



Preparing for the Changing Rules of the Game

Syed Ismail Shah, PhD

Chairman, PTA, e-mail: ismail@pta.gov.pk



Presentation Outline

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Paradigm Shift in Telecom Sector-OTT Services

**Difference Between OTTs & other Telecommunication Services-
Comparative Regulatory Analysis**

OTT Services & Key Issues & Challenges

**Converting Challenges into Opportunities through OTTs
Management**

Over the Top (OTT) Services

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CATEGORIES

1. A) Messaging and voice services, (VoIP, Skype, Chat with and without video, Gmail, WhatsApp, Wechat, Line, Viber);
2. B) Application eco-systems (mainly non-real time), linked to social networks, e-commerce; (Facebook, Linkedin, Twitter, Instagram, Amazon, Flipcart, Snap deal, Alibaba)
3. C) Video/audio content. (OTT-TV, OTT Video, streaming and video on demand(VoD), Netflix, Net movies, Youtube)

Over the Top (OTT) Services

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Business Model

- i) Subscription based – Users pay a periodical - weekly, monthly or annual – fee to use the service.
- ii) Usage/Transaction – Users have to pay for a specific transaction or the resources they use.
- iii) Advertisements – Users pay attention to a site or service and the supplier sells different types of ads.
- iv) Donations – Some platforms (such as Wikipedia) are funded by donations (Crowd Funding).
- v) Freemium – Basic features are free to use, but some premium or convenience features are offered at a price.
- vi) Monetization of Information – Users disclose Information about themselves, suppliers monetize these.

Why Over the Top (OTT) Services Can't be Ignored

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Over the course of full-year 2013, OTT messaging traffic exceeded 25 trillion messages.

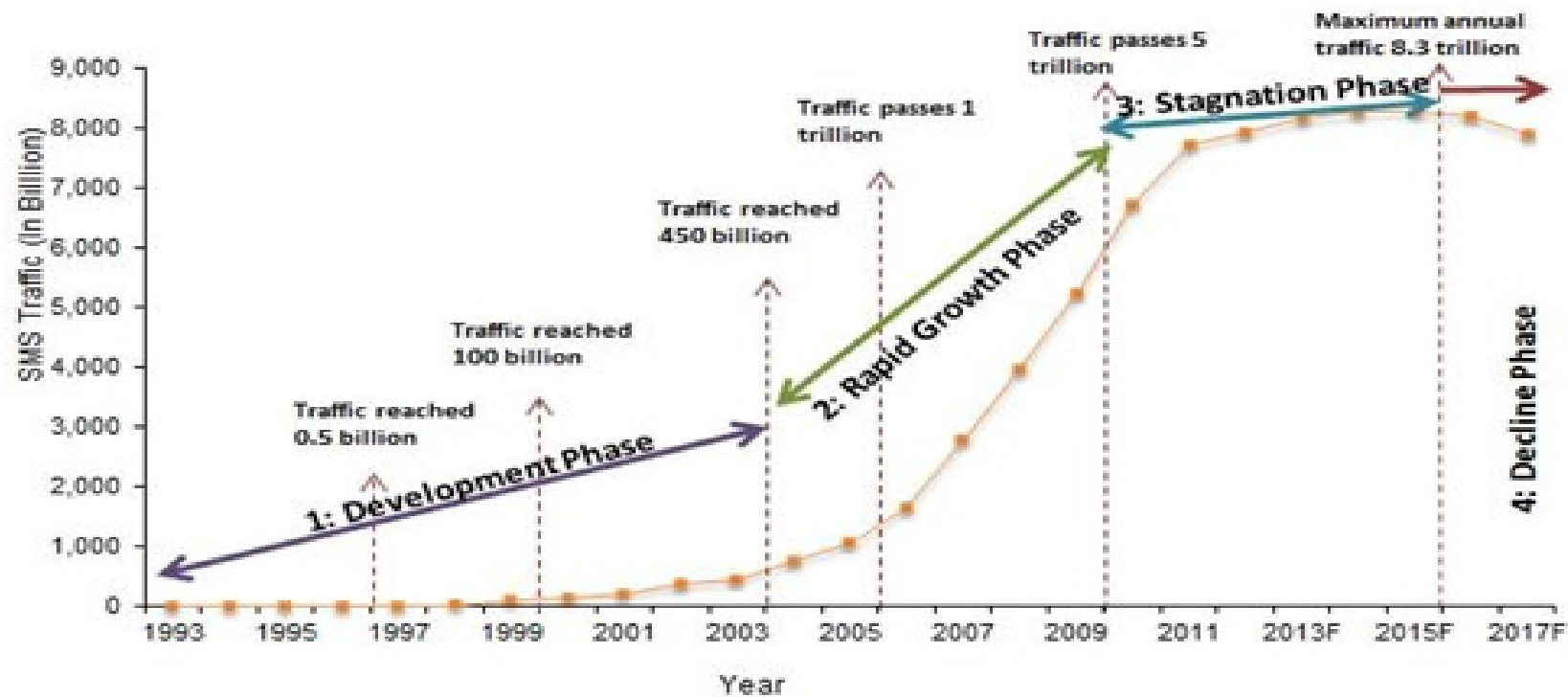
Over the next five year period from Jan-2014 to Dec-2018, OTT messaging traffic worldwide will reach a whopping 40 trillion messages during 2014, cross 50 trillion during 2015 and breach a staggering 90 trillion during full-year 2018.

