

Market forecast and industry trends

Jean-Philippe Dauvin

ST Chief Economist Emeritus

DECISION



Content



- **Electronics industry trend**
- Components forecast
- Next dilemmas : the Five D's



World economies : growth but increasing risks

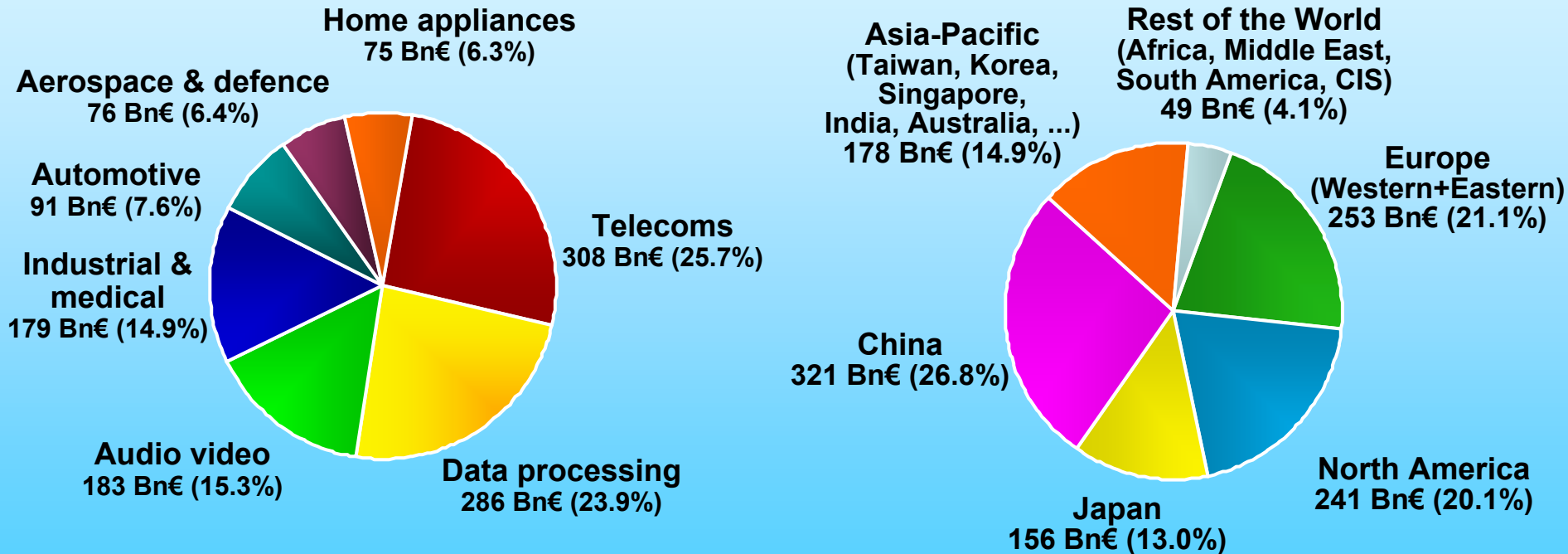
| Growth drivers | Growth 2008/2007 | | Nature of risk |
|--|--|--|--|
| <ul style="list-style-type: none"> Emerging countries demand Mature installed base renewal Technology decreasing prices Cash | <ul style="list-style-type: none"> USA Europe China India South America Japan World | <ul style="list-style-type: none"> 2% 3% 9% 8% 6% 2% ≈ 4% | <ul style="list-style-type: none"> Trade deficit Economics Demographic Social Speculative growth Inflation 2008 or 1928 ? |

Very favourable conditions for the electronics industry which generates value and disinflation



Asia represents half of world electronics production... Europe and North America still major production areas

The World Electronics Industries in 2007, production per application sector and region
 Total equipment production = € 1,198 billion



**Hardware value is larger than the world 8th economy (Canada).
 Together with IT and professional software & services electronics ecosystem is larger than Japan (world 2nd economy) !**

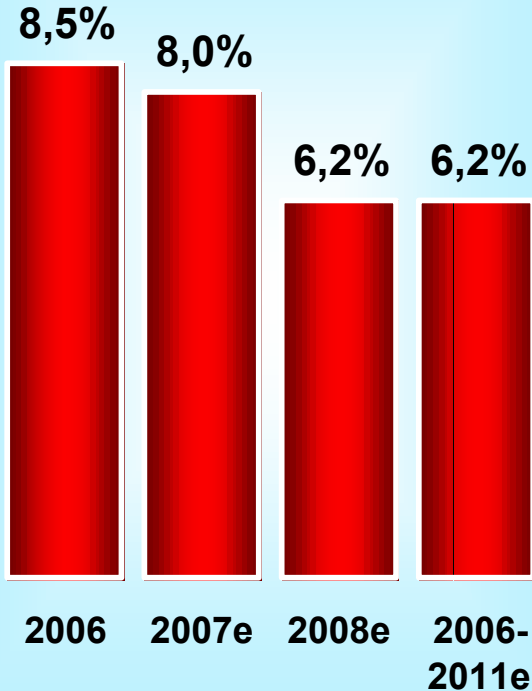
prov. average 2007 exchange rate: 1 euro = 1.3461 \$ (source: ECB)



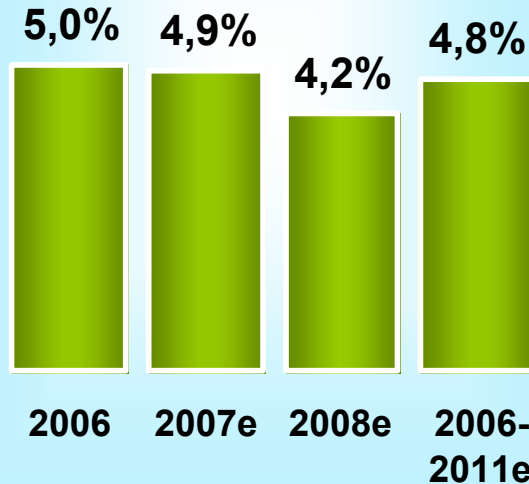
Different growth profiles for electronics production : the more developed countries

