



Myths and facts of ISPs-OSPs collaboration

Gabriel Recalde

Manager, Public Policy and Government Affairs
Central America and the Caribbean

The Caribbean is at the threshold of the Internet revolution

+DIGITAL +MOBILE

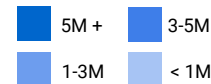
Data is only referred to main markets

POPULATION	INTERNET USERS	INTERNET PENETRATION	MOBILE INTERNET USERS
18.7M	11.8M	63%	8.6M

Aruba, Bahamas y Puerto Rico lead on
internet penetration

Dominican Republic, Puerto Rico and Jamaica
are the countries with most
Internet users

Internet users

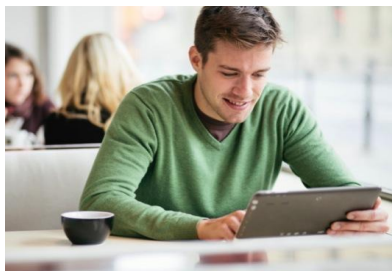
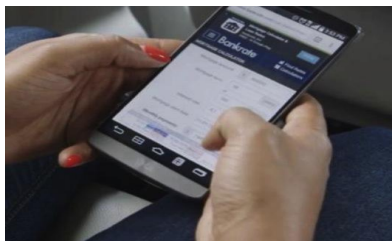


There is room for improved collaboration between ISPs and OSPs



**Myth #1: OSPs do not
contribute to local
economies**

FACT: OSPs generate significant economic activity and value



- **10 percent increase** in usage of Internet applications has added on average **USD 5.6 trillion** in global GDP (Source: WIK, 2017)
- SMEs that have adopted web technologies in developing countries have increased revenue, lower costs, increased productivity and created jobs (Source: BCG, 2012)
- The app economy has created more than **600k jobs** in Argentina, Brazil, Colombia and Mexico (Source: PPI)
- Mobile content and application providers have contributed with **USD 5 billions** in the region in 2013 (Source: GSMA)
- There are over **5,000 tecnolatinas** in LatAm, 9 of them are worth over USD 1B ("unicorns"), 123 of them are worth USD 25M (Source: NXTPLabs)

**Myth #2: OSPs do not invest
in infrastructure**

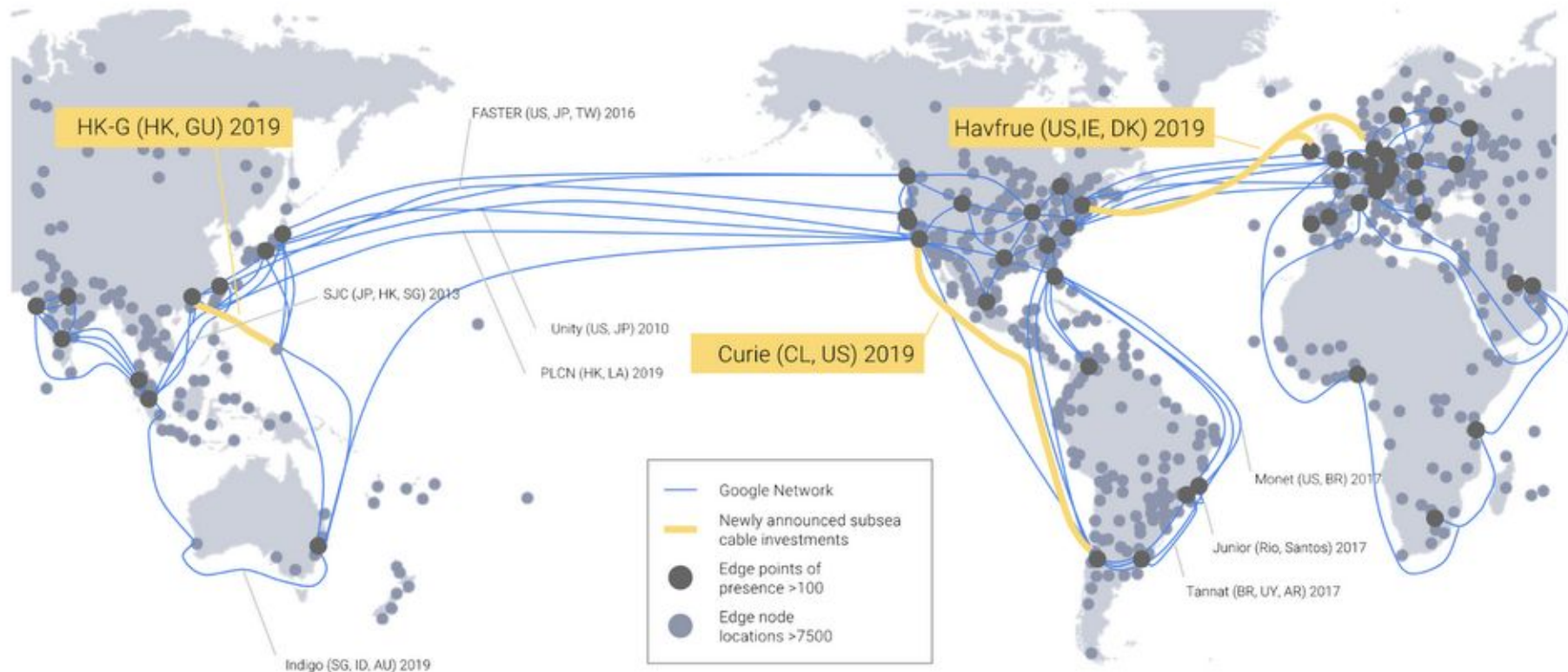
FACT: OSPs invest billions to bring their services to ISPs front doors



