

# Sony

Sony Corporation



Sony's Headquarters Complex at Sony City in [Minato, Tokyo](#)

<b>Native name</b>	ソニー株式会社
<b><u>Romanized name</u></b>	Sonī kabushiki kaisha <sup>[1]</sup>
<b>Formerly</b>	Tokyo Tsushin Kogyo KK (1946–1957)
<b><u>Type</u></b>	<u>Public KK</u>
<b><u>Traded as</u></b>	<ul style="list-style-type: none"><li>• <a href="#">TYO: 6758</a></li><li>• <a href="#">NYSE: SNE</a></li><li>• <a href="#">TOPIX Core 30 Component</a></li></ul>
<b><u>ISIN</u></b>	<a href="#">JP3435000009</a> 
<b>Industry</b>	<a href="#">Conglomerate</a>
<b>Founded</b>	7 May 1946; 73 years ago <a href="#">Nihonbashi, Chūō, Tokyo</a> , Japan <sup>[2]</sup>
<b>Founders</b>	<ul style="list-style-type: none"><li>• <a href="#">Masaru Ibuka</a></li><li>• <a href="#">Akio Morita</a></li></ul>
<b>Headquarters</b>	Sony City, <a href="#">Minato, Tokyo</a>

	<p>Japan</p>
<b>Area served</b>	Worldwide
<b>Key people</b>	<ul style="list-style-type: none"> <li>• Shuzo Sumi (chairman of the board)</li> <li>• Kazuo Matsunaga (vice chairman of the board)</li> <li>• Kenichiro Yoshida (president and CEO)</li> </ul>
<b>Products</b>	<ul style="list-style-type: none"> <li>• <a href="#">Consumer electronics</a></li> <li>• <a href="#">Semiconductors</a></li> <li>• <a href="#">Video games</a></li> <li>• <a href="#">Films</a></li> <li>• <a href="#">TV shows</a></li> <li>• <a href="#">Music</a></li> <li>• <a href="#">Computer hardware</a></li> <li>• <a href="#">Telecommunications equipment</a></li> </ul>
<b>Services</b>	<ul style="list-style-type: none"> <li>• <a href="#">Financial services</a></li> <li>• <a href="#">Insurance</a></li> <li>• <a href="#">Banking</a></li> <li>• <a href="#">Credit finance</a></li> <li>• <a href="#">Advertising agency</a></li> <li>• <a href="#">Network services</a></li> </ul>
<b>Revenue</b>	<p>▲¥8.665 trillion        (~\$80 billion<sup>[3]</sup>) (2019)<sup>[4]</sup></p>
<b><a href="#">Operating income</a></b>	<p>▲¥894.2 billion (2019)<sup>[4]</sup></p>
<b><a href="#">Net income</a></b>	<p>▲¥916.2 billion (2019)<sup>[4]</sup></p>
<b><a href="#">Total assets</a></b>	<p>▲¥20.981 trillion (2019)<sup>[4]</sup></p>
<b><a href="#">Total equity</a></b>	<p>▲¥3.746 trillion (2019)<sup>[4]</sup></p>
<b>Number of employees</b>	<p>114,400 (2019)<sup>[5]</sup></p>
<b><a href="#">Divisions</a></b>	<ul style="list-style-type: none"> <li>• Sony Electronic Products &amp; Solutions</li> </ul>

- Sony Imaging & Sensing Solutions
- [Sony Mobile](#)
- [Sony Interactive Entertainment](#)
- [Sony Music](#)
- [Sony Pictures](#)
- [Sony Financial Holdings](#)

### Subsidiaries

Website [www.sony.net](http://www.sony.net)

### Footnotes / references

<sup>[4]</sup>

**Sony Corporation** (ソニー株式会社, *Sonī Kabushiki Kaisha*, /'sooni/ *SOH-nee*, commonly known as **Sony** and stylized as **SONY**) is a Japanese [multinational conglomerate](#) corporation headquartered in Kōnan, [Minato](#), [Tokyo](#).<sup>[6][11]</sup> Its diversified business includes consumer and professional [electronics](#), [gaming](#), [entertainment](#) and [financial services](#).<sup>[7]</sup> The company owns the largest [music entertainment business](#) in the world,<sup>[8]</sup> the largest [video game console](#) business and one of the largest [video game publishing](#) businesses, and is one of the leading manufacturers of electronic products for the consumer and professional markets, and a leading player in the [film and television entertainment](#) industry.<sup>[9][*better source needed*]</sup> Sony was ranked 97th on the 2018 [Fortune Global 500](#) list.<sup>[10]</sup>

Sony Corporation is the electronics [business unit](#) and the [parent company](#) of the Sony Group (ソニー・グループ, *Sonī Gurūpu*), which is engaged in business through its four operating components: electronics (AV, IT & communication products, semiconductors, [video games](#), [network services](#) and [medical business](#)), [motion pictures](#) (movies and TV shows), [music](#) ([record labels](#) and music publishing) and financial services (banking and insurance).<sup>[11][12][13]</sup> These make Sony one of the most [comprehensive entertainment companies](#) in the world. The group consists of Sony Corporation, [Sony Pictures](#), [Sony Mobile](#), [Sony Interactive Entertainment](#), [Sony Music](#), [Sony Financial Holdings](#), and [others](#).

