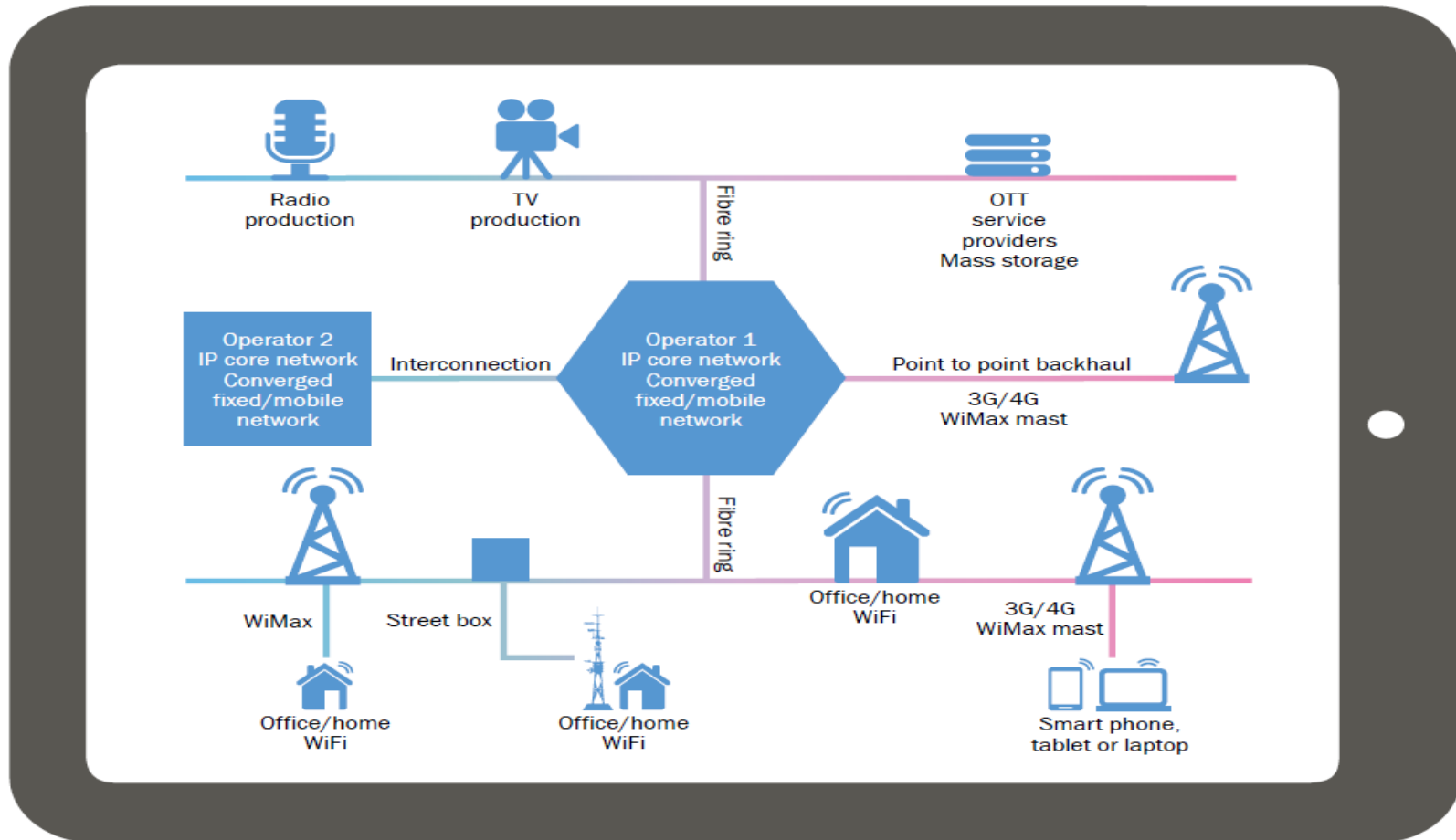


Trends in Telecommunication Reform 2016: Regulatory Incentives to Achieve Digital Opportunities



Jaroslav K. PONDER
Coordinator for Europe Region
International Telecommunication Union (ITU)