Electronic equipment : production per zone, annual growth, 2006-2011

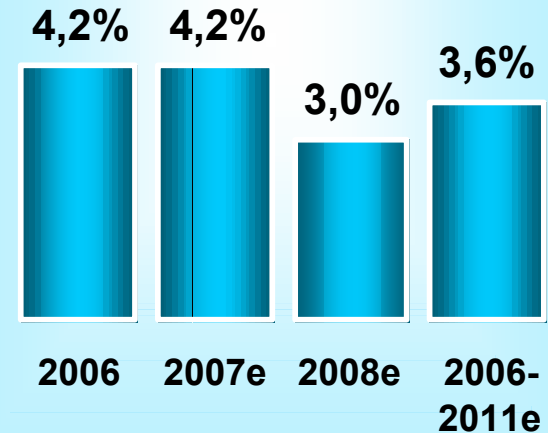
World



Europe

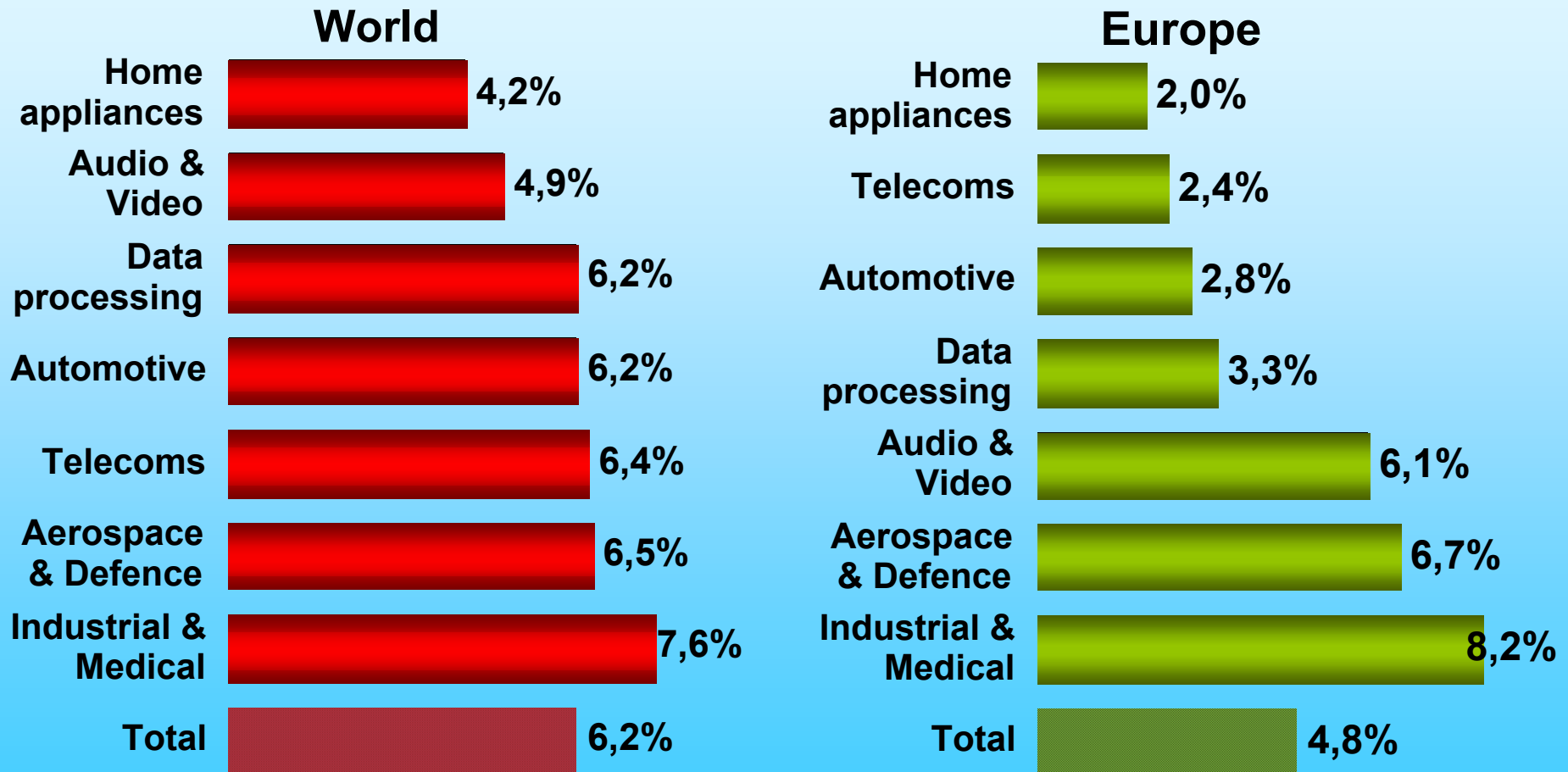


North America



Specialization at work in the West...

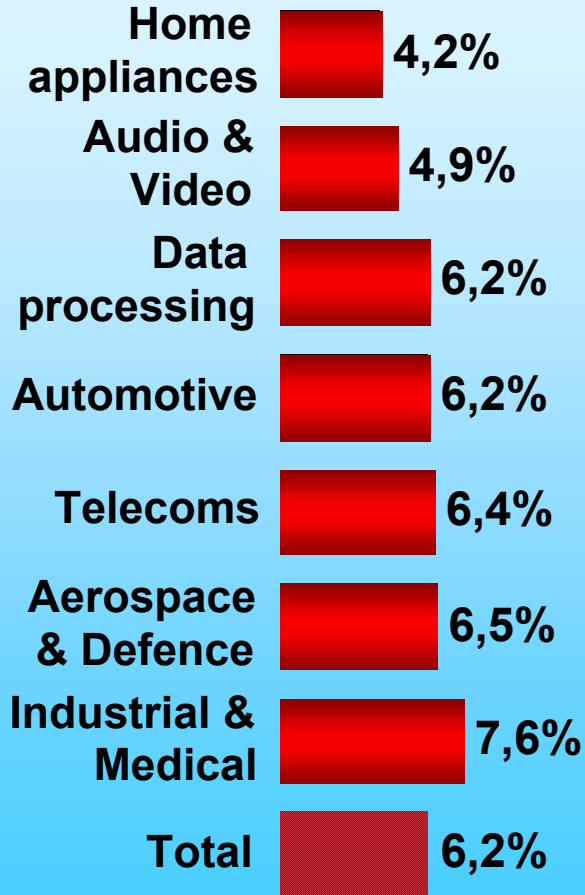
Electronics industry, Average annual growth per application sector, 2006-2011