With growth during 2013 coming in at 129 percent, it is estimated that the Compound Aggregate Growth Rate (CAGR) over the next five years up to 2018 will be a massive 29 percent average per annum

Why Over the Top (OTT) Services Can't be Ignored

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Figure 7: SMS Traffic Growth (In Billion, 1992-2017F)



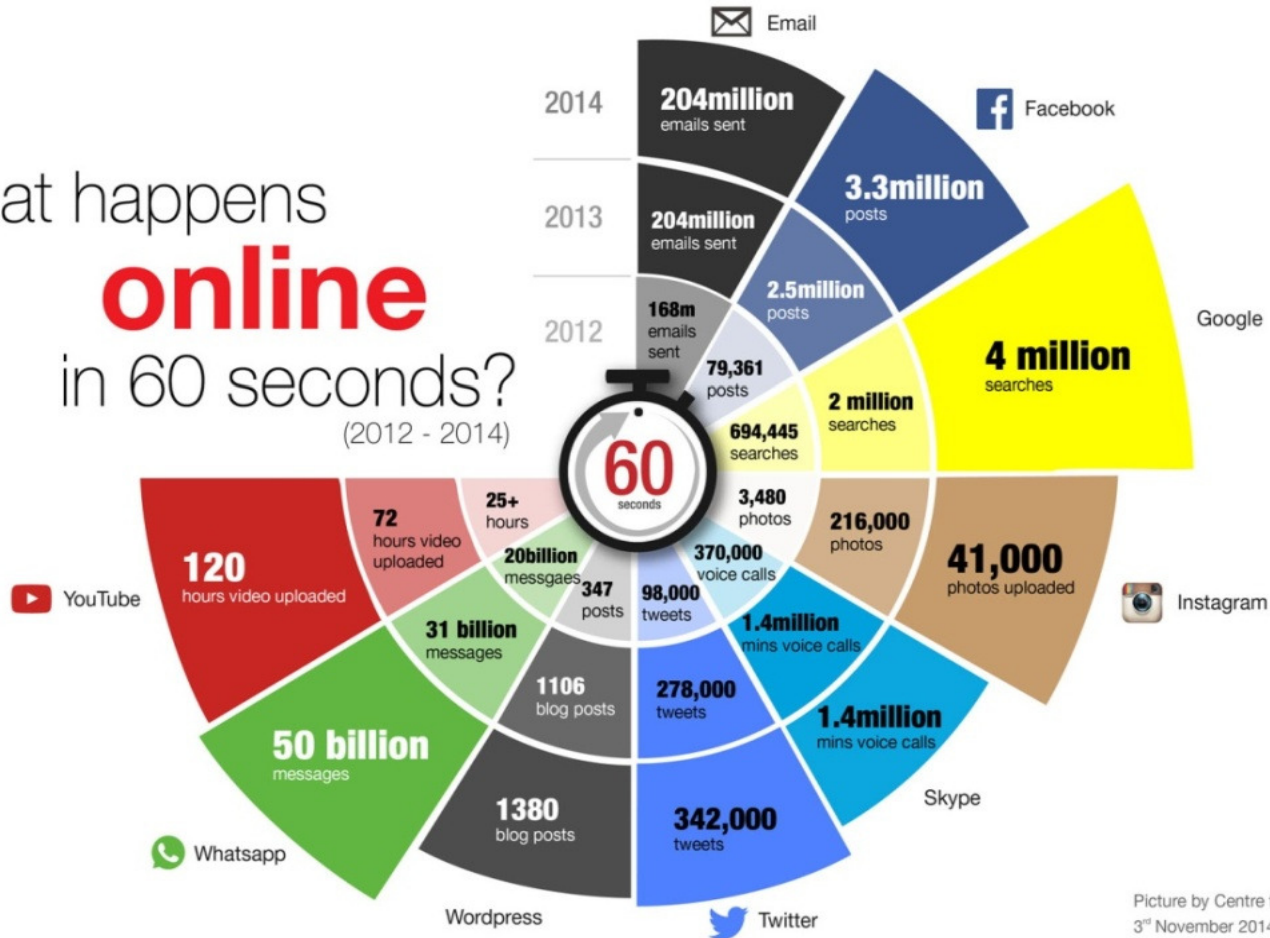
Source: Portio Research Ltd.

