

# Electronica 2010 – ZVEI Forum

## European Electronics Industry Outlook: *some light after the crisis?*

November 9th 2010

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# Who we are

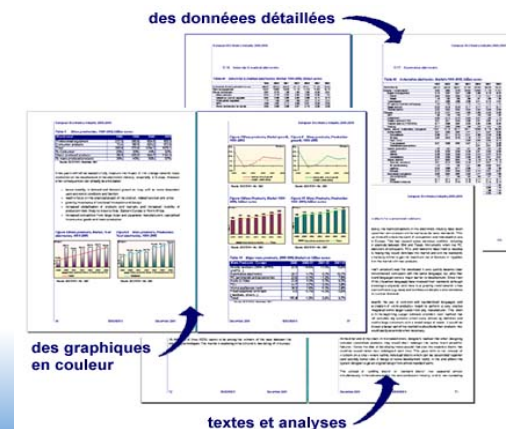


**DECISION** is a European based consultancy, created in 1991, which is composed of 20 industrial experts, focused on :

- ✓ **Electronic** equipment and components
- ✓ **Electrical** and **Energy** industries
- ✓ **Aerospace / Defense** industries

We are specialists in **sectoral analysis** and **economical forecast** (5-year period)

Our network of experts is **international** including Europe, North America and Japan. Experts bring to DECISION their knowledge, experience, as well as **connections to the industry**



# Our references



## Component industries

## Governments, trade associations

## Finance



# The Future of the European Electronic Industries 2009-2014

A comprehensive scope of analysis:

- Aerospace and defense (airborne systems, space, communications, missiles, land and sea based systems...)
- Audio & video (TV sets, STBs, VCRs, DVD...)
- Automotive (powertrain and chassis, safety and security, communication and entertainment)
- Data Processing (mainframe, large systems, servers, dedicated terminals, PCs, peripherals, ...)
- Home Appliances
- Industrial and Medical electronics (vehicle systems, power supply, power distribution, automation, medical electronics, instrumentation – measurement - test...)
- Telecom (mobile, base station, fixed infrastructure, other terminals...)

World and European coverage for both Production AND Market

For more information:

[http://www.decision.eu/ang/prod\\_el\\_a.htm](http://www.decision.eu/ang/prod_el_a.htm)

**DECISION**  
Etudes Conseil

**The Future of the European  
Electronic Industries**

**2009 - 2014**

Production, Market and Issues

**The whole electronics industry  
covered in a single survey!**

- Market and Production forecasts from 2009 to 2014
- Detailed analysis of 50 equipment categories covering all application markets:
  - Telecommunication
  - Data processing
  - Aerospace, defense & security
  - Industrial & medical
  - Automotive
  - Audio & video

a survey updated  
yearly since 2001 by  
**DECISION**  
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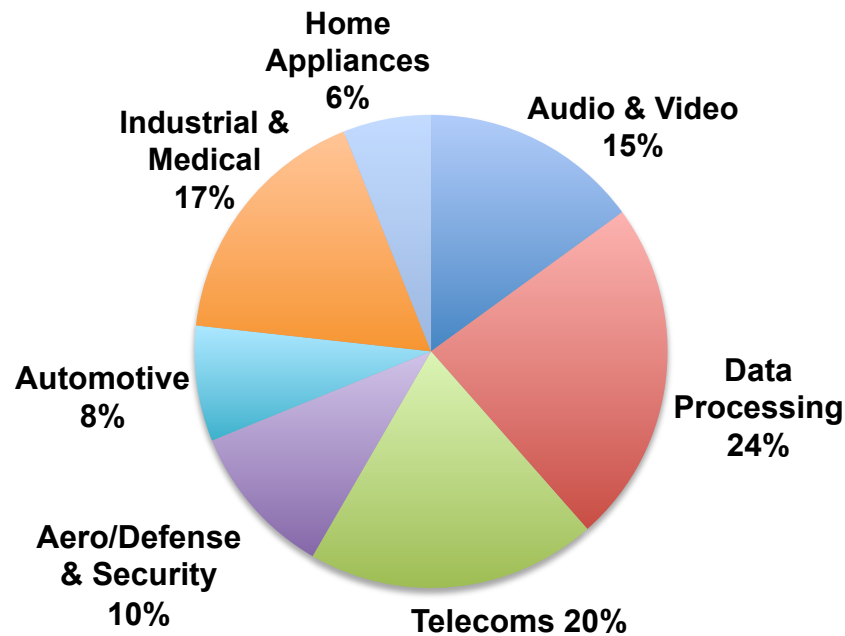