The ICT Sector Today

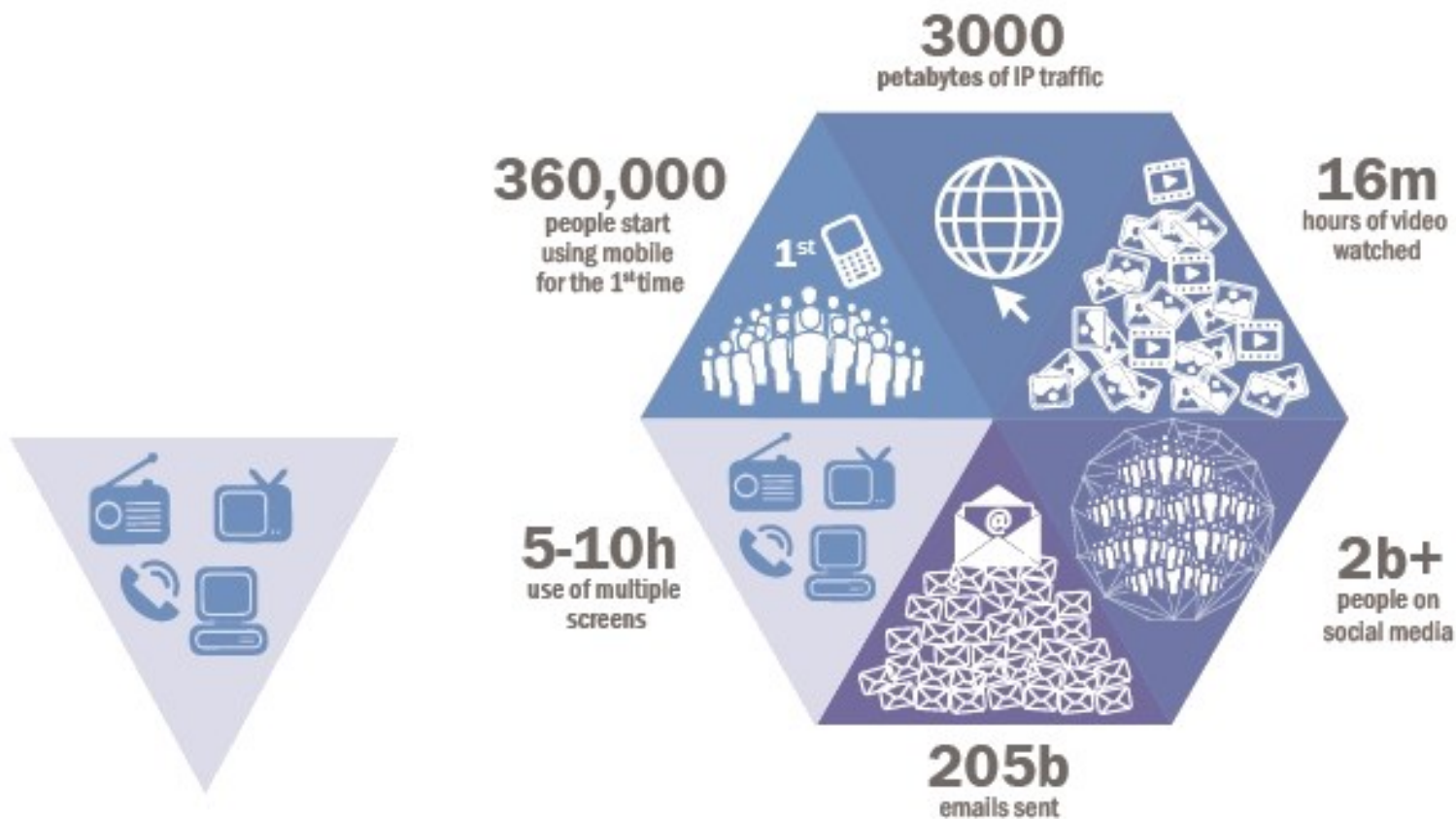


Source: ITU

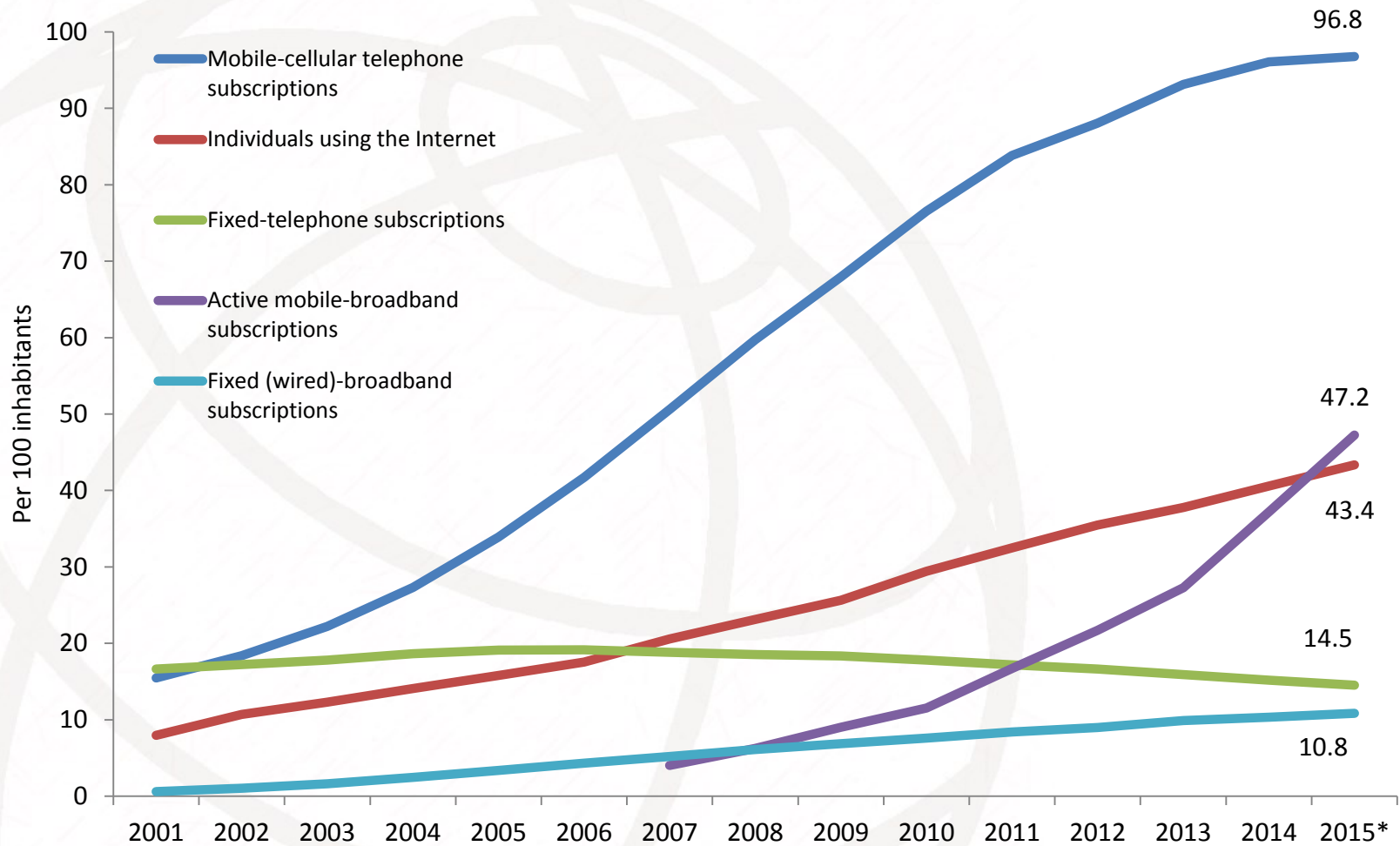
We ARE a Smart Connected Society

1994

2015



Global ICT Developments, 2001-2015



Note: * Estimate

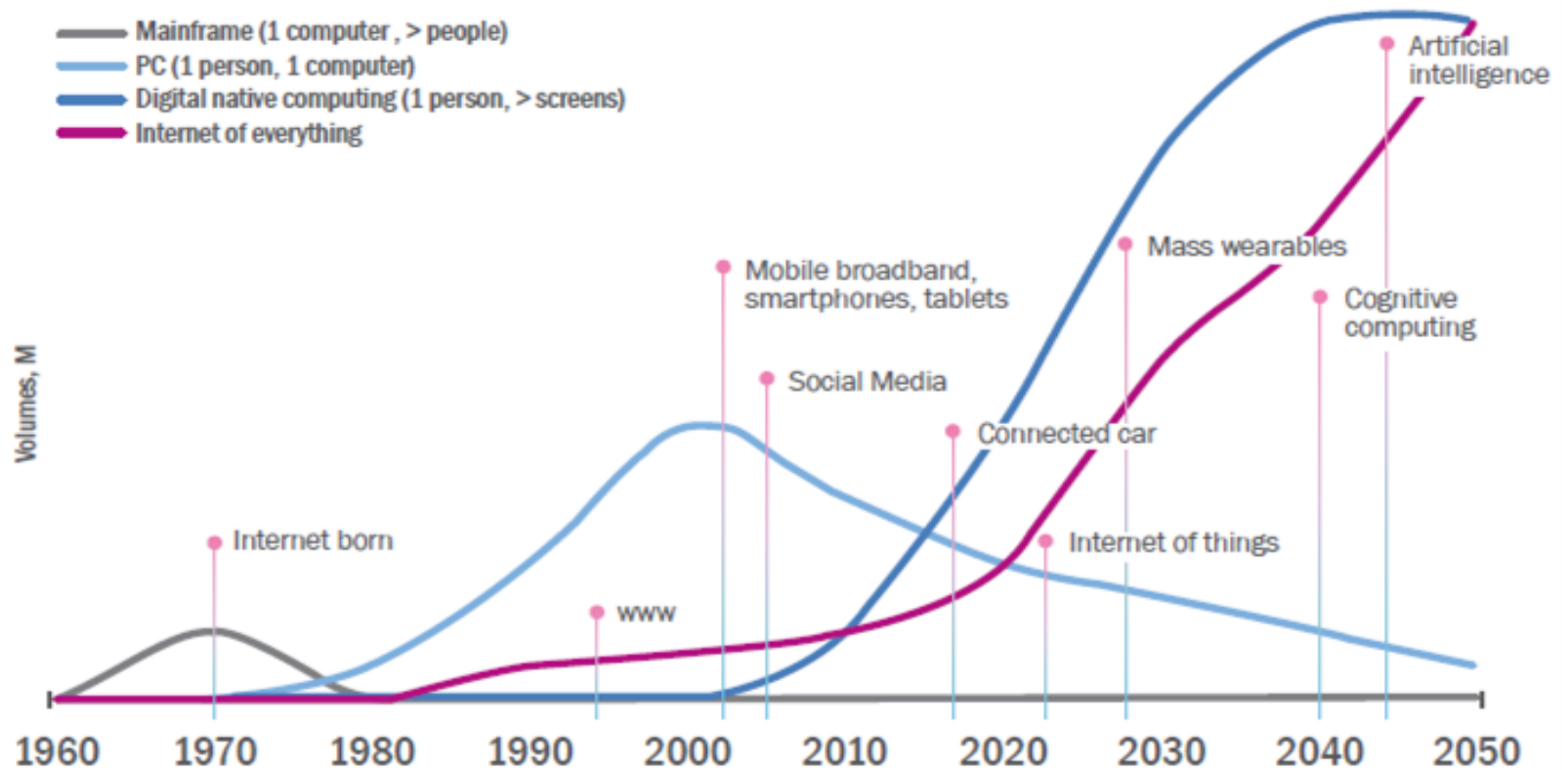
Source: ITU World Telecommunication /ICT Indicators database

ITU ASP RO



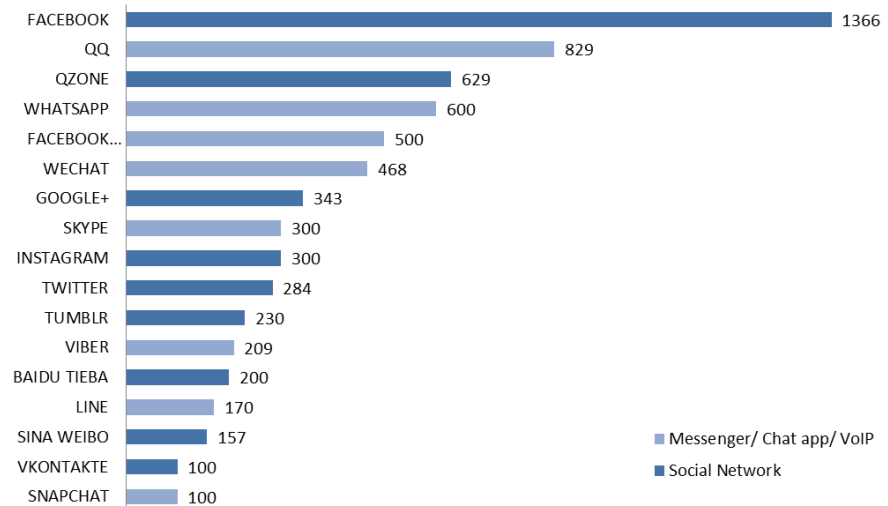
History of the Future

One to many to any: ICTs from happy few to the masses



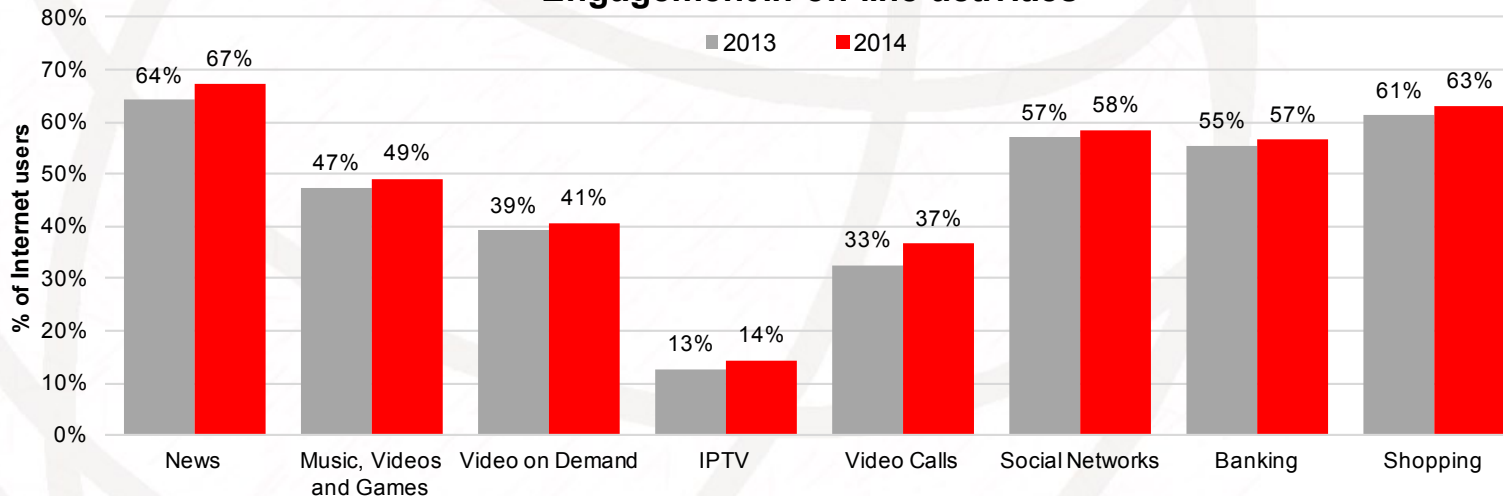
Online Activities

Active users by social platform, January 2015 (in millions)



Source: ITU

Engagement in on-line activities



Source: EC Digital Agenda Scorecard 2015

Source: Eurostat - Community survey on ICT usage in Households and by Individuals; IHS Technology databases - TV Media Intelligence Service