F – Forecasted

Why Over the Top (OTT) Services Can't be Ignored

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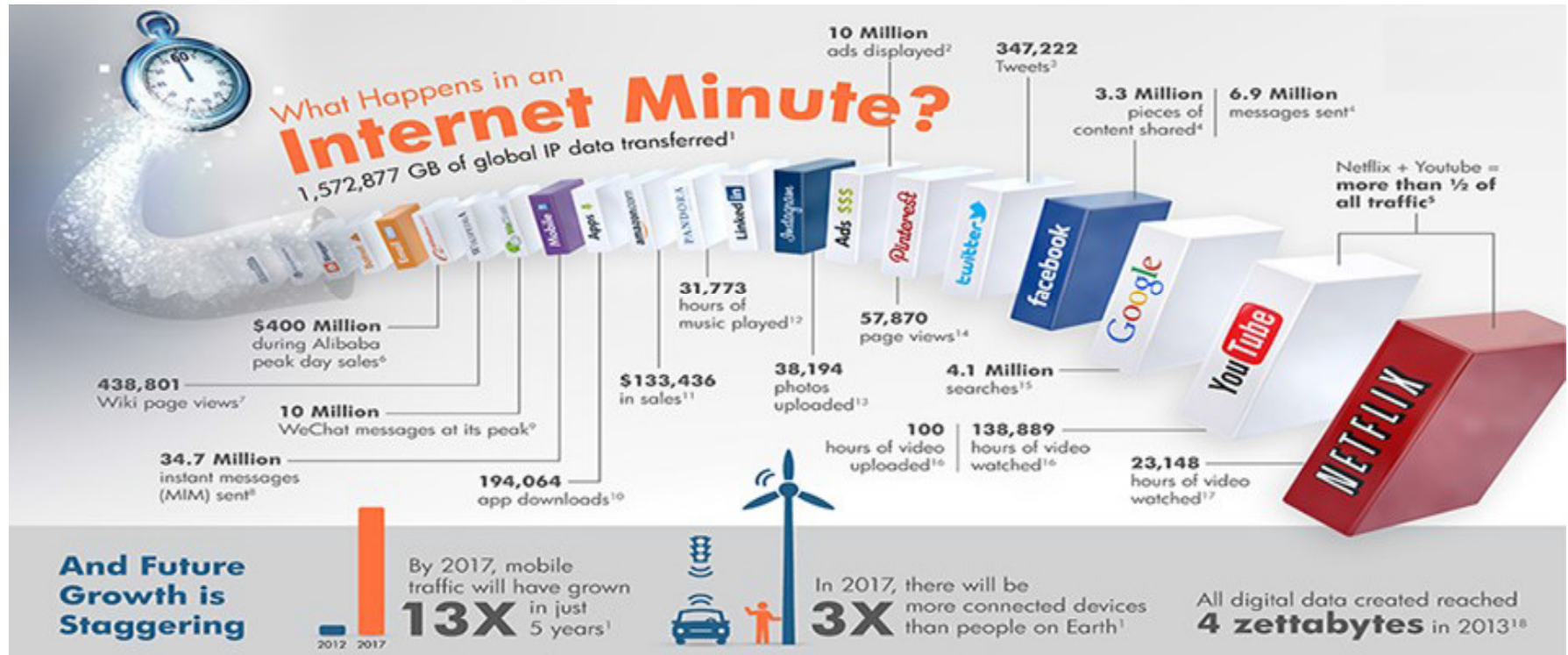
What happens
online
 in 60 seconds?
 (2012 - 2014)



