

ITU/BDT Regional Economic Dialogue of Telecommunications/ICTs for Latin America and the Caribbean (RED) Mexico DF, Mexico, 04-06 September

Session 4: Stimulating innovation in the Digital Ecosystem

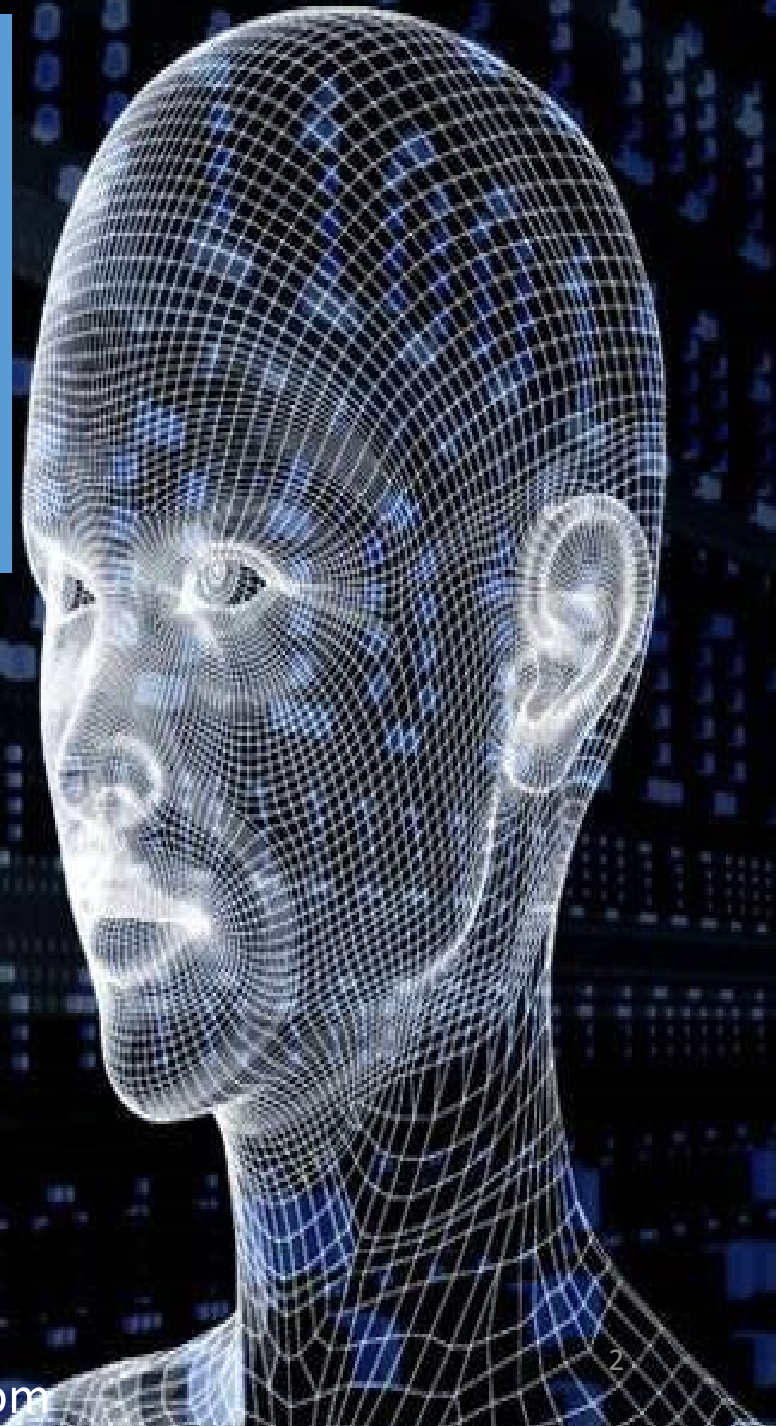
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Preparing the regulatory landscape for future technologies, services and business models- *Regulation for Smart Societies*



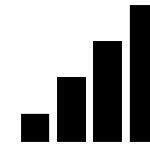
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ICTs at the Centre of Smart Societies

- ICTs and Digital Technologies key to socio-economic development and growth of smart connected societies
- Requires cross-sectoral collaboration 
- New regulatory approaches (co-regulation, self regulation)
- Collaborative regulation involving multiple stakeholders-sector regulators, competition regulators, service providers, consumers



