



**The Arab Regional Economic and Financial Forum of Telecommunications  
Muscat, Oman, 6-7 December 2016**

## **The Digital Platforms: balance on services provision**

**Slaheddine Maaref , Senior Advisor and Deputy Regional Director**

**ITU Regional Office for the Arab States  
International Telecommunication Union**



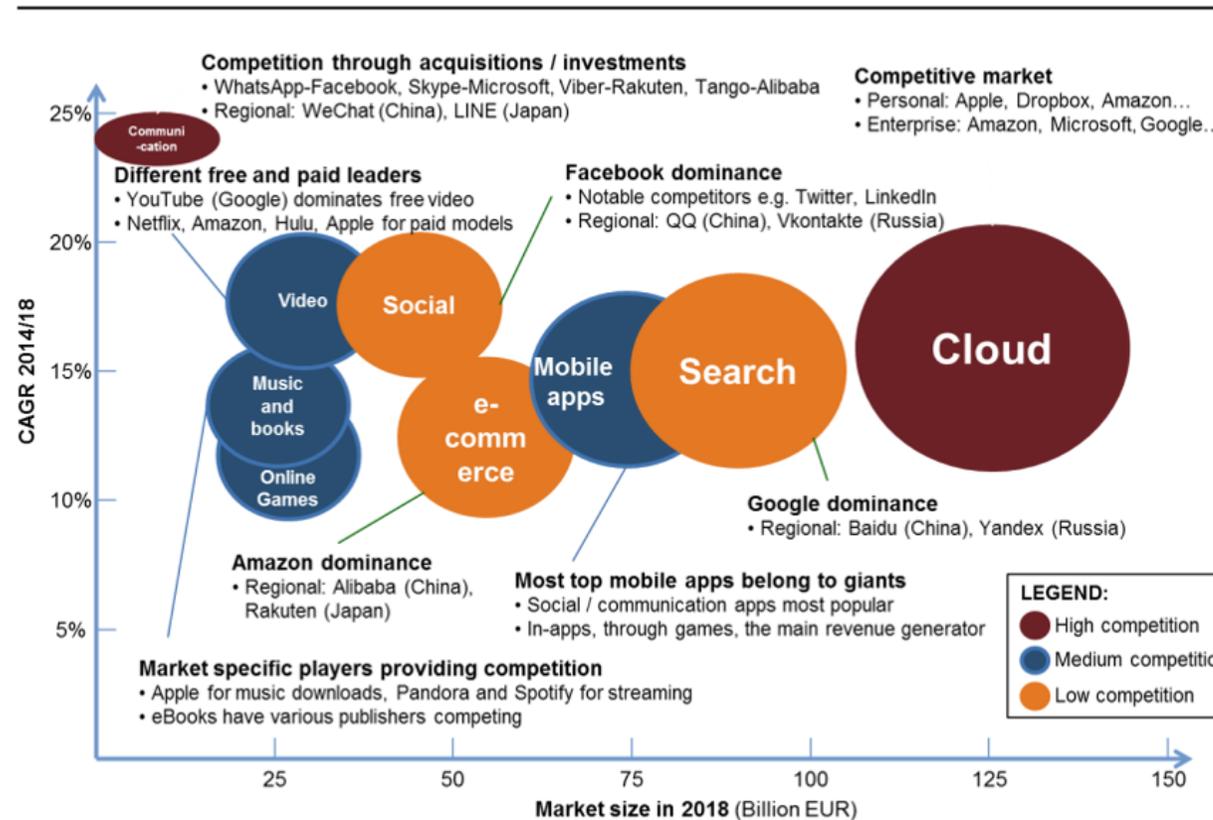
# Agenda

- The digital value Chain?
- Is the App Economy affecting or encouraging technology developments?
- How do we measure the App Economy?
- Possible regulatory approaches and recommendations

