



TOWARDS A NETWORKED SOCIETY

Trends and challenges for the mobile broadband in Latam Region.

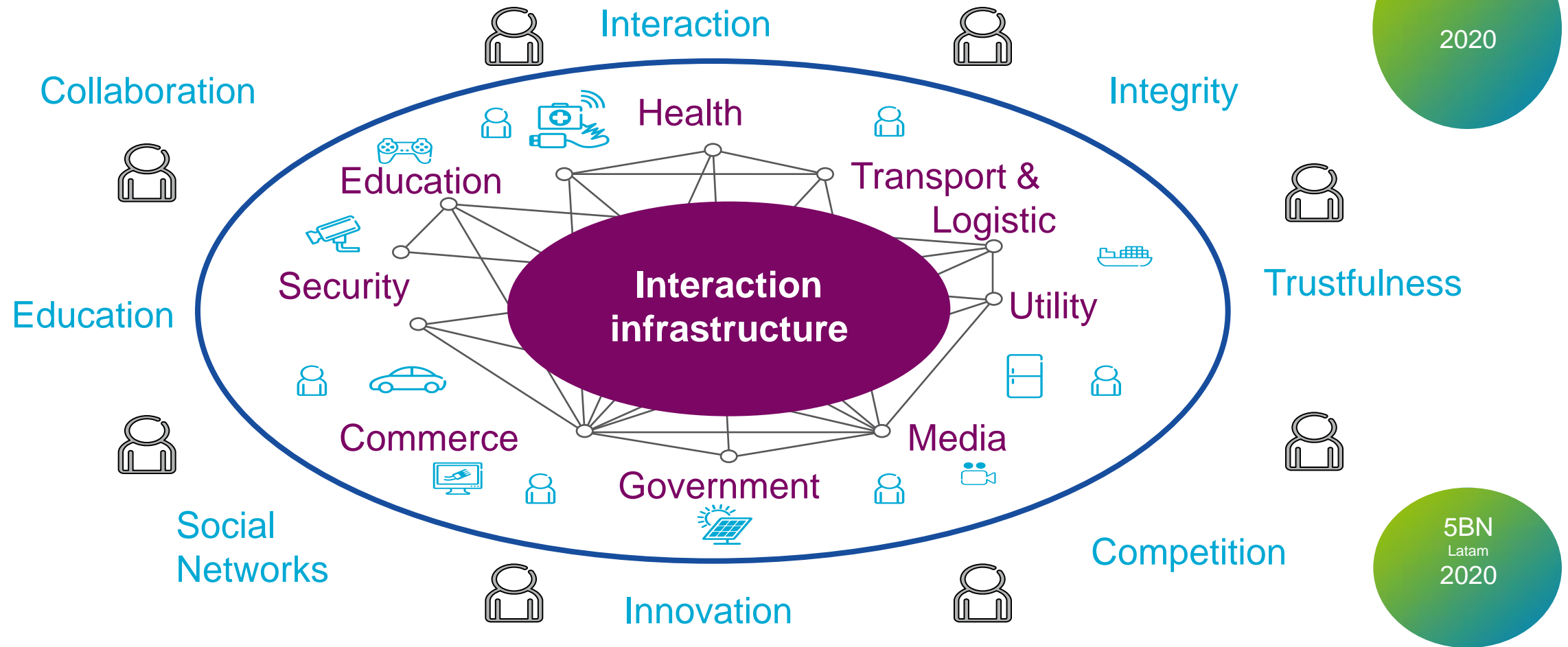
ITU/BDT REGIONAL ECONOMIC AND FINANCIAL FORUM OF
TELECOMMUNICATIONS/ICTS FOR LATIN AMERICA AND THE CARIBBEAN
SAN JOSÉ, COSTA RICA / MARCH 2014

Facundo Fernandez Begni - Ericsson



IN THE NETWORKED SOCIETY PEOPLE,
KNOWLEDGE, DEVICES, AND INFORMATION ARE
NETWORKED FOR THE GROWTH OF SOCIETY,
LIFE AND BUSINESS.

NETWORKED SOCIETY



WHEN ONE PERSON CONNECTS, THEIR WORLD CHANGES
WITH EVERYTHING CONNECTED, OUR WORLD CHANGES.

TODAY



6.7 billion
mobile subscriptions

785,000
app in stores

x3
mobile data traffic in
one year

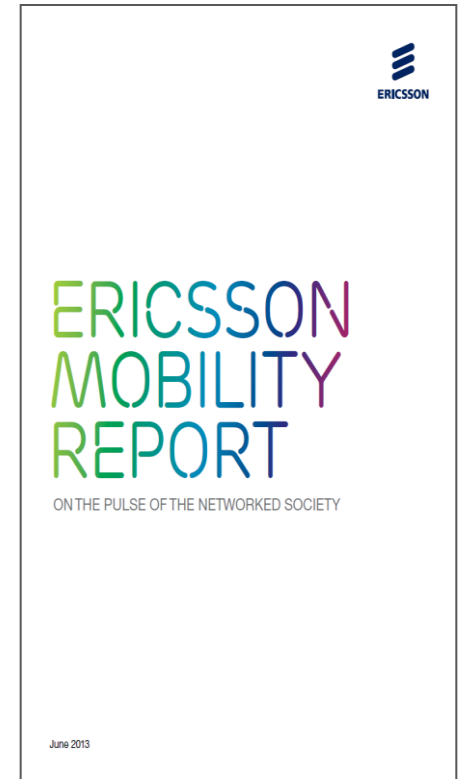
LTE
commercial reality

> 3,000
HSPA devices

> 100 tablets

2 billion
Internet users

15 billion
downloaded apps



www.ericsson.com/ericsson-mobility-report

9.3 BILLION MOBILE SUBSCRIPTIONS END 2019

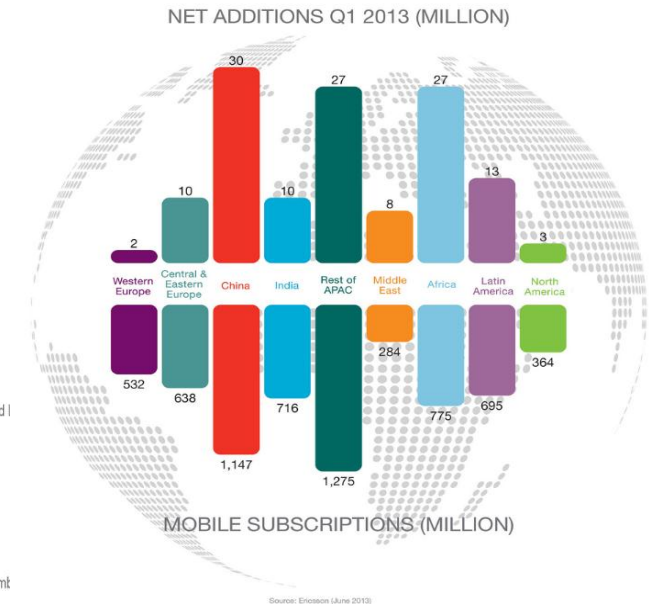
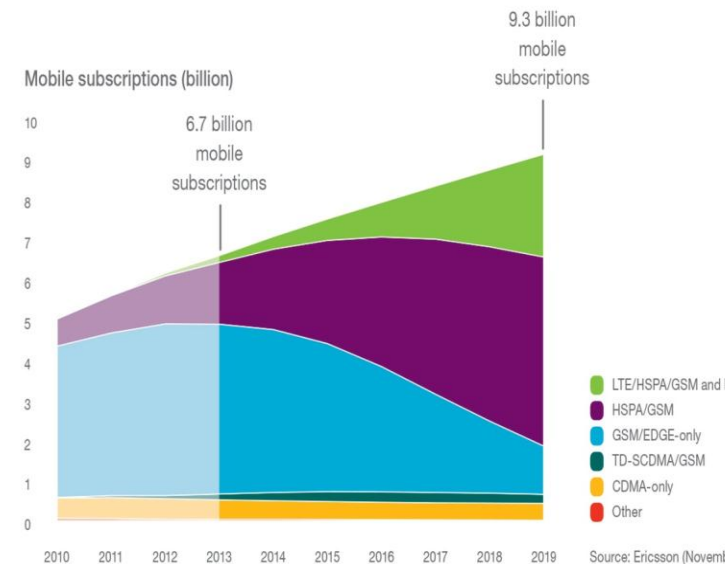