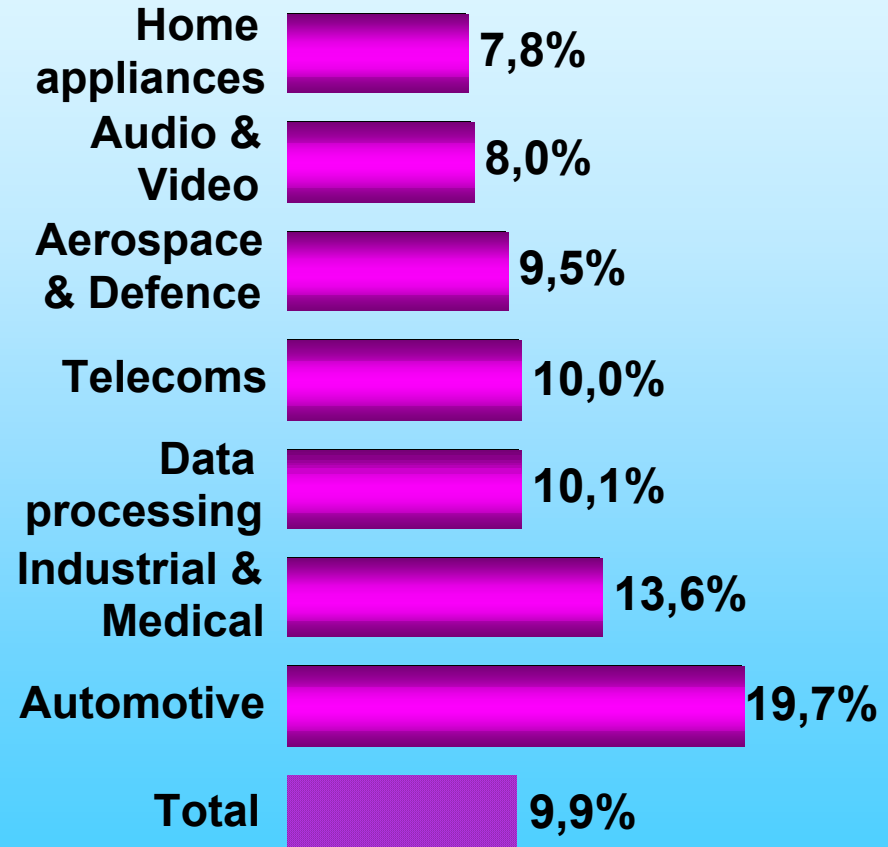
... and globalization in the Far-East

Electronics industry, Average annual growth per application sector, 2006-2011

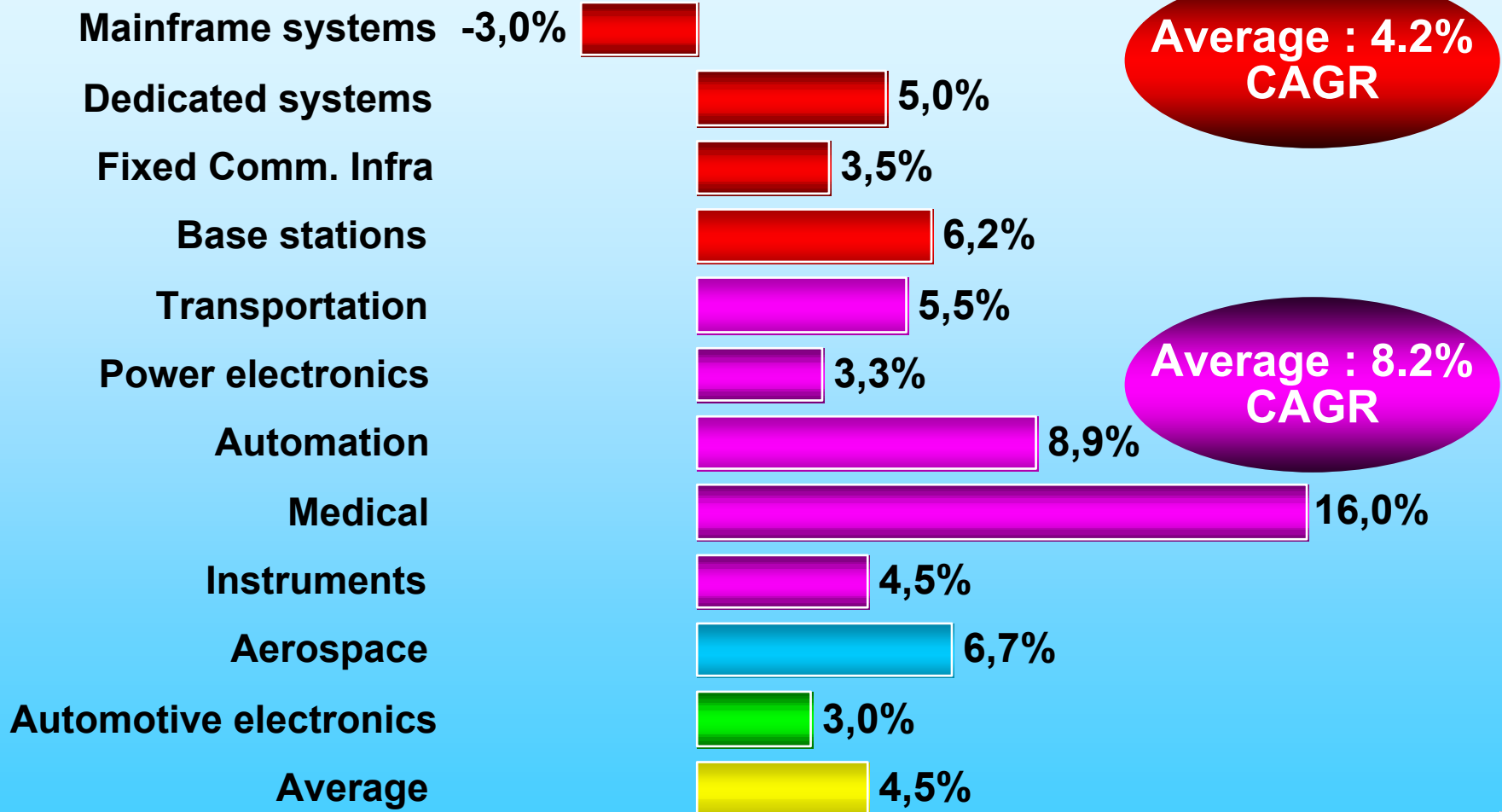
World



China



European professional electronics industries production growth 2006-2011



Toward a greater geographical bipolarisation ? A large impact on the supply chain

Emerging countries



Mature economies

- Low cost « boxes »
- « commodities »
- Very short product life cycle
- Poor value perceived by customer
- Linear growth

- New applications
- Multiple interactions in the value chain
- Long life cycle
- High value perceived by customer
- Very dynamic growth

Rigid

- PC
- Telecom
- Audio – Video

- Power savings
- Industrial
- Medical « health & beauty care »



New opportunities emerging in mature economies



- Home
- Transports
- Industry



- Living place
- Individual care
- Paramedical & medical applications



- Tracking
- Infrastructure security
- Personal security

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Content



- Electronics industry trend

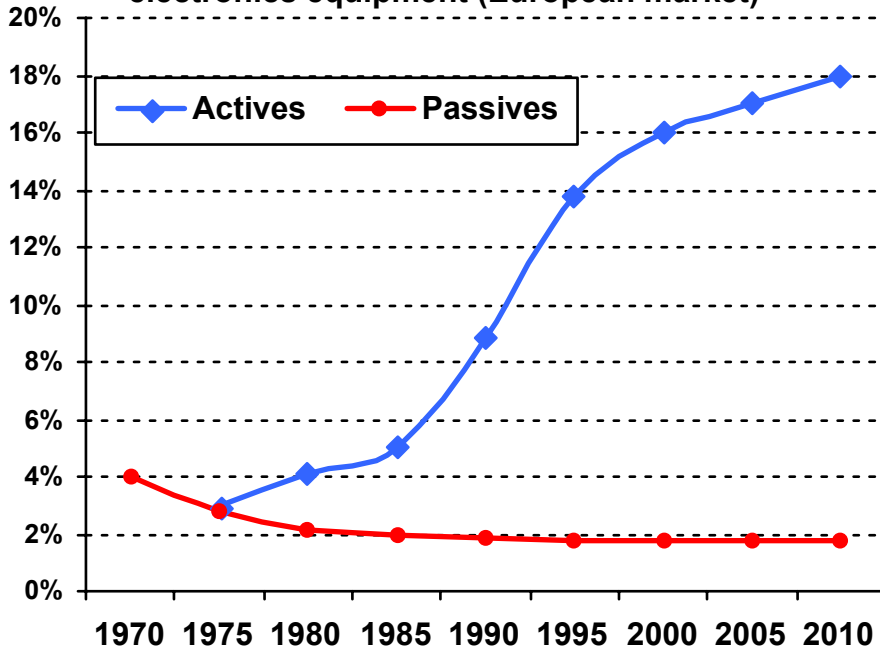


- **Components forecast**
- Next dilemmas : the Five D's

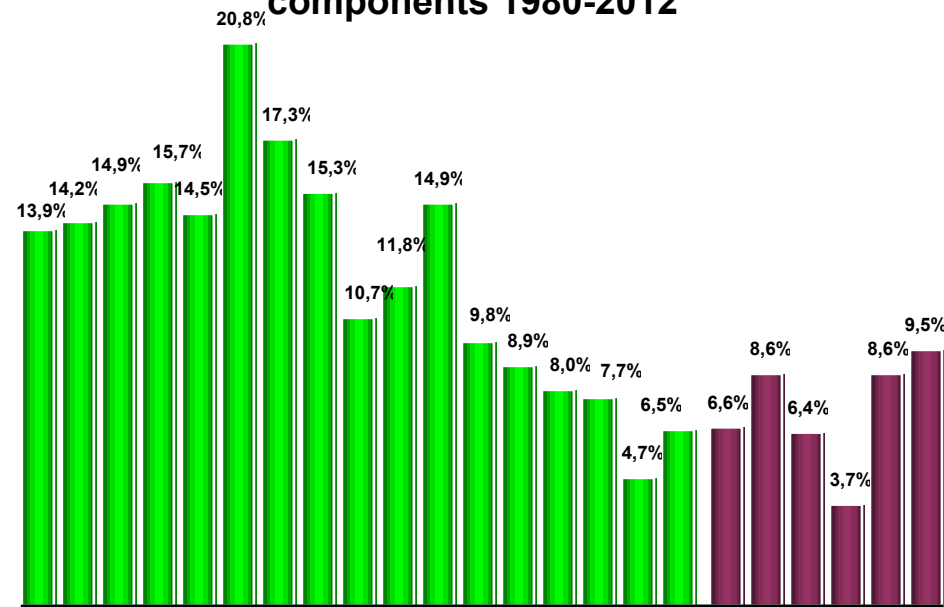


Comparative analysis between passives and actives profiles

Semiconductor vs passives content in electronics equipment (European market)