# OUTLINE

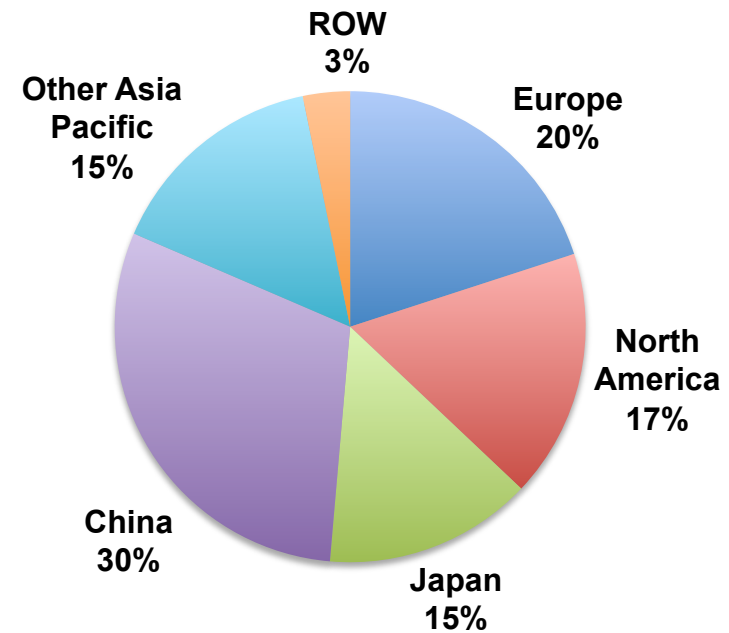
1. World electronics outlook
2. European electronics outlook
3. Focus on long-term growth opportunities for Europe
4. Conclusion

