



BROADBAND FOR ALL

BROADBAND AS ENABLER FOR NEW SERVICES AND ECONOMIC GROWTH

ITU-D REGIONAL DEVELOPMENT FORUM FOR EUR AND CIS REGION "NGN AND BROADBAND, OPPORTUNITIES AND CHALLENGES", CHISINAU (MOLDOVA), 4-6 MAY 2010

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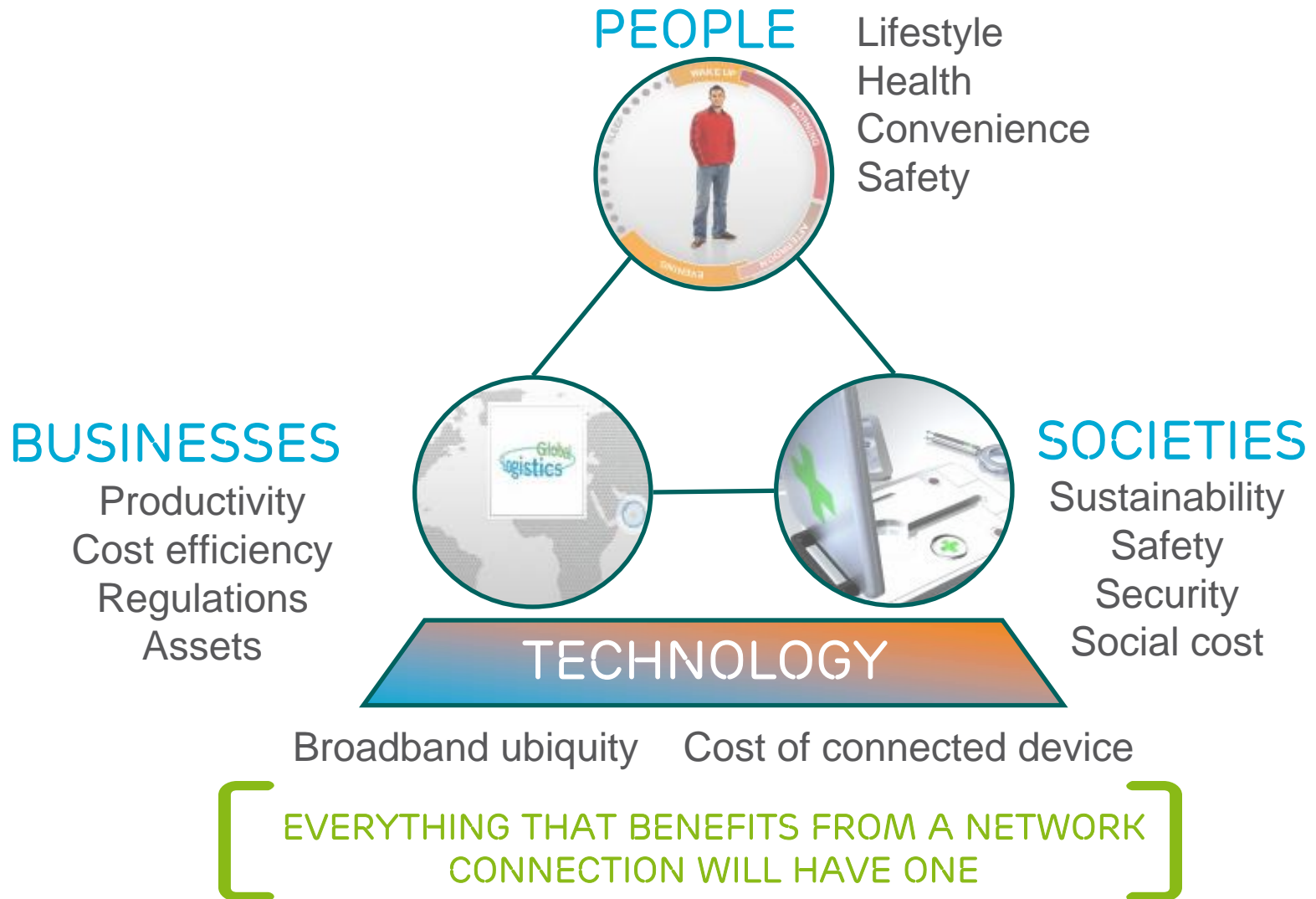
THE WORLD IN 2020



