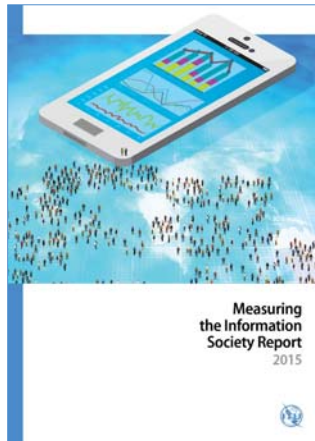


ITU Multi-Country Workshop for National Focal Points on ICT Indicators and Measurements



Measuring the Information Society Report 2015

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International Telecommunication Union

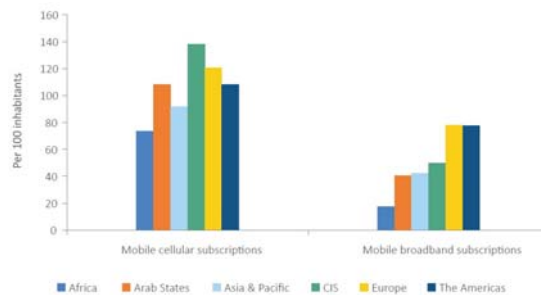
Overview

- Launched in Japan during the World Telecommunication/ICT Indicators Symposium 2015
- Includes five chapters, covering:
 1. Monitoring Global ICT Goals and Targets
 2. ICT Development Index (Global analysis)
 3. ICT Development Index (Regional analysis)
 4. Monitoring the price and affordability of ICT
 5. Internet of Things (IoT): Data for development

Substantial growth in **global** access to and use of ICTs

- Mobile-cellular subscriptions have risen from 2.2 to 7.1 billion in the last 10 years
- 3G population coverage grew from 45% to 69% between 2011 and 2015
- Mobile-broadband subscriptions have risen from 0.8 to 3.5 billion in the last 5 years
- Rapid growth of Internet usage, over 40 per cent of the world's population online in 2015
- Steady growth of fixed-broadband subscriptions, reaching 0.8 billion in 2015

Significant digital divides between **regions** persist



Nay Pyi Taw, 15-18 March 2016

Source: ITU



Monitoring the ITU Connect 2020 Agenda

Goal 1 Growth – Enable and foster access to and increased use of telecommunications/ICTs

- Target 1.1: Worldwide, 55% of households should have access to the Internet by 2020
- Target 1.2: Worldwide, 60% of individuals should be using the Internet by 2020
- Target 1.3: Worldwide, telecommunication/ICTs should be 40% more affordable by 2020

Goal 2 Inclusiveness – Bridge the digital divide and provide broadband for all

- Target 2.1.A: In the developing world, 50% of households should have access to the Internet by 2020
- Target 2.1.B: In the least developed countries (LDCs), 15% of households should have access to the Internet by 2020
- Target 2.2.A: In the developing world, 50% of individuals should be using the Internet by 2020
- Target 2.2.B: In the least developed countries (LDCs), 20% of individuals should be using the Internet by 2020
- Target 2.3.A: The affordability gap between developed and developing countries should be reduced by 40% by 2020
- Target 2.3.B: Broadband services should cost no more than 5% of average monthly income in developing countries by 2020
- Target 2.4: Worldwide, 90% of the rural population should be covered by broadband services by 2020
- Target 2.5.A: Gender equality among Internet users should be reached by 2020
- Target 2.5.B: Enabling environments ensuring accessible telecommunications/ICTs for persons with disabilities should be established in all countries by 2020

Goal 3 Sustainability – Manage challenges resulting from the telecommunication/ICT development

- Target 3.1: Cybersecurity readiness should be improved by 40% by 2020
- Target 3.2: Volume of redundant e-waste to be reduced by 50% by 2020
- Target 3.3: Green House Gas emissions generated by the telecommunication/ICT sector to be decreased per device by 30% by 2020

Goal 4 Innovation and partnership – Lead, shape and adapt to the changing telecommunication/ICT environment

- Target 4.1: Telecommunication/ICT environment conducive to innovation
- Target 4.2: Effective partnerships of stakeholders in telecommunication/ICT environment

The ICT Development Index (IDI)

- 11 indicators, covering 3 areas
- 167 economies
- Comparison of data from 2015 and 2010
- Regional analysis

