Driving the LTE Ecosystem for All

Herman Schepers, Senior Director, Spectrum Campaign, GSMA

27 February 2014
Barcelona

AGENDA

Update on Project

Global Need for Mobile Broadband

Consumer Survey Results

Panel Discussion

Driving the LTE Ecosystem for All

LTE for Emerging Markets

Roberto Rodriguez Dorrego, Telefonica

27 February 2014
Barcelona

PROJECT UPDATE

Driving the ecosystem for emerging markets

- This project is looking at how to accelerate the development of lower cost LTE devices, in order to enable more rapid spectrum allocation and adoption of LTE around the world.
- To gather further intelligence we have run a user survey in key emerging markets to understand more about the potential for smartphone adoption, including gaining an appreciation of the key ‘trade-offs’ by region that users will make in moving from a feature phone to a smartphone.
- Further to this we need to define what will be our Low-Cost LTE device to satisfy the developing countries users needs – detailed specification
- And target a price range to make it affordable to the mass market

Global Need for Mobile Broadband

H.E Suvi Lindén

ITU Special Envoy for the Broadband Commission for Digital Development

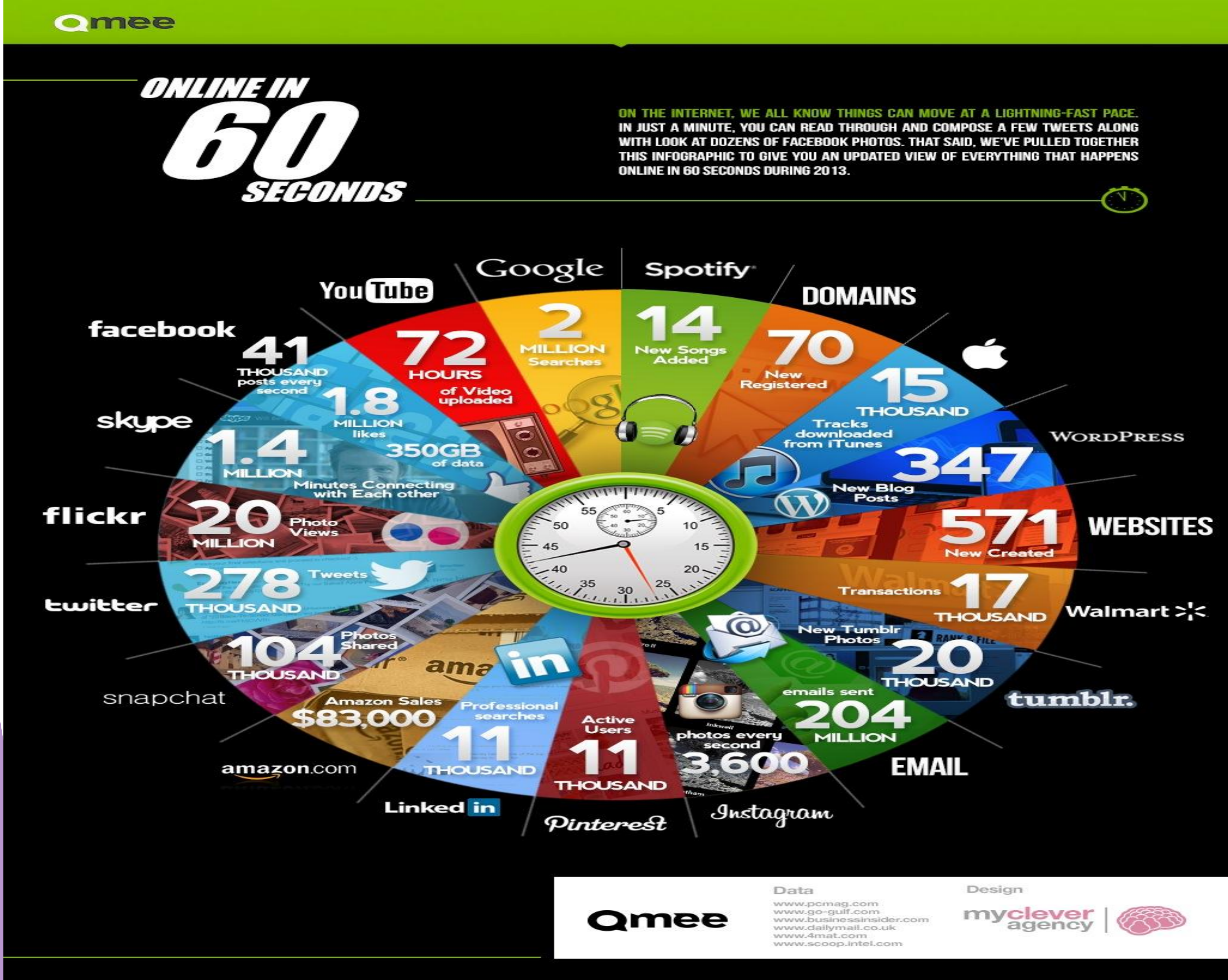
27 February 2014
Barcelona

compliance with the GSMA

The Global Need for Mobile Broadband

Suvi Lindén ITU`s Special Envoy for the Broadband Commission for Digital Development

MWC 2014



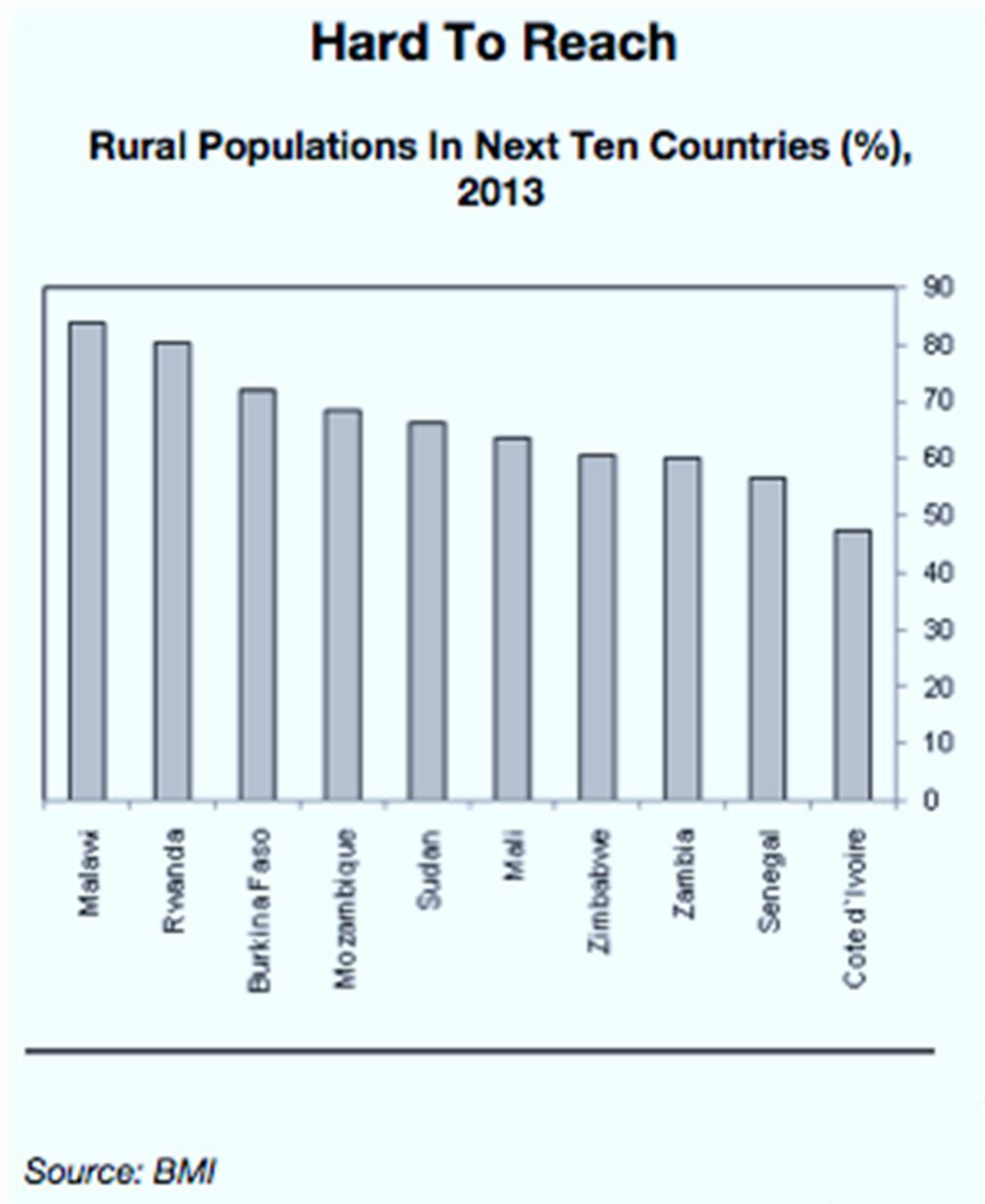
ONLINE IN 60 SECONDS
ON THE INTERNET, WE ALL KNOW THINGS CAN MOVE AT A LIGHTNING-FAST PACE. IN JUST A MINUTE, YOU CAN READ THROUGH AND COMPOSE A FEW TWEETS ALONG WITH LOOK AT DOZENS OF FACEBOOK PHOTOS. THAT SAID, WE'VE PULLED TOGETHER THIS INFOGRAPHIC TO GIVE YOU AN UPDATED VIEW OF EVERYTHING THAT HAPPENS ONLINE IN 60 SECONDS DURING 2013.
Google
2 MILLION Searches
Spotify
14 New Songs Added
DOMAINS
70 New Registered
15 THOUSAND Tracks downloaded from iTunes
WordPress
347 New Blog Posts
WEBSITES
571 New Created
Walmart
Transactions 17 THOUSAND
tumblr.
New Tumblr Photos 20 THOUSAND
EMAIL
emails sent 204 MILLION
Instagram
photos every second 3,600
Pinterest
Active Users 11 THOUSAND
LinkedIn
Professional searches 11 THOUSAND
amazon.com
Amazon Sales $83,000
snapchat
Photos Shared 104 THOUSAND
twitter
278 THOUSAND Tweets
flickr
20 MILLION Photo Views
skype
1.4 MILLION Minutes Connecting with Each other
facebook
41 THOUSAND posts every second
1.8 MILLION likes
350GB of data
YouTube
72 HOURS of Video uploaded
Qmee
Data
www.pcmag.com
www.go-gulf.com
www.businessinsider.com
www.dailymail.co.uk
www.4mat.com
www.scoop.intel.com
Design
myclever agency