VISION 2020: 50 BILLION CONNECTIONS



DRIVERS FOR NETWORKED EVERYTHING



TECHNOLOGY ENABLERS

Higher network speeds
at lower cost

More powerful and less
expensive mobile modules

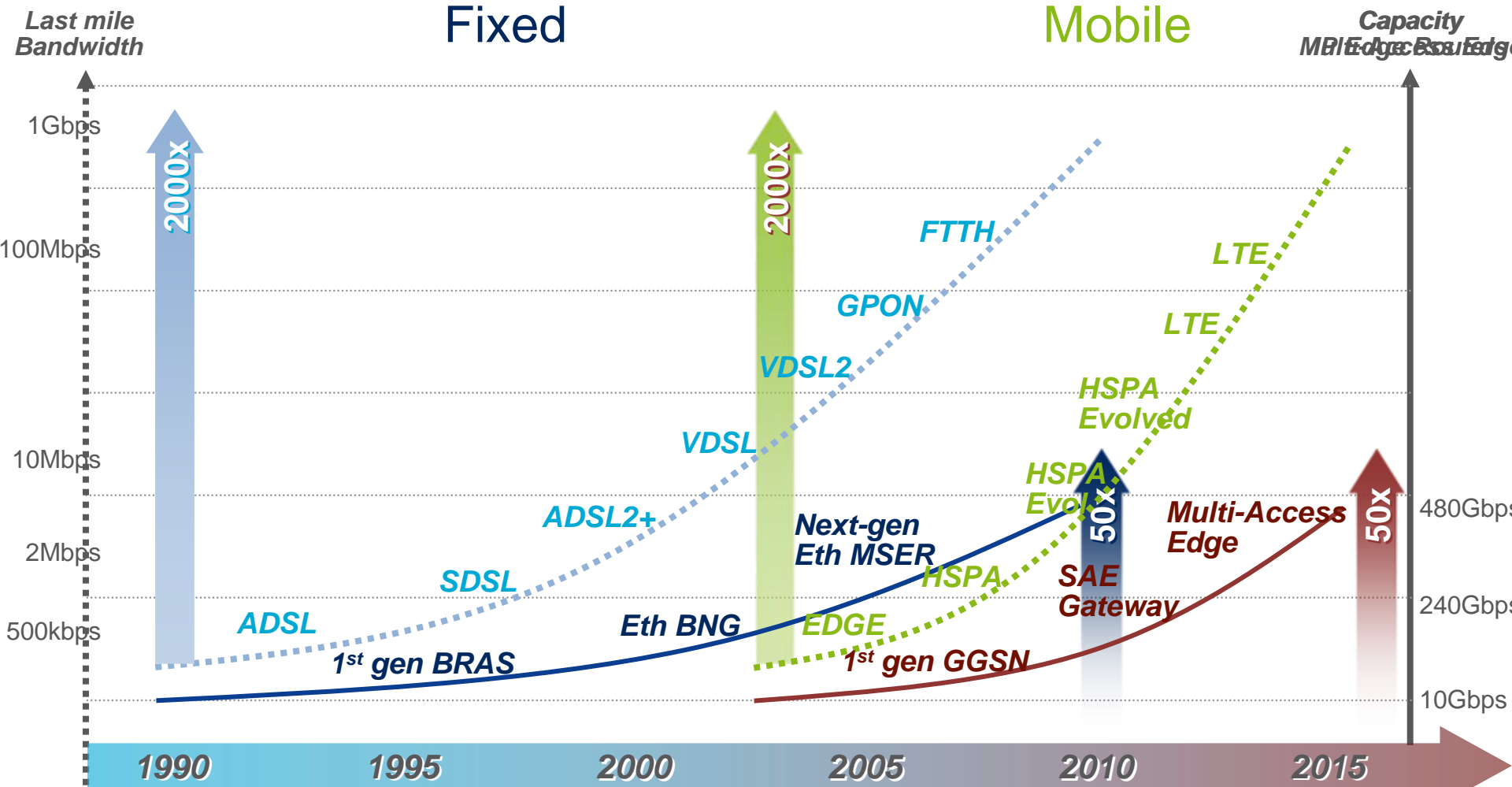
Thinner and cheaper
displays

New and low cost
sensor technologies

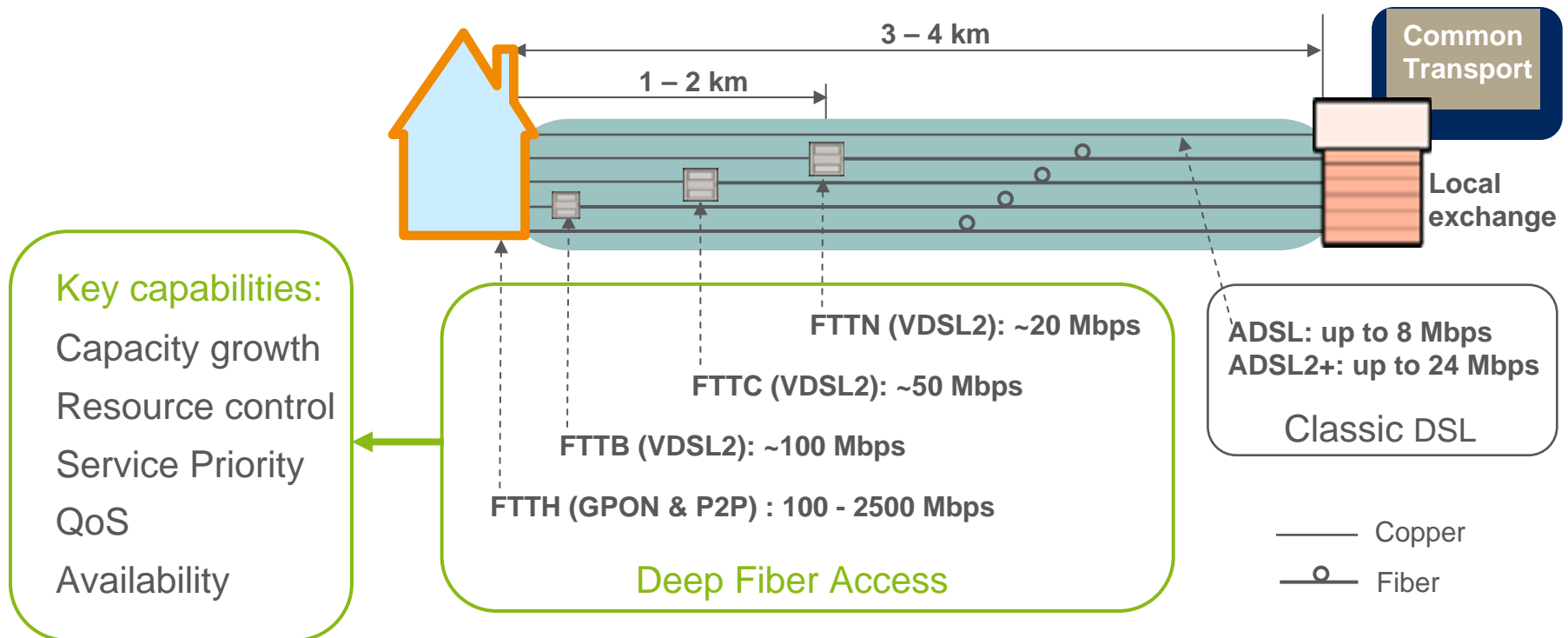
New materials

TECHNOLOGY EVOLUTION

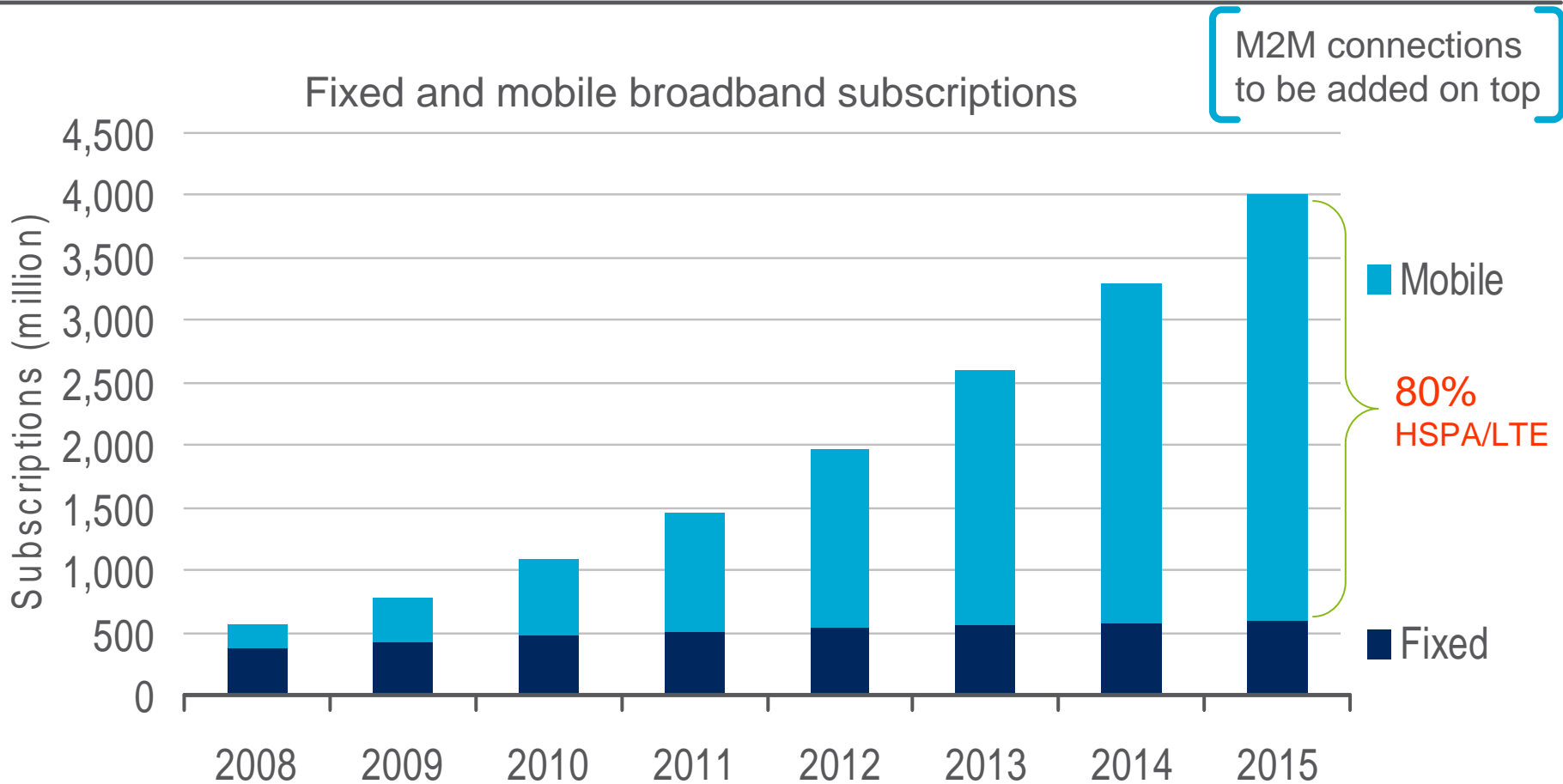