10-year annual growth rate of active components 1980-2012

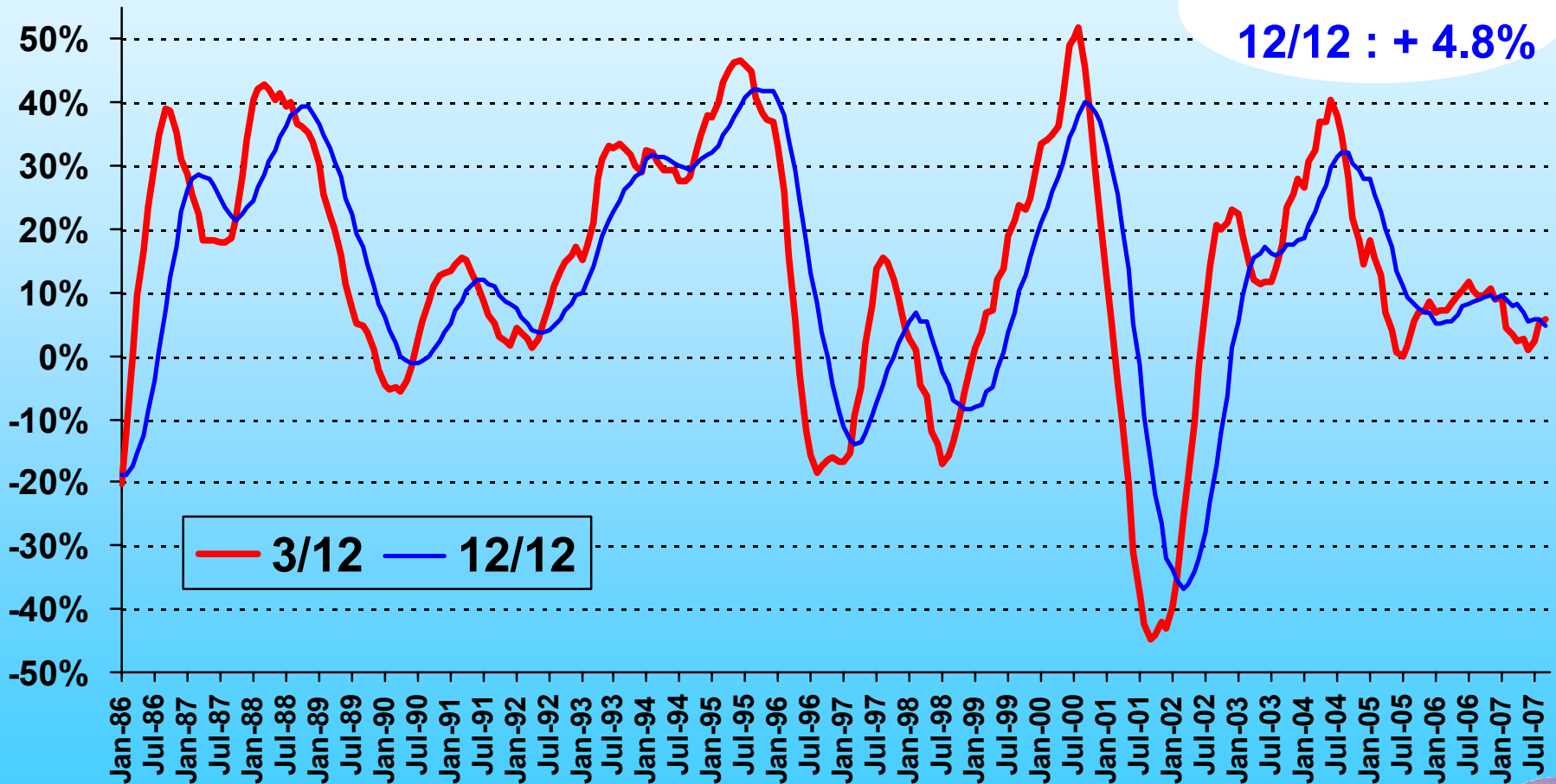


- Actives see their growth declining to the benefit of other electronics components families !
- Since 2 years, connectors have been growing faster than semiconductors.
- This new phenomenon could favorably impact the passives industry in the future as “connections drive passives consumption”.

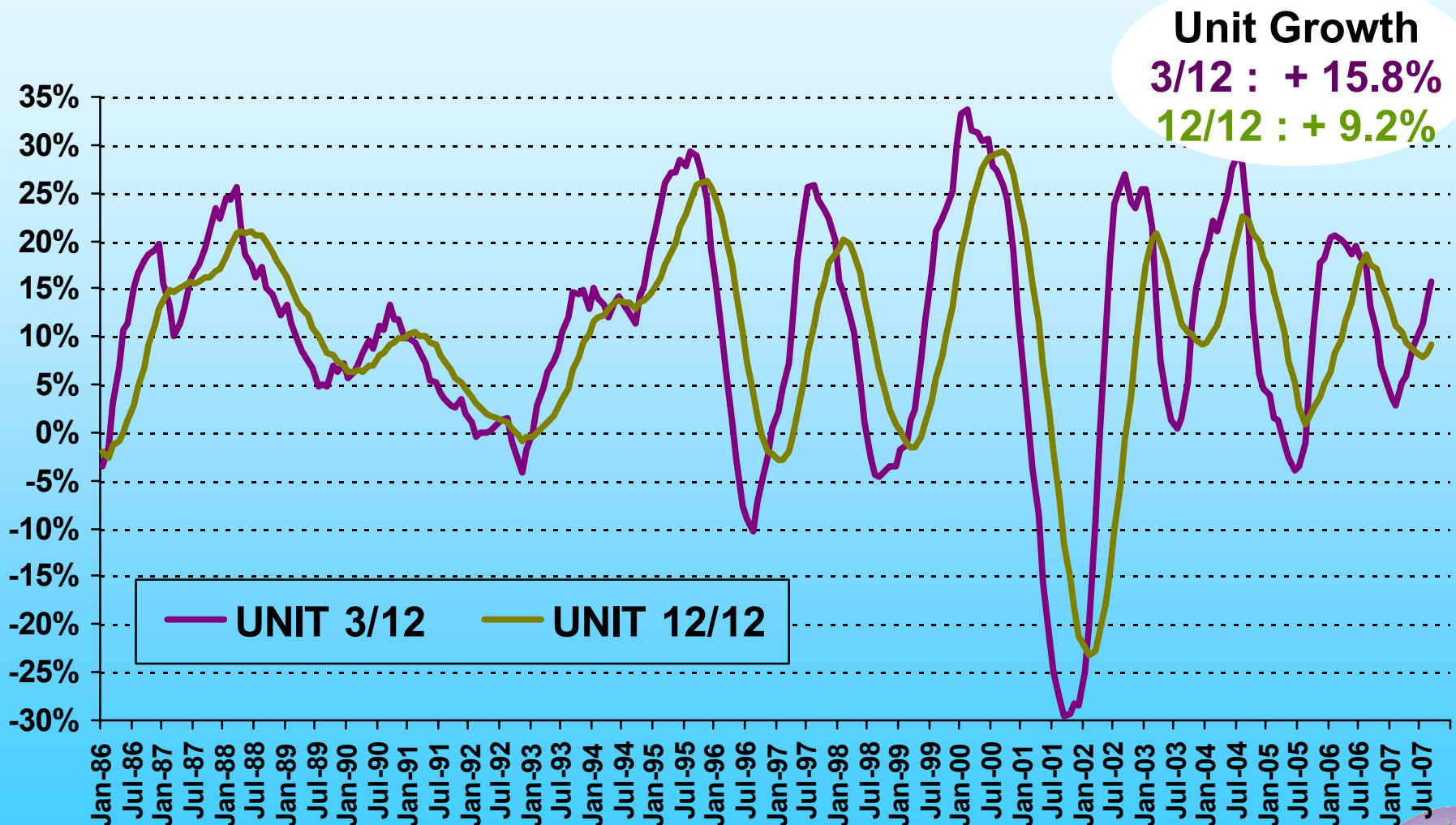


Market cycle : TOTAL SC 1986-2007, \$ Growth Rate (Sept. '07)

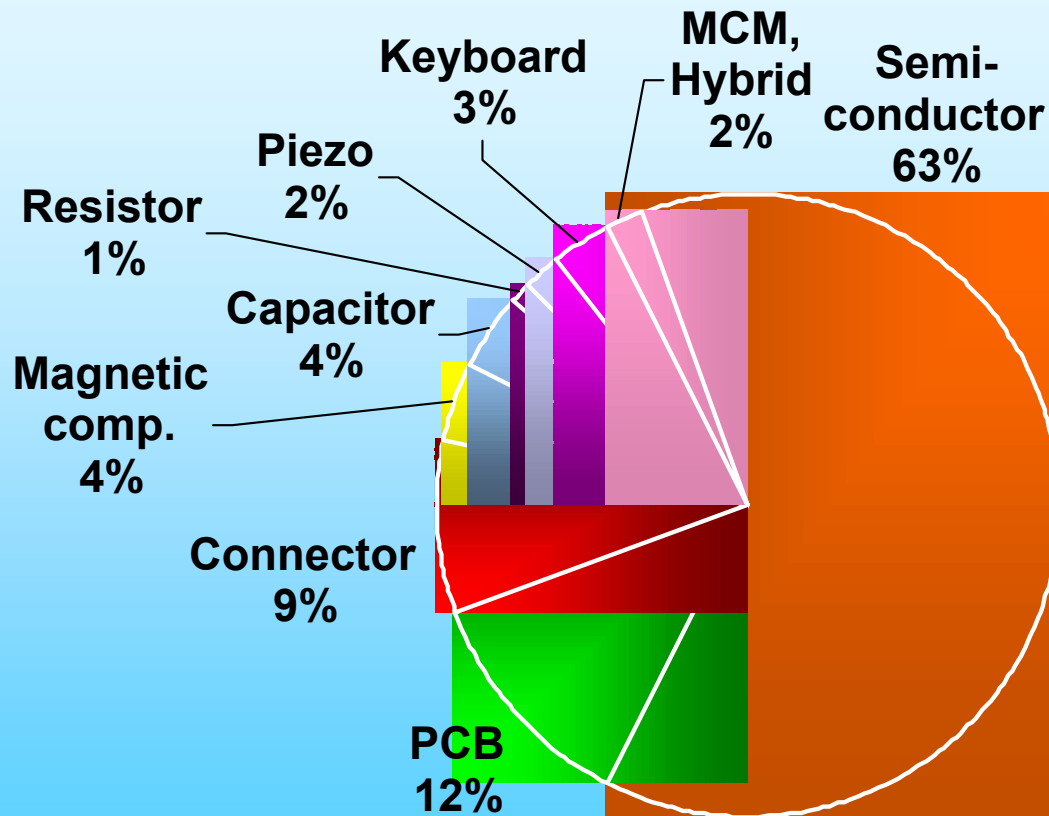
3/12 : + 5.9%
12/12 : + 4.8%



Market cycle : TOTAL SC 1986-2007, unit Growth Rate (Sept. '07)