GAME-CHANGER

BROADBAND COMMISSION

Millenium Development Goals

- End Poverty and Hunger
- Universal Education
- Maternal Health
- Child Health
- Gender Equality
- Environment
- Global Partnership
- HIV/Aids

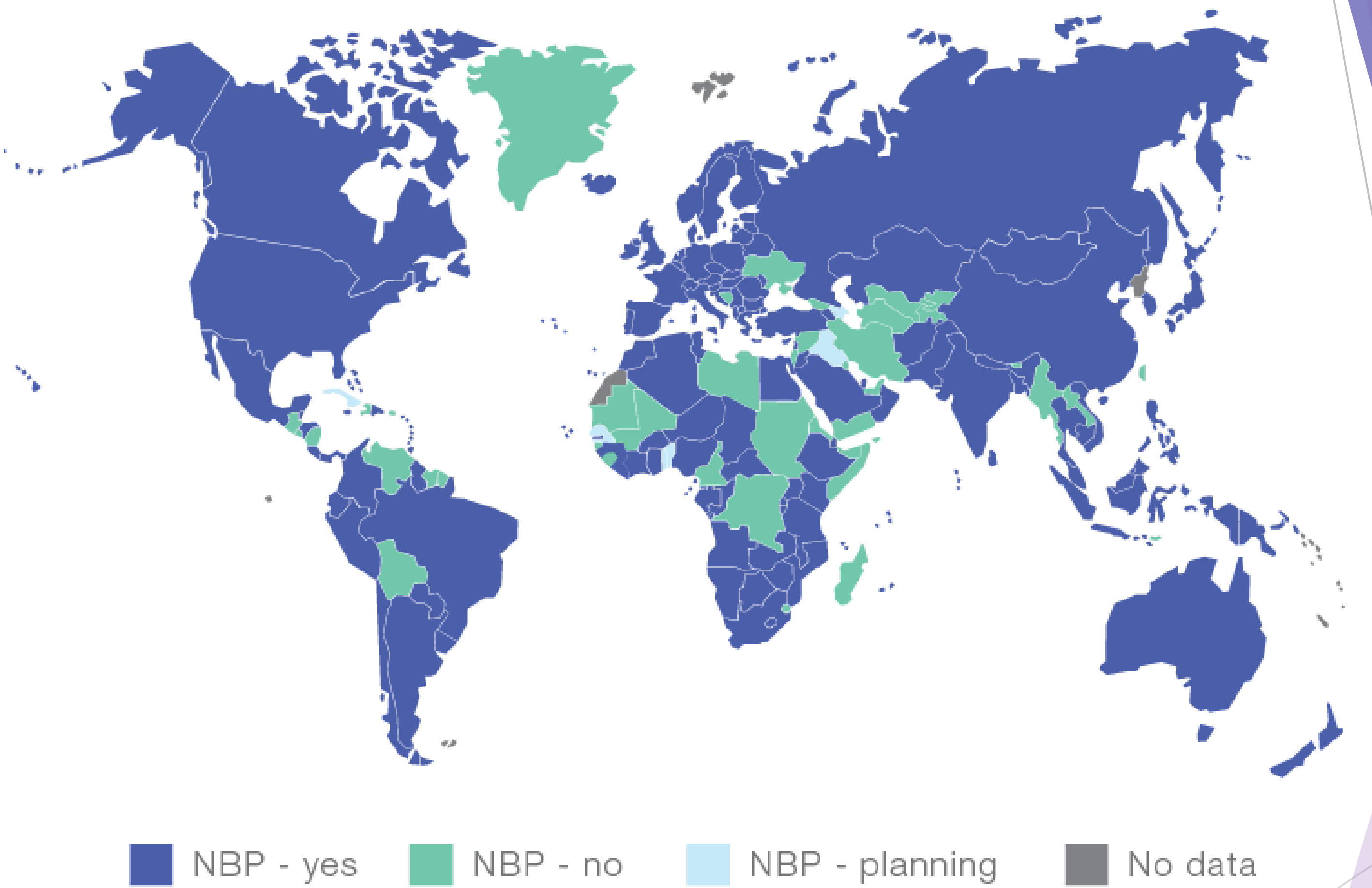

Hard To Reach
Rural Populations In Next Ten Countries (%), 2013
90
80
70
60
50
40
30
20
10
0
Malawi
Rwanda
Burkina Faso
Mozambique
Sudan
Mali
Zimbabwe
Zambia
Senegal
Cote d'Ivoire
Source: BMI

Accessibility

Affordability

Status of National Broadband Plans, mid-2013

World Map, according to status of National Broadband Plan (NBP)



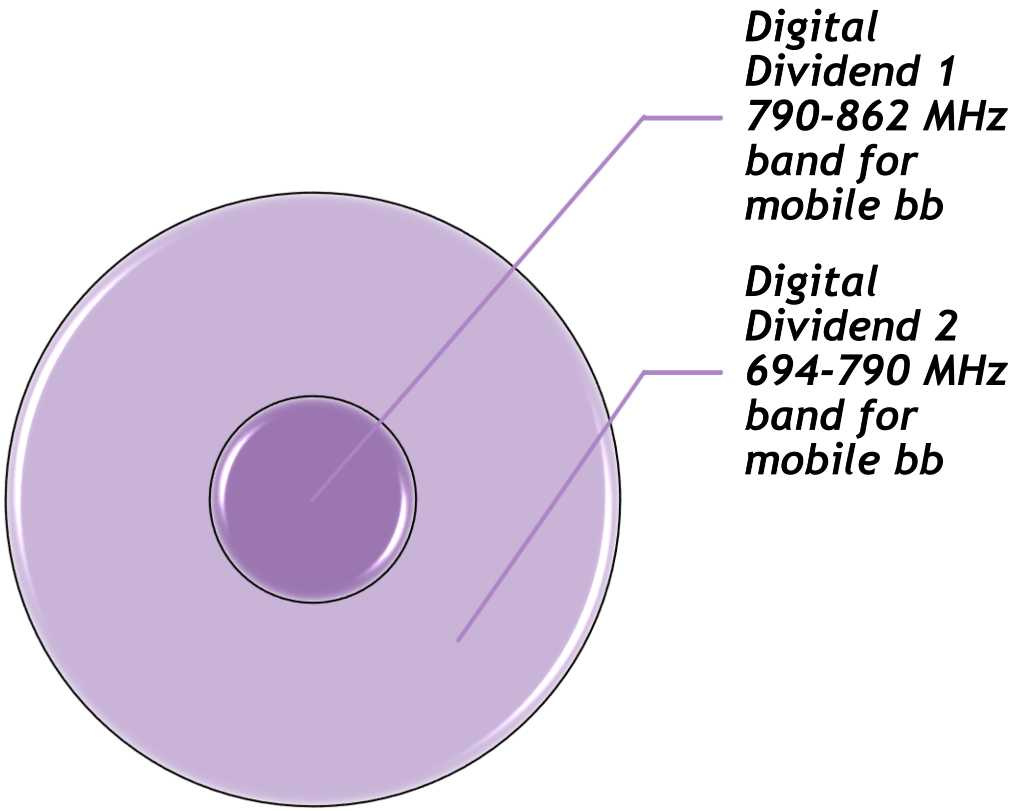
Notes: Based on data for 193 countries. National broadband plan includes: a plan, strategy or policy specific to broadband; digital plan, agenda, strategy or policy; or an ICT plan, strategy, or policy.