Picture by Centre for Learning and Teaching
 3rd November 2014

Why Over the Top (OTT) Services Can't be Ignored

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**Section II-Difference Between OTTs & other Telecommunication Services-
Comparative Regulatory Analysis**

OTTs Providers Vs Other Telecom Services Providers- Comparative Regulatory Analysis



Areas of regulation	Network Operators	OTT Players
Licensing	Must purchase licenses from the government to operate	Often exempted
Quality of service	Licenses include requirements for SLAs	<input type="checkbox"/> No QoS guarantee <input type="checkbox"/> QoS issues blamed on network provider
Price changes	Regulators' approval is needed in advance	<input type="checkbox"/> No need for authorization <input type="checkbox"/> Loose agreement is offered which is subject to change at any time
Operating Area	Only serve customers within the regulated jurisdiction	Serve any user globally

OTTs Providers Vs Other Telecom Services Providers- Comparative Regulatory Analysis



Areas of regulation	Network Operators	OTT Players
Net neutrality	Best effort data transport without discrimination, independent of source or nature of data	No obligations (control over content and freedom of choice concerning customers)
Interconnection	Required as part of regulatory regime → Additional costs	“Over-The-Top” of the network → no interconnection requirements
Number Portability	Obligation to offer number portability between providers	OTT service independent from mobile number
Taxes	Local and national taxes	Locating operators in low cost locations and tax havens

OTTs Providers Vs Other Telecom Services Providers- Comparative Regulatory Analysis