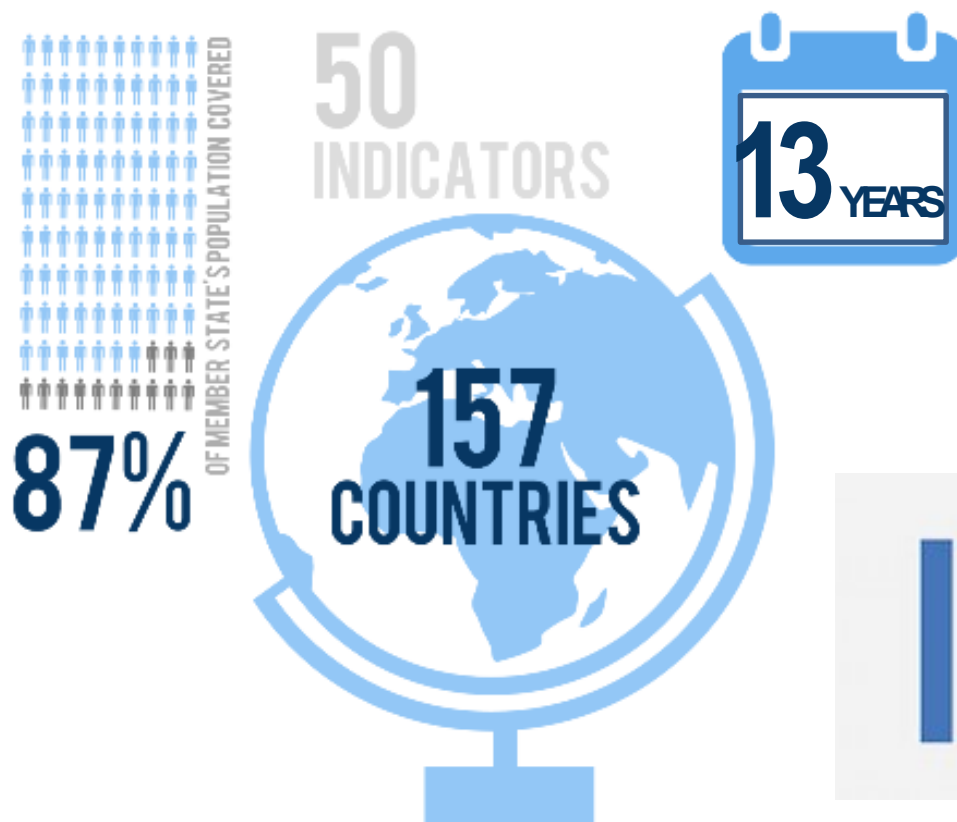


Tracking Regulatory Trends

- The dawn of the **global digital economy** has opened the way to a ladder of regulation or five generations of ICT regulation
- The interaction of the **ICT sector for stimulating growth** in the digital economy alongside other sectors needs to be understood
- **New kind of policy and regulatory frameworks** are needed
- It is essential to have a clear understanding of the complex **relationships between regulatory policies and ICT growth**
- Need to **quantify trends** and learn from successful experiences



The ICT Tracker



Source: ITU ICT Regulatory Tracker, 2015



ICT Regulatory Tracker

(Complete set of data available)

The screenshot shows an Excel spreadsheet with the following structure:

- Columns:**
 - Columns 1-4: Country, 1. Regulatory authority
 - Columns 5-14: 2. Regulatory mandate
 - Columns 15-28: 3. Regulatory regime
 - Columns 29-32: 4. Competition framework
 - Column 33: Total for cluster 1
 - Column 34: Total for cluster 2
- Rows:**
 - Row 1: Country (Argentina)
 - Row 2: Max Category Points (0-3)
 - Row 3: Country
 - Row 4: Year
 - Rows 5-32: Data for various countries including Albania, Andorra, Antigua and Barbuda, Argentina, Armenia, Australia, Austria, Azerbaijan, Bahamas, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Benin, Bhutan, Bolivia and Hercegovina, Botswana, Brazil, Bulgaria, Burkina Faso, Cambodia, Cameroon, Canada, Cape Verde, Central African Rep., Chile, China, Colombia, Comoros, Congo, Congo (Democratic Republic of the), Costa Rica, Cote d'Ivoire, Croatia, Cuba, Cyprus, Czech Republic, Denmark, Dominica, Dominican Rep., Ecuador, Egypt, El Salvador, Equatorial Guinea, Estonia, Ethiopia, Fiji, Finland, France, Gabon, Gambia, Georgia, Germany, Ghana, Greece.



Generations of Regulation

G1: Regulated public monopolies

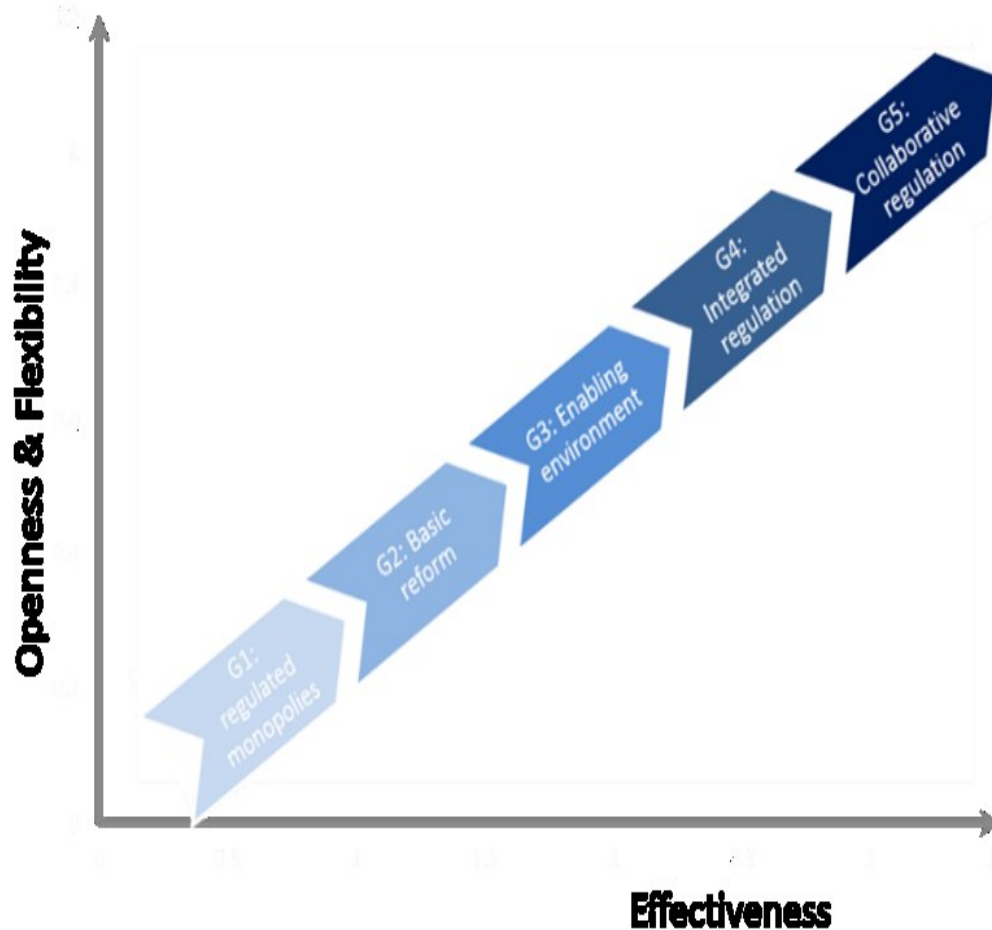
without an independent regulator

G2: Basic reform, including the creation of separate regulatory bodies, partial liberalization and privatization across the layers

G3: Regulation for enabling investment, innovation and access, with focus on stimulating competition

G4: Integrated regulation, with an evolving role of the regulator as a partner for development and social inclusion

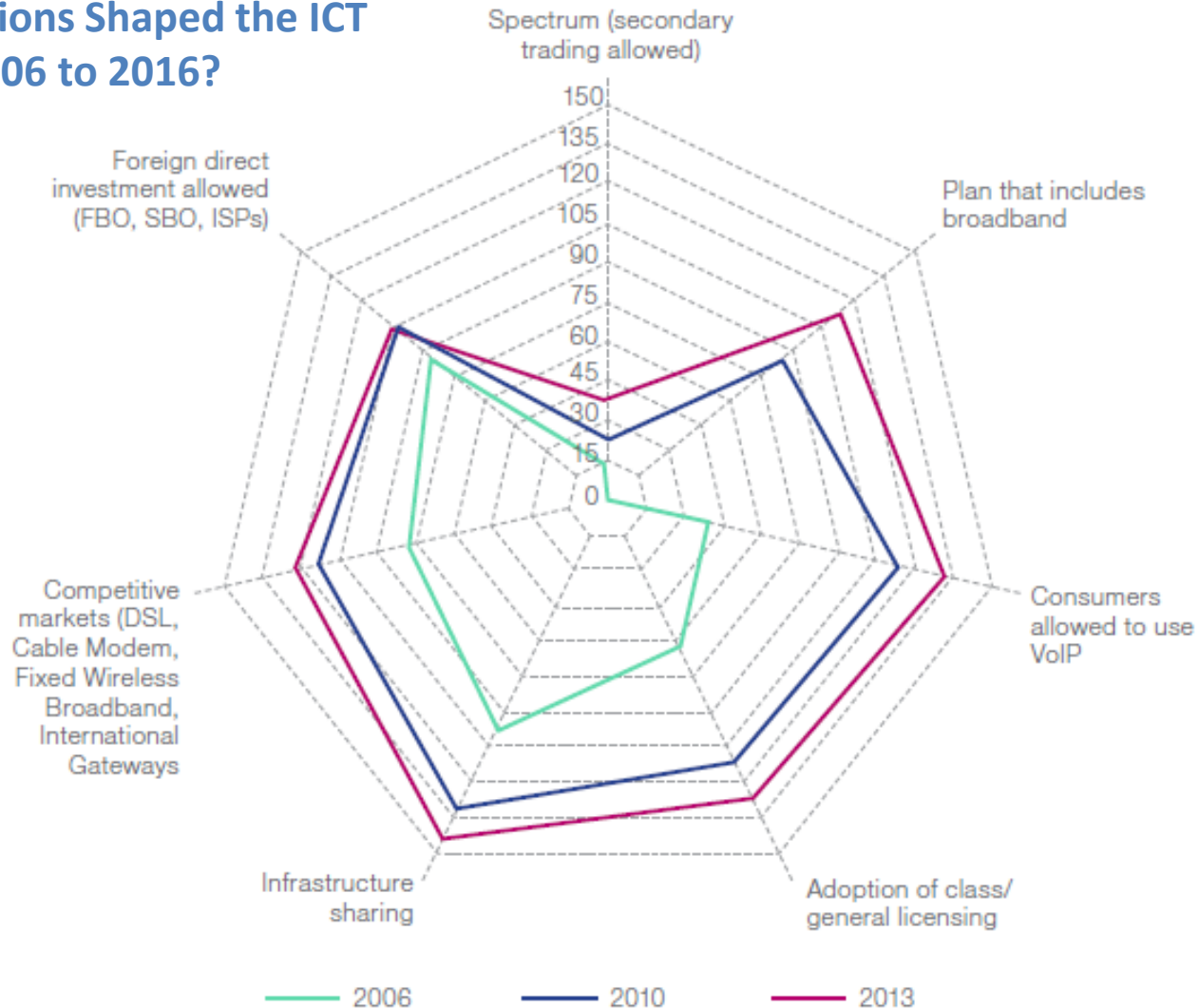
G5: Collaborative regulation, with the need to define the foundation, platforms and mechanisms for working with other sector regulators to help achieve the Sustainable Development Goals