Source: ITU/UNESCO Broadband Commission and ITU Telecommunication/ICT Regulatory Database.

BBP and DSO

Harmonisation

Digital dividend spectrum for mobile broadband




Thank You!

Consumer Survey on Low Cost Devices

Results and Recommendations

Martin Garner, Senior Vice President

CCS Insight

27 February 2014
Barcelona

GSMA Digital Dividend Spectrum
Low Cost LTE Device

User Survey

Martin Garner
SVP

Agenda

- **Survey aims and approach**
- **Key findings**
- **Recommendations**

Headline Findings

- **We see an opportunity for a low-cost LTE smartphone**
  - A smartphone is the right device to start with
  - Tablets are also an interesting opportunity
- **This survey findings show clear product priorities**
  - Focus on reasonable data speed (single-carrier), battery life
  - Make savings on processor speed, memory, screen, camera quality and range of LTE bands supported
- **Tariffs and services have a big impact on device attractiveness and affordability**
  - We were not able to study these in this survey
  - Operators have better data on this than we could get in a survey
- **We estimate an addressable market of 100-400m, in the 8 countries we surveyed**
  - Somewhat larger on a world scale
- **This phone will see competition from low cost 2G and 3G devices**

Survey Aims And Approach

Survey Aims

- **Survey**
  - Explore the potential for a low cost LTE smartphone in emerging markets
  - Find out from consumers how they prioritise features
  - Is there a segment that is interested, and would buy, mainly on price?
  - Estimate the addressable market

- **We know that users start a journey when they get a smartphone**
  - Their use of the device grows over time as they find more things they can do with it
  - Survey designed to talk to:
    - Featurephone users – who might buy a smartphone
    - Smartphone users – who remember their previous featurephone
  - Important to compare their attitudes

Survey Approach

Parameters:

- **Scope**
  - 8 countries
  - Representative sample
- **Timescale / budget**
  - Start at Christmas, finish for MWC
  - Necessary to do the survey on mobile devices
- **Technical subject**
  - Technical questions do not work in a survey
  - But can ask about trade-offs

Survey Overview

- 8 countries
  Brazil, China, India, Indonesia, Kenya, Mexico, Nigeria, Saudi Arabia
- 1,000 responses from each
- 50:50 split
  Feature- / smart-phone
- 50:50 split – M / F

Survey Approach: Operator Input

- ✓ **Allow for the device to be a tablet or a dongle**
- ✓ **What would they sacrifice for a cheaper device?**
- ✓ **Is there a fear of a touch screen in some areas?**
- ✓ **How important is the perceived ruggedness of smartphones?**
- ✓ **Is the camera a key driver?**
- ✓ **Explore coverage vs. data speed**
- ✓ **Ask about triggers for purchase**

- ✗ **Cost of ownership is more important than just the purchase price of the phone**
  - Need to include tariffs
- ✗ **Change in spend when smartphone purchased?**
- ✗ **What are the killer apps used, e.g. Line, Viber, Facebook, WhatsApp**
- ✗ **Explore whether voice, SMS expected to rise or fall once they have a smartphone**

Survey Approach: Core Trade-Offs, Plus Sanity Checks

Trade-offs for key features

- **Price vs. existing / previous phone**
- **Features missed, or would not give up**
- **Is a smartphone ideal, or a different data device?**
- **Features you would sacrifice to get the price down?**
- **Smartphone purchase triggers**
- **Travel => roaming needs**

Aim is to understand attitudes and trade-offs either side of the smartphone transition

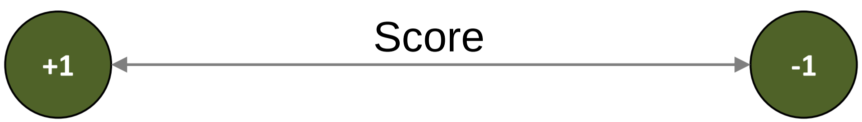
Survey Approach: Trade-Off Questions – MaxDiff Method

- **MaxDiff:**
  - ✓ Efficient for collecting trade-offs
  - ✓ Differences across segments, countries
  - ✓ Relative importance
  - ✗ Absolute importance of features

Example question layout

Of these four features which one would be **most** important and **least** important for you in choosing a new smartphone?

Most		**Least**
❑	Battery Life	❑
❑	Can download ‘000s of apps	❑
❑	High data speed – e.g. like a cyber café	❑
❑	Low price	❑



Survey Approach: Trade-Off Questions

Features were each tested 3 times

Reasonable speed data everywhere
- Data coverage

Can download '000s of apps
- Memory + processing

High speed data – like a cyber-café
- Data speed

Low price

Battery life

Basic touch screen
- Quality of screen needed 1

Screen works well in bright sunlight
- Quality of screen needed 2

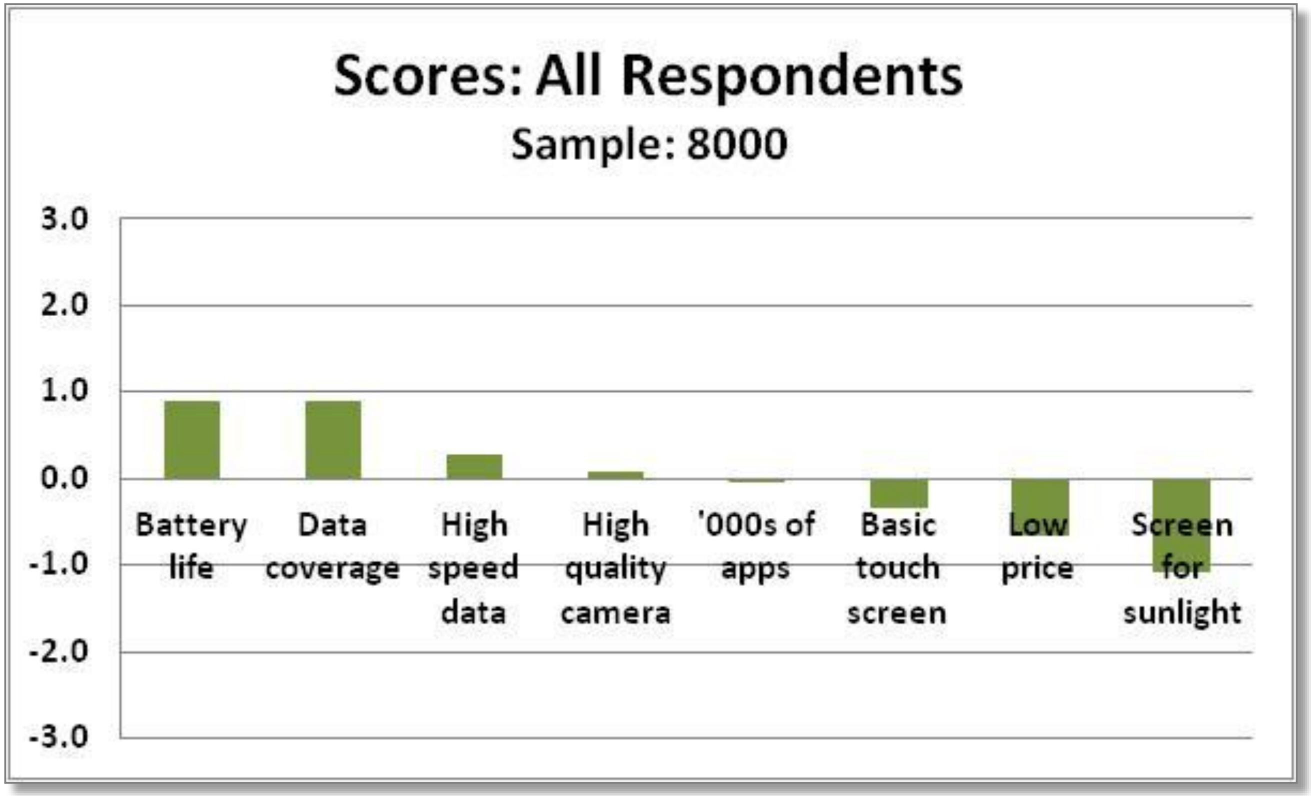
High quality camera

Scoring system:

