A microscopic view of plant cells, showing several elongated, rectangular cells with thick green cell walls. The cells are arranged in a grid-like pattern, with some cells showing internal structures like chloroplasts. The background is a light blue-green color.

Device Platform and Application Evolution

It's fast..

Sept 2011

Company name.
Area

Telefonica

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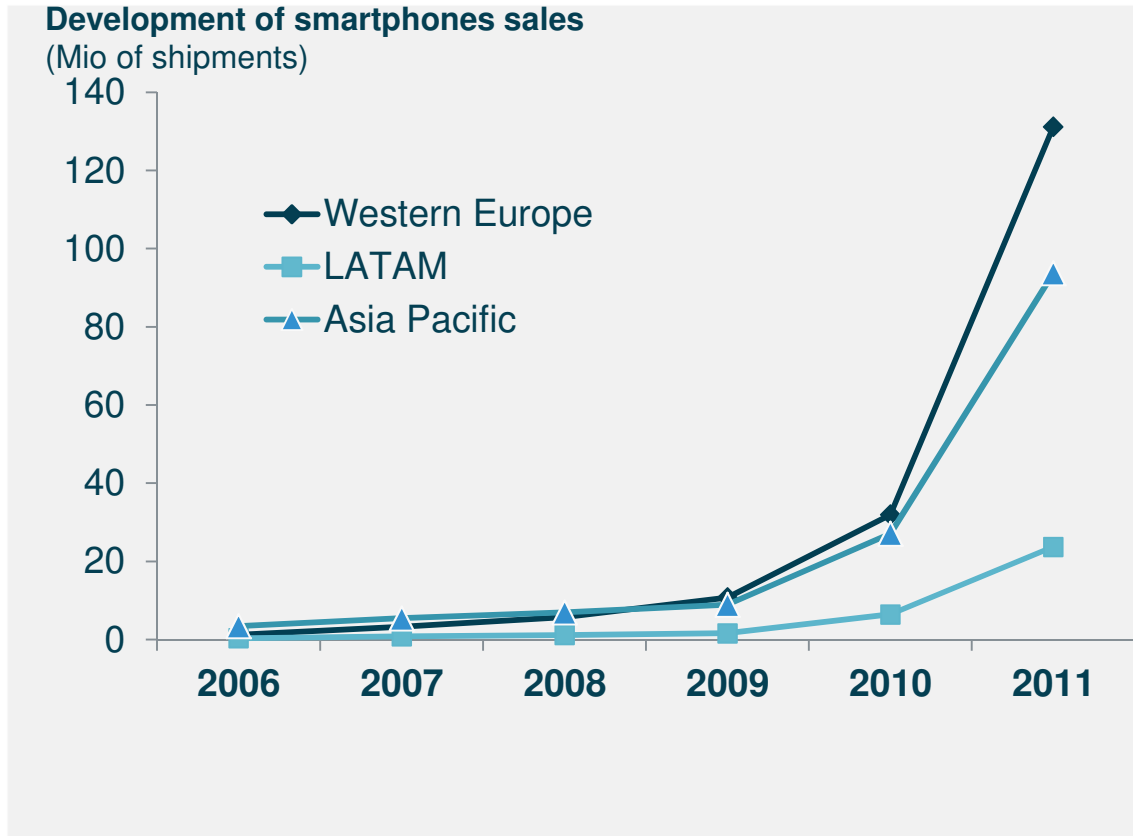
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Impact and open Questions,

