

EXECUTIVE SUMMARY

Internet Society Global Internet Report 2014

Open and Sustainable Access for All



Executive Summary

Introduction

The Internet Society (ISOC) is a global not-for-profit organization founded in 1992 to provide leadership in Internet related standards, development and policy, with the guiding vision that 'The Internet is for Everyone'. This report is the first in a series meant to celebrate the progress of the Internet, highlight trends, and illustrate the principles that will continue to sustain the growth of the Internet.

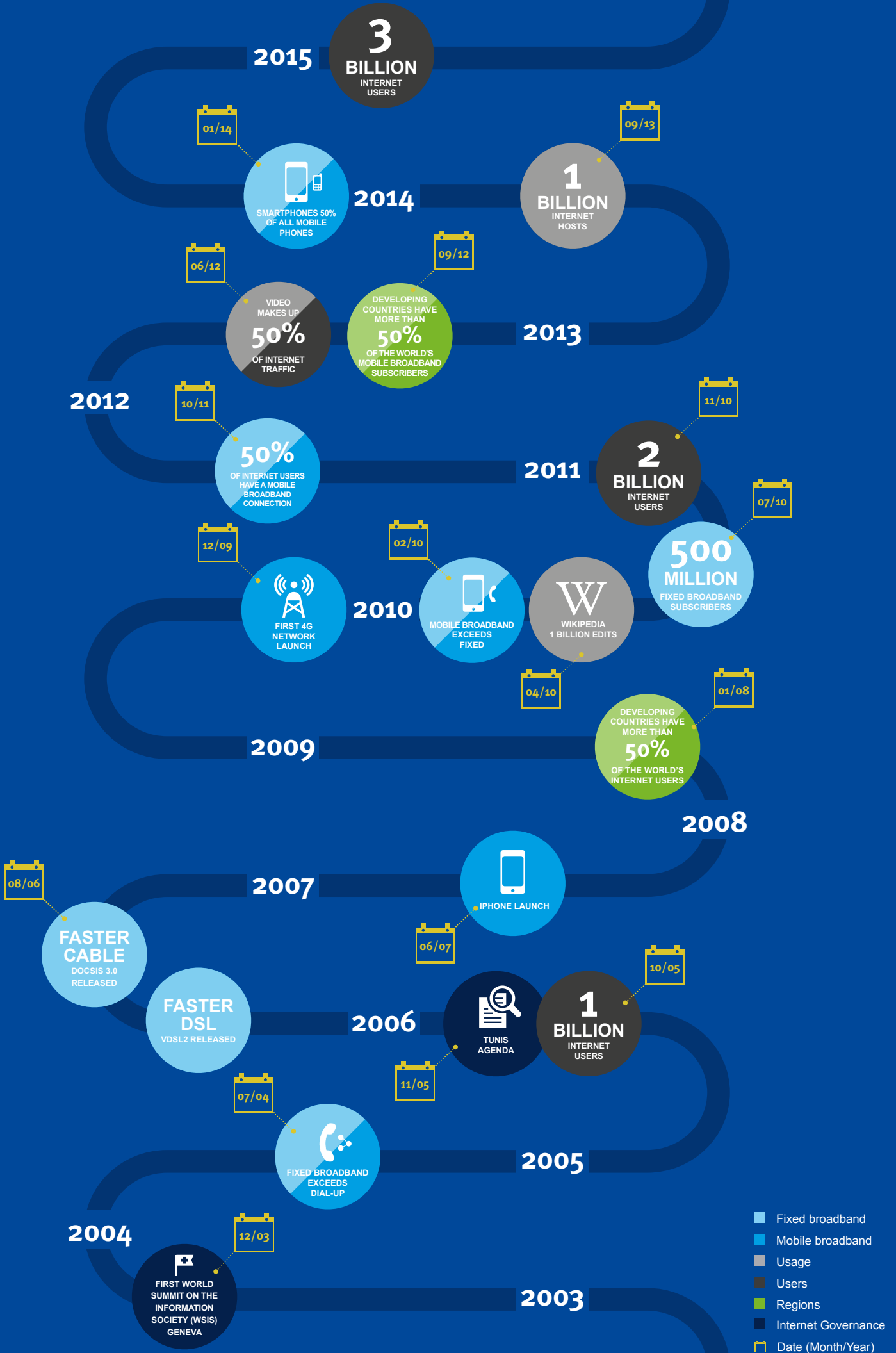
This report focuses on the open and sustainable Internet – what we mean by that, what benefits it brings, and how to overcome threats that prevent those of us already online from enjoying the full benefits, and what keeps non-users from going online in the first place. Given the rapid pace of change, it is important to solidify and spread the benefits of the open Internet, rather than taking them for granted.