Score	
3, 2	Most important
1, 0, -1	No clear preference
-2, -3	Least important

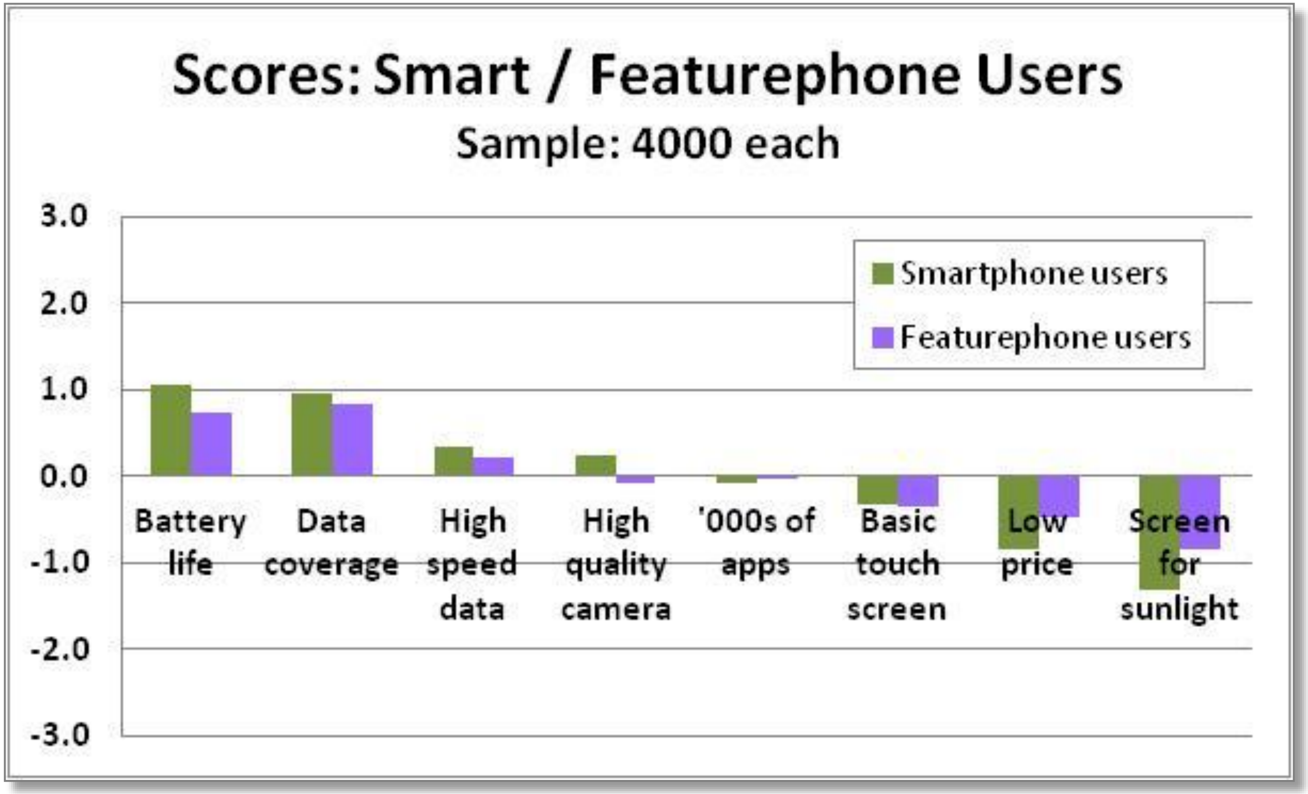
Key Findings

Key findings: Battery Life And Data Coverage Are The Highest Priorities



- **Broad alignment of priorities across – countries, genders, age groups, phone used**
- **Low price is a low priority across the whole sample, especially for smartphone users**
- **Low average scores suggest that there are segments to look for**

Key findings: Battery Life And Data Coverage Are The Highest Priorities



- **Broad alignment of priorities across – countries, genders, age groups, phone used**
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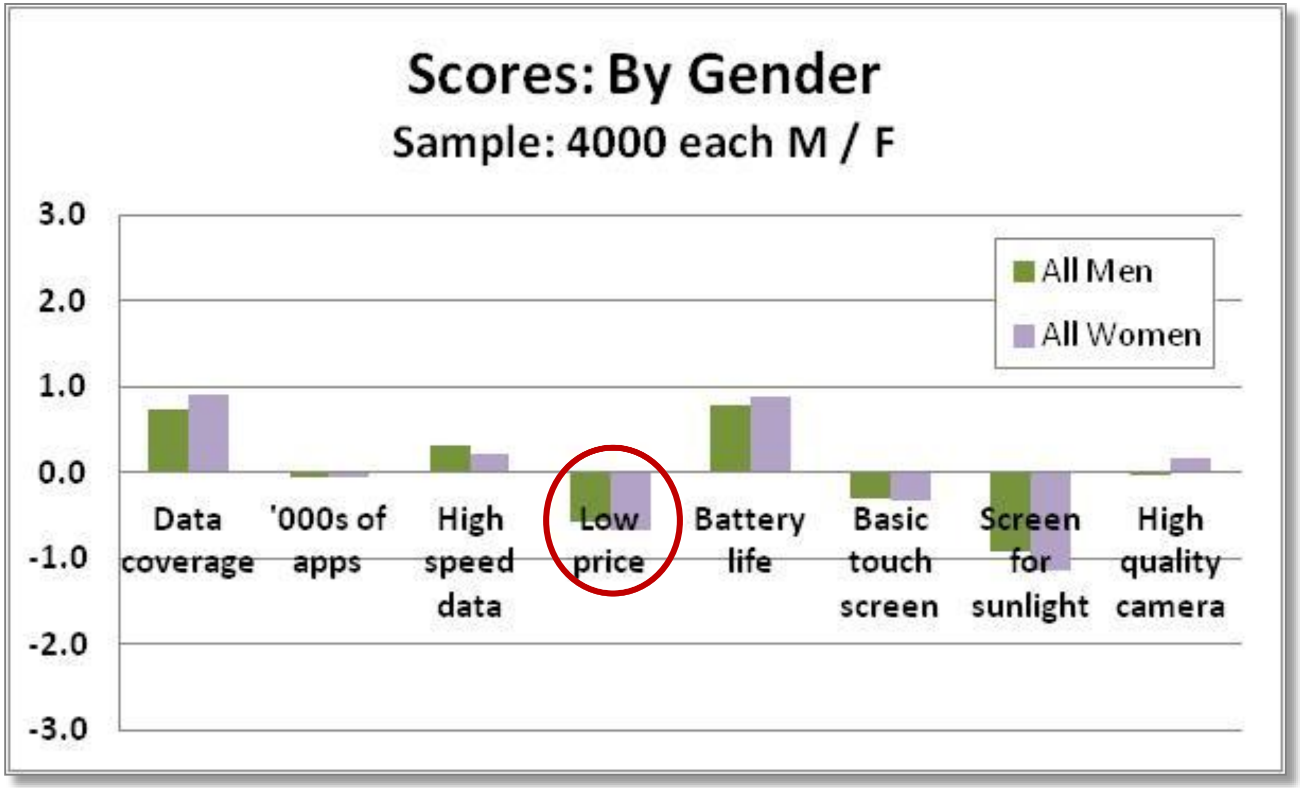
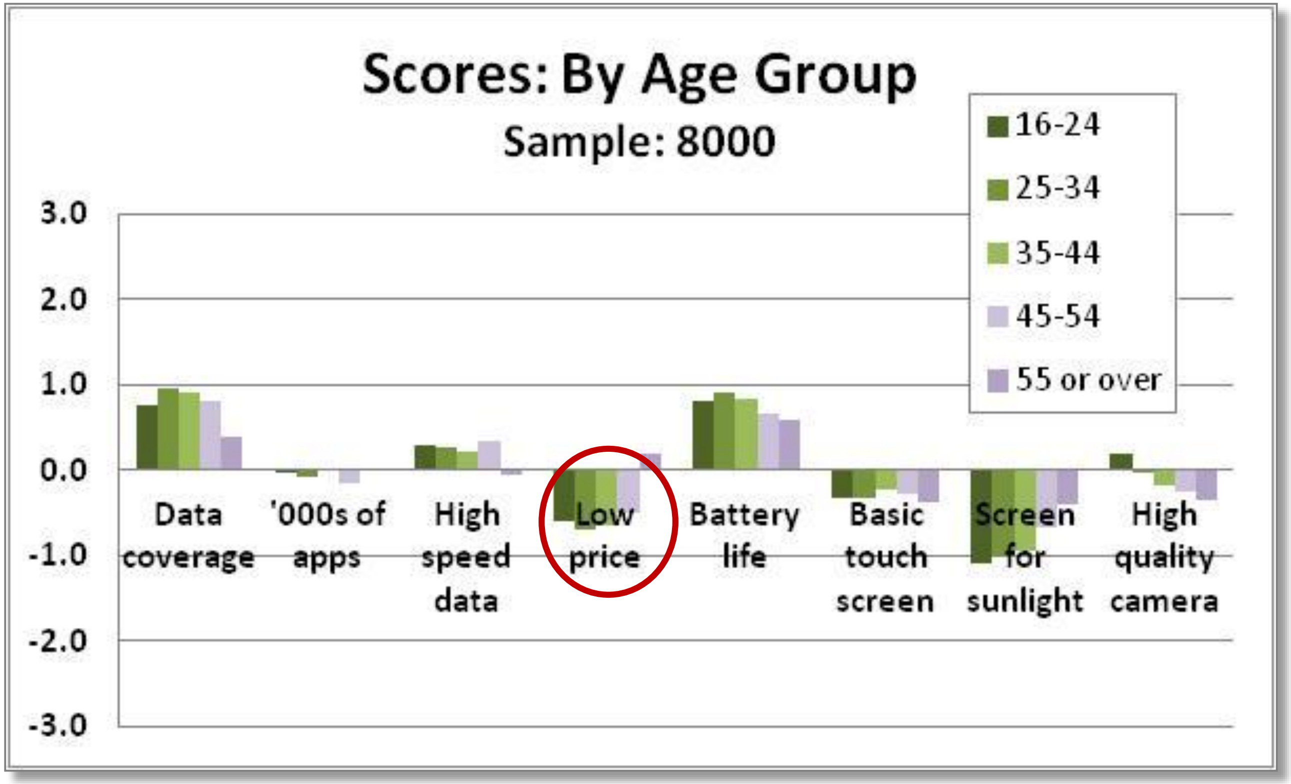
Key Findings: Small Differences In Scoring Between Men And Women



