

Mobile broadband wireless access.

- Connecting all EU citizens against economic downturn

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Affairs

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Mobile broadband is serving the **political agenda**

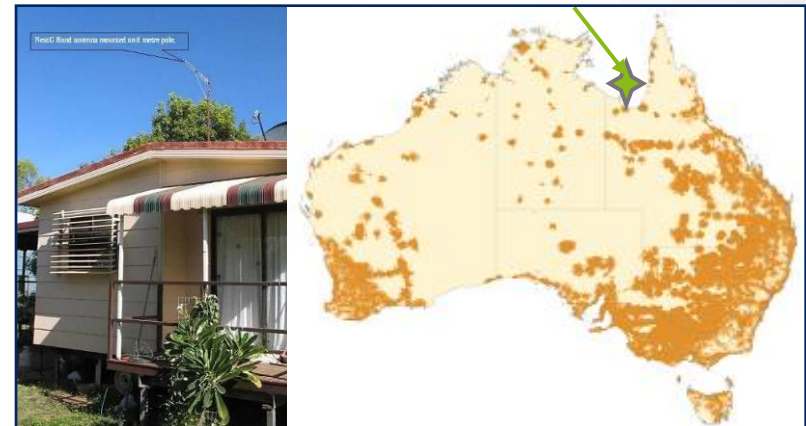
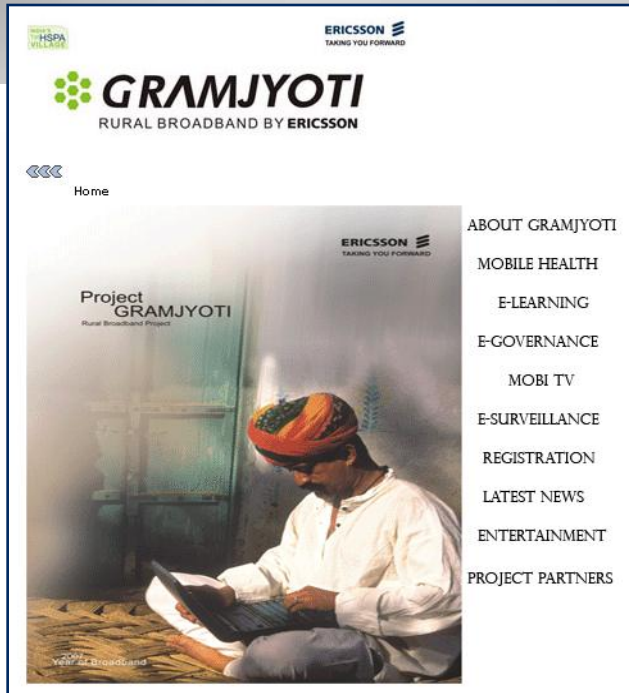
- › mobile broadband potential should be fully engaged; **maximizing the national growth**
 - but, today it is a struggle in the regulatory domain, mobile broadband needs recognition
- › mobile broadband might be the **first, and only connection to the internet** for many
 - mobile now equal to fixed internet connection
- › with **spectrum** at hand; presenting a significant **societal** and **economical** opportunities for citizens
 - needs to be included in balanced decisions
- › reducing the **digital divide**; between people on one hand and regions on the other hand



holding such responsibilities, regulatory experiments should be avoided, spectrum still need to be made available and be harmonized



HSPA enables cost effective broadband to all...



Telstra provided HSPA to 98% of pop in 10 months

Also rural areas like Mornington Island in Gulf of Carpentaria, Australia

over 120km from serving tower

18 villages and 15 towns provided internet services using HSPA



Mobile broadband modules

- summary of 2009 so far...

HSPA de facto standard for mobile broadband

Netbook trend shows very strong attach rate for mobile broadband

Majority of notebooks prepared for built-in mobile broadband

Increased focus on consumer segment

Demand for smaller form factor has already started

2020 Vision:

"50 billion connected devices"