LATAM 2013

- › Penetration 118%
- › Subscriptions 723 M
- › Prepaid 79%
- › Smartphone penetration 20%

- › LTE is now growing strongly, with 40 million new subscriptions added in Q4 2013
- › LTE reached 200 million subscriptions in Q4 2013
- › LTE to reach 2.6 billion subscriptions by 2019
- › WCDMA/HSPA around 80 million new subscribers, i.e. 3X more than LTE

Mobile subscriptions by technology, 2010-2019



923 M

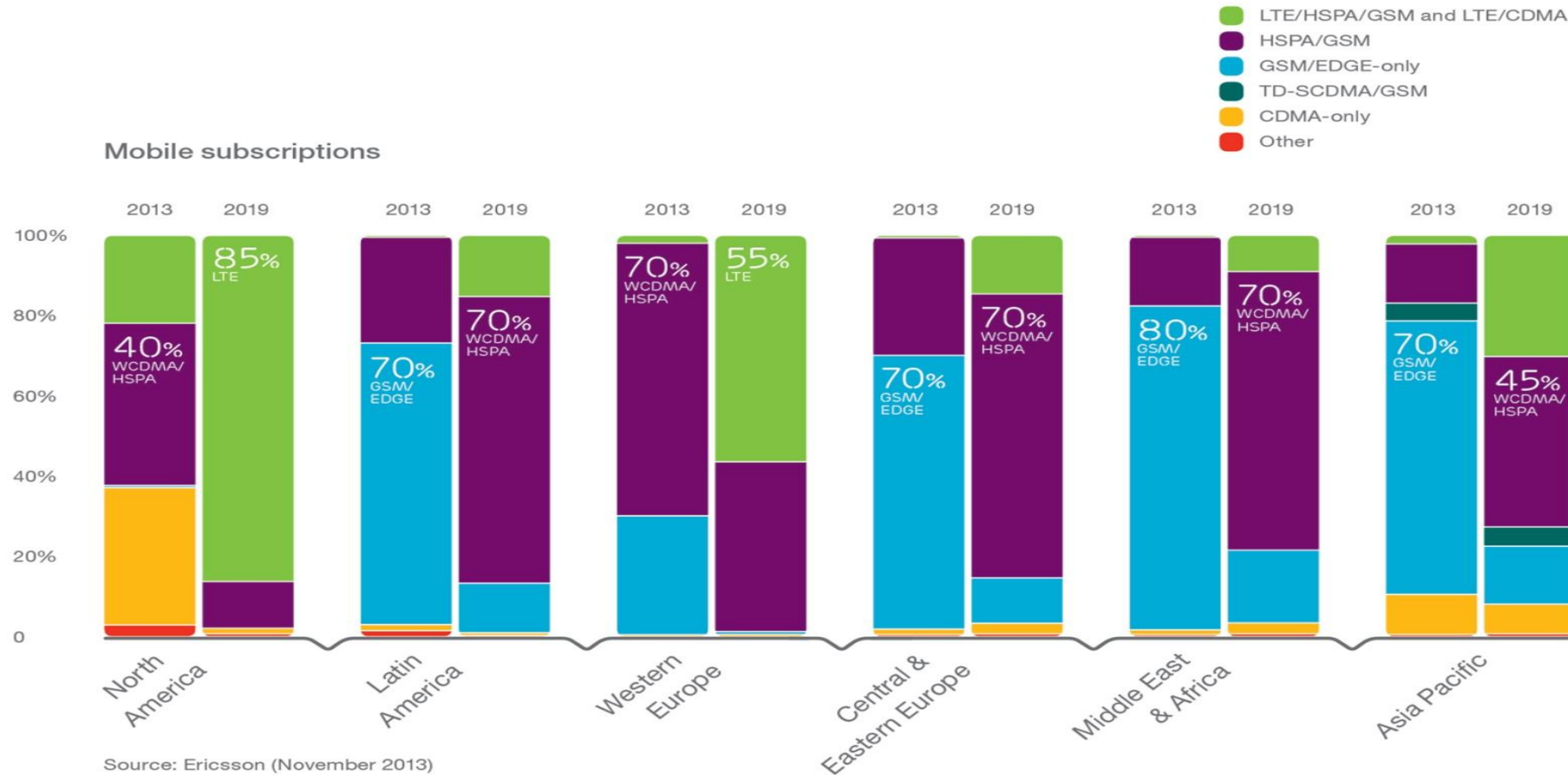
SUBSCRIPTIONS
LATAM 2019

140%

PENETRATION
LATAM 2018

M2M subscriptions not included

TECHNOLOGY BY REGIONS



- › In Latin America by 2019, WCDMA/HSPA will be the dominant technology (~70%), however GSM/EDGE-only subscriptions will still have significant presence (~20%) and LTE will have ~10%

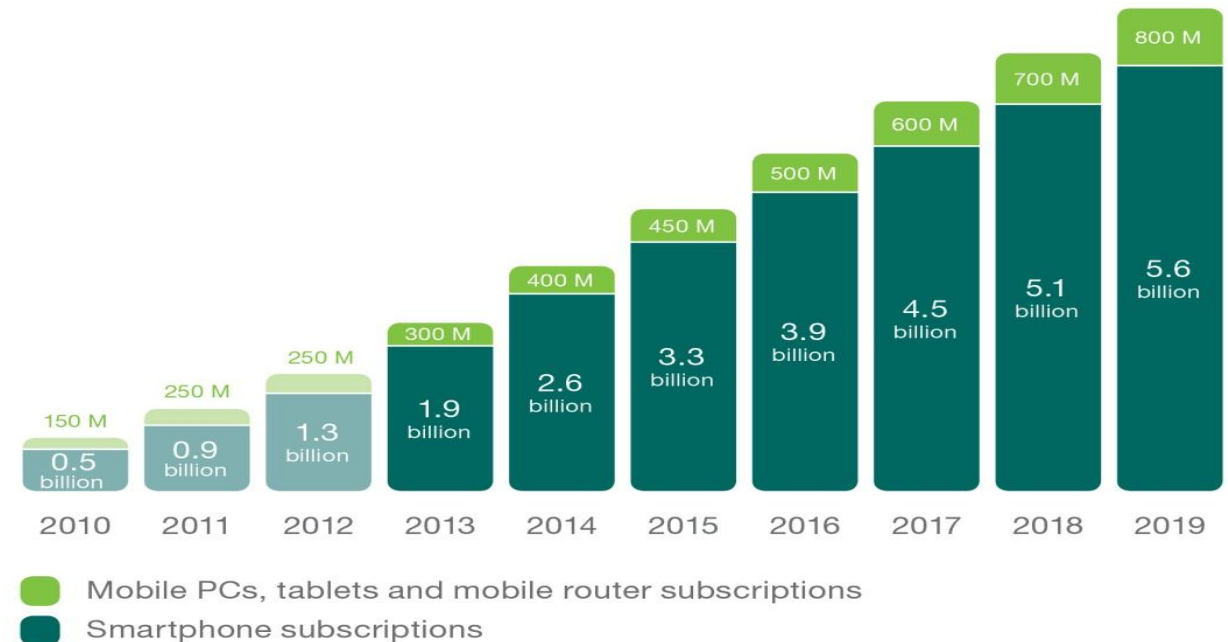
Technology refers to the highest technology the device & network can support

5.6 BILLION SMARTPHONE SUBSCRIPTIONS END 2019



- › 5.6 B smartphone subscriptions by the end of 2019
- › 55% of phones sold during Q3 2013 were smartphones
- › By 2019 the average smartphone subscription will use 2.2GB of data per month

