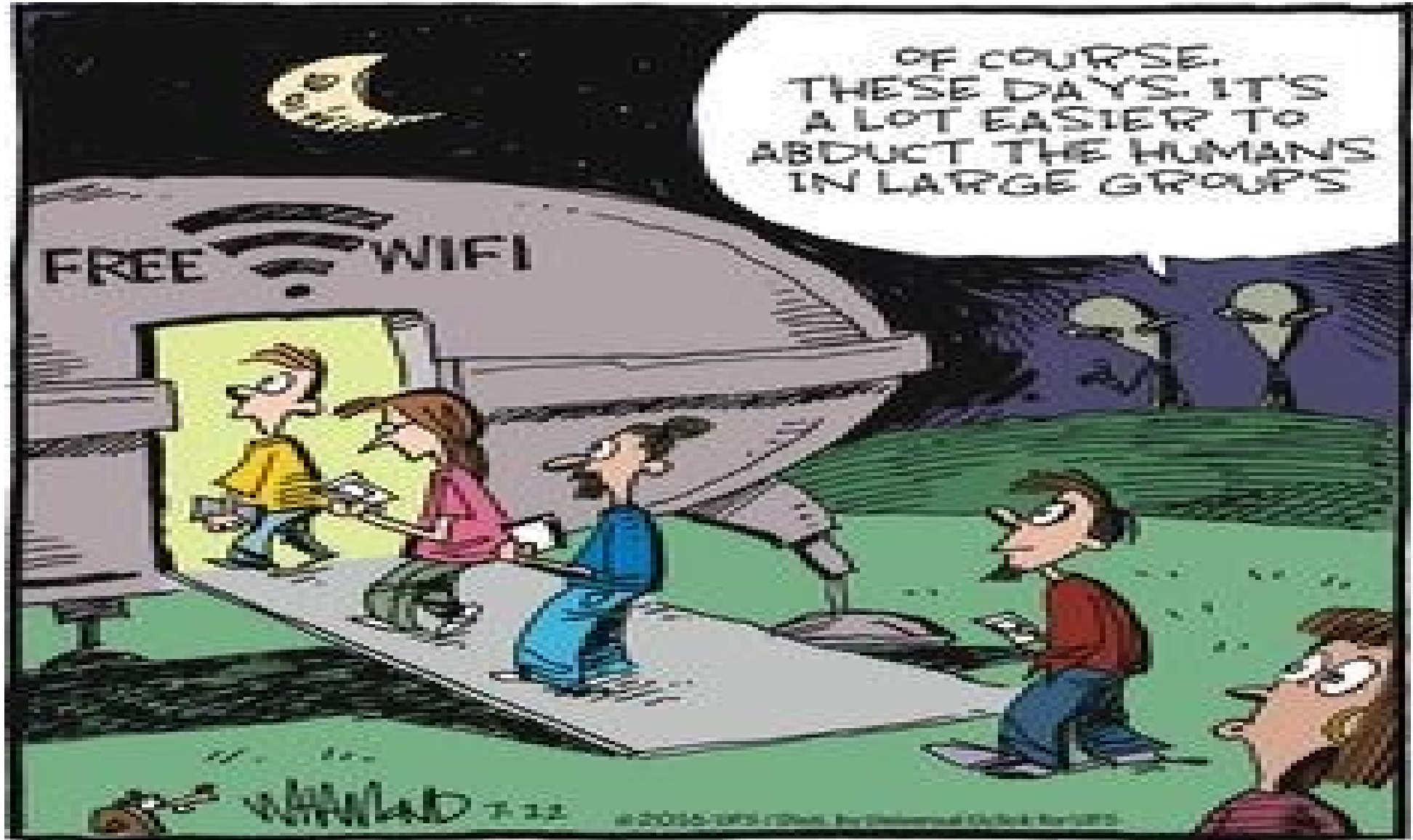


**Session on Economic Issues in Modern  
Telecommunication/ICT Markets  
ITU Headquarters Geneva, September 25, 2018**

**Economic and Regulatory Issues in the Era of Free Services**

Archana G. Gulati  
Senior Deputy Director General  
Department of Telecommunications, Government of India