# Electronic equipment production breakdown

World production per application sector, 2009



World production per region, 2009

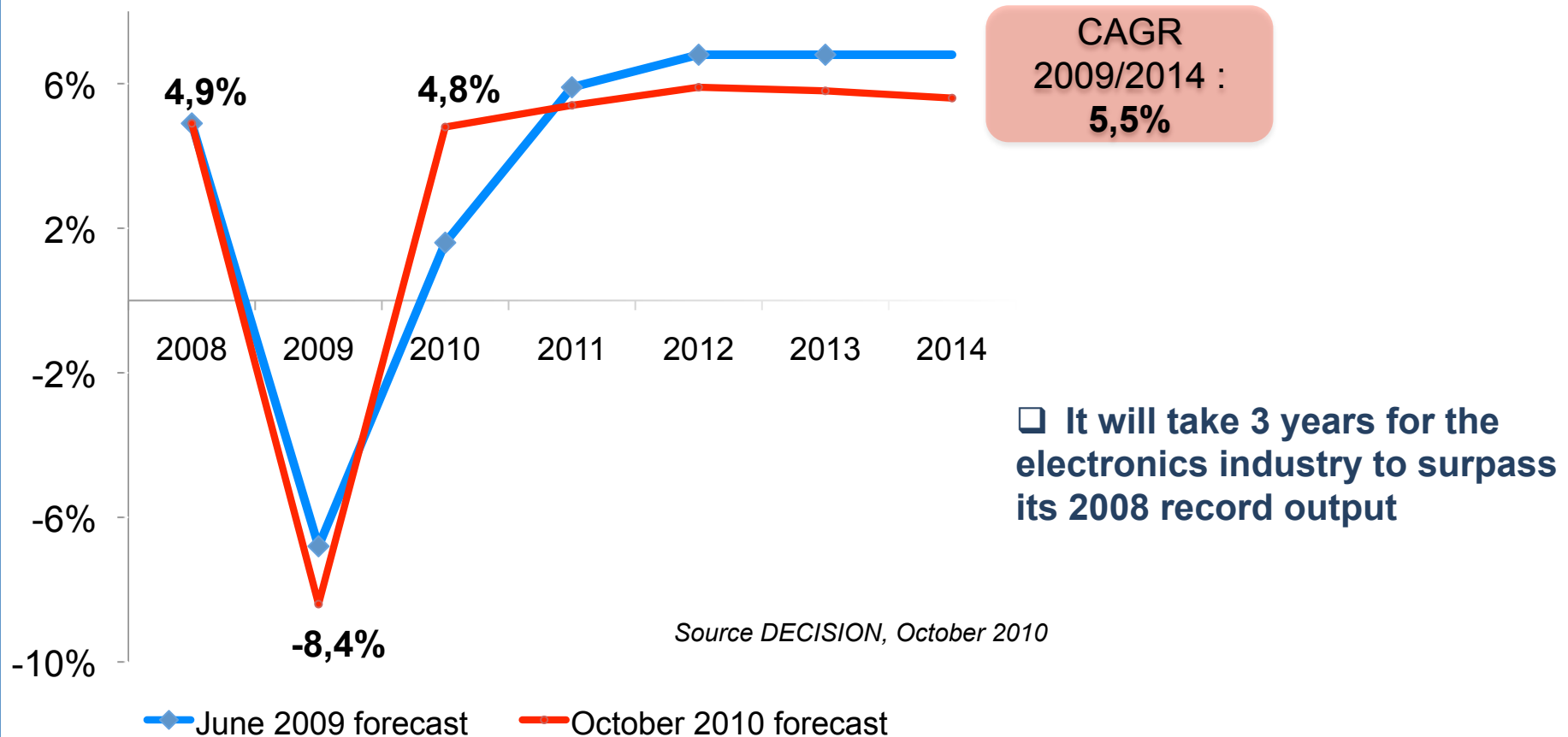


Source DECISION, October 2010

**World production 2009 = 1,115 billion euros**

# Industry's recovery profile

World production growth in value terms, 2009-2014



# Differentiated impacts in the value chain

□ Depending on players' positions within the supply chain, business conditions and resulting growth can be quite different

- end market trend
- stock level
- balance between manufacturing capacity and final demand
- pervasion

	2009 growth in value term	2010 growth in value term	Remarks
<b>Equipment</b>	-8%	+5%	-
<b>Sub-contractors</b>	-9%	+8% EMS: +5%, ODM: +10%	Cycle amplification is natural in this business – adjustment variable for OEMs
<b>Components</b>	Semiconductors: -10%  Connectors: -25%	Semiconductors: +25% à 27%  Connectors: +20%	Cycle over-amplification ... as usual (CAPEX and ASP)

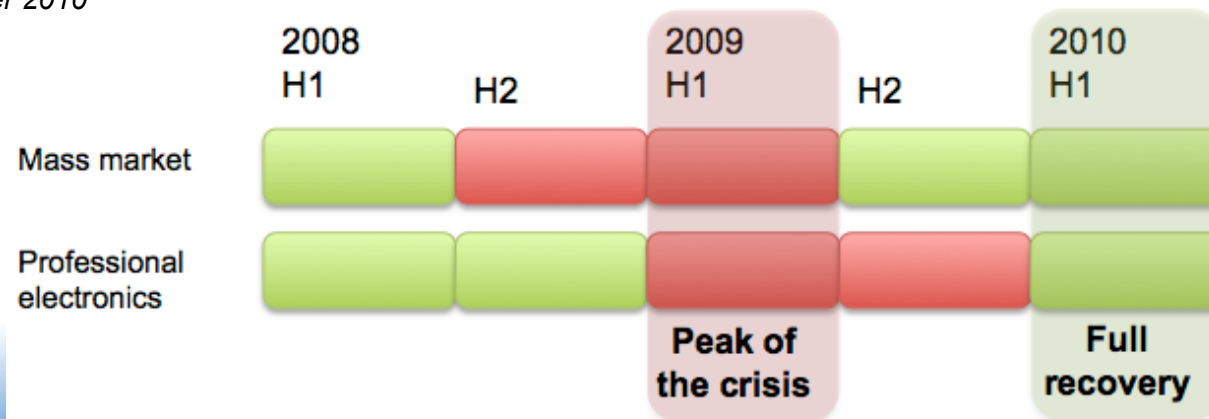
Source: DECISION, Elcoteq, IDC, WSTS, Gartner, Isuppli