Sony is among the semiconductor sales leaders<sup>[14]</sup> and since 2015, the [fifth-largest television manufacturer](#) in the world after [Samsung Electronics](#), [LG Electronics](#), [TCL](#) and [Hisense](#).<sup>[15]</sup>

The company's current slogan is *Be Moved*. Their former slogans were *The One and Only* (1979–1982), *It's a Sony* (1982–2005), *like.no.other* (2005–2009)<sup>[16]</sup> and *make.believe* (2009–2013).<sup>[17]</sup>

Sony has a weak tie to the [Sumitomo Mitsui Financial Group](#) (SMFG) [corporate group](#), the successor to the [Mitsui](#) group.<sup>[18]</sup>



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# History

Further information: [History of Sony](#)

## Tokyo Tsushin Kogyo



[Masaru Ibuka](#) and [Akio Morita](#), founders of Sony.

Sony began in the wake of [World War II](#). In 1946, [Masaru Ibuka](#) started an electronics shop in a department store building in Tokyo. The company started with a capital of ¥190,000<sup>[19]</sup> and a total of eight employees.<sup>[20]</sup> On 7 May 1946, Ibuka was joined by [Akio Morita](#) to establish a company called Tokyo Tsushin Kogyo (東京通信工業, *Tōkyō Tsūshin Kōgyō*) (Tokyo Telecommunications Engineering Corporation).<sup>[21]</sup> The company built Japan's first [tape recorder](#), called the Type-G.<sup>[21][22]</sup> In 1958, the company changed its name to "Sony".<sup>[23]</sup>

## Name

When *Tokyo Tsushin Kogyo* was looking for a romanized name to use to market themselves, they strongly considered using their initials, TTK. The primary reason they did not is that the railway company [Tokyo Kyuko](#) was known as TTK.<sup>[21]</sup> The company occasionally used the acronym "Totsuko" in Japan, but during his visit to the United States, Morita discovered that Americans had trouble pronouncing that name. Another early name that was tried out for a while was "Tokyo Teletech" until [Akio Morita](#) discovered that there was an American company already using Teletech as a brand name.<sup>[24]</sup>

The name "Sony" was chosen for the brand as a mix of two words: one was the [Latin](#) word "[sonus](#)", which is the root of sonic and sound, and the other was "[sonny](#)", a common slang term used in 1950s America to call a young boy.<sup>[9]</sup> In 1950s Japan, "sonny boys" was a [loan word](#) in Japanese, which connoted smart and presentable young men, which Sony founders [Akio Morita](#) and [Masaru Ibuka](#) considered themselves to be.<sup>[9]</sup>

The first Sony-branded product, the [TR-55 transistor radio](#), appeared in 1955 but the company name did not change to Sony until January 1958.<sup>[25]</sup>

At the time of the change, it was extremely unusual for a Japanese company to use [Roman letters](#) to spell its name instead of writing it in [kanji](#). The move was not without opposition: TTK's principal bank at the time, [Mitsui](#), had strong feelings about the name. They pushed for a name such as Sony Electronic Industries, or Sony Teletech. Akio Morita was firm, however, as he did not want the company name tied to any particular industry. Eventually, both Ibuka and Mitsui Bank's chairman gave their approval.<sup>[21]</sup>

## Globalization

Sony TR-730 transistor radio made in Japan, circa 1960

According to Schiffer, Sony's TR-63 radio "cracked open the U.S. market and launched the new industry of consumer microelectronics."<sup>[26]</sup> By the mid-1950s, American teens had begun buying portable transistor radios in huge numbers, helping to propel the fledgling industry from an estimated 100,000 units in 1955 to 5 million units by the end of 1968.<sup>[citation needed]</sup>

Sony co-founder Akio Morita founded Sony Corporation of America in 1960.<sup>[20]</sup> In the process, he was struck by the mobility of employees between American companies, which was unheard of in Japan at that time.<sup>[20]</sup> When he returned to Japan, he encouraged experienced, middle-aged employees of other companies to reevaluate their careers and consider joining Sony.<sup>[20]</sup> The company filled many positions in this manner, and inspired other Japanese companies to do the same.<sup>[20]</sup> Moreover, Sony played a major role in the development of Japan as a powerful exporter during the 1960s, 1970s and 1980s.<sup>[27]</sup> It also helped to significantly improve American perceptions of "made in Japan" products.<sup>[28]</sup> Known for its production quality, Sony was able to charge above-market prices for its consumer electronics and resisted lowering prices.<sup>[28]</sup>

