

World Electronic Industry

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DECISION
Etudes Conseil

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1 Executive summary

The recent evolution of the world electronics markets has confirmed the major trends that had appeared by the end of 2003:

Over 60% of electronic output now consists of mass-market products. This enables a fast penetration of new products worldwide, reducing the time between introduction and saturation, and increasing the need for continuous innovation.

Mass-market products and professional products are two very different segments.

Digitalisation has led to the convergence of segments that used to be differentiated as “computer”, “telecoms” or “consumer”. The resulting “converged” products are mobile, networked and (in most cases) interoperable.

The business model is changing. Buyers demand the product they want (innovative, fashionable, cheap, easy-to-use and reliable), and competition between suppliers is fought on this terrain.

The multiplication of new digital products, applications and solutions makes the electronics market globally more stable and more competitive, and less dependant upon specific products categories (as TVs, PCs or mobile phones),.

Out-sourcing is progressing in all the areas of the electronics industry, and no longer only in assembly. This has led to the development of new players (CEMs, EMS, ODMs...).

The emergence of China in electronics has become a reality in the last two or three years. China has become a both a considerable market and a serious competitor for the other electronics industries in the world. China will, in 2009, produce 24% of the world electronics (20% in 2004).

Over the 2004-2009 period, the world electronics industry will grow by close to 5% per year, with a relatively even profile, although 2009 is expected to be a relatively poor year.

Automotive and consumer electronics will lead the overall industry growth with an annual growth of respectively 7.3 and 6.7%. By 2009 audio-video will represent 14.5% of the total

electronics industry, data processing 23%, telecommunications 24%, aerospace and defence 6,5%, automotive 9%, and industrial and medical electronics 16%. Home appliance electronics at 6,9% are over-estimated, as the figure includes not only the electronic content, but the whole value of the appliance.

Automotive electronics will continue to lead the whole industry in terms of growth, pulled by the diffusion to mid- and low-range cars of applications that were reserved to the top-of-the-range, rather than by real innovation. The industry is facing a new challenge with interference problems due to the multiplication of new applications. This problem has generated a number of initiatives such as AUTOSAR that aiming to define standards, especially in the software area.

The acceleration of consumer electronics market growth is linked to an innovation boom, a drop in prices and the opening of new markets. The innovation boom is directly related to digitalisation which is allowing a total renewal of consumer electronics products (TVs, cameras, printers ...), that are favourably affected by convergence. The drop in prices has been a constant trend in consumer electronics and mass-market products for decades. It is mostly due to optimisation and rationalisation of production and design, and to component innovation and digitalisation. In comparison to these factors production localisation in Asia or Eastern Europe is a marginal and transient factor.

The PC industry, which used to pull the overall market, has recovered in 2003 and 2004 from a major slump in 2001-2002. We expect it to grow by close to 7% per year in units, to 230 million in 2009. There will be a slight price decrease over the period, despite the increasing share of the laptops which will pull the market, and the value will see a 5% annual growth to 120 billion euros in 2009, about 10% of the total electronics industry. Passing Taiwan, China has become the leading world manufacturer of PCs (30% in 2004, and this share will grow to 35% by 2009).

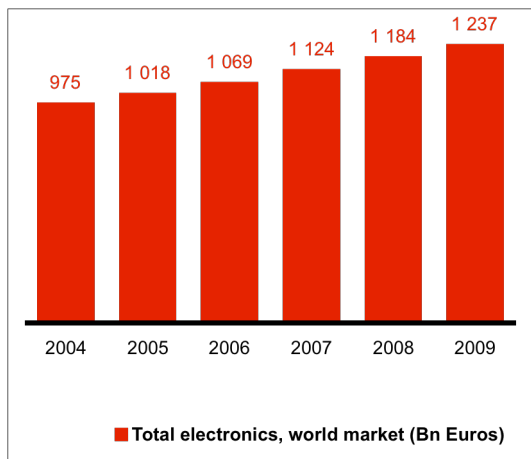
In telecommunications the mobile segment will drive the market with an annual growth rate of 5%, whereas the total market will only grow by less than 4% per year. The shift of mobile telephony to 3G will enable this growth. The mobile handsets will represent a 100 billion euros market, not so far from the PC market, and a 1 billion units market.