# All end markets concerned unlike 2001

Annual growth of World electronic equipment production in value term, 2009-2014

	2009	2010	2011	CAGR 2009-2014
Aero-Def & Security	5%	4%	3%	4,5%
Audio & Video	-7%	-1,5%	1,5%	1%
Automotive	-14%	8%	6,5%	6,5%
Data Processing	-9%	6,5%	6%	6,5%
Home Appliances	-6%	2,5%	3%	3%
Industrial & Medical	-11%	8%	7,5%	8%
Telecoms	-10,5%	5,5%	6,5%	6,5%

Source DECISION, October 2010



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# Impact on regional dynamics

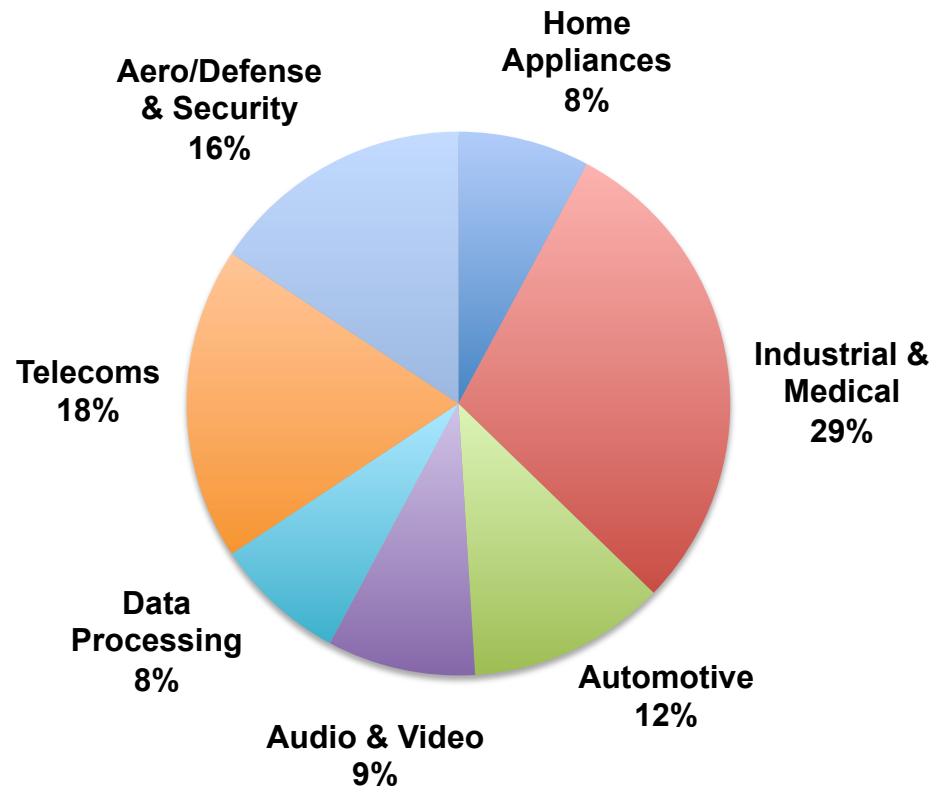
Annual equipment production growth per region, 2009-2014