# Content and Applications market Size



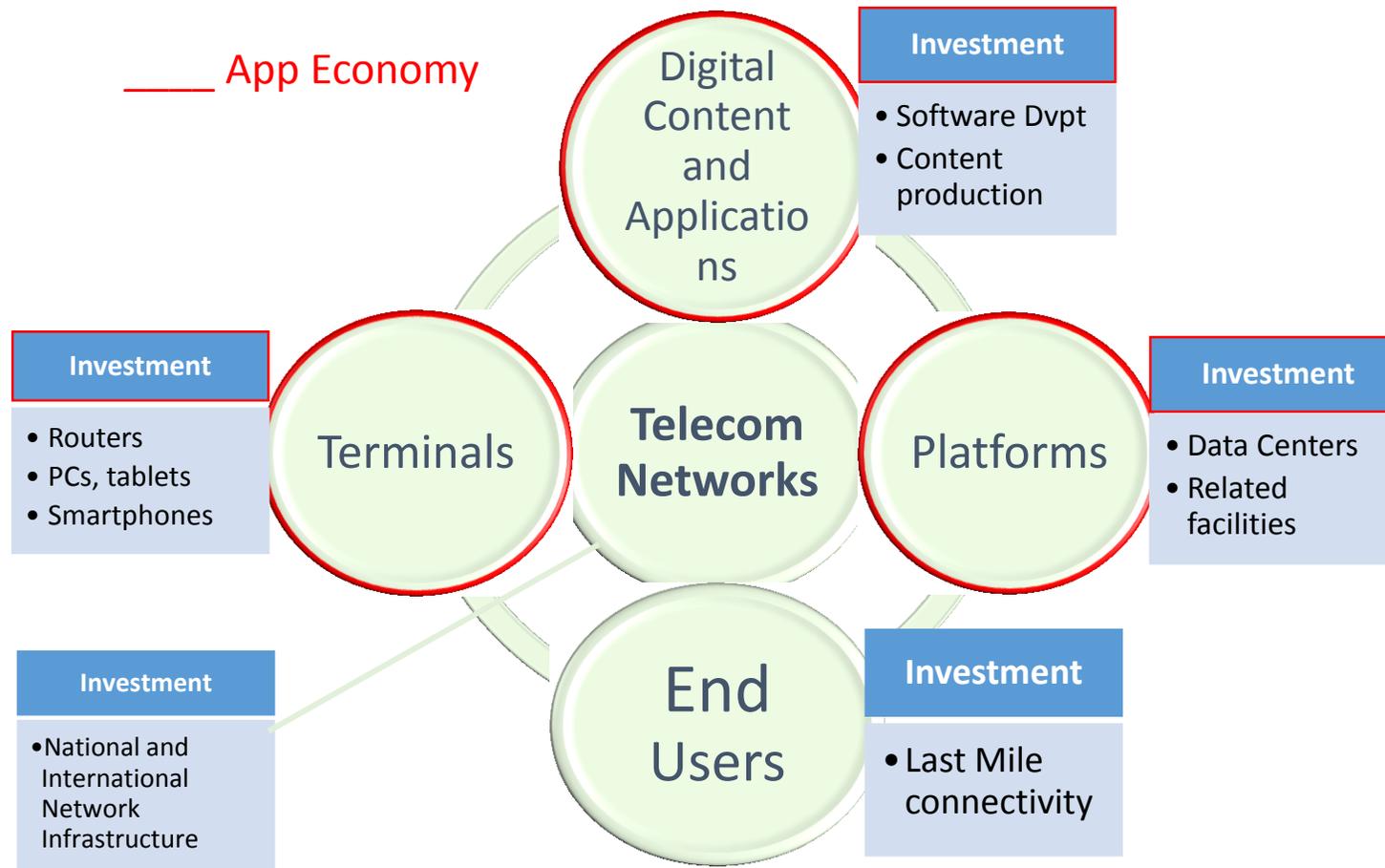
Figure 8: Online services and applications: Market size in 2018 (bn Euro), CAGR 2014-2018 and degree of competition



Source: IDATE (2014): State of Internet services worldwide, December.

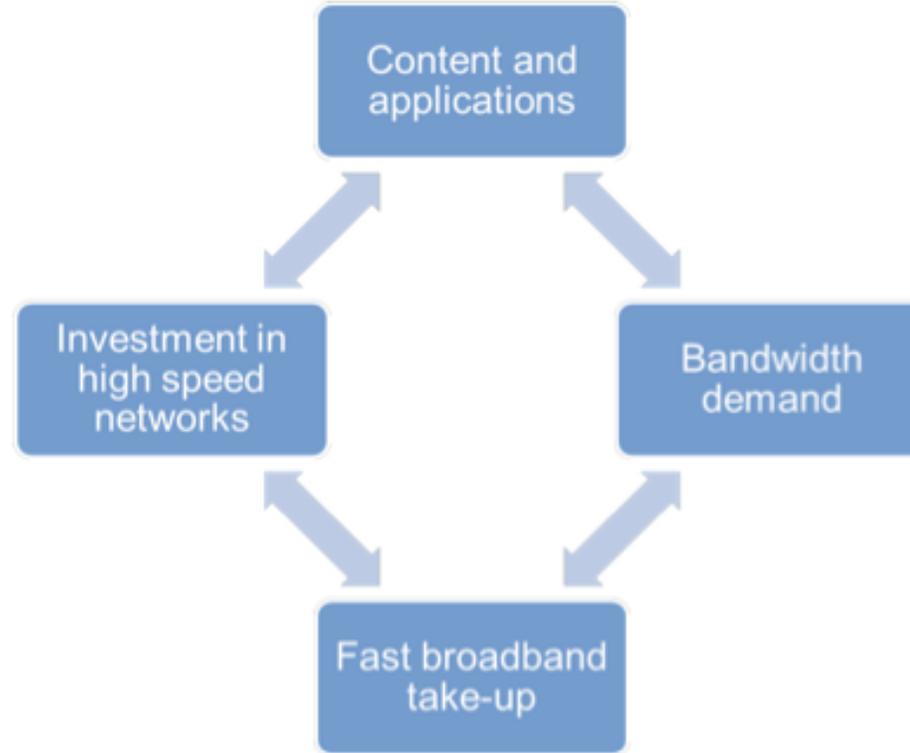
# The Digital Value Chain

The digital value chain incorporates many players  
**Infrastructure operator is no longer the exclusive provider of services.**



# Virtuous circle of networks and applications

Applications and content generate user demand – offer services that make connectivity desirable – thereby boosting broadband take-up and leads to new network investment.