Principles of Regulating Smart Societies

Innovation

Inclusiveness

Empowerment

Transparency

Sharing

Collaboration

Challenges of Regulating Smart Societies

Privacy

Competition

Security

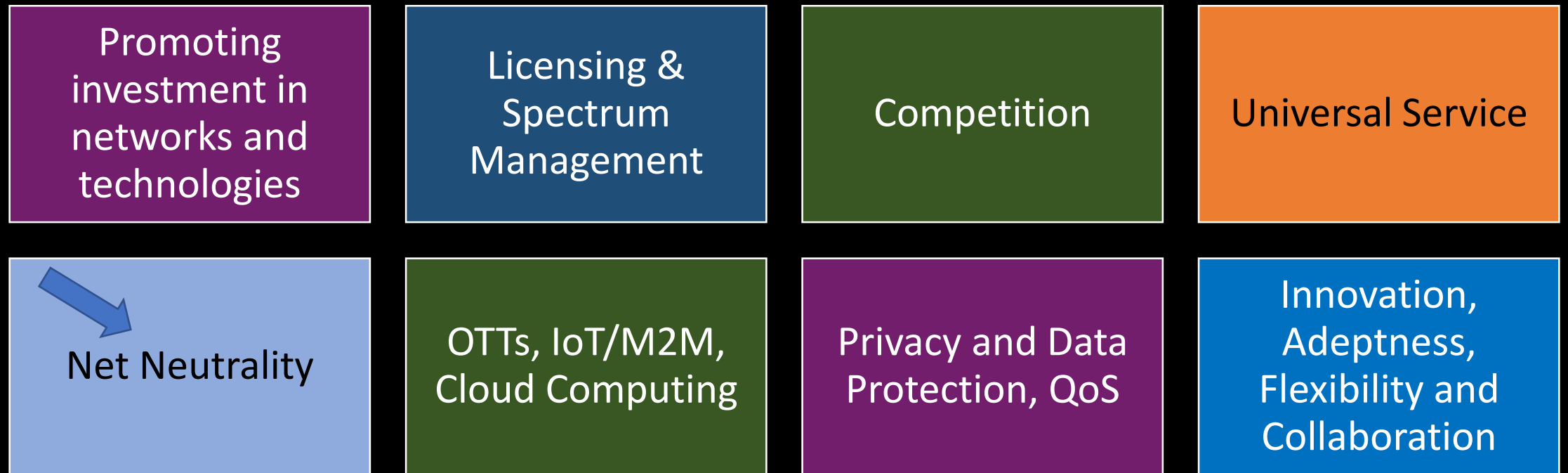
Trust

QoS

Inclusivity

Interoperability

Focus of ICT Regulators in the Smart Era



What

- Refers to non-discriminatory treatment of internet traffic by the internet provider, irrespective of the source of the content.
- For instance, if an internet provider throttles or blocks access to certain websites, it will be a violation of net neutrality.

Global Scenario

- TRAI has taken a pro-net neutrality stance in its November 2017 recommendations.
- The FCC (USA) 2017 decided to let market forces take the wheel when it came to treating internet traffic.
- The EU and the FCC (Obama administration) have upheld net neutrality and have been strict with the mandatory non-discriminatory approach.

Regulation

- Regulations with regards to net neutrality essentially involve expressing the regulator's stance on non-discriminatory treatment of internet traffic.
- If the regulator upholds non-discriminatory treatment, then there is a need to identify their stance on reasonable traffic management and exceptions to the non-discriminatory approach.

India

S. No.	Issue	Stance
1	Non-Discriminatory Treatment	<ul style="list-style-type: none">• No discriminatory treatment of content
2	Specialized Services	<ul style="list-style-type: none">• Should be excluded from non-discriminatory treatment• DoT to decide on critical IoT (emergency services, real time data transfer, high QoS, etc) services that may be excluded
3	Reasonable Traffic Management Practices (TMPs)	<ul style="list-style-type: none">• To be excluded from non-discriminatory treatment• Reasonable traffic management - scope and assessment may be done from time to time