Source DECISION, October 2010

# 2009 crisis confirms Europe specialization

European equipment production per application sector, 2009



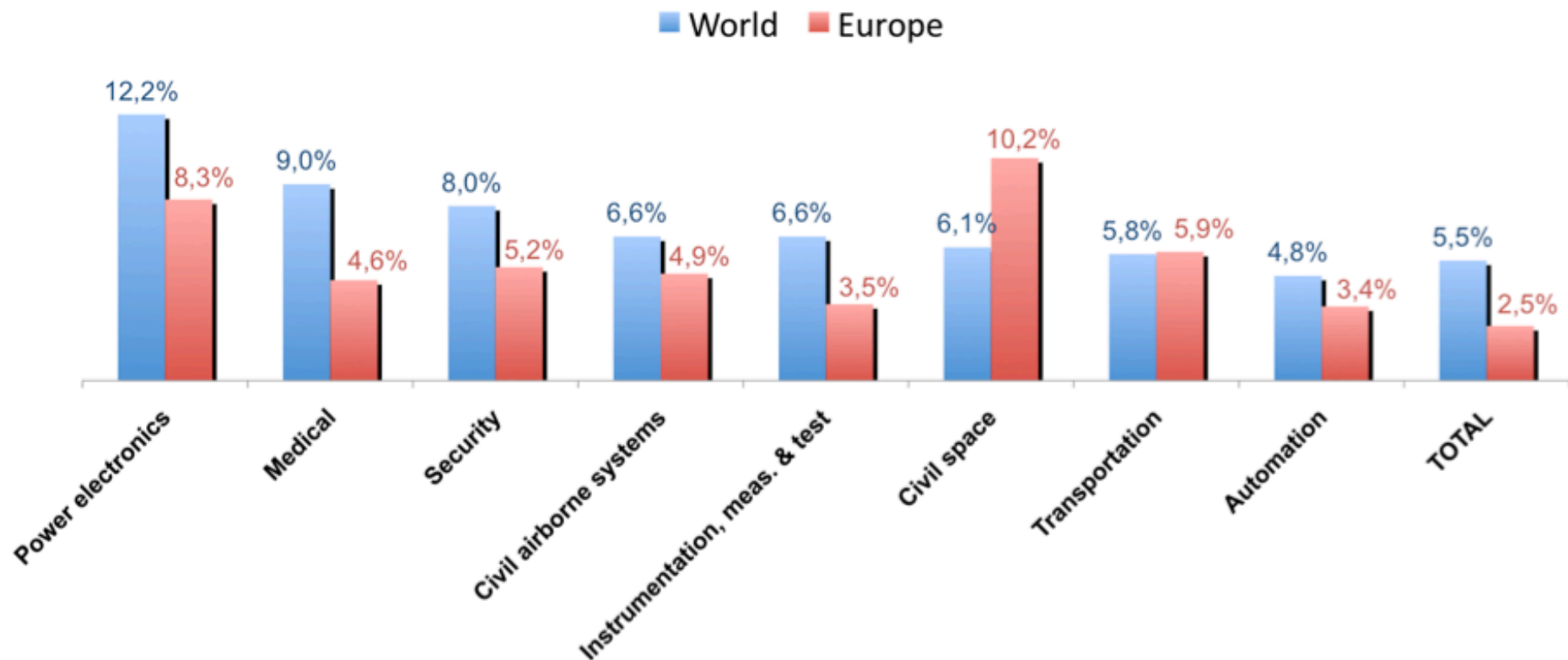
Share of Europe out of World equipment production, 2009

Application sector	Share of World production
Industrial & Medical	<b>34%</b>
Aerospace Defence and Security	<b>30%</b>
Automotive	<b>30%</b>
Telecommunications	<b>18%</b>

Source DECISION, October 2010

# European assets in a global market

Annual Average production growth per application sector 2009-2014, World vs. Europe



Source DECISION, October 2010

# The European industry is adapting

## ❑ Realignment of manufacturing capacities

- facilities are closed in specific sectors that are heavily impacted by the crisis (e.g. automobile), workforce continue to decline in others (e.g. telecoms)
- semiconductor branch adopting a fablite business model

## ❑ But R&D investments are being protected in high potential markets

- hybrid and electric transports (rail, air, road)
- power electronics and energy storage
- photo-voltaic, bio-electronics, etc.