China's share of mobile handset production will increase in units from 35 to 38%, to a large extent destined to the Chinese market.

Defence and aerospace electronics will grow at a steady pace of 3.5% per year. The military segment is clearly driven by the USA, which supports its industry through huge budget increases while Europe struggles as it can on export markets. The civil segment is more balanced, and rather in favour of Europe as Airbus is making life difficult for Boeing, and Arianespace is successfully continuing its launches despite strong world-wide competition.

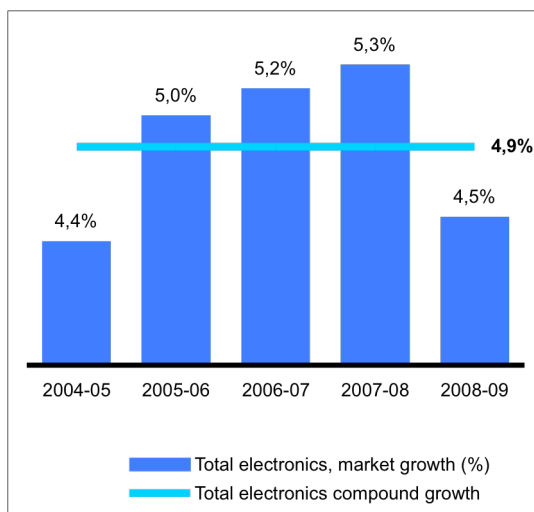
Industrial and medical electronics should find their way back to a slow but steady growth (almost 5% per year), driven by the automation sector. In this area, North America and Europe represent two thirds of the market and will keep their positions.

Figure 1, Total electronics, world market (billion euros)



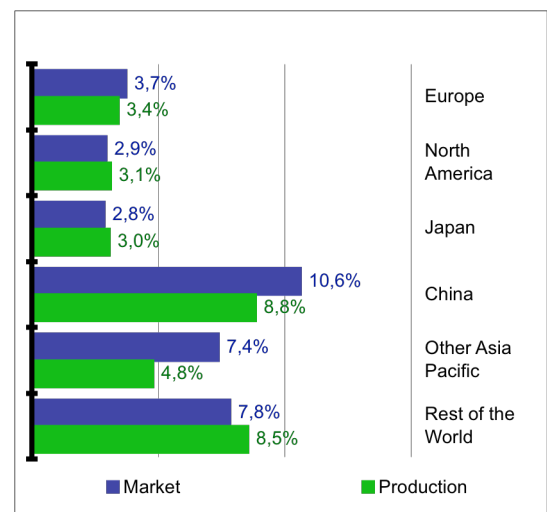
Source: DECISION – June 2005

Figure 2, Total electronics, market growth (%)



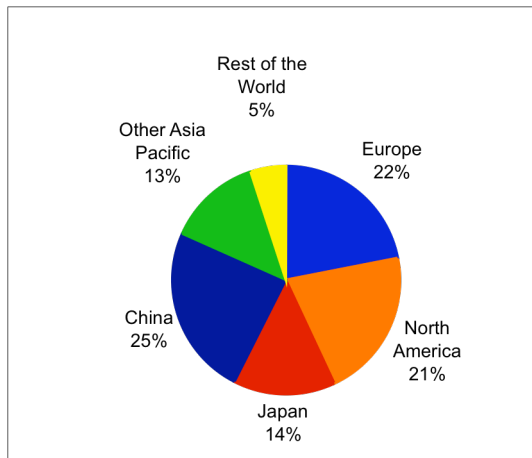
Source: DECISION – June 2005

Figure 3, Total electronics, market and production 2004-09 compound growth per region (%)