- **Women slightly stronger on Data Coverage and Battery Life**
- **Men slightly stronger on High Data Speed**

Key Findings: Some Preferences Do Show By Age Group

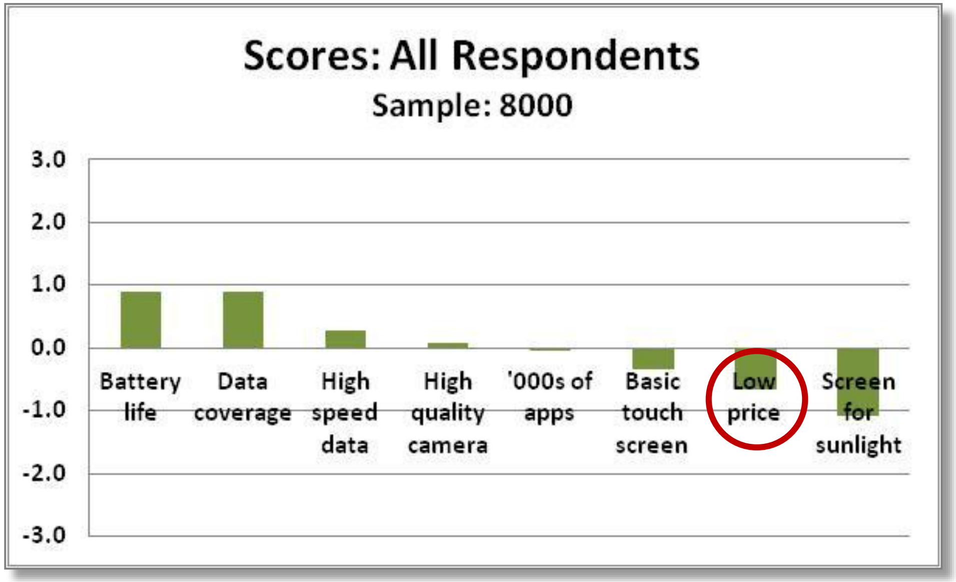


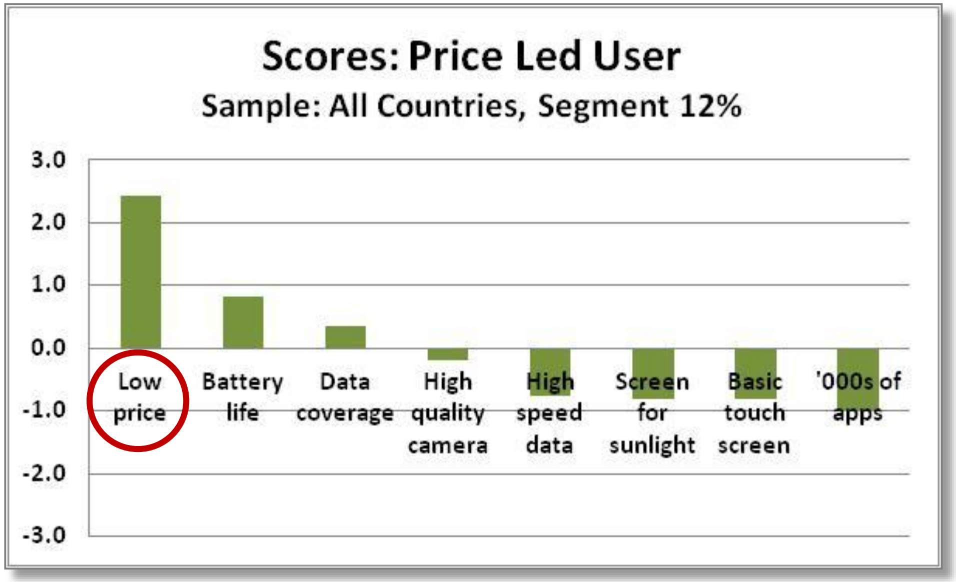
- **Younger people value Battery Life, Data Coverage and High Quality Camera more**
  - Probably because they typically do more on a phone

- **Older people are less dismissive of screens that work well in bright sunlight**
  - Slightly stronger on Low Price

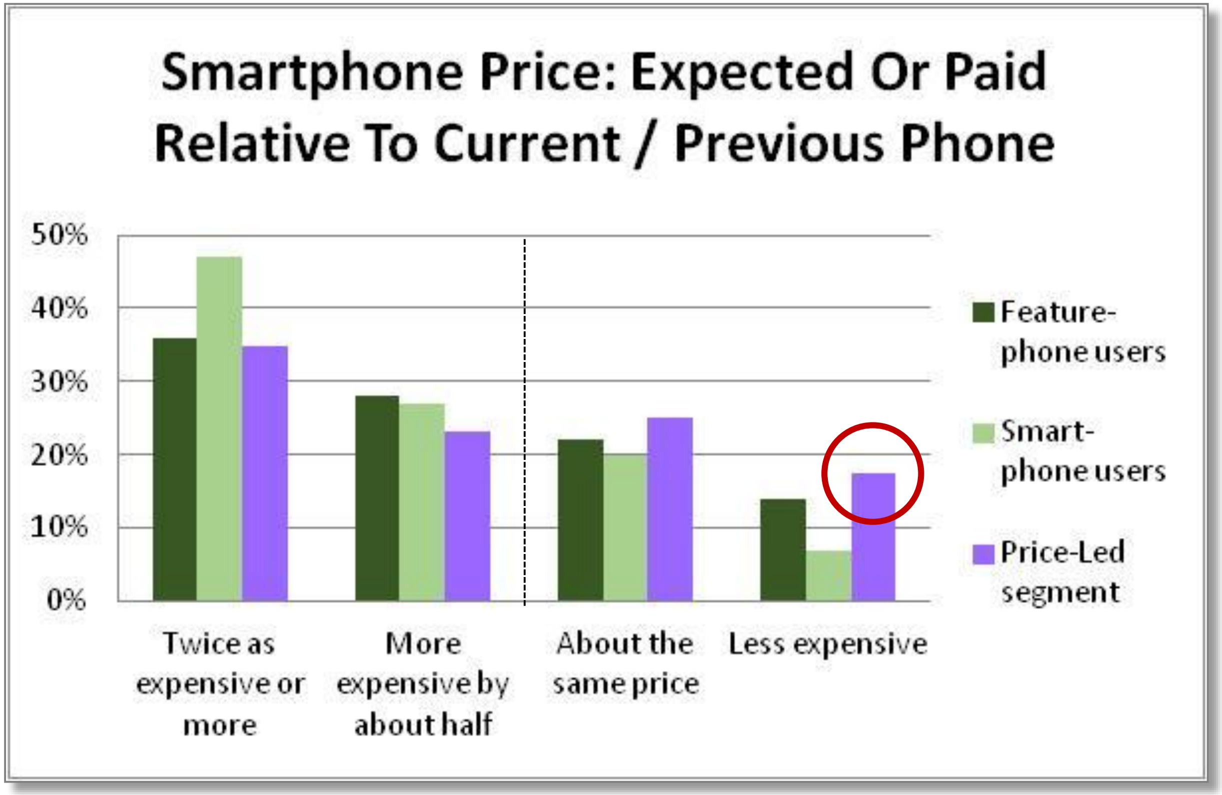
Key Findings: Key Segments Account For 70% Of Responses