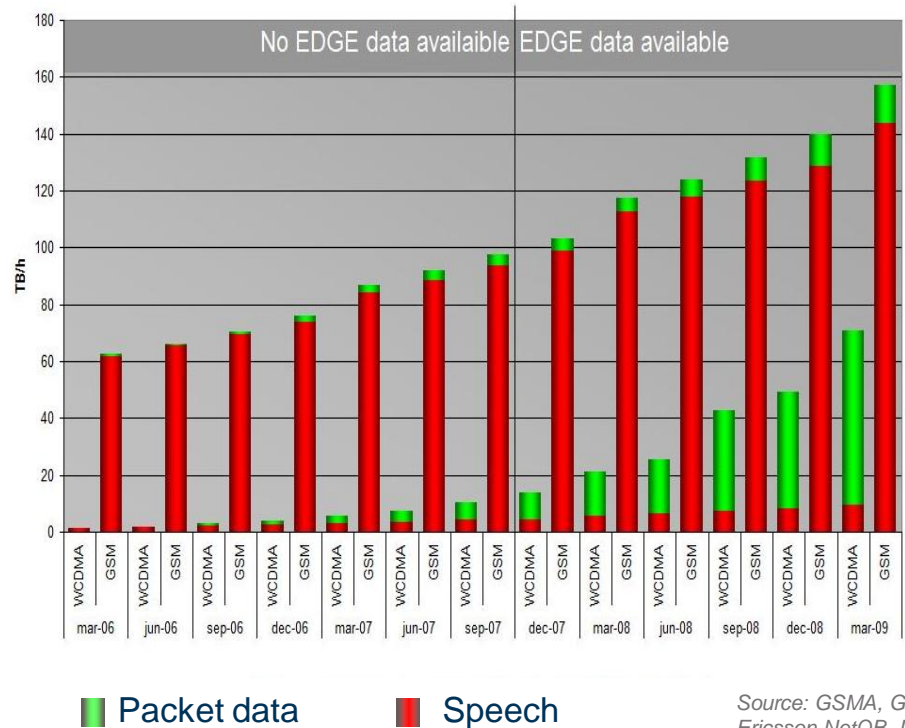
Strong growth in mobile broadband

- world wide status

Rapid subscriber uptake

- 410 million WCDMA/HSPA subscribers
- 10 million new HSPA subscribers per month, 150 million in total
- 1600 HSPA devices** are launched from 150 suppliers
- HSPA is deployed in 250 networks in 110 countries/territories
- 90%** of the traffic in WCDMA/HSPA networks **is data**

Exceptional traffic growth

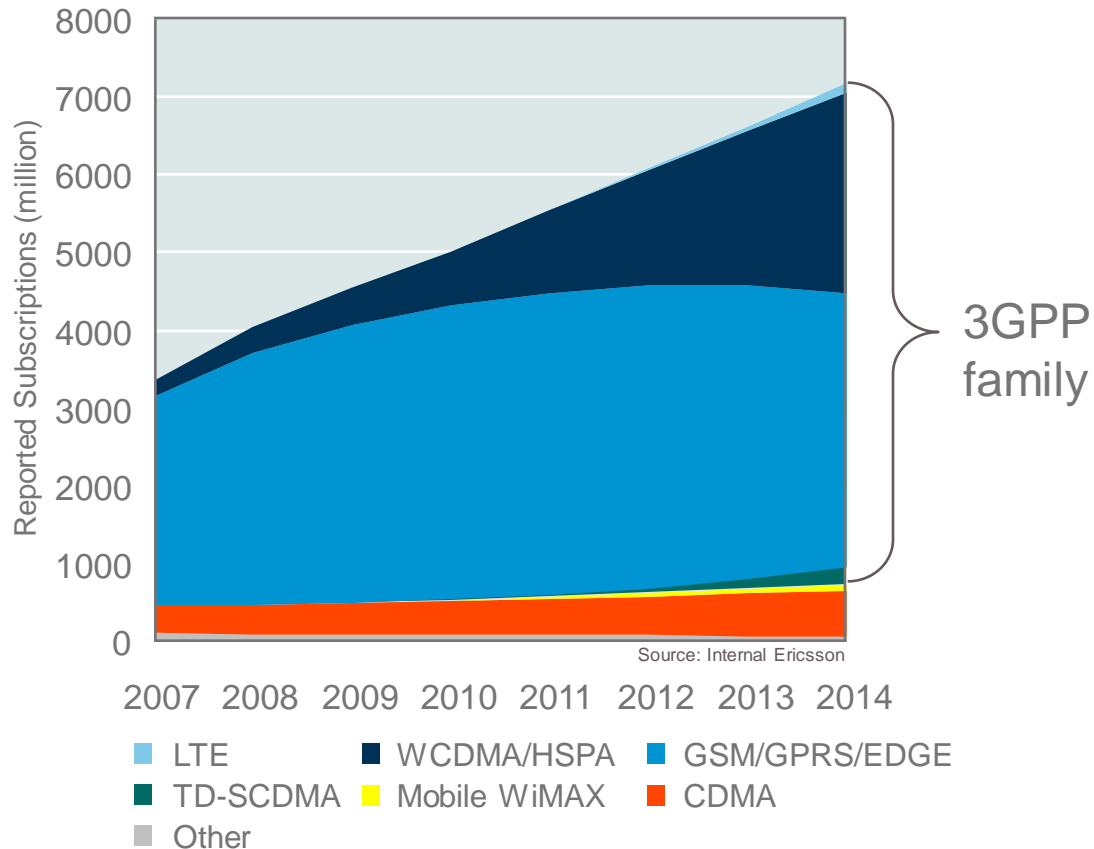


Source: GSMA, GSA, and Ericsson NetQB, March-2009

[LTE will accelerate this trend further – more spectrum needed!]

