

# Un nuevo marco regulatorio para el ecosistema digital

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## The internet value chain – a rich and diverse ecosystem

CONTENT RIGHTS	ONLINE SERVIC	ERVICES		ENABLING TECHNOLOGY AND SERVICES	CONNECTIVITY	USER INTERFACE
Premium rights  Video (excluding sports)  Sports video content  Music  Publishing  Gaming  Non-entertainment content  BBC, Blizzard Entertainment, Bloomberg, Disney, Major League Baseball, Time Warner	E-retail (B2B, B2B; e.g. Alibaba.com, Amazon, EC21, Groupon, Rakuten	Service of the servic	el bnb, Expedia,	Design and hosting  Design and development  Web hosting  e.g. Go Daddy, Ipower	Mobile access e.g. América Móvil, Axiata, China Mobile, Docomo, Loon for all, MTN,	Hardware devices  • Smartphones  • PCs  • Smart TVs
	Video Music e.g. Netflix, Youku, Youtube Music e.g. Pandora, Spotify		ndora, Spotify	Payment platforms e.g. Alipay, MasterCard, PayPal, VISA	Ooredoo, Telefonica, TMobile, Verizon Wireless, VimpelCom,	Connected set-top boxes     Digital media
	e.g. Amazon e.g Kindle, DMGT, Mi	aming g. King, iniclip, incent	Gambling e.g. Betfair, Bwin	M2M platforms     SIM management and M2M platforms     Application and solutions e.g. Bosch, Cumulocity	Vodafone	receivers Tablets Wearables Consoles Other smart items Other hardware
able, Vivendi  Iade for digital  Professional	Social and community e.g. Cisco, e.g. Facebook, Goog- le+, LinkedIn, match. com, Tencent, Twitter, Yahoo  Communications e.g. Cisco, Kakaotalk, Skype, Snapchat, Tencent, WhatsApp		Advertising  Online agencies Online networks and exchanges Third-party ad servers	Fixed access (including VPNs and Wi-Fi) e.g. atät, Google fiber, Liberty Global, Orange Business Services, Telekom Malaysia	e.g. Apple, Arris, Fitbit, Lenovo, Logitech, MI, Roku, Samsung, Sony Systems and software	
content User-generated content	Search e.g. Baidu, Google, Yandex		e.g. Google AdWords, Verizon-Aol, WPP Internet analytics e.g. Adobe, Nielsen			
Buzzfeed, Fullscreen, Machinima, Maker, Xmedia DS	Information Cloud services and reference e.g. Experian, Google Maps, Wikipedia		Managed bandwidth and content delivery  • Core network and		Operating systems     App stores     Security and     software	
	Other e-services	Azure		interchange  Content delivery networks  Content optimisation	Satellite e.g. Eutelsat, Inmarsat, Iridium. SES	e.g. Apple, Cisco, Google, McAfee, Microsoft, Symantec
	e.g. Charles Schwab, Duolingo, Nest, TaskRabbit			e.g. Akamai, BT, Equinix, Level 3, Ooyala	mounty on 3	

Note: M2M is machine to machine, and VPN is virtual private network. Source: A.T. Kearney analysis



# Traditional bottlenecks are becoming less relevant, while new bottlenecks are emerging

Traditional telco bottlenecks may be less relevant in the Digital Age



New potential bottlenecks emerging include operating systems, app stores and elements of the IP interconnection value chain

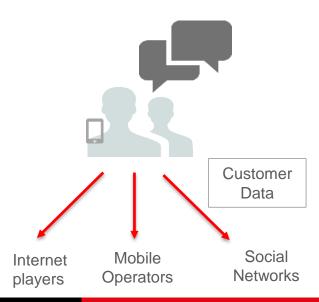


In some cases, statutory legal powers maybe insufficient to deal with these old and new bottlenecks on a consistent basis



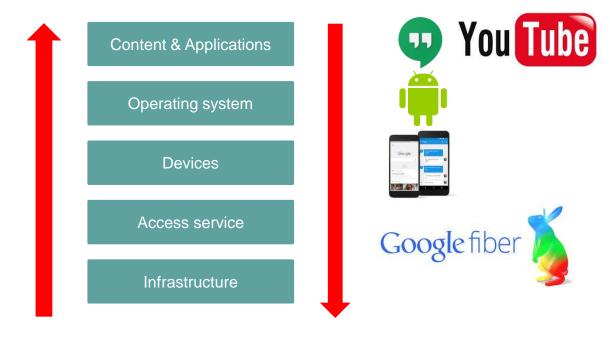
# Control of customer data is a significant strategic advantage

An important trend in the market is the 'dematerialisation' of consumer data, which is no longer fully owned by MNOs but rather owned by several parties, including Internet players.