Source: ITU

The Role of Regulation

Which Regulations Shaped the ICT Sector from 2006 to 2016?

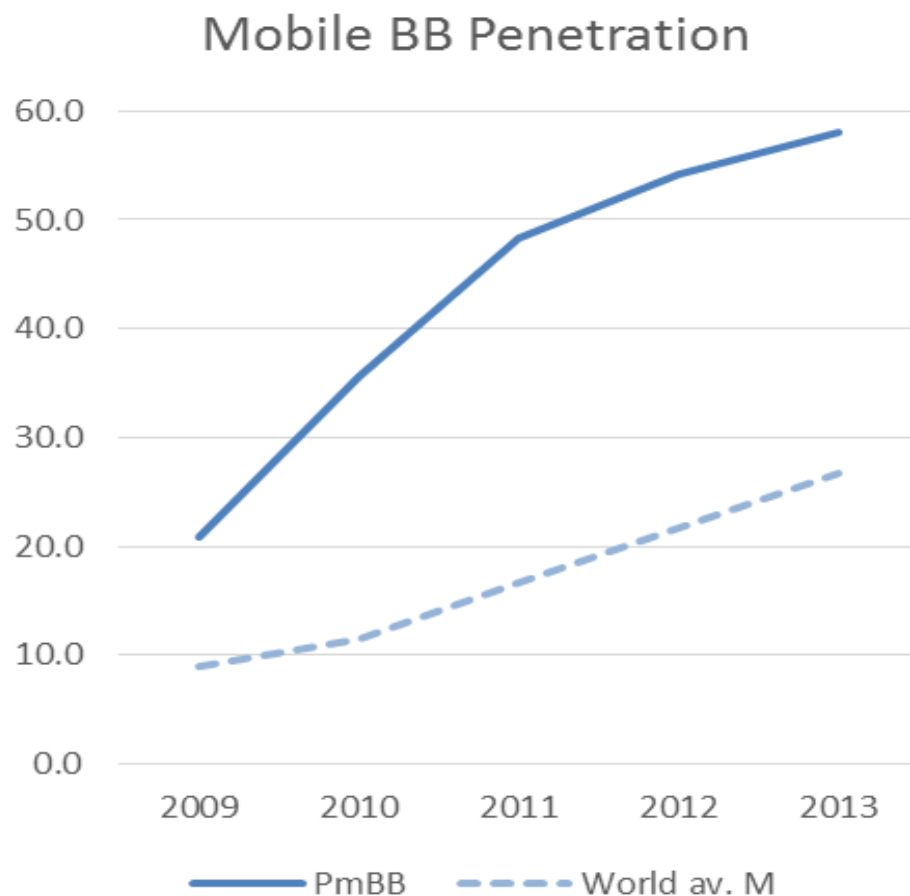


Source: <http://www.itu.int/tracker>

Source: ITU's Trends in Telecommunication Regulatory Reform Report, 2015.



Winning formulas for mobile broadband



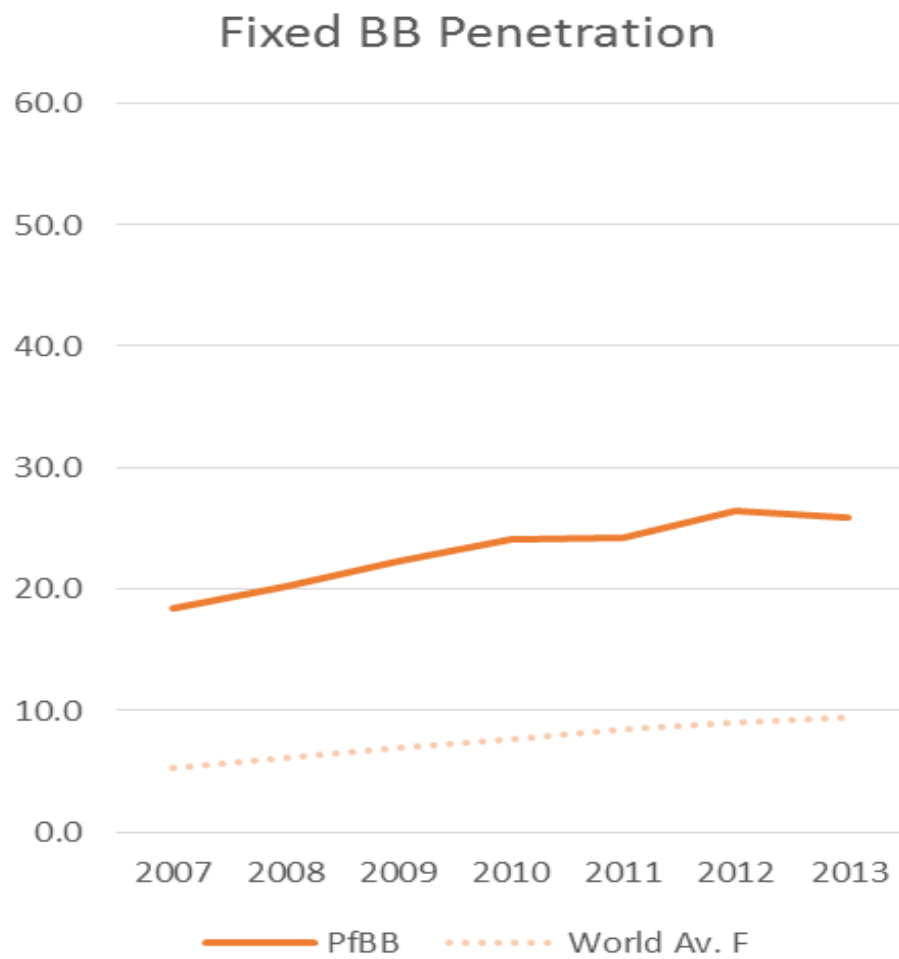
Source: ITU



- Competition in mobile broadband
- Competition in international gateways
- Mobile number portability enabled
- Band migration allowed
- Infrastructure sharing for mobile (either allowed or mandated), including MVNOs
- National broadband plan adopted



Winning formulas for fixed broadband



- Competition in DSL/cable
- Fixed number portability enabled
- Infrastructure sharing for fixed either allowed or mandated
- Converged licensing framework in place
- National broadband plan adopted



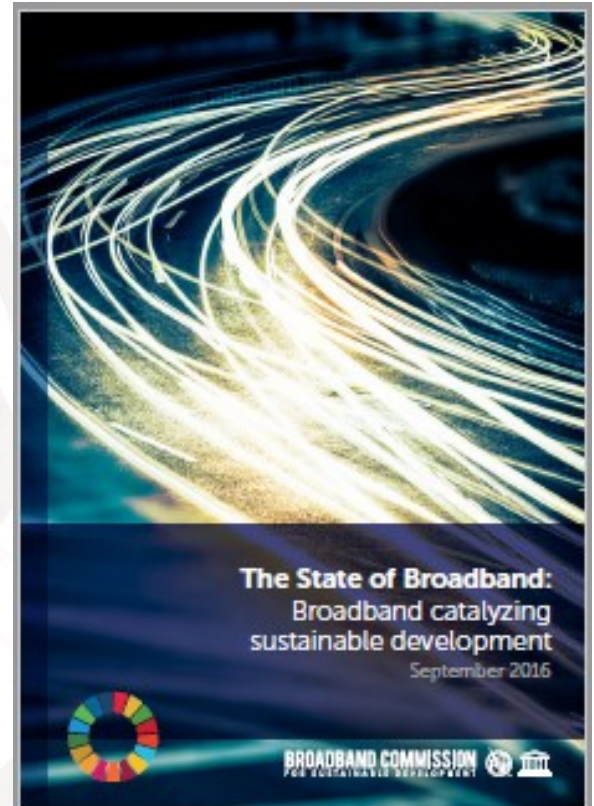
Ecosystem Needs



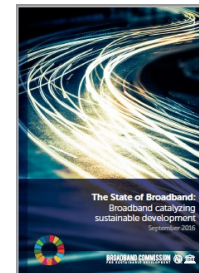
The State of Broadband 2016 Report

Broadband Commission

- The digital divide is shifting from basic telephony to Internet
- Half of all mobile phones are now broadband-enabled
- Competition among next-gen technologies is intensifying
- Roughly half the Commission's targets were achieved by the original end-date of 2015.
- The overall digital gender divide has grown slightly.