# Challenges of Regulating Smart Societies

Privacy

Competition

Security

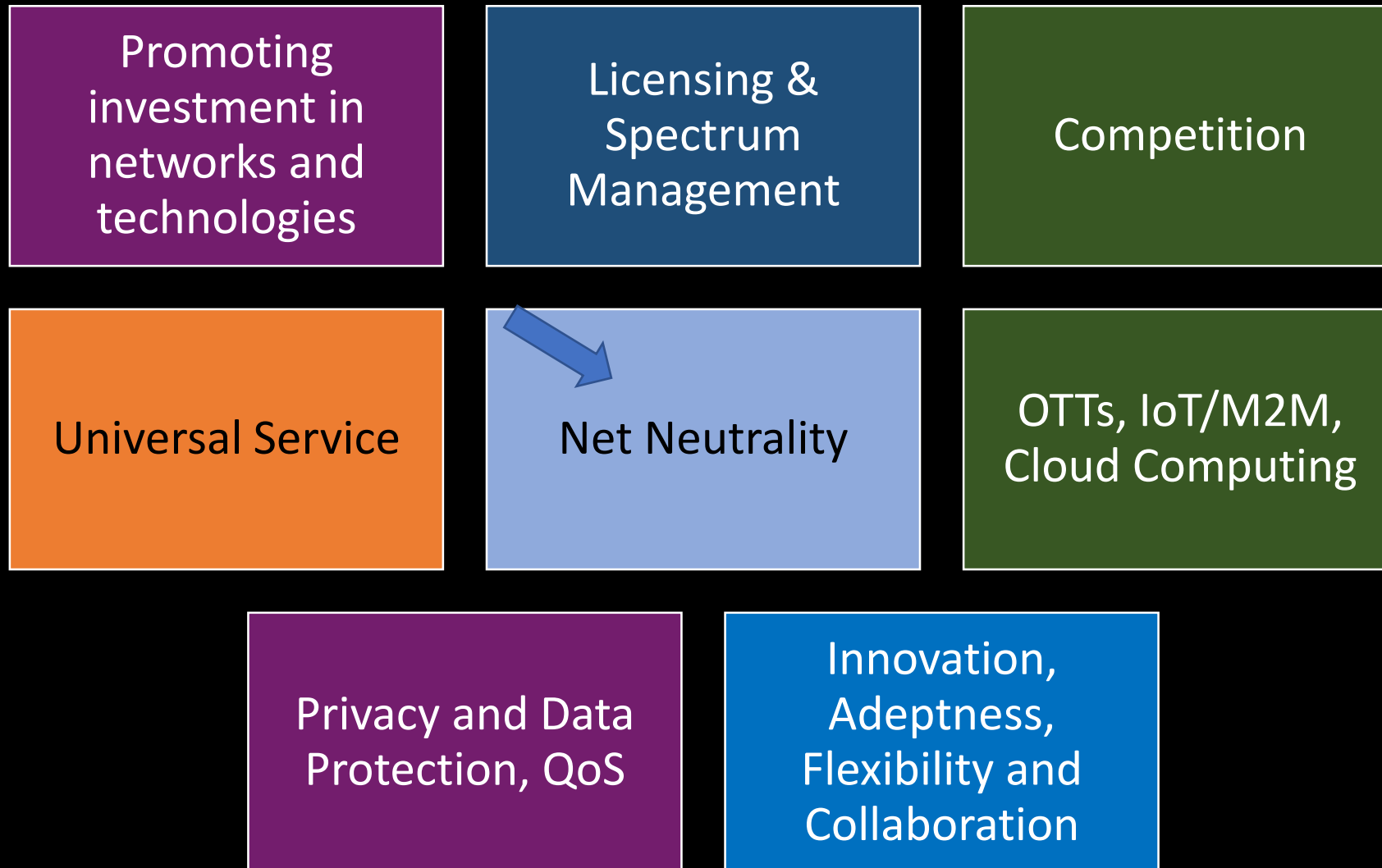
Trust

QoS

Inclusivity

Interoperability

# Focus of ICT Regulators in the Smart Era



# Challenges of Regulating Smart Societies

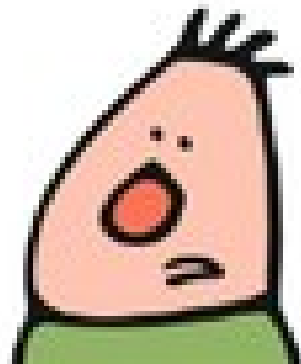
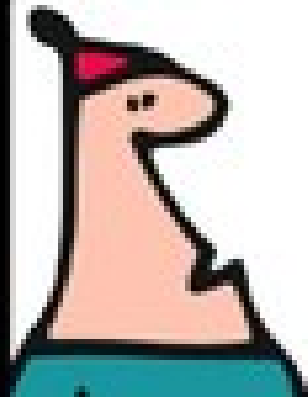


A LONG TIME AGO  
SOME FOLKS WERE  
WORRIED ABOUT THE  
PRIVACY IN THE WEB

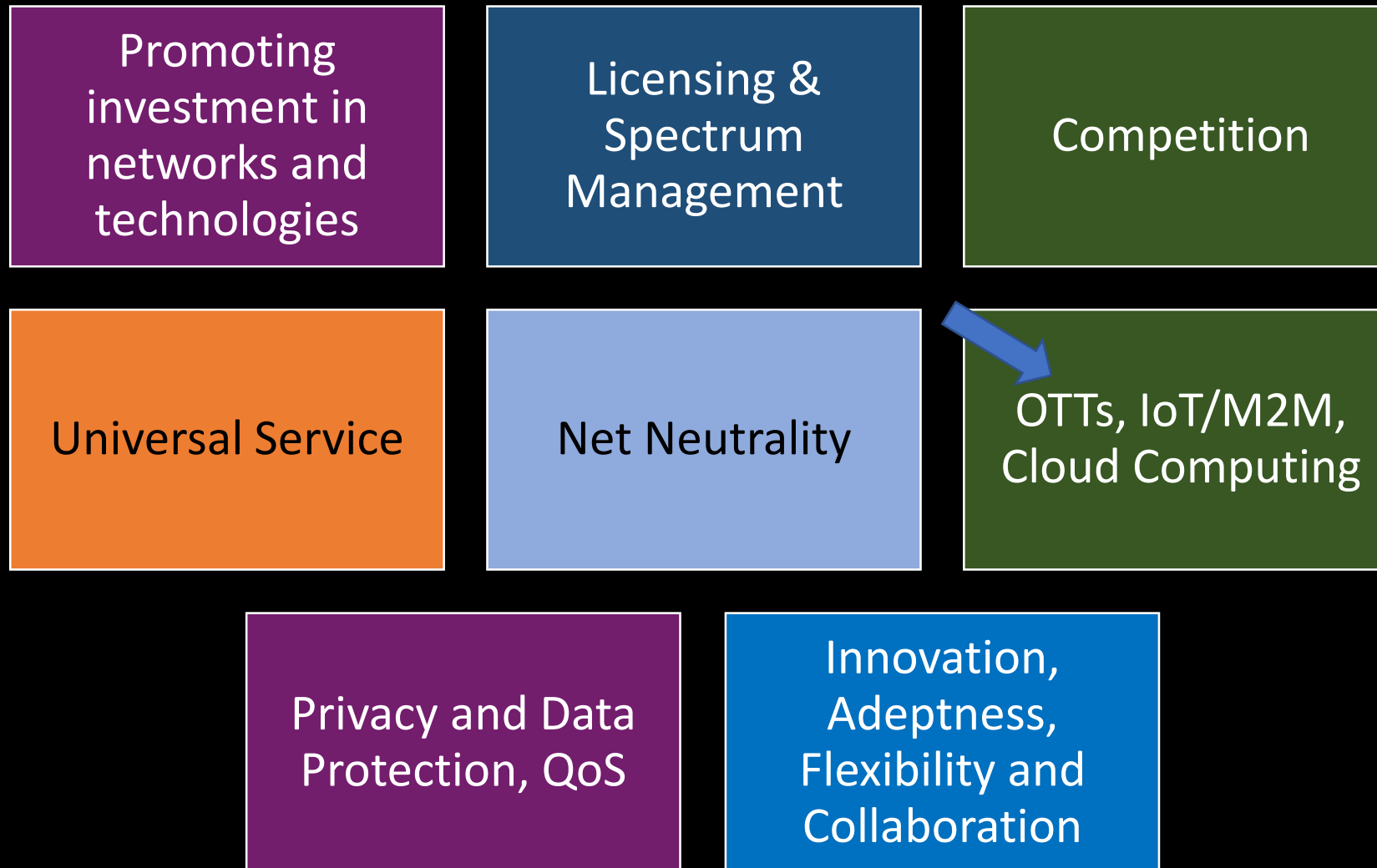
WHAT WAS  
"THE WEB"?

I'VE HEARD IT  
WAS A  
PREDECESSOR  
OF FACEBOOK

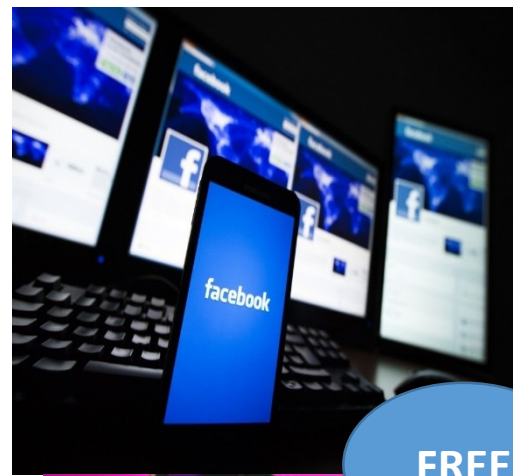
WHAT'S  
PRIVACY?