Components market by product family



World

total component : €300B

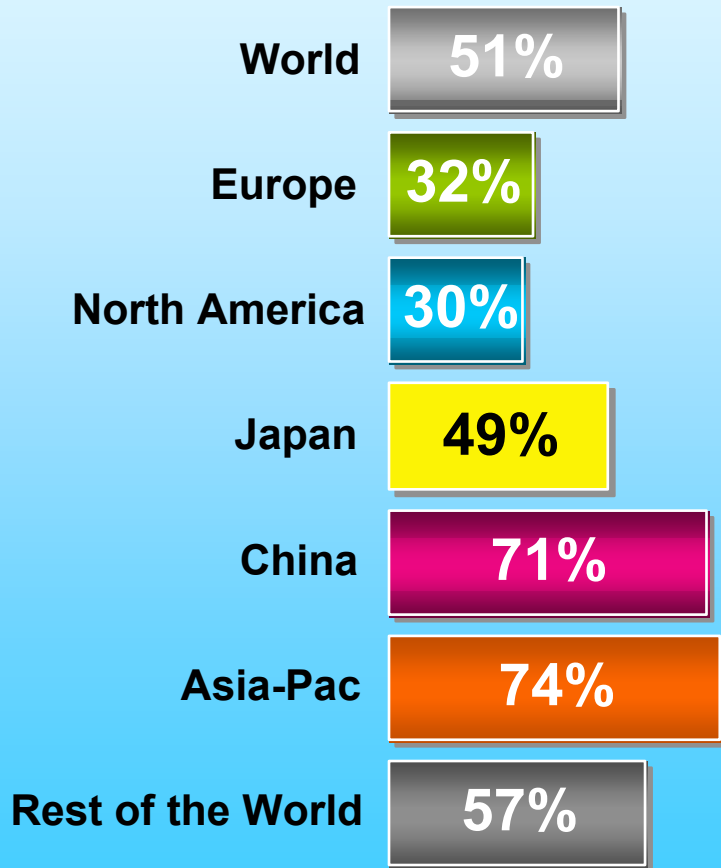
European consumption 2007

| | | |
|------------|-----|----|
| PCB | 7.0 | €B |
| Connector | 6.6 | €B |
| Magnetic | 2.2 | €B |
| Capacitors | 2.4 | €B |
| Keyboard | 2.0 | €B |
| Piezo | 1.0 | €B |
| MCM/Hybrid | 1.7 | €B |
| Resistors | 0.7 | €B |

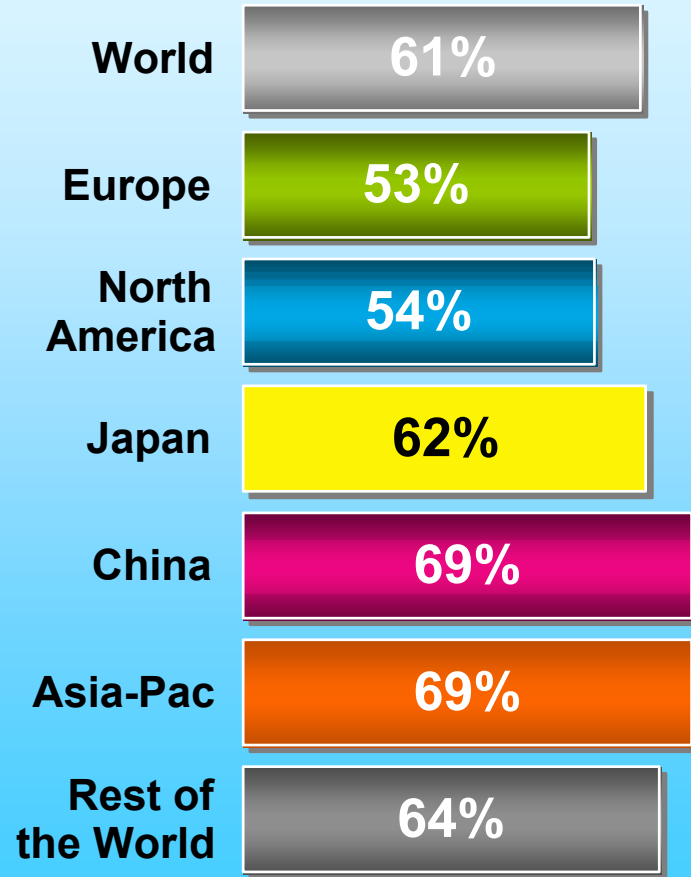


Regional and product mix for passive commodities

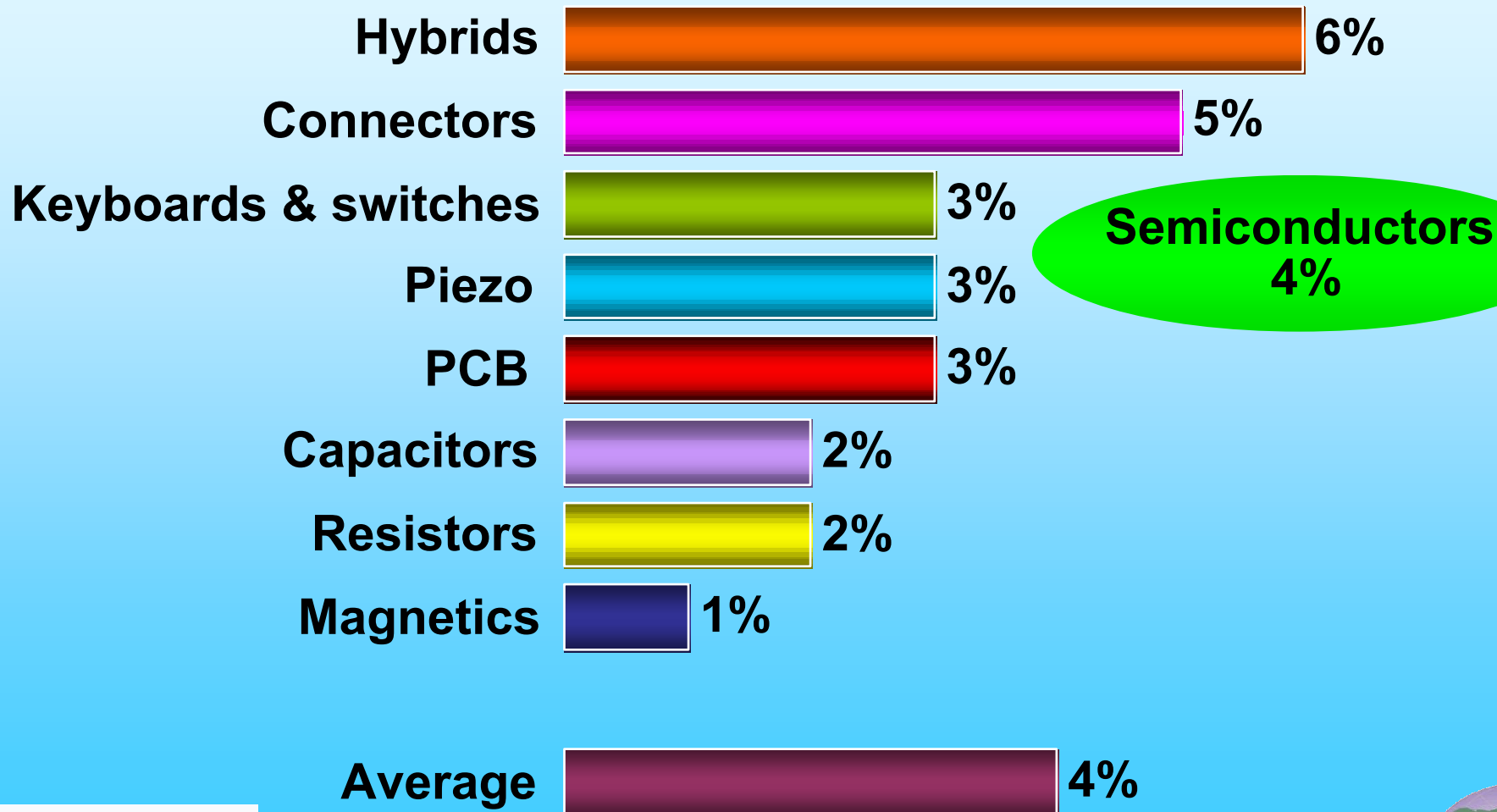
Share of mass market equipment in 2006 production