This is your Internet: Trends and Growth

Against a backdrop of relentless growth, the Internet continues to change and evolve, as shown in the timeline below. It is remarkable that only in 2004 did fixed broadband connections exceed dial-up access, the number of users only exceeded one billion late in 2005, or that the first smartphone was only introduced in 2007. How many of us could have imagined back then that mobile broadband would so soon surpass fixed, developing country users surpass developed country users, video traffic surpass all other, and that we would be approaching three billion users in early 2015?

Throughout this process of constant change, the fundamental nature of the Internet has remained constant. The Internet is a uniquely universal platform that uses the same standards in every country, so that every user can interact with every other user in ways unimaginable 10 years ago, regardless of the multitude of changes taking place. This report shows why it is important to maintain, and strengthen, the open and sustainable Internet that has enabled not just the growth, but also the evolution of the Internet.

TIMELINE OF MILESTONES IN DEVELOPMENT OF THE INTERNET



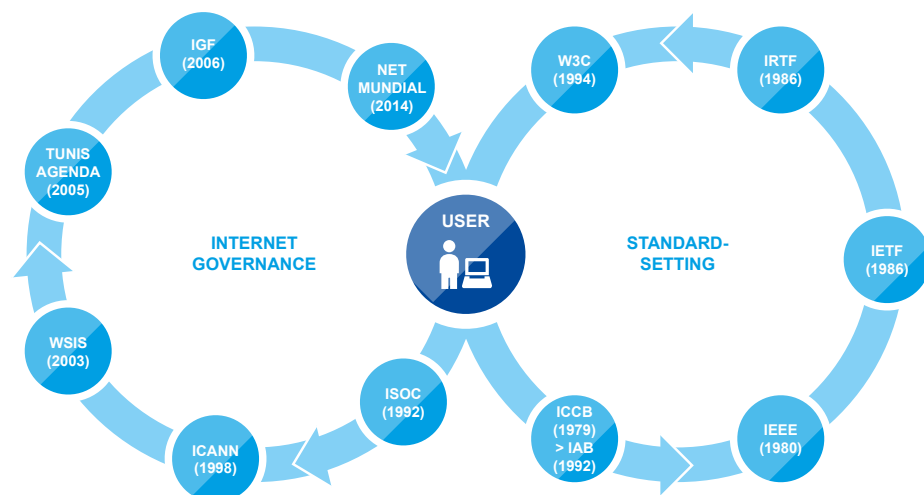
- Fixed broadband
- Mobile broadband
- Usage
- Users
- Regions
- Internet Governance
- Date (Month/Year)

What is the Open and Sustainable Internet?

The Internet has changed the world. Open access to the Internet has revolutionized the way individuals communicate and collaborate, entrepreneurs and corporations conduct business, and governments and citizens interact. At the same time, the Internet established a revolutionary open model for its own development and governance, encompassing all stakeholders.

The development of the Internet relied critically on establishing an open process. Fundamentally, the Internet is a 'network of networks' whose protocols are designed to allow networks to interoperate. In the beginning, these networks represented different academic, government, and research communities whose members needed to cooperate to develop common standards and manage joint resources. Later, as the Internet was commercialized, vendors and operators joined the open protocol development process and helped unleash the unprecedented era of growth and innovation.