## ❑ Smaller gets better!

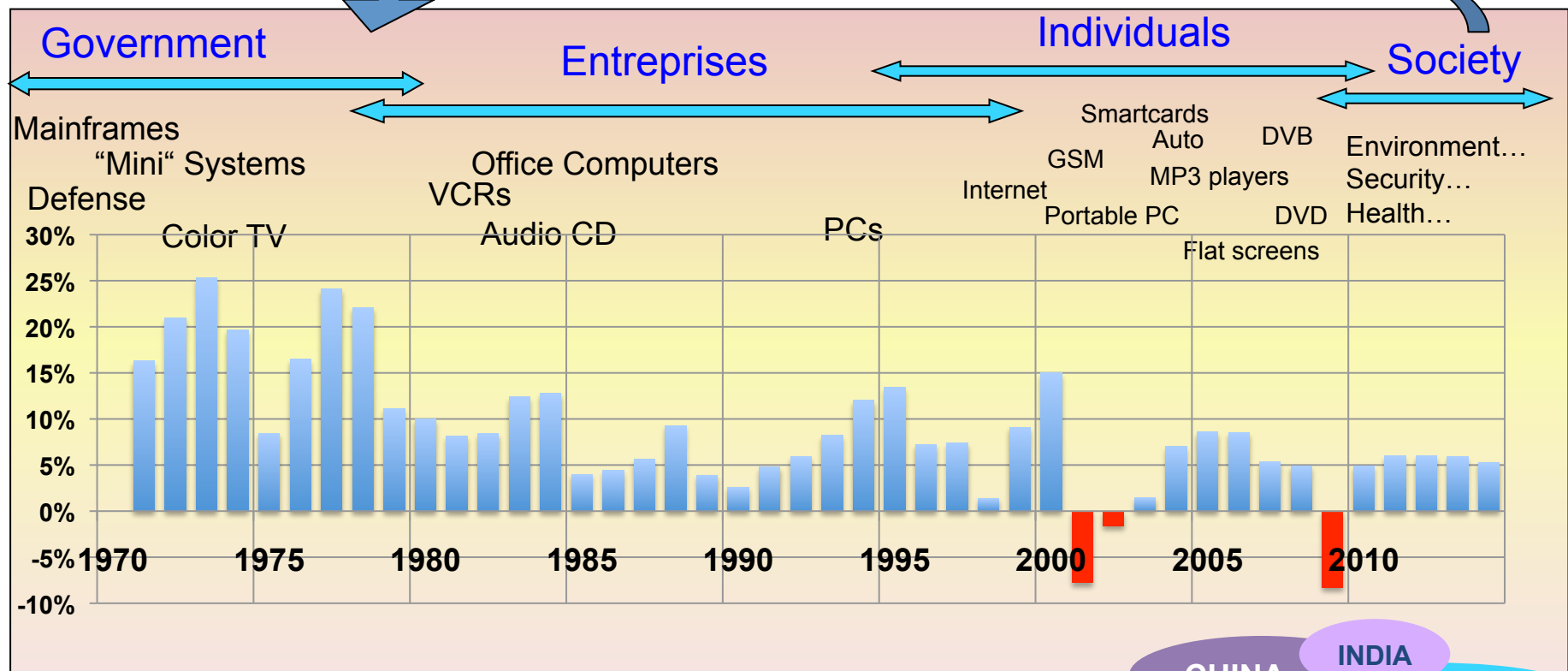
- regional sub-contractors in Europe have demonstrated their agility and adaptation to the local European market...
- ...contrary to large international players!

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# Electronics currently enters its fourth development age

