

# INVESTMENT CASTING MARKET REVIEW 2009 Europe & North America

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## Objective

- This presentation will review the investment casting markets of Europe and North America
  - These 2 major areas represent a major proportion of the overall World Investment Casting industry

# Acknowledgements

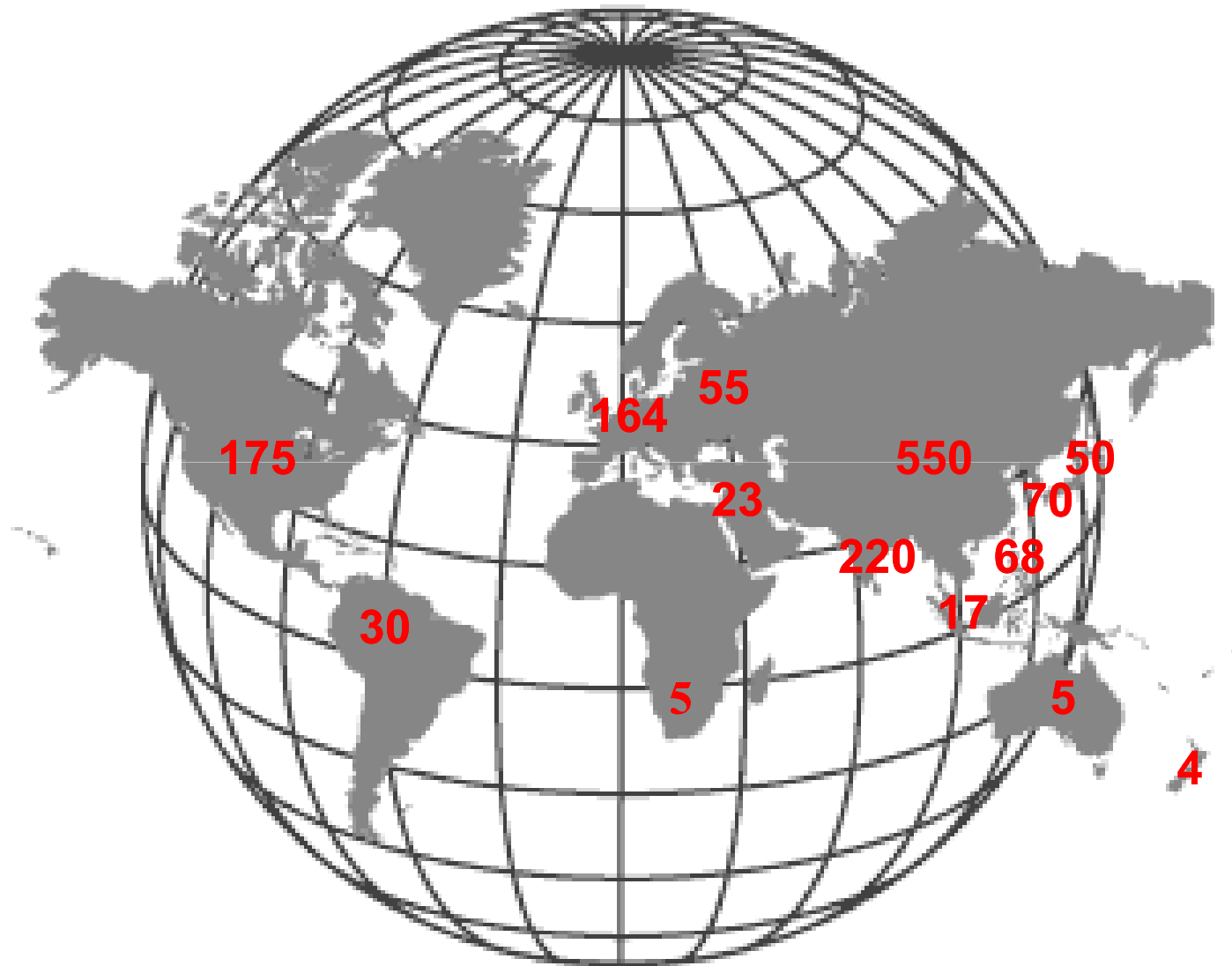
The data used for this presentation has been provided by the following organisations, whose help and contribution is gratefully appreciated :