# Focus of ICT Regulators in the Smart Era



# Oh Thank (God For) Technology-WE CAN'T DO WITHOUT THEM!



FREE



CONVENIENCE



FREE

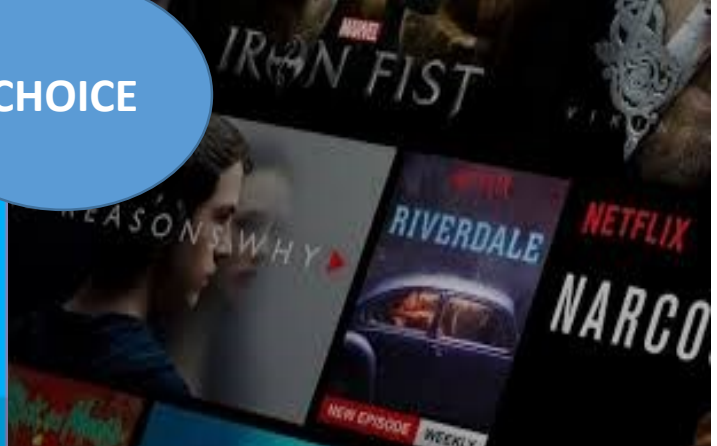
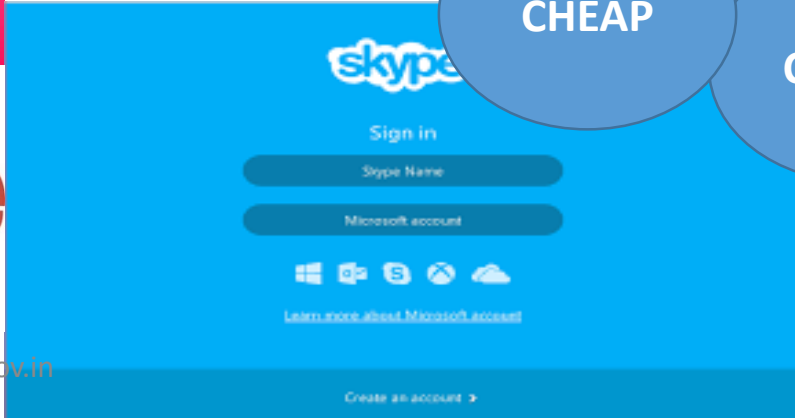


CHOICE



CHEAP

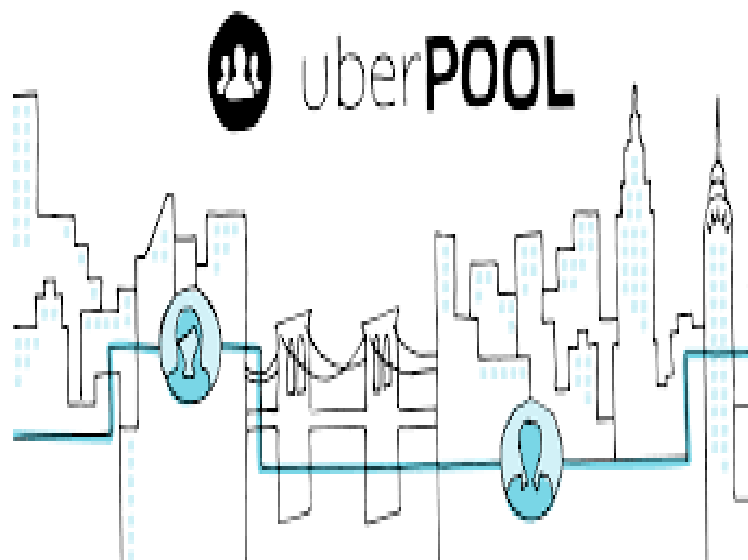
CHOICE





# Already Old (New) Buzzwords

- App Economy
- Sharing Economy
- OTT



# Regulating OTTs/App Economy

- App Economy: *the sum of all economic activity, products and services, required to deliver app functionality to end users via mobile broadband services.*
  - Consumers are happy!
  - Innovators are happy!
  - Investors very happy!
- Regulators still catching up!
- Incumbents are threatened esp. by communication apps
- Commodified as providers of undifferentiated broadband services
- Adversely affects brand value and profit margins



# ICTs regulator's Headache(s)

*Caution: 'The law of exclusionary practices: Traditional analysis [of competition law] puts too little weight on the need for unclogged markets and too much weight on the fear of chilling investment by insiders-who are invariable dominant firms.'*  
-Eleanor Fox