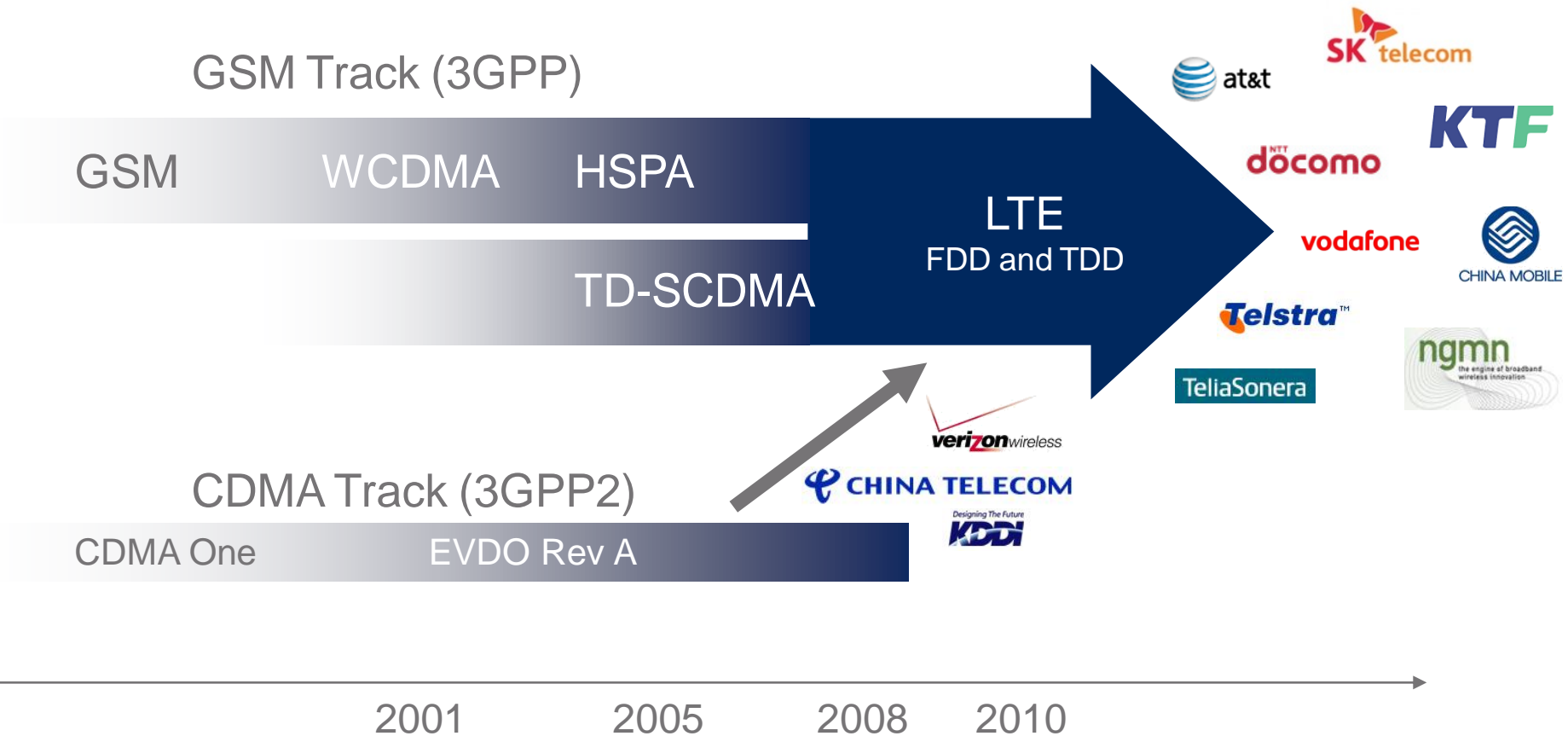
Towards 50 billion 2020

This slide contains forward looking statements



[Harmonized spectrum is the key mass market enabler]

A common technology evolution



[LTE the Global standard for Next Generation (4G)]