In 1971, Masaru Ibuka handed the position of president over to his co-founder Akio Morita. Sony began [a life insurance company](#) in 1979, one of its many peripheral businesses. Amid a global recession in the early 1980s, electronics sales dropped and the company was forced to cut prices.<sup>[28]</sup> Sony's profits fell sharply. "It's over for Sony," one analyst concluded. "The company's best days are behind it."<sup>[28]</sup> Around that time, [Norio Ohga](#) took up the role of president. He encouraged the development of the [Compact Disc](#) in the 1970s and 1980s, and of the [PlayStation](#) in the early 1990s. Ohga went on to purchase [CBS Records](#) in 1988 and [Columbia Pictures](#) in 1989, greatly expanding Sony's media presence. Ohga would succeed Morita as [chief executive officer](#) in 1989.<sup>[29][citation needed]</sup> Under the vision of co-founder Akio Morita<sup>[30]</sup> and his successors, the company had aggressively expanded into new businesses.<sup>[27]</sup> Part of its motivation for doing so was the pursuit of "convergence," linking film, music and digital electronics via the

Internet.<sup>[27]</sup> This expansion proved unrewarding and unprofitable,<sup>[27]</sup> threatening Sony's ability to charge a premium on its products<sup>[30]</sup> as well as its brand name.<sup>[30]</sup> In 2005, [Howard Stringer](#) replaced [Nobuyuki Idei](#) as [chief executive officer](#), marking the first time that a foreigner had run a major Japanese electronics firm. Stringer helped to reinvigorate the company's struggling media businesses, encouraging blockbusters such as *Spider-Man* while cutting 9,000 jobs.<sup>[27]</sup> He hoped to sell off peripheral business and focus the company again on electronics.<sup>[30]</sup> Furthermore, he aimed to increase cooperation between business units,<sup>[30]</sup> which he described as "silos" operating in isolation from one another.<sup>[31]</sup> In a bid to provide a unified brand for its global operations, Sony introduced a slogan known as "make.believe" in 2009.<sup>[29][citation needed]</sup>



Sony Store in [Markville Shopping Centre](#), Canada

Despite some successes, the company faced continued struggles in the mid- to late-2000s.<sup>[27]</sup> In 2012, [Kazuo Hirai](#) was promoted to president and CEO, replacing Stringer. Shortly thereafter, Hirai outlined his company-wide initiative, named "One Sony" to revive Sony from years of financial losses and bureaucratic management structure, which proved difficult for former CEO Stringer to accomplish, partly due to differences in business culture and native languages between Stringer and some of Sony's Japanese divisions and subsidiaries. Hirai outlined three major areas of focus for Sony's electronics business, which include imaging technology, gaming and mobile technology, as well as a focus on reducing the major losses from the television business.<sup>[32]</sup>

Sony Store in [Nagoya](#), Japan

In February 2014, Sony announced the sale of its Vaio PC division to a new corporation owned by investment fund Japan Industrial Partners and spinning its TV division into its own corporation as to make it more nimble to turn the unit around from past losses totaling \$7.8 billion over a decade.<sup>[33]</sup> Later that month, they announced that they would be closing 20 stores.<sup>[34]</sup> In April, the company announced that they would be selling 9.5 million shares in [Square Enix](#) (roughly 8.2 percent of the game company's total shares) in a deal worth approximately \$48 million.<sup>[35]</sup> In May 2014 the company announced it was forming two joint ventures with [Shanghai Oriental Pearl Group](#) to manufacture and market Sony's [PlayStation](#) games consoles and associated software in China.<sup>[36]</sup>

It was reported in December 2016 by multiple news outlets that Sony was considering restructuring its U.S. operations by merging its TV & film business, Sony Pictures Entertainment, with its gaming business, Sony Interactive Entertainment. According to the reports, such a restructuring would have placed Sony Pictures under Sony Interactive's CEO,

Andrew House, though House wouldn't have taken over day-to-day operations of the film studio.<sup>[37][38][39]</sup> According to one report, Sony was set to make a final decision on the possibility of the merger of the TV, film, & gaming businesses by the end of its fiscal year in March of the following year (2017).<sup>[37]</sup>

## Formats and technologies

Further information: [List of Sony trademarks](#)

Sony has historically been notable for creating its own in-house standards for new recording and storage technologies, instead of adopting those of other manufacturers and standards bodies. Sony (either alone or with partners) has introduced several of the most popular recording formats, including the [floppy disk](#), [Compact Disc](#) and [Blu-ray Disc](#).<sup>[40]</sup>

### Video recording



A rare Japanese market Betamax TV/VCR combo, the Model SL-MV1

The company launched the [Betamax videocassette recording](#) format in 1975.<sup>[41]</sup> Sony was involved in the [videotape format war](#) of the early 1980s, when they were marketing the [Betamax](#) system for video cassette recorders against the [VHS](#) format developed by [JVC](#).<sup>[42]</sup> In the end, VHS gained critical mass in the marketbase and became the worldwide standard for consumer VCRs.<sup>[42]</sup>