CAEF (Casting Association of European Foundries)

EICF (European Investment Casting Federation)

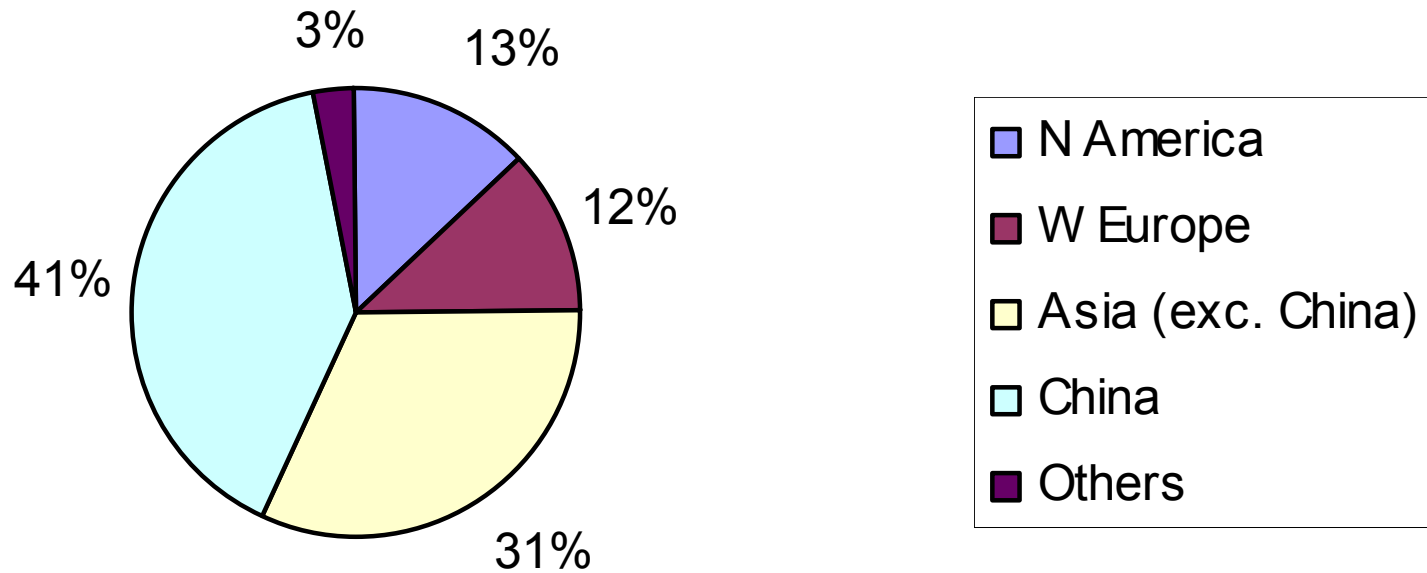
ICI (Investment Casting Institute - United States)