India

S. No.	Issue	Stance
4	Permitted Exceptions from Non-Discriminatory Treatment	<ul style="list-style-type: none">• Specialized services
5	Transparency and Disclosures	<ul style="list-style-type: none">• Require ISPs to publicly disclose accurate information regarding the network management practices, performance, and commercial terms of its broadband Internet access services sufficient to enable consumers to make informed choices
6	Monitoring and Enforcement	<ul style="list-style-type: none">• By multi-stakeholder body

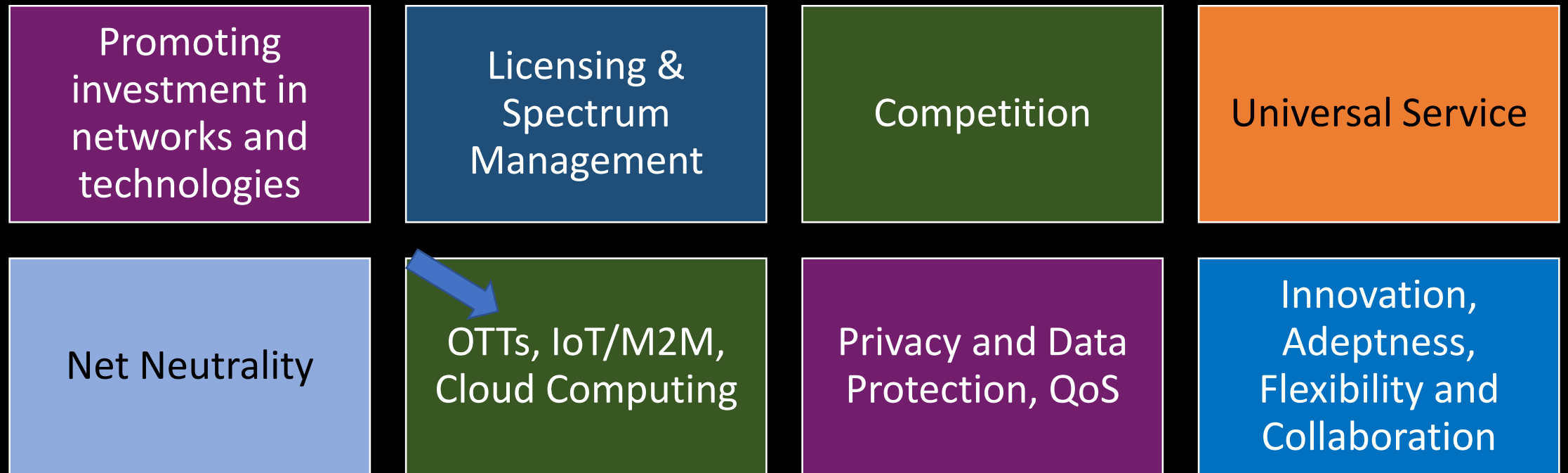
A LONG TIME AGO
SOME FOLKS WERE
WORRIED ABOUT THE
PRIVACY IN THE WEB

WHAT WAS
"THE WEB"?

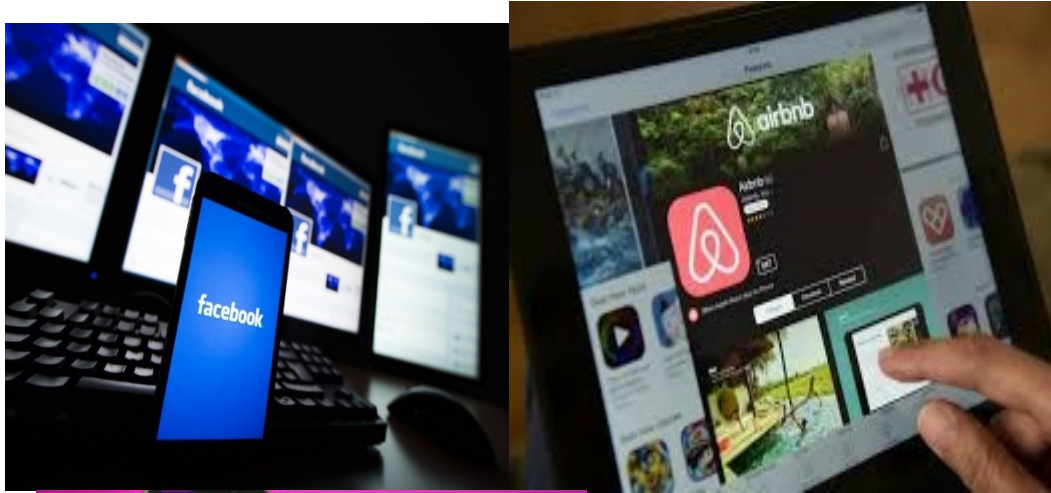
I'VE HEARD IT
WAS A
PREDECESSOR
OF FACEBOOK

WHAT'S
PRIVACY?