- **Just want it to work – 33%**
  - Priorities: data coverage, battery life
- **Content –Led users – 20%**
  - Priorities: camera, data speed, apps
- **Apps-Led users – 7%**
  - Priorities: Battery life, ‘000s of apps,
- **Price-Led – 12%**
  - 60% featurephone users,
40% smartphone users
  - Priorities: low price, battery life, data coverage
  - Similar to “I just want it to work” but with low cost as clearly the highest priority
  - Lower priorities: screen quality, access to ‘000s of apps





Key Findings: Price Expectations For A New Smartphone Make Sense



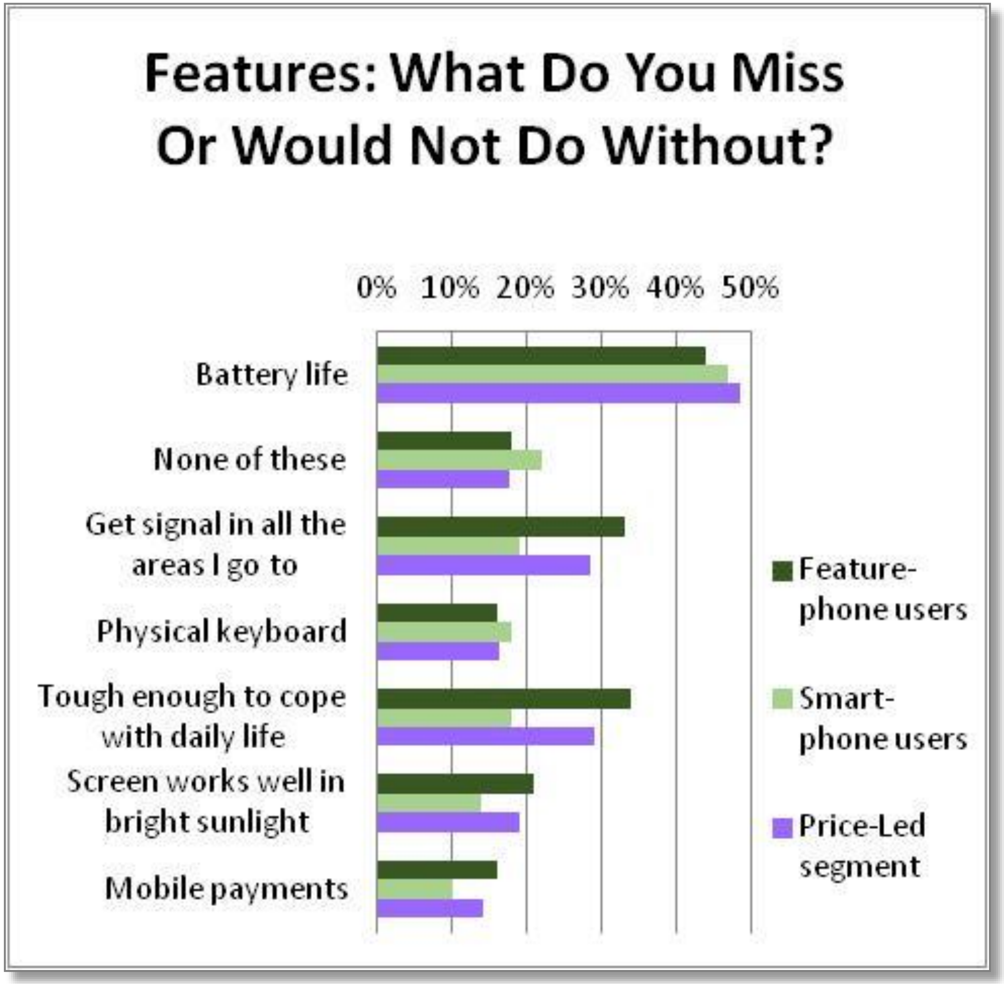
- **Note: Featurephone users gave expectations, smartphone users said what they paid**
- **70% see a smartphone as a trade-up by 50% or more in price**
- **An interesting group expect a smartphone to be cheaper than their current phone, or paid less than previous phone to get one**
  - 1 in 7 featurephone owners
  - 1 in 6 of the Price-Led segment

Features They Would Miss Or Would Not Do Without

Smartphone users – what do you miss?

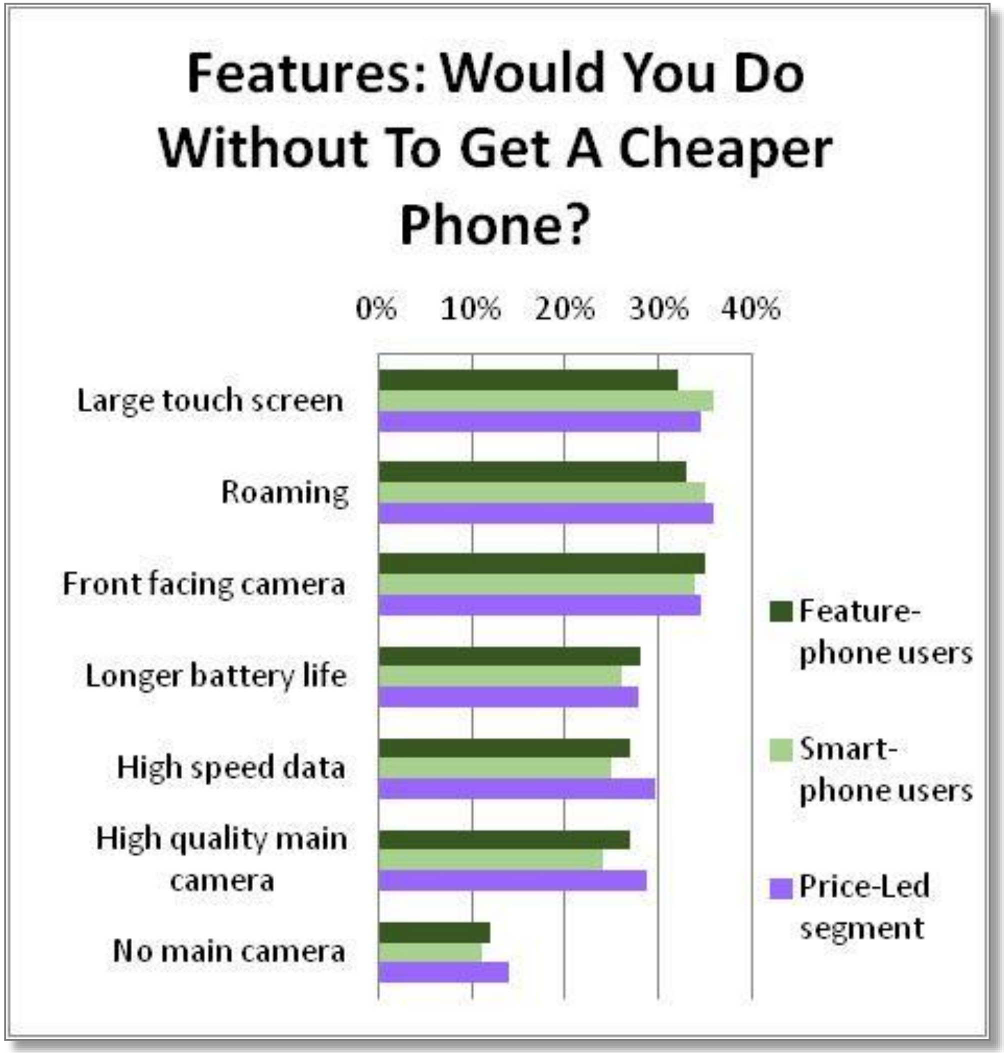
Featurephone – reason not to buy

- **We should listen most to smartphone users**
  - They have experience as users
- **Battery life is clearly the most important factor**
- **Featurephone users are worried on coverage, toughness**
  - Smartphone users don't completely agree
- **Price-Led segment response is very similar to featurephone users**
  - Although 40% of them are smartphone users



Key Findings: What Would They Sacrifice To Get The Price Down?