Share of commodities in 2006 total passive consumption



European components market growth 2006-2011



Content



- Electronics industry trend



- Components forecast



- **Next dilemmas : the Five D's**



A drastic change in focus

**Before
globalization**



**Managing the product
in manufacturing it
in your homeland**



Do it all



In globalization



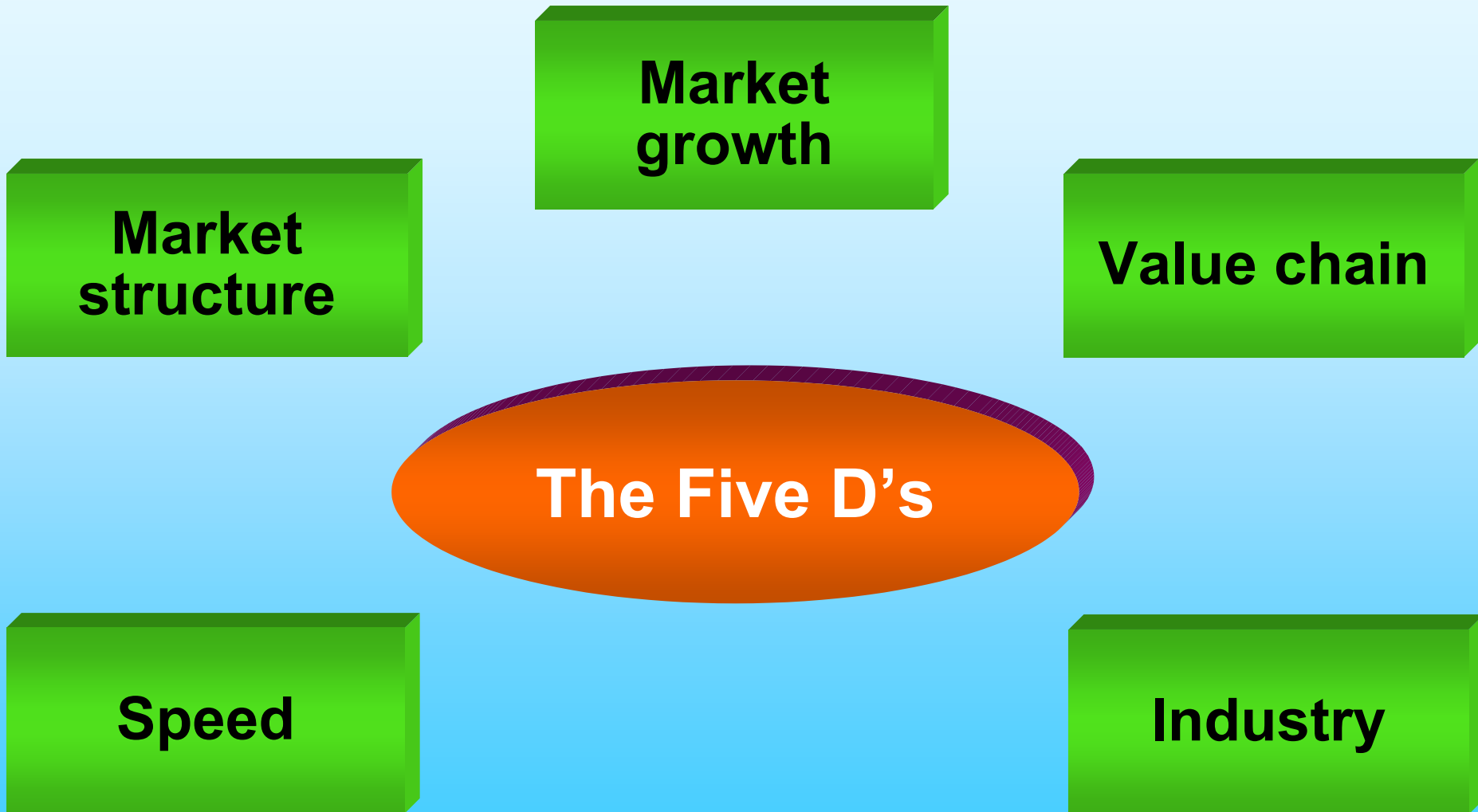
**Managing an outcome
in outsourcing to partners...
and to customers worldwide**



