

The rise of Microsoft: The Personal Computer (PC) Era (1975-2011)

Microsoft (Microcomputer Software) was founded in 1975 to enable people and businesses throughout the world to realize their full potential by creating technology that transforms the way people work, play, and communicate. It was once in *quasi* monopolistic position, achieving the vision of its founder Bill Gates, to have one Personal Computer (PC) on every desk, both at the office or at home, running on Windows Operating System (OS) and using Microsoft Office (Word, Excel, Powerpoint, etc...) productivity suite. From 1975 to 2010, the Personal Computer sales grew strongly with a CAGR of 25% YoY, 74% of them bought for business (professional or work related) and 26% for home consumers, Microsoft capturing up to 95% of this growth (see appendix 1 and 2). This explains the sustained growth of Microsoft's revenue, 9% CAGR YoY for 13 years, peaking at \$86.83B in 2014, most revenues generated with enterprise customers (appendix 3).

Becoming an outsider: Consumerization of IT (2007 – Until now)

In 2007, Apple launched its “Iphone” putting the internet in your pocket, and creating the blue ocean of smartphones laying the foundation of the IT consumerization trend. In less than 5 years, Apple sold more than 250M Iphones, generating \$250B of revenues. In 2008 it launched the “AppStore” (extending iTunes platform launched in 2003 to serve Ipods) and the Ipad in 2010 reinforcing its not so blue anymore ocean leader position: this lucrative blue ocean attracted new entrants such as Google behemoth who launched its android platform in 2008 and a huge partner ecosystem to become the leader in the smartphone OSes. New trends in the IT industry raised with mobile devices:

- Consumerization of IT: usages existing in the mass consumer space instill in the enterprise space. Mass consumer market was the primary target of Apple and Google,
- Open a new space for back-end services specifically design to serve these millions of mobile devices beyond proprietary platforms (AppStore & iTunes, Google Play), *i.e.* the dawn of public cloud services (Google, Amazon, Facebook, Twitter...).

In that new device and software space, PC market share is shrinking by 20% in 4 years with its relative weight in the device space decreasing from 15% in 2012 to an estimated 10% in 2015 (see appendix 4 and 5). Furthermore, the Microsoft OS footprint in the PC market has also slightly been eroded (from 95% to 90% see appendix 2): Microsoft is losing its relevancy in the consumer IT space.

As people are more attracted to mobile devices (Ipad, Iphone, Android phones & tablets), and since their budget is not extensible, budget arbitration are often made to PC disadvantage. It is really disruptive to Microsoft's business model which was founded on PC ecosystem and network externalities, locking in customers in a proprietary ecosystem in which regular upgrades ensured sustainable revenues. Apple and Google succeeded in circumventing entry barriers of Microsoft's business by creating a blue ocean aside the legacy PC market.

Microsoft core business is under siege

Furthermore, Apple and Google now enter in the Enterprise segment. Due to IT consumerization (the nightmare of CIOs), Apple devices are more and more connected to corporate application back-end. Apple and IBM made a win/win deal in which IBM (who is strongly established in the business/enterprise market) will develop client applications for Ipad and Iphone to connect to its enterprise platform back-end services which is a major threat for Microsoft who currently owns

the interface between business data & applications and the corporate end-user with its windows client. Google and its Google Apps platform is also selling aggressively (with massive discount) its solution to businesses and enterprises. The enterprise segment in which Microsoft has fought hard to gain some legitimacy and from which most of its revenues come from is under siege: From a *quasi-monopolistic* situation, Microsoft has almost become an outsider in most of its business dimensions. Despite its strong financial results, Microsoft legacy business model might collapse if not reinvented to face new business environment challenges (see appendix 6).

Microsoft reinvented: From “Devices & Services” to “¹Cloud first, Mobile first”

Refining the value chain definition has been key to (re)define the position of Microsoft in the new IT World. Initial attempt starting 2011, was the “Devices & Services” vision: “To produce (*business*) value, (*corporate*) users use (*client*) applications on devices that connect (*through the network*) to (*corporate*) back-end services”. This illustrates the shift in Microsoft’s business strategy which was initially based on one-time sales of software, and has evolved to multi-year contracts with its large customers ensuring recurrent revenues to a model in which “device” would become a pillar. Apple makes great devices, but has only one great service “Itunes/Appstore”. Google makes great services, but is rather weak on devices. Microsoft would like to do it both, like for its Xbox platform model, and extend it to all products.