BROADBAND CAPACITY



TRANSFORMATION TO DEEP FIBER ACCESS



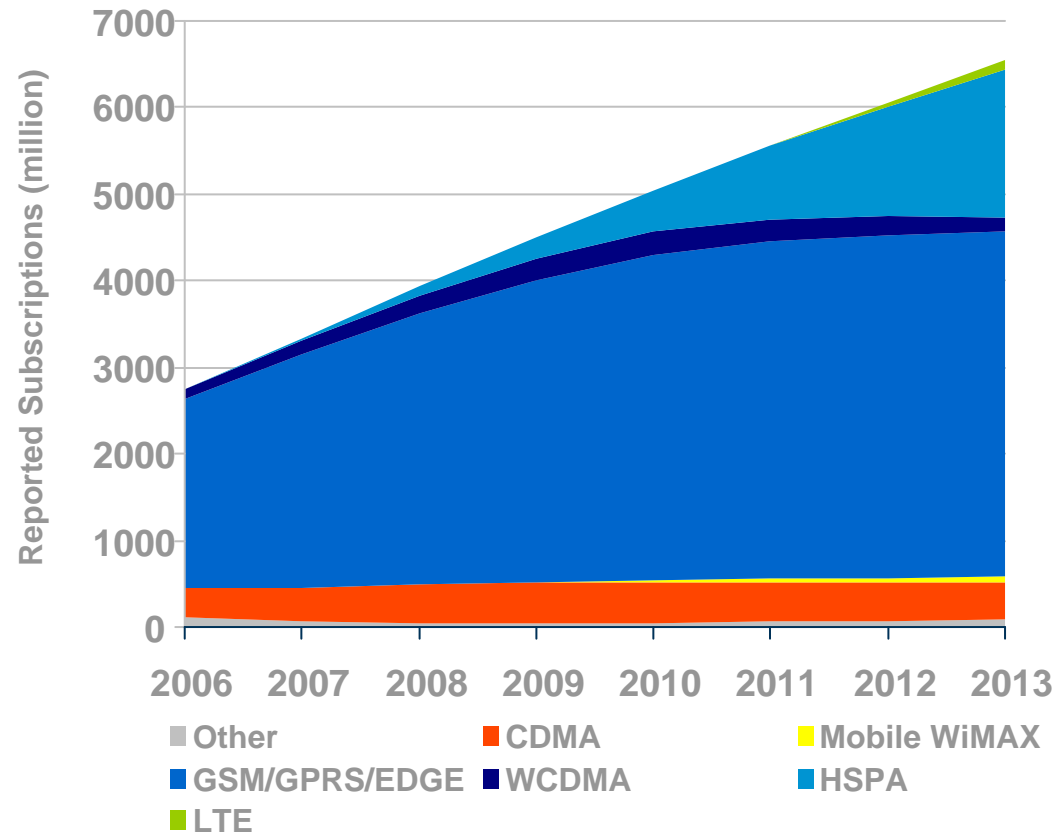
BROADBAND IS GOING MOBILE



Mobile Broadband includes: CDMA2000 EV-DO, HSPA, LTE, Mobile WiMAX, TD-SCDMA