Smartphones, mobile PCs, tablets and mobile routers with cellular connection

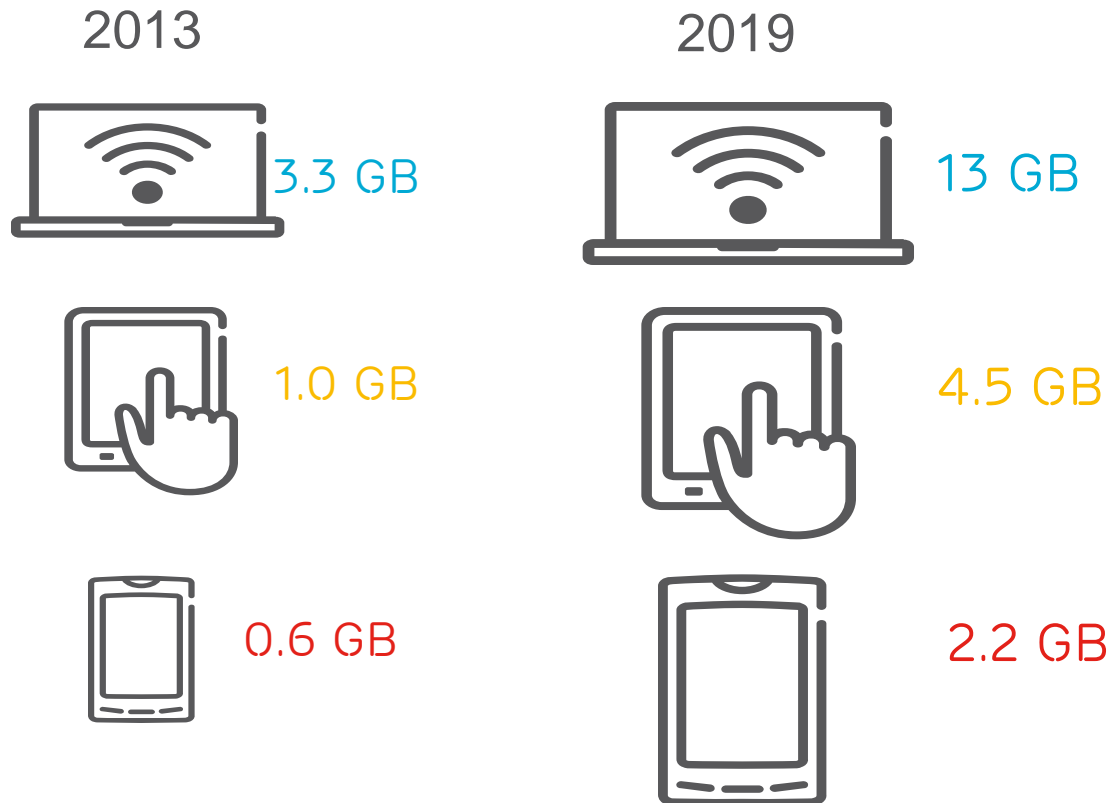


Source: Ericsson (November 2013)

10 TIMES MOBILE DATA TRAFFIC BY END OF 2019

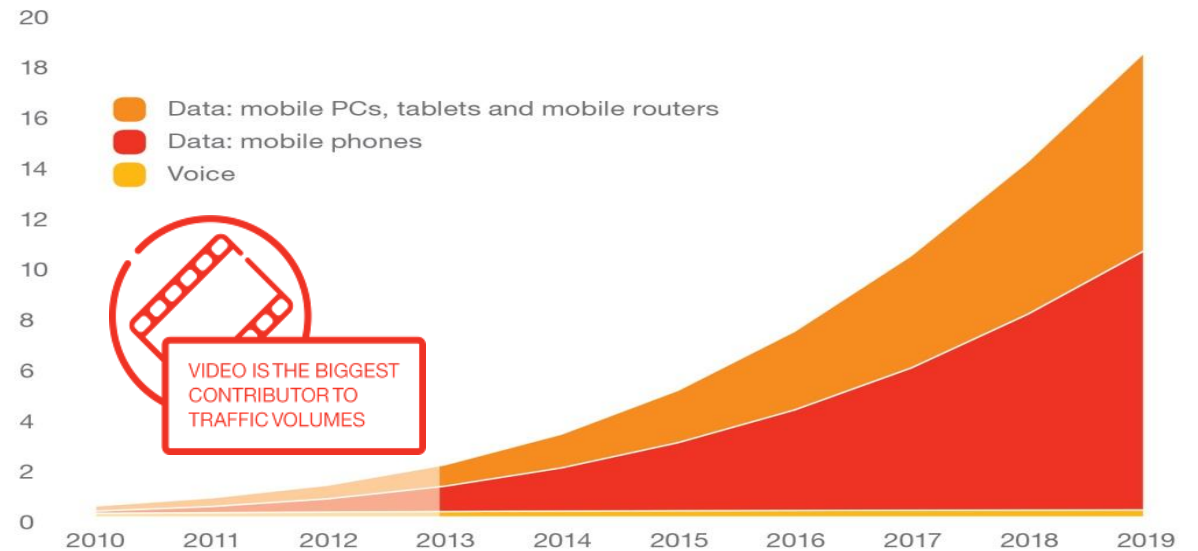


Monthly consumption per device type



Global mobile traffic: voice and data 2010-2019

Global mobile traffic (monthly ExaBytes)

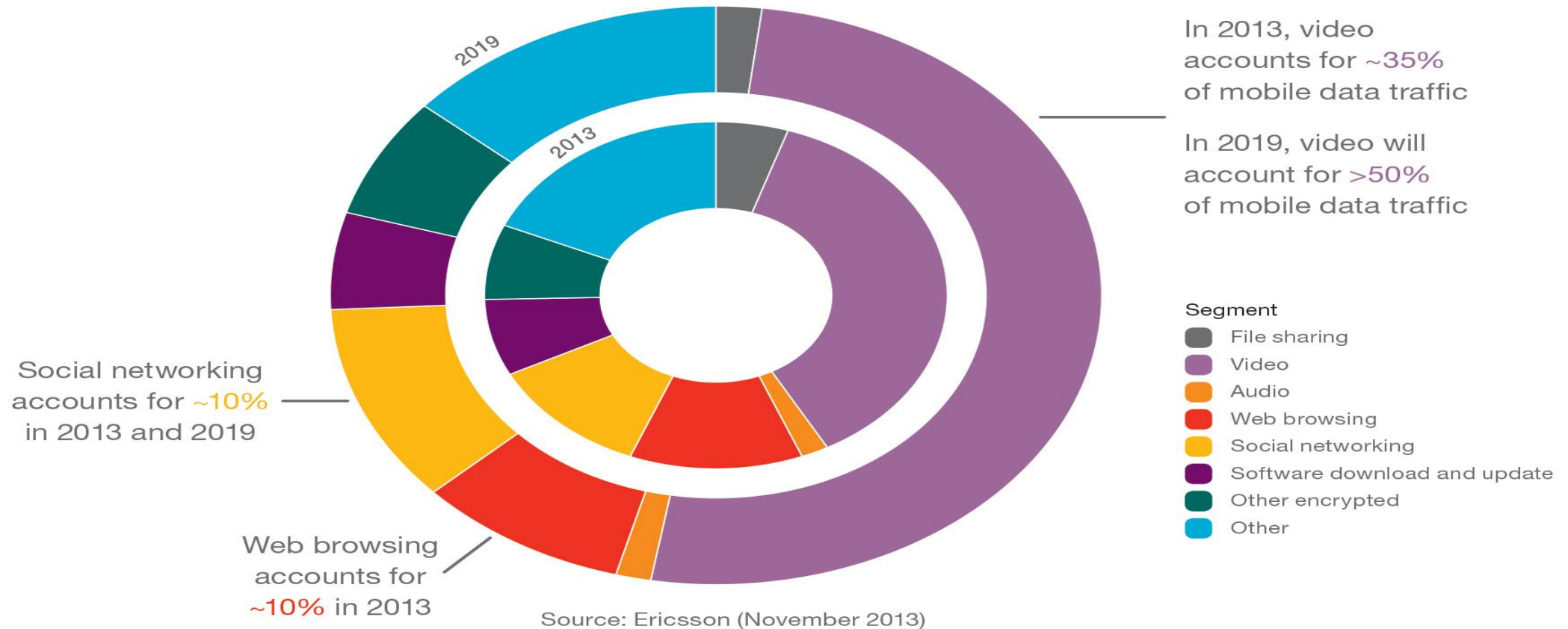


Source: Ericsson (November 2013)