But seeing things that way was not enough broad: in the consumer space, value might not be work-related, but more likely entertainment-related. With the rise of the “Internet of Thing” (IoT), formerly named “Machine to Machine” (M2M), a “user” might be the device itself. The value itself, might be created through “Machine learning” on large sets of data (Big Data). This vision

¹ <http://www.microsoft.com/en-us/news/speeches/2014/03-27nadella.aspx>

was also somehow “self-centered” on Microsoft proprietary “Windows” ecosystem in a new IT world which is not 95% Microsoft-related anymore: “Windows first” or “Windows only” strategy needed to be changed.

The strategy followed by Microsoft to capture maximum market share was a 3-step entry barrier & network externality creation strategy. *Step1*: Embrace the “ecosystem”, *i.e.* the development of software compatible with a competing product, or an open standard. *Step2*: Extend, *i.e.* add Microsoft proprietary features/tweak the open standard, smashing the competition with enhanced added-value “alike” products. *Step3*: Extinguish using network externalities, making of the Microsoft’s product a *de facto* standard that competitors should embrace (by creating complement products/services) or leave. Think about Netscape, AOL Instant Messenger, Palm OS, etc... This entry barrier creation strategy has been core to the development of Microsoft. It is an autocatalytic process: each new product introduced that way locked further the customer and/or partner into Microsoft’s ecosystem, amplifying network externalities all owned by Microsoft and shared with its partner ecosystem.

But this time is over, and in the extended mobile devices and applications space, Microsoft is not the *de facto* standard anymore, and it cannot count anymore on its owned network externalities to lock-in customers. “Devices & Services” should be extended to “Cloud First and Mobile first”: Provide added-value mobile applications for any platform to redirect customers to Microsoft cloud services, favoring interoperability, *i.e.* building on network externalities created by both Apple and Google. The recent availability of Office applications for IOS is the very first move in the “Cloud First, Mobile First” new strategy: It is not about OS anymore (*Windows only is dead*), but about (*mobile*) applications which consume (*cloud*) services offered by platforms.

Pros and Cons of this strategy?

Microsoft has quite a good success with its Windows Platform in the Enterprise segment: high margins and low volume (when compared to consumer segment), with multi-year Enterprise Agreements which provides some predictability and recurrence. However, this segment is under siege, meaning it will at least shrink in value and/or in volume as well. On this segment, Microsoft needs both new growth drivers and entry barriers. Cloud Services such as Azure or Office 365 act as such: Cloud Services can be sold on top of existing Enterprise Agreements to extend service catalogue (IaaS, PaaS or SaaS, see appendix 7), and despite reversibility clauses in the contracts, large cloud migrations are most of the time “one-way trips”. **It is mandatory to capture maximum market share at the very start** because it will be hard to move the lines later on. Facing an oligopolistic market (Amazon Web Services, Azure, Google), with no collusion, a tough price war is raging to gain market shares at profitability expense. Furthermore, careful eyes should be kept on cost management, as building and running these large datacenters is capital intensive: an over estimated demand (or decreased adoption momentum) can lead to an increase of fixed cost per unit initiating a downward demand spiral for your service.

In the consumer space, it is even trickier. Most offered services are either free (Gmail + GoogleApps, outlook.com + Office 365). Using network externalities to increase the number of users of your client application and hence your cloud services consumption is a good strategy as long as you can turn it into money. Microsoft uses Office for Ipad (and soon for Android) to redirect users to its Office 365 for home offering (including its Office Suite to be installed on premise for Mac or PC) starting at \$5/month, while Google offers it for free (but no suite). Pricing might be an issue: Google revenues is generated by online advertising which allows it to distribute cloud services for free. Although Microsoft addresses mostly power users who need to do

advanced work with the Office heavy client instead, pricing strategy should be a penetration pricing strategy. The other issue is that Microsoft would depend on both AppleStore and GooglePlay application policies to be able to possibly benefit of network externalities: Apple and Google could slow down acceptance/refuse (for technical / contractual / legal reasons) a Microsoft application to be deployed through their market places, especially if applications are aimed to redirect customers on Microsoft cloud. This is the reason why, Microsoft should (and is) keep developing the Windows Platform as well. By unifying kernels of Windows, Windows Phone and Xbox, it increases *de facto* the network externalities for a developer (software company) that would invest in Windows Platform, as the application would be compatible with all “screens” (mobile, PC, TV).