Betamax is, for all practical purposes, an obsolete format. Sony's professional-oriented [component video](#) format called [Betacam](#), which was derived from Betamax, was used until 2016 when Sony announced it was stopping production of all remaining 1/2-inch video tape recorders and players, including the Digital Betacam format.<sup>[43]</sup>

In 1985, Sony launched their Handycam products and the [Video8 format](#).<sup>[44]</sup> Video8 and the follow-on hi-band [Hi8](#) format became popular in the consumer camcorder market. In 1987 Sony launched the 4 mm DAT or [Digital Audio Tape](#) as a new digital audio tape standard.<sup>[45]</sup>

### Audio recording





First Sony Walkman TPS-L2 from 1979

In 1979, the [Walkman](#) brand was introduced, in the form of the world's first portable music player using the [compact cassette](#) format.<sup>[46]</sup> Sony introduced the [MiniDisc](#) format in 1992 as an alternative to Philips DCC or [Digital Compact Cassette](#) and as a successor to the compact cassette.<sup>[47]</sup> Since the introduction of MiniDisc, Sony has attempted to promote its own audio compression technologies under the [ATRAC](#) brand, against the more widely used MP3. Until late 2004, Sony's [Network Walkman](#) line of digital portable music players did not support the MP3 standard natively.

In 2004, Sony built upon the [MiniDisc](#) format by releasing [Hi-MD](#). Hi-MD allows the playback and recording of audio on newly introduced 1 GB Hi-MD discs in addition to playback and recording on regular MiniDiscs. In addition to saving audio on the discs, Hi-MD allows the storage of computer files such as documents, videos and photos.

## Audio encoding

In 1993, Sony challenged the industry standard [Dolby Digital](#) 5.1 surround sound format with a newer and more advanced proprietary motion picture digital audio format called [SDDS](#) (Sony Dynamic Digital Sound).<sup>[48]</sup> This format employed eight channels (7.1) of audio opposed to just six used in Dolby Digital 5.1 at the time.<sup>[48]</sup> Ultimately, SDDS has been vastly overshadowed by the preferred DTS ([Digital Theatre System](#)) and Dolby Digital standards in the motion picture industry. SDDS was solely developed for use in the theatre circuit; Sony never intended to develop a home theatre version of SDDS.<sup>[49][50]</sup>

Sony and Philips jointly developed the Sony-Philips digital interface format ([S/PDIF](#)) and the high-fidelity audio system [SACD](#). The latter became entrenched in a format war with [DVD-Audio](#). Neither gained a major foothold with the general public. CDs were preferred by consumers because of the ubiquitous presence of CD drives in consumer devices until the early 2000s when the iPod and streaming services became available.<sup>[51]</sup>

## Optical storage



Front side of a Sony 200GB Blu-ray disc

In 1983, Sony followed their counterpart [Philips](#) to the [compact disc](#) (CD). In addition to developing consumer-based recording media, after the launch of the CD Sony began development of commercially based recording media. In 1986 they launched Write-Once [optical discs](#) (WO) and in 1988 launched [Magneto-optical discs](#) which were around 125MB size for the specific use of archival data storage.<sup>[52]</sup> In 1984, Sony launched the [Discman](#) series which extended their Walkman brand to portable CD products.

In the early 1990s, two high-density optical storage standards were being developed: one was the MultiMedia Compact Disc (MMCD), backed by Philips and Sony, and the other was the Super Density disc (SD), supported by [Toshiba](#) and many others. Philips and Sony abandoned their MMCD format and agreed upon Toshiba's SD format with only one modification. The unified disc format was called DVD and was introduced in 1997.

Sony was one of the leading developers of the [Blu-ray](#) optical disc format, the newest standard for disc-based content delivery. The first Blu-ray players became commercially available in 2006. The format emerged as the standard for HD media over the competing format, Toshiba's [HD DVD](#), after a two-year-long [high-definition optical disc format war](#).

## Disk storage

In 1983, Sony introduced 90 mm micro diskettes (better known as 3.5-inch (89 mm) [floppy disks](#)), which it had developed at a time when there were 4" floppy disks, and a lot of variations from different companies, to replace the then on-going 5.25" floppy disks. Sony had great success and the format became dominant. 3.5" floppy disks gradually became obsolete as they were replaced by current media formats.<sup>[53][49][citation needed]</sup>

## Flash memory

Sony launched in 1998, their [Memory Stick](#) format, [flash memory](#) cards for use in Sony lines of digital cameras and portable music players. It has seen little support outside of Sony's own products, with [Secure Digital cards](#) (SD) commanding considerably greater popularity. Sony has made updates to the Memory Stick format with [Memory Stick Duo](#) and [Memory Stick Micro](#).

## Business units

Further information: [List of assets owned by Sony](#)

Sony offers products in a variety of product lines around the world.<sup>[54]</sup> Sony has developed a music playing robot called [Rolly](#), dog-shaped robots called [AIBO](#) and a [humanoid](#) robot called [QRIO](#).