The incumbents survival

Net Neutrality

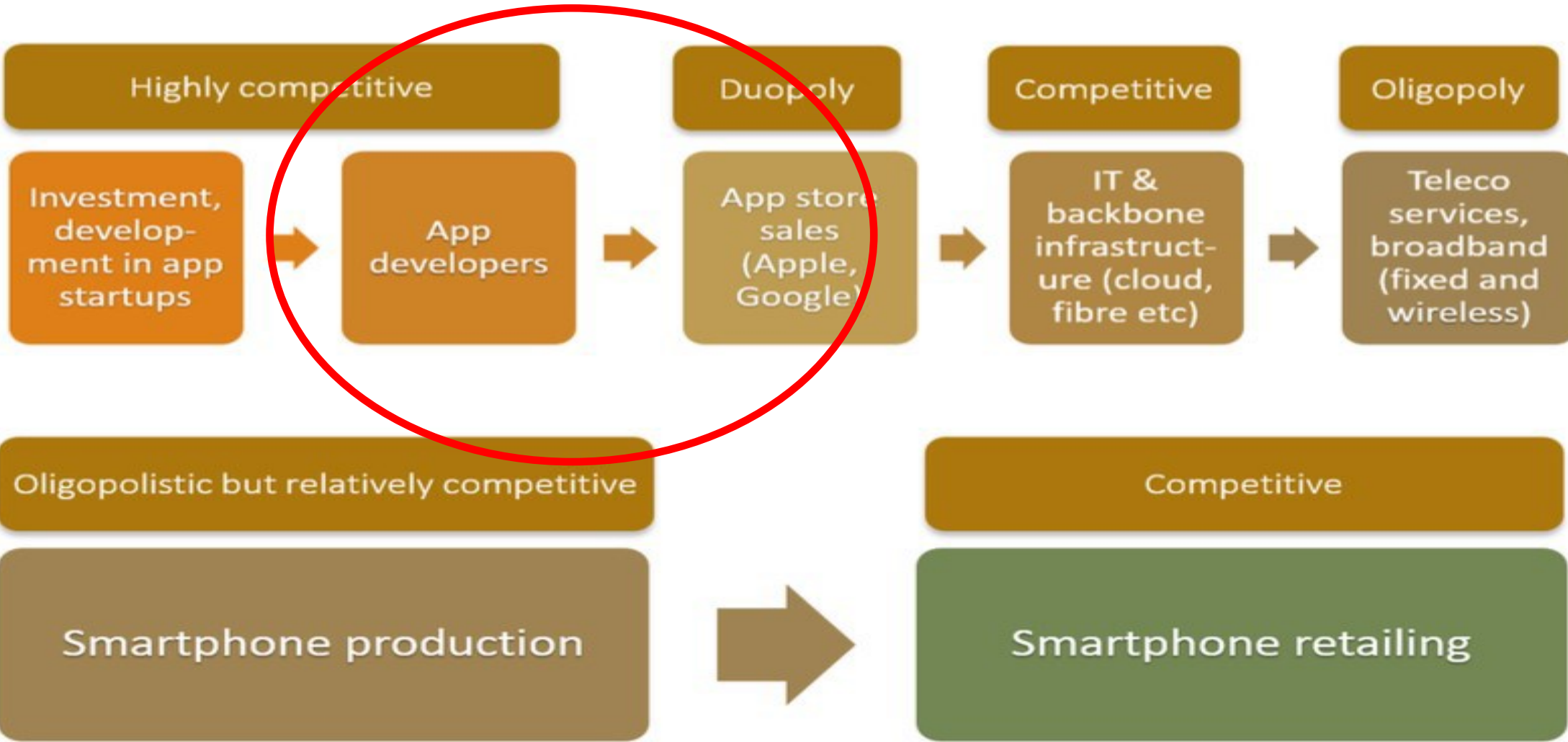
Network safety

Privacy & data Protection

Competition

# Regulatory Challenges

- Competition Regulator's headache, Its not as competitive as we think



# The Economics Behind it

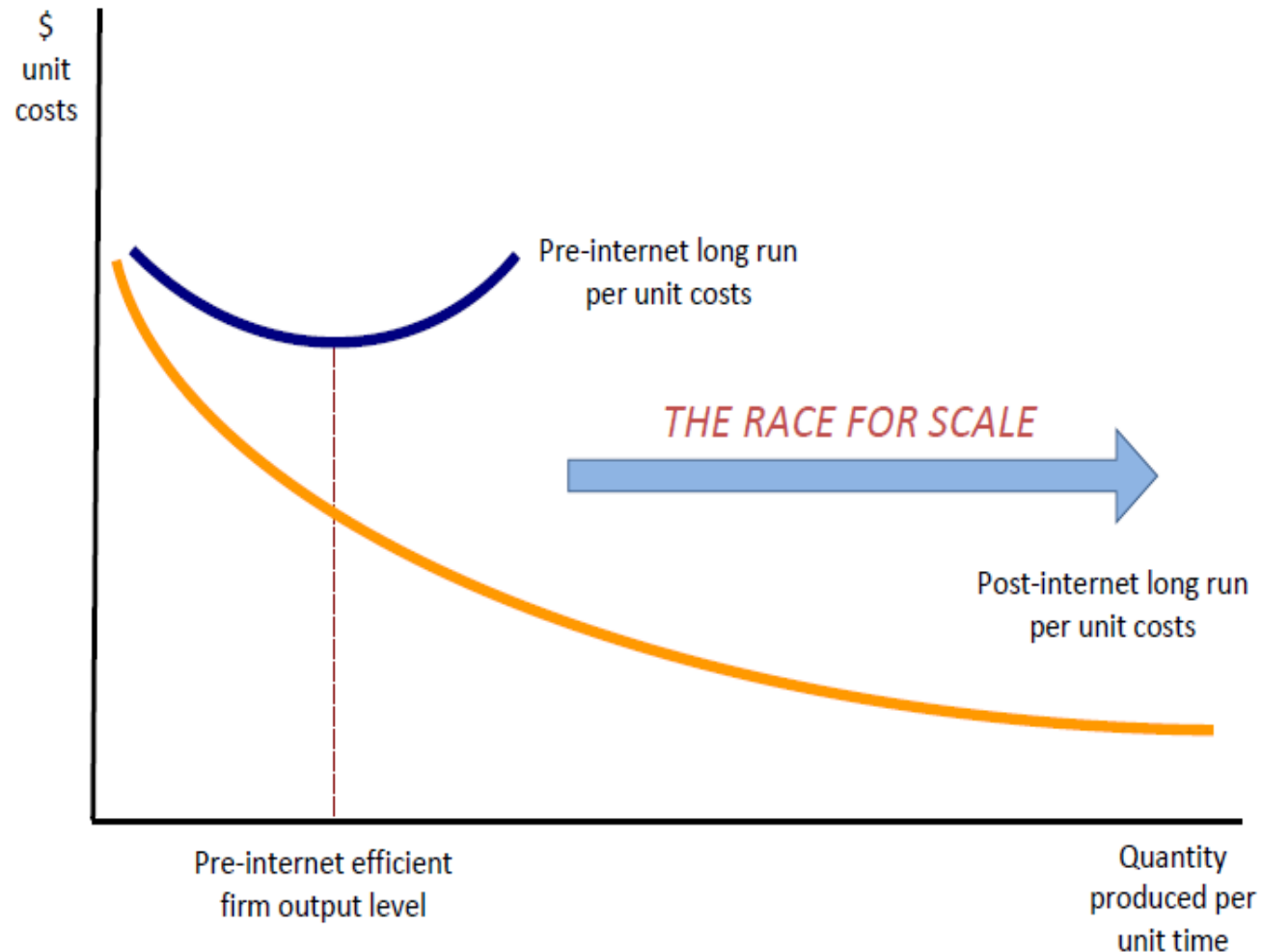
## Reduction in transaction cost

- No brick and mortar market places,
- No physical records,
- Far less human labour,
- More outsourcing,
- More contracting,

## Economies of Scale

## Network Effects

# Decreasing Costs & the Advantage of Scale



- Since diseconomies of scale don't set in, the lower per unit cost places giants at a huge advantage
- Bolstered by network effects

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

Source: ITU GSR 16 Discussion paper

Archana G.Gulati, Senior DDG, DoT, India, [ag.gulati@gov.in](mailto:ag.gulati@gov.in)