Mobile broadband speed evolution

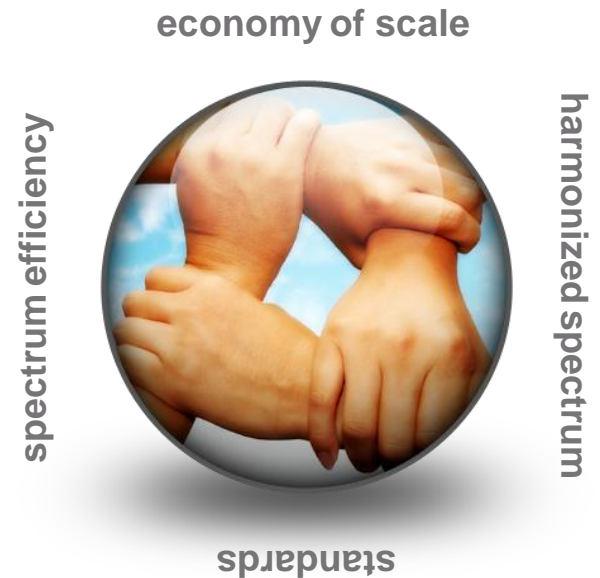
	HSPA+	LTE	Future LTE releases
Market impact	2009	2010	~2014
Peak rate	42 Mbps	~150 Mbps	~1000 Mbps
Typical user rate downlink	1-10 Mbps	10-100 Mbps	Operator dependent
Typical user rate uplink	0.5-4.5 Mbps	5-50 Mbps	Operator dependent

[Excellent user and networks experience]

Harmonized spectrum and standards

Harmonized spectrum is necessary and key for the public mobile broadband access developments; as for the industry to be able to successfully respond to national policy goals

- › **economy of scale** and **affordability**
 - mass markets add these values
- › easy **cross-border coordination**
- › **cross-border operation**
- › **global roaming** capabilities
- › **interoperability**
- › **efficient use** of spectrum (also in border areas)