Changing the culture of the organization remains the biggest challenge

The whole organization has been built to sell in fire and forget mode software products to a “high margin/low volume” Enterprise Segment (compared to consumer segment) for years, and it has been very efficient at doing it. Transitioning to Cloud First, Mobile First strategy requires different set of capabilities and organization. It somehow means transitioning to a “low margin/high volume” revenues model which forces you to be really cost effective and focused on execution (cannot lose anymore billions in failed acquisitions). It requires (technological) open-mindedness to transition from proprietary products to added-value solutions (as a service) built across various platforms (as commodities). It requires a new partner interaction business model (syndication, co-branding or white label) or a shift upward the value chain looking for more business oriented partners to build business solutions out of Microsoft cloud services. Set the platform on fire, fire and hire new people and rethink your incentive model... you name it: Transformation has begun.

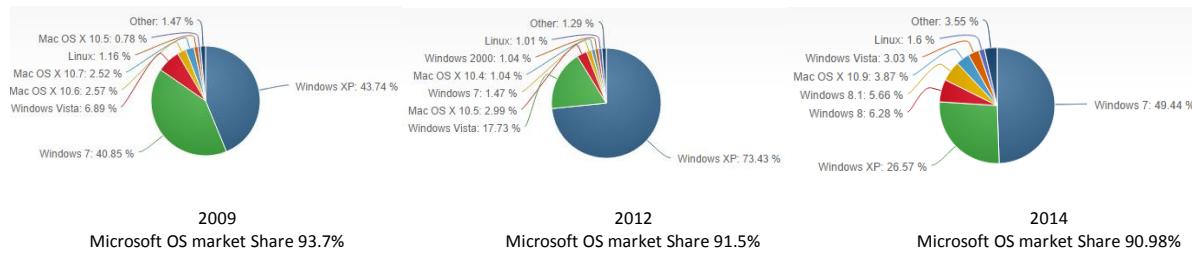
Appendices

Appendix 1: Personal Computer Sales from 1975 to 2011

Computer Sales	2011	2010	2000	1975
Number of computers sold in the U.S.	95.4 Million	93 Million	46 Million	40,000
Number of computers sold globally	355.2 Million	346.2 Million	134.7 Million	50,000
Computer Sales Revenue	2011	2010	2000	1975
U.S. computer sales revenue	\$85.5 Billion	\$83.4 Billion	\$86.9 Billion	\$50 Million
Worldwide computer sales revenue	\$329 Billion	\$321 Billion	\$251 Billion	\$60 Million
Computer Sales All-Time				
Number of computer sales all-time	3.287 Billion			
Computer sales revenue all-time	\$4.835 Trillion			
Purpose and Characteristics				
Percent of computers sold for business	74 %			
Percent of desktop computers sold	81.5 %			
Percent of laptop computers sold	16.4 %			
Percent of servers sold	2.1 %			

Source: (Gartner from <http://www.statisticbrain.com/computer-sales-statistics/>)

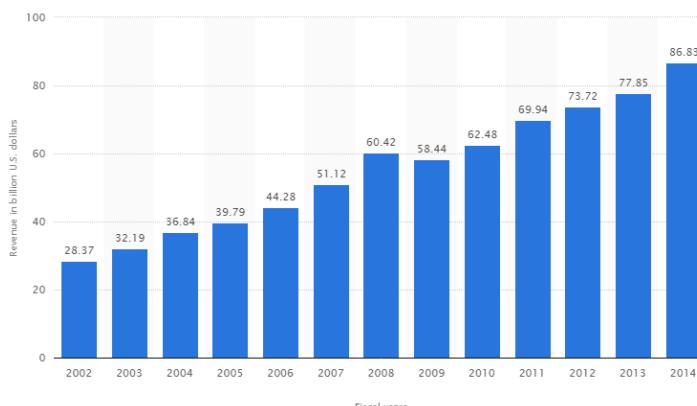
Appendix 2: OS market share evolution from 2009 to 2014 for “PC”