# Distribution of Investment Casting Foundries



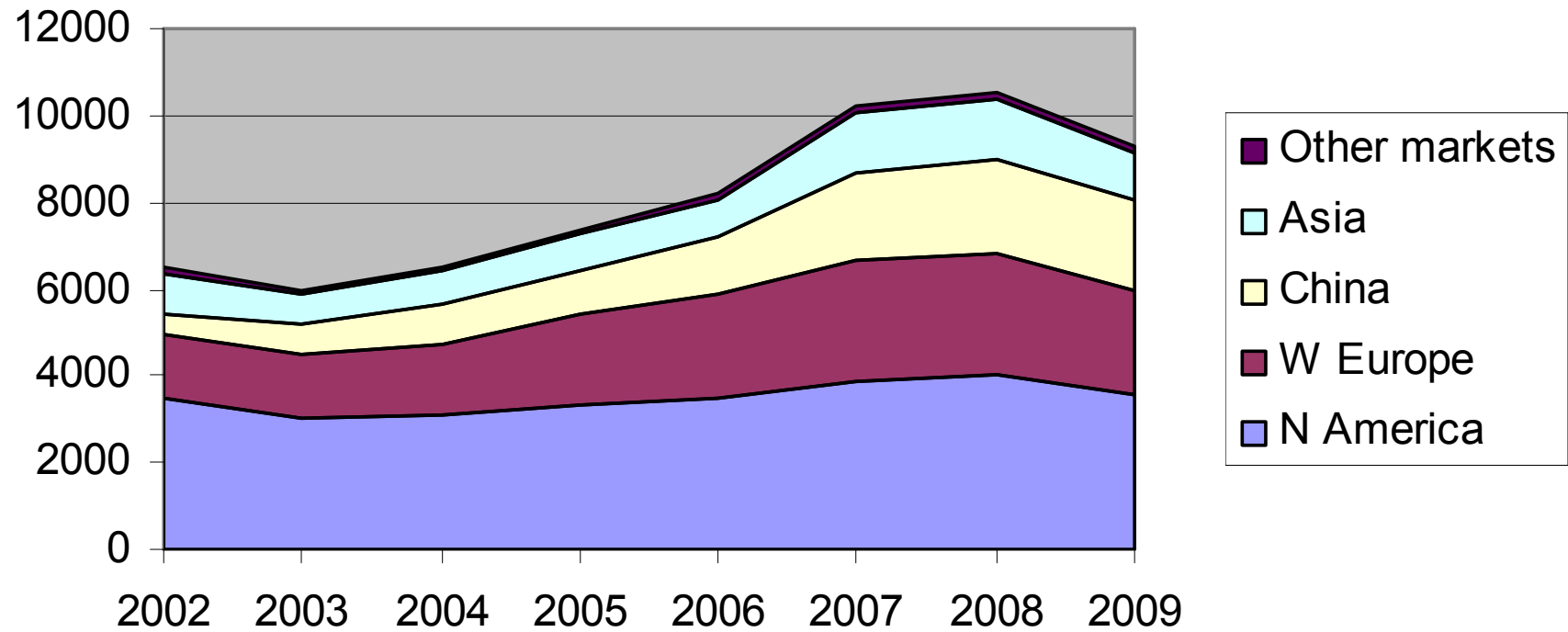
# % Distribution of Foundries

Total Identified 1600

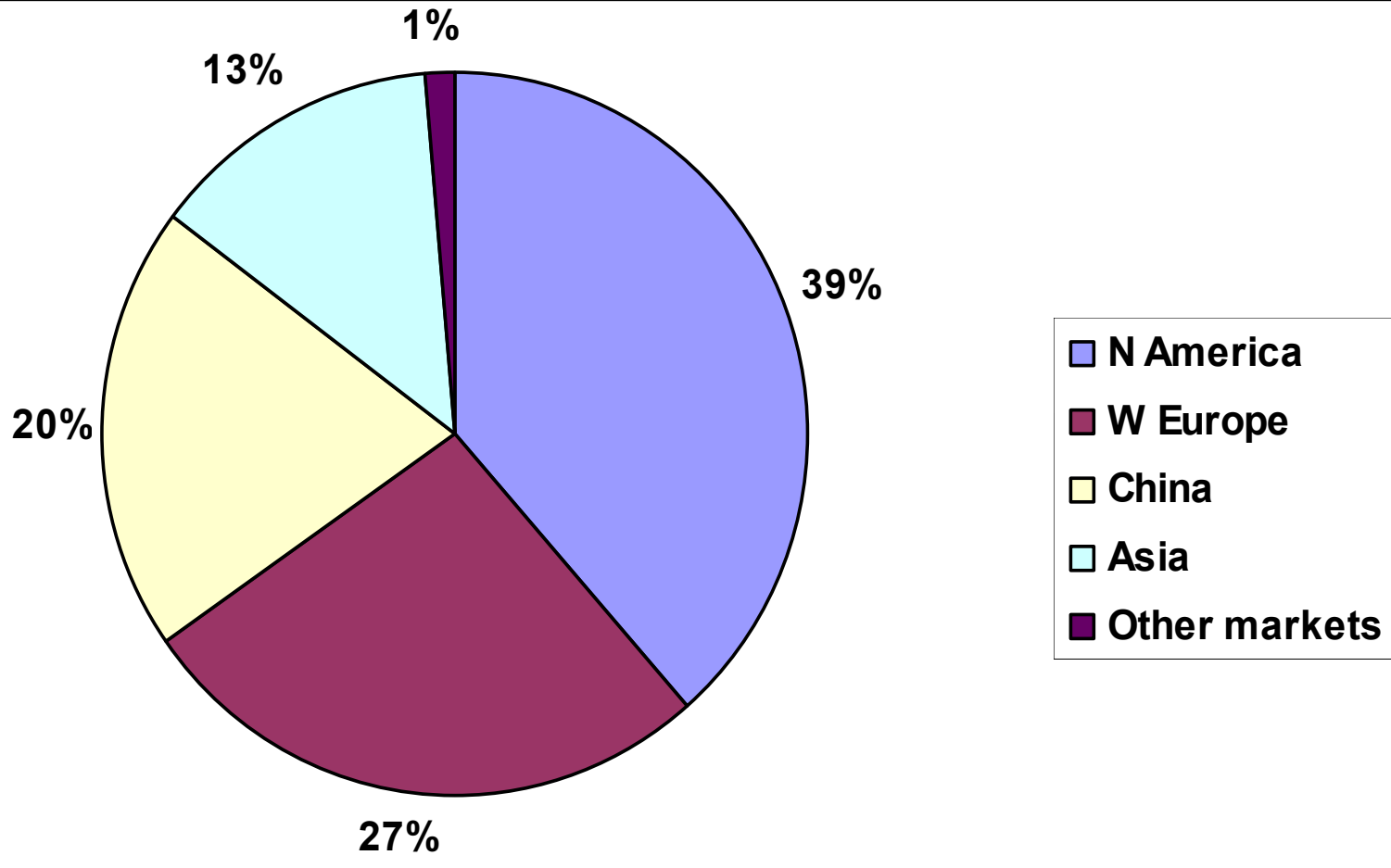


# World Investment Casting Sales

## World Investment Casting Sales