As of 1 April 2016, Sony is organized into the following business segments: Mobile Communications (MC), Game & Network Services (G&NS), Imaging Products & Solutions (IP&S), Home Entertainment & Sound (HE&S), Semiconductors, Components, Pictures, Music, Financial Services and All Other.<sup>[55]</sup> The network and medical businesses are included in the G&NS and IP&S, respectively.<sup>[56]</sup>

## Electronics

### Sony Corporation



Sony at [Westfield Riccarton shopping centre](#) in [Christchurch](#), New Zealand

Sony Corporation is the electronics business unit and the parent company of the Sony Group. It primarily conducts strategic business planning of the group, research and development (R&D), planning, designing and marketing for electronics products. Its subsidiaries such as Sony Global Manufacturing & Operations Corporation (SGMO; 4 plants in Japan), Sony Semiconductor Manufacturing Corporation (7 plants in Japan), Sony Storage Media and Devices Corporation, Sony Energy Devices Corporation and its subsidiaries outside Japan ([Brazil](#), China, [UK](#) ([Wales](#)), [India](#), [Malaysia](#), [Singapore](#), South Korea, [Thailand](#), Ireland and United States) are responsible for manufacturing as well as [product engineering](#) (SGMO<sup>[clarification needed]</sup> is also responsible for customer service operations). In 2012, Sony rolled most of its consumer content services (including video, music and gaming) into the [Sony Entertainment Network](#).

### Audio

Sony produced the world's first portable music player, the [Walkman](#) in 1979. This line fostered a fundamental change in music listening habits by allowing people to carry music with them and listen to music through lightweight headphones. Walkman originally referred to portable audio

[cassette](#) players. The company now uses the Walkman brand to market its portable audio and video players as well as a line of former [Sony Ericsson](#) mobile phones.

Sony utilized a related brand, Discman, to refer to its CD players. It dropped this name in the late 1990s.

## Computing

Sony produced computers ([MSX home computers](#) and [NEWS workstations](#)) during the 1980s. The company withdrew from the computer business around 1990. Sony entered again into the global computer market under the new [VAIO](#) brand, began in 1996. Short for "Video Audio Integrated Operation", the line was the first computer brand to highlight visual-audio features.<sup>[31]</sup>

Sony faced considerable controversy when some of its laptop batteries exploded and caught fire in 2006, resulting in the largest computer-related recall to that point in history.<sup>[57][58][59]</sup>

In a bid to join the [tablet computer](#) market, the company launched its [Sony Tablet](#) line of [Android](#) tablets in 2011. Since 2012, Sony's Android products have been marketed under the [Xperia](#) brand used for its smartphones.<sup>[60]</sup>

On 4 February 2014, Sony announced that it would sell its VAIO PC business due to poor sales<sup>[61]</sup> and Japanese company Japan Industrial Partners (JIP) will purchase the VAIO brand, with the deal finalized by the end of March 2014.<sup>[62]</sup> Sony maintains a minority stake in the new, independent company.

## Photography and videography



A Sony [Cyber-shot](#) digital camera.

Sony offers a wide range of digital cameras. Point-and-shoot models adopt the [Cyber-shot](#) name, while [digital single-lens reflex](#) models are branded using [Alpha](#).

The first Cyber-shot was introduced in 1996. At the time, digital cameras were a relative novelty. Sony's [market share](#) of the digital camera market fell from a high of 20% to 9% by 2005.<sup>[31]</sup>

Sony entered the market for [digital single-lens reflex cameras](#) in 2006 when it acquired the camera business of [Konica Minolta](#). Sony rebranded the company's line of cameras as its [Alpha](#)

line. Sony is the world's third largest manufacturer of the cameras, behind [Canon](#) and [Nikon](#) respectively.

There are also a variety of [Camcorders](#) which are manufactured by Sony.

## Video



Logo of [Bravia](#) television. Its backronym is "Best Resolution Audio Visual Integrated Architecture".

In 1968, Sony introduced the [Trinitron brand name](#) for its lines of [aperture grille cathode ray tube](#) televisions and (later) [computer monitors](#). Sony stopped production of Trinitron for most markets, but continued producing sets for markets such as Pakistan, Bangladesh and China. Sony discontinued its series of Trinitron computer monitors in 2005. The company discontinued the last Trinitron-based television set in the US in early 2007. The end of Trinitron marked the end of Sony's analog television sets and monitors.

Sony used the LCD WEGA name for its LCD TVs until summer 2005. The company then introduced the BRAVIA name. [BRAVIA](#) is an in house brand owned by Sony which produces high-definition LCD televisions, projection TVs and front projectors, home cinemas and the BRAVIA home theatre range. All Sony high-definition flat-panel LCD televisions in North America have carried the logo for BRAVIA since 2005. Sony is the third-largest maker of televisions in the world.<sup>[63]</sup> As of 2012, Sony's television business has been unprofitable for eight years.<sup>[63]</sup>



A [Sony Bravia](#) 4K television.

