

# Sistemi informativi

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A.A. 2011/12  
01CIT



## Instructors

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# Office hours

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- Class-time (break, end of lesson)
- Or send e-mail to schedule an appointment

# Course objectives

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- This class is **NOT** about technology and programming
- This class **is** about information systems and their role in digital enterprises
  - ◆ Interaction among IS, organizations, management, business processes
- Technology (Internet, DBs, web apps, etc.) is the enabler

# Previous courses

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- Techniques and tools to build software and software systems
  - ♦ ASM, C, C++, Java
  - ♦ Html, asp, jsp,
  - ♦ TCP/IP, http,
  - ♦ SQL, xml

# Previous courses

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- Methods and processes to build software and software systems
  - ♦ Requirements, design, implementation, testing, verification validation, ..
  - ♦ Waterfall, prototyping, iterative
- Languages to model software and software systems
  - ♦ UML

# Previous courses

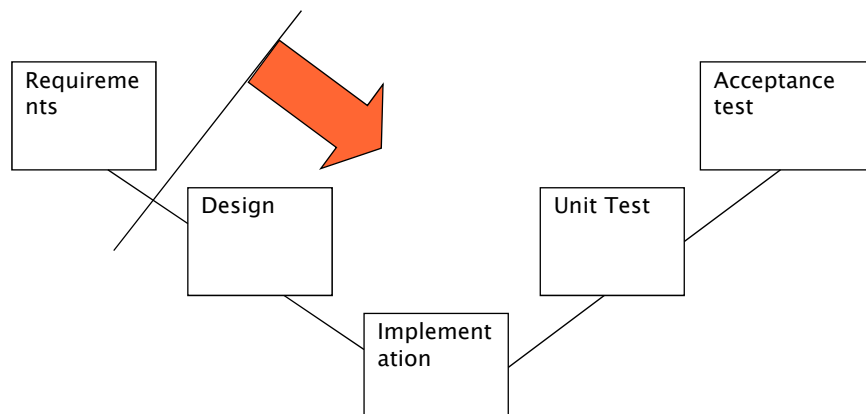
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- Scope
  - ◆ Any application domain
    - Telecom, banking,..
  - ◆ Any level
    - Application, network, operating system

## So..

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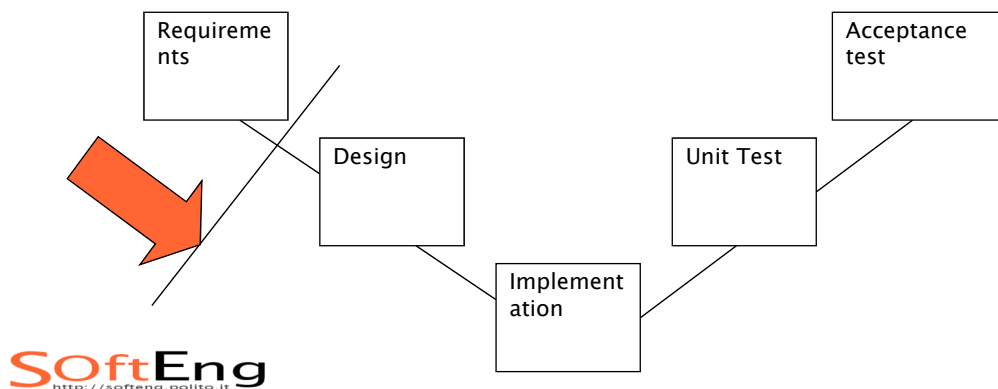
- From previous courses you know HOW to build ANY software system (or part of it) given the requirements



# This course

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- Is about WHAT software system to build
  - ♦ Limiting the scope to software systems that support BUSINESS PROCESSES