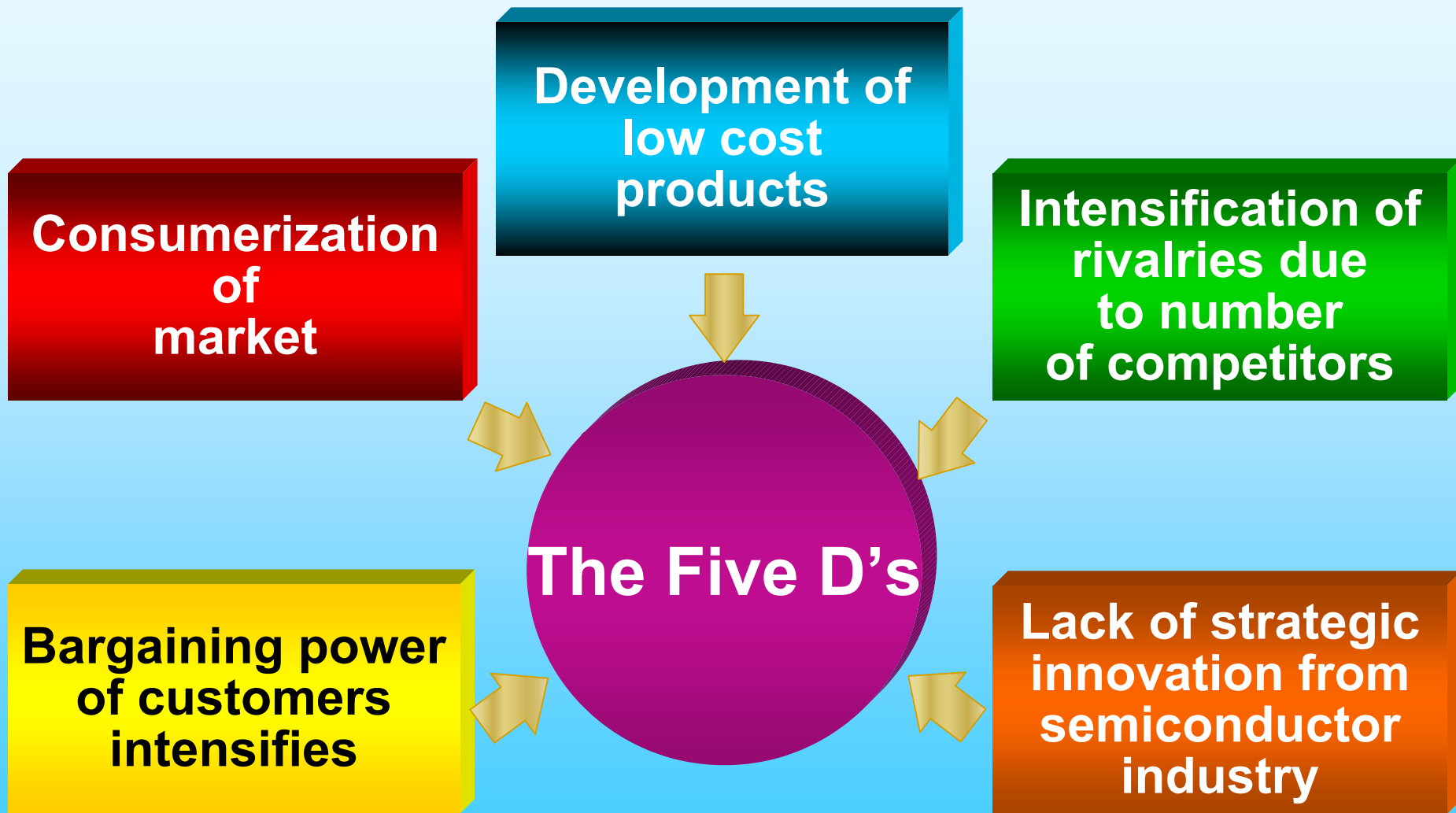
Do it yourself



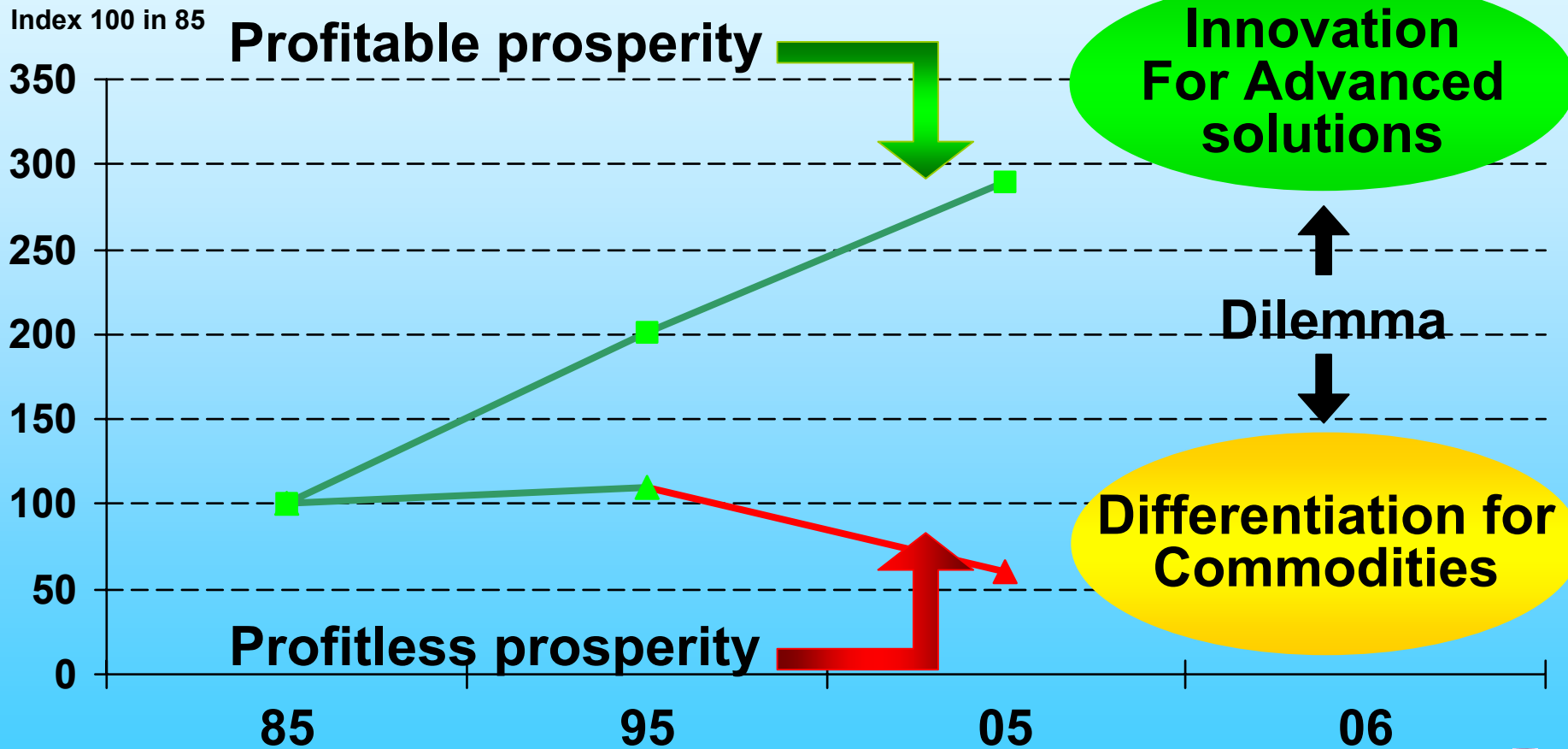
The Five D's : market growth



The Five D's : market growth

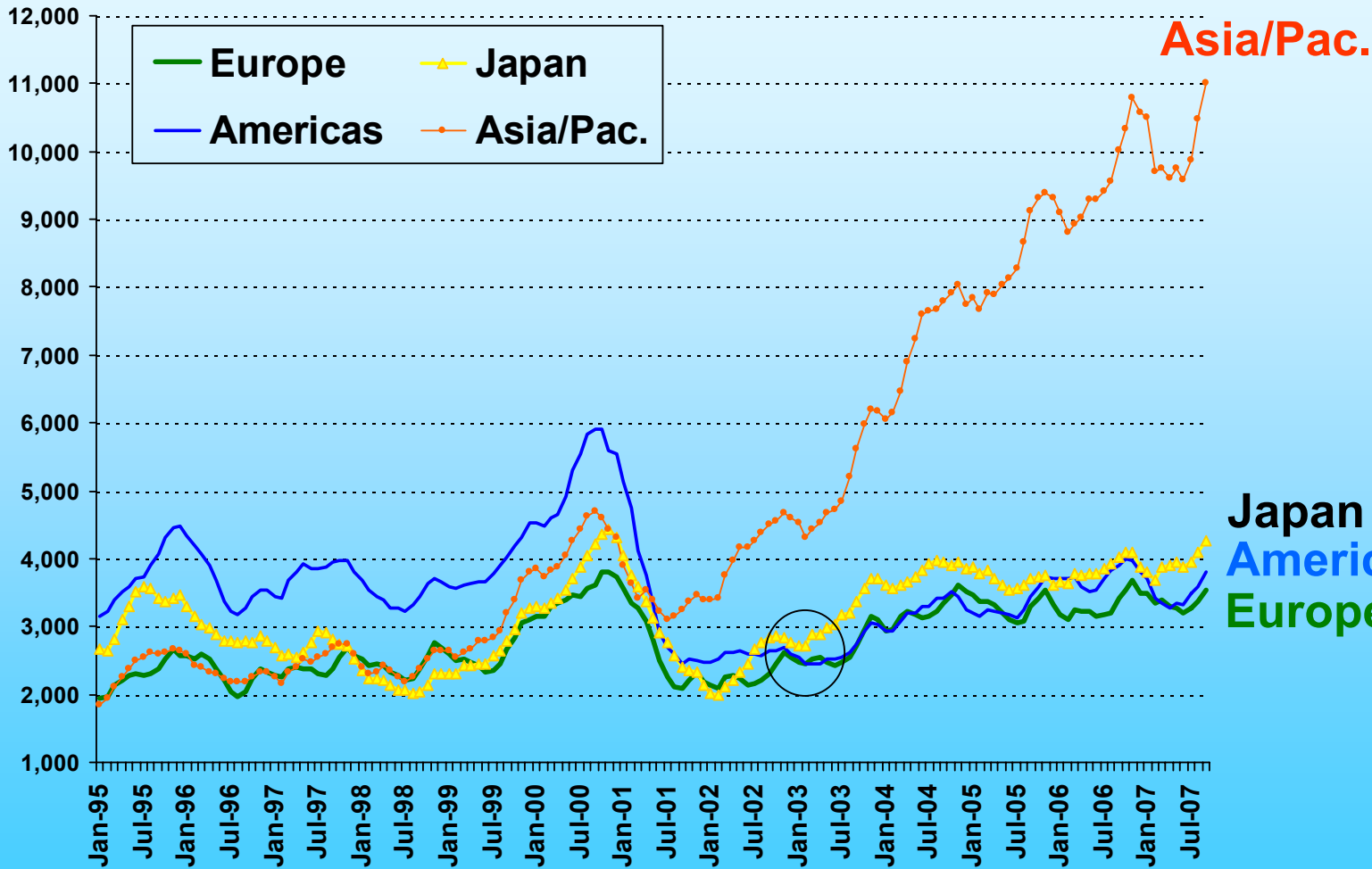


The Five D's : market growth Components ASP trends

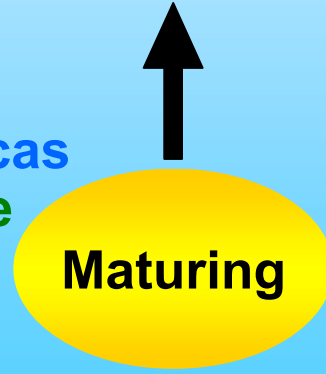


The Five D's : market structure

\$M / Month 3-mma



Dilemma



Japan
Americas
Europe



The Five D's : market structure

A different view

The « Box » market

Large volume low cost

Made in China

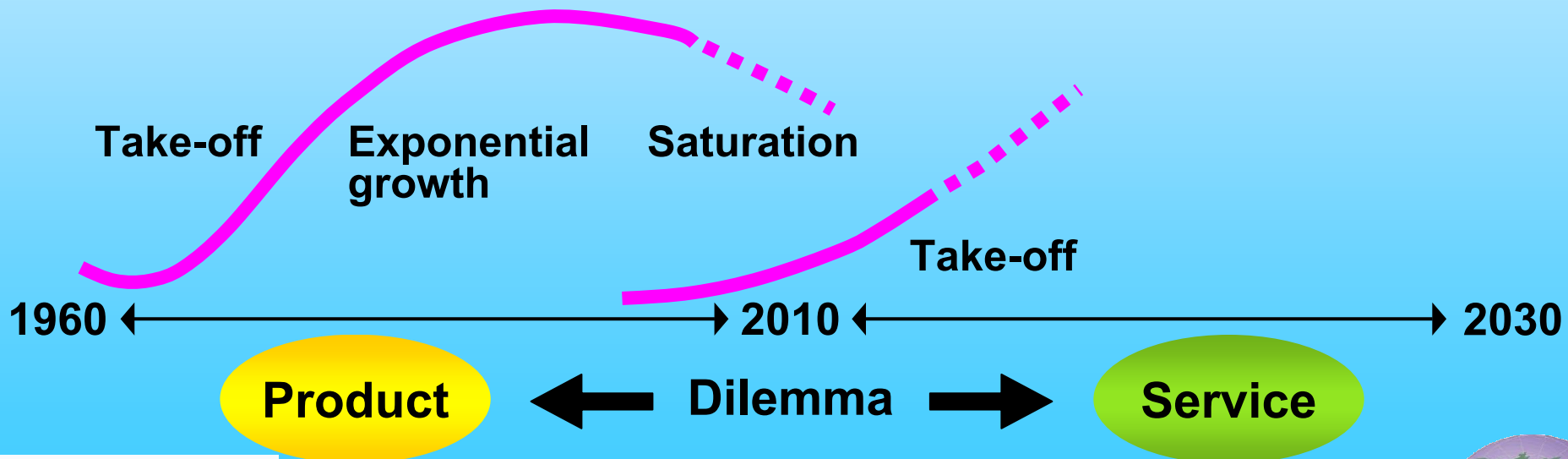
Profitless prosperity

The « social usage » market

Individual well-being ecosystem

Energy saving

High « cost of ownership »



The Five D's : value chain Communication case study

Slow growth

Medium growth

High growth

Medium growth

Si
35
Passive
20
Display
13
Software
10

80

Handset
105
EMS/ODM
35
Infra
36

175

Soft-
ware
20
Content
10

30

5% per year

15% per year (unit)

25% per year (\$)

8% per year (\$)

Was controlling
the chain

Dilemma

Will control the
chain

Index 100

700



The five D's : industry structure

The old rules of the game

- Size : to reach critical mass
- Growth : to reach size
- Partnering : rejected as a cultural issue
- Processing raw materials

The new rules of the game

- Leadership : to dominate market segments
- Cash : to create market cap
- Partnership with everybody and everywhere