## Vertical bargaining and integration



Other things equal, tendency for vertical integration/partnering



## Competitive Dynamics of the Digital Ecosystem

### Modularity

- All digital players engage each other across the value chain in a variety of roles
- Digital sector is not a collection of related but separate markets but rather a single, integrated ecosystem

## Economies of Scale and Scope/Network Effects

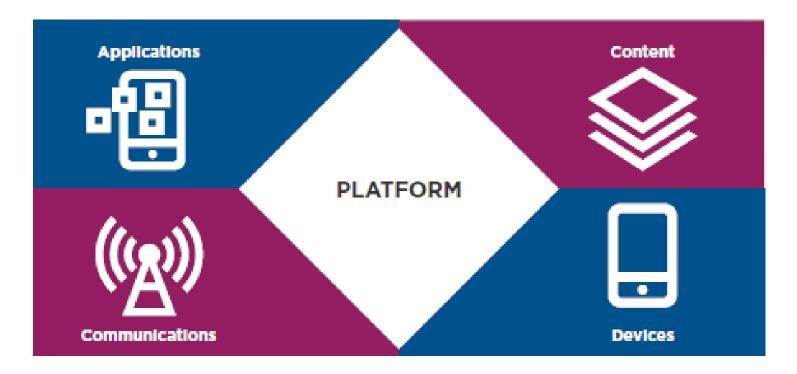
- Competition "for" the market, not "in" the market
- Consumers benefit from size and scope; regulation should not impose barriers to their realization

## **Dynamic Competition**

- Transformative innovation generates choice and value for consumers
- Static "dominant" positions are dynamically contestable
- Regulation should not inhibit innovation and investment



## The Modules Comprise a Platform





## System goods and complementarity



Strong complementarities between <u>infrastructure</u> and <u>services</u>

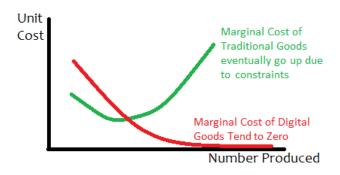


Individual contributions to social welfare <u>difficult</u> to disentangle

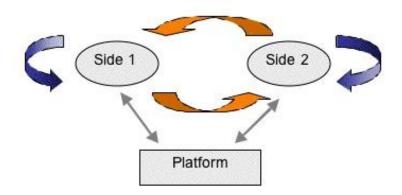


## Economies of Scale and Scope Benefit Consumers

## Supply Side



## **Demand Side**

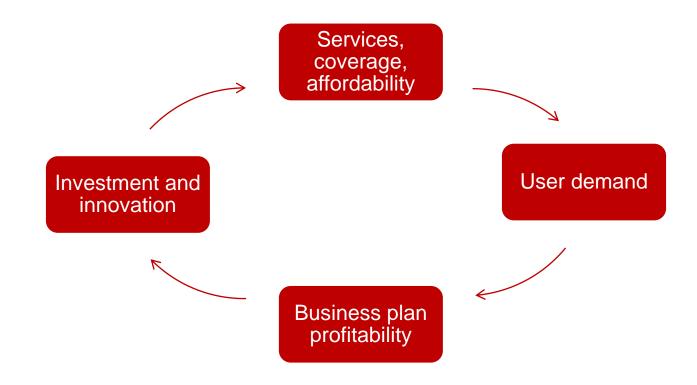


For information goods, marginal cost approaches zero

"Network effects" and multi-sided platforms: The greater the user base the higher the value for all users