# The Danger of New Monopolies

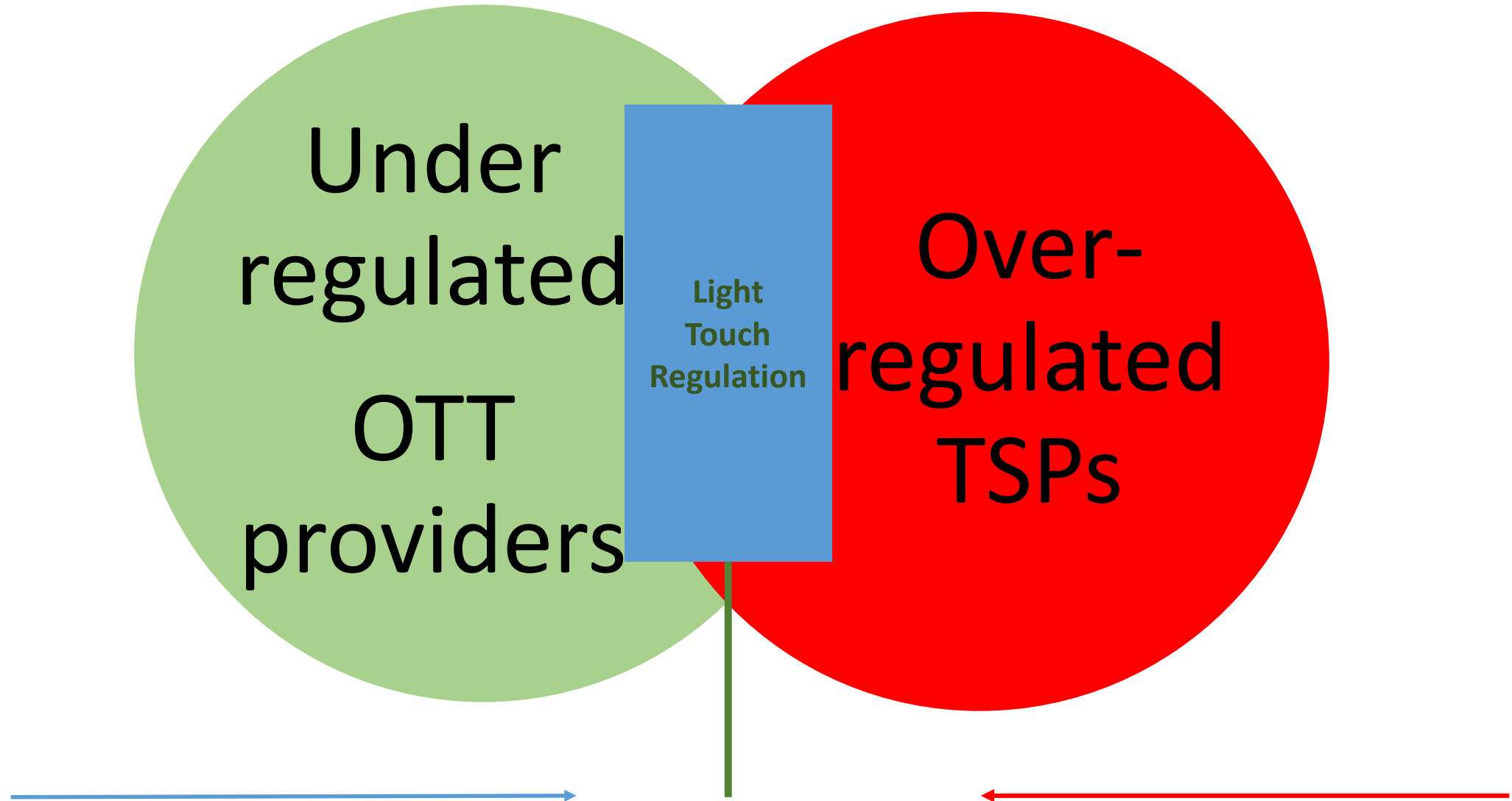


**Technology making economies of scale and managing a large global firm easier**

*As diseconomies of scale are destroyed, it becomes more and more practical to run a globally integrated firm -- indeed, a global monopoly -- provided, again, that the firm maintains a strong focus, picking one activity and doing all of it for the whole world. The picture that results is a large collection of focused monopolies, each of them taking a precision "slice" through the world economy by means of global computer networks and by the grace of the standardized world that it both depends upon and helps to create-Phil Agre*

*Google , Amazon, Facebook, Uber each almost a verb*

# Level Playing Field





<b>Area of Regulation</b>	<b>Telecom Service Providers</b>	<b>OTTs</b>
Spectrum allotment and use	Need to bear costs and adhere to rules	No such costs
Licensing	Yes, different licenses and their associated costs including licensing fee	No such licenses or costs
Spectrum related charges	Need to bear the costs	No such costs
Space related charges	Need to bear the costs	No such costs
Bank Guarantees to the government	Yes	No
Proper record keeping including methodology	Required	Required through other acts
Interconnection	Yes, required as part of regulatory regime. Requirement to interconnect entails costs.	No such interconnection required as they are 'Over the Top' networks
Quality of Service Parameters	Required as part of regulatory regime	No such requirement
Obligations under various Telegraph Acts	Need to adhere to rules	No such requirement
Infrastructure sharing	Need to bear the costs	No Infrastructure sharing
Security conditions	Need to adhere to rules	No such requirement
Emergency and Public utility services	Need to adhere to rules	No such requirement
Monitoring services i.e. Lawful interception and monitoring	Required as a license condition	No such requirement

Source: TRAI

## REGULATORY IMBALANCES



# Possible Methods of Licensing

Temporary/Experimental  
Licensing?

- Wait and watch

Deemed Class License?

- Light touch

Regular License?

# Singapore's Light Touch Regulation

Recent innovation in the shared economy has caused disruptions to the transportation sector. In response, the Singapore Government has chosen to regulate all third-party taxi booking services.

The *Third-Party Taxi Booking Service Providers Act* takes a 'light-touch' approach to regulation by only imposing basic requirements that are necessary to protect commuter interests and the 'fundamental tenets' of taxi regulatory policies. Under the regime, all third-party taxi booking services with more than 20 participating taxis are required to register with the Land Transport Authority (LTA). The threshold of 20 is to allow very nascent services to be exempted from registration, providing them room to 'experiment' before their size reaches the registration threshold. Furthermore, clause 11 of the Act empowers the LTA to impose conditions on registered providers to ensure that commuter interests are safeguarded and taxi regulations are not undermined. These conditions include the requirement that registered service providers must dispatch only licensed taxis and drivers holding valid Taxi Driver's Vocational Licences, fare-related safeguards for commuters and the existence of customer support services for commuters.<sup>48</sup>

Upon an overview of the Singaporean legislation, it is obvious that the ministry intended not only to minimise disruption and protect consumer interests, but also to allow space for new services to innovate and thrive, and for new technologies and business models in the market to emerge.<sup>49</sup>