as to be able to provide affordable services

Overall spectrum objectives

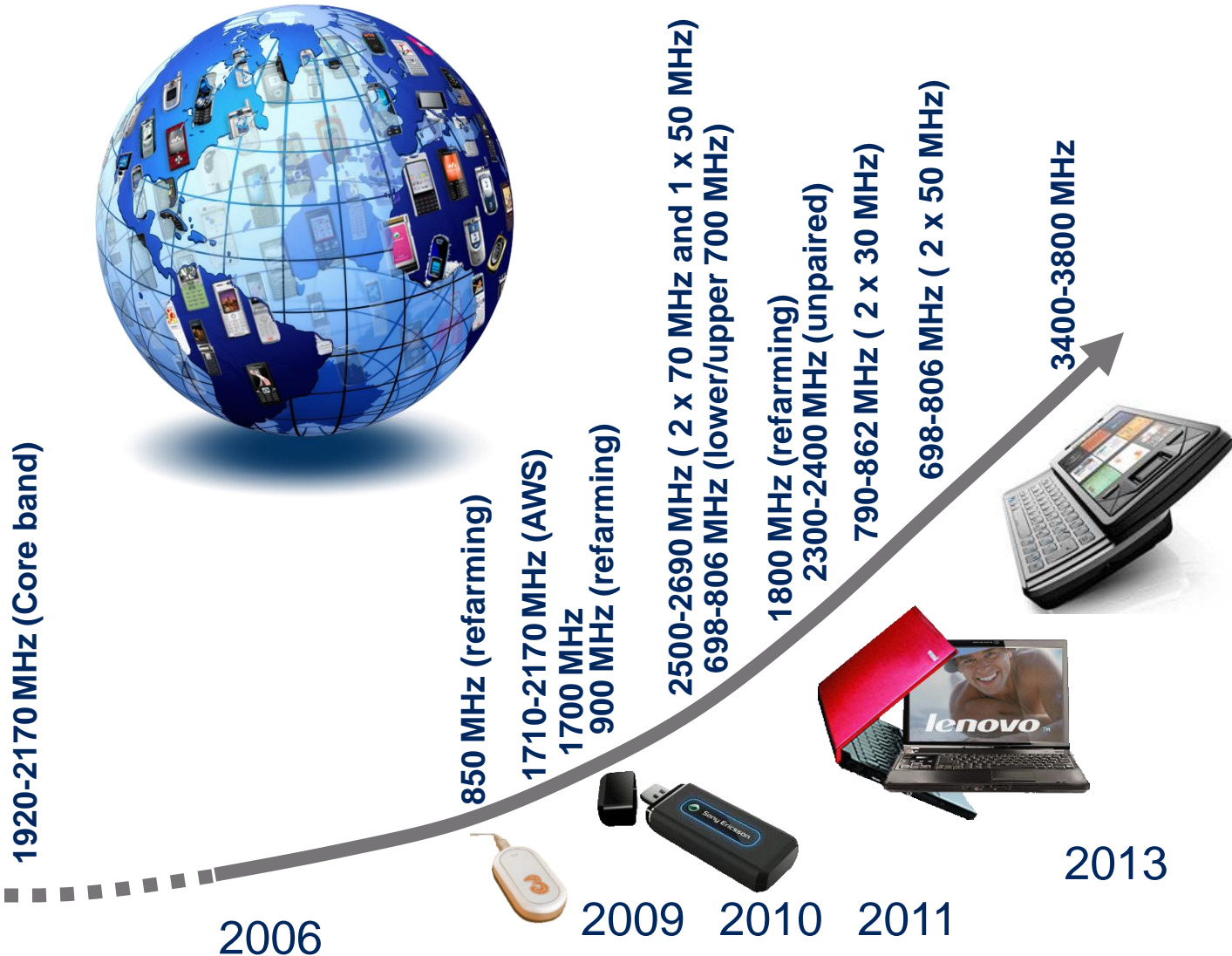


thriving for global, or regional, harmonization of frequency bands for mobile and fixed broadband radiocommunication services;

- the **right spectrum** (propagation and coverage)
- the **right combination** of spectrum bands
- **contiguous** spectrum (**20 MHz** channels for high data rates)
- **aligned and common** duplex arrangements (**separate** FDD and TDD)
- **aligned channel raster**, and/or block arrangements (**5 MHz** channel raster)