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## Example

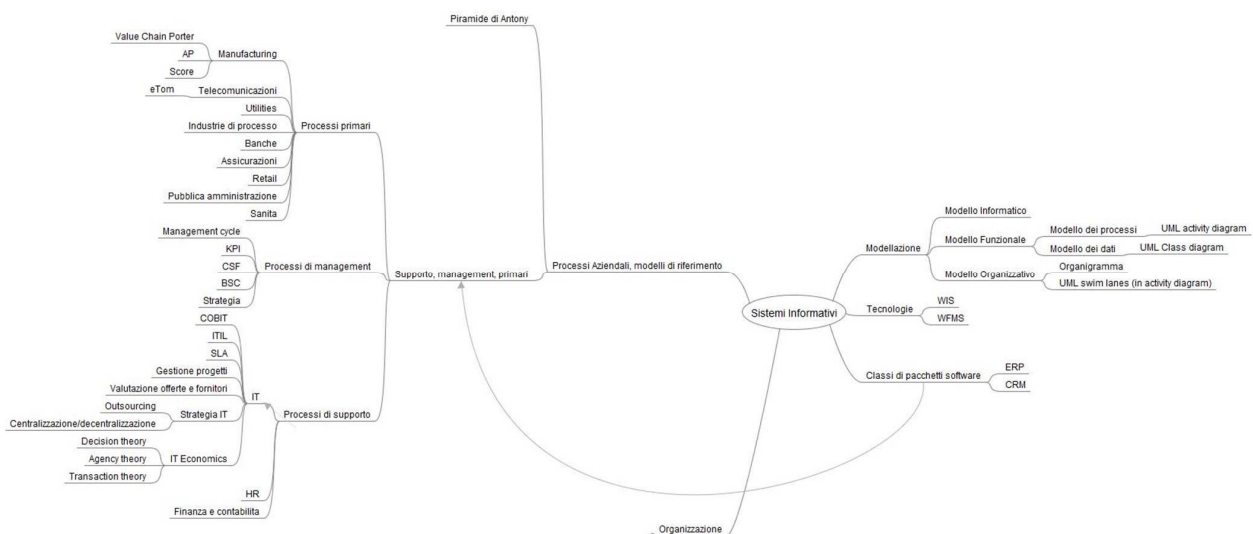
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- Company selling cars
  - ♦ Relationship with car dealers could be automated through IS
    - What functions to automate, what benefits?
  - ♦ Also relationship with final customer could be automated
    - What function? Sales or after sale?
  - ♦ Which of the two changes has more benefit and should be implemented first?

# Course objectives

- Give a definition of IS
- Understand relationship IS – business processes and organization
- Analyze how IS supports, improves (or limits) business processes
- In summary, analyze the VALUE of a software system
  - ◆ ECONOMIC view on the use of technology

