Measuring the Information Society Report 2015

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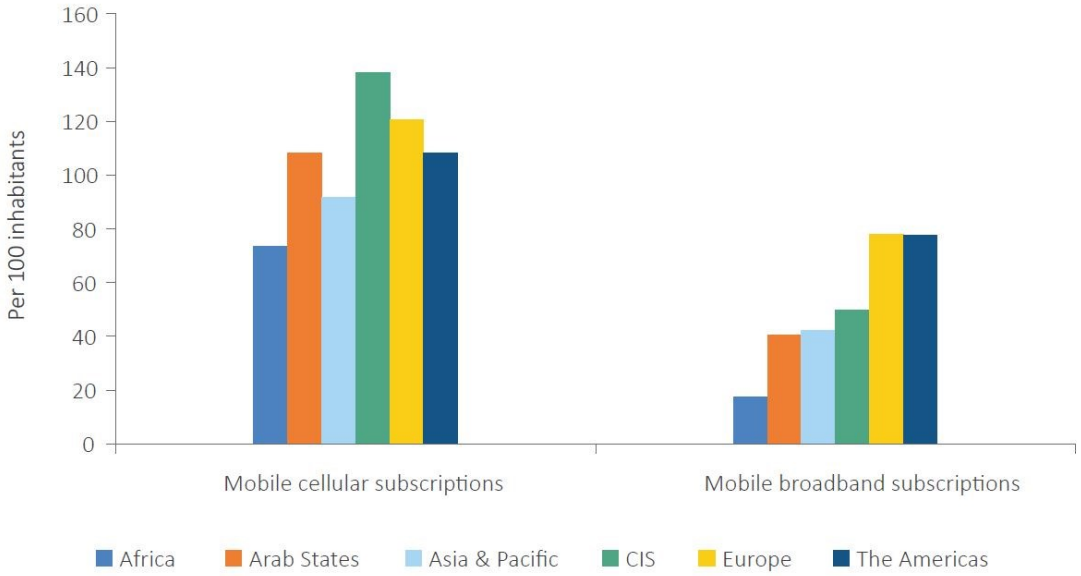
Jaroslaw K. PONDER
Coordinator for Europe &
Strategy and Policy Advisor
International Telecommunication Union

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



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

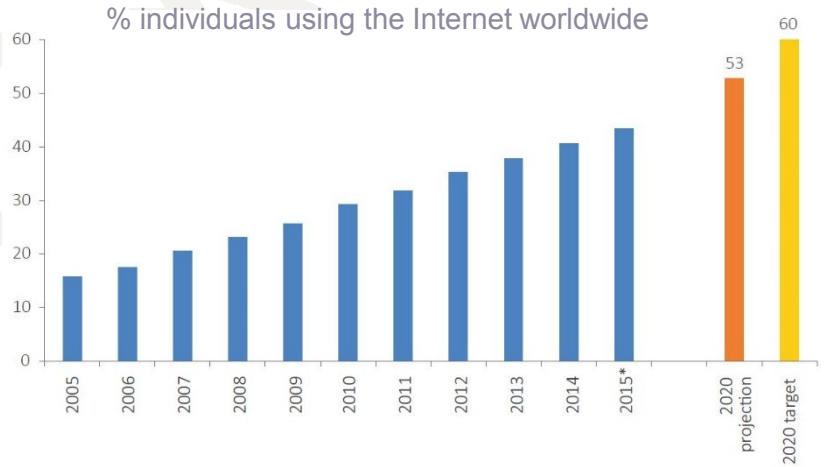
- **Target 3.1**: Cybersecurity readiness should be improved by 40% by 2020
- **Target 3.2**: Volume of redundant e-waste to be reduced by 50% by 2020
- **Target 3.3**: Green House Gas emissions generated by the telecommunication/ICT sector to be decreased per device by 30% by 2020

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

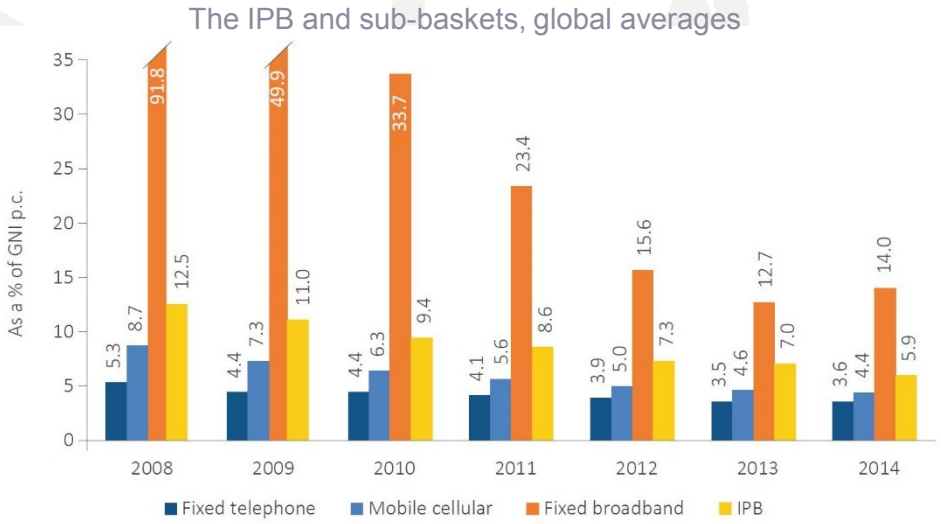
1.2 Worldwide, 60% of individuals should be using the Internet by 2020