- minimizing **interference** between different operations; minimizing the need for **guard bands** / restricted channels (supported by technology developments)
- under **licensed** schemes (**QoS**)

[allow for mobile broadband for all consumers]

Broadband spectrum time line



3800-4200 MHz

4400-4990 MHz

50 billion connections

80 %
of the total broadband subscriptions are mobile year 2013



Converged radio regulations

Today

mobile



personal and mobile

fixed



households and businesses

broadcasting



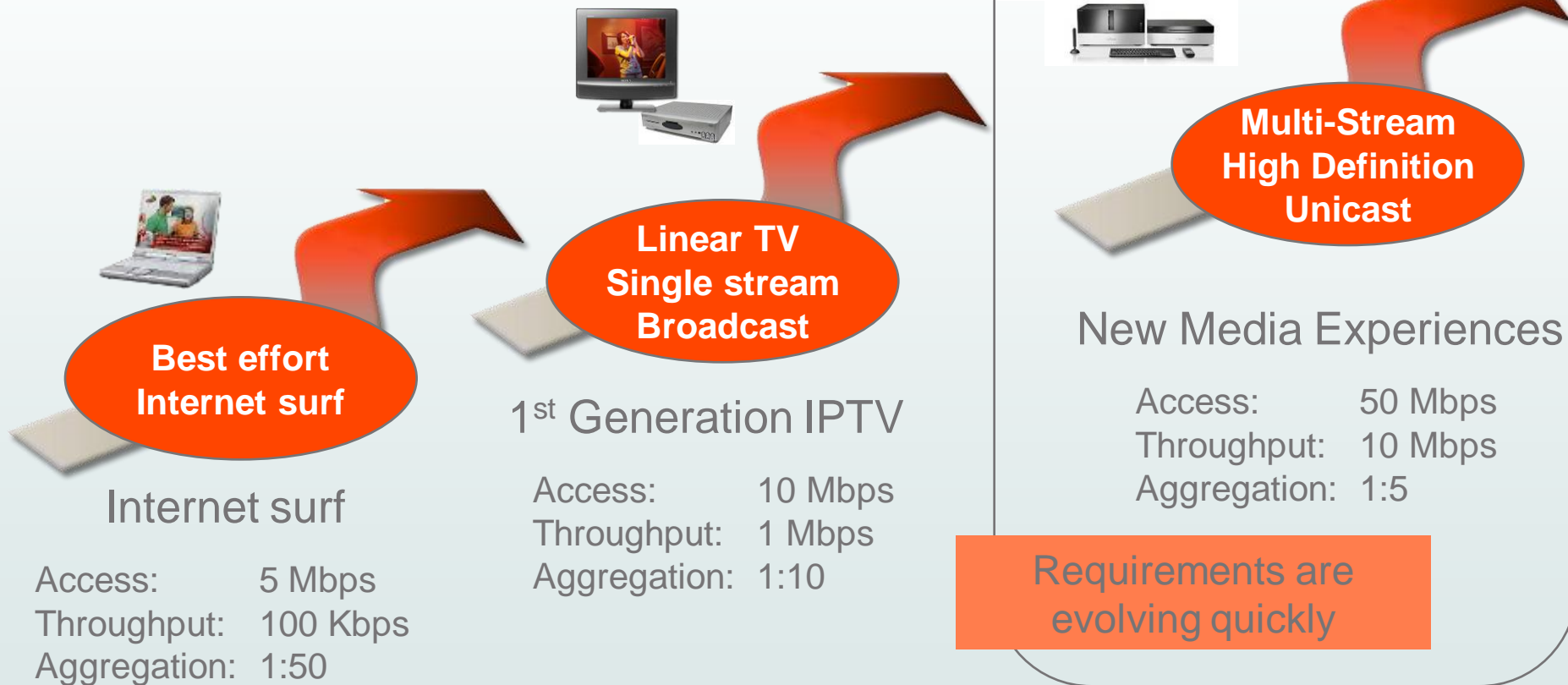
households

Tomorrow



personal, mobile, fixed (complementing),
any device and services wherever-whenever