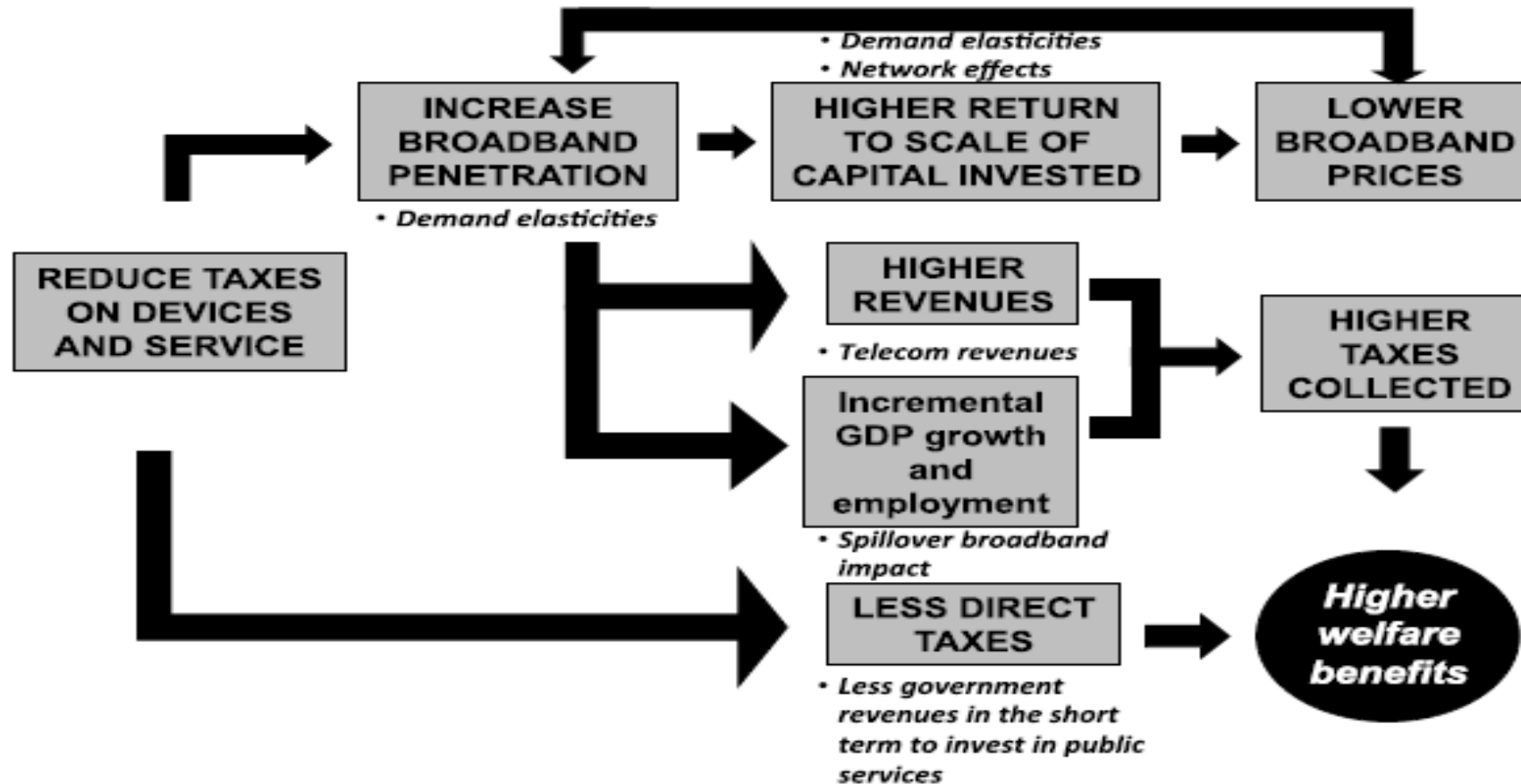
# Other Issues

Loss of Tax Revenue?

National Security

Cross Sectoral Regulation & Collaboration

# Replace Universal Service Levies with General Budget?



Source: Katz, R. and Berry, T. (2014) Driving Demand of Broadband Networks and Services. ITU Publication "The Impact of taxation on the Digital Economy".

# About IoT-Too early to Define?



- *The Internet of Things enables objects sharing information with other objects/members in the network, recognizing events and changes so to react autonomously in an appropriate manner. The IoT therefore builds on communication between things (machines, buildings, cars, animals, etc.) that leads to action and value creation.“*

*-European Commission*

# Some Current Areas of Investment

1

Smart cities

2

Smart  
metering &  
grids

3

Connected  
vehicles

4

Healthcare

5

Smart Homes

# Smart Cities: On a Lighter Note!





# Licensing

---

IoT players are not necessarily communication service providers

---

Should they be licensed /regulated?

---

Would it adversely impact innovation, growth of IoT and competition

---

Cost of regulating so many entities

---

Cross sectoral players

---

Need for flexibility, adaptability and collaborative approach

Enabling clarification for existing licensed players

Registration for purely localised players using delicensed bands

A new M2M license for larger players using delicensed bands with more elaborate networks that replicate TSP networks

Security by design

Eventual requirement for OTA reconfiguration in case of imported devices

Cross sectoral regulatory oversight

National Trust Centre for Oversight

# India's Regulatory Approach

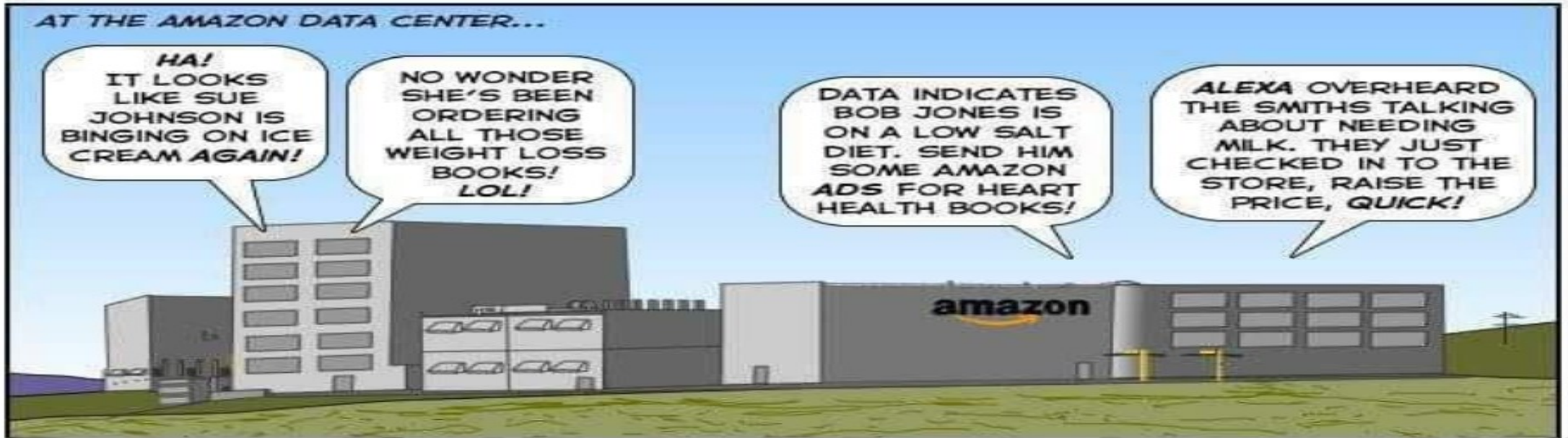
Archana G.Gulati, Senior DDG, DoT, India,  
ag.gulati@gov.in

*When everyday items come equipped with some or all of the five senses... combined with computing and communication capabilities, concepts of data request and data consent risk becoming outdated*

-ITU Internet Reports 2005: The Internet of Things – Executive Summary

It's your doctor - he just  
got an alert that you're  
having a second  
helping of pie.