- **\$100bn invested** by OSPs globally between 2011 and 2014 in physical fabric of the web (source: Analysis Mason, 2014)
- Google invested **\$30bn** in the last three years in infrastructure to improve performance for users and reduce costs for operators
- **15 Data Centers** globally
- Backbone network to link datacenters and can exchange our traffic, also known as “peering”
- Google Global Cache to ISPs - these are small numbers of Google servers that cache popular static content like YouTube videos, very close to users.
- The Google network is in **30+ countries** and the Google Global Cache is in **190+ territories**

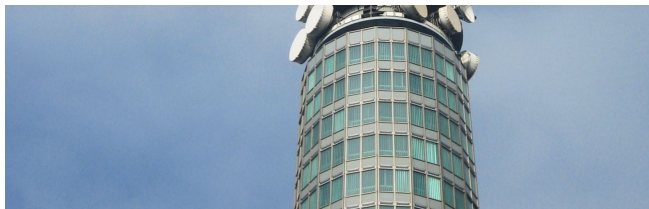
Google Network

The largest cloud network, comprised of more than 100 points of presence



**Myth #3: OSPs and ISPs
compete in a zero sum game**

FACT: Partnerships are driving great value for consumers and both players

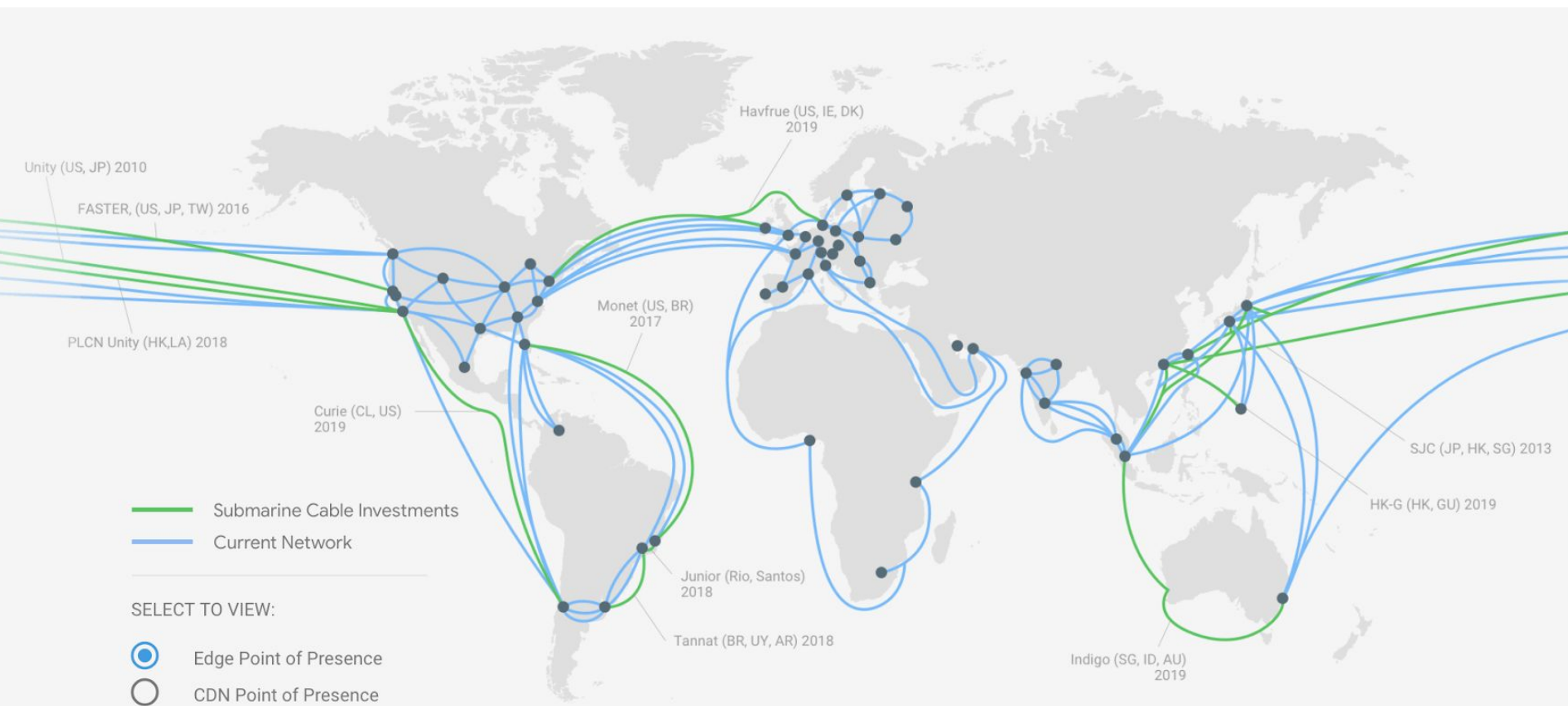


- Mobile data revenue grew at an annual average rate of **34% between 2010-2014**, driven by demand for access to applications on the move (Source: CCIA, 2016)
- In Indonesia, online content and applications drove over **USD \$6.6 billion** in economic value for consumers and telecom operators (Source: Analysis Mason, 2015)
- Operators in Africa recorded **data traffic growth of more than 50%** in 2015. Data revenue as a share of total revenue is rising, reaching 15% on average (Source: GSMA, 2016)