Three residential broadband steps

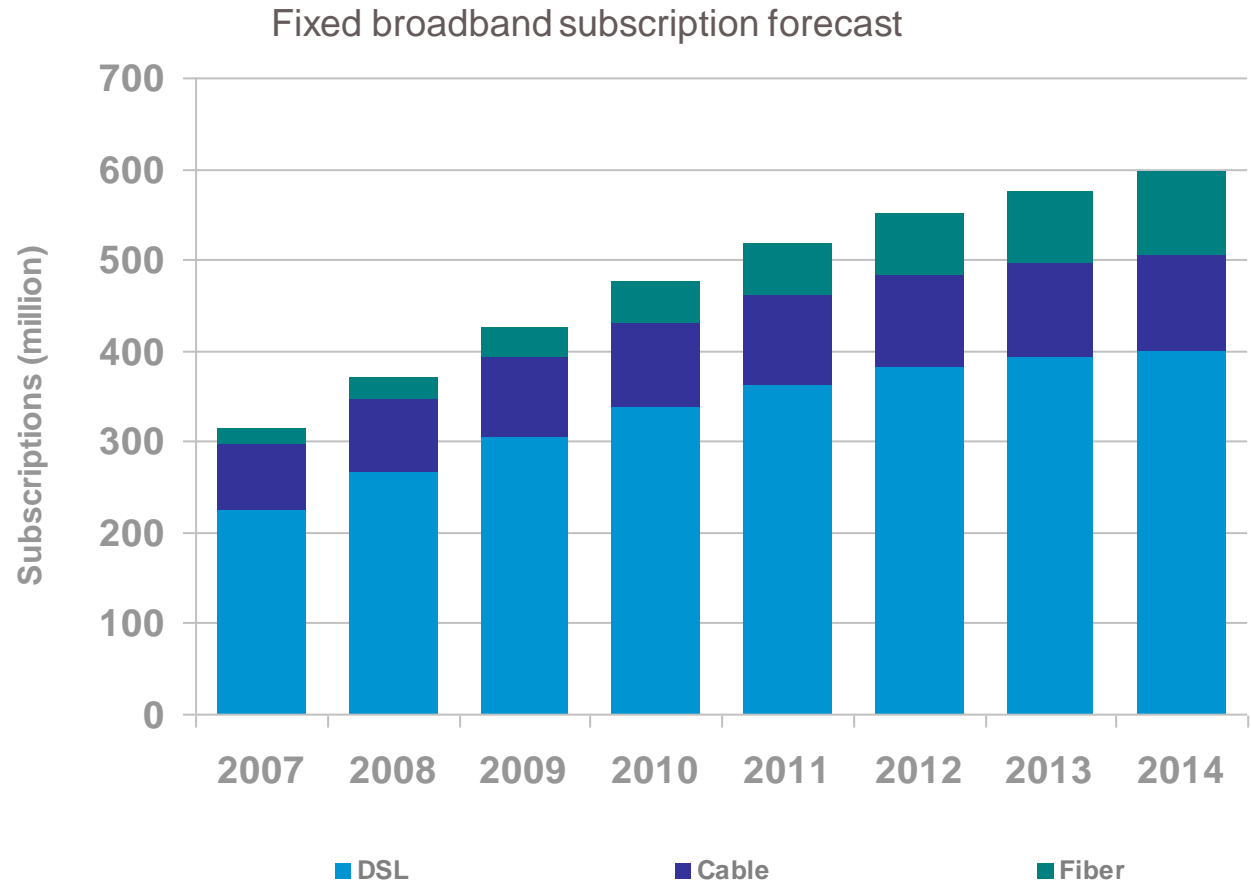


High definition TV & Video will be the main driver of capacity in access network

Deep fiber business case

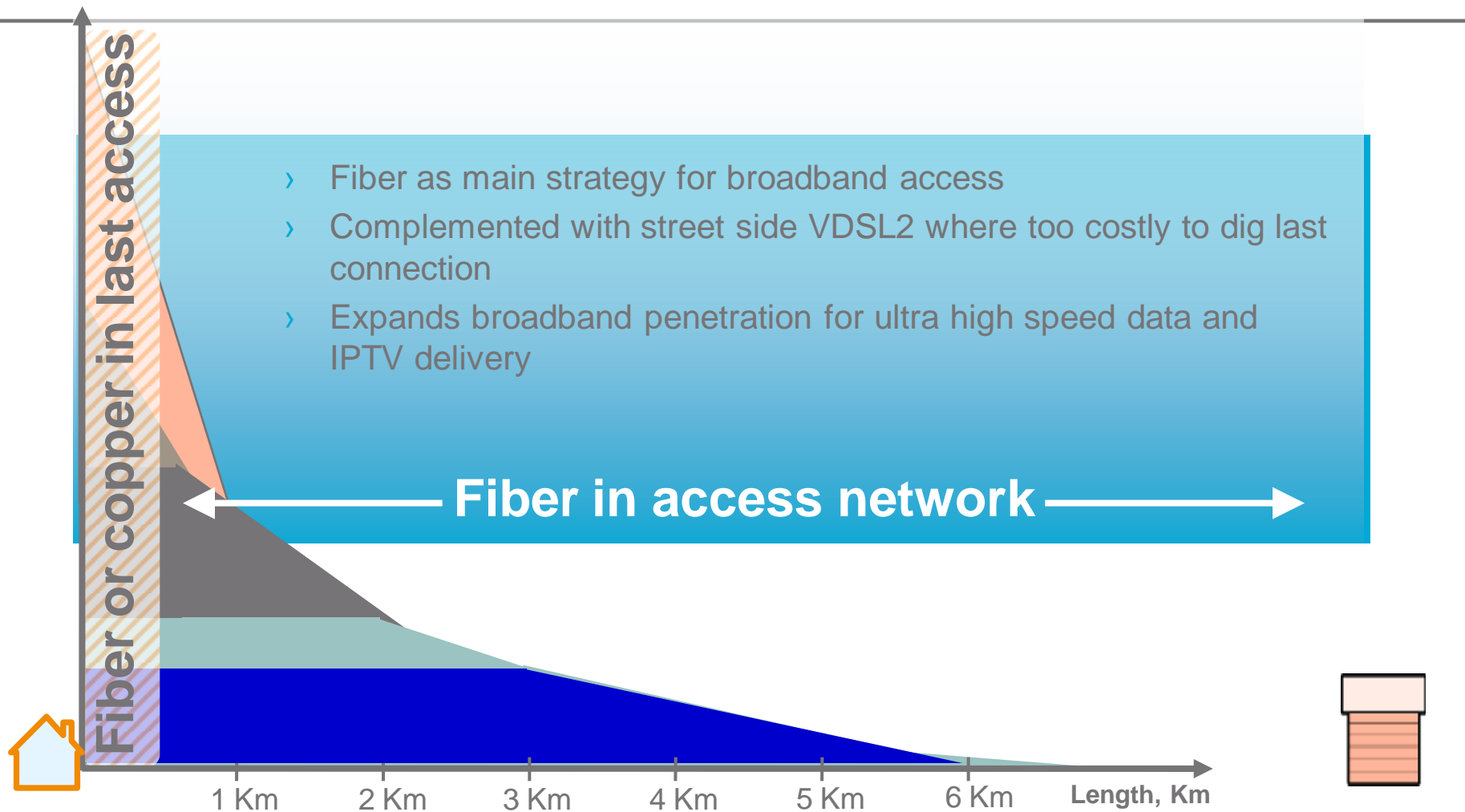
- › Fiber access is not built to provide internet access.
- › A deep fiber project is difficult to justify by High-Speed Internet (and telephony), even with basic IPTV.
- › Deep fibre and IPTV increases the value of the access and secures the long term role of the service provider in the value chain.
- › The business case is about building the most valuable and cost-effective access service
 - and to use it to deliver more value.
- › Fixed broadband also becoming a complement to a dominating Mobile Broadband Access, adding service capabilities, bandwidth and capacity to buildings and fixed consumers with very high bandwidth demand