10X

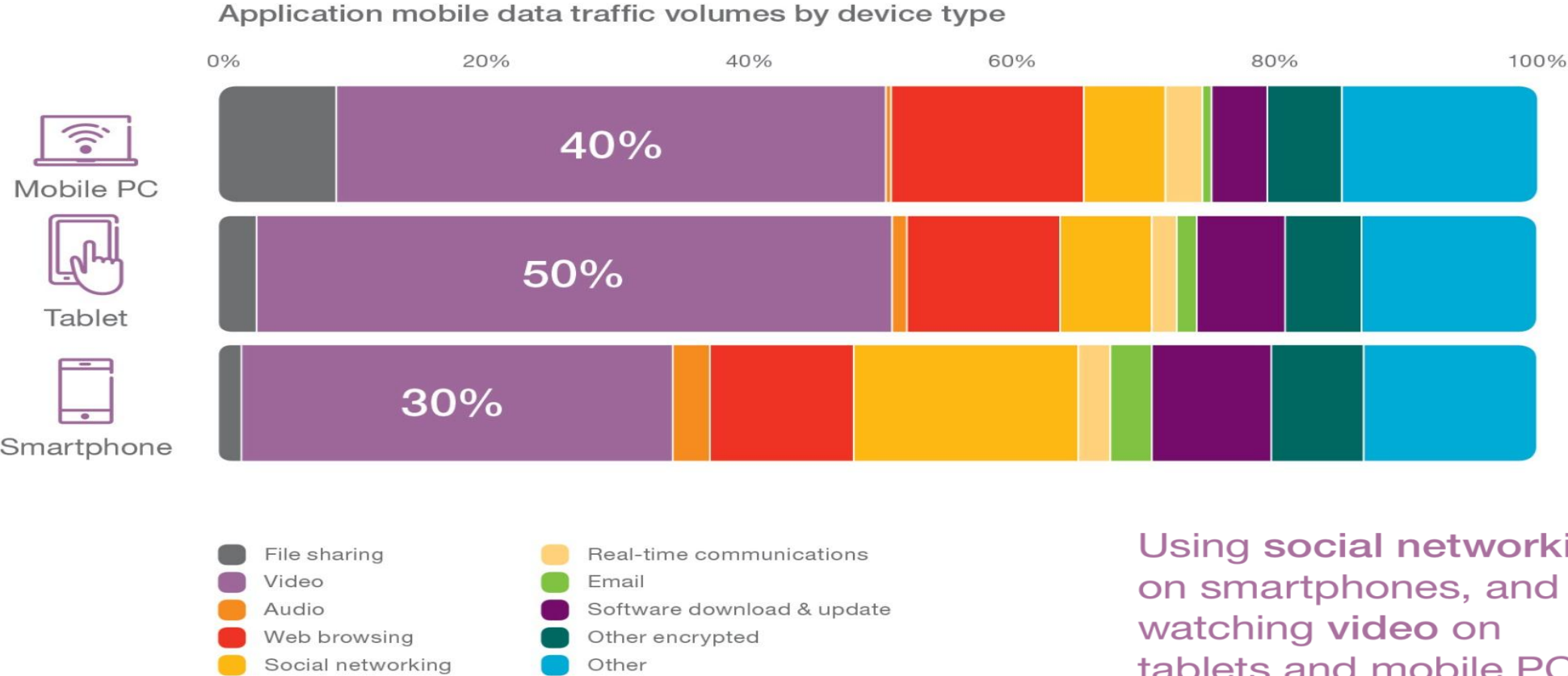
growth in mobile
data traffic between
2013 and 2019

MOBILE APPLICATION TRAFFIC OUTLOOK, 2013 AND 2019



Video is also likely to form a major part of file sharing traffic and a sizeable part of encrypted traffic, in addition to the identified application type 'video'. By encrypted traffic we mean encryption on the network layer (e.g. VPNs) or transport layer (e.g. TLS/SSL). Application layer encryption such as DRM for video content is not included.

MOBILE TRAFFIC MIX – APPLICATIONS AND DEVICES



Source: Ericsson (November 2013)

Using social networking on smartphones, and watching video on tablets and mobile PCs has increased since 2012

Note: Based on average value from measurements in a selected number of commercial HSPA and LTE networks in Asia, Europe and Americas. Not global average representative

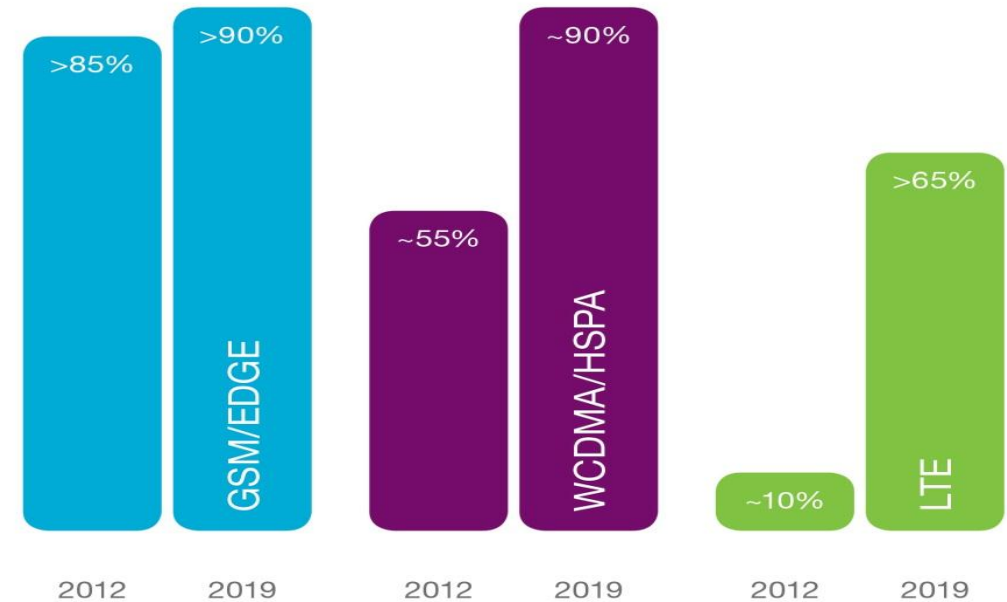
POPULATION COVERAGE



Population coverage by technology, 2012 and 2019

>65%

of the world's
population will be
covered by LTE in 2019



Source: Ericsson (November 2013)

- › Around 90% of world's population covered by WCDMA/HSPA in 2019
- › LTE network deployments continue in all regions of the world, as LTE population coverage doubled in 2012 compared to 2011 (10% vs. 5%)
- › More than 65% of world's population covered by LTE in 2019

APP COVERAGE

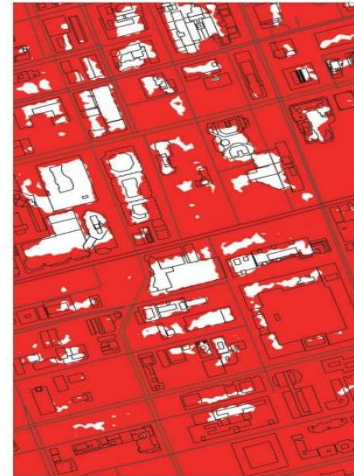


- › It's an app centric world
- › User want reliable access for their apps wherever they go in the network
- › App coverage requires a true end-to-end approach to design, build and run mobile networks

City plan view without mapped coverage



Voice coverage (red)



Music coverage (yellow)



Video streaming coverage (blue)



“Every app has its own coverage map”

“App Coverage” – the area where my app works as I expect

10 HOT CONSUMER TRENDS 2014

Ericsson ConsumerLab





Making small changes to the ways we communicate and use the internet will have a huge impact on society as a whole. So what new developments can we expect to see in 2014 and beyond?