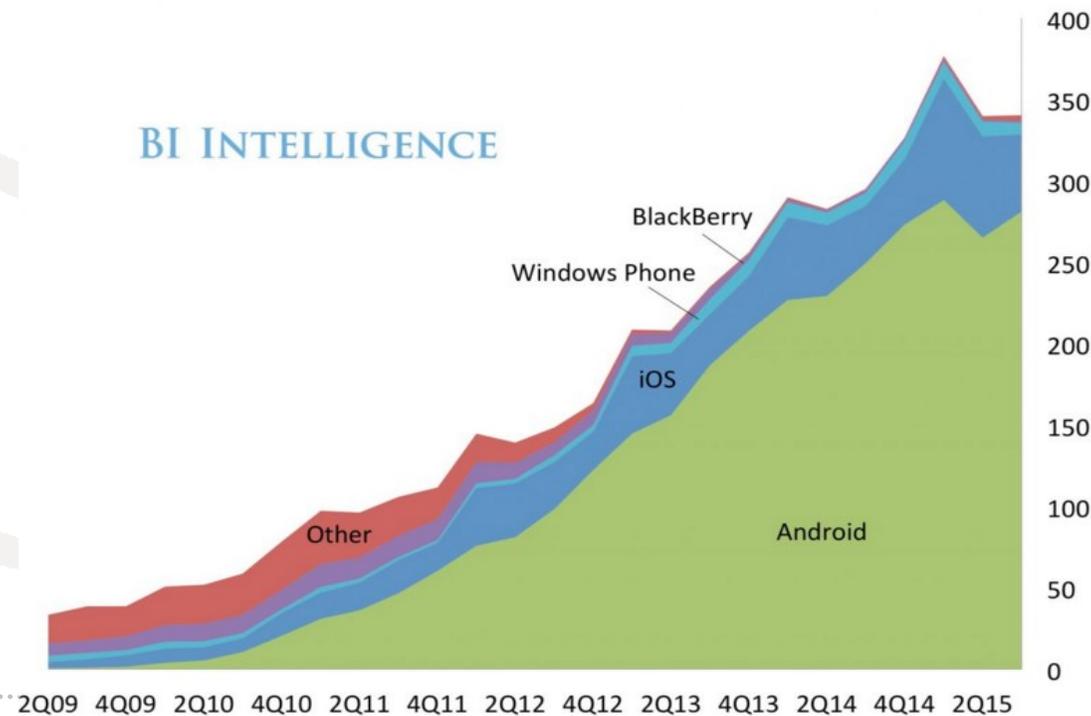
CAPs help push for an alternative revenue model based on data rather than voice services

Both sides of the value chain – networks and applications providers – offer value to each other.

- **Should content providers contribute in the investment in telecoms infrastructure?**
- **Is there a trade-off between increased usage of applications and content, and investment in telecoms infrastructure?**

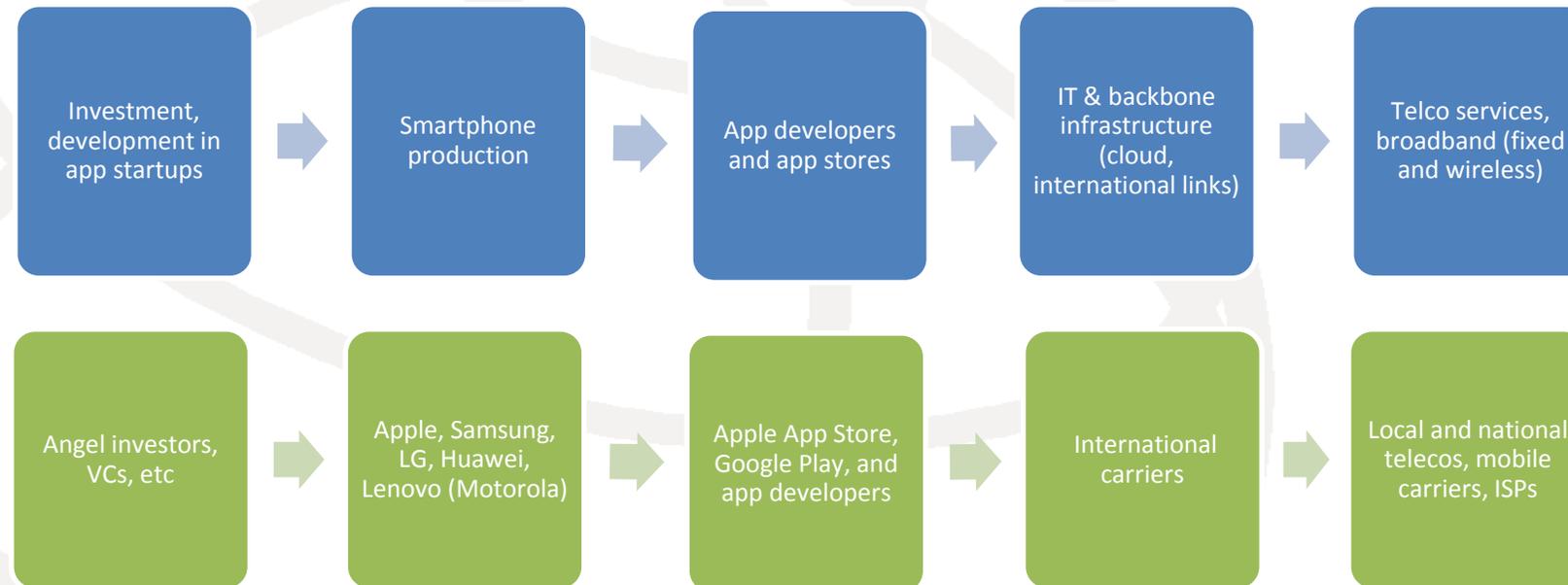
# Structure of the App Economy: Market Concentration

- The dominance of the existing big app companies as the home to the two dominant app platforms may prove to be a barrier to the growth of the app economy in developing countries.
- However, despite this concentration, other countries such as, in Asia have shown that a vibrant national app economy can be developed based on the specific preferences of the domestic market (e.g. China).