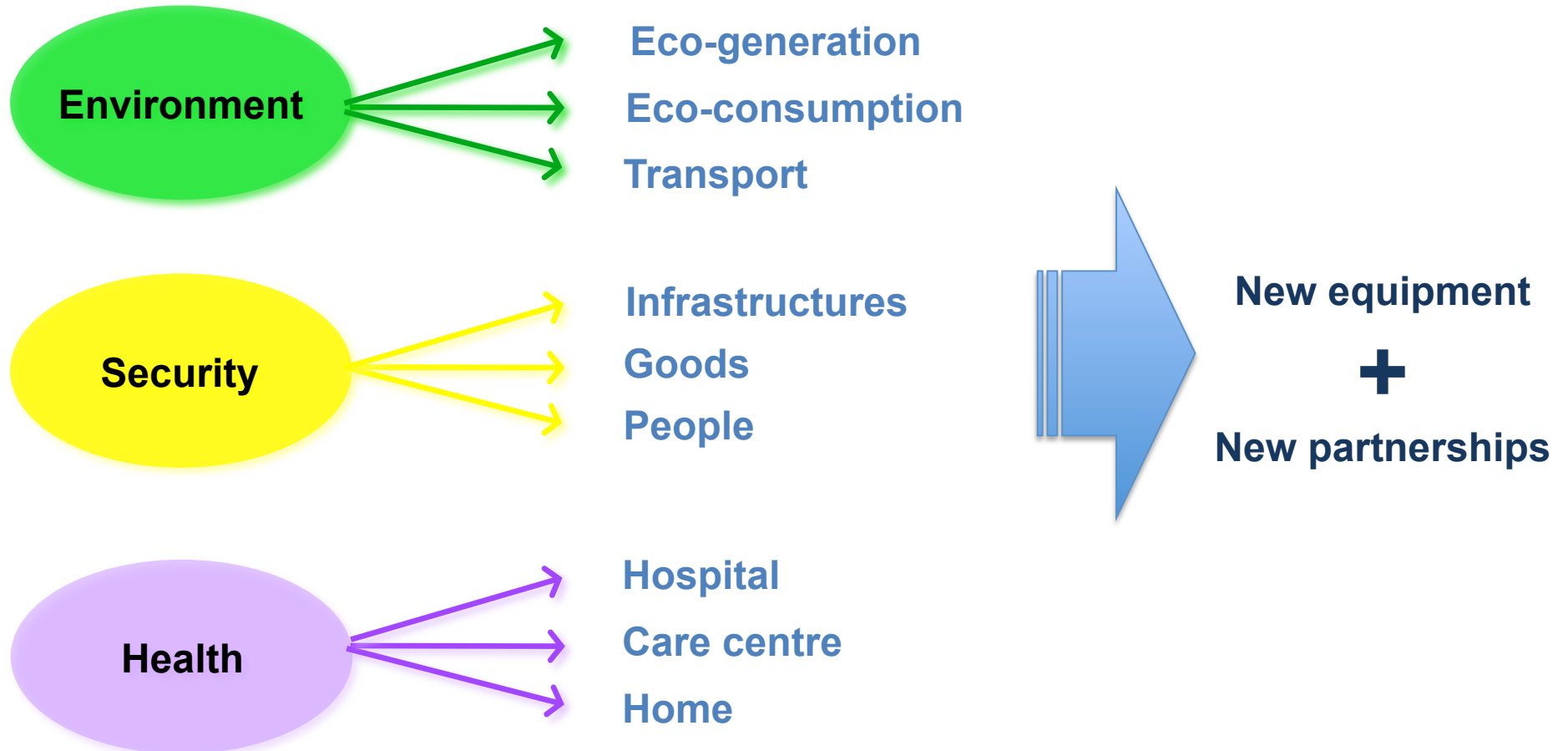
Annual growth of World electronic equipment production in value, 1970-2013



Source DECISION, October 2010



# Societal needs are the pillars of future European electronics industry



# Impact and development of Green IT

- ❑ **«Environmental impact of ICT technologies»** (IDATE, 2010)
  - In France, ICT technologies represent 7,3% of total electric consumption (telecoms, consumer, data processing)
  - This share is expected to decline by 6,3% in 2012
  
- ❑ **«Green IT 2020»** (BCG, 2010)
  - In France, electronic technologies could help reduce GHG emissions by 7% in 2020 with the following contributions:
    - Transport 61%, Energy 28%, Residential 11%
  - At the World level, the breakdown of expected gains is rather different (SMART2020):
    - Transport 34%, Energy 52%, Residential 14%
  
- ❑ **Located at the centre of all the energy market issues, the *smart grid* market represents a tremendous growth opportunities for Europe**
  - Up to 200 billion dollars in 2014 (*Pike Research*),
  - 4 billion dollars public investments in the USA, 20 billion dollars of revenue in 5 years according to CISCO

# Electric vehicle for the MaaS\*!

\*Mobility as a Service

## ❑ More electric vehicles should represent 10 to 20 million vehicles per year in 2020

- 700k hybrid vehicles produced in 2009 (2 millions in 2014)
- Very specific markets from one country to another – European options