- In Thailand, greater use of online video services increased consumers' willingness to upgrade to fiber-to-the-home (FTTH) broadband services

Areas of collaboration: Infrastructure



Subsea cables



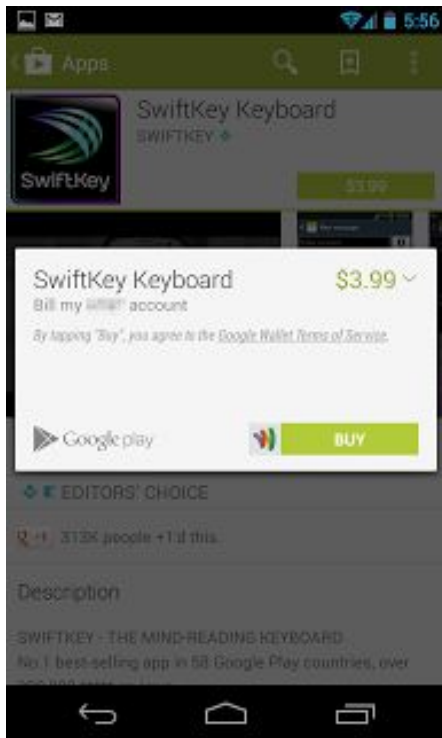
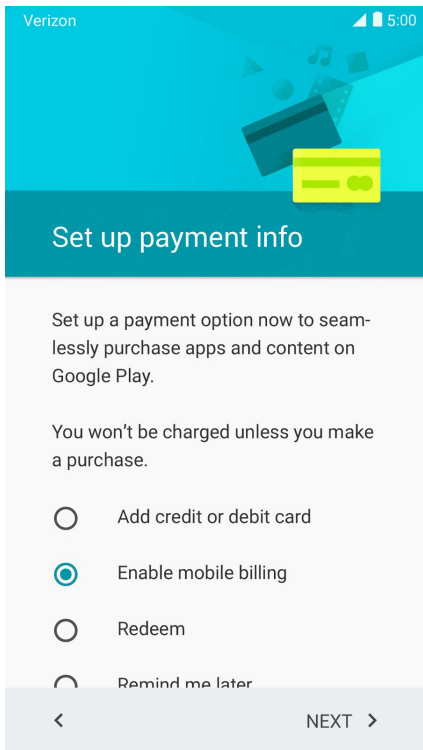
Google Global Cache



Google Station



Areas of collaboration: Payments



Direct carrier billing is the easiest and fastest way to get user's favorite entertainment on Google Play

There are over **100** Direct Carrier Billing **telecoms operator partners**

Projected carrier billing market of **USD 24.7bn** by 2019 (Source: Ovum, April 2015)

Areas of collaboration: Rich Communication Services



Areas of collaboration: Disaster Relief



Areas of collaboration: many more



Augmented / Virtual Reality



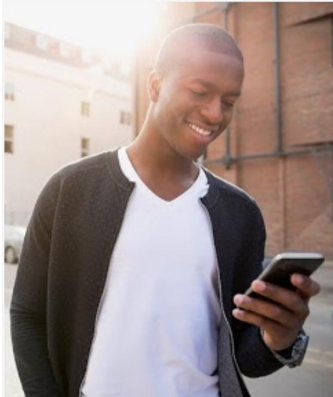
Connect with the future of immersive and innovative experiences for users.



Internet of Things



Enable powerful and secure connectivity across everyday devices.



Carrier Messaging



Partner to bring the next generation of carrier messaging to the world.



Digital Marketing



Reach new customers and serve existing customers better, creating more impactful moments.

telecomsconnect.withgoogle.com

Many thanks

grecalde@google.com