- Generating value

**Volkswagen
business model**

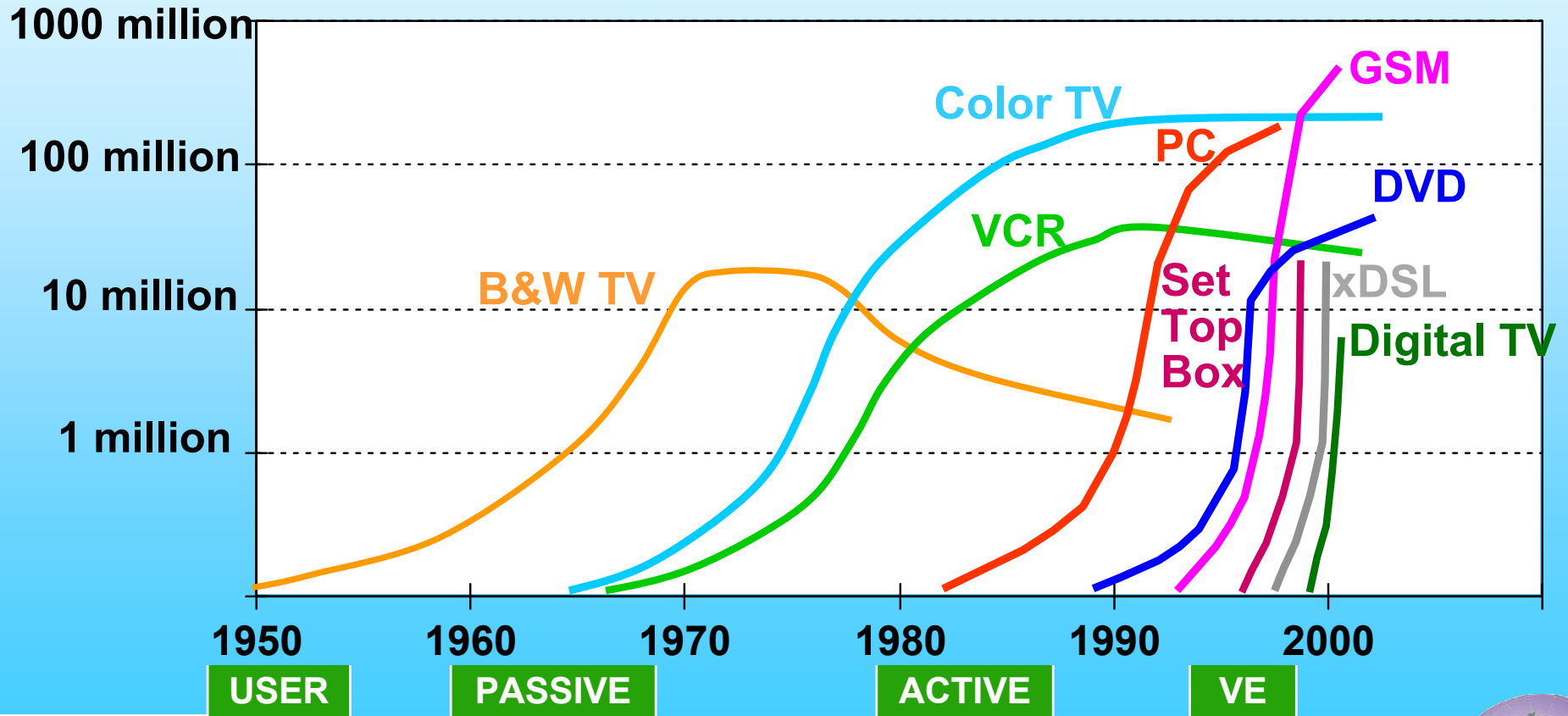
Dilemma

**Porsche
Business model**



The Five D's : speed

| Base technology | ANALOG | | DIGITAL | |
|---|--------|-----|---------|--------|
| % of semiconductors in price production | 2% | 12% | 30% | 35-40% |



Conclusion

The old world

- Strong growth
- Simple market combination
- Single-type of competition
- Few identified « fair plays » partners
- Stable business model
- Recruitment only among engineers
- Mololithic company structure
- 40 years to react

Living in two dimensions

The new world

- Moderate growth
- Multiple market combination
- Multi-type of competition
- Many partners among which unidentified « Barbarians »
- Different manufacturing business model
- Recruitment also from commercial & marketing schools
- Flexible company structure
- 40 minutes before sinking

Living in a multidimensional world



The need for strategic agility

Industrial organization

- Production becomes a commodity
- Major role of Design
- Flexibility / increased depth in product portfolios

Customer

- Increased number of small clients
- Services suppliers increasingly important
- Decreasing role of major OEMs

Global strategic agility

Technology

- Towards « solution » platforms
- Optimization of current designs

Cycles

- Adaptive and flexible
- Short delays