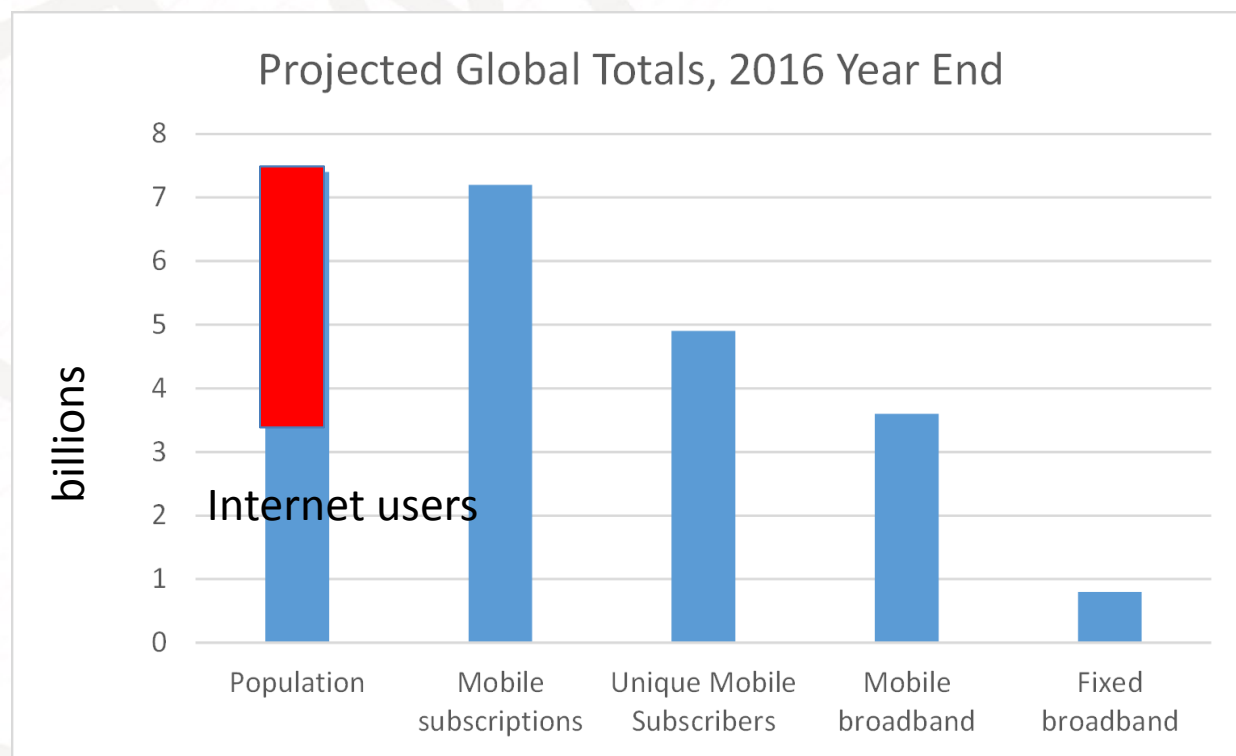


The Shifting Digital Divide – from basic telephony to Internet

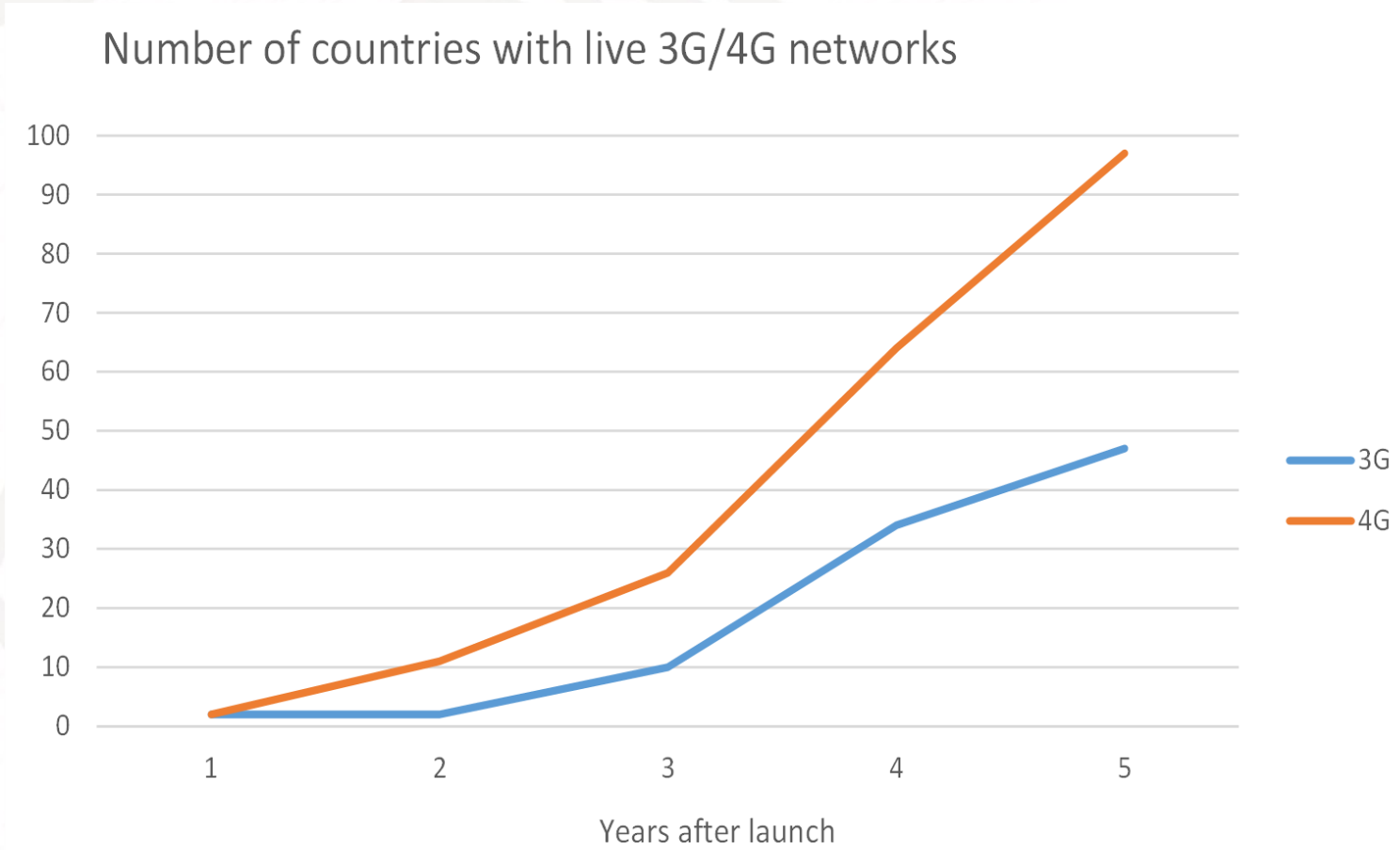
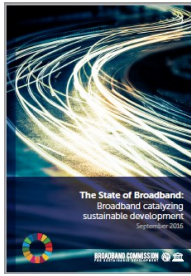


The digital divide is shifting from basic phones to Internet, with mobile broadband a key driver of growth in Internet access –half of all subscriptions now broadband-enabled:

 **Remaining No
of Unconnected
People**



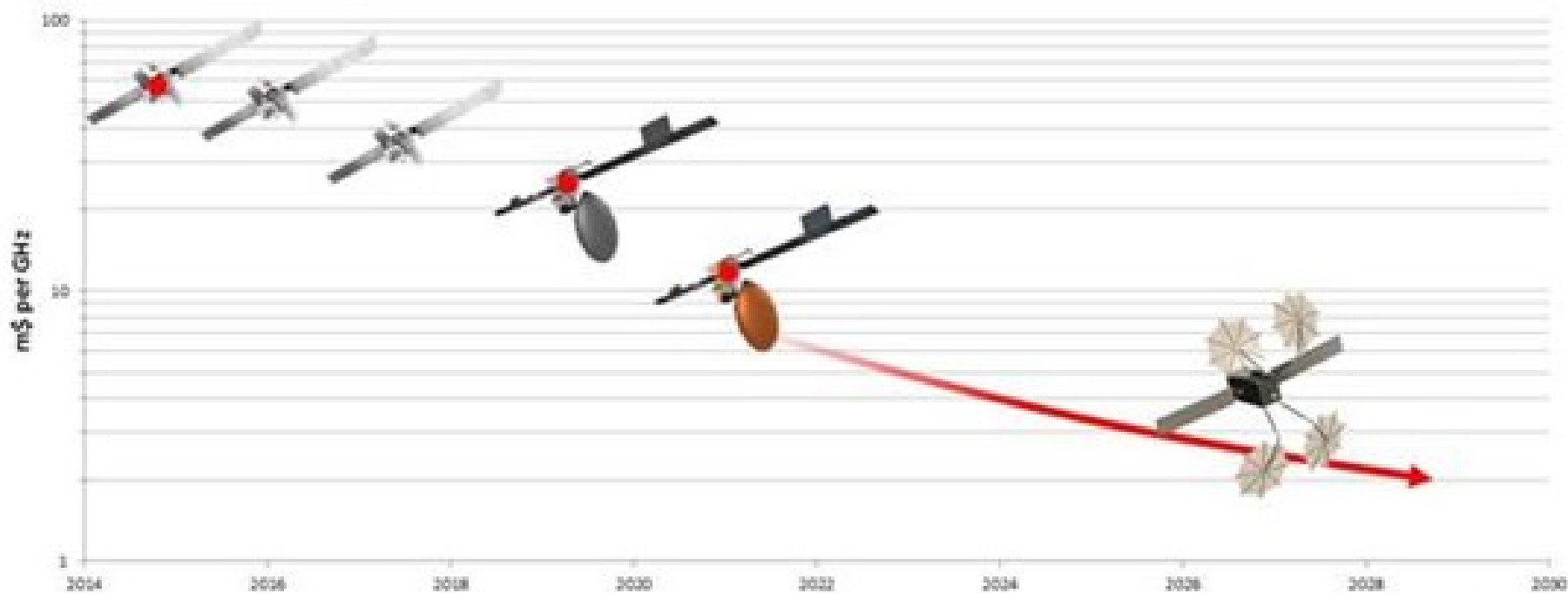
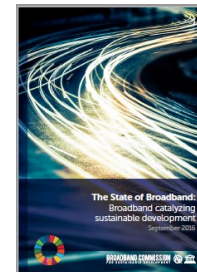
3G - 4G



Source: ITU.