Fixed broadband includes: DSL, FTTx, Cable modem, Enterprise leased lines and Wireless Broadband

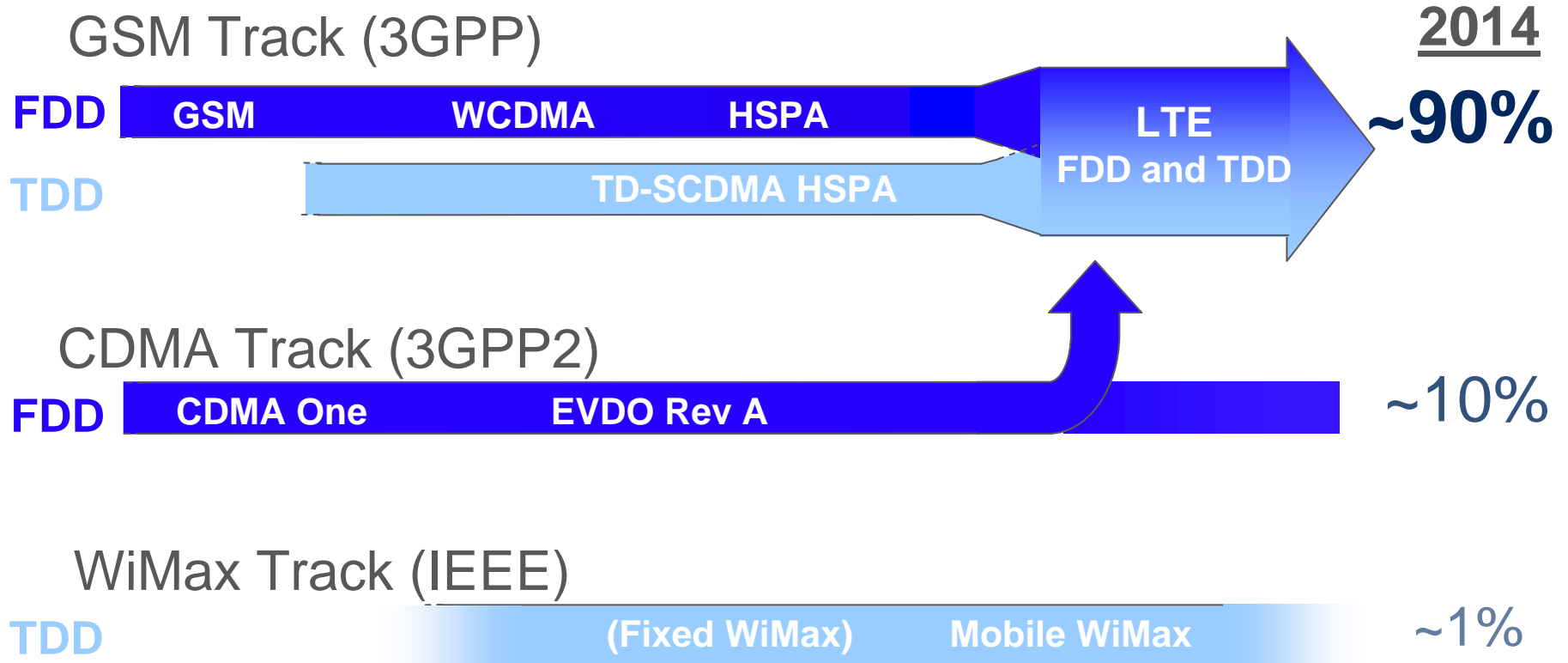
85% OF BROADBAND SUBSCRIBERS ARE MOBILE IN 2015