US\$M



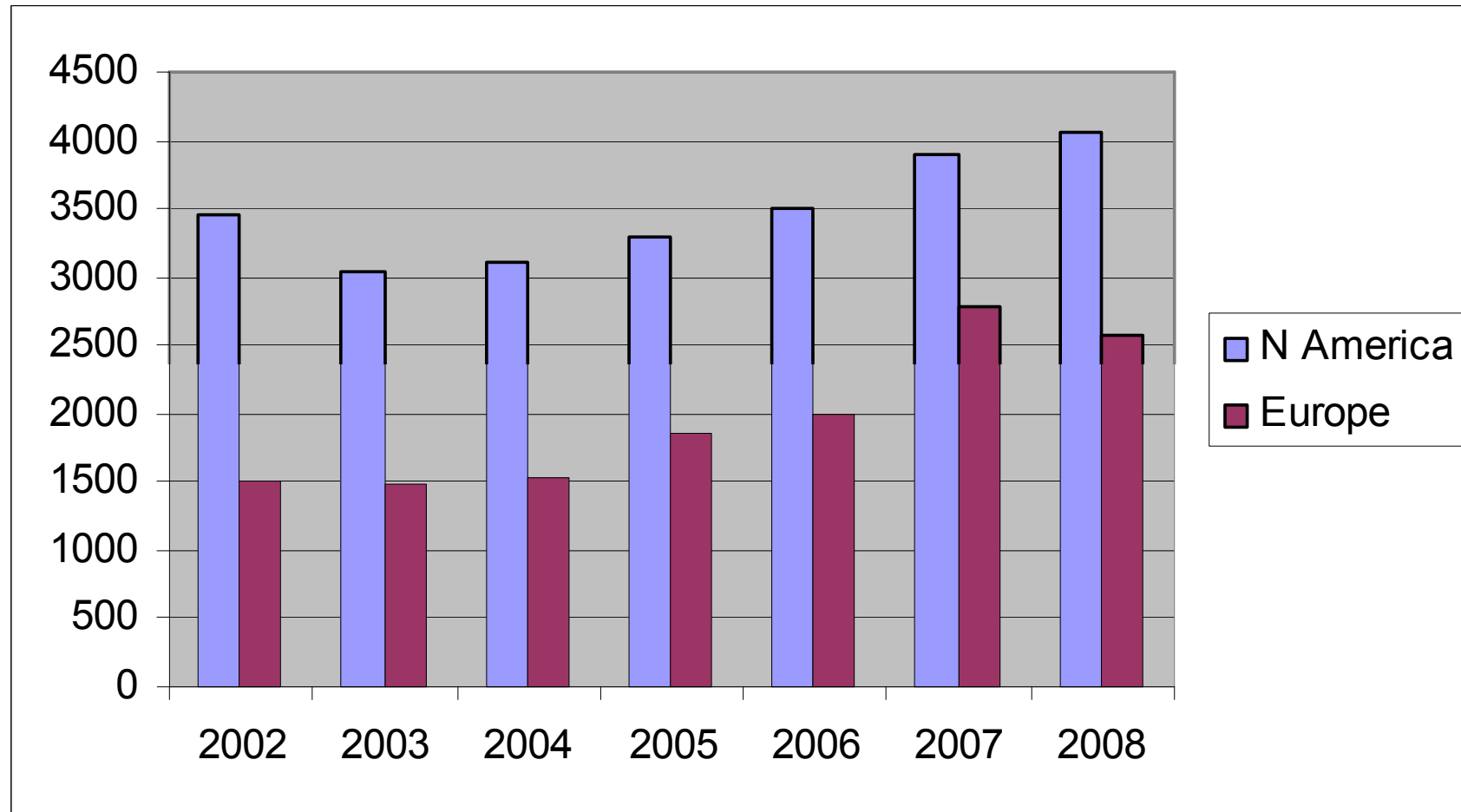
# World Sales by Region, 2008



## Global Investment Casting Sales – 2008

- 2008 total World sales US\$10,500M (US\$10.5B)  
– + 2% v 2007
- Economic downturn did not have a serious impact on sales value until the 4<sup>th</sup> quarter