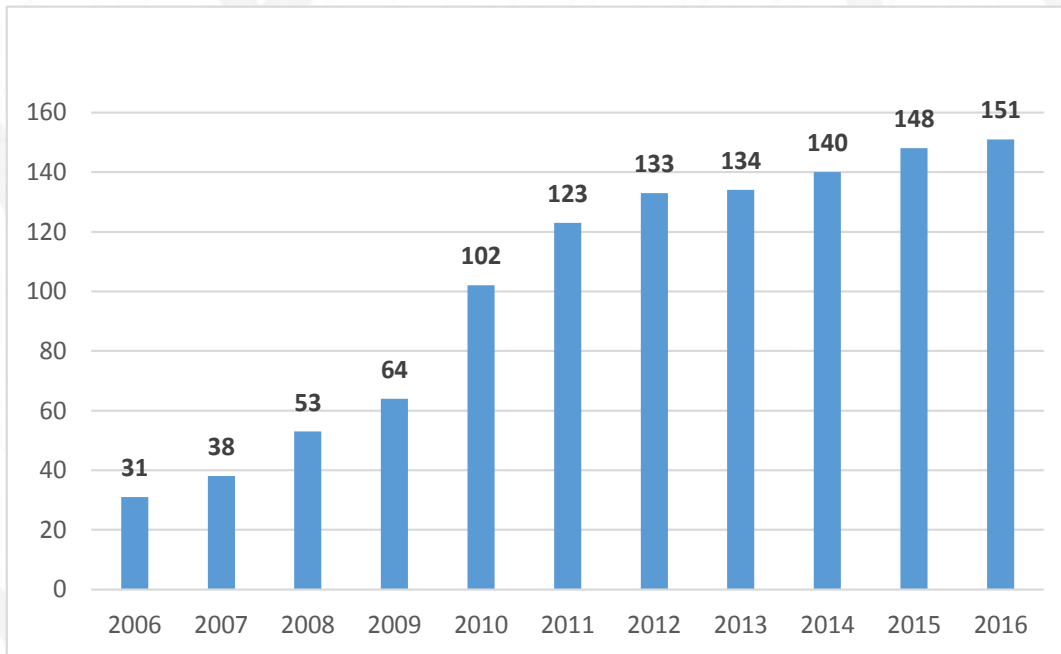
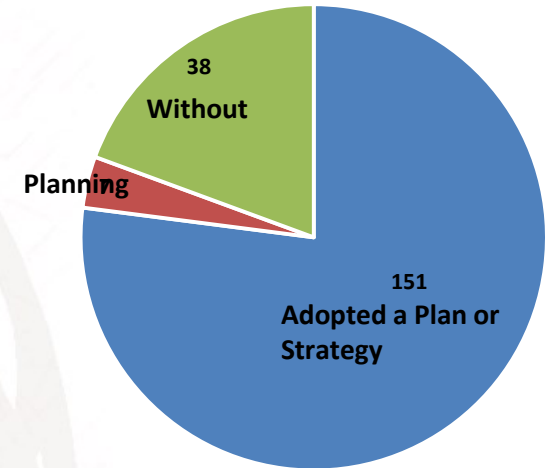
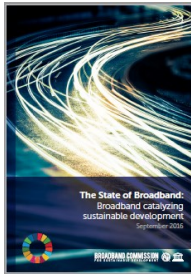
Next-Generation Satellite



Source: Eutelsat Intelligence.

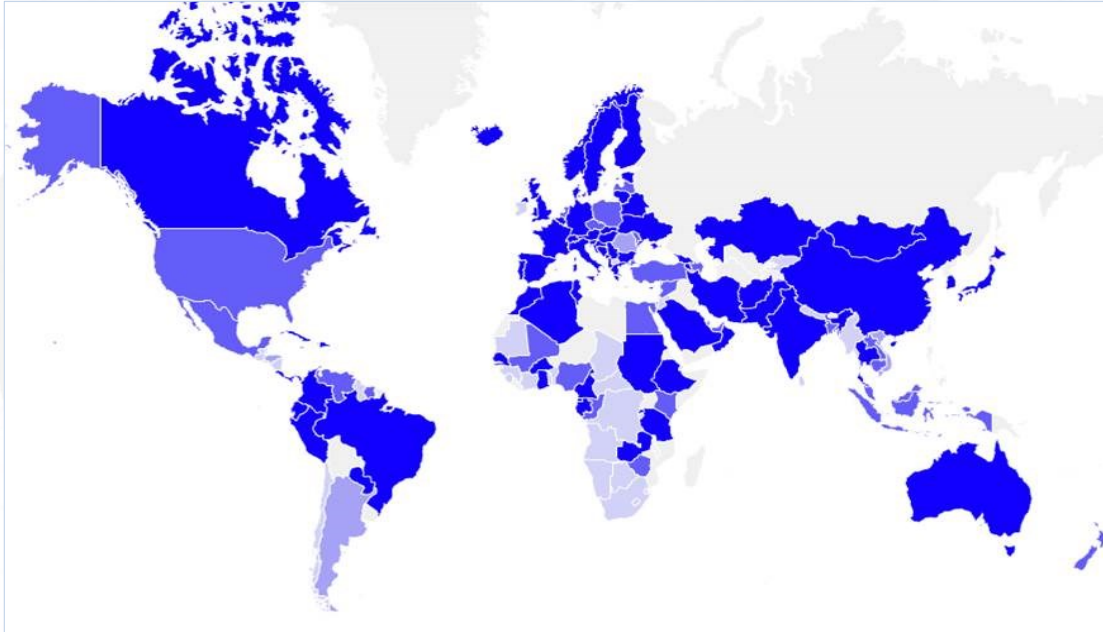
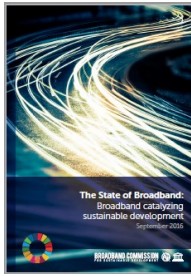


National Broadband Plans



Source: ITU.

National Broadband Plans



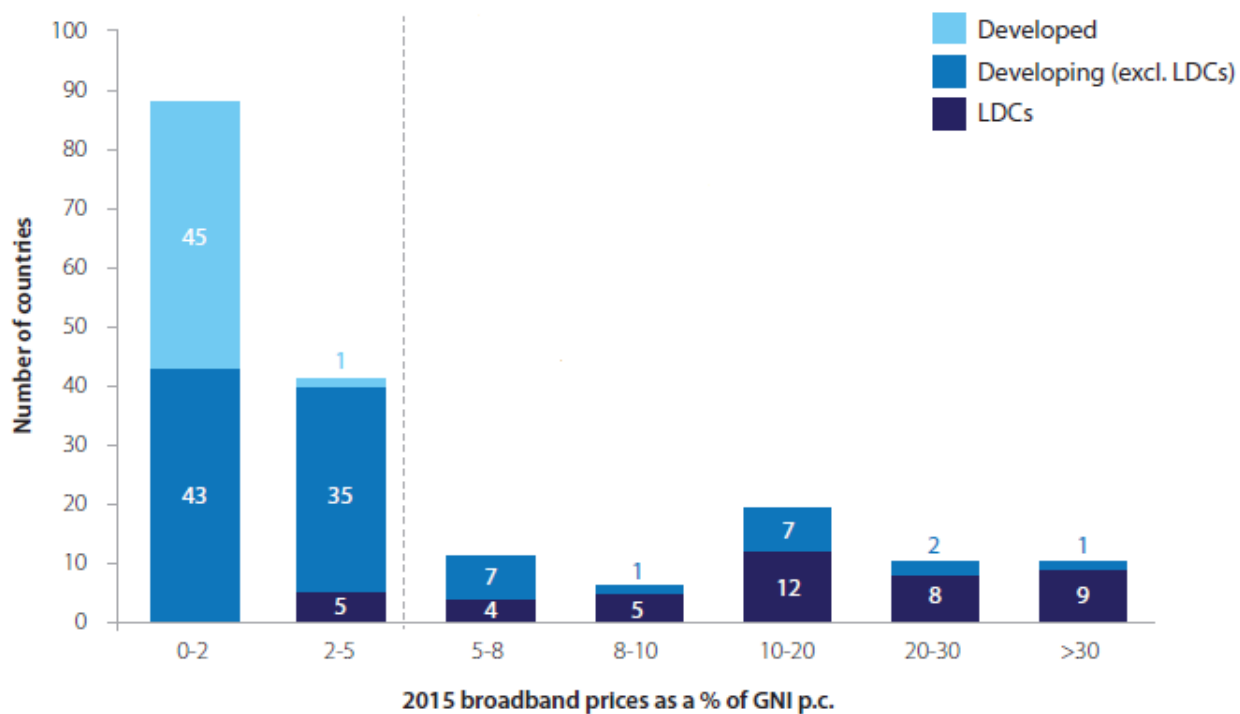
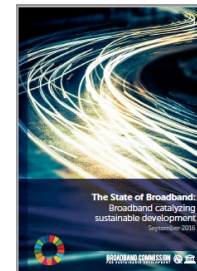
151 National
Broadband Plans

30 Broadband
Strategies

10 IoT Roadmaps



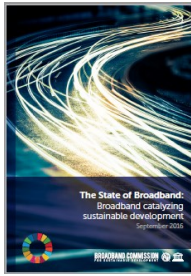
Targets – Affordability



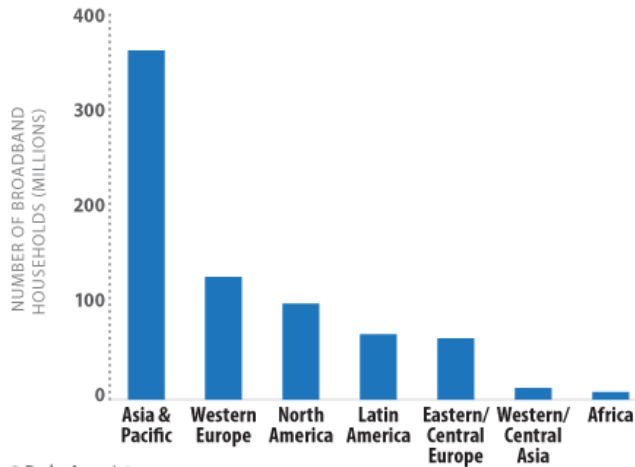
Source: ITU.