In December 2011, Sony agreed to sell all stake in an LCD joint venture with [Samsung Electronics](#) for about \$940 million.<sup>[64]</sup> On 28 March 2012, Sony Corporation and [Sharp Corporation](#) announced that they have agreed to further amend the joint venture agreement originally executed by the parties in July 2009, as amended in April 2011, for the establishment and operation of Sharp Display Products Corporation ("SDP"), a joint venture to produce and sell large-sized LCD panels and modules.<sup>[65]</sup>

On 9 November 2015, Sony announced that they are going to stop producing Betamax Tapes in March 2016.<sup>[66]</sup>

Sony also sells a range of [DVD players](#). It has shifted its focus in recent years to promoting the [Blu-ray](#) format, including discs and players.

### **Semiconductor and components**

Sony produces a wide range of semiconductors and electronic components including image sensors ([Exmor](#)), image processor ([BIONZ](#)), laser diodes, system LSIs, mixed-signal LSIs, OLED panels, etc. The company has a strong presence in the image sensor market. Sony-manufactured CMOS image sensors are widely used in [digital cameras](#), [tablet computers](#) and [smartphones](#).

In April 2018, Sony announced to join the market for satellite communications and develop [laser communication](#) products for small satellites. Sony wants to use its heritage with [optical disc](#) technology used in products like CD players and plans to start initial tests in collaboration with [JAXA](#) in 2018.<sup>[67]</sup>

### **Healthcare and biotechnology**

Sony has targeted medical, healthcare and biotechnology business as a growth sector in the future. The company acquired iCyt Mission Technology, Inc. (renamed Sony Biotechnology Inc. in 2012), a manufacturer of flow cytometers, in 2010 and Micronics, Inc., a developer of microfluidics-based diagnostic tools, in 2011.

In 2012, Sony announced that it will acquire all shares of [So-net Entertainment Corporation](#), which is the majority shareholder of M3, Inc., an operator of portal sites (m3.com, MR-kun, MDLinx and MEDI:GATE) for healthcare professionals.

On 28 September 2012, [Olympus](#) and Sony announced that the two companies will establish a joint venture to develop new surgical endoscopes with [4K resolution](#) (or higher) and 3D capability.<sup>[68]</sup> Sony Olympus Medical Solutions Inc. (Sony 51%, Olympus 49%) was established on 16 April 2013.<sup>[69]</sup>

On 28 February 2014, Sony, M3 and [Illumina](#) established a joint venture called P5, Inc. to provide a genome analysis service for research institutions and enterprises in Japan.<sup>[70]</sup>

### **Sony Mobile Communications**

Main article: [Sony Mobile](#)



[Xperia](#), the product device name for a range of smartphones from Sony.

Sony Mobile Communications Inc. (formerly Sony Ericsson) is a [multinational mobile phone](#) manufacturing company headquartered in Tokyo, Japan and a wholly owned subsidiary of Sony Corporation.

In 2001, Sony entered into a joint venture with Swedish telecommunications company [Ericsson](#), forming Sony Ericsson.<sup>[71]</sup> Initial sales were rocky, and the company posted losses in 2001 and 2002. However, SMC reached a profit in 2003. Sony Ericsson distinguished itself with multimedia-capable mobile phones, which included features such as cameras. These were unusual for the time. Despite their innovations, SMC faced intense competition from [Apple's iPhone](#) which released in 2007. From 2008 to 2010, amid a global recession, SMC slashed its workforce by several thousand. Sony acquired Ericsson's share of the venture in 2012 for over US\$1 billion.<sup>[71]</sup> In 2009, SMC was the fourth-largest mobile phone manufacturer in the world (after [Nokia](#), [Samsung](#) and [LG](#)).<sup>[72]</sup> By 2010, its market share had fallen to sixth place.<sup>[73]</sup> Sony Mobile Communications now focuses exclusively on the smartphone market under the [Xperia](#) name. In 2015, Sony released [Xperia Z5 Premium](#) in Canada following US and Europe.<sup>[74]</sup>

In the year 2013, Sony contributed to around two percent of the mobile phone market with 37 million mobile phones sold.<sup>[75]</sup>

## Sony Interactive Entertainment

Main article: [Sony Interactive Entertainment](#)



Sony Interactive Entertainment headquarters in [San Mateo, California](#)

Sony Interactive Entertainment (formerly Sony Computer Entertainment) is best known for producing the popular line of PlayStation consoles. The line grew out of a failed partnership with Nintendo. Originally, Nintendo requested Sony to develop an add-on for [its console](#) that would play [Compact Discs](#). In 1991 Sony announced [the add-on](#), as well as a dedicated console known as the "Play Station". However, a disagreement over software licensing for the console caused the partnership to fall through. Sony then continued the project independently.