Focus of ICT Regulators in the Smart Era



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



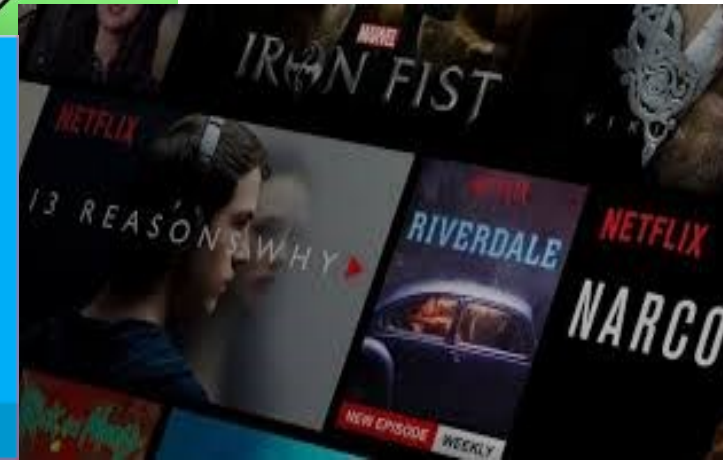
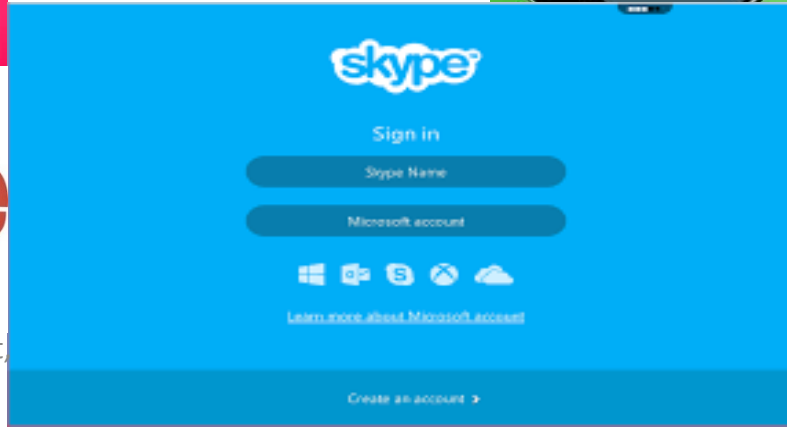
amazon