% Internet users worldwide expected to **fall short of the Target**



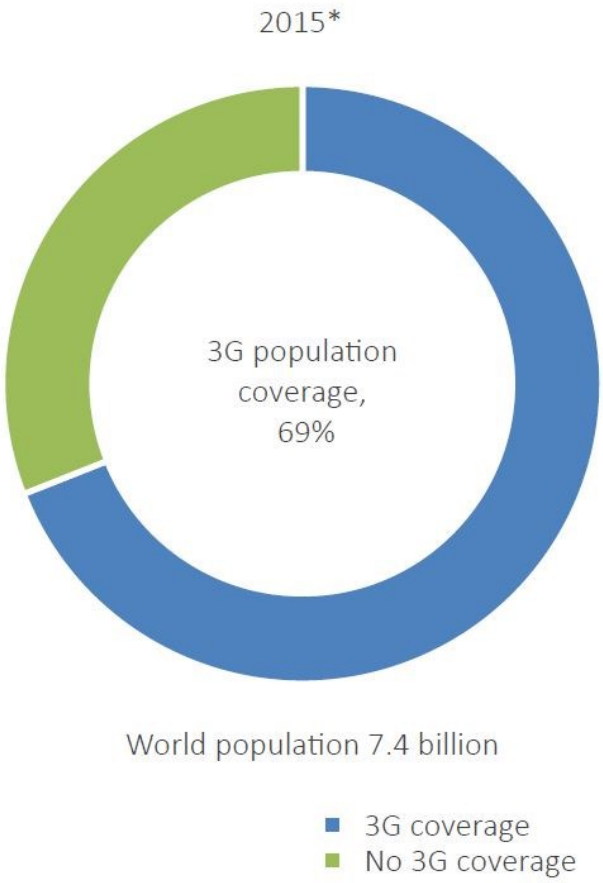
1.3 Worldwide, ICTs should be 40% more affordable in 2020 than in 2012

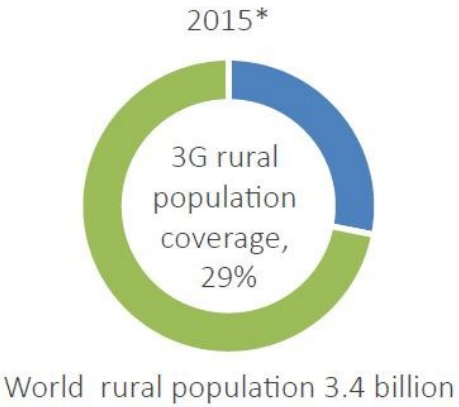
Affordability improving significantly

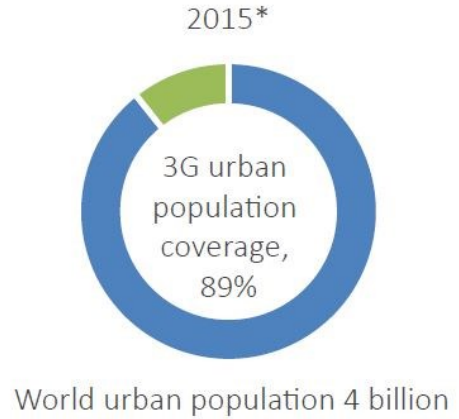


Note: *Estimate. Source: ITU.

2.4 Worldwide, 90% rural population should be covered by broadband in 2020





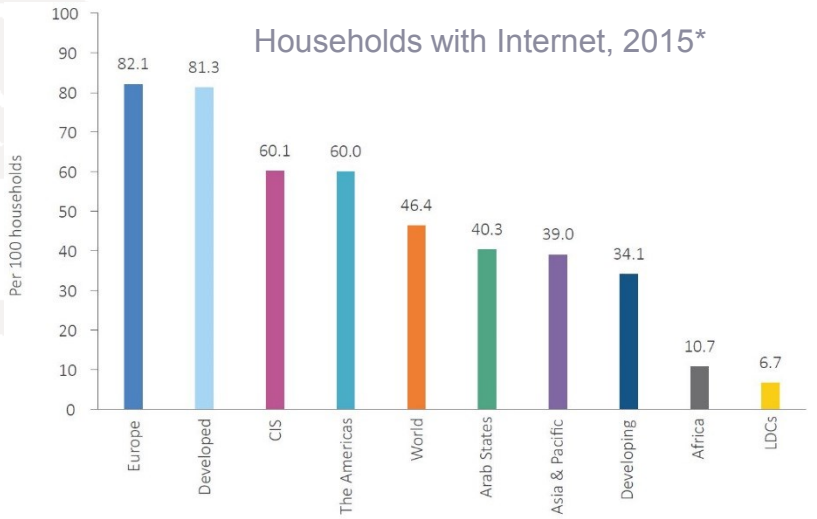


3G absent in many rural areas

Note: *Estimate. Source: ITU.

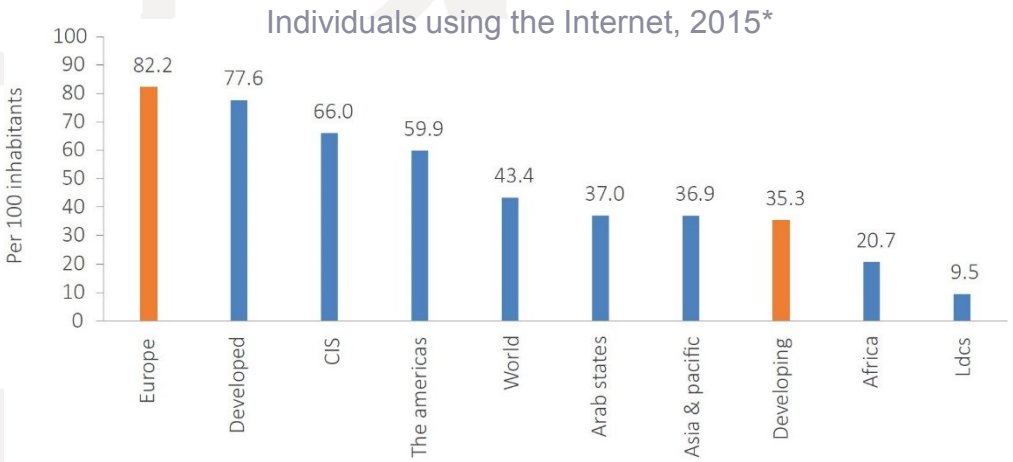
2.1 50% of households should have Internet by 2020 in developing countries, 15% in LDCs

Households with Internet	target	projection
Developing	50%	45%
LDCs	15%	11%



2.2 50% of individuals should be using the Internet by 2020 in developing countries, 20% in LDCs

Internet users	target	projection
Developing	50%	46%
LDCs	20%	16%



Note: *Estimate. Source: ITU.