The cooperation between the communities of interest was itself made possible by tools that were enabled by this inter-network – email, file transfers, and then the World Wide Web. Thus came a vital feedback loop between the users of the network and the stewards, who were one and the same. This loop has ensured that the openness of the process developing the network is reflected in the open usage of the network, and vice versa.



The spirit of collaboration that lies at the foundation of the Internet has extended from standards to a multi-stakeholder governance model for shared Internet resources for naming and addressing. The multi-stakeholder approach now also covers policy in a variety of organizations and processes at the international and national level, creating an infinite loop of continuous improvement.

To illustrate, we show how the multi-stakeholder model is used to develop standards such as the Opus audio codec; how it has been applied to combat spam in developing countries; how Internet Exchange Points can be developed; and even how a multistakeholder approach has been adapted to provide wireless Internet access in rural India.

Benefits of an Open and Sustainable Internet

The open Internet has created a medium like no other, one that merges the most notable characteristics of traditional media such as broadcast and telecommunications, while also augmenting them in ways that have revolutionized aspects of civil society, business, and government.

The Internet allows these traditional forms of communications, but is more interactive than old-style broadcast, and more inclusive than a conventional telephone call. As a result, the nearly three billion Internet users are both creators of information as well as consumers. Websites, blogs, videos, tweets, can all be broadcast and accessed in the largest mass medium imaginable. Audio and video calls and conferences can be set up and received without regard to distance or cost.

However, these changes are not just limited to traditional media. Governments can use the Internet to deliver services and levy taxes and, in turn, can choose to enable citizens to elect, petition, and oversee their governments online. Entrepreneurs not only have new markets for their goods or services, but also a new means to raise money online to finance their dreams. Likewise, entertainers have a new global medium to share or sell their endeavours, while new artists can be discovered and grow online.

With open access to the Internet and an appropriate enabling environment, the resulting benefits of the Internet are limited only by the imagination and efforts of its users. Here we provide some examples that demonstrate the value of the open Internet for creating benefits among its global users.

EXAMPLES OF THE OPEN AND SUSTAINABLE INTERNET

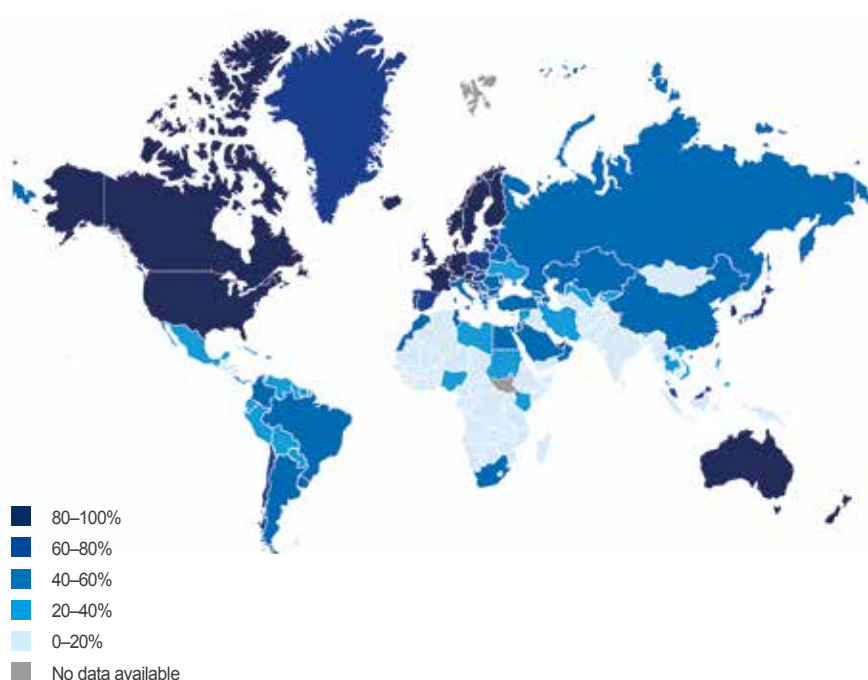


Challenges to the Open and Sustainable Internet

The benefits of the open Internet flow from the development and adoption of a set of underlying protocols that are in use worldwide. These protocols help to create the base of nearly three billion users, allowing them to communicate with one another to generate the benefits described in the previous section. However, while the Internet is often called the 'network of networks', all networks are not created alike.