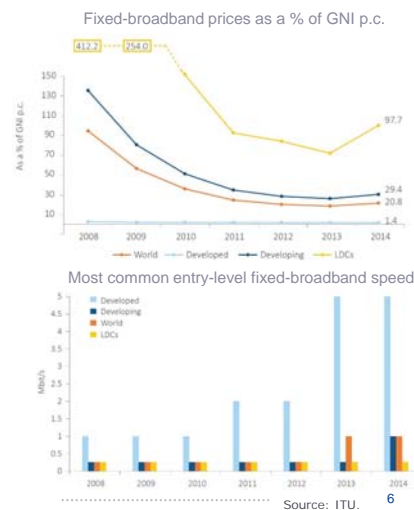
ICT access
1. Fixed-telephone subscriptions per 100 inhabitants
2. Mobile-cellular telephone subscriptions per 100 inhabitants
3. International Internet bandwidth (bit/s) per internet user
4. Percentage of households with a computer
5. Percentage of households with Internet access
ICT use
6. Percentage of individuals using the Internet
7. Fixed-broadband subscriptions per 100 inhabitants
8. Active mobile-broadband subscriptions per 100 inhabitants
ICT skills
9. Adult literacy rate
10. Secondary gross enrolment ratio
11. Tertiary gross enrolment ratio

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Source: ITU. 5

While fixed-broadband prices fell throughout the world until 2013, they increased in 2014

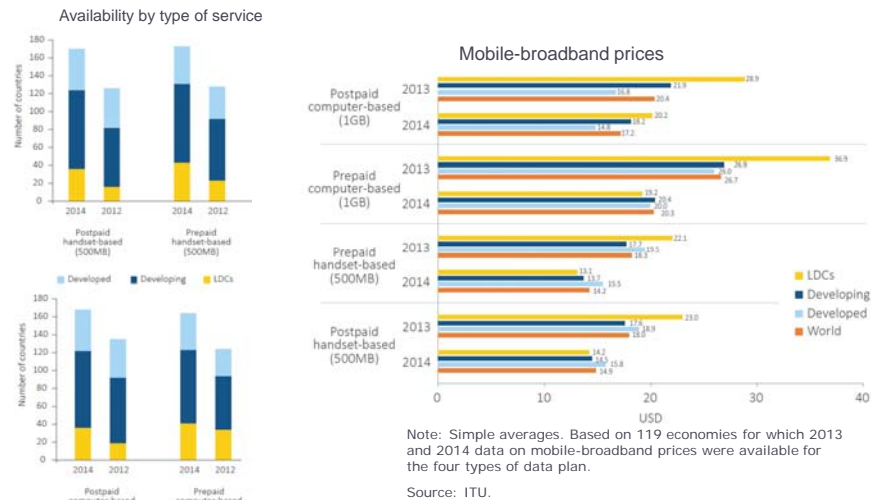
- In more than half the countries prices stagnated or increased between 2013 and 2014...
- ...but entry-level fixed broadband plans in some countries include better quality, i.e. higher speeds or more data for money
- In the LDCs, fixed-broadband services remain unaffordable
 - Major constraint: International Internet bandwidth



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Source: ITU. 6

Mobile-broadband: more offers, lower prices



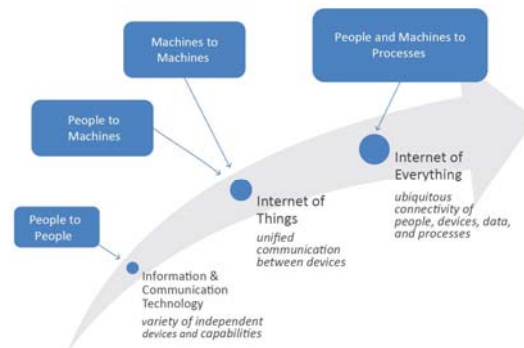
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The Internet of Things: data for development

IoT includes objects or devices which have an IP address, and the communication between these objects and other devices and systems that thus become Internet-enabled

- ICT developments are underpinning and accelerating the progress of IoT
- Most of the value derived from IoT comes from the generation, processing and analysis of new data



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Source: ITU. 8

Size and impact of IoT

- It is estimated that from 26 to 100 billion devices will be connected as part of IoT by 2020*
- IoT is expected to generate several trillions of USD of market value by 2020**
- IoT has the potential to become a major driver of development

Sectors in which IoT can play an enabling role for development



* ABI (2013), Gartner (2013), IDC (2014)
** Forbes (2014), Gartner (2013) and McKinsey (2015)
Nay Pyi Taw, 15-18 March 2016

Source: ITU based on Al-Fuqaha, Ala et al. (2015).

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IoT data for development – challenges

Infrastructure

- **Interoperability** key to unlocking as much as 40 to 60 per cent of IoT's potential value
- **Fixed-broadband connectivity and large bandwidth** are required for the development of IoT

Data management and analysis

Similar to those of other **big data** applications:

- Need to set statistical and data standards, identify analytical best practices and **facilitate data sharing**
- Mechanisms to **protect privacy** and foster competition and openness in data markets are required
- Public administrations could also contribute by adopting **open data policies** for their IoT datasets

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For further information:

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