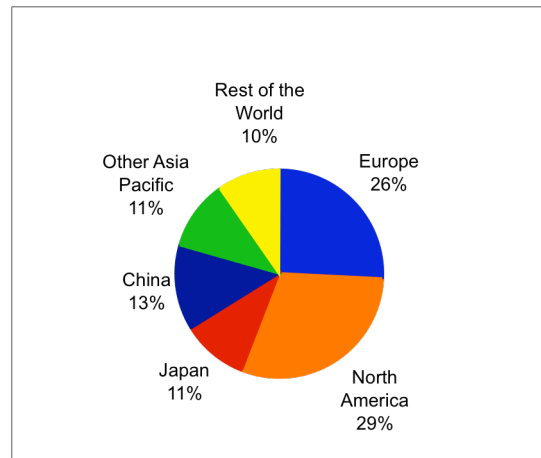
Source: DECISION – June 2005

Figure 4, Total electronics, production breakdown by region (2009 %)



Source: DECISION – June 2005

Figure 5, Total electronics, market breakdown by region (2009 %)



Source: DECISION – June 2005

Table 1, Total electronics, World market by sector, 2004-2009, million euros

Sector	Million euros		Growth (1) 2004-09
	2004	2009	
TVs & Audio-video	128 990	179 182	6.8%
Home appliances	70 880	85 410	3.8%
PCs & data processing	227 988	286 257	4.7%
Telecoms & networks	246 806	298 319	3.9%
- of which mobile (2)	104 189	137 116	5.6%
- of which fixed (2)	142 617	161 203	2.5%
Aerospace and defence electronics	67 307	80 739	3.7%
Automotive electronics	77 146	109 715	7.3%
Industrial and medical electronics	156 022	197 600	4.8%
Total electronics	975 140	1 237 221	4.9%
- of which consumer & mass products	49%	50%	5.5%
- of which professional products	43%	41%	3.7%
- of which automotive	8%	9%	7.3%

Source: DECISION – June 2005

(1) Compound annual growth rate

(2) Infrastructure & phones/terminals

Table 2, Total electronics, World market by region, 2004-2009, million euros

Region	Million euros		Growth (1) 2004-09
	2004	2009	
Total World	975 140	1 237 221	4.9%
Europe	266 038	318 965	3.7%
North America	320 348	370 099	2.9%
Japan	113 298	130 303	2.8%
China	98 038	162 357	10.6%
Other Asia-Pacific	94 645	134 947	7.4%
Rest of the World	82 774	120 550	7.8%

Source: DECISION – June 2005

(1) Compound annual growth rate

Table 3, Total electronics, World market share by region, % in value

Region	World %	
	2004	2009
Total World	100.0%	100.0%
Europe	27.3%	25.8%
North America	32.9%	29.9%
Japan	11.6%	10.5%
China	10.1%	13.1%
Other Asia-Pacific	9.7%	10.9%
Rest of the World	8.5%	9.7%

Source: DECISION – June 2005

Table 4, Total electronics, World production by region, 2004-2009, million euros

Region	Million euros		Growth (1) 2004-09
	2004	2009	
Total World	975 140	1 237 221	4.9%
Europe	230 263	272 108	3.4%
North America	223 043	259 636	3.1%
Japan	153 932	178 846	3.0%
China	197 343	301 176	8.8%
Other Asia-Pacific	128 709	162 469	4.8%
Rest of the World	41 850	62 986	8.5%

Source: DECISION – June 2005
(1) Compound annual growth rate

Table 5, Total electronics, World production share by region, % in value

Region	World %	
	2004	2009
Total World	100.0%	100.0%
Europe	23.6%	22.0%
North America	22.9%	21.0%
Japan	15.8%	14.5%
China	20.2%	24.3%
Other Asia-Pacific	13.2%	13.1%
Rest of the World	4.3%	5.1%

Source: DECISION – June 2005