You Tube

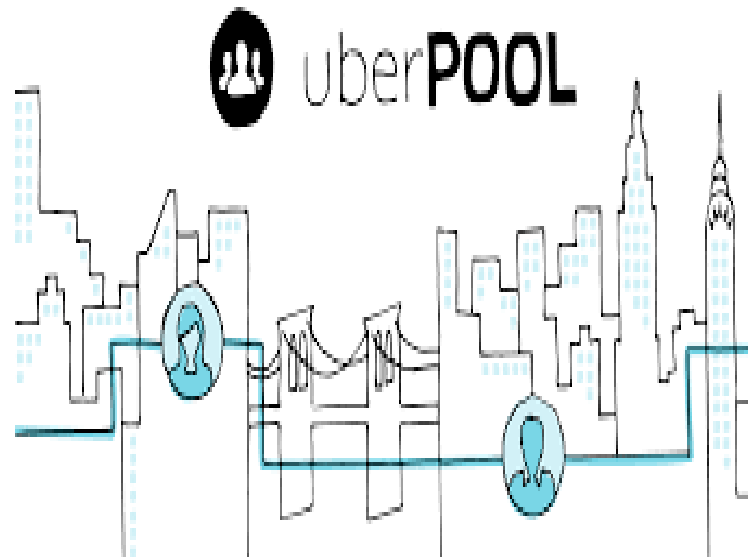


ebay

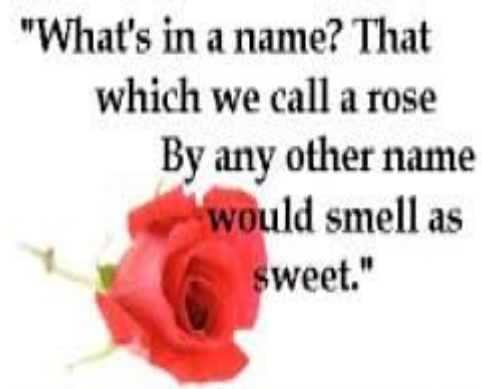
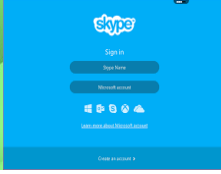


Already Old (New) Buzzwords

- App Economy
- Sharing Economy
- OTTS



Defining OTTs:

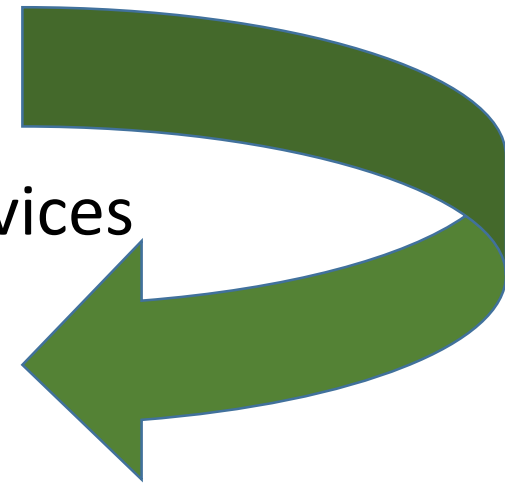


Romeo and Juliet (II, ii, 1-2), William Shakespeare

- The term over-the-top (OTT) refers to applications and services which are accessible over the internet and ride on operators' networks offering internet access service (TRAI)
- Content, a service or an application that is provided to the end user over the public Internet. This means that the term OTT does not refer to a particular type of service but to a method of provision, namely provision over the public Internet. The provision generally occurs independent of the Internet access provider in control of distribution of the service (EU)