## Dynamic Competition - Drives Innovation and Investment





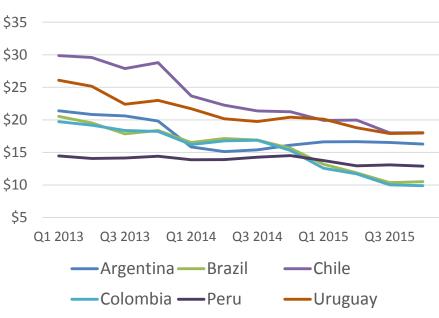
## Dynamic Competition - Enables Disruptive Entry

	Incumbent(s)	Entrant(s)	
MOBILE PHONES	Blackberry, Nokia, Motorola	Apple, Samsung	
INTERNET BROWSERS	Microsoft	Chrome	
MOBILE MESSAGING	Wireless Companies	Skype, WhatsApp	
ONLINE MUSIC	Apple	Pandora, Spotify	
LONG DISTANCE CALLS	Wireline telco incumbents	Mobile carriers, Skype	



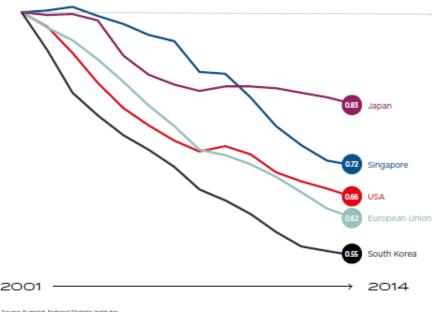
## Dynamic Competition - Drives Prices Down





#### PRICE INDICES FOR TELECOMMUNICATIONS SERVICES

(Selected countries; 2001-2014)



Source: Eurostat, National Statistic Institutes



## **Examples of Regulatory Asymmetries**



	Applications	Devices	Content	Communications
Consumer Protection	General CP law	General CP law	Age-related, violence, sex; otherwise general CP law	Specific regulation: portability, opt-in services, specific consumer protection offices
Competition Enforcement and Economic Regulation	General competition law	General competition law	Compulsory licensing for some content; otherwise general competition law Restrictions on advertising time Restrictions on foreign ownership	Industry specific obligations and regulatory institutions. Asymmetric access regulation to SMP operators
Security	Data requests by authorities	Little or no regulation Current battle over encryption	State secrets regulation	Legal interception of communications Retention of call data records Interoperability with military networks
Privacy and Data Protection	General privacy regulation	General privacy regulation	Specific regulation (e.g. images of minors; 'right to be forgotten')	Industry specific regulation (e.g., "CPNI"); licence conditions



## Costs and Consequences of Legacy Regulation

### Regulating well is always difficult...

- Lack of information leads to regulatory errors, distorting markets and competition
- Market conditions and technologies change in unpredictable ways
- Regulations often impose substantial compliance burdens
- Regulation inevitably benefits some interests over others

### ...and more so in the digital ecosystem

- Complexity of digital markets increases regulatory error
- Rapid change accelerates regulatory obsolescence
- Innovation and entry are distorted by regulatory burdens and risks
- Higher regulatory distortions raise returns to rent-seeking

Discriminatory, prescriptive regulations inhibit the growth of the digital ecosystem and reduce consumer welfare



## Principles of a New Regulatory Framework

## **Functionality-based**

 Pursue regulatory goals based on achieving regulatory objectives, not legacy structures based on industries or technologies

## **Dynamic**

 Prefer performance based regulation with ex post enforcement over prescriptive, ex ante rules

## **Bottom-up**

 Evaluate regulation – including the need for regulation – in light of current market realities

The new framework will reduce regulatory asymmetries, promote dynamic competition and innovation, and allow regulatory objectives to be achieved more effectively at lower cost



## Applying the three principles for a new Framework

### Implications for...

## Regulation of bottlenecks

- •Consistent standard across the ecosystem should limit regulation to enduring bottlenecks (if any)
- •Where competition is well established, legacy regulation should be removed
- •New potential bottlenecks should be monitored to ensure no foreclosure effects

# Privacy and Data Protection

- •Communications carriers subject to specific, more stringent rules than other digital players
- •Technology- and business-model-agnostic rules will benefit consumers and competition

## Spectrum Management

- •Critical input for mobile wireless more heavily regulated than critical inputs to other players (e.g. IP rights)
- Spectrum should be managed to reduce scarcity and enhance flexibility through market mechanisms



## Muchas gracias

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