- **1 in 3 would sacrifice screen size, roaming and front facing camera**
- **1 in 4 say they would sacrifice some battery life, higher speed data and a high quality main camera**
  - i.e. would put up with a lower quality camera
- **Smartphone owners disagree slightly in some areas**
  - Less willing to give up battery life, high speed data and high quality main camera
- **Price-Led segment responses are similar to featurephone users**



Key Findings: Features They Would Miss Or Would Not Do Without

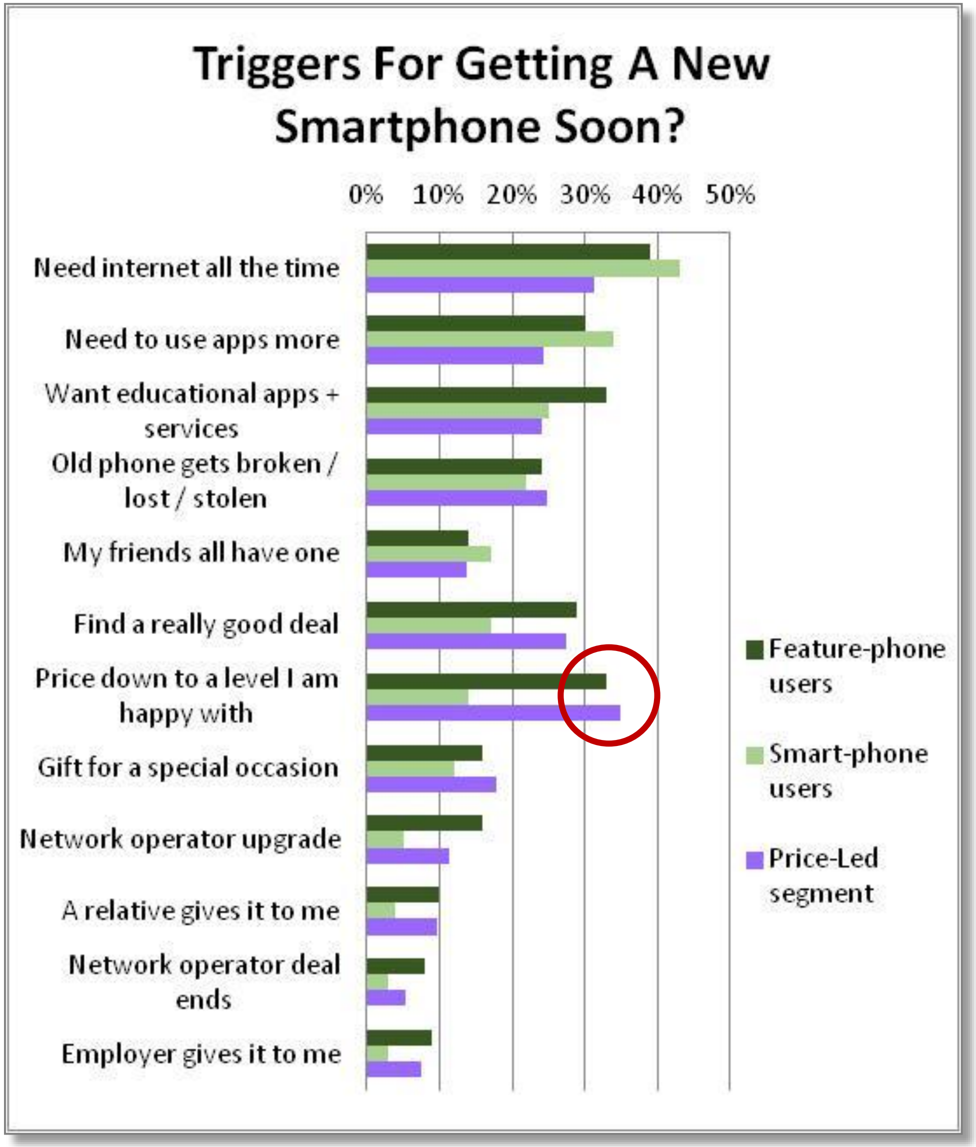
	More concerned	Less Concerned
Brazil	-	Battery life, Physical keyboard
China	Coverage	Screen works in bright sunlight
India	Screen works in bright sunlight, Payments	Toughness
Indonesia	Toughness, Data coverage	Payments
Kenya	Battery life	-
Mexico	Physical keyboard	Battery life
Nigeria	Battery life	Toughness
Saudi Arabia	-	Data coverage, Battery life

Triggers For Purchase

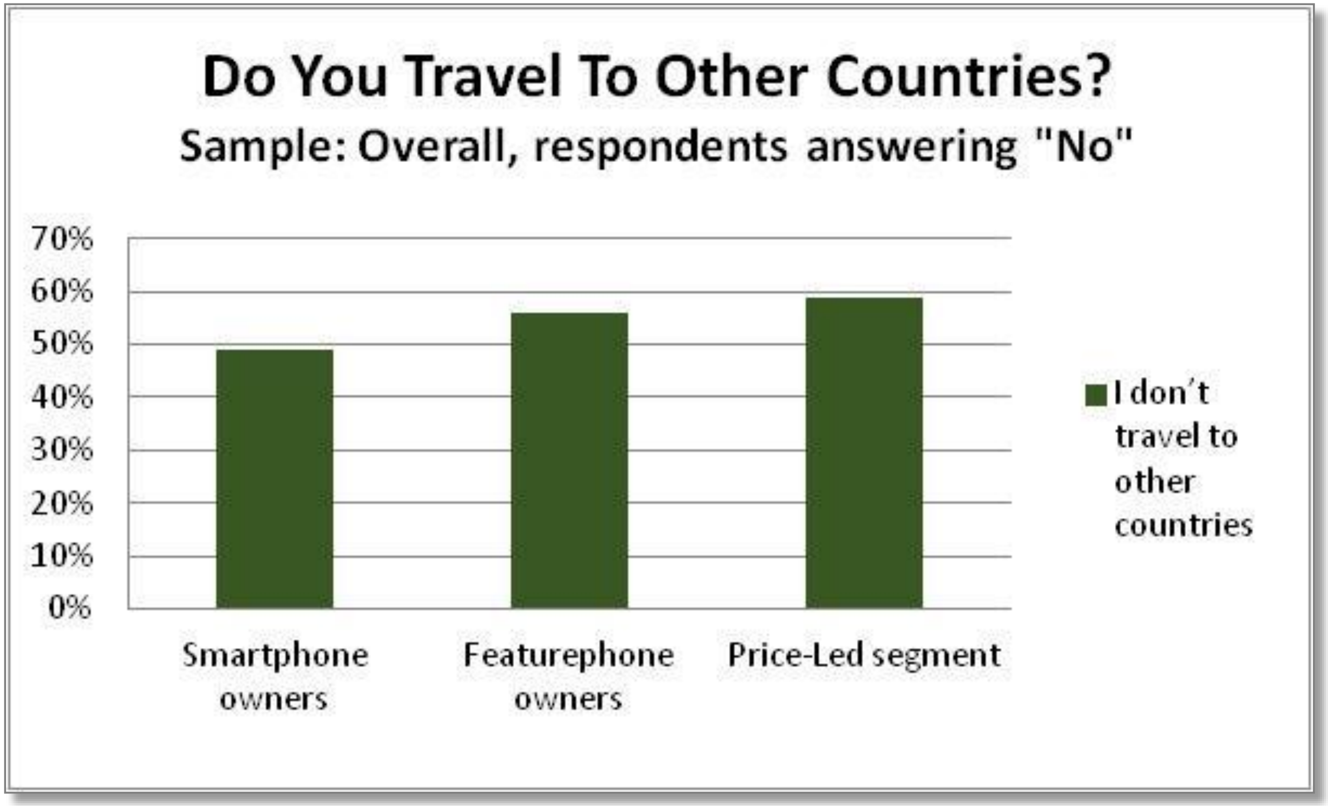
Smartphone users: triggers for purchase

Featurephone users: expected triggers

- **Internet, apps and education are the main triggers**
- **Featurephone users – high response on price coming down and deals available for switching**
  - Price-Led segment similar
- **Price-Led segment less driven by internet, apps than other users**



Travel Patterns

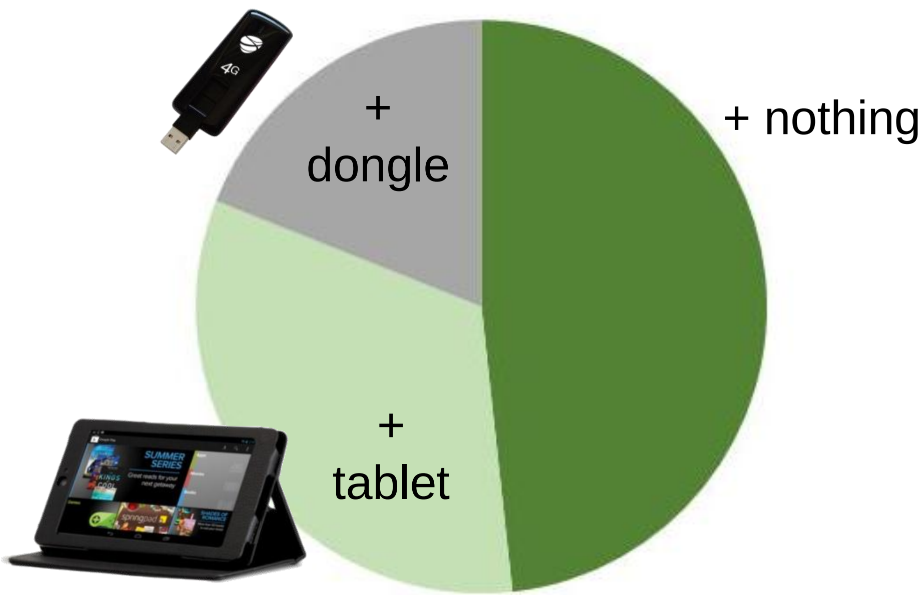


- **59% of Price-Led segment do not travel to other countries**
  - Stronger response than we saw for willingness to sacrifice roaming
- **Strongest overall response in Brazil, Nigeria, Kenya**
- **Supports the view that it may not be necessary to support all bands in the chipset**
- **Note: less true for existing smartphone owners**

