

3G Network Evolution from 2007 to 2012: HSPA+, LTE, WiMAX and femtocells

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with Andrew Parkin-White

Edited by Sarah Peake

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Glossary

2G	Second Generation	IEEE	Institute of Electrical and Electronics Engineers
2.5G	Enhanced Second Generation		
3G	Third Generation	LTE	Long Term Evolution
3.5G	Enhanced Third Generation	MB	Megabyte
3GPP	Third Generation Partnership Project (responsible for 3G network standardisation)	MHz	megahertz
		MIMO	Multiple-Input Multiple-Output (a smart antenna system)
4G	Fourth Generation	MNO	Mobile Network Operator
ADSL	Asymmetric Digital Subscriber Line	ms	millisecond
ADSL2+	Asymmetric Digital Subscriber Line 2 Plus (an enhanced form of ADSL)	OFDM	Orthogonal Frequency Division Multiplexing
ARQ	Automatic Repeat Request (an error control method in data transmission)	PC	Personal Computer
		PSTN	Public Switched Telephone Network
CDMA	Code-Division Multiple Access	QAM	Quadrature Amplitude Modulation
CDMA2000	3G standard based on CDMA	QPSK	Quadrature Phase Shift Keying
DSL	Digital Subscriber Line	SAE	System Architecture Evolution (the core network architecture of LTE)
DVB-H	Digital Video Broadcasting – Handheld	SMS	Short Message Service
EDGE	Enhanced Data Rates for GSM Evolution	TV	Television
		UMTS	Universal Mobile Telecommunications System
GB	Gigabyte	USB	Universal Serial Bus
GPRS	General Packet Radio Service	VDSL	Very High Speed Digital Subscriber Line
GSM	Global System for Mobile communications	VoIP	Voice over Internet Protocol
HSDPA	High-Speed Downlink Packet Access	W-CDMA	Wideband Code Division Multiple Access
HSPA	High-Speed Packet Access	WiMAX	Worldwide Interoperability for Microwave Access
HSPA+	Evolved High-Speed Packet Access		
HSUPA	High-Speed Uplink Packet Access	WLAN	Wireless Local Area Network

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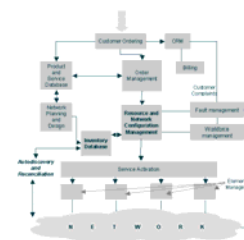
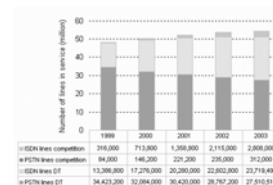
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 and Products & services: Cable TV

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Company Name	Country	Organisation Type	Products & Services	Rating
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Orange	France	Telecoms Operator	Cable TV, Fixed Line, Mobile	4.2
SFR	France	Telecoms Operator	Cable TV, Fixed Line, Mobile	4.0
Bouygues Telecom	France	Telecoms Operator	Cable TV, Fixed Line, Mobile	3.8

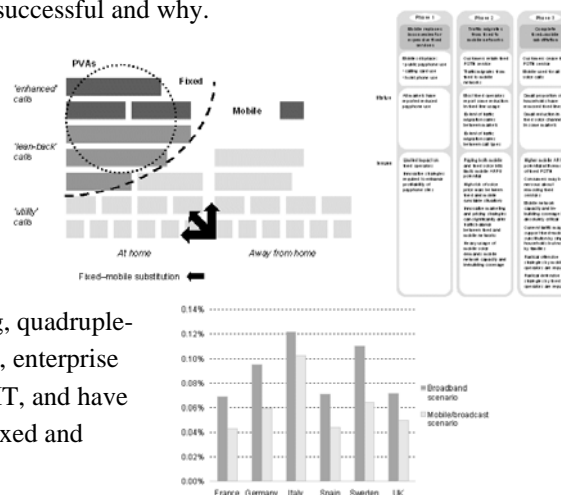
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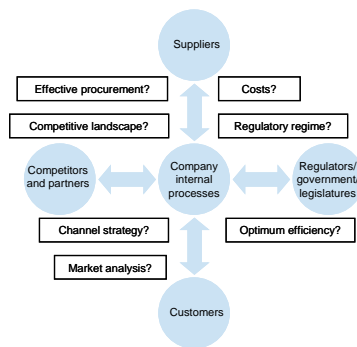
Service	Country	Service	Technology	Currency	Period	2008	2009
Mobile service revenue	Various Europe	E-revenue	3G, 4G	EUR	half year	2,762,000,000	6,174,000,000
Mobile service revenue	France	E-revenue	3G, 4G	EUR	half year	28,000,000	400,400,000
Mobile service revenue	Germany	E-revenue	3G, 4G	EUR	half year	182,000,000	1,000,000,000
Mobile service revenue	Italy	E-revenue	3G, 4G	EUR	half year	205,500,000	1,000,000,000
Mobile service revenue	Spain	E-revenue	3G, 4G	EUR	half year	222,700,000	1,000,000,000
Mobile service revenue	Sweden	E-revenue	3G, 4G	EUR	half year	50,000,000	1,000,000,000
Mobile service revenue	UK	E-revenue	3G, 4G	EUR	half year	123,400,000	1,000,000,000
Mobile service revenue	Various Europe	E-revenue	All generations	EUR	half year	103,000,000	1,000,000,000
Mobile service ASPU	Various Europe	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	France	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	Germany	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	Italy	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	Spain	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	Sweden	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	UK	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service ASPU	Various Europe	E-revenue	All generations	EUR	per average	0.03	0.06
Mobile service revenue	Various Europe	E-revenue	2G	EUR	half year	1,450,400,000	1,170,400,000
Mobile service revenue	France	E-revenue	2G	EUR	half year	170,000,000	162,000,000
Mobile service revenue	Germany	E-revenue	2G	EUR	half year	205,200,000	200,200,000
Mobile service revenue	Italy	E-revenue	2G	EUR	half year	192,200,000	192,200,000
Mobile service revenue	Spain	E-revenue	2G	EUR	half year	102,000,000	102,000,000

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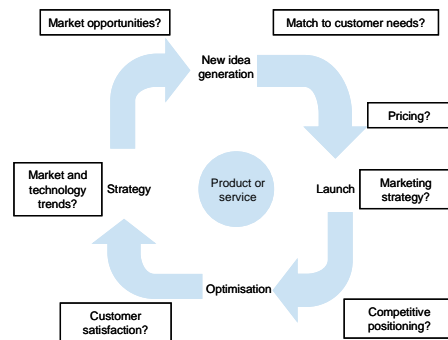
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