Fixed broadband subscriptions



Source: Ericsson Internal

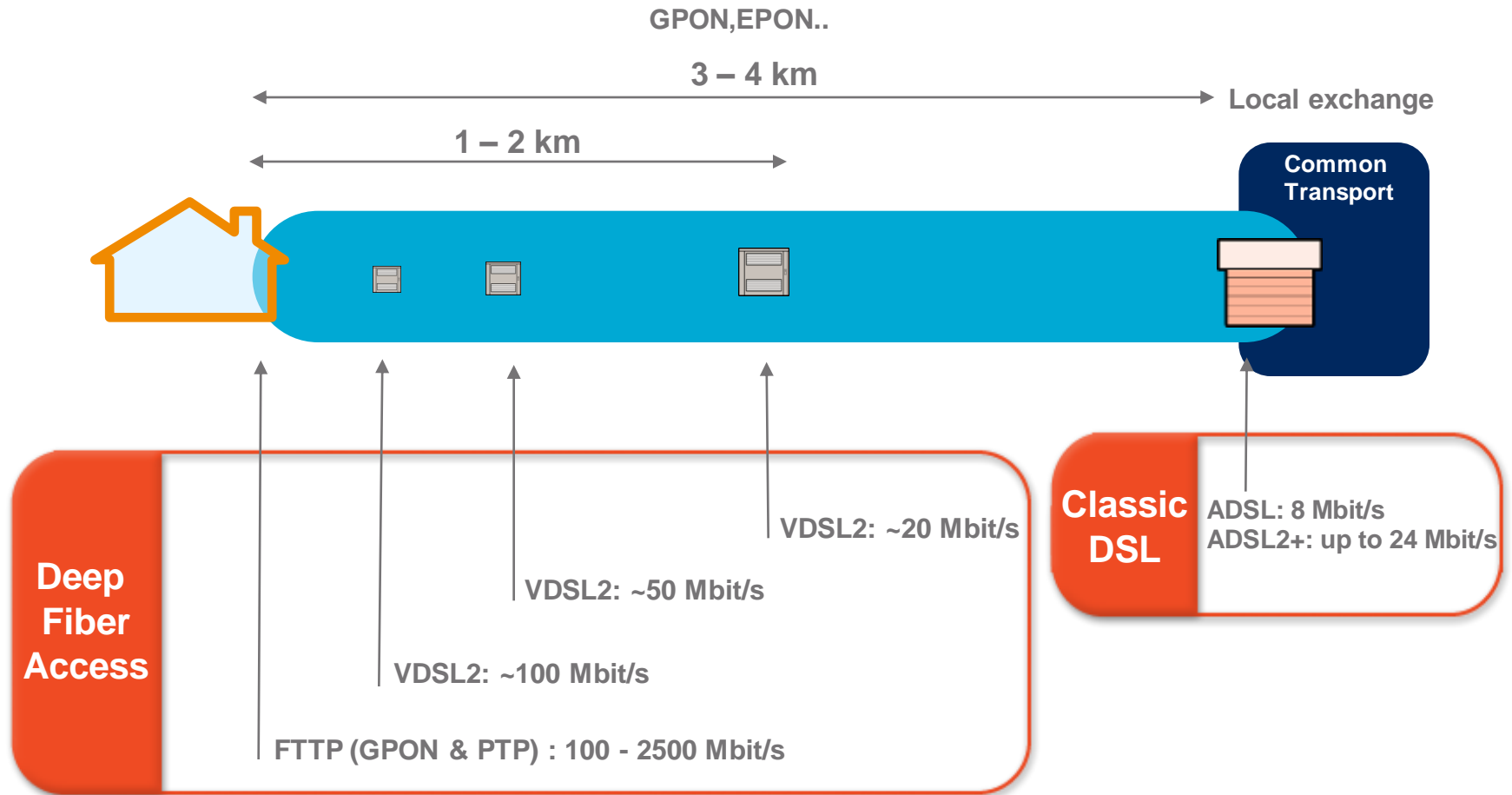
Deep Fiber Access for Broadband Expansion



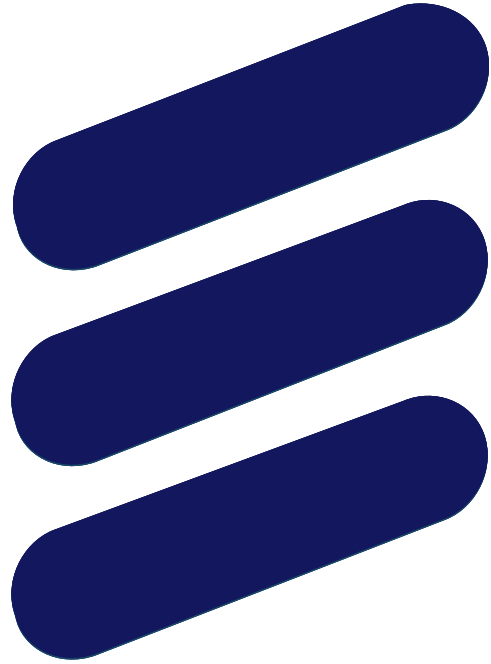
DFA: Fiber + DSL to expand broadband penetration

Transformation to Deep Fiber Access

Multiple Deep Fiber alternatives – VDSL2/GPON/PTP Fiber



Closer to customer to increase speed



ERICSSON