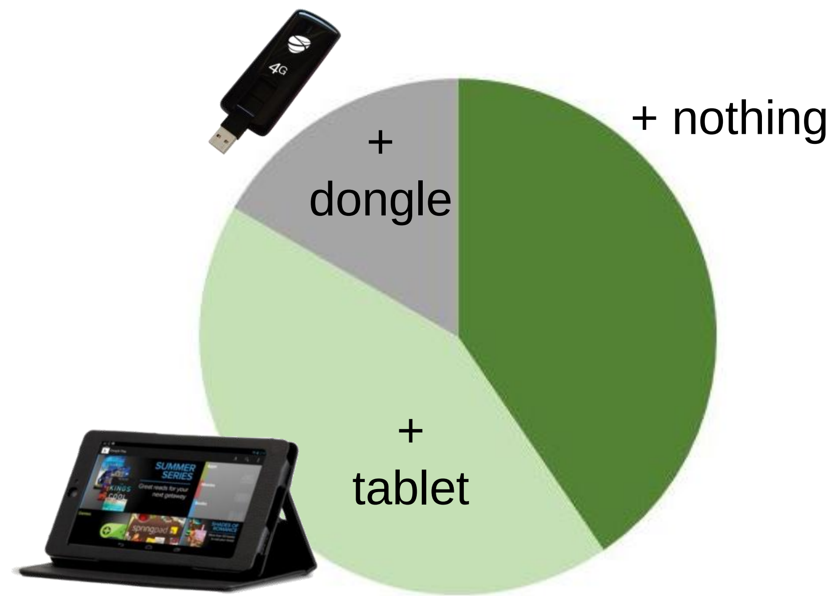
Key Findings: Should It Be A Smartphone?

If high speed mobile data devices come onto the market at much lower prices, how would you expect your use of mobile to change?

Buy a new smartphone - 58%



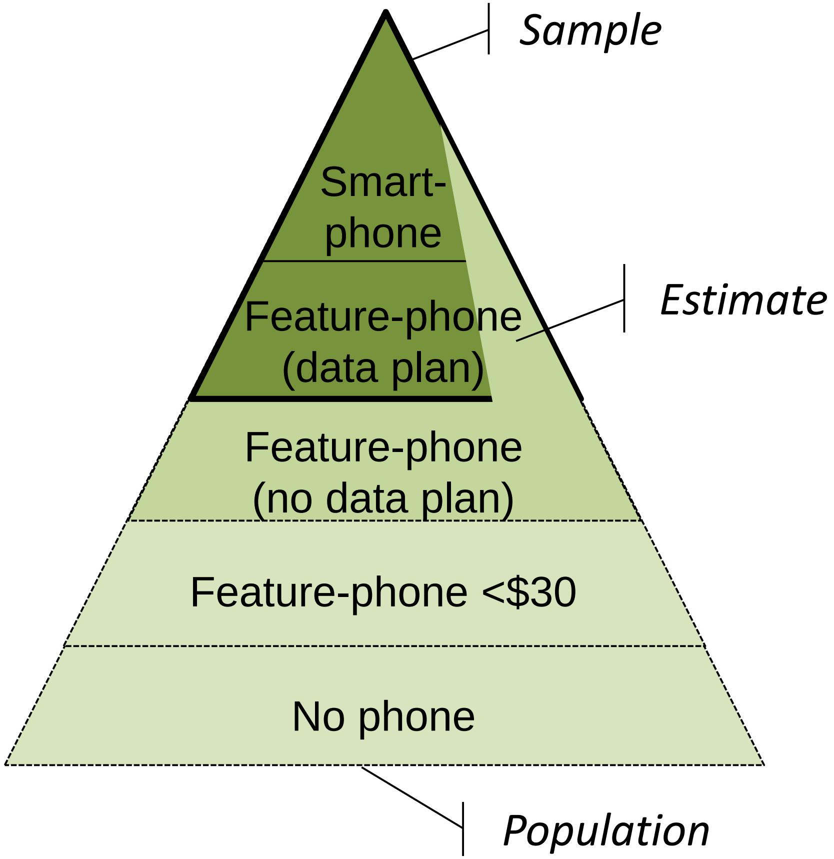
Keep existing phone - 42%



- **The majority would prefer a smartphone**
- **Tablets also show strongly – and may be substitutes for some buyers**
- **Price Led – More likely to buy a smartphone (61%), less interested in tablets (33%)**

Key Findings: Estimating The Size Of The Market Opportunity

4Q13		(m)
Total Connections		**3,037**
Of which		
▪ Phone <$30	1,500	**1,537**
Replacements:		
▪ Have a data plan		**770**
▪ Price Led		13%
▪ Addressable market		**100**
New sales:		
▪ Share addressable		100%
▪ Addressable market		**767**
Total addressable		**867**
▪ SIMs per subscriber		2.1
Total addressable people		**417**



Key Findings: Estimating The Size Of The Market Opportunity

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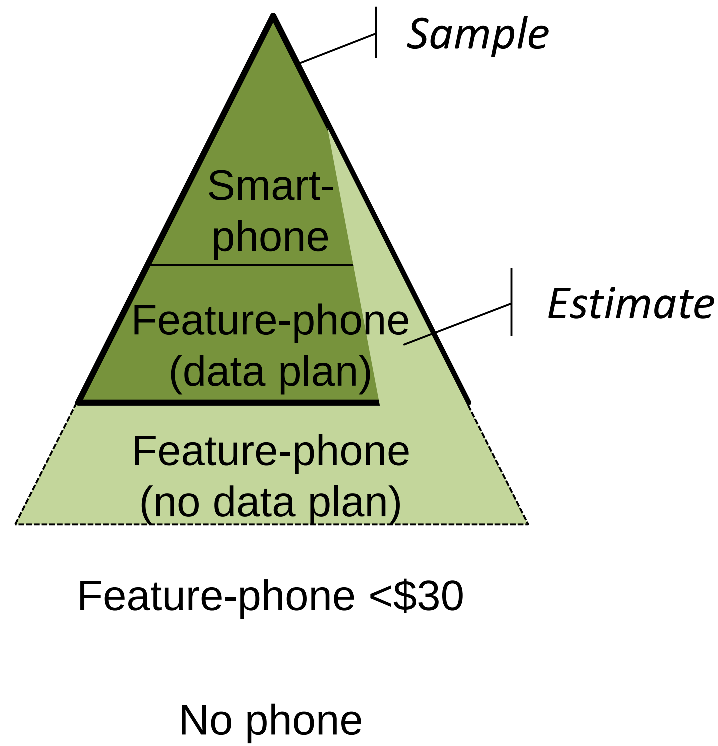
▪ **Addressable market**		**100**
New sales:		
▪ **Share addressable**		**14%**
▪ **Addressable market**		**108**
Total addressable		**208**
▪ **SIMs per subscriber**		**2.1**
Total addressable people		**100**



Recommendations

Recommendations

- **Low-cost LTE smartphone product priorities are**
  - Low price, Data coverage, Battery life
- **Key target groups are less interested in**
  - Camera quality, Screen quality, High speed data, having access to ‘000s of apps
- **Where featurephone and smartphone owners disagree**
  - Design around the views of smartphone owners
  - Their experience is important
- **Non-4G smartphone prices are falling fast**
  - Some featurephone users will find these a good substitute
  - Operators will need to work out how to position 4G devices alongside them

Recommendations

- **Tariffs will have as big an impact on cost of ownership and service usage as the cost of the device**
  - We were unable to survey service usage within time / budget constraints
- **Service and app usage will have an impact on what makes a suitable phone**
  - E.g. more use of YouTube needs a better processor, more memory, higher need for network speed
- **We recommend operators carry out a study into service usage with their own data**
  - People who have recently switched to a smartphone will be the best group to study
- **A smartphone is the right device to start with**
  - But tablets are generating a significant response
  - Worth considering tablets in a second phase?

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PANEL

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- Panellists:
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  - Rob Borthwick, Head, Group Regulatory Affairs, Axiata Group
  - Bob Cai, VP Marketing, Huawei
  - Mikael Halen, Director Government and Industry Relations, Ericsson
  - Mariana Mariana Rodríguez Zani, General Director, Convergencia Research and Convergencialatina
  - Marcelo Pizarro, Advisor, Policy and Regulatory Division at Subtel

THANK YOU

www.gsma.com/spectrum/initiatives