# Course mind map



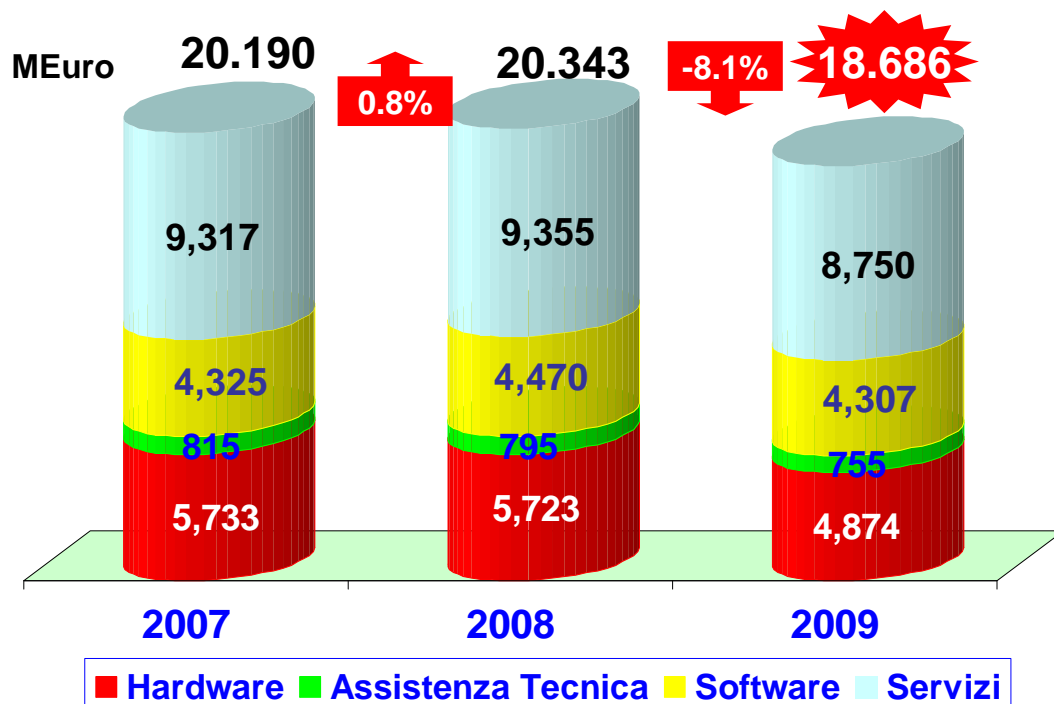
# Market

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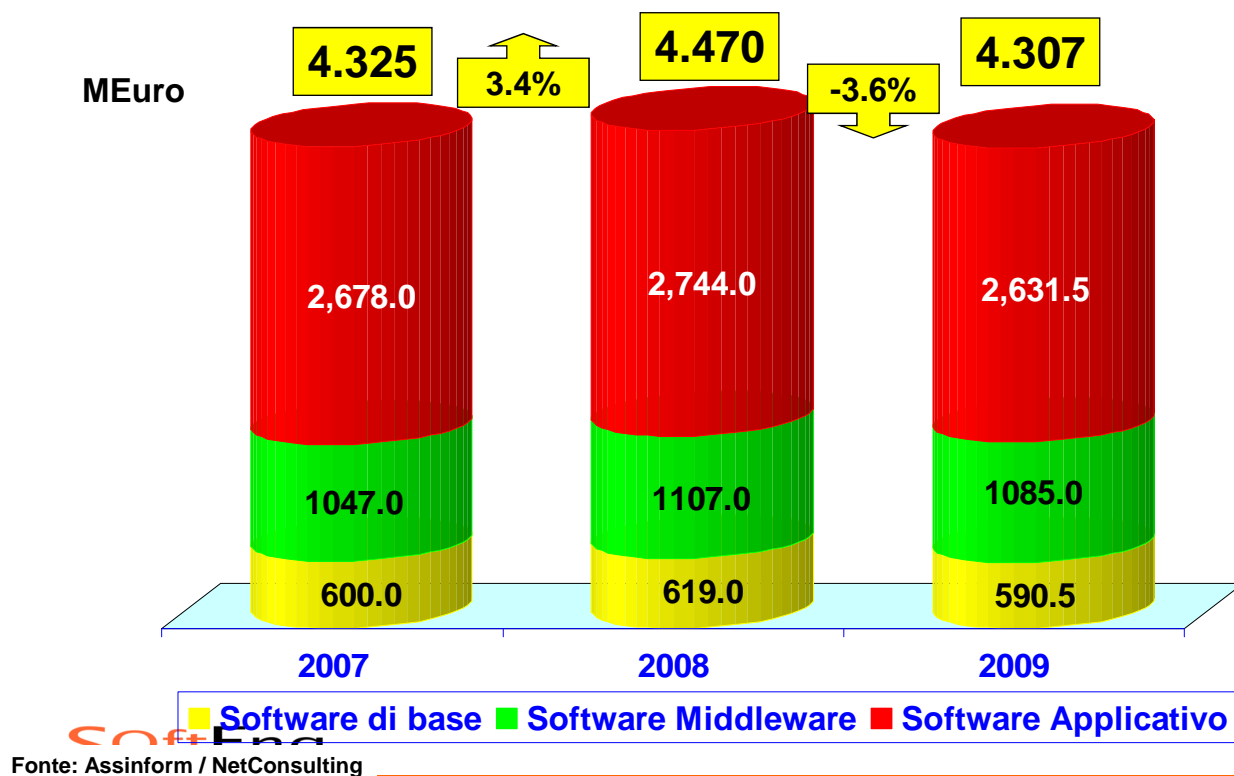
- World:
  - ♦ ICT 6% GNP (Automotive 2.5%)
  - ♦ Lots of IT in non IT companies
- Italy
  - ♦ Information Technology 20000 MEuro (2 % GNP)