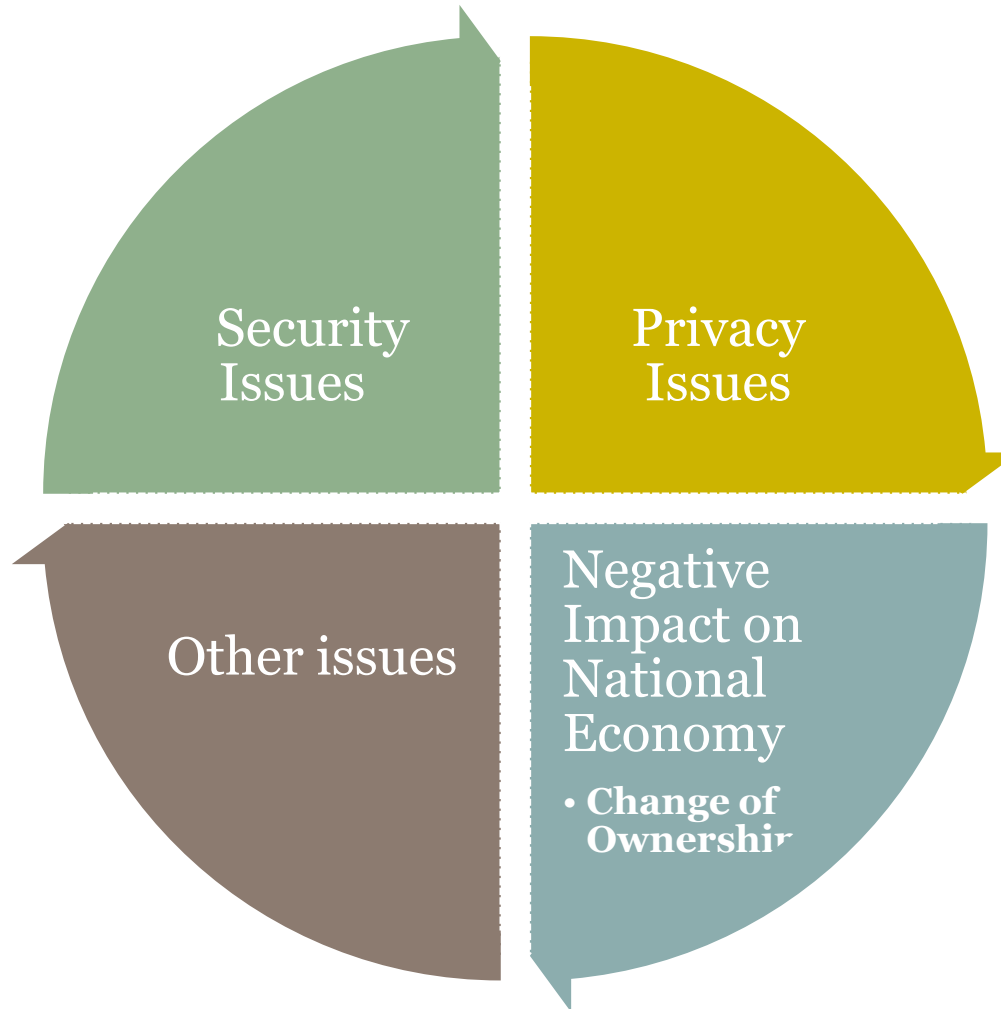


Areas of regulation	Network Operators	OTT Players
Infrastructure/ Network	<ul style="list-style-type: none"> <input type="checkbox"/> Investing in networks to deliver services to end users <input type="checkbox"/> Practicing technologies to use resources efficiently (e.g. multicasting) 	<ul style="list-style-type: none"> <input type="checkbox"/> No investments in networks that reach end users <input type="checkbox"/> Telcos are incumbent to deliver competitors services regardless of the impact to its networks
Fees	Customers' fees support the costs to underwrite the network	Services offered without any relationship to the underlying cost of the network
Privacy	Strict data protection and privacy requirements for users	Practiced on a limited and generally voluntary basis
Public Safety services	Mandatory	No such obligations

Section III-OTT Services & Key Issues & Challenges

OTT- Key Challenges & Issues

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Security Issues

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Cyber Security Threats

No provision for Legally approved surveillance

Calls originated from other countries from virtual numbers

Apps with special encryption

Cultural Sensitivity (*because of global nature*)

Privacy Issues

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Collect users' private information for commercial gains
(*targeted advertisement*)

No check for risk assessment and apps at App stores' level-

Use of Apps with location tracking for crime-
Threats on the nation's security *and financial health*

Malicious Software brought by Internet Apps

Impact on National Economy

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Difficulty for traditional and local companies to compete with global OTT players (lower costs of contents storage and hosting etc)

Tax Losses-Location-agnostic: benefit from the variable tax rates across states globally

Tax losses-Costumers purchase goods and services from global players rather than local entities

Lower government revenues due to the lowering- of telecom revenues

less investment in infrastructure from Telcos

Other Issues & Challenges

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Social engineering

Psychological manipulation of people into performing actions or divulging confidential information (especially via social networks)

Copyright violation

Omnipresence of pirated contents (books, movies, videos, ...): regulatory imbalance regarding content owners