Gender equality

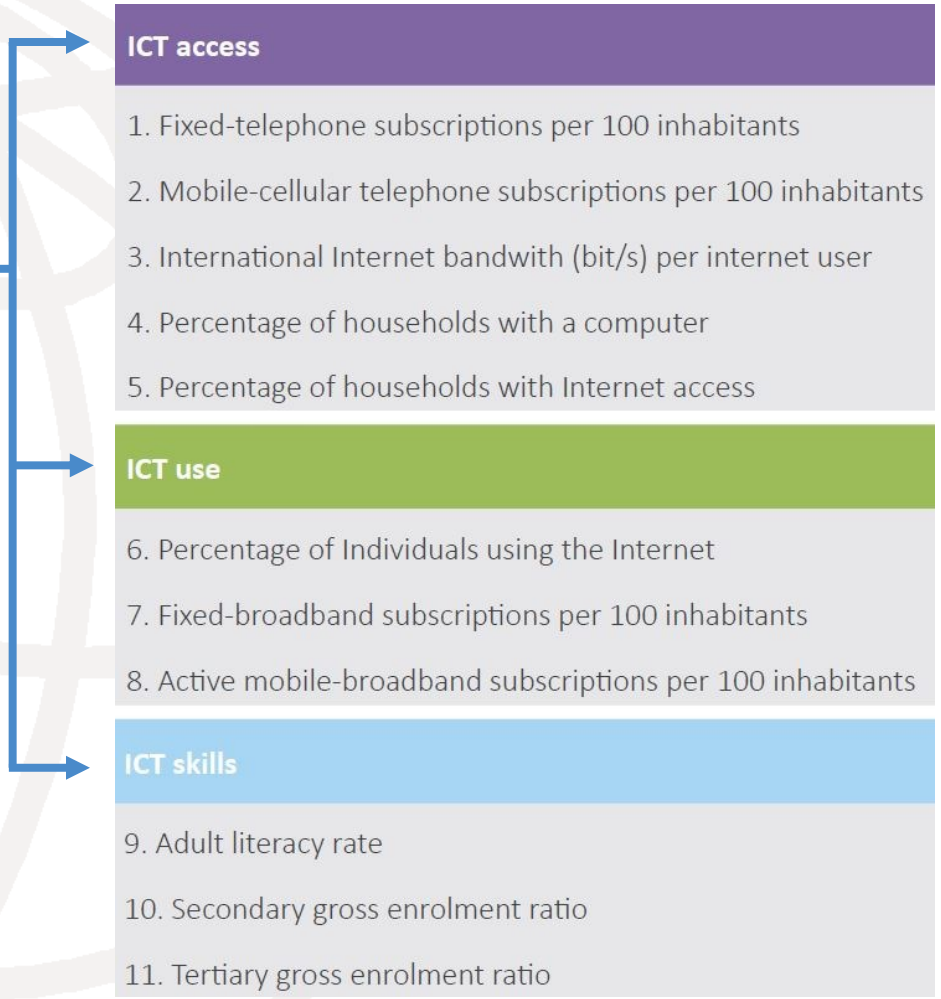
- There is a significant divide in ICT access and use between men and women
- The gender gap is higher in developing countries and LDCs

Region	Gap 2013 (%)	Gap 2015 (%)
Developed	6.3	5.4
Developing	15.6	15.4
World	11.0	11.1
LDC	29.9	28.9
Africa	20.7	20.5
Arab States	15.5	14.4
Asia & Pacific	17.7	17.6
CIS	7.5	7.0
Europe	9.4	8.2
The Americas	-0.4	-0.7

Note: The gap represents the difference between the Internet user penetration rates for males and females relative to the Internet user penetration rate for males, expressed as a percentage.