# The App Economy Value Chain

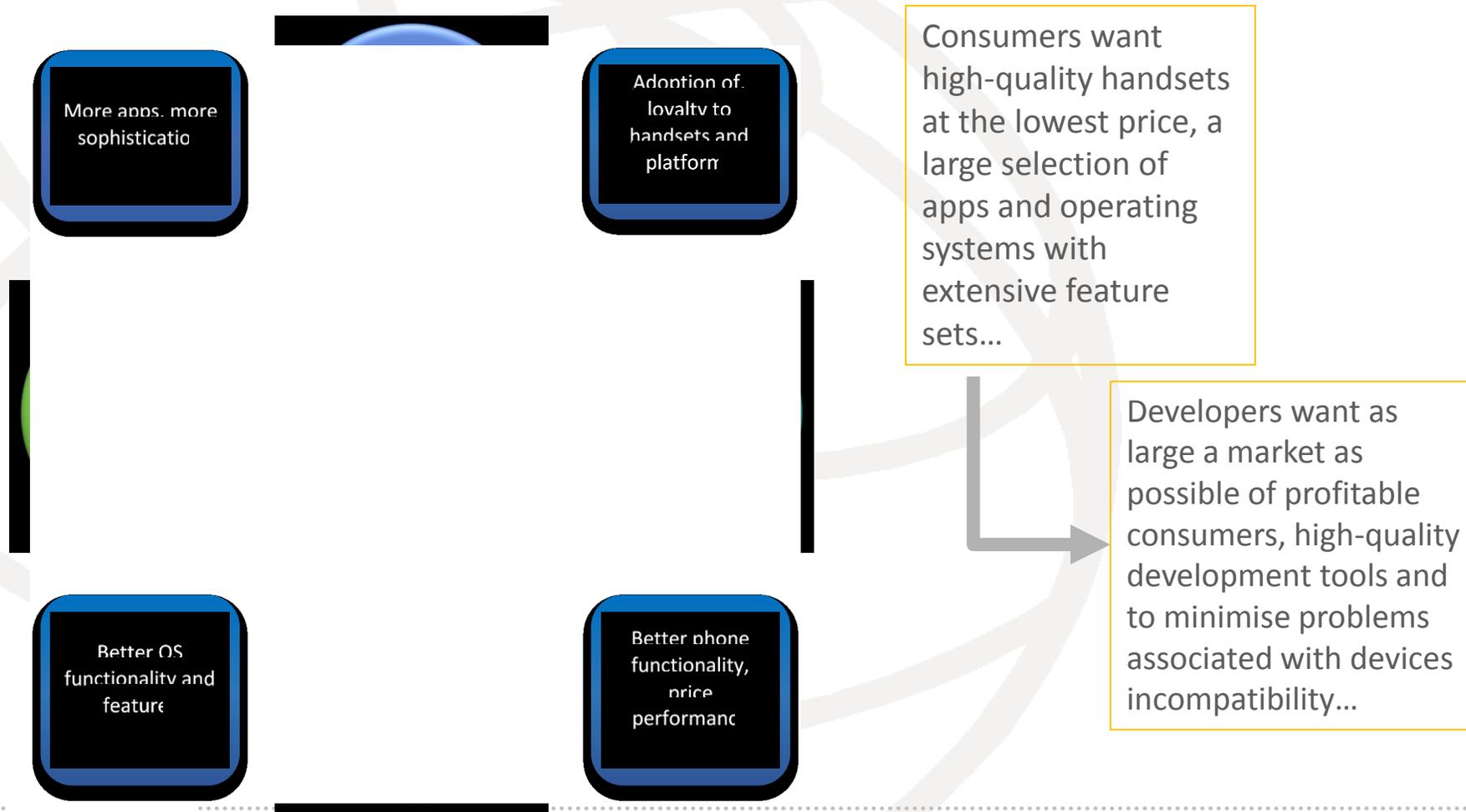
One starting point for developing a definition of the app economy is to understand the app value chain.



Source: Systems Knowledge Concepts ([www.skc.net.au](http://www.skc.net.au))

All the economic activity in the app value chain that is required to deliver apps and their associated network functionality to end users.

# The 'virtuous cycle' of the App Economy ecosystem



# How do we measure the App Economy?

# How do we measure the App Economy? (1)

- The traditional measure of economic benefit or increases in social welfare is ‘value added’.
- The apps economy is about a ‘barter economy’ – app companies offer services and functionality in return for attention and personal information.
- Since the statistical collections that directly measure the value of the app economy are not available, it is suggested three different ways in which the impact of the sector can be measured:
  - The Value Chain and Consumer Surplus Method
  - Capital Value Method
  - Productivity Method
- The emergence of the App Economy has prompted widespread industrial change. However, quantifying the scale and scope of these changes is complex.
- There are significant economic impacts of the App economy especially when it is estimated that in Europe up to 2% of the labour force (depending on the market) is already engaged in the App Economy.