The Smartphone phenomenon

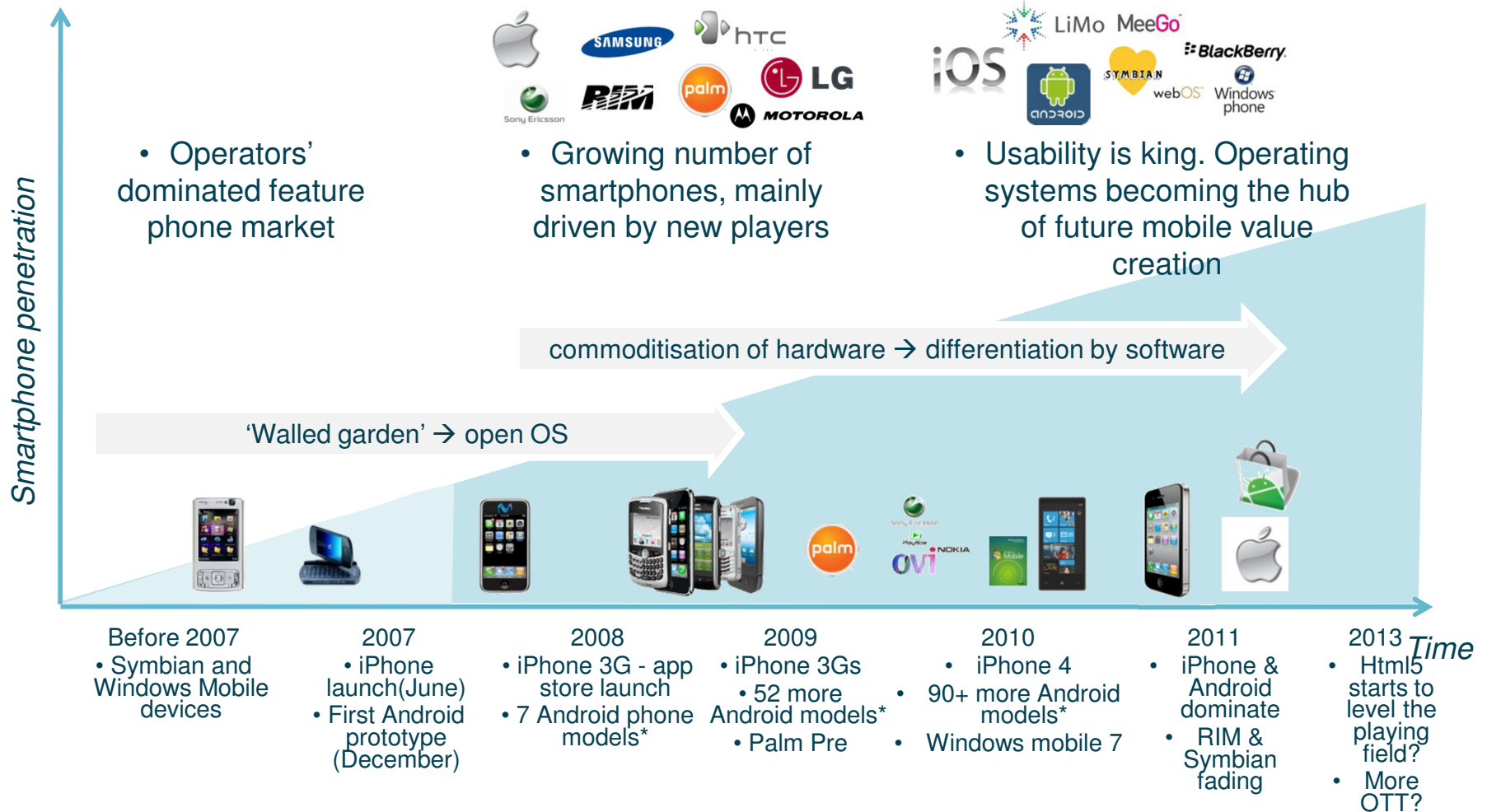
“Smartphone sales in the first quarter of 2011 jumped 85 percent over the same period last year, more than four times the growth in the overall mobile communication device sales, Gartner said “



- Already **one fifth** of current sold devices worldwide are smartphones
- Smartphone sales will pass PC sales in 2012. In some regions, smart-phones already substitute PC

Smartphone growth is accelerating – forecasts continually being revised upwards

Device ecosystem development – More complexity



And for the Customer its now better than the mobile internet vision we had 10 years ago

- it's cheaper, it's more open, it's smarter
- it's far richer than just access to internet, it's also about access to Communities and Applications
- it's not about the technology, it's about the customer experience
 - > The seamless integration of camera's, touchscreens etc. with connectivity to the WEB have driven the customers imagination & usage
 - > customers do ring Service and have questions but as a rule these are being answered
 - > hence its reasonable to expect that even as Smartphones enter low/ mid segments they will continue to be used & drive DATA



And we know from research that many Customers who don't currently have a smartphone are likely to get one next time they upgrade

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■ Web Apps



➤ HTML5 empowers all platforms to offer apps through the browser

➤ Its high developer mindshare holds promise of catch-up with App Store

➤ Native apps can be richer, faster but Web Apps with their offline capability can now offer a great experience

➤ Many companies are advocating Web Apps, especially those that want to avoid the control of the App Store business model, e.g.