3GPP FAMILY SUCCESS GIVES ECONOMIES OF SCALE



COMMON LTE EVOLUTION

ALIGNMENT FOR WCDMA/HSPA, TD-SCDMA (CHINA) AND CDMA



LTE THE GLOBAL STANDARD FOR NEXT GENERATION (4G)

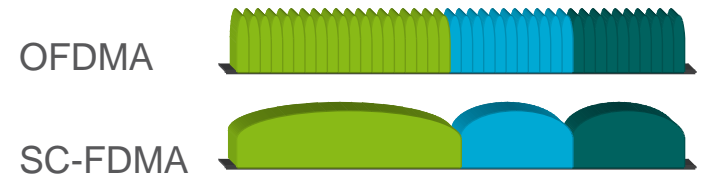
MOBILE BROADBAND SPEED EVOLUTION



KEY LTE RADIO ACCESS FEATURES

> LTE radio access

- Downlink: OFDM
- Uplink: SC-FDMA



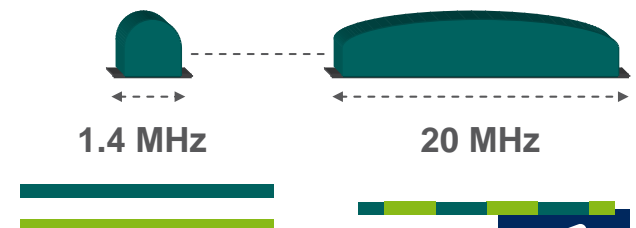
> Advanced antenna solutions

- Diversity
- Beam-forming
- Multi-layer transmission (MIMO)



> Spectrum flexibility

- Flexible bandwidth
- New and existing bands
- Duplex flexibility: FDD and TDD



CURRENT 3GPP BANDS – early LTE

FDD		
Band	“Identifier”	Frequencies (MHz)
1	IMT Core Band	1920-1980/2110-2170
2	PCS 1900	1850-1910/1930-1990
3	GSM 1800	1710-1785/1805-1880
4	AWS (US & other)	1710-1755/2110-2155
5	850	824-849/869-894
6	850 (Japan)	830-840/875-885
7	IMT Extension	2500-2570/2620-2690
8	GSM 900	880-915/925-960
9	1700 (Japan)	1750-1785/1845-1880
10	3G Americas	1710-1770/2110-2170
11	UMTS1500	1428-1453/1476-1501
12	US 700	698-716/728-746
13		776-788/746-758
14		788-798/758-768
17		704-716/734-746

TDD		
Band	“Identifier”	Frequencies (MHz)
33,34	TDD 2000	1900-1920 2010-2025
35,36	TDD 1900	1850-1910 1930-1990
37	PCS Center Gap	(1915) 1910-1930
38	IMT Extension Center Gap	2570-2620
39	China TDD	1880-1920
40	2.3 TDD	2300-2400

Additional (FDD&TDD)		
	3.5 GHz	3400-3600
	3.7 GHz	3600-3800

LTE IN NEW AND EXISTING BANDS

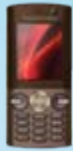
FULL SERVICE BROADBAND NETWORKS

THE BASE FOR THE FUTURE

Today

Mobile

Fixed



>4B subscribers

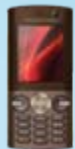
Personal services, Mobility, Interoperable
Subscriber scale optimized