# How do we measure the App Economy? (2)

Value Chain  
Method



Capital Value  
Method

Productivity  
Method

**The capital value method** measures the value of equity – which in turn is dependent on investors perspective of the future profit streams that the sector may generate.

**The productivity method** measures how the output of the app economy will influence economic activity in other areas and facilitate new industries and activities.

**method** is aimed at size of a sector – e.g., how es it directly and indirectly omes are generated? This d approach to measuring of a sector. It would also ate of the level of value umers over and above enerated.



# Possible regulatory approaches

# The debate on optimal regulatory approaches

Different perspectives on the app economy and its regulation

## REGULATORS



- Security
- Rules
- Law
- Risk management
- Cyber-war
- Cyber-crime
- Protection of assets
- Protection of society
- Protection of privacy
- Protection of traditional market players
- Labor protection
- Syndicates
- Control
- Enablement of international digital spaces
- Enablement of cross national technologies
- Norms
- Consumer protection
- Enablement of a digital single market



## DIGITAL



- Free economy
- Boundless communication
- Full transparency
- Business opportunities
- High rewards
- Freedom of ideas
- Money
- Open society
- Open economy
- Open government
- New ideas
- New ways of working
- Flexibility
- Connectivity
- Global village
- Innovation
- Entrepreneurship

## Key regulatory questions for the telecommunication/ICT sector

**?** How to **define appropriate legal and regulatory provisions** while at the same time recognizing that the applicable body of law **must not hamper the spread of innovation and progress within the digital economy?**

**?** How to **ensure consumer security, product quality and other protections in transactions**, while at the same time **avoiding over-regulating new collaborative business models?**

**?** Globally, a range of organizations are arguing the case for less rather than more regulation for the sharing economy. **Where is the market failure we need to address?**

**?** Globally, a range of organizations are arguing the case for less rather than more regulation for the sharing economy. **Where is the market failure we need to address?**

# Is *ex ante* regulation needed in the future or is *ex post* regulation sufficient for the app economy?

## Ex post:

After the event regulation relating to specific allegations of market abuse

### Advantages:

- Attempts to stop conduct only shown to be harmful
- Lower information and monitoring requirements
- Least disruptive regulatory approach for emerging markets

### Disadvantages:

- Triggered only after anti competitive conduct has occurred
- Securing information from accused firm is difficult
- General competition provisions may be unsuitable for industry specific issues

## Ex ante:

Anticipatory intervention mainly concerned with market structure

### Advantages:

- Sets forward looking expectations for firm behaviour
- Provides industry certainty by setting clear rules
- Promotes a greater degree of transparency

### Disadvantages:

- Can lead to excessive or unnecessary regulation
- Can create market distortions through regulatory arbitrage
- Regulatory processes are costly and prone to capture by regulated entities

# Regulatory building blocks

- Central to the discussion of the growth and regulation of the sharing economy is the *question of how to balance regulations for established businesses and new, innovative businesses*.
  - an inclusive dialogue is needed to discuss and define appropriate legal and regulatory provisions,
  - Regulators and policy makers must ensure consumer security, product quality and other protections in transactions, while at the same time avoiding over-regulating new collaborative business models.
  - Competition regulators will need to be watchful that the digital economies of scale and scope are not exploited contrary to law.
  
- Governments should not impose legacy regulations on new business models simply because they happen to fall outside of existing regulatory schemes. Nor should regulators give into claims by existing incumbents that merely seek to protect their own market position or the primacy of their businesses.

## Recommendations (1/2)

- Undertake a review of the regulations applicable to network operators and OTT players
- **Update the licence conditions** and as required provide deeming provisions for non-resident OTT providers etc.
- **Assess and continually monitor** the state of competition in the market
- **Collaborate with tax authorities**
- **Promote and facilitate ubiquitous broadband** (especially wireless broadband)

## Recommendations (2/2)

- Ensure adequate and up to date **data protection, privacy and cyber security legislation** based on global exemplars
- Establish **co-ordination procedures between other sector regulators**
- Engage in **greater public awareness and advocacy campaigns** in relation to digital/ICT services
- Regulators must **engage more broadly with education and training sector**

# Studies on App Economy



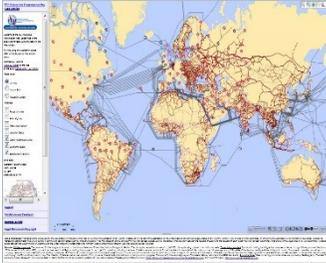
- GSR 16 Discussion Paper :  
The Race for Scale: Market Power, Regulation and the App Economy available at: [www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx](http://www.itu.int/en/ITU-D/Regulatory-Market/Pages/bestpractices.aspx)
- Impact of the ICT App Economy/ OTT services on national socio-economic growth - Case study of South Africa and Ghana – under preparation
- ITU Study on Policy and Regulatory Aspects of the App Economy – under preparation

[www.itu.int/treg/](http://www.itu.int/treg/)