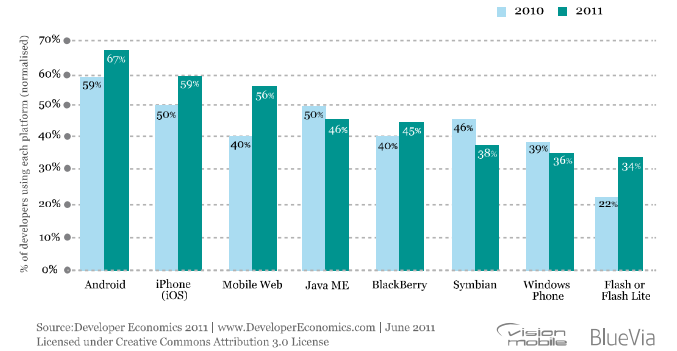


FINANCIAL
TIMES

‘We’re encouraging our readers to switch immediately to the new FT web app’

➤ WAC is part of the story that offers de-fragmentation and differentiates by offering operator APIs

Developer Mindshare Index 2011-2010
Top-8 mobile platforms being used by developers, irrespective of their current platform (n=806)



html 5 will be one of the winners and will co-exist with native Apps, offering a very different business model & opportunity for catch-up

Trends



> 425000 Aps



> 200000 Aps



> 26000 Aps

■ Cross Platform Tools

- › Whilst Web Apps will become popular there will still be a need to develop native Apps across a range of fragmented platforms
- › Cross platform tools give the developer the ability to write 1 App and package it for multiple device platforms
- › Depending on the Tool used and the complexity the developer wants to go to they can access native device API's to improve functionality & performance

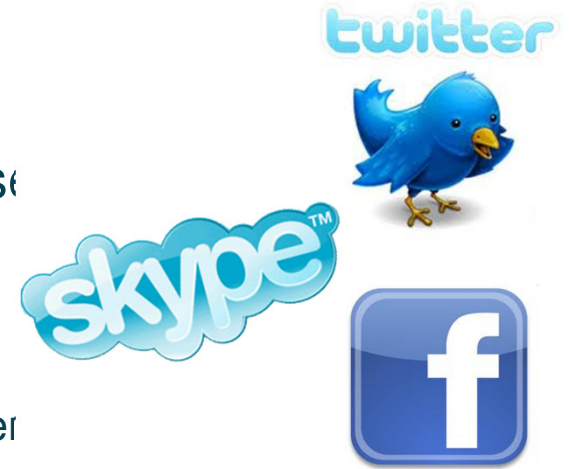
■ The cost and impact of IPR is still to be played out e.g.

- › Microsoft/ Samsung
- › Apple /Samsung
- › Google/ Motorola



Usage Trends

- we know after traditional voice and txt, the most used applications on Smartphones are comms-based e.g. Facebook, twitter, email
 - › Customers already love the “To Skype”, To Tweet”
 - › Facebook’s link up with Skype is likely to create wider awareness and familiarity of mobile VOIP services



- NFC will change again customer usage and perception of their phone
 - › e.g. enabling your phone to be your wallet, driven by a great Customer Experience



- Tablets becoming PC's, PC's becoming smartphones
 - › Android/ WP7 et al on ARM & X86,
 - › Customers will expect easy migration of their services & data between categories
 - › Will continue to drive new opportunities e.g. for Windows 8



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Impact and open Questions,

Impacts of smartphone phenomenon

- whilst many of the internet players have a momentum of their own services & new customers
- many of the traditional players do not believe they can 'forge their own destiny'
 - › And are creating new strategies & relationships



"In addition, HP reported that it plans to announce that it will discontinue operations for webOS devices, specifically the TouchPad and webOS phones. HP will continue to explore options to optimize the value of webOS software going forward." Aug, 2011

"In a year, we've gone from very small to... very small," Steve Balmer, keynote address

"The epicenter of wireless communications is in Silicon Valley," says Jan Uddenfeldt, chief technology officer of Sony Ericsson

- iOS/ Android are dominating both the Smartphone & Tablet category, whilst other platforms 'burn'
 - › Enjoying typically a higher subsidy
- and the OEM's have very different stories in terms of sales & margins
 - › And it is NOT as simple as believing low cost Asian OEM's are simply replacing branded OEM's

The industry is at a 'Tipping Point'

- being Trusted and by the customer is the fulcrum
 - › And Relevant to many of their experiences
- developers and the rise of HTML5 can be the tipping point towards a more open and less vertical world
 - › across all device categories
- industry initiative have a role to play e.g.
 - › GCF
 - › Tizen
- its still the device that puts the service into the customers hand

Otellini said. "...So good products on good platforms can really still make a big difference in this industry."