1. APPS CHANGE SOCIETY

City life will be transformed by 2016

2. YOUR BODY IS THE NEW P@55W*RD

Users prefer fingerprints to passwords



3. THE QUANTIFIED SELF

40% want to log their physical activities



4. INTERNET EXPECTED EVERYWHERE

Quality of experience when using internet is falling behind that of voice



5. SMARTPHONES REDUCE THE DIGITAL DIVIDE

The smartphone is the primary internet device in India and Indonesia



6. ONLINE BENEFITS OUTWEIGH CONCERNS

People minimize risk by being more cautious online



7. VIDEO ON COMMAND

38% watch video clips recommended by their friends several times a week



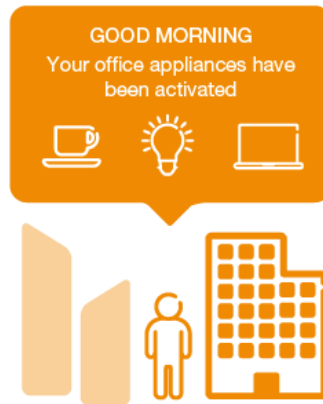
8. MAKING MY DATA VISIBLE

48% use apps to check their data consumption



9. SENSORS IN DAILY PLACES

60% believe sensors will be commonplace by the end of 2016



10. PLAY, PAUSE, RESUME ELSEWHERE

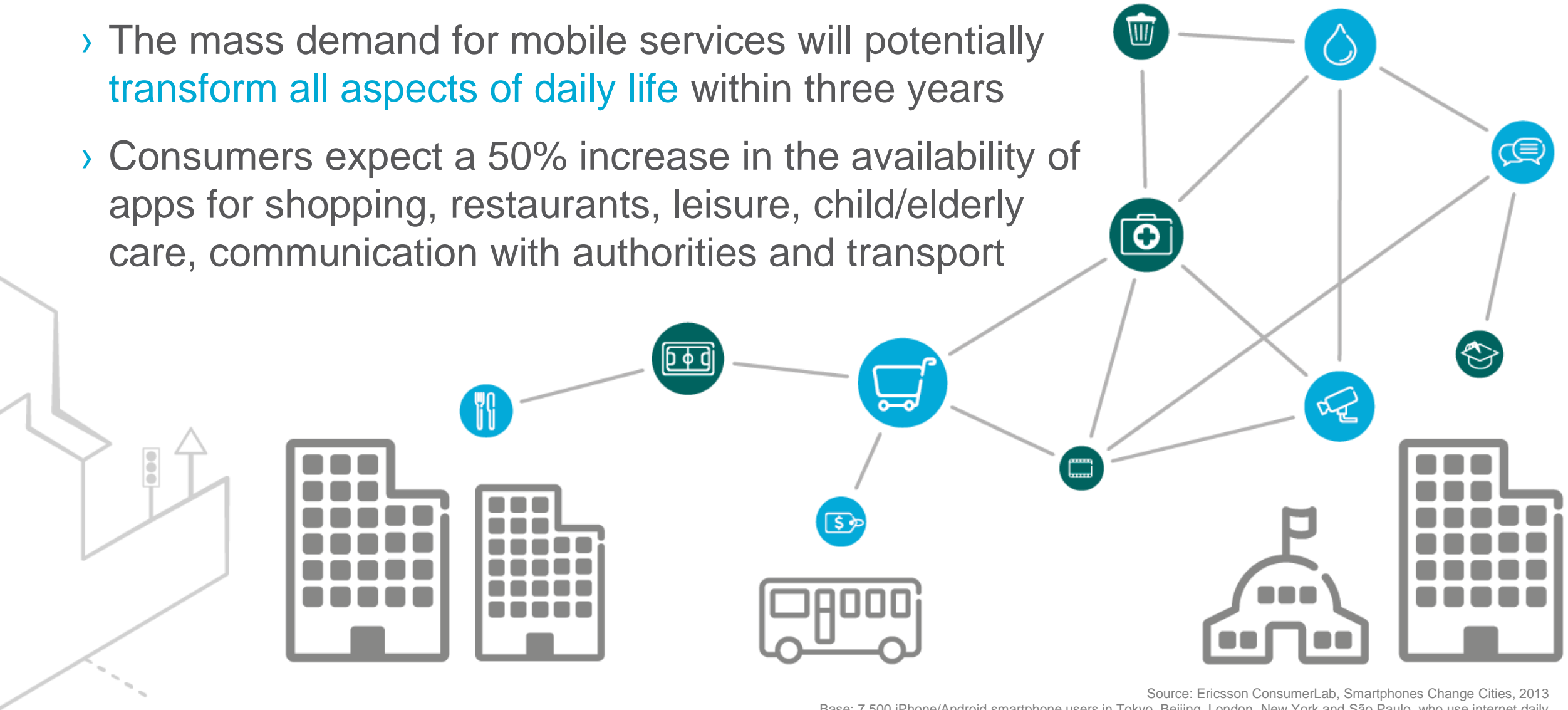
The rise of streaming services allows people to view content on the move



1. APPS CHANGE SOCIETY



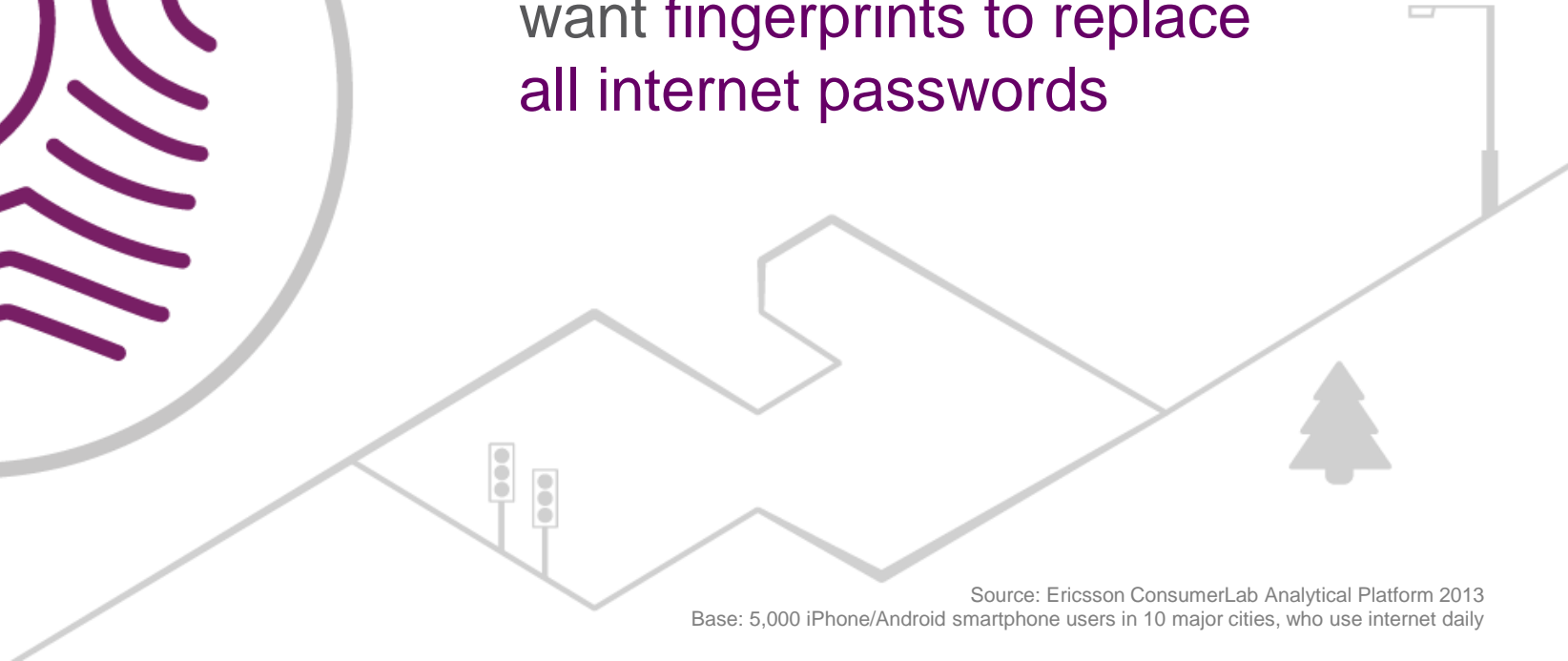
- › The mass demand for mobile services will potentially **transform all aspects of daily life** within three years
- › Consumers expect a 50% increase in the availability of apps for shopping, restaurants, leisure, child/elderly care, communication with authorities and transport