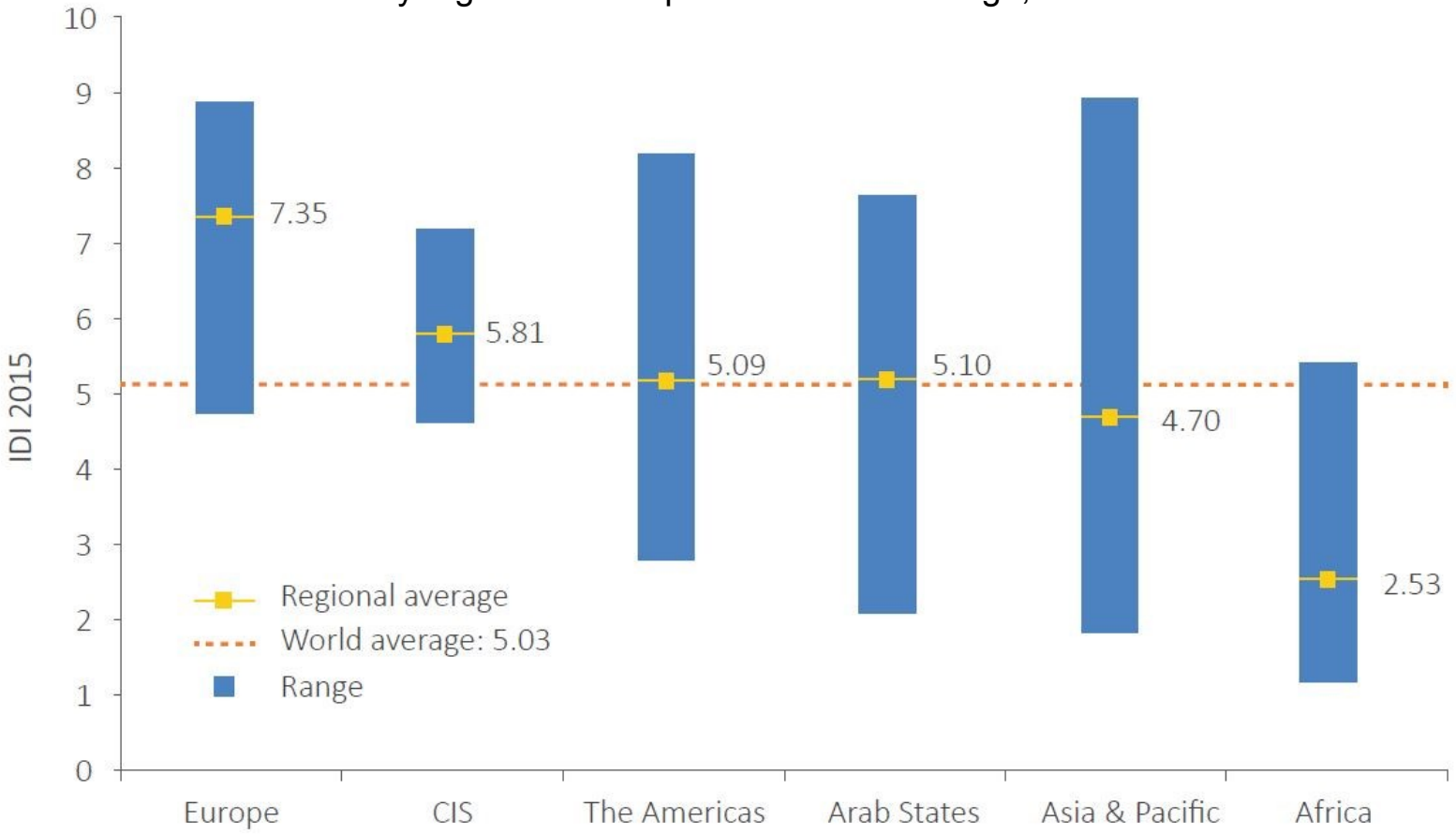
The ICT Development Index (IDI)