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

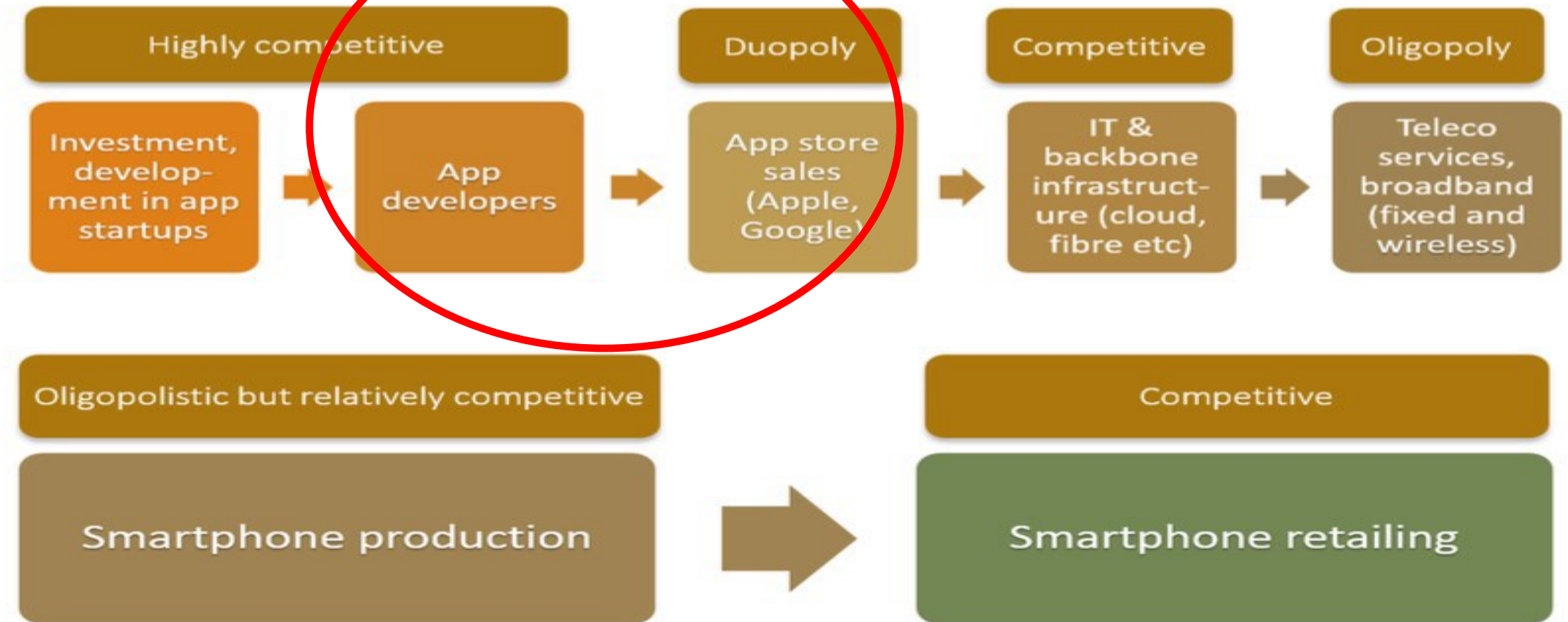
Network safety

Privacy & data Protection

Competition

Regulatory Challenges

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



The 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

Other Issues

Loss of Tax Revenue?

National Security

Cross Sectoral Regulation & Collaboration

Answers??????