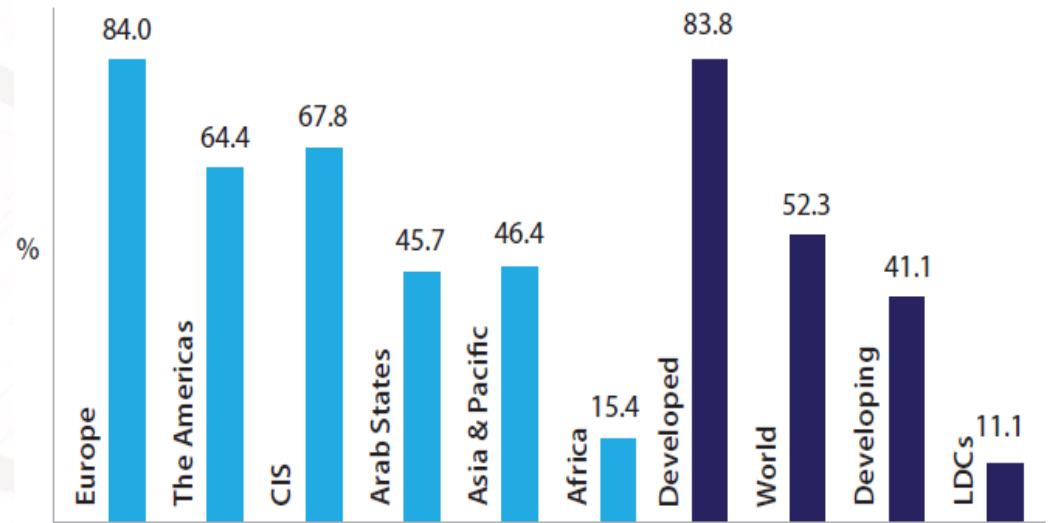
Household Access



Broadband Households by Region



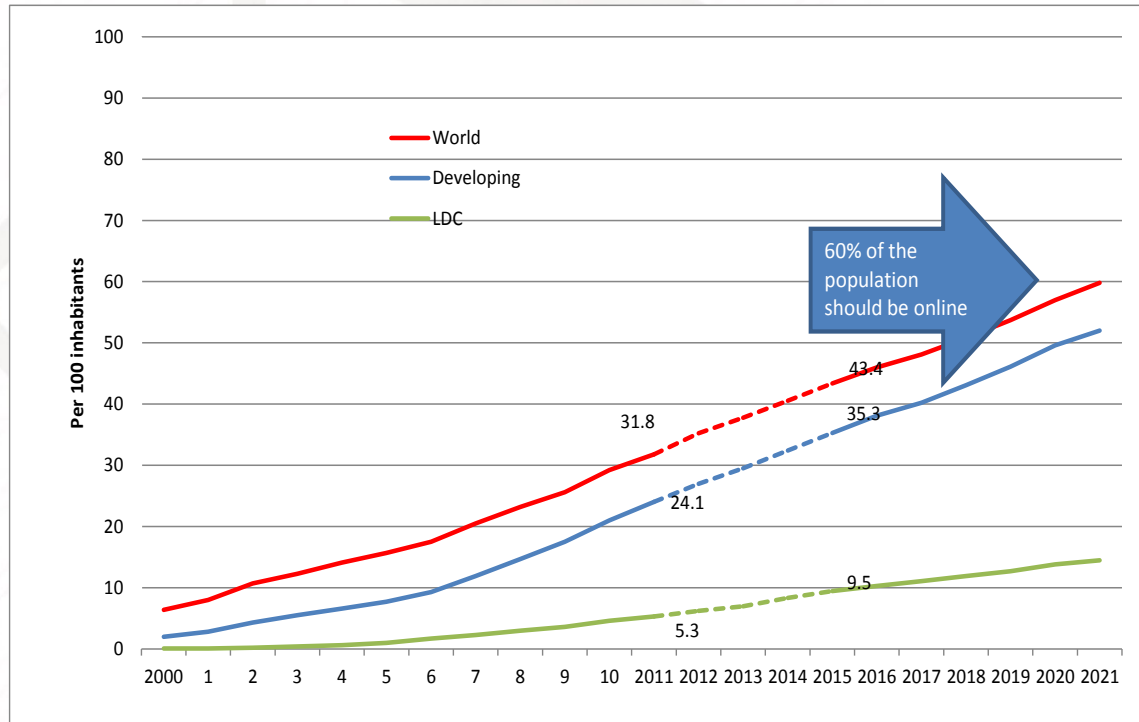
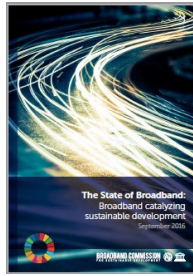
© Parks Associates



Source: Parks Associates, ITU.



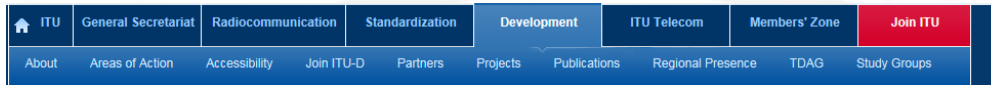
Individual Access Continues to Increase



Source: ITU.



ITU/BDT Regulatory Activities



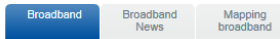
Regulatory and Market Environment

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Global Symposium for Regulators (GSR) 2016

Sharm el-Sheikh, Egypt, 11-14 May 2016



- Broadband Thematic Reports
- Case studies
- GSRs and Best Practice Guidelines
- ITU Broadband Atlas **New**
- ITU Broadband Atlas in 3D **New**
- Broadband Commission for Digital Development
- Broadband Commission Reports
- Understanding patents, competition and standardization

HIGHLIGHTS

ICTEYE



- ITU Regional Economic and Financial Forum of Telecommunications/ICTs for Latin America and the Caribbean
Brasilia, Brazil

GSR

Since its launch in 2000, the annual Global Symposium for Regulators (GSR) provides a unique venue for regulators and policy-makers from both developed and developing countries to meet and exchange views and experiences. The meeting fosters an open dialogue between regulators and industry.

- GSR16: **Be Empowered, Be Included!** Building blocks for smart societies in a connected world, **11-14 May 2016, Sharm el-Sheikh, Egypt**
- GSR15: **Mind the Digital Gap - Regulatory incentives to achieve digital opportunities**, 9-11 June 2015, Libreville, Gabon
- GSRs Best Practice Guidelines and documents

PUBLICATIONS & STUDIES

We produce a number of flagship reports including **Trends in Telecommunication Reform** focusing on best practice regulation to enable ubiquitous broadband markets to thrive. Various thematic studies provide valuable viewpoints and strategies on multiple issues that affect regulation and economics in a converged broadband world.

- Trends in Telecommunication Reform Series
- ITU Broadband Thematic Reports Series
- Publications on Economics & Finance
- Other publications

Global Symposium for Regulators (GSR-16)

Trends in Telecommunication Reform 2016: Regulatory Incentives to Achieve Digital Opportunities

- Investment strategies to foster the deployment of broadband and access to the digital economy,
- Network sharing and co-investment regulation,
- Regulation and the Internet of Things (IoT),
- Interoperability in the digital ecosystem,
- Smart regulation to facilitate m-services and applications uptake and diffusion

Broadband Thematic reports Publications on economic and Finance

www.itu.int/treg



Global Symposium for Regulators (GSR)

- GSR brings together **heads of national telecom/ICT regulatory authorities** from around the world and has earned a reputation as the global annual venue for regulators to **share their views and experiences on the most pressing regulatory issues** they have identified
- **GSR fosters a dynamic Global Industry Regulators Dialogue (GRID)**, between regulators, policy makers, industry leaders and other key ICT stakeholders
- GSR's Global Dialogue provides a **neutral platform for ITU-D Sector Members** to share their views on major issues facing the ICT sector
- GSR includes a series of **pre-events**:
 - ✓ A Thematic Pre-Conference
 - ✓ The Private Sector Chief Regulatory Officers Meeting
 - ✓ The Regulatory Associations Meeting



Global Symposium for Regulators (GSR)

15 Annual Editions of GSR since 2000



GSR2000
Establishing a regulatory body



GSR2001
Effective regulation



GSR2002
Promoting Universal Access to ICTs



GSR2003
Promoting Universal Access to ICTs



GSR2004
Licensing in an era of convergence



GSR2007
The Road to Next Generation Networks (NGN): Can regulators promote investment and achieve open access?



GSR2005
Developing a new regulatory framework to promote broadband deployment and access in developing countries



GSR2008
Six degrees of sharing: Innovative infrastructure sharing and open access strategies to promote affordable access for all



GSR2009
Hands-on or Hands-off? Stimulating growth through effective ICT regulation



GSR2010
Enabling Tomorrow's Digital World



GSR 2011
Smart Regulation for a Broadband



Global Symposium for Regulators (GSR)

15 Annual Editions of GSR since 2000 (cont.)



GSR 2012
Why regulate in a Networked Society?