Launched in 1994, the first [PlayStation](#) gained 61% of global console sales and broke Nintendo's long-standing lead in the market.<sup>[76]</sup> Sony followed up with the [PlayStation 2](#) in 2000, which was even more successful. The console has become the most successful of all time, selling over 150 million units as of 2011. Sony released the [PlayStation 3](#), a high-definition console, in 2006. It was the first console to use the [Blu-ray](#) format, and was considerably more expensive than competitors [Xbox 360](#) and [Wii](#) due to a [Cell processor](#).<sup>[31]</sup> Early on, poor sales performance resulted in significant losses for the company, pushing it to sell the console at a [loss](#).<sup>[77]</sup> The PlayStation 3 sold generally more poorly than its competitors in the early years of its release but

managed to overtake the Xbox 360 in global sales later on.<sup>[78]</sup> It later introduced the [PlayStation Move](#), an accessory that allows players to control video games using motion gestures.



The [PlayStation 2](#) is the best-selling video game console of all time

Sony extended the brand to the portable games market in 2004 with the [PlayStation Portable](#) (PSP). The console has sold reasonably, but has taken a second place to a rival handheld, the [Nintendo DS](#). Sony developed the [Universal Media Disc](#) (UMD) optical disc medium for use on the PlayStation Portable. Early on, the format was used for movies, but it has since lost major studio support. Sony released a disc-less version of its PlayStation Portable, the [PSP Go](#), in 2009. The company went on to release its second portable video game system, [PlayStation Vita](#), in 2011 and 2012. Sony launched its fourth console, the [PlayStation 4](#), on 15 November 2013, which as of 31 December 2017 has sold 73.6 million units globally.<sup>[79]</sup>

On 18 March 2014, at [GDC](#), president of [Sony Computer Entertainment Worldwide Studios](#) [Shuhei Yoshida](#) announced their new virtual reality technology dubbed Project Morpheus, and later named [PlayStation VR](#), for PlayStation 4. The headset brought VR gaming and non-gaming software to the company's console. According to a report released by Houston-based patent consulting firm [LexInnova](#) in May 2015, Sony is leading the virtual reality patent race. According to the firm's analysis of nearly 12,000 patents or patent applications, Sony has 366 virtual reality patents or patent applications.<sup>[80]</sup> PlayStation VR was released worldwide on 13 October 2016.<sup>[81]</sup>

## Electric vehicles and batteries

See also: [Electric vehicle](#)

In 2014, Sony participated within [NRG Energy eVgo Ready for Electric Vehicle](#) (REV) program, for [EV charging](#) parking lots.<sup>[82]</sup> Sony is in the business of electric vehicle [lithium-ion batteries](#);<sup>[83][84][85]</sup> on 28 July 2016, Sony announced that the company will sell its battery business to [Murata Manufacturing](#).<sup>[86]</sup>

IT giants such as [Google](#) ([driverless car](#)) and [Apple](#) (iCar/[Project Titan](#)) are working on electric vehicles and [self driving cars](#), competing with [Tesla](#); Sony is entering into this field by investing \$842,000 in the [ZMP](#) company.<sup>[87][88]</sup> On 6 January 2020 at the [Consumer Electronics Show](#) in [Las Vegas](#), Sony announced a concept Electric Vehicle called the Vision-S.<sup>[89]</sup>



In January 2020 Sony unveiled a concept electric car at the [Consumer Electronics Show](#), named [Vision-S](#), designed in collaboration with components manufacturer [Magna International](#).<sup>[90]</sup> At the occasion Sony also stated its goal of developing technology for the automotive sector, especially concerning autonomous driving and entertainment.<sup>[91]</sup>

## Entertainment

Further information: [Sony Entertainment](#)

[Sony Entertainment](#) has two divisions: Sony Pictures Entertainment, Sony Music Group (Sony Music Entertainment, Sony/ATV Music Publishing).

Sony USA also previously owned and operated Sony Trans Com: a technology business that provided in-flight entertainment programming as well as video and audio playback equipment for the airline industry. Sony had purchased the business from Sundstrand Corp. in 1989 and subsequently sold it to [Rockwell Collins](#) in 2000.<sup>[92][93]</sup>

## Sony Pictures Entertainment

Main articles: [Sony Pictures](#), [Sony Pictures Entertainment Japan](#), and [Sony Pictures Networks India](#)



Sony Pictures Plaza, next to the main studio lot of [Sony Pictures](#) in [Culver City, California](#)

Sony Pictures Entertainment Inc. (SPE) is the television and film production/distribution unit of Sony. With 12.5% box office market share in 2011, the company was ranked third among movie studios.<sup>[94]</sup> Its group sales in 2010 were US\$7.2 billion.<sup>[12][95]</sup> The company has produced many notable movie franchises, including [Spider-Man](#), [The Karate Kid](#) and [Men in Black](#). It has also produced the popular television game shows [Jeopardy!](#) and [Wheel of Fortune](#).

Sony entered the television and film production market when it acquired Columbia Pictures Entertainment in 1989 for \$3.4 billion. Columbia lives on in the [Sony Pictures Motion Picture Group](#), a division of SPE which in turn owns [Columbia Pictures](#) and [TriStar Pictures](#) among other film production and distribution companies such as [Screen Gems](#), [Sony Pictures Classics](#), [Sony Pictures Home Entertainment](#). SPE's television division is known as [Sony Pictures Television](#).