## ❑ Car manufacturers are facing strategic choices

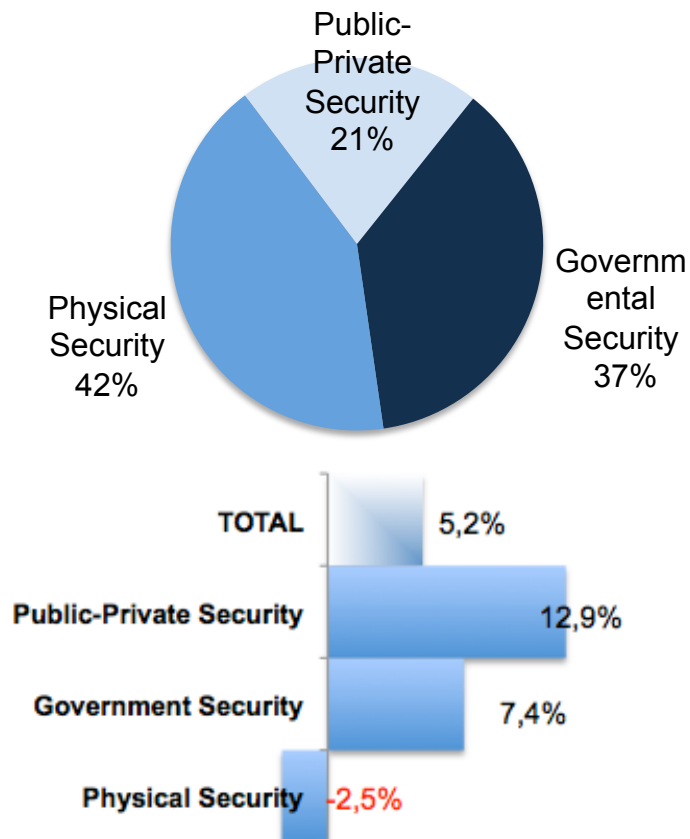
- The average electronic content will grow significantly by the end of the decade (powertrain + communication)
- While equipment manufacturers have the control over embedded electronic – car makers are developing new partnerships with the electronics industry
- Expected transition in distribution and MRO process

## ❑ New entrants and new business models

- Michelin, Bolloré, Dassault, Tesla
- Full ownership, rental (car and/or batteries), auto-sharing, self-service...

# Electronics provides answers to new security threats

Security Electronic equipment production in Europe, 2009-2014



□ Europe represents 24% of WW production, i.e., 8.4 billion euros in 2009

- Leadership areas: Identification, Smartcards, Secure communications, air and seaport protection

□ The European value chain is consolidating from a product and a regional perspectives

- Morpho (Safran) acquisitions of GE Homeland Protection and L3
- Cassidian (EADS) acquisitions in the US

□ Security and digital trust offers new fields of software/hardware convergence

- Intel's acquisition of McAfee

# Telehealth development – ~~if~~ vs. when

- ❑ **In 2050, 50% of the developed countries population will be over 50 years old!**
  - Developed economies health expenditures already represent over 10% of national GDPs (up to 18% in the USA)!
  
- ❑ **Electronics pervasion is still limited, roughly 10 to 12% of all medical technologies but growing driving long-term double digits market growth**
  - Technological requirements to better integrate life science
  - Organic electronic (interconnections, bio-sensors, etc.)
  
- ❑ **ICT – medical – domotic convergence = Telemedecine and Telehealth**
  - Success stories already exist in Europe (Telecardiology, Teleradiology, Tele-stroke), its the care organization that needs to adapt
  - Well being and comfort, new high volumes market to develop, based on new business model that are currently emerging

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# Societal markets are real opportunities for Europe

- ❑ **Societal markets demonstrate a very high leverage on the entire economy**
  - Thanks to direct economic growth they generate (service creation, export opportunities)
  - Thanks to economies and savings they can generate (power efficiency, environmental protection, care optimization, etc.)
  
- ❑ **Europe has strong know-how and capabilities to build upon in these domains**
  - Leaders all along the value chain: operators, integrators, equipment suppliers
  - Innovative technologies developed by dynamic SMEs
  
- ❑ **R&D takes place today for markets that will profoundly modify the marketplace between 2015 and 2020!**
  - Societal innovation is systemic and involves technological development, integration capabilities as well as new business models between technology suppliers, system integrators and service operators

## Thanks for your attention:

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