- High Added Value sector remaining resilient
- Economy possibly showing signs of stabilising
- Asian exports reduced by transfer of some commercial work back to West

# N America & Europe Comparison US\$M



# Market Segmentation

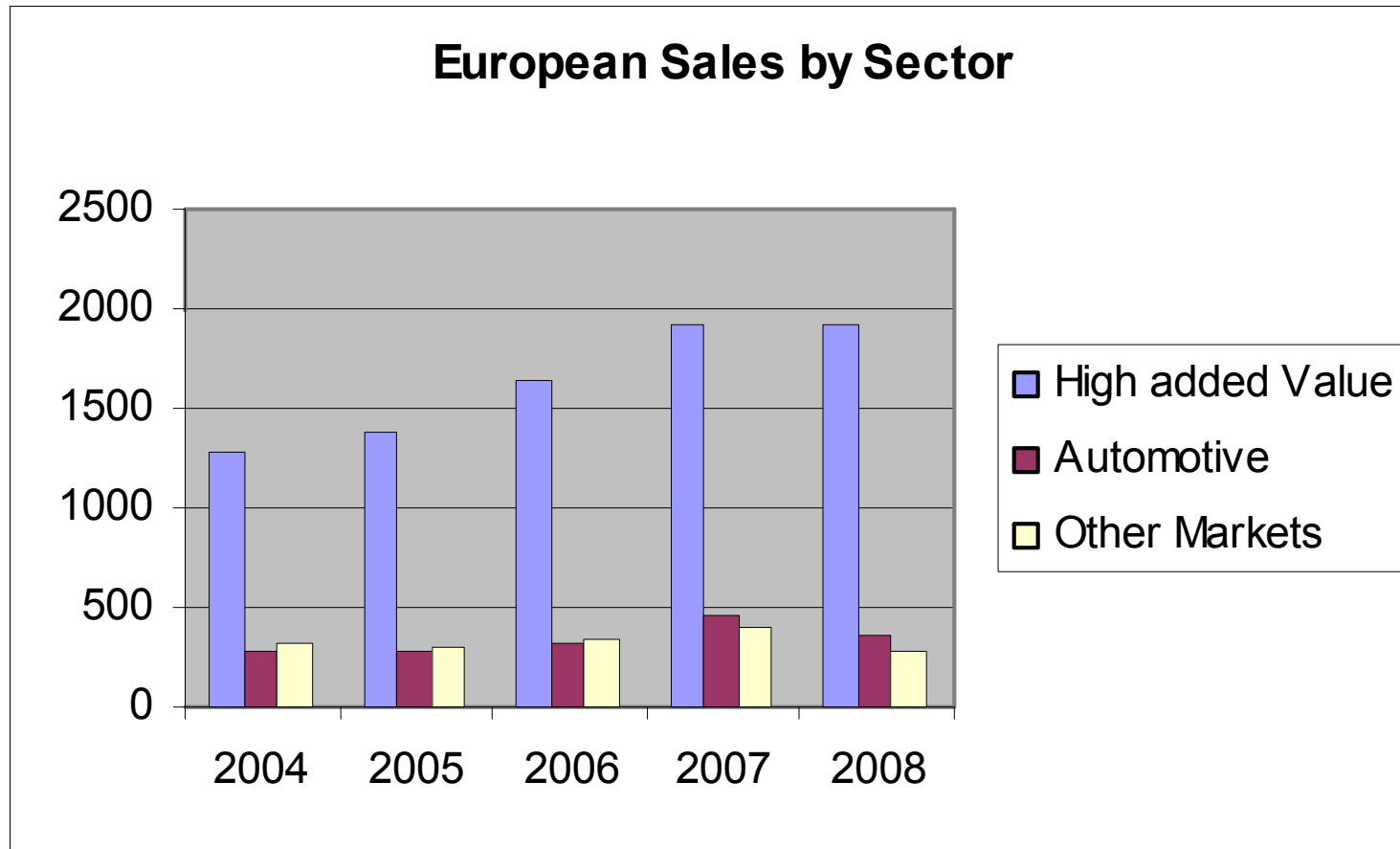
Over recent years the various organisations have come to accept the following categories as the best method of analysing the World industry, using the US\$ as the means of providing a standard comparative measure :