The main entrance to the [Sony Pictures Entertainment](#) studio lot in Culver City

For the first several years of its existence, Sony Pictures Entertainment performed poorly, leading many to suspect the company would sell off the division.<sup>[96]</sup> Sony Pictures Entertainment encountered controversy in the early 2000s. In July 2000, a marketing executive working for Sony Corporation created a fictitious film critic, [David Manning](#), who gave consistently good reviews for releases from Sony subsidiary [Columbia Pictures](#) that generally received poor reviews amongst real critics.<sup>[97]</sup> Sony later pulled the ads, suspended Manning's creator and his supervisor and paid fines to the state of Connecticut<sup>[98]</sup> and to fans who saw the reviewed films in the US.<sup>[99]</sup> In 2006 Sony started using [ARccOS Protection](#) on some of their film DVDs, but later issued a recall.<sup>[100]</sup>

In late 2014, Sony Pictures [became the target of a hack attack](#) from a clandestine group called Guardians of Peace, weeks before releasing the anti-[North Korean comedy film](#) [The Interview](#).<sup>[101]</sup>

## Sony Music Group

Main articles: [Sony Music](#), [Sony/ATV Music Publishing](#), and [Sony Music Entertainment Japan](#)



[Sony Music Entertainment](#) headquarters in [New York City, United States](#)

Sony Music Entertainment (also known as SME or Sony Music) is the second-largest global [recorded music company](#) of the "[big three](#)" [record companies](#) and is controlled by [Sony Corporation of America](#), the United States subsidiary of Japan's *Sony*.

In one of its largest-ever acquisitions, Sony purchased [CBS Record Group](#) in 1988 for US\$2 billion.<sup>[102]</sup> In the process, Sony partnered and gained the rights to the ATV catalogue of Michael Jackson, considered by the [Guinness Book of World Records](#) to be the most successful entertainer of all time. The acquisition of CBS Records provided the foundation for the formation of Sony Music Entertainment, which Sony established in 1991.

In 2004, Sony entered into a joint venture with [Bertelsmann AG](#), merging Sony Music Entertainment with [Bertelsmann Music Group](#) to create [Sony BMG](#). In 2005, Sony BMG faced a [copy protection scandal](#), because its music CDs had installed [malware](#) on users' computers that was posing a security risk to affected customers.<sup>[103]</sup> In 2007, the company acquired [Famous Music](#) for US\$370 million, gaining the rights to the catalogues of Eminem and Akon, among others.

Sony bought out Bertelsmann's share in the company and formed a new Sony Music Entertainment in 2008. Since then, the company has undergone management changes. In January 1988, Sony acquired CBS Records and the 50% of CBS/Sony Group. In March 1988, four wholly owned subsidiaries were folded into CBS/Sony Group and the company was renamed as [Sony Music Entertainment Japan](#)

Sony purchased digital music recognition company [Gracenote](#) for US\$260 million in 2008.<sup>[104]</sup> [Tribune Media Company](#) acquired Gracenote from Sony in 2014 for \$170 million.<sup>[105]</sup>

Besides its record label, Sony operates other music businesses. In 1995, Sony merged its publisher with [Michael Jackson's ATV Music Publishing](#), forming Sony/ATV Music Publishing. At the time, the publishing company was the second largest of its kind in the world. The company owns the publishing rights to over 4 million compositions, including [The Beatles' Lennon-McCartney](#) catalogue, [Bob Dylan](#), [Eminem](#), [Lady Gaga](#), [Sam Smith](#), [Ed Sheeran](#), and [Taylor Swift](#).

In 2012, Sony/ATV then acquired a majority stake in [EMI Music Publishing](#), making them the world's largest music publishing company.<sup>[106]</sup> As of 2016, Sony owns all of Sony/ATV.<sup>[107]</sup>

## **Finance**

Headquarters of Sony Financial Holdings in [Tokyo](#), Japan

### **Financial services**

[Sony Financial Holdings](#) is a holding company for Sony's financial services business. It owns and oversees the operation of [Sony Life](#) (in Japan and the Philippines), Sony Assurance, [Sony Bank](#) and Sony Bank Securities. The company is headquartered in Tokyo, Japan. Sony Financial accounts for half of Sony's global earnings.<sup>[108]</sup> The unit proved the most profitable of Sony's businesses in [fiscal year](#) 2006, earning \$1.7 billion in profit.<sup>[30]</sup> Sony Financial's low fees have aided the unit's popularity while threatening Sony's premium brand name.<sup>[30]</sup>

### **Mobile payments**

Sony wants to contend with Apple and Samsung on mobile payments in Asia. Sony plans to use its [contact-less](#) payment technology to make ground in the public transportation industry across Asia. The system, known as [FeliCa](#), relies on two forms of technologies to make it viable, either chips embedded in smartphones or plastic cards with chips embedded in them. Sony plans to implement this technology in train systems in Indonesia as early as Spring 2016. <sup>[109]</sup>