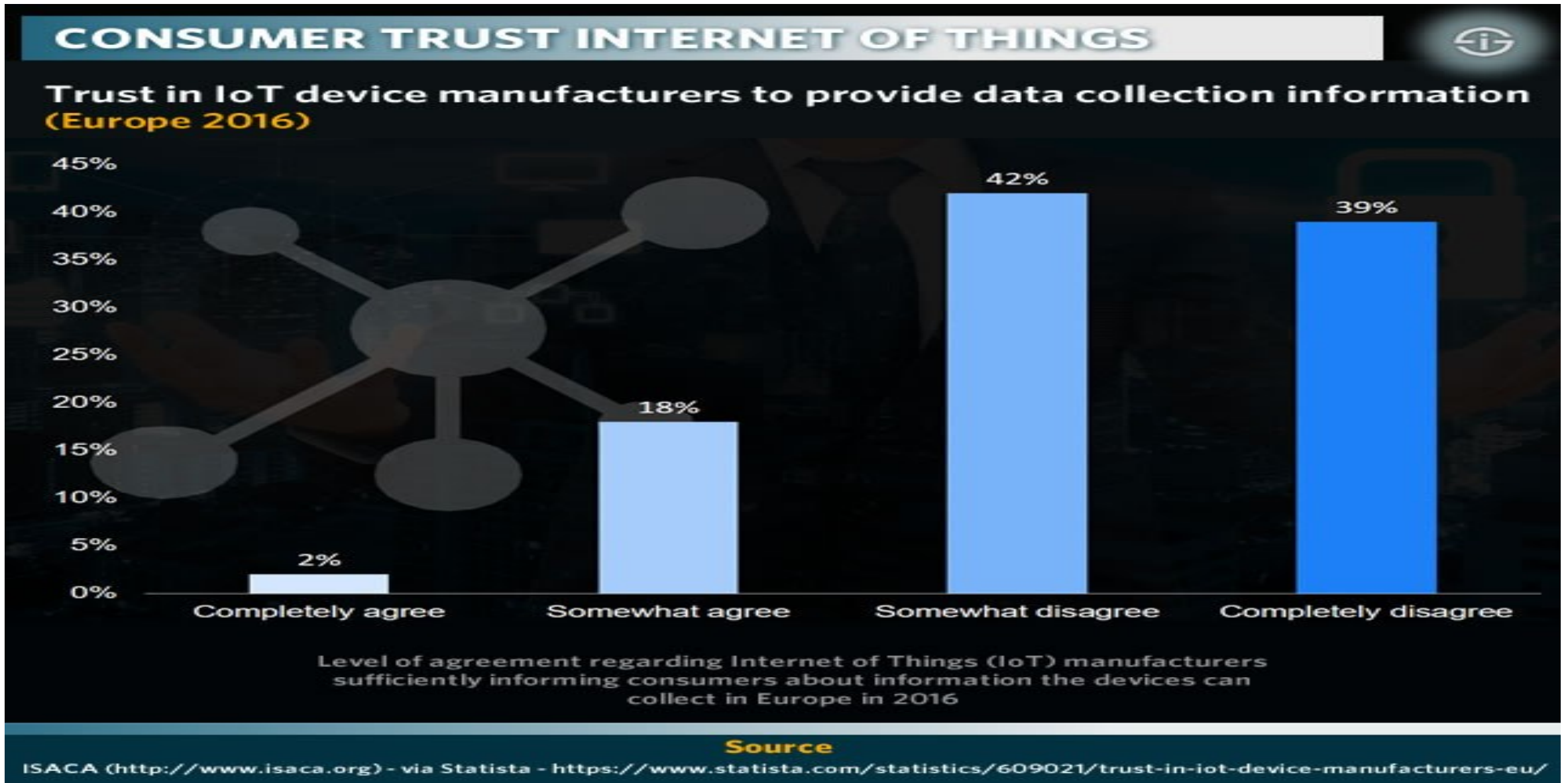


# The Price is not the money you pay

- You search for sofas on one site, and then every other site you view shows you sofa ads' making you the 'passive receiver of the interaction between the site and the advertiser\*
- “Data about a thing, if you have enough of it, starts approaching the thing itself. If I have enough data about a figurine, I can take a 3D printer and create a replica of it. What can I do if I have enough data about you?” (Aral Balkan)
- Data is the new criterion for market power and a consumer issue because it affects QoS

<https://www.theguardian.com/technology/2017/jul/02/is-it-time-to-rein-in-the-power-of-the-internet-regulation>

# Trust and Future Growth of IoTs



# Privacy, Possible Solutions

1

Enactment/  
Review of Data  
Protection Laws

2

Privacy by  
design

3

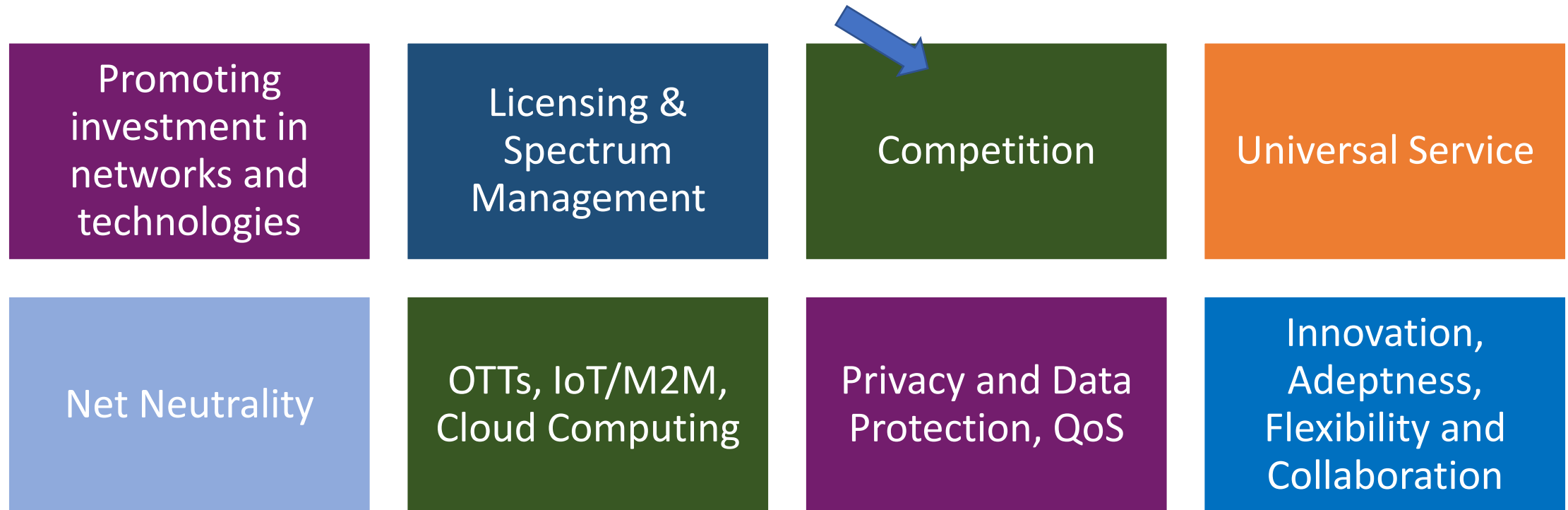
Simpler user  
friendly rules  
and consent  
mechanisms

4

Consumer  
Awareness



# Focus of ICT Regulators in the Smart Era



# Contemporary Competition Issues: Zero Tariff and Big data

- Data as a hidden cost to consumers, who may pay for products offered free of charge 'indirectly' through disclosure of personal data.
- Data as a source of market power:
- **Possible solutions:**
  - **Data Portability**, that is, the ability to extract all user data from a service, and share it with another.
  - **Anonymized, public data sets**, which can be used as a test bed by newer service providers.