GLOBAL INTERNET PENETRATION LEVELS IN 2012

[Source: ITU]



Creating a global network of networks based on a standard platform is a foundational success of the Internet. That is not to say, however, that there are not significant differences between countries in terms of Internet access and usage. The first, highlighted above, relates to the penetration of Internet users between countries; the more users within a country and in neighboring countries, the more benefits to any other user in being online.

Further, for those users already online, the overall user experience can differ significantly by country. Any such differences, however, do not originate from technical standards, but rather from government policy and economic reality. In particular, these differences can arise at two layers of the Internet:

- Infrastructure. Countries can differ by the affordability and bandwidth of access networks, and by the resilience of their international connections to other countries, based on economic factors and policy and regulatory choices.
- Content and applications. Some governments require network operators to filter content or block applications, using political or legal justifications. In other cases, content may not be available or locally relevant for economic reasons.

While the open Internet is an unparalleled positive force for advancement, it is not immune from economic and political influences that act to limit benefits. An affordable and reliable Internet is not yet a reality for the majority of people in the world. At the same time, where access is available it should not be taken for granted. The mere fact of being connected does not guarantee one will be able to innovate or freely share information and ideas; these abilities require an enabling Internet environment, one that is based on unrestricted openness.

Recommendations

Although the Internet is held together by a global set of standards, we have shown here that there are divisions in the user experience between countries. Further, in spite of the striking, once unimaginable, growth in Internet adoption and usage, the majority of the world population is still not online. Addressing the challenges in the previous section will not just improve the user experience of those currently online,

but will also contribute to the Internet Society’s overarching vision, that the Internet is for Everyone.

Progress towards our vision is proceeding quickly around the world, as access continues to grow at a significant pace. However, much development work remains to be done to bring the economic and social benefits of the Internet to everyone. Further, those who are online are experiencing significant variations in their user experience.

For non-Internet users, sitting on the other side of the so-called digital divide, Internet access is clearly a critical component. With the advent of mobile broadband, which can be rolled out faster and at lower cost than fixed broadband, access is no longer as critical an issue for those in the new service regions. Nonetheless, affordability remains as a significant roadblock. However, there is evidence that among those who have access to the Internet and are able to afford it, there are still many who choose not to go online.

<i>Have Internet already</i>	<ul style="list-style-type: none"> • Resilience: Increase cross-border connectivity • Security and privacy: Use technology to promote trust and privacy • Content availability: Make sure content is widely and legally available
<i>Could have Internet</i>	<ul style="list-style-type: none"> • Content access: Provide access to locally relevant content • Content creation: Government lead in developing applications and creating demand for hosting infrastructure
<i>Cannot have Internet</i>	<ul style="list-style-type: none"> • Access: Remove barriers to deployment, and government invests where costs are high or incomes are low • Affordability: Remove taxes on equipment and services to lower costs, subsidize demand in targeted fashion

As a result, when considering how to bridge the digital divide, it is important to differentiate those who could afford to go online, but choose not to, from those who do not have access or could not afford it anyway. It is also important to consider the issues that impact those already online, such as improved security and privacy measures. Addressing those concerns will not just impact those already online, but improve the experience for those considering going online.

Conclusion

As we near three billion Internet users, it is appropriate to step back and marvel at the speed of adoption and changes that have taken place to date. It is clear that the open Internet model, which helped to fuel the growth and navigate all the bumps in the road, continues to be the best way to ensure that the Internet remains sustainable and continues to grow.

Working together – and honouring the Internet model – all stakeholders can meet the foreseen challenges outlined in this report – and others as they arise – to make the Internet yet more essential to end-users' lives as citizens, consumers, and innovators. At the same time, we can address the digital divide that separates regions and people, and make sure that once online, everyone has the same user experience. With open and universal online access, anything is possible.

Internet Society

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