No regulatory framework for Health Apps

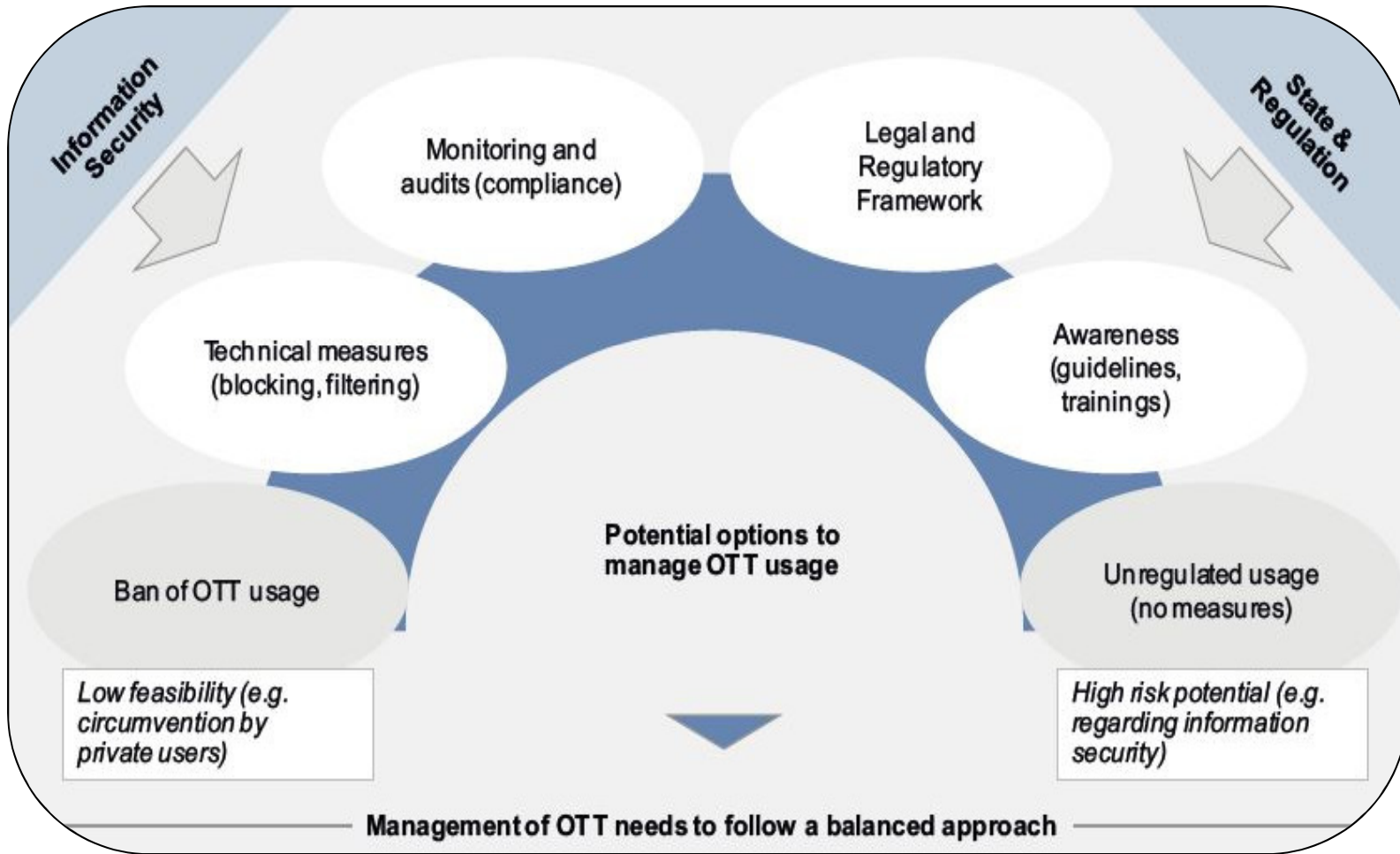
- Sharing personal Health details with various unregulated healthcare sites**
- Providing unregulated medical advices**

Ecommerce issues

No satisfaction for consumers expectations in the real world (no contact addresses, quality of goods can be assessed only by the website)