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



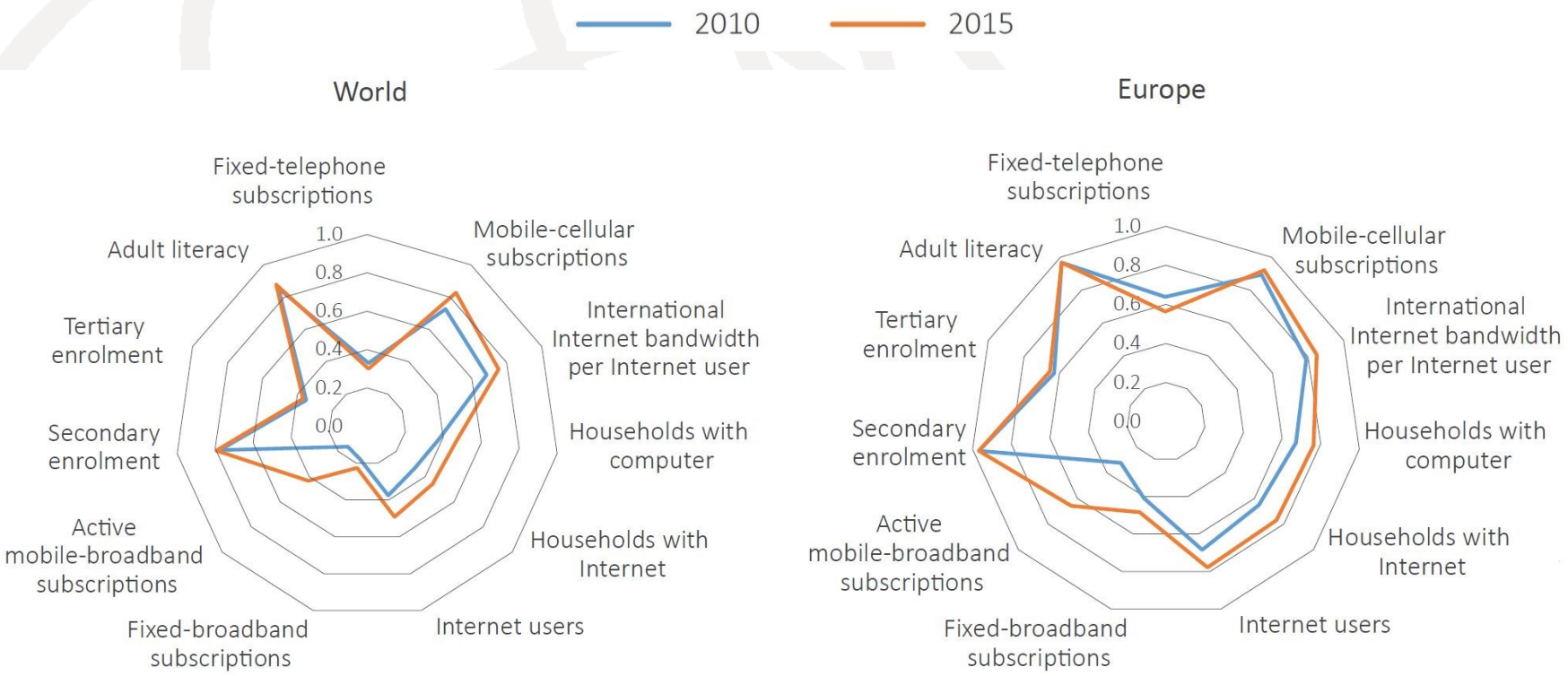
Regional IDI

IDI by region and compared to world average, 2015



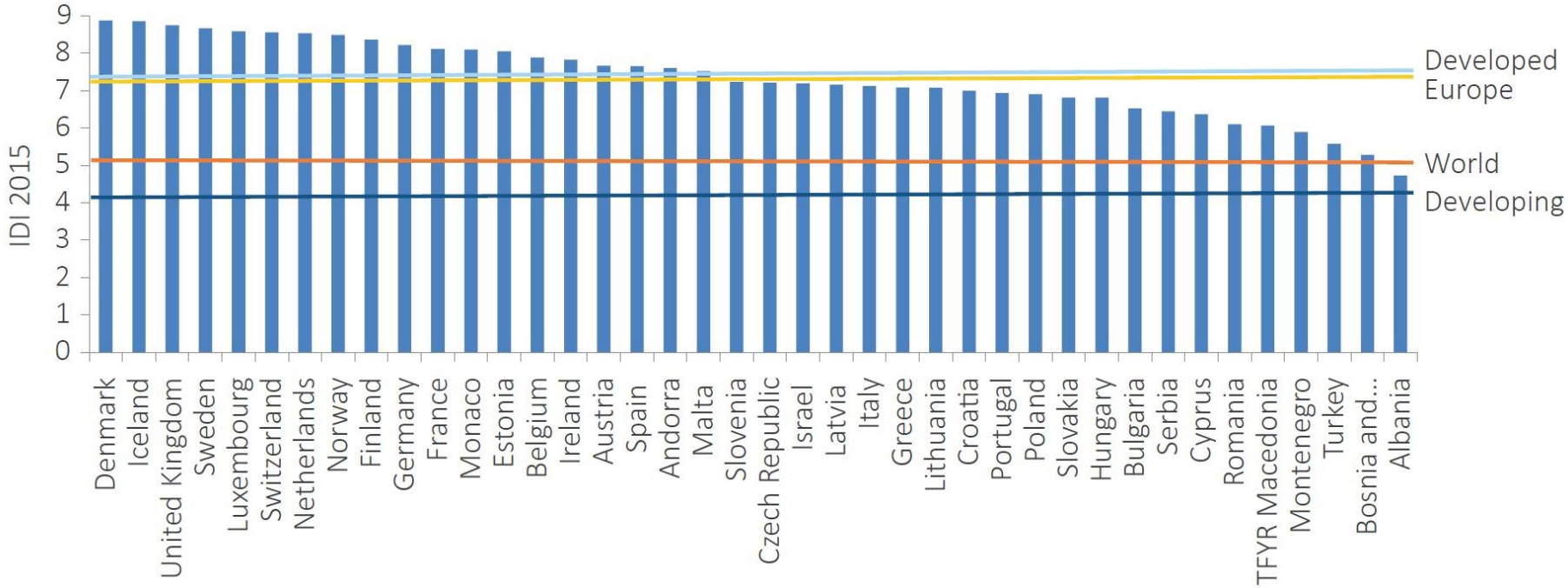
Source: ITU.

IDI progress in Europe



Source: ITU.

IDI values in Europe



Source: ITU.

IDI 2015 top ten

1. Korea (Rep.)
2. Denmark
3. Iceland
4. United Kingdom
5. Sweden
6. Luxembourg
7. Switzerland
8. Netherlands
9. Hong Kong, China
10. Norway

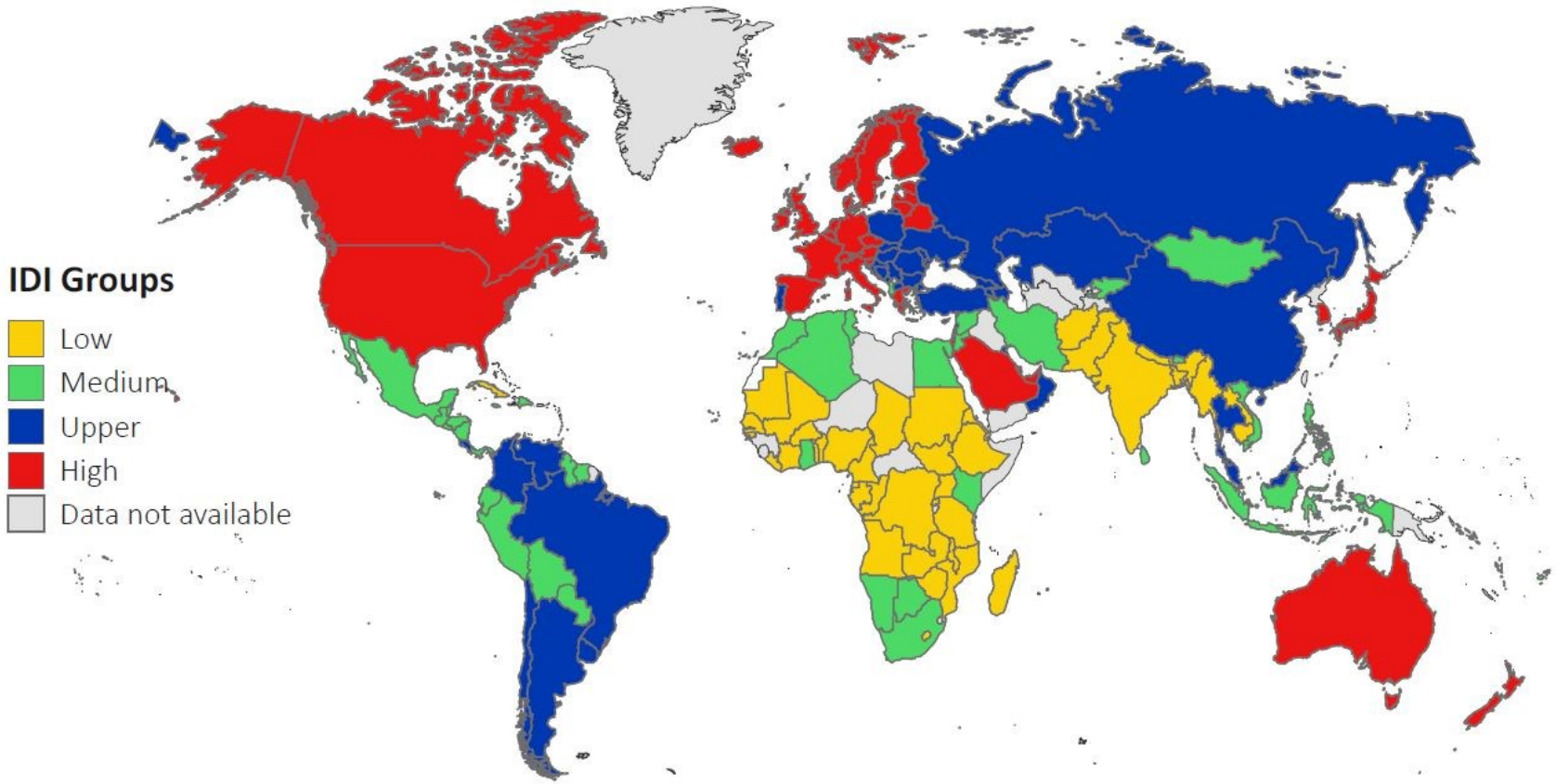
- The Republic of Korea leads the IDI rankings for both 2010 and 2015
- There has been relatively little change in the highest performers in the Index since 2010.
- Top IDI performers have high income levels, competitive markets and a skilled population