2. YOUR BODY IS THE NEW PASSWORD



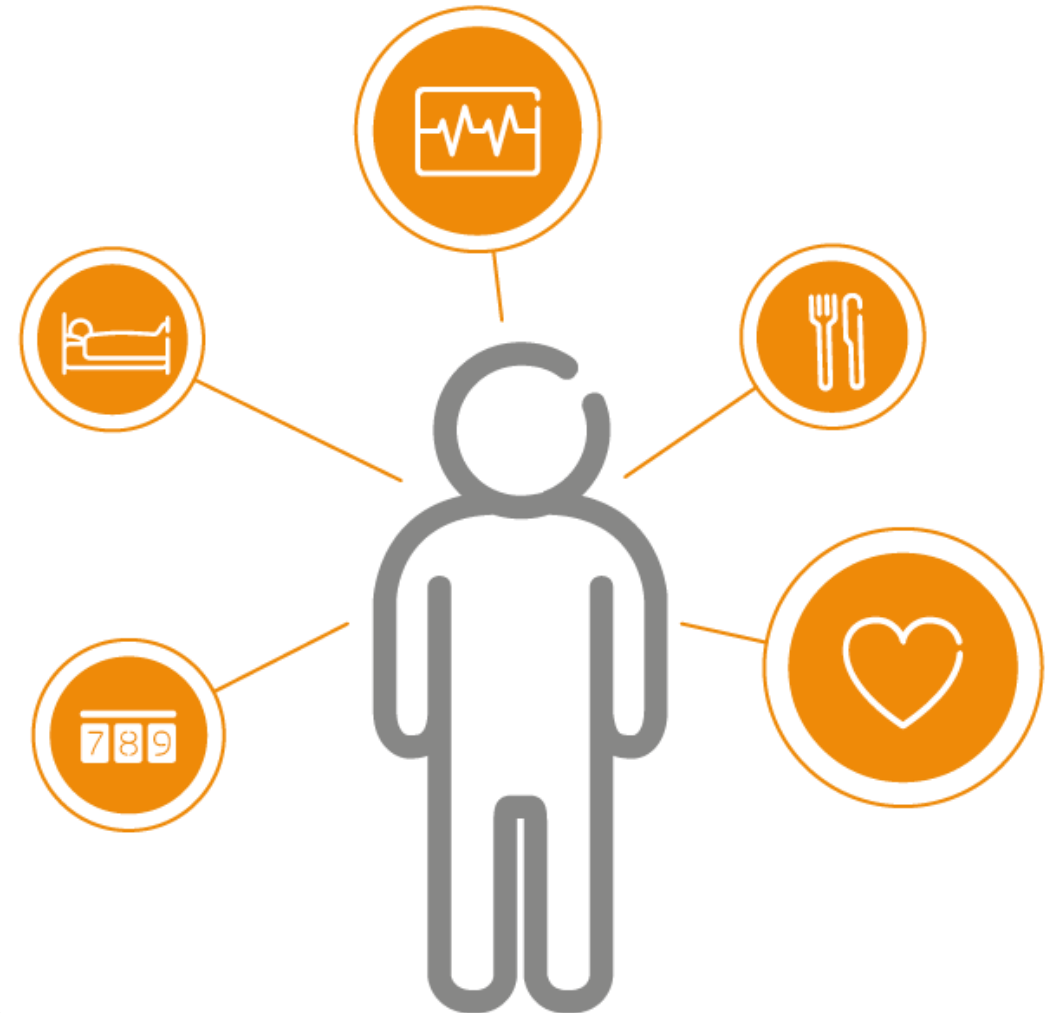
- › Consumers have grown tired of using passwords to access content online
- › 52% of smartphone users want fingerprints to replace all internet passwords



3. THE QUANTIFIED SELF



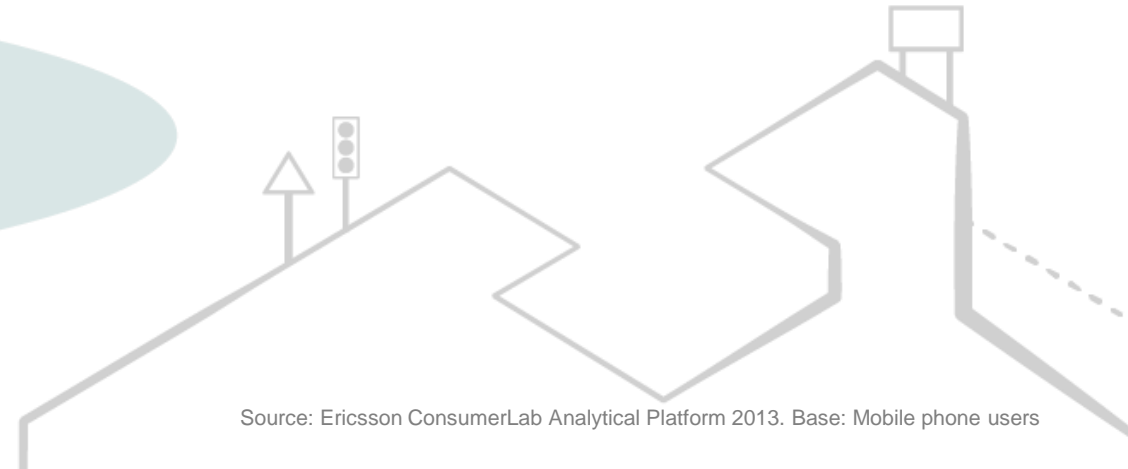
- › We are increasingly treating our phones as self-tracking devices
- › 40% of smartphone owners want to log all of their physical activities
- › 59% want to use wristbands and 56% want to use rings to generate personal data