## **Introduction to the ITU Global Broadband Connectivity Project**

# **The ITU Interactive Transmission Maps**

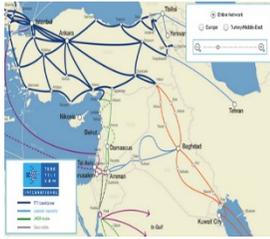
---



# ITU Interactive Transmission Maps 1

- With the landing of submarine cables in many countries and the expansion of national and cross-border fiber backbone networks in addition to mobile and wireless services, **broadband connectivity is achieving significant progress**
- Creating online Interactive Transmission Maps, taking stock of national backbone connectivity (optical fibers, microwaves and satellite Earth stations) as well as of other key metrics of the ICT sector, will serve as a **powerful tool for all concerned stakeholders for facilitating the development of the Broadband connectivity worldwide**. Thanks to collaboration between ITU and Regional Organizations as well as all related Stakeholders including Administrations and concerned Operators, **data collection and validation for building the online Interactive Transmission Maps is performed through a public and transparent process.**
- Data concerning submarine cables are also provided by TeleGeography. For more information: [www.submarinecablemap.com](http://www.submarinecablemap.com)





# ITU Interactive Transmission Maps <sup>2</sup>

## *Many Advantages*

- **Demonstrating ICT connectivity current status around the globe + monitoring their evolution over time**
- **Providing accessible multi-criteria analysis** based on robust and reliable evidence
- **Empowering network planners, policy makers and regulators from developing countries with tools to assess the status of national connectivity and to identify gaps**
  - ➔ possibility to design targeted strategies and implementation programs that expand the reach and increase the use of broadband
- **Providing industry with a powerful tool to assess market opportunities = management tool for :**
  - ➔ making investment decisions
  - ➔ promoting broadband
  - ➔ achieving universal connectivity
- **Offering an informed insight to abundant, current data on global ICT connectivity to all interested stakeholders**





# Some Screenshots 1

**ITU Interactive Transmission Map TIES version**

UNESCO Disclaimer: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, or sea area, or its frontiers and boundaries. The line of control in Jammu and Kashmir was shown in accordance with the 1949 UN Commission for India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The boundary between the Republic of Sudan and the Republic of South Sudan is shown as a dashed line. The boundary between the Republic of Azerbaijan and the Republic of Armenia is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of Abkhazeti is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of South Ossetia is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of Abkhazeti is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of South Ossetia is shown as a dashed line.

Line data  
Operator: Telecomunicatii  
From: Bucharest  
To: Ploiesti  
Distance: 84.73 km

**Legend**  
**Validation and Feedback**  
**Sources & Help**  
**Legal Notice and Copyright**

**ITU Interactive Transmission Map TIES version**

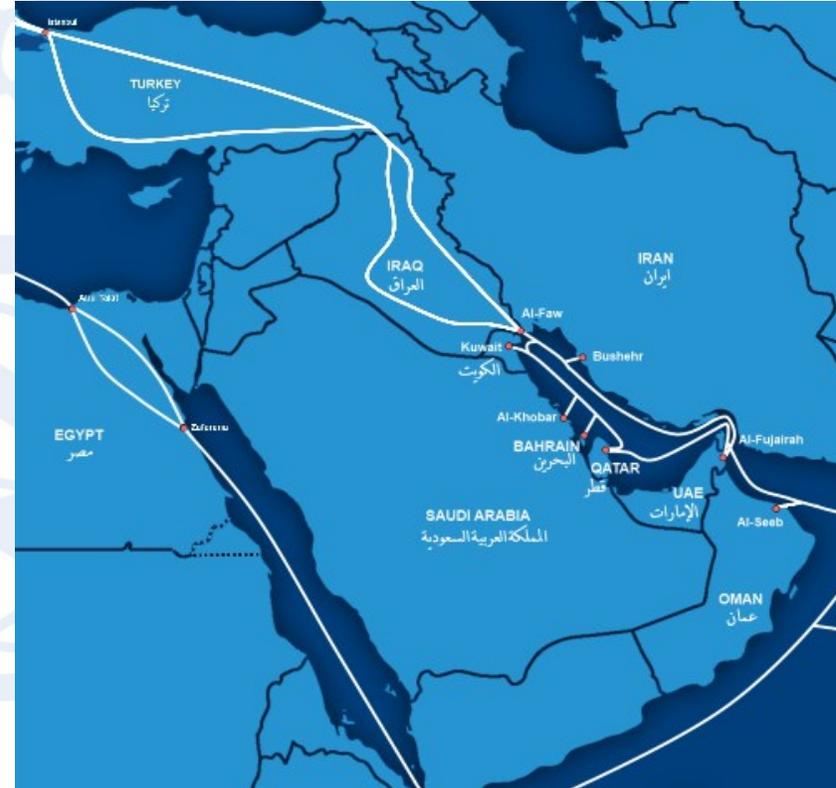
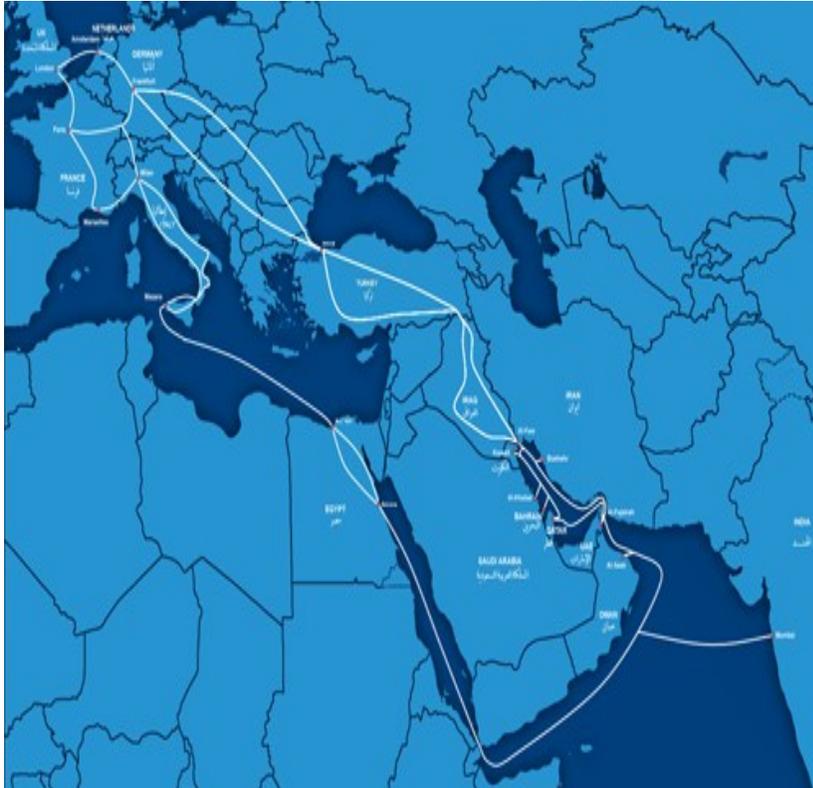
UNESCO Disclaimer: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, or sea area, or its frontiers and boundaries. The line of control in Jammu and Kashmir was shown in accordance with the 1949 UN Commission for India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. The boundary between the Republic of Sudan and the Republic of South Sudan is shown as a dashed line. The boundary between the Republic of Azerbaijan and the Republic of Armenia is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of Abkhazeti is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of South Ossetia is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of Abkhazeti is shown as a dashed line. The boundary between the Republic of Georgia and the Republic of South Ossetia is shown as a dashed line.