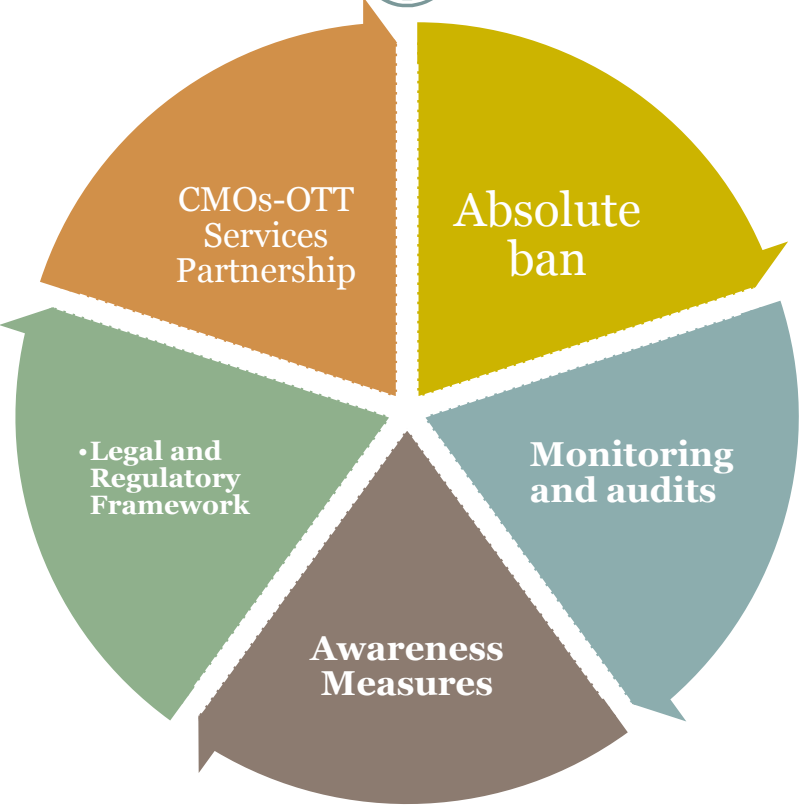
**Section IV- Converting Challenges into Opportunities through OTTs
Management**

Managing OTT Service Providers and Creating Opportunities



Managing OTT Service Providers and Creating Opportunities

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Managing OTT Services Providers

i) Absolute ban. Strict enforcement of such a ban may indeed contribute to a reduction of risk, but also deprives the economy of the benefits of OTT services. This measure is not feasible at all and difficult to implement as it also conflicts with the concept of free market economy and can have significant negative impact on the growth. Furthermore, users will always find a way around thus making the system impractical

ii) Monitoring and audits. In order to determine whether OTT services are being used according to the requirements of existing regulations, monitoring and audits are very effective. Operators should be encouraged to monitor activities within their networks to detect any violations. Proper documentation of the monitoring/ control of OTT services can be used as evidence of compliance. Monitoring the private use of OTT services at home is not recommended as it conflicts with basic human rights (freedom of speech).

Managing OTT Service Providers

iii) Awareness Measures. Ensuring that users are sufficiently aware of the opportunities and risks is regarded as one of the most vital and practicable measures that the regulator can take. Lack of knowledge, misunderstanding and inadequate awareness of security risks can lead to the unintended leakage of critical data. The development of an overall awareness program to cover all user groups and including continuous, repeated activities is recommended.

Managing OTT Service Providers

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iv) Creating CMOs-OTT Service Providers Partnership- OPPORTUNITY

- According to Mobilesquared, OTT communication will be worth \$43 billion (around £28 billion, AU\$54 billion) by 2018 as long as partnerships are formed.
- **Benefits for CMOs**
- Offering an OTT service will drive customer loyalty as CMOs will be able to provide cheaper access to value-added services. This will boost messaging, voice and data usage on the network
- By enabling OTTs to integrate features such as seamless web-SMS chat, CMOs can terminate cross-channel traffic on their network, further increasing revenue
- By capitalizing on existing technologies through partnerships and monetising existing assets such as mobile numbers, operators will no longer need to invest in developing and managing their own services

Managing OTT Service Providers

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v) Legal and Regulatory Framework.

- The nature of the OTT providers' business models makes them extremely difficult to regulate specifically as communications providers.
- As international companies are also often beyond the jurisdiction of the country in which they do business.
- General civil and criminal law can be applied to control their behavior within a particular jurisdiction and the international trend is towards the introduction of more far-reaching data protection and cybersecurity laws which address the new challenges posed by the internet – specifically its international nature.
- Comparative International best practices can be used as benchmarks



Thank You!