4. INTERNET EXPECTED EVERYWHERE



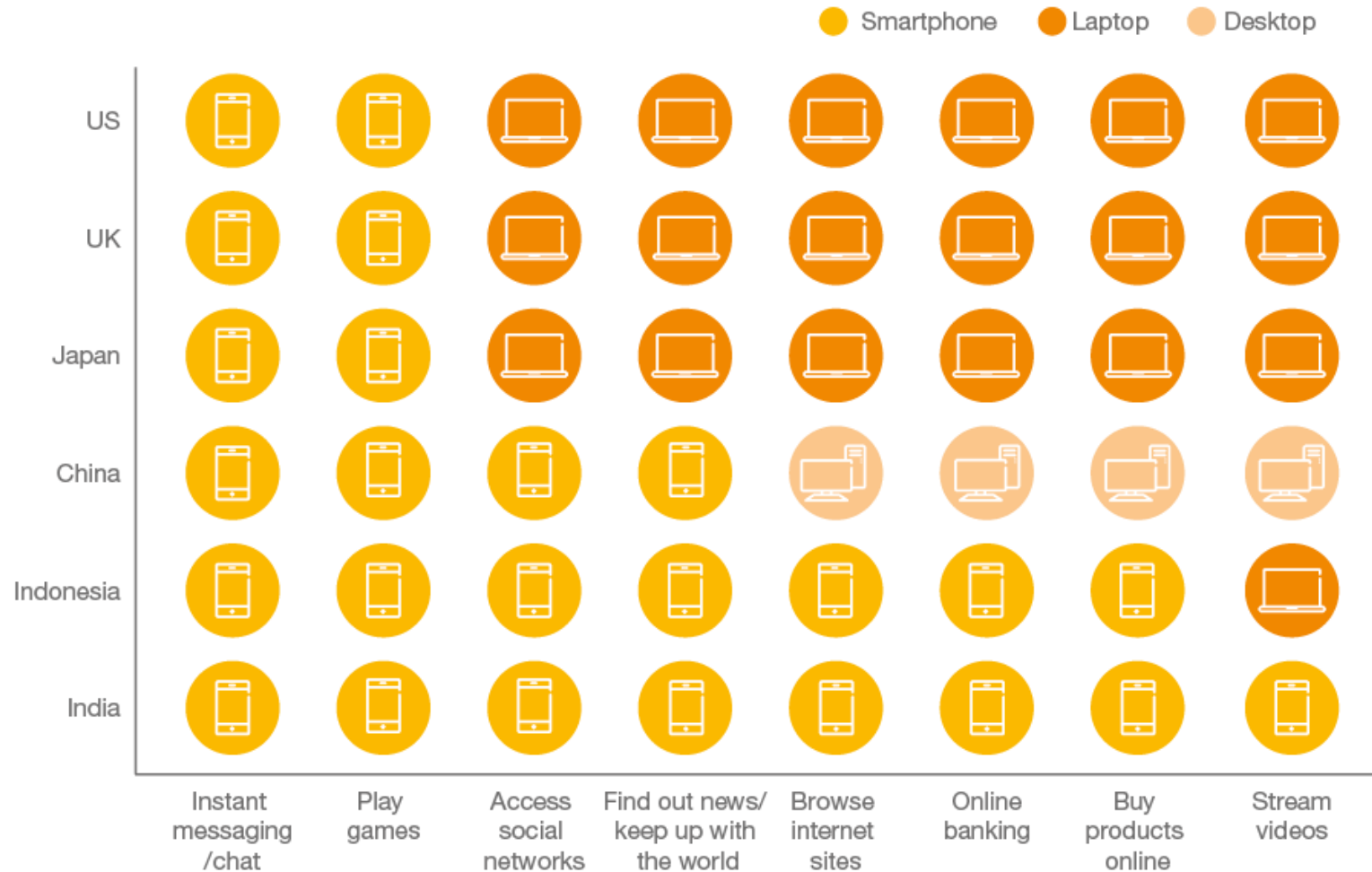
- › Smartphone users are realizing that the signal bars on their phone are no longer a good indicator of internet coverage
- › Quality of experience when using internet is falling behind that of voice, and consumers in developed nations are less forgiving of connectivity issues



5. SMARTPHONES REDUCE THE DIGITAL DIVIDE



- › The increase of cheaper smartphones is providing more consumers with the opportunity to participate online
- › In India and Indonesia, the smartphone is now the primary internet device



6. ONLINE BENEFITS OUTWEIGH CONCERNS

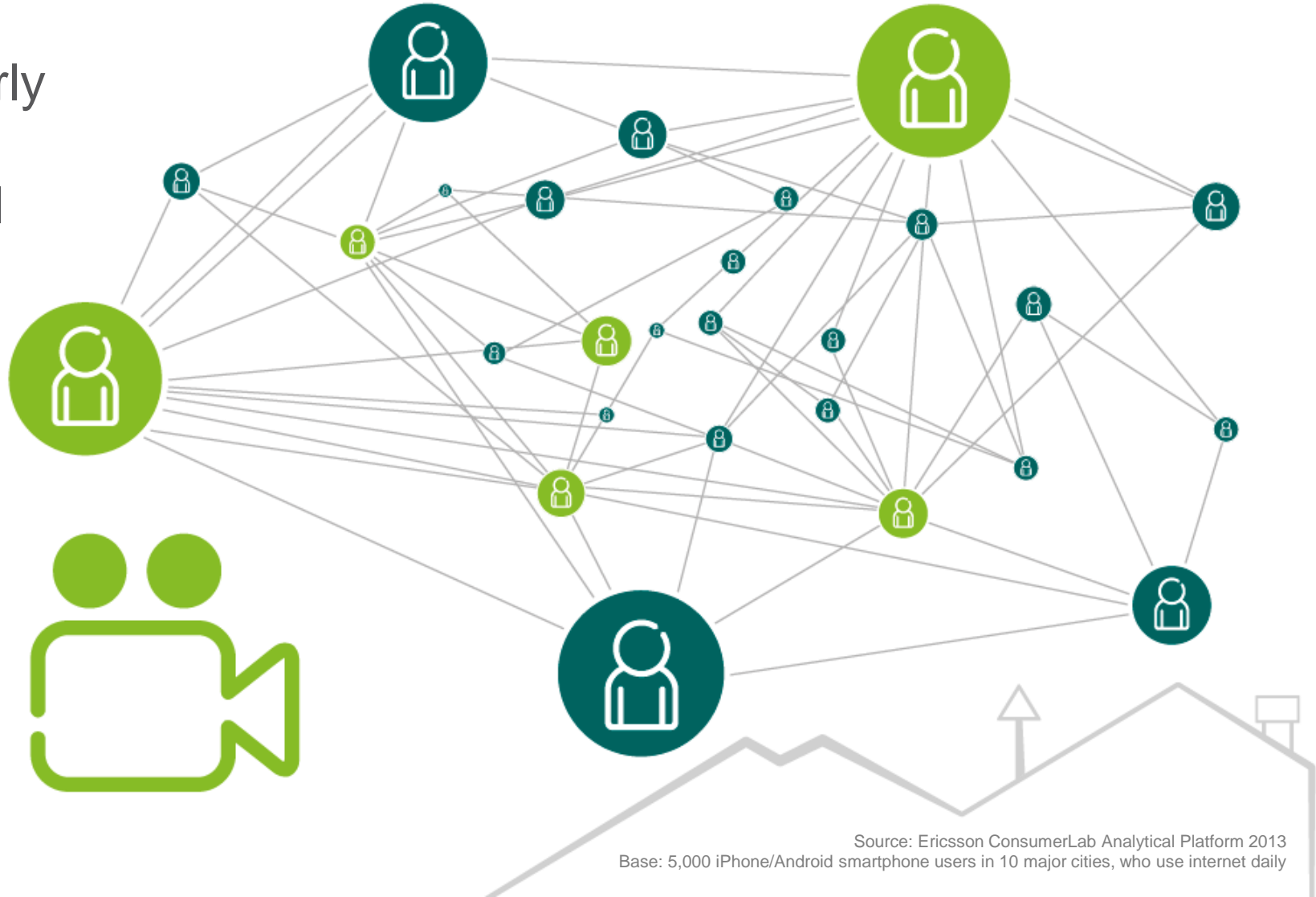


- › The risks associated with being connected are becoming more apparent, but **people minimize them by being more cautious online**
- › 56% of daily internet users are concerned about privacy issues
- › 4% say that they would use the internet less because of this

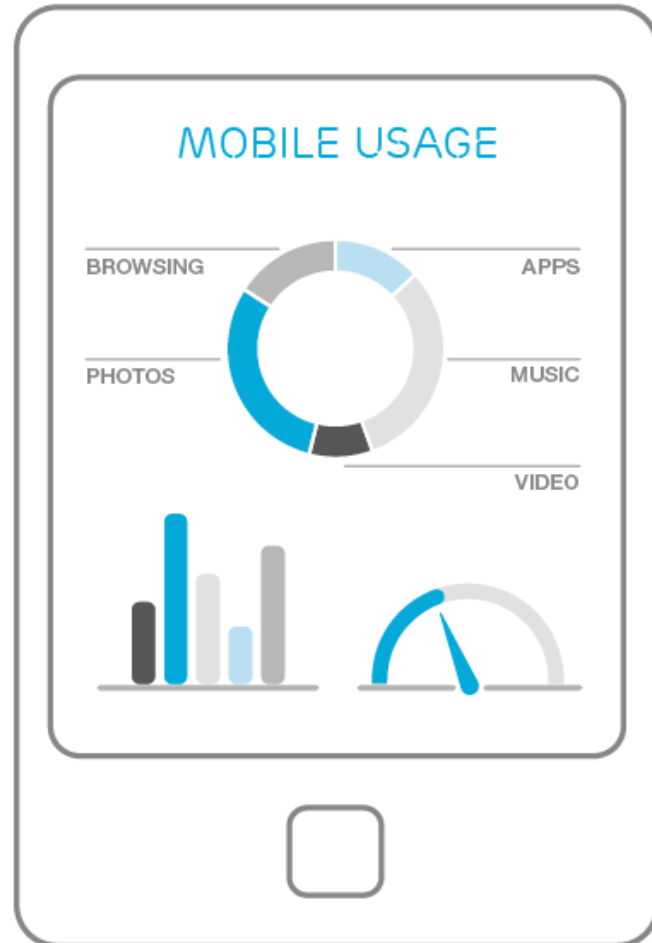
7. VIDEO ON COMMAND



- › Our friends are particularly influential when it comes to viewing video material
- › 38% of respondents say they **watch video clips recommended by their friends** at least several times a week
- › 22% influence their own friends



