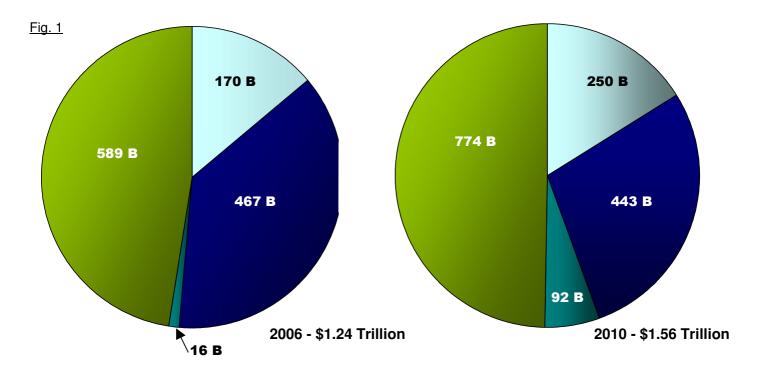
Applications, anywhere, anytime

The obsession with 3G suggests an inexorable quest for speed and a new generation of technology when it really is about capacity, capability and content. As we move into the Broadband world we also musn't forget the 4^{th} C – the Customer. But the capability to meet market needs is also driven by progress on the internet/web.

Mobile 2.0 and 3.0 will soon be with us opening up a whole new world of content and applications.

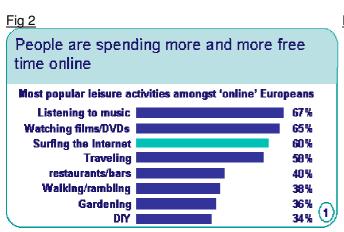
Taking recent figures from Insight Research the global telecom revenues in 2006 are expected to grow annually by 5.91% (CAGR) to 2010, from \$1.24 to \$1.56 Trillion, as figure 1 illustrates:

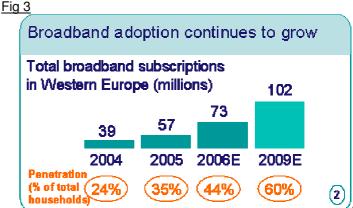


	CAGR
Broadband Wired	10.5%
Narrowband Wired	- 1.4%
Broadband Wireless	61.7%
Narrowband Wireless	7.8%

Narrowband wireless growth is driven by cellular and it's share is anticipated to grow from 47.4% to 49.6% of the global total revenues. However, it is broadband wired and wireless that show the fastest growth rates. As also illustrated by this guide this is driven by a wider demand for Applications than purely voice services.

People are spending more of their free time online (as seen in Figure 2) and broadband adoption continues to grow, although I sense Figure 3 may understate the impact of broadband wireless and 3G / HSPA.





urces: Fig 2. Forrester; Fig 3. Strategy Analytics March 2006

The evolution of the Internet to Web 2.0 / 3.0 will have a more profound impact on Applications development as Figure 4 shows. Applications will move from 'consult / surf / search' to 'share / collaborate / exploit' and eventually to 'suggest / happen / discover / provide', all alongside a general trend from content 'pull' to 'push'

Fig 4



- Knowledge = documents published in the web
- The web behaves like a book or data repository: users <u>consult</u> the web which is a passive repository of data
- Users <u>surf</u> the web: they navigate and search the web alone, discovering what info and services may be of interest to them
- Users <u>search</u> for information and service assisted by search engines (such as google) which rely on data pattern matching

web2.0

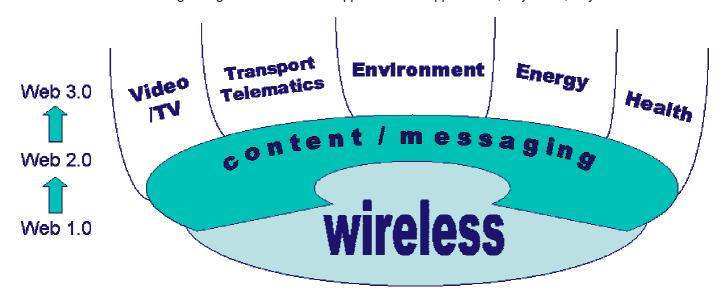
- Knowledge = Web 1.0 + knowledge of users
- The web is, besides a repository, a collaborative tool that allow users to <u>share</u> their knowledge
- Users become part of the web: the web is a platform where users become visible, share knowledge, <u>collaborate</u> and gain recognition
- Next-generation search engines start to <u>exploit</u> knowledge coming from users captured through a new generation of collaborative tools and technologies (weblogs, wikis, tagging, folksonomies, ...)



- Knowledge = knowledge in web 2.0 + structured semantics of data and services
- The web is alive: <u>Suggests</u> what information and services are most suitable for me, here, now!
- Life <u>happens</u> at the web: The web is at the centre of every day life for business, organizations and individuals, always available in mobility
 - Service <u>discovery</u>
- The web <u>provides</u> unlimited storage and process capacity

Source: Fig 4 Telefonica / NESSI

Early examples of Web 2.0 we see are My Space, Flickr, 2nd Life, Wikipedia and some Enterprise collaboration tools. When we look to see how Web 2.0 will impact mobile it takes us into a wider world of partnerships partly based on Mobile Content but into the growing market for Mobile Applications or Applications, Anywhere, Anytime.



We already see growing interest in Mobile Video and TV from the growth in downloads and Mobile TV trends around the world. We also expect to see all phones sold by 2010 to have Mobile Email and Mobile Internet capabilities – as an industry we need to make these applications as easy to use as they are to sell.

Other mobile applications will be based on combinations of Web 2.0, and messaging telematics. For example Transport Telematics will evolve from navigation to journey management (with congestion alerts, breakdown and other information services); parking will get smarter for connected cars; congestion analysis via wireless will support road resource management and user charging; environmental sensors will offer pollution control; connected roads will offer more road safety and better informed drivers and passengers.

The further growth in Telematics for societal, energy and health requirements will be supported by growing GSM economies of scale and systems integrators. Harbor Research predict the machine to machine market (M2M) could reach annual revenues of \$290 billion by 2011 (\$200Bn services / \$80 Bn operations / \$10 Bn hardware), but this will require Applications partnering and ecosystems to be more fully built.

As we continue to move from a verbal to a visual world, Web 2.0 and beyond will play a much bigger part in Mobile Communications. With more (mobile) phones than people in many parts of the world we are now able to offer a much wider range of applications and solutions – a world of 3A or Applications, Anywhere, Anytime.

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