# Competition, Contemporary Issues: Guarding innovativeness

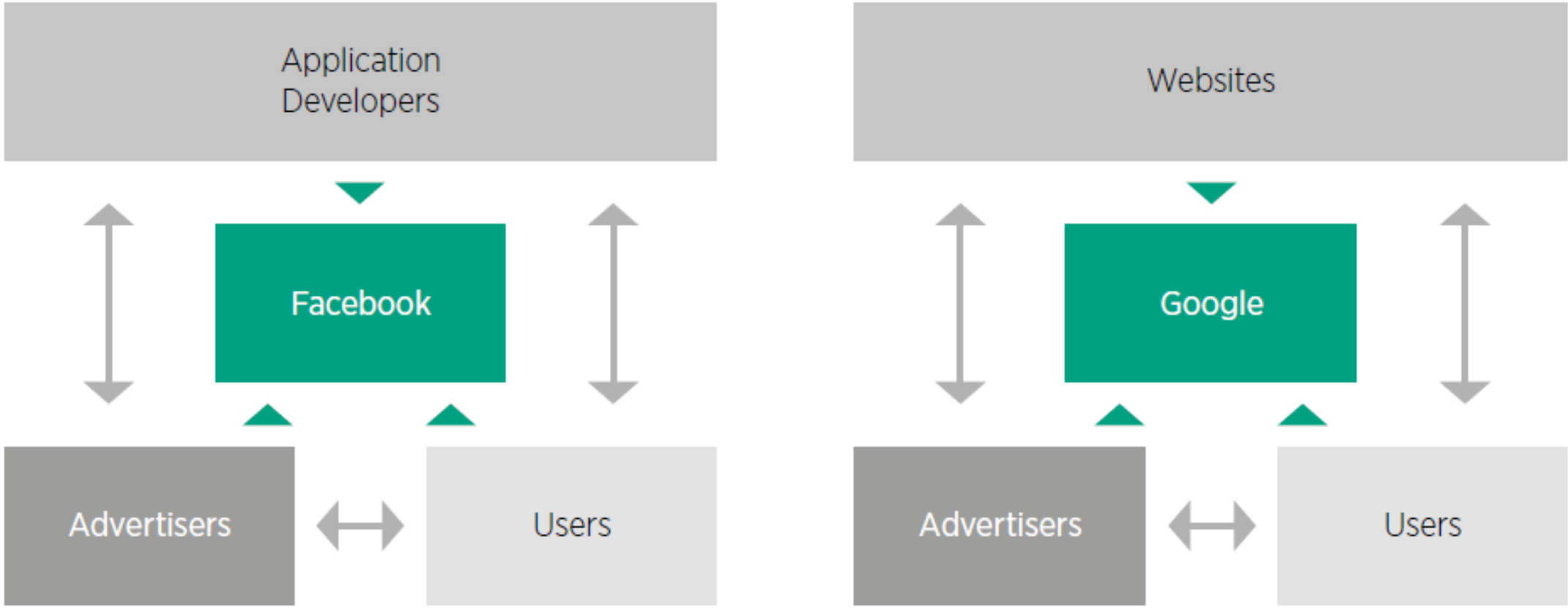
Protect Innovativeness

Ensuring market power is not used to:

- **Keep potential competitors from entering the market**
- **Leveraging of market power into adjacent markets**
- **Prevent competitors from gaining access to essential information, data or resources for anticompetitive reasons**
- **Eliminating competition through acquisitions**
- ***These actions stifle innovation by making entry more difficult and costly, increasing the probability of failure and therefore lowering expected return.***

Also maverick acquisition

# Contemporary Competition Issues-Multisided Markets



## Contemporary Competition Issues-Network Effects

- Can cause reduction in costs and prices for large firms
- Conversely can increase switching costs, lock in customers-in anticompetitive ways
  - Think-Google, Amazon, Facebook, Apple
- *'The ability to compete for audiences increases if a company has multiple platforms and creates synergies by linking them. Consumers accessing different platforms from one provider (e.g. email, cloud computing, social networking and web searching), allowing the provider to develop very detailed user profiles. These are used to optimise the experience of end-users and advertisers. Digital platform operators which make themselves indispensable to end-users and advertisers are in a **gatekeeper position**'-GSMA*

# Platforms as the New Significant Market Powers

- *Ensuring fair and innovation-friendly platform economy :*
  - *Complementing enforcement action under competition law, the European Commission is conducting a fact-finding exercise on platform-to-business trading practices.*
  - *Concerns relate to platforms favouring their own products or services, discriminating between suppliers and sellers and restricting access to and the use of personal and non-personal data. The absence of transparency and redress mechanisms are additional matters raised by stakeholders.*

([https://www.bakermckenzie.com/-media/files/insight/publications/2017/10/ar\\_antitrust\\_digitalage\\_oct17.pdf?la=en](https://www.bakermckenzie.com/-media/files/insight/publications/2017/10/ar_antitrust_digitalage_oct17.pdf?la=en))

# Challenges to Applying Standard Economic Tools in the Digital Age

- Product markets
  - Convergence blurring classic market boundaries-voice/messaging/Entertainment
  - Bundling of internet, T.V., telephone-should bundle be the product?
- Geographic Markets
  - Regional :e.g. African Service Providers
  - International: Skype, Viber
- Business Case more important than supply side substitutability
  - Threat of new entry by way of innovation (WhatsApp vs. Facebook Messenger)
- Relevance of SSNIP when Provision of free services may be funded by either cross-subsidisation (e.g. addons, chargeable elements of a service), or subsidisation from customers who are more profitable / or by advertising, such as in the case of Facebook-non monetary exchange of value
- Monopoly Power exercised not by Price increase but by using Data

# Challenges to Applying Standard Economic Tools in the Digital Age

- Multi sided markets imply that the impact needs to be considered in multiple markets, taking into account the interactions amongst markets.
- When goods and services are provided free of charge, it is not feasible to calculate the impact of a change in price using standard quantitative analysis.
- Data is not available on all the companies operating in this space and particularly on their volumes and revenues.
- There is no common unit of measurement for many of these good and services, for example VoIP services are not usually measured in terms of minutes and messages.



# Some Solutions

- Requesting information from new digital players who may have traditionally been outside of the monitoring regime.
- Undertaking market surveys to understand the views of both businesses and consumers.
- Reviewing non-monetary measures such as number of subscribers/time spent/data.
- Greater collaboration of ICT regulators with competition authorities

Future  
Regulatory  
Issues??



## Acknowledgements

- Invaluable ITU Resources
- A lot of information available on the internet.....for free!!



"We only come here for the free wi-fi."



Thanks!