Source: [here](#)

Appendix 3: Microsoft global revenues from 2002 to 2014

Microsoft's global revenue in the fiscal years from 2002 to 2014 (in billion U.S. dollars)



Appendix 4: Device Segment & OS market share evolution from 2012 to 2015

Table 1

Worldwide Device Shipments by Segment (Thousands of Units)

Device Type	2012	2013	2014	2015
PC (Desk-Based and Notebook)	341,273	299,342	277,939	268,491
Tablet (Ultramobile)	119,529	179,531	263,450	324,565
Mobile Phone	1,746,177	1,804,334	1,893,425	1,964,788
Other Ultramobiles (Hybrid and Clamshell)	9,344	17,195	39,636	63,835
Total	2,216,322	2,300,402	2,474,451	2,621,678

Source: Gartner (December 2013)

Table 2

Worldwide Device Shipments by Operating System (Thousands of Units)

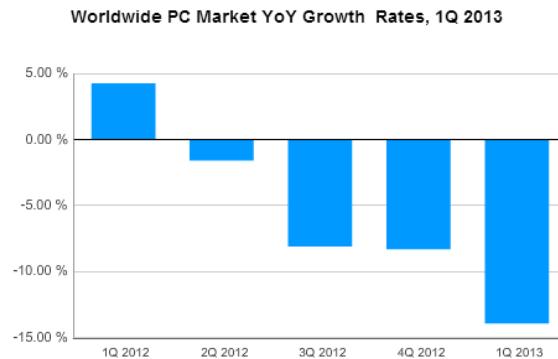
Operating System	2012	2013	2014	2015
Android	503,690	877,885	1,102,572	1,254,367
Windows	346,272	327,956	359,855	422,726
iOS/Mac OS	213,690	266,769	344,206	397,234
RIM	34,581	24,019	15,416	10,597
Chrome	185	1,841	4,793	8,000
Others	1,117,905	801,932	647,572	528,755
Total	2,216,322	2,300,402	2,474,414	2,621,678

Source: Gartner (December 2013)

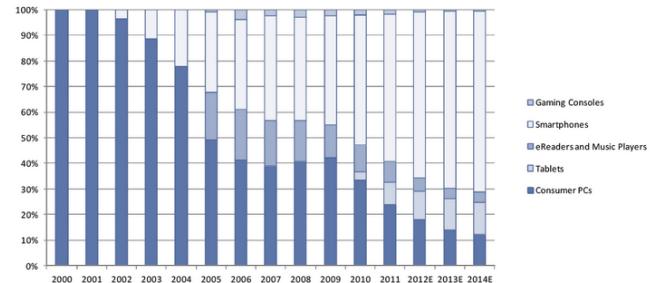
Gartner's market forecast data is detailed in "Forecast: PCs, Ultramobiles, and Mobile Phones, Worldwide, 2010-2017, 4Q13 Update" and available on the Gartner web site at <http://www.gartner.com/doc/2639615>.

Source: [here](#)

Appendix 5: PC market YoY growth rate ([source 1](#) / [source 2](#))



Evolution of consumer compute landscape



Source: IDC, Goldman Sachs Research estimates.

Appendix 6: Comparison of products & services market share of Apple, Amazon, Google & Microsoft (2014)

	Apple	Amazon	Google	Microsoft
Phone	Iphone 11.7%	Fire Phone 0.7%	Nexus 84%	Lumnia 2.5%
Tablet	Ipad 25%	Kindle Fire HD 0.5%	Xoom Nexus 7 70%	Surface 4.5%
Computer	Mac 4%		Chrome 1.6%	OEM / Surface 3 90%
Books	iBook	Kindle	Play Book	Barnes & Nobles
Music	iTunes	Amazon	Play Music	Xbox Music
Movies	iTunes	Amazon	PlayMovies	XboxLive VOD
Browser	Safari 12%	Silk	Chrome 32%	Internet Explorer 19%
OS	Mac OS / IOS 13%	Amazon Android	Android 44%	Windows 14%
Office Apps	iWork		Google Apps	Office 365
Search	(Google)	(Bing)	Google	Bing
Cloud	iCloud (Azure/AWS)	AWS	Google	Azure / Office 365

Appendix 7: Comparison of IaaS / PaaS / SaaS service management boundaries