>400M subscribers
Per household
Cost/bit optimized

Tomorrow

Full Service Broadband



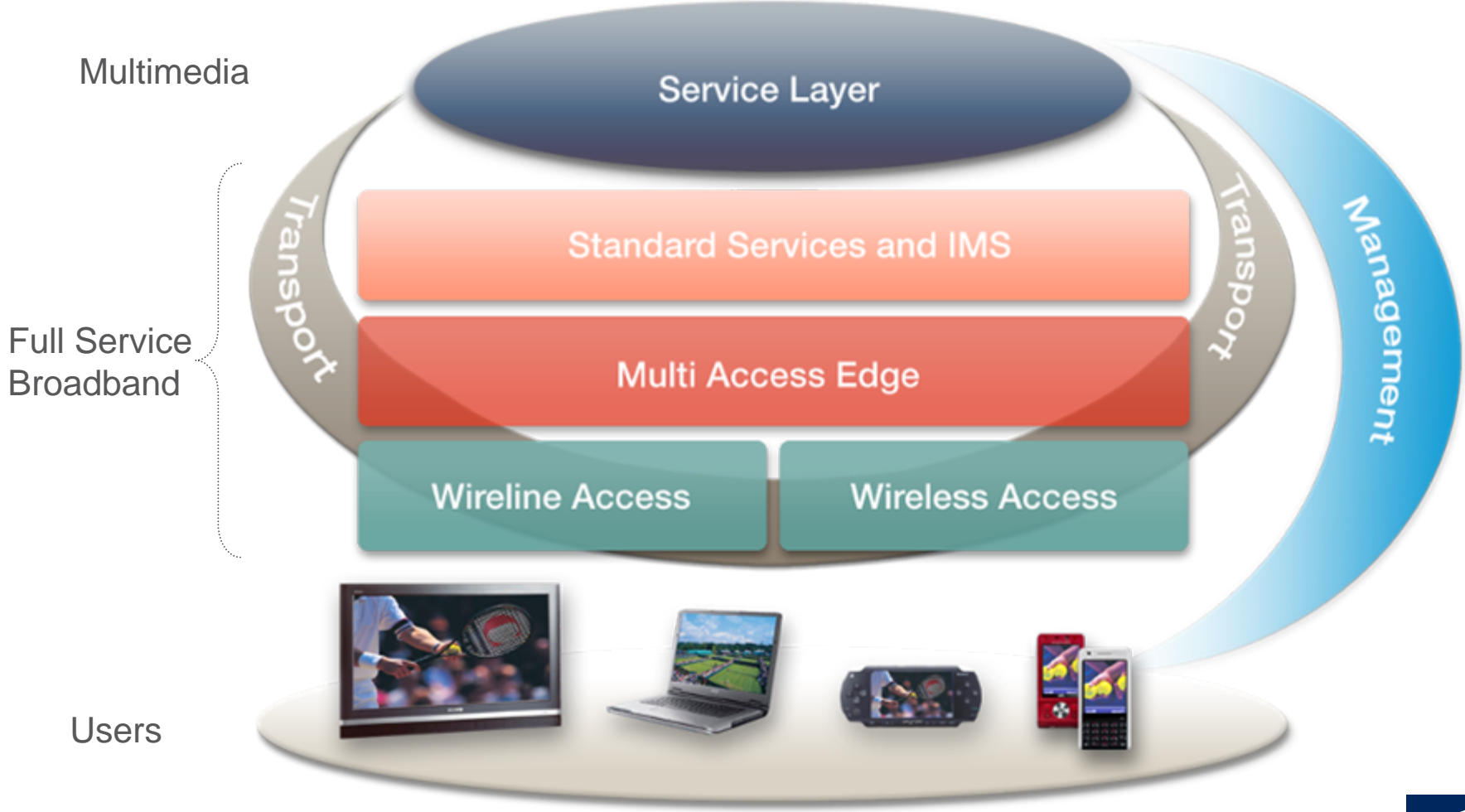
50B connections

Personal, Mobility, Interoperable
Subscriber, device & cost/bit optimized

MOBILE EXCELLENCE - THE BASE FOR PERSONALIZED SERVICES, INTEROPERABILITY AND SCALE



FULL SERVICE BROADBAND



BROADBAND HAS POSITIVE EFFECTS ON THE ENVIRONMENT AND THE ECONOMY



Smart use of ICT can offset global CO₂ emissions by 15% by 2020

1% increase in broadband penetration can increase employment by 0.2-0.3% per year (US)