Dynamic IDI improvements are found at all levels of the ranking…

Change in IDI ranking				Change in IDI value			
IDI rank 2015	Country	IDI rank change (2010-15)	Region	IDI rank 2015	Country	IDI value change (2010-15)	Region
57	Costa Rica	23	Americas	27	Bahrain	2.22	Arab States
27	Bahrain	21	Arab States	57	Costa Rica	2.14	Americas
56	Lebanon	21	Arab States	56	Lebanon	2.12	Arab States
109	Ghana	21	Africa	41	Saudi Arabia	2.09	Arab States
74	Thailand	18	Asia & Pacific	32	United Arab Emirates	1.94	Arab States
32	United Arab Emirates	17	Arab States	54	Oman	1.92	Arab States
41	Saudi Arabia	15	Arab States	109	Ghana	1.92	Africa
85	Suriname	15	Americas	36	Belarus	1.88	CIS
97	Kyrgyzstan	15	CIS	74	Thailand	1.74	Asia & Pacific
36	Belarus	14	CIS	61	Brazil	1.74	Americas
54	Oman	14	Arab States				

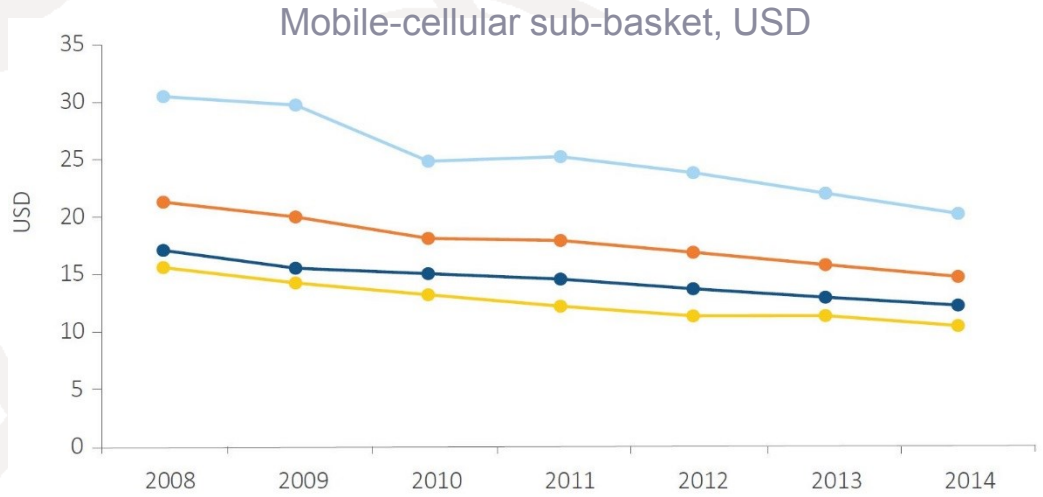
Source: ITU.

… but disparities in IDI value remain – LDCs are falling behind

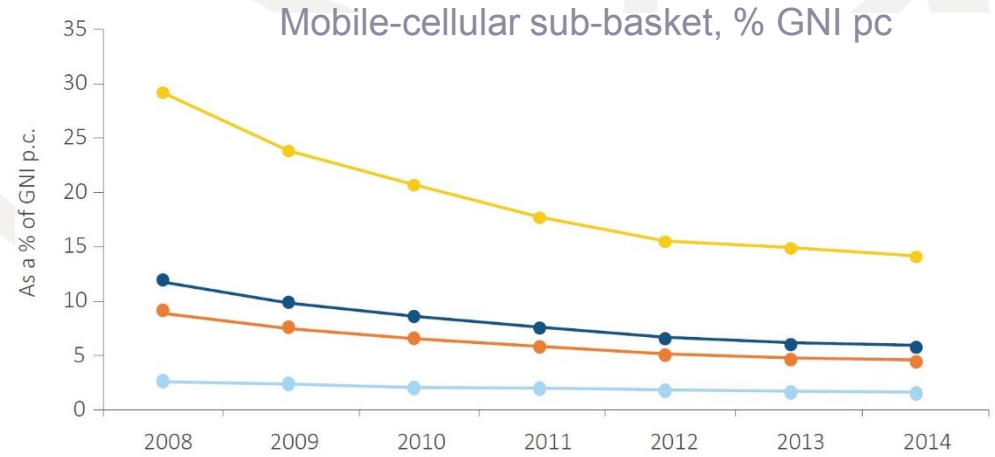


Denominations and classifications employed in these maps do not imply any opinion on the part of the ITU concerning the legal or other status of any territory or any endorsement or acceptance of any boundary.