8. MAKING MY DATA VISIBLE

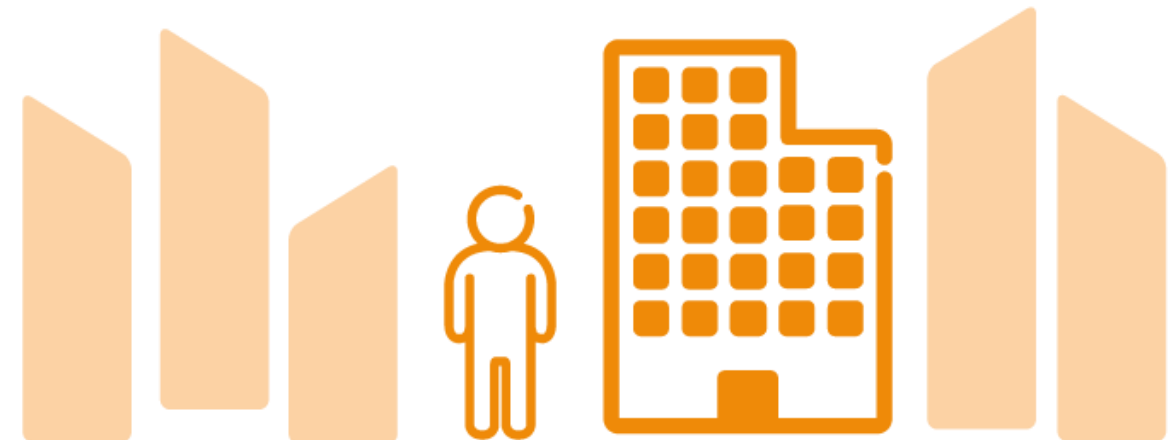
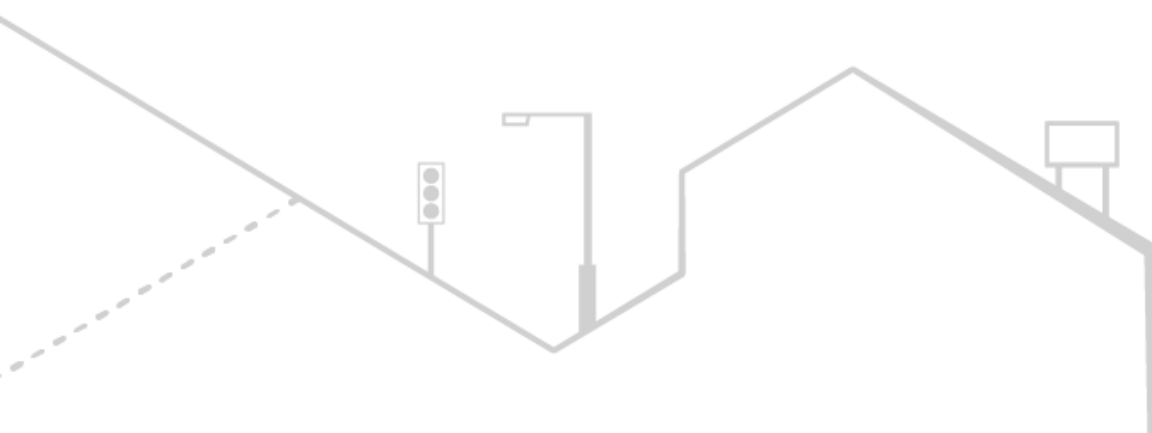


- › Our internet usage is measured in bits and bytes, but people need help understanding the relevance of the data
- › 48% of smartphone owners use apps to get information about data consumption
- › 37% use apps to test connection speed

9. SENSORS IN DAILY PLACES



- › Smartphone owners believe that interactive sensors will be used in everything from healthcare and public transport, to cars, homes and workplaces
- › 60% believe sensors will be commonplace by the end of 2016

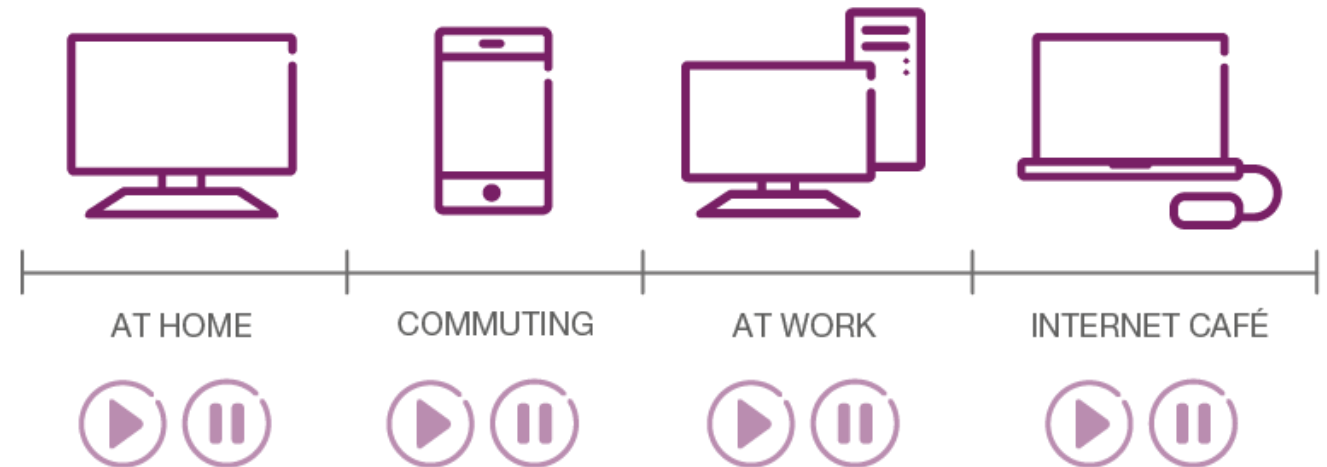


10. PLAY, PAUSE, RESUME ELSEWHERE



- › The rise of streaming services means people are increasingly viewing content on the move
- › 19% of total global streamed TV and video time is spent on phones or tablets

- › In Chile, Mexico and Brazil, an average of 18% of smartphone owners who watch video begin doing so at home, and then continue watching the same content elsewhere



Source: Ericsson ConsumerLab Analytical Platform 2013. Base: Smartphone owners in Chile, Mexico and Brazil

KEY FACTORS FOR THE SUCCESS OF MOBILE BROADBAND



Technology

QoS, Interoperability



Spectrum strategy

Availability, Harmonization



Coverage

Network deployment



Mass access

Economies of scale, Devices, Commercial offers

SPECTRUM AVAILABLE FOR IMT PER REGION



North America

Base: 850, 1900, US700 & AWS
Future: **2600**

Latin America

Base: 850/900, 1800/1900, 2100
2013+: **1.7/2.1, 2500, 700**
Future: 600, E850, 2.3, 1.5, & 3.5

Europa

Base: 2100 & 900
Future: **2600, 1800 & CEPT800**

MEA

Base: 2100
Future: **900, 1800 & 2600**
2013+: CEPT800 & APT700

APAC

Base: 2100, 900 & 850
Future: **1800, 2300 & 2600**
2013+: APT700

Japan

Base: 2100, 1700, JP850
Future: **1500, 900 & APT700**

- The lack of enough spectrum in Latam region is the major threat for massive MBB adoption
- Another challenge is the slow spectrum release process (i.e., typically between 6 – 10 yrs. from start)

Out of a total 1177 MHz of identified spectrum in ITU R, on average, ~ 1000 MHz available for licensing in each Region



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