GSR 2013
4th-Generation Regulation:
driving digital
communications ahead



GSR14
Capitalizing on the potential
of the digital world



GSR15
Mind the Digital Gap -
Regulatory incentives to
achieve digital opportunities



Be Empowered, Be Included!
Building Blocks for Smart Societies
in a Connected World



Global Symposium for Regulators 2016

Under the theme “Be empowered, Be included: Building Blocks for Smart Societies in a Connected World”, this year’s programme includes compelling discussions and debate around:

- Artificial intelligence, smart sensors & smart networks
- Digital financial inclusion – the challenges of bringing the unbanked online
- The regulatory road towards the ‘Internet of Things’ and M2M communications
- New digital platforms – empowering or enslaving?
- Privacy, trust and cybersecurity
- Strategies to encouraging digital entrepreneurship

For more information: www.itu.int/gsr16





Global Symposium for Regulators 2016

- Regulators were invited, **as part of the GSR consultation process**, to identify pro-active collaborative policy and smart ICT regulatory measures needed to facilitate access to and the development of digital financial services:
 - identify topics of relevance to stakeholders of the digital finance ecosystem,
 - addressing regulatory overlaps between the ICT/Telecommunication and Financial Services sectors,
 - defining new regulatory approaches to ICT/telecommunication policy and regulation, in particular in an era of collaborative regulation.

Best Practice Guidelines Available here:

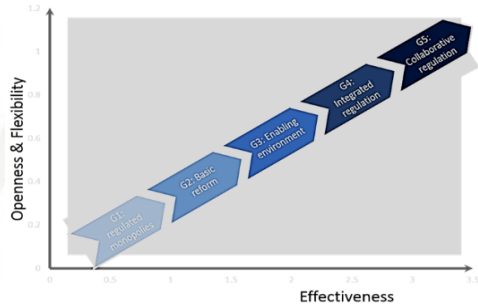
<http://www.itu.int/en/ITU->

[D/Conferences/GSR/Documents/GSR2016/BPG_16_en.pdf](http://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2016/BPG_16_en.pdf)



GSR-16 themes and related discussion papers

Evolution of ICT Regulation



Source: ITU.

- Building blocks for smart societies in a connected world: A regulatory perspective on 5th generation collaborative regulation
- Emerging technologies and the global regulatory agenda
- The race for scale: market power, regulation and the App economy
- Maintaining trust in a digital connected society

www.itu.int/en/ITU-D/Conferences/GSR/Pages/GSR2016/Papers.aspx



GSR-16 best practice guidelines

GSR-16 Consultation

YOU ARE HERE [HOME](#) > [ITU-D](#) > [CONFERENCES](#) > [GLOBAL SYMPOSIUM FOR REGULATORS \(GSR\)](#) > [GSR-16 CONSULTATION](#)



GSR-2016 Best Practice Guidelines

The overarching theme of the 16th edition of GSR being "Be Empowered, Be Included: Building Blocks for Smart Societies in a Connected World", participants engaged in a global constructive dialogue to explore synergies and ways to strengthen collaboration and cooperation between the telecom/ICT and financial sectors. The aim was to identify smart ICT policy and regulatory measures needed to enable collaborative regulation and an

inclusive dialogue across sectors, this year focusing in particular on fostering an enabling environment for access to inclusive digital financial services, especially for the underserved and underbanked.

Regulators were invited, **as part of the GSR consultation process**, to identify pro-active collaborative policy and smart ICT regulatory measures needed to facilitate access to and the development of digital financial services:

- identify topics of relevance to stakeholders of the digital finance ecosystem,
- addressing regulatory overlaps between the ICT/Telecommunication and Financial Services sectors,
- defining new regulatory approaches to ICT/telecommunication policy and regulation, in particular in an era of collaborative regulation.

Contributions were coordinated by H.E Yasser Elkady, Minister of Communications and Information Technology, and Chairman of the Board of Directors, National Telecommunications Regulatory Authority, Egypt and GSR-16 Chair.

Best practice guidelines

PDF

English, [عربي](#), [中文](#), [Español](#), [Français](#), [Русский](#)



GSR16 BEST PRACTICE GUIDELINES ON COLLABORATIVE REGULATION FOR DIGITAL FINANCIAL INCLUSION

Regulating the ever-changing ICT sector requires skills, foresight and innovation. Developing and using best practices is the best way to fast-track our efforts to adapt to change and embrace new technologies to foster development and business.



Organized on the initiative of
Mr Brahima Sanou,
Director, Telecommunication
Development Bureau (BDT), ITU

Digital inclusion is one of the major challenges brought about by the digital age and it requires an inclusive dialogue across the sectors. Banking the unbanked, like connecting the unconnected, is a major milestone towards universal growth and prosperity. Leveraging on both technology and finance, digital financial inclusion through collaborative regulation can be a powerful driver towards achieving the Sustainable Development Goals.



Coordinated by
H.E. Yasser Elkady,
Minister of Communications and
Information Technology, and
Chairman of the Board of Directors,
National Telecommunications
Regulatory Authority, Egypt

In Egypt, we recognize the power of ICTs in achieving economic and social sustainable development, in transforming our citizen's life for good and in creating more connected global societies by expanding access to knowledge, financial services and healthcare, create new business opportunities, and provide more consumer choice, hence, new policies and regulations.

www.itu.int/en/ITU-D/Conferences/GSR/Pages/GSR2016/GSR-16-Consultation.aspx





GSR-16 Thematic Pre-Conference: Global Dialogue on Digital Financial Inclusion (GDDFI)

Sharm el-Sheikh, Egypt ,11 May 2016



Organized by: ITU, in collaboration with the Bill & Melinda Gates Foundation, the Alliance for Financial Inclusion (AFI), the Government of Egypt and other partners

Participants: Over 510 from around the world including chief executives, ministers, and representatives of financial and telecoms regulatory agencies, tech private-sector leading companies and regional organizations

Topics: Digital Financial Services: The State of Play • Prospects and challenges: getting it Right • Shaping Collaborative Approaches to Promote Digital Financial Services • Collaborative guidelines and measures

www.itu.int/gddfi16





GDDFI-16 Collaborative guiding measures for Inclusive Digital Financial Services

Global Dialogue on Digital Financial Inclusion (GDDFI)
Sharm el-Sheikh, Egypt, 11 May 2016

Collaborative Guiding Measures for Inclusive Digital Financial Services

The rapid penetration of mobile phones and the emergence of innovative technology-led business models aimed at providing access to formal financial services through mobile devices especially to underserved and unbanked people emphasizes the need of an enabling regulatory environment for inclusive digital financial services. The complexity of digital and mobile banking models that are expanding the financial services value chain creates an increased need for dialogue and collaboration between the financial sector and telecommunications/ICT sectors, particularly at public and institutional level.

We, the stakeholders participating in the 2016 GDDFI, recognize that targeted collaborative approaches can go a long way towards fostering access, availability, and up-take of robust, secure and affordable digital financial services. Therefore, we have identified the following policy, regulatory, and business collaborative guiding measures to move forward the digital financial inclusion agenda by building synergies at the national, regional and global levels.

1. Develop an inclusive **ECOSYSTEM** for Digital financial services

Telecom/ICT and financial services regulators need to collaborate to develop consistent and proportionate regulatory frameworks in order to develop a competitive and innovative digital financial ecosystem where different providers have the possibility to leverage their unique assets and capabilities to serve the bottom of the pyramid. The ecosystem consists of users (consumers, businesses, government agencies and non-profit groups) who have needs for digital and interoperable financial products and services; the providers (banks, other licensed financial institutions, and non-banks) who supply those products and services through digital means; the financial, technical, and other infrastructures that make them possible; and the governmental policies, laws and regulations which enable them to be delivered in an accessible, affordable, and safe manner.

The DFS ecosystem aims to support all people and enterprises within a country, and should support national goals including financial inclusion, economic health, and the stability and integrity of the financial systems.

An important over-arching issue in the development of the DFS ecosystem is the need to invest in and manage two sides of the eco-system at once. Practically, this means both supporting initiatives to load electronic money into consumer transaction accounts - principally through bulk, or G2P payments and initiatives to enable consumers to spend this money in electronic form, principally through the enablement of merchant electronic payment acceptance.

2. Encourage **INTEROPERABILITY**

The possibility for users worldwide to make electronic payment transactions with any other user in a convenient, affordable, fast, seamless and secure way via a single transaction account is likely to further promote financial inclusion while increasing efficiencies and competition in the marketplace.

Telecom/ICT and financial regulators and market players have a role in driving interoperability and also encourage shared access to digital platforms aimed at promoting financial inclusion. We encourage interoperability at different levels such platforms, access points, agents and customers.

3. Encourage public private **PARTNERSHIPS**

Collaboration and partnerships are critical due to the broadening of the value chain and the participation of an increasing number of actors in the digital financial ecosystem such as banks, telecom/ICT operators,

See as well the GDDFI-16 discussion
paper on:

*Digital financial services: Regulating
for financial inclusion - An ICT
perspective*

www.itu.int/gddfi16



Trends in Telecommunication Reform 2016



Regulatory Incentives to Achieve Digital Opportunities

The 16th edition of Trends examines:

- Investment strategies to foster the deployment of broadband and access to the digital economy,
- Network sharing and co-investment regulation,
- Regulation and the Internet of Things (IoT),
- Interoperability in the digital ecosystem,
- Smart regulation to facilitate m-services and applications uptake and diffusion.

Available from the ITU bookshop at:
www.itu.int/pub/D-PREF-TTR.17-2016

Other regulatory, finance and economic publications available at:

www.itu.int/pub/D-PREF



THANK YOU FOR YOUR ATTENTION !!!!

More Information

- Telecommunication Development Sector
 - <http://www.itu.int/ITU-D/>
- ICT Regulatory Tracker
 - <http://www.itu.int/ITU-R/>
- ITU ICT Eye
 - <http://www.itu.int/icteye/>
- Publications on Economics & Finance
 - <http://www.itu.int/pub/D-PREF-EF/en>
- ITU Europe Coordination Office
 - <http://www.itu.int/itu-d/>