Mobile-cellular prices continue to fall



and the service is becoming more affordable

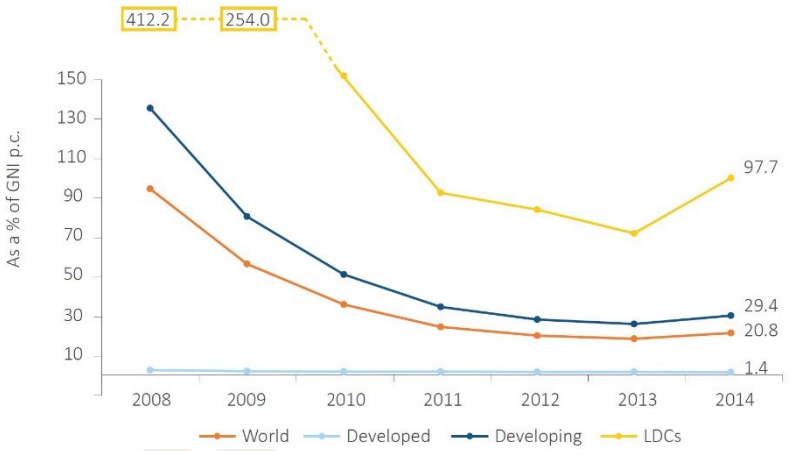


Source: ITU.

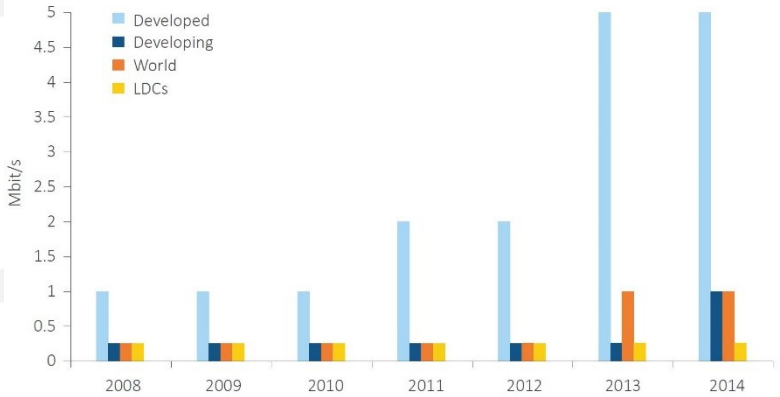
While fixed-broadband prices fell throughout the world until 2013, they increased in 2014

- 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

Fixed-broadband prices as a % of GNI p.c.



Most common entry-level fixed-broadband speed



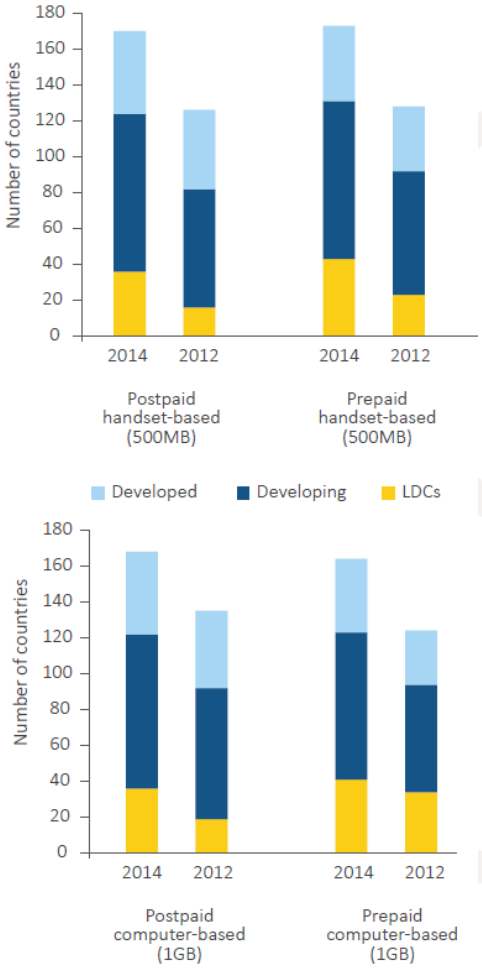
Source: ITU.