Line data  
Operator: Telecomunicatii  
From: Bucharest  
To: Ploiesti  
Distance: 84.73 km

**Legend**  
**Validation and Feedback**  
**Sources & Help**  
**Legal Notice and Copyright**

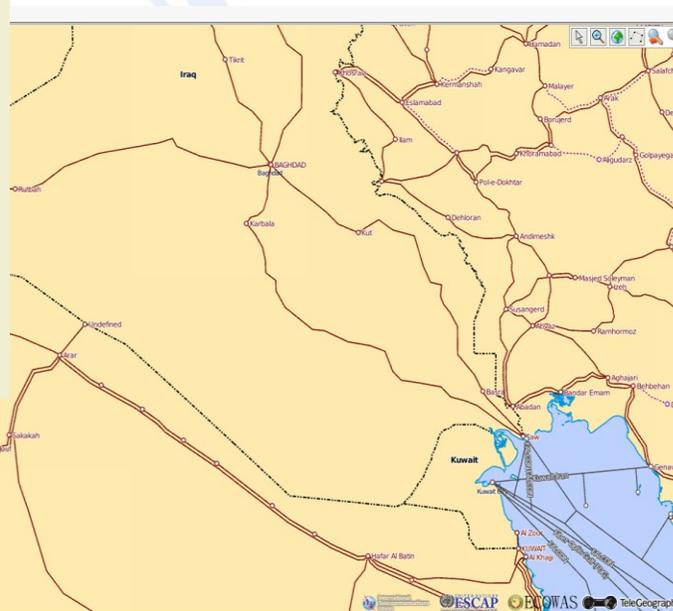
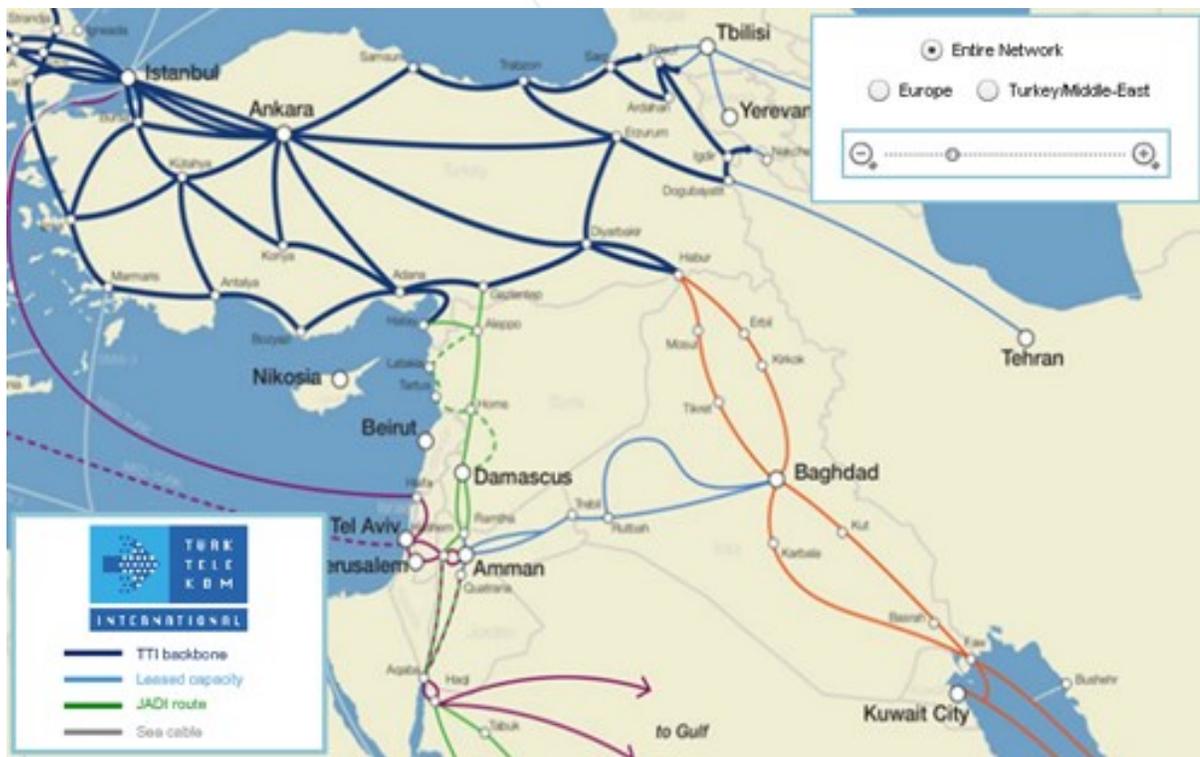