BROADBAND TO ALL AND EVERYWHERE NOT ONLY AT HOME OR WORK

Mobile
Broadband



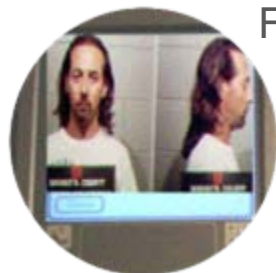
Field operations



Broadband
on the move



Supporting
Firefighting



Supporting the
local police

**A flavor of Services
& Applications**



Reporting traffic
situation



Connecting the
unconnected

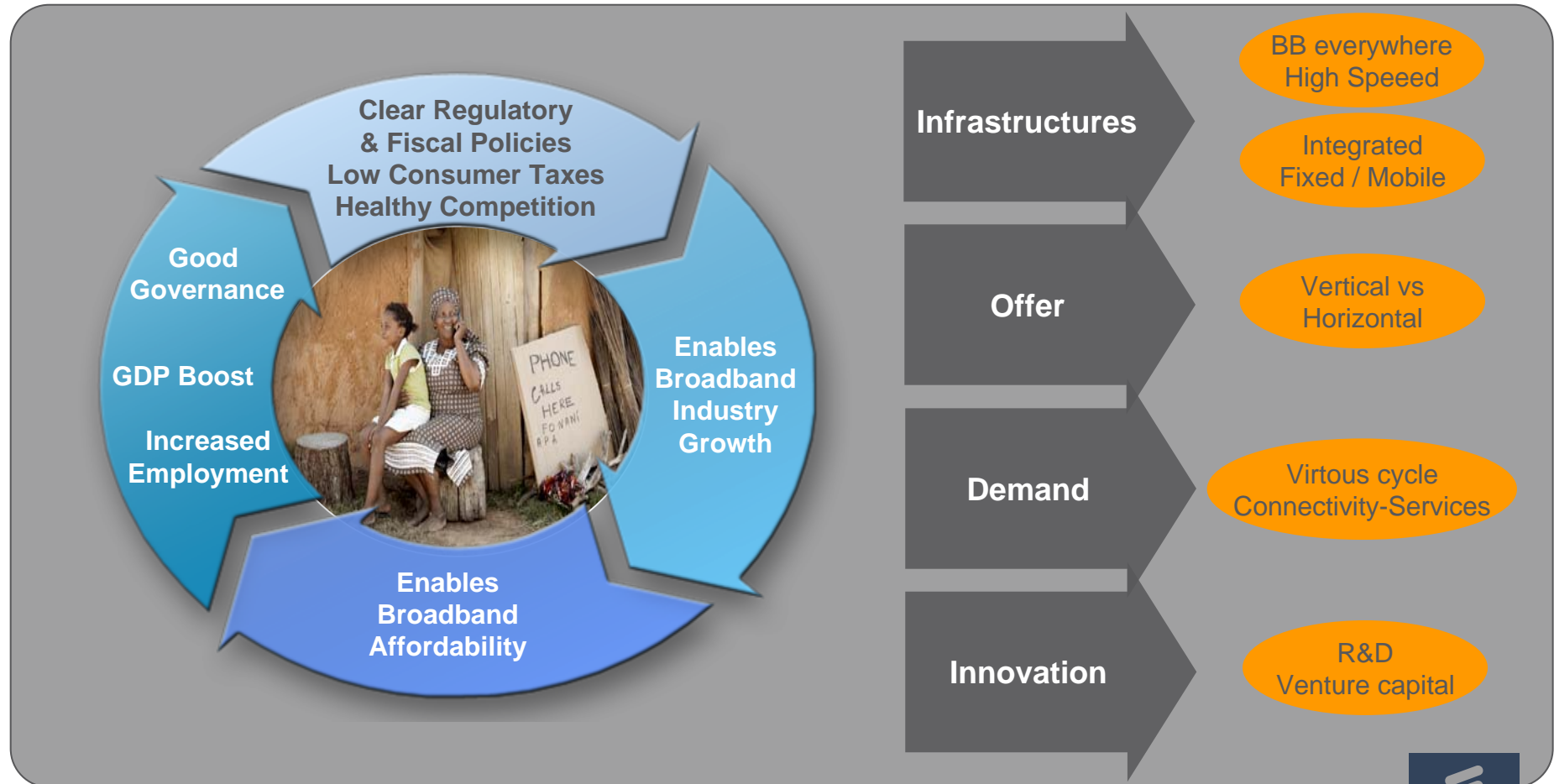


Medical services



Anywhere Internet access
& Entertainment

MOBILE AND FIXED BROADBAND SERVICES SPUR POSITIVE GROWTH CIRCLE



AN ALL COMMUNICATING WORLD



TELECOMMUNICATIONS - THE WORLD'S GROWTH ENGINE



CONCLUSIONS

- › **Broadband benefits society** and economy enhancing efficiency, productivity, sustainability as well as social and personal life
 - Additional spectrum needed to enable broadband everywhere and for all
 - Actions needed to stimulate investments: Holistic policies/regulations, less and fair regulation, more certainties

- › Broadband proliferation is at an inflection point, poised to bring **radical improvements** for:
 - Individuals, Enterprises, Governments
 - Social, Economic, Environmental

- › We are moving towards a converged broadband enabled world with **connectivity embedded into all kinds of devices**

- › Driven by the tremendous success of the mobile ecosystem, we envision most device connectivity to be based on **3GPP technologies**

- › Engaging in connecting new types of devices brings significant **profit potential** to operators and service providers



ERICSSON