trust online, specifically the economic issues that must be addressed to help prevent data breaches, a major user trust concern. We also make five recommendations:

- Put users at the centre of solutions; and include the costs to both users and organisations when assessing the costs of data breaches.
- Increase transparency through data breach notifications and disclosure.
- Data security must be a priority. Better tools and approaches should be made available. Organisations should be held to best practice standards when it comes to data security.
- Organisations should be accountable for their breaches. General rules regarding the assignment of liability and remediation of data breaches must be established up front.
- Increase incentives to invest in security by catalysing a market for trusted, independent assessment of data security measures.

### Collaborative governance

In implementing the WSIS targets over the past decade, we have found at the Internet Society that we get better answers to global questions when a range of experts and interests can meaningfully take part in the discussion. This approach, which was endorsed by the ten-year Review of the World Summit on the Information Society (WSIS+10), demonstrated again its efficacy in the recent success of the IANA transition.

In a recent publication “[Internet governance – Why the multistakeholder approach works](#)” the Internet Society builds on this experience and explains in further detail what are the pillars of an effective multistakeholder governance model for the Internet:

- [Inclusiveness and transparency](#);
- [Collective responsibility](#);
- [Effective decision-making and implementation](#);
- [Collaboration through distributed and interoperable governance](#).

As a multistakeholder forum that provides a unique opportunity for all stakeholders to share experiences and best practices that can inform decision-making in their local communities, ISOC welcomes the renewed mandate of the Internet Governance Forum (IGF).

The IGF has indeed proven to be an important forum for strengthening the ties between different stakeholder communities. Its open, inclusive and multistakeholder nature has been of practical value to share information and develop best practices, where the IGF is providing a global platform for cooperation among all stakeholders. Similarly, National and Regional IGFs are also valuable platforms for local stakeholders to address key local Internet governance issues in a multistakeholder framework, which have proved useful networking platforms to facilitate cooperation between local actors to address local priorities. As such, ISOC is committed to continuing to strengthen these local initiatives.

However, the IGF is not the only means for collaboration. All stakeholders need to strengthen efforts for goal-oriented collaboration to expand access and enhance trust in the Internet. To this end, they need to take further steps to facilitate such collaboration in their respective processes, forums and regimes.

Furthermore, efforts should focus on strengthening gender and geographical balance in Internet governance discussions. There is a continued need to facilitate the active participation of governments, in particular from developing countries, into the existing processes and forums that shape Internet policies and the network's technical developments. ISOC is actively working to strengthen the connection between different communities. Examples mentioned above of fellowships for engineers and policy makers to participate in the IGF and the Internet Engineering Task Force (IETF) demonstrate our ongoing commitment to support an inclusive Internet governance ecosystem.