## IT Market – Italy

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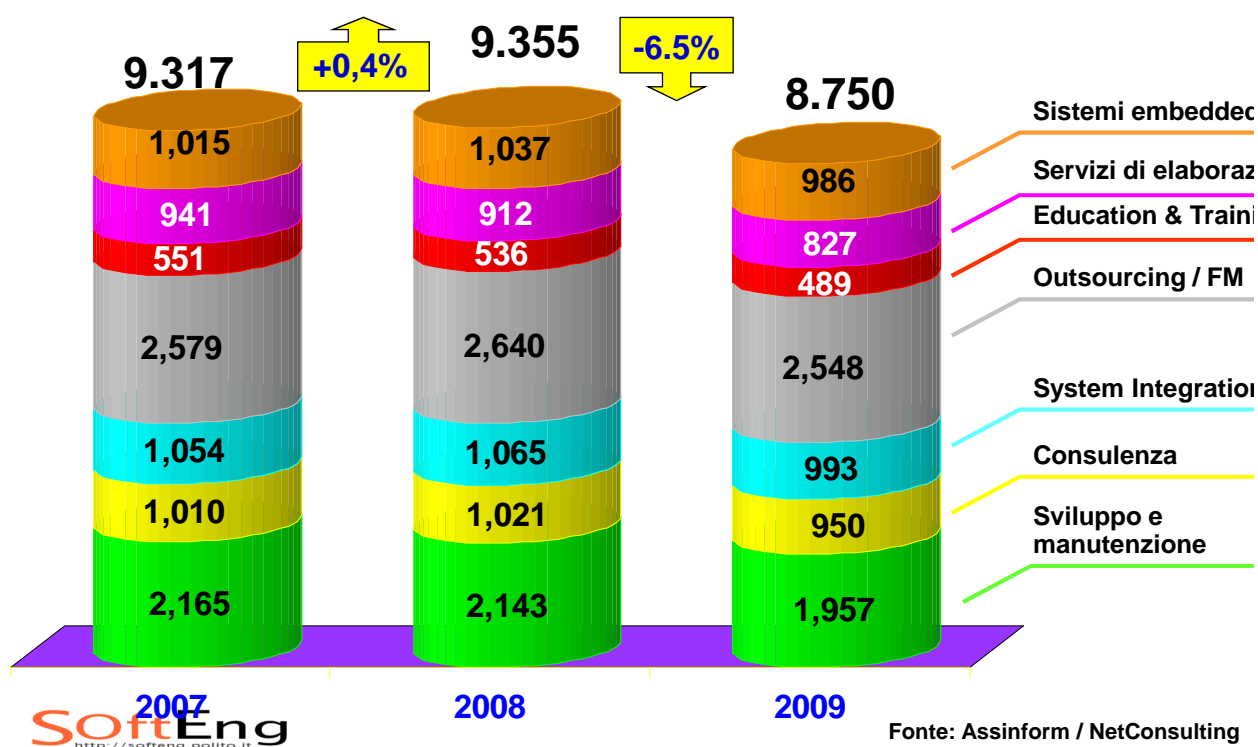


# Software market Italy



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# Service market Italy



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# Market

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- Software developers, system integrators
  - ◆ Engineering, Reply, CSI Piemonte, Ribes
  - ◆ Accenture, Cap Gemini, Amadeus, IBM, HP, EDS, Microsoft, SAP
  - ◆ Marelli, STM
  - ◆ Telecom Italia, Vodafone, Wind
  - ◆ RGI, Finance Evolution
- 'Non ICT'
  - ◆ Automotive: GM, Fiat, Iveco
  - ◆ Finance: Intesa San Paolo, Fondiaria Sai, Toro, Reale Mutua
  - ◆ Automation: Comau, Hexagon Metrology, Prima, Media RAI

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# Polling the room...

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- Technologies to build up Information Systems
  - ◆ Web applications
  - ◆ Databases
  - ◆ Networks
  - ◆ Middleware and distributed systems
  - ◆ Data mining, data warehouse
  - ◆ Security

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# Classware

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- Bracchi, Francalanci, Motta, “Sistemi informativi d’impresa”, McGraw Hill 2010
- Daft, Organizational theory and design.

# Web site

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- <http://softeng.polito.it/01CIT>
- News about the course
- Material
  - ◆ Slides, exercises, links

# Final, projects

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- Modo tesina e compito – voto max 30 lode
  - ♦ Tesina: 0 a 5 punti
    - Gruppi 3 persone max
    - Caso di studio – analisi e implementazione processo
      - 1 analisi processo attuale
      - 2 proposta nuovo processo (BPR)
      - 3 analisi economica
      - 4 implementazione tecnologica
  - ♦ Compito: 0 a 30 punti
- Modo compito – voto max 30

# Tesine – template

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- Descrizione organizzazione
  - ♦ Strategia (Prodotto / servizio offerto)
  - ♦ Dimensione
  - ♦ Struttura (organigramma)
  - ♦ Variabili organizzative
    - Profit / no profit
    - Culture
    - Politics
    - ...
  - ♦ Strategia e organizzazione SI
- Processo 1 – as is
  - ♦ Activity diagram
  - ♦ Class diagram
  - ♦ KPI
  - ♦ Analisi criticita
- Process 1 – to be
  - ♦ Activity diagram
  - ♦ Class diagram
  - ♦ Analisi vantaggi
  - ♦ ANalisi economica