High Added Value  
Automotive  
Other Markets

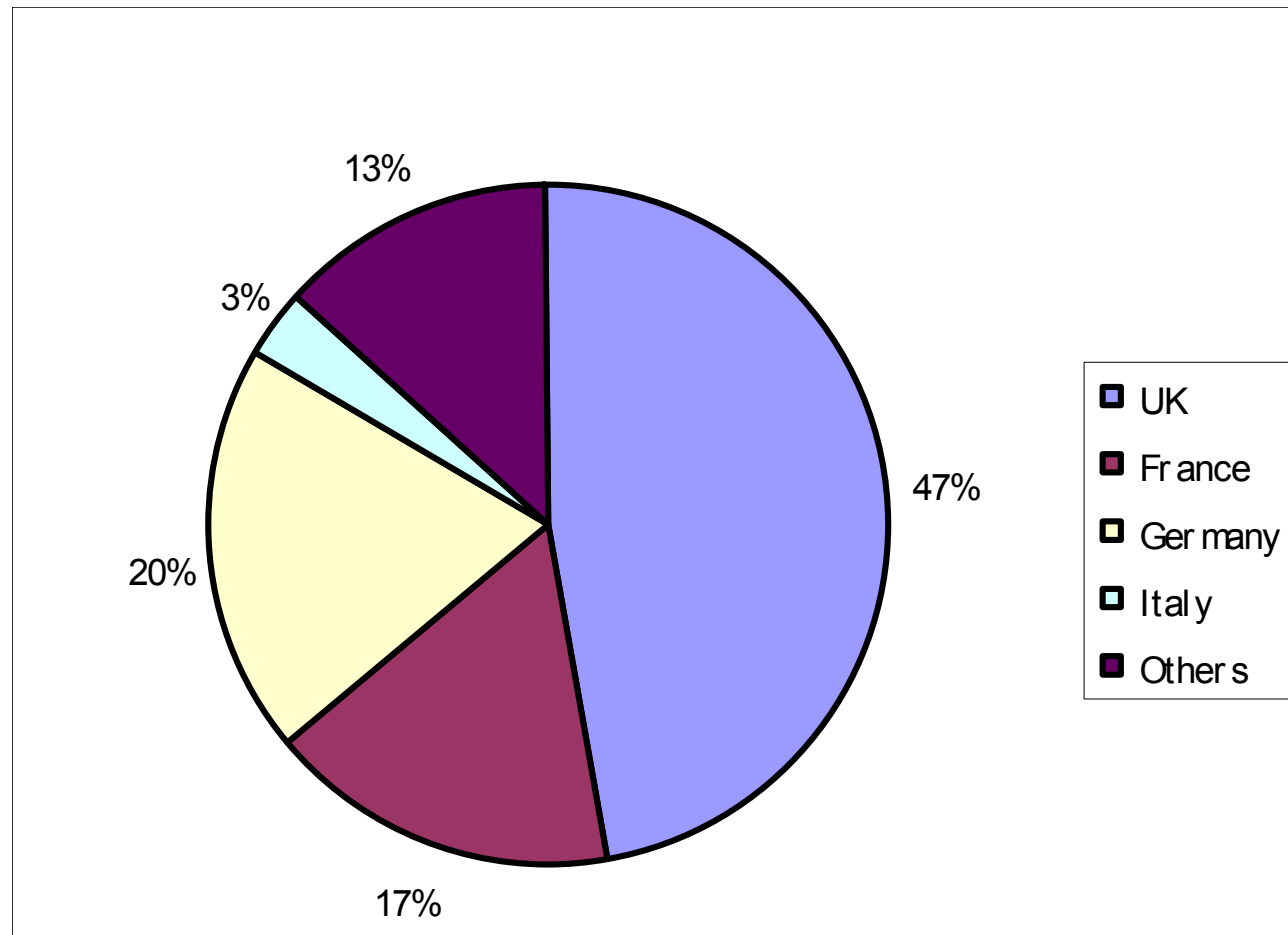
Europe

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# Europe - Sales by Market Sector US\$M



# European Investment Casting Market 2008 by Country



# Market Trends - Europe

## AEROSPACE

- European aerospace remains busy but at reduced levels
  - Rescheduling of orders slowing production
- Good sales at Paris air show from Middle East
  - \$2Bn orders for Airbus and Rolls Royce
- BAE Systems selling 72 Typhoon fighters to Saudi
- Airbus to make new A350 XWB
  - to compete with Boeing 'Dreamliner'
- Boeing delays to Dreamliner have had some impact on European suppliers

# Market Trends - Europe

Industrial Gas Turbines – market continuing to perform very strongly despite economic situation

- Foundries planning increased capacity
- Long term projects
- High demand for spares/servicing

AUTOMOTIVE – most affected by the recession

- Car sales down by 30%
  - Some early signs of recovery
  - Smaller fuel efficient cars selling well
- Commercial vehicle sales down by 40%
  - Truck sales down 45%, lowest sales for 20 years
  - Some manufacturers closed down