Fixed-broadband prices in Europe

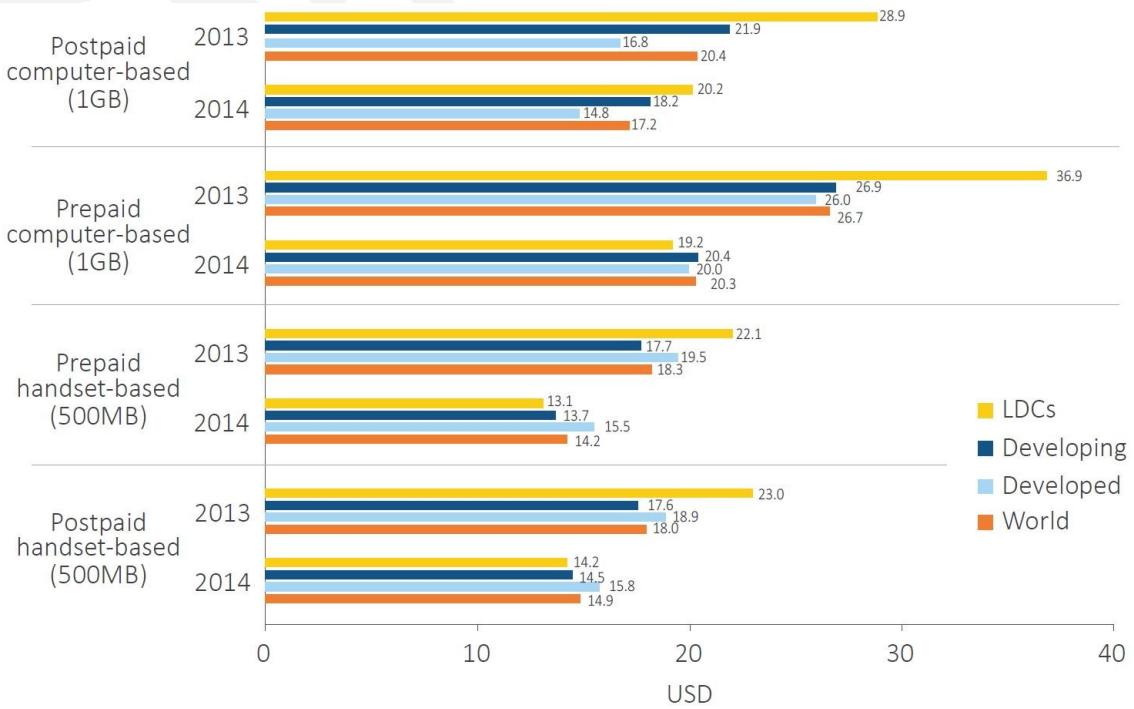
Source: ITU.

Mobile-broadband: more offers, lower prices

Availability by type of service



Mobile-broadband prices



Note: Simple averages. Based on 119 economies for which 2013 and 2014 data on mobile-broadband prices were available for the four types of data plan.

Source: ITU.

Countries with the lowest mobile-broadband prices

Prepaid handset-based 500MB										
Europe	PPP$	Asia & Pacific	PPP$	The Americas	PPP$	Arab States	PPP$	CIS	PPP$	Africa	PPP$
Estonia	3.16	Cambodia	5.17	Uruguay	10.75	Sudan	7.81	Moldova	6.94	Mozambique	6.23
Lithuania	3.94	Pakistan	5.17	Paraguay	11.79	Tunisia	13.28	Belarus	9.90	Guinea	7.81
Iceland	4.76	Bhutan	5.35	Costa Rica	12.03	Bahrain	13.60	Kazakhstan	11.02	Cape Verde	10.46

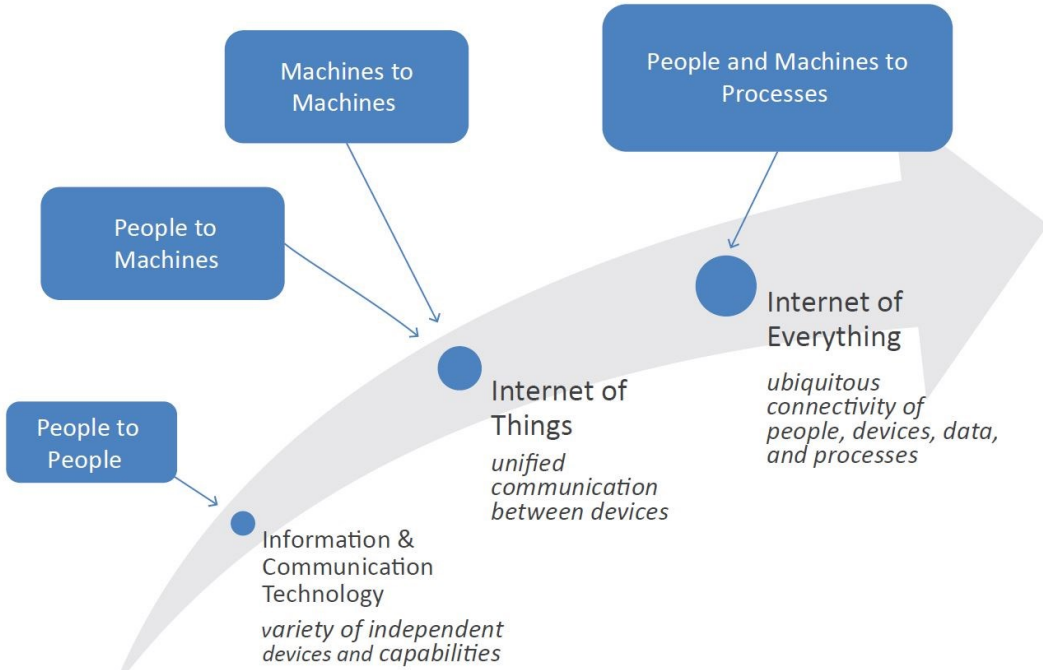
Postpaid computer-based 1GB										
Europe	PPP$	Asia & Pacific	PPP$	The Americas	PPP$	Arab States	PPP$	CIS	PPP$	Africa	PPP$
Austria	5.76	Cambodia	6.44	Uruguay	11.71	Egypt	14.08	Kazakhstan	11.02	Mauritius	10.53
Lithuania	6.76	Sri Lanka	8.38	Barbados	14.52	Tunisia	19.92	Belarus	13.68	Tanzania	12.72
Romania	7.75	Indonesia	12.54	United States	16.32	Libya	21.70	Moldova	17.35	Mozambique	13.02

Source: ITU.

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



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)

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

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

For further information:

indicators@itu.int

www.itu.int/ict