# Some Screenshots 2





# Some Screenshots 3



**UNCS Disclaimer:** The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. Final status of the Abyei area is not yet determined. A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

**Sources:** [UN Map base layer](#): The base map for this infographic is based on the UNmap database of the United Nations Cartographic Section. The UNmap is prepared at a scale of 1:1,000,000. UNmap is being updated on a continuous basis. [Transmission Map data](#): The data for building the infographic have been collected through primary sources: Reply to an official request for information (RFI) document has been sent to all Regions outlining the purpose of the project for operators, indicating what level of detail is required, and what format the data is to be published. Secondary sources: On average, around 25 to 40% of the data was readily available in the public domain, from operator websites, annual reports, company presentations, and presentations at industry conferences. Partnerships: A number of organizations do already research and produce transmission network maps for particular countries or regions, for various technical reasons. Whenever possible, partnerships with these organizations were established, to seek permission to display their network maps through the ITU world transmission map. The collection of data as well as their validation from concerned Operators/Administrations is currently a work in progress. The source for the Asian Highway and Trans-Asian Railway networks is the ESCAP Secretariat. [Submarine Cable Data](#) concerning submarine cables are provided by TeleGeography. The data for submarine cables displayed in this map are dated 11 March 2015 and it will be constantly updated with new data available at TeleGeography's GitHub account (<https://github.com/telegeography/submarinecablemap>). For more information: <http://www.submarinecablemap.com>





# Some Screenshots 4

The screenshot displays two overlapping web browser windows. The top window, titled "ITU Interactive Transmission Map - Validation", shows a news article about the "Regional: Gulf Bridge International No." and "First Ever Gulf to Europe Terrestrial Fiber Optic Link". The article text states: "Gulf Bridge International (GBI) today (4 March 2013) announce will include the first ever terrestrial fiber optic link connect to Europe. The link consists of robust diverse routes through significantly reduce latency time for connectivity from the strengthens GBI's existing Europe routing through the Sub network against cable cuts and other common industry, Iraq and Turkey represents a major milestone for both reg communications," said Ahmed Mekky, Board Member and route will lead to faster connectivity via lower latency time; reduce the likelihood of a reoccurrence of the three day investment is in line with our vision to connect the world to the continued ICT development across a region home to or addition, Iraq is now emerging as a modern communication implications for the nation's economy and long-term development. Route provides connectivity from the cable landing station crossing Iraq and Turkey to Istanbul, and onward to Frankfurt."

The bottom window, titled "Submarine Cable Map", shows a map of the Middle East and surrounding regions with various submarine cable routes. A specific cable is highlighted in blue and labeled "Al-Faw, Iraq". The map includes labels for countries such as Georgia, Armenia, Azerbaijan, Turkey, Syria, Iraq, Iran, Afghanistan, Pakistan, Saudi Arabia, United Arab Emirates, Oman, Yemen, Eritrea, Sudan, and Egypt. The map data is attributed to Google and is dated February 17, 2016. The interface includes a search bar, a "Submarine Cable List" sidebar, and a footer with the text "All content © 2016 PriMetrica, Inc." and the date "16:43 17/02/2016".





ITU Interactive Transmission Maps Project homepage

<http://www.itu.int/en/ITU-D/Technology/Pages/InteractiveTransmissionMaps.aspx>

ITU Interactive Terrestrial Transmission Map

<https://www.itu.int/itu-d/tnd-map-public/>

ITU TIES Interactive Terrestrial Transmission Map

<https://www.itu.int/itu-d/tnd-map/>

ITU TIES Validation Framework

<https://www.itu.int/itu-d/tnd-map/validation/>



# Thank you

**International  
Telecommunication  
Union**

Committed to connecting the world