Less Regulation/Self Regulation: Industry Codes

Light Touch Regulation: Protect consumers not incumbents

Level playing Field

- -TSP vs. OTT provider
- -Traditional vs. Online

Consumer awareness

Collaboration among regulators

New Models of Taxation-Ease Burden on Existing Players

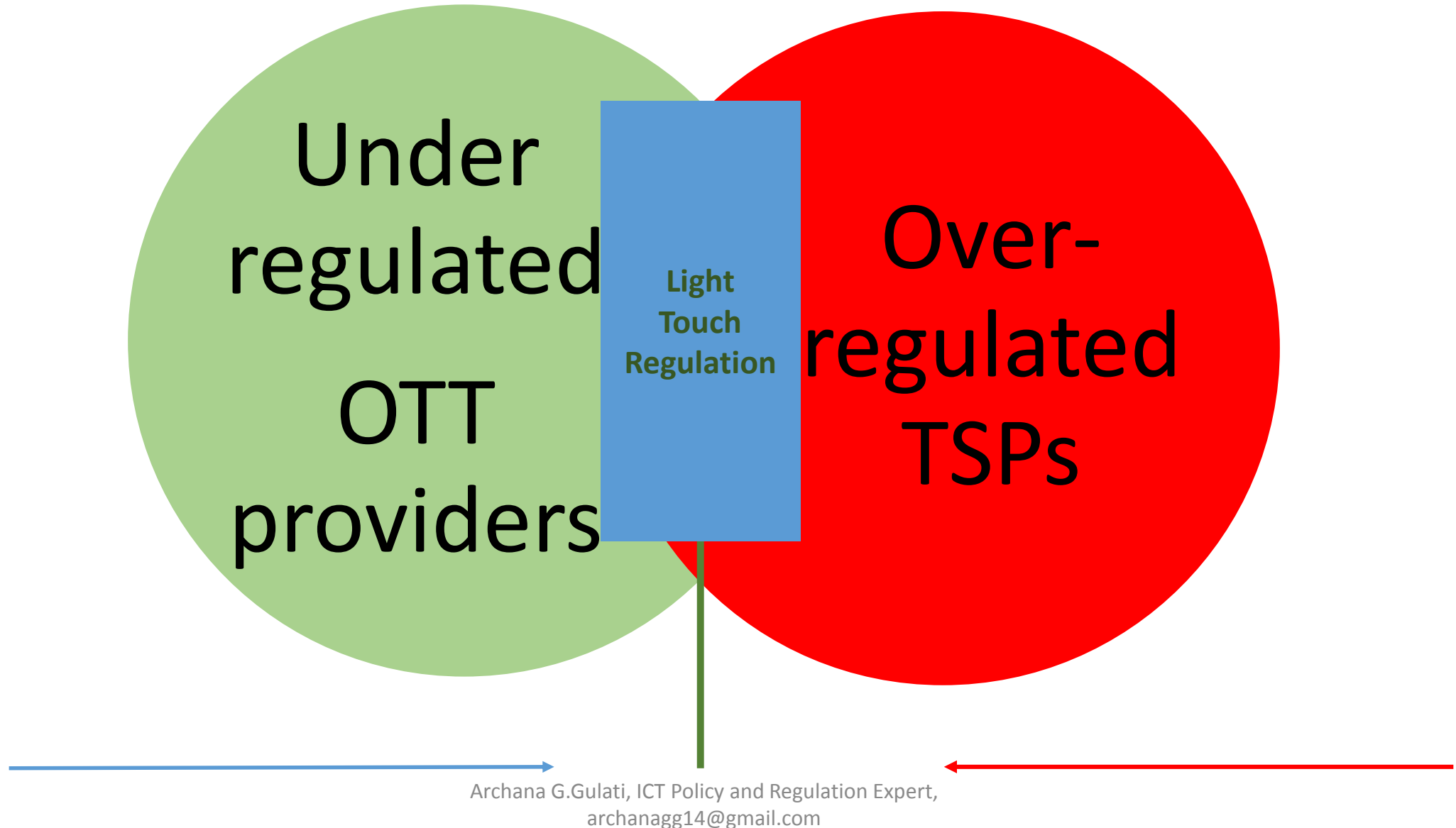
Singapore's Light Touch Regulation

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.⁴⁸

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.⁴⁹

Level Playing Field



Area of Regulation	Telecom Service Providers	OTTs
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



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Possible Methods of Licensing

Temporary/Experimental
Licensing?

- Wait and watch

Deemed Class License?

- Light touch

Regular License?

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!



Regulatory Issues

1

Licensing

2

Spectrum

3

Numbering

4

Privacy

5

Security

6

Competition

- Interoperability
- Open Data

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

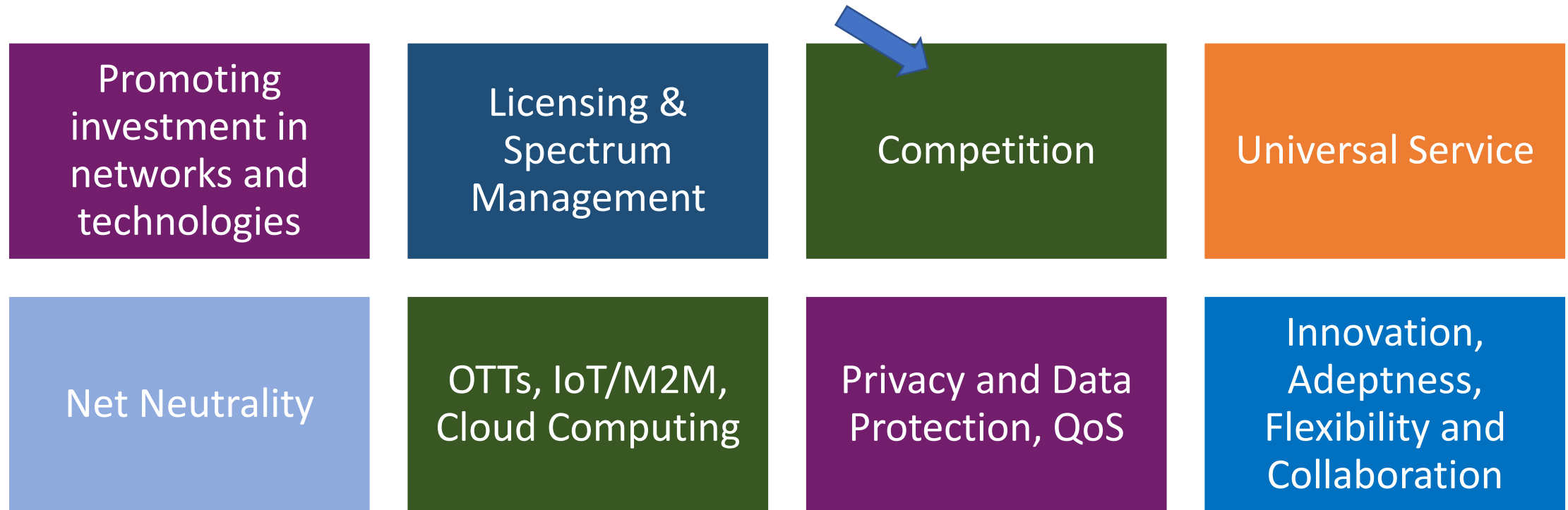
Cross sectoral regulatory
oversight

National Trust Centre for
Oversight

India's Regulatory Approach

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Focus of ICT Regulators in the Smart Era