# Market Trends - Europe

## MEDICAL

- Market conditions steady

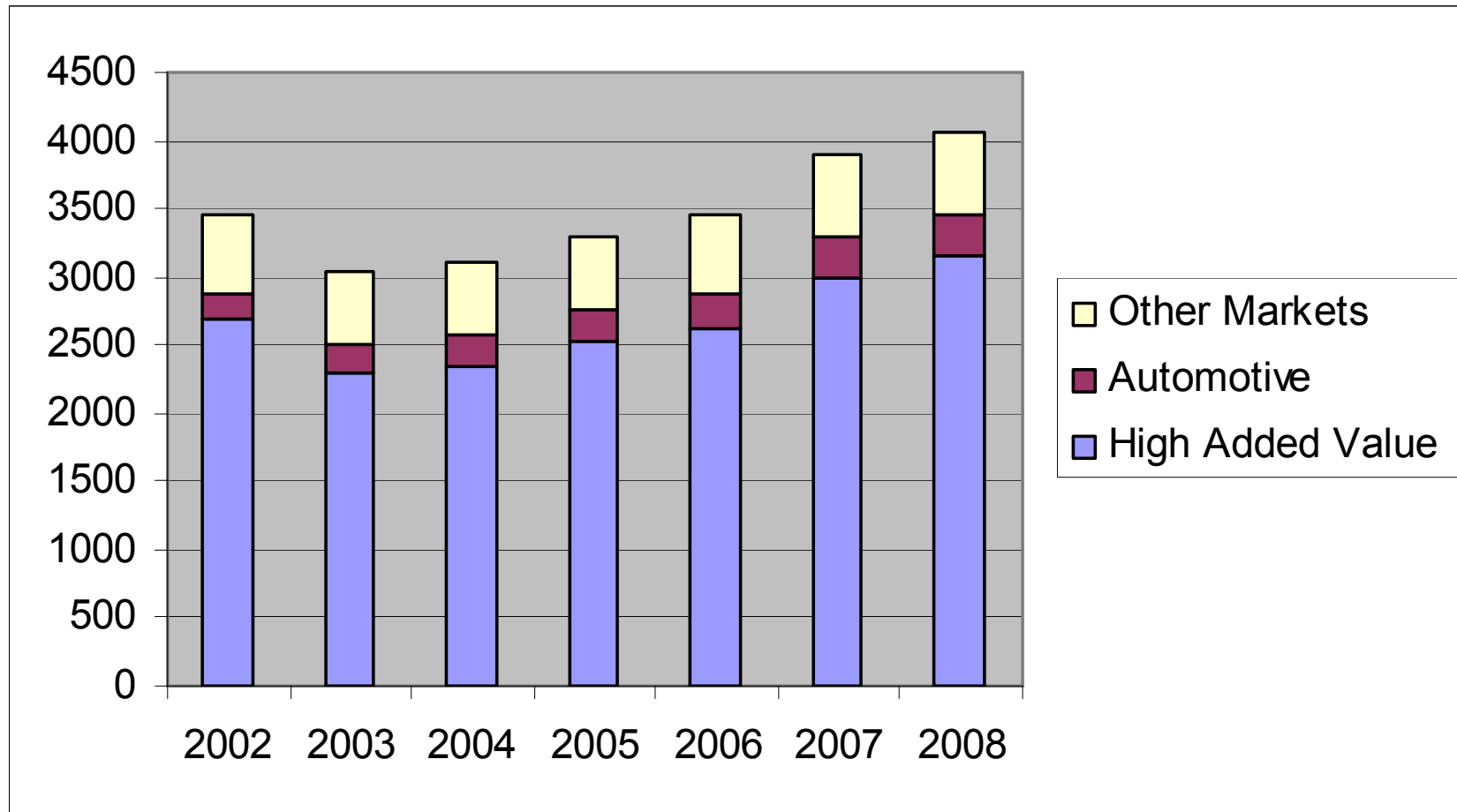
## COMMERCIAL

- Mixed situation
- Foundries bringing work back in-house from China, India
- Working short time when necessary
- Trying to retain skilled workforce

North America

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# N America - Sales by Market Sector US\$M



# North America Trends

Investment Casting Overall strong – for 3 quarters of 2008

Record Levels of Production in Aerospace & IGT

*Then 4<sup>th</sup> quarter*

- Housing Market Collapse / Banking & Credit Crisis
- Energy Costs drop due to slowdown & falling Oil Prices
- Focus on domestic supply and manufacture
- Schedule delays/ Order Cancellations / Layoffs

# N America Trends - continued

## Aerospace

- Civil - Starting to see reduced activity
- Boeing suffering 45 cancelled Dreamliner orders
- Military – Still busy with Engine Spares & Defence Programmes

## Industrial Gas Turbines (IGT)

- PCC +7% year on year growth

## Automotive

- Worldwide sales downturn
- Turbocharger business stalled, slow pick up expected
- Motorcycle sales plummet

## Medical

- Slow rate of increase, elective surgery reduced

## General Industry

- Down across most segments
- Work being transferred back from overseas foundries

## Europe & N America Summary

- Aerospace expected fall of 15% in 2009
- IGT Industry still growing !
  - Increase in units ordered for Eastern Europe, Russia, Southeast Asia & Africa
  - Large 'After Market' spares business
- Automotive - Worldwide fall in sales
  - Car companies in 'Transformation'
  - Turbocharger demand stalled
- Commercial – Mixed fortunes
  - foundries transferring casting production back from China, India

## Looking to the Future

Market conditions are stabilising following global economic difficulties

- New Investment Casting Potential
  - Advanced Fuel & Exhaust Systems
  - Multiple turbochargers & direct fuel injection
  - Hybrids & Electric vehicles
- Medical Products keep developing
  - Implants
  - Diagnostic equipment
  - Injury stabilising appliances
- IGT growth to continue
- Aerospace will require more complex castings