

Smartphone Wars

Following six years of innovation and upheaval in the smartphone industry, 2013 was shaping up to be no different. Industry players continued to differentiate and capitalize on the rapidly evolving landscape. Early market leaders struggled to recapture market share lost years earlier to newer entrants, and new players vied to remain disruptive. Apple, whose iPhone had sparked the smartphone frenzy in 2007, sought to broaden its appeal by introducing a less expensive iPhone that had a casing made of plastic, instead of glass. Search engine giant Google's Android OS was the most widely adopted smartphone platform, with almost half of all Android devices being made by Samsung, the Korean electronics company. Having started its smartphone endeavor by building phones and supplying parts for other equipment manufacturers, Samsung had burst on the scene in 2010, rapidly gobbling up market until it had become the world's highest-volume phone maker in 2012.

Meanwhile, Research in Motion (RIM), Nokia, and Microsoft, which were all market leaders in the pre-iPhone smartphone industry, continued to sputter (see **Exhibit 1**). After an exclusive partnership with Nokia failed to produce strong enough results, Microsoft announced an agreement to acquire the Finnish phone maker in hopes that the combination might yield cost savings and innovations that neither company had been able to obtain on its own. Microsoft Windows 8 Phone sales had not met expectations, but analysts remained hopeful that new developments would produce the next wave of creativity and value. By 2013, RIM, which had changed its name to BlackBerry after its iconic banner product, had struggled with ventures in tablets and new operating systems. Finally, in late 2013, BlackBerry announced plans to cut 40 percent of its workforce and stop selling to consumers.² Every player in the smartphone wars had delivered innovative products at some point and had dealt with strategic moves by competitors, but market leadership had been fleeting. These companies dealt with challenges on every front. Each move brought with it competitive responses and countermoves. New products, such as tablet computers and smart watches, threatened to make the entire industry obsolete. Could any of the companies involved in the smartphone wars find a path to sustained industry leadership? And if not, could they at least avoid the path of demise followed by RIM?

EXHIBIT 1 Global Smartphone Sales to End Users from 1st Quarter 2009 to 2nd Quarter 2013, by Operating System (millions of units)

	Android	iOS	Microsoft	RIM	Symbian	Others
2009	2.76	16.22	10.83	23.83	57.02	7.92
2010	67.22	46.59	12.38	49.65	111.58	12.47
2011	220.67	89.27	8.76	51.53	88.41	14.25
2012	449.54	129.07	17.01	34.21	28.51	19.27
2013	334.09	70.23	13.4	12.4	1.98	3.28

Source: Gartner Company, "Gartner Says Worldwide Mobile Device Sales to End Users Reached 1.6 Billion Units in 2010; Smartphone Sales Grew 72 Percent in 2010" [Press Release] (February 9, 2011).

History of the Industry

The first mobile phones emerged shortly after World War II.³ Briefcase-sized and very limited in range and functionality, commercialized mobile phones took another three decades to gain critical mass. These first mobile phones were typically so large that most were only found in cars. However, in the 1970s, the first handheld mobile phones hit the market. The United States, Japan, Denmark, Sweden, Finland, and Norway all rolled out mobile phone networks between 1979 and 1981. These first handhelds ran on an analog system, called 1G.

Beginning in the 1990s, the new all-digital 2G network continued to expand as more cellular towers were built. Better technology allowed for smaller components, new features such as SMS text messaging, and smaller phones. As phones became more convenient to carry around, demand exploded. With the 2G network, the first downloadable ringtones introduced a concept that would later be crucial as smartphones gained popularity a decade later: downloading information from the Internet via a wireless connection.

Smartphones emerged as “a category of mobile device that provides advanced capabilities beyond a typical mobile phone. Smartphones run complete operating system software that provides a standardized interface and platform for application developers.”⁴ These new smartphones were more advanced and offered greater flexibility than feature or “dumb”⁵ phones. Early smartphones would hardly be recognized as such today, however. In 1993, IBM launched the first smartphone, the Simon,⁶ which offered a full touch screen. The Simon had a few applications, or apps (software used for functions other than running the device’s operating system⁷), such as fax, personal digital assistant (PDA), pager, calculator, and address book. Unlike users of later smartphones, which stored applications on the device itself, Simon users had to switch out memory cards that held individual applications in order to enjoy many of the features offered. In addition to being bulky and expensive (the Simon retailed for \$899), Simons lacked access to a wide variety of apps. Within two years of hitting the markets, IBM had retired the Simon. Although a business failure for IBM, the Simon was the first spark that ignited a new sub-industry of smartphones.

Throughout the next 10 years, additional smartphones hit the market.⁸ Nokia and Ericsson launched their own versions in the late 1990s. Ericsson’s second generation phone featured a full touchscreen at a time when button-centric devices dominated the landscape. In addition, this device offered the first “open” operating system (OS), the Symbian OS. An open OS allowed third-party developers to create applications to be downloaded and run on a device. Third-party developers gave users access to a much broader array of technologies on their devices. These early smartphones developed slowly until the birth of what modern smartphone users would recognize as the earliest “pure” smartphones. By 2007, Nokia, Palm, Microsoft, and RIM had all risen to power, but new companies such as Apple, Google, and Samsung would usher in a new wave of innovation.

Nokia

Nokia was a Finnish company that rose to prominence in the late 1990s, enjoying market leadership in the mobile phone industry for more than 15 years. Mass adoption of feature phones helped Nokia establish itself as the leading producer of handsets. Following success among mass consumers with feature phones, Nokia launched many different smartphones. The first Nokia smartphones were expensive and primarily targeted to business customers.⁹ Nokia smartphones, like Ericsson’s, ran on the Symbian OS, making it the largest OS for more than five years. Nokia strove to differentiate its phones early on by investing heavily in mobile gaming and music technologies. However, Nokia struggled later in the decade as the BlackBerry (see below) gained momentum. Although easily the top overall cell phone supplier, Nokia felt the sting of losses in its smartphone business and took measures to protect its market share among smartphone users. For example, in response to the growing threat of Palm smartphones, Nokia began launching phones with a full keyboard.