Characteristics of Digital Markets

- Waves of investment and innovation which lead to rapid technological progress.
- Quality and product features may be more important to consumers than price.
- Price may be replaced by other measures of market power (data?)
- Relatively contestable, allowing entrants to quickly reach a large segment of the market,
- However, in some cases there may be strong network effects and economies of scale with the potential for a 'winner-takes-all' outcome that undermines market contestability.
- Two-sided, allowing two or more user groups to benefit from using the digital platform. For example, search engines are used both by individuals to access information on the internet and by advertisers to access viewers
- Large scale data analysis and gathering. Data as a non /not easily replicable strategic asset that affects service quality.



Competition, Contemporary Issues: Guarding innovativeness

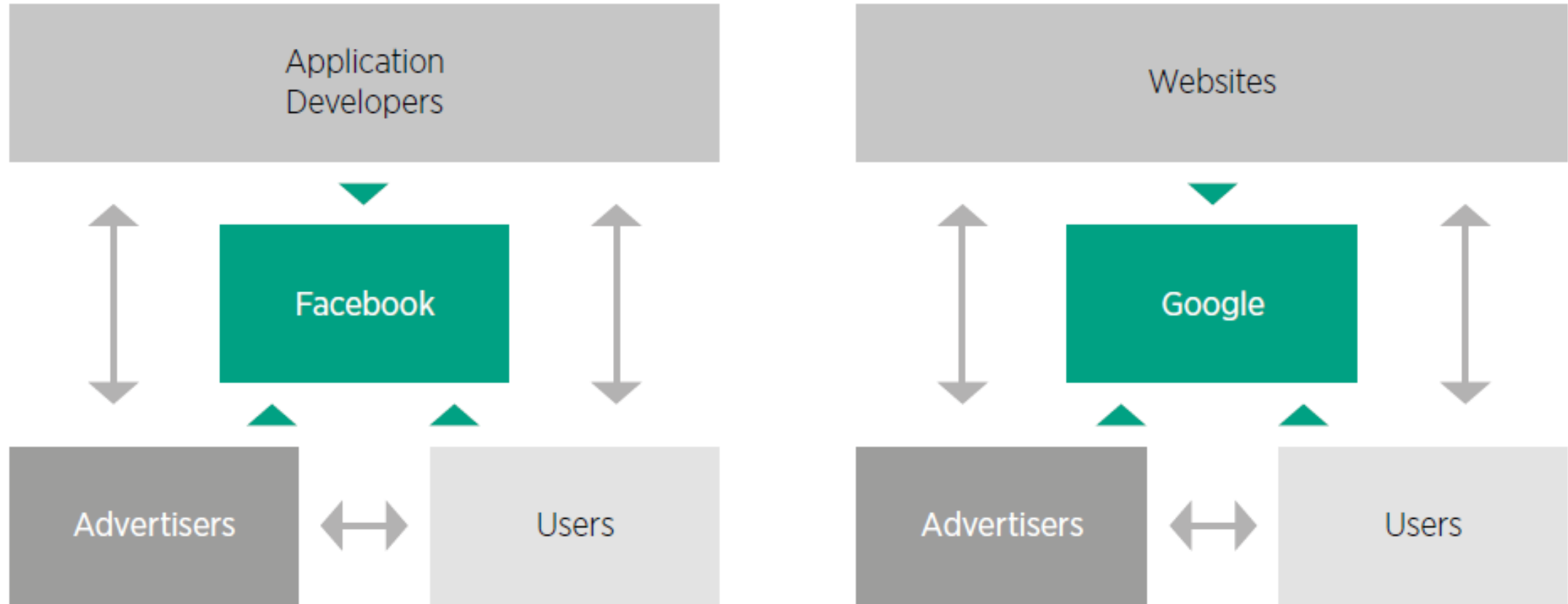
Protect Innovativeness

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: 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.



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.*

*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

Future Regulatory Issues??





Thanks!

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