



# IT Governance and security: ISO 27000 at Universitat Jaume I



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- Walking the path to IT governance:
  - Systems plan
  - Strategic management system
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- IT Governance
- Conclusions

# Context and initial situation

- Universitat Jaume I at a glance:
  - Created on 1991
  - 3 faculties
  - 25 departments
  - 30 degrees
  - 1500 professors
  - 600 administrative staff
  - 15000 students



# Context and initial situation

- A set of corporate principles were defined in 1991:
  - Empower IT as a primary objective
  - In-house development approach
  - Tailor-made development of tools and services
- IT informal design principles in an very early stage:
  - CASE tools adoption: Business modeling
  - Developments to support core functionalities
  - No formal process defined. No guides

# Context and initial situation

- A formal plan is needed!!!



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# Systems plan

- The systems plan is an strategic project for:
  - Ensure alignment with strategic objectives
  - Allow decision making more easy
  - Define methods and tools



... Always to:  
**Guide the future  
automation process**

# Systems plan

- The defined methods and tools allow us to:
  - Define the strategic objectives
  - Create and grow organizational structure and management policies
  - Create a business process map
  - Define the technology and information systems plan
  - Create an educational and training plan

**An organizative model was needed to create an IT based Strategic Management System**



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# Strategic management system

- Main characteristics:
  - Initially created on 2001
  - Guided by metrics and indicators:
    - Integral Management Scoreboard (global)
    - Local Management Scoreboards (at the administrative unit level)
- When you have all the metrics and indicators, you need to analyze them:
  - A reference models to compare with is needed

# Strategic management system

- Consequent actions:
  - New reference models adopted:
    - ISO
    - EFQM
  - Revision of the bussiness process map
  - Creation of improvement groups (people to improve processes from different areas of the organization)
  - Definition of IT processes, security and services: The technology framework

**How will be defined the technology framework?**

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# Technology framework

- An instrument to:
  - Order, direct and align the process of development of products and technologic services
  - Satisfy the business process needs. Giving always a proper solution. Adapting to any situation
  - **Be aligned** with corporate strategic objectives
- Empower IT
- Adhered to standards and reference models:
  - A reference to compare with is needed

# Technology framework

- How to order, direct and align the process of development of products and technologic services?:
  - Follow reference models
  - Adopting best practices
  - Auditing
  - Defining a controlled and in-house development process

# Technology framework

- Information system:
  - ISO 27001 as a concretion of ISO 27002 best practices to ensure: **Availability, privacy and integrity.**
- Information technology:
  - No data replication
  - Powered by internal development
  - Cloud services
  - **Agile methodologies for software development**

# Technology framework

- The ISO 27001 standard provides a formal model for creating an Information Security Management System (ISMS), as a set of:
  - Procedures
  - Regulations
  - Policies

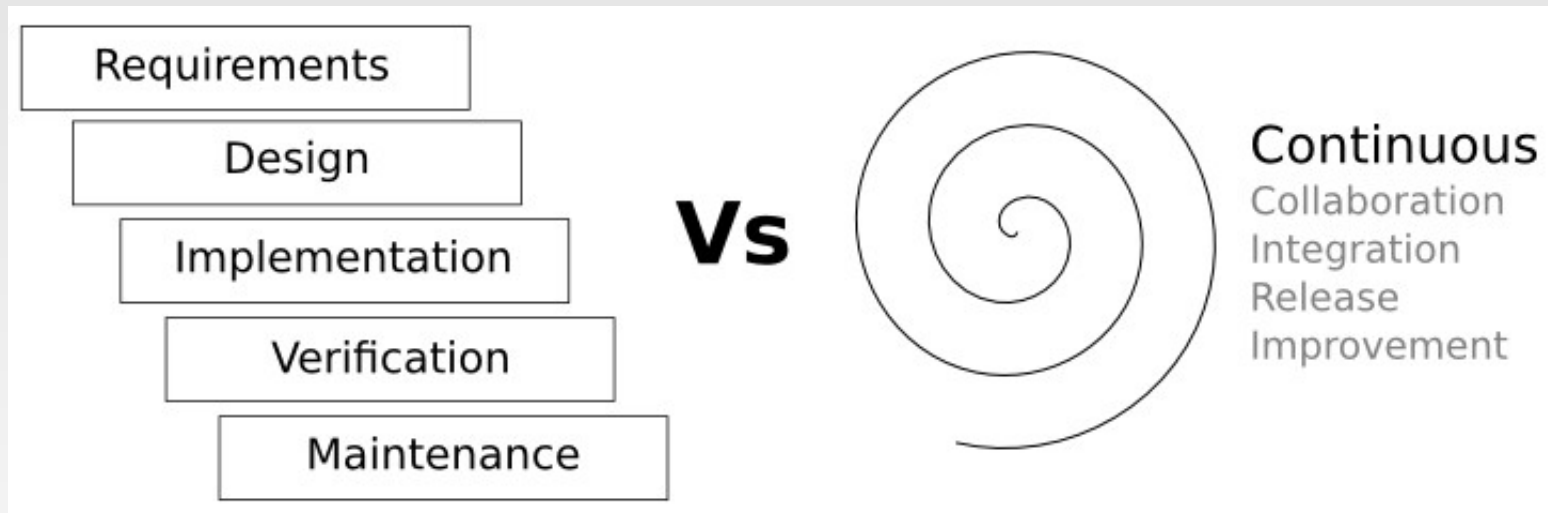


# Technology framework

- How an ISMS contributes to IT governance?:
  - A set of established procedures in order to manage the **acquisition** of IT systems and to guarantee its **performance**, security and reliability
  - Regulations establishing the **responsibility** of each stakeholder regarding IT
  - Policies reflecting the **strategic** guidelines established by the governing bodies of the University

# Technology framework

- Agile development process as an instrument to manage change and adapt to strategic needs



# Technology framework

- We can't forget that agile is focused in adding value to a client.
- The client is the most important thing in our development process.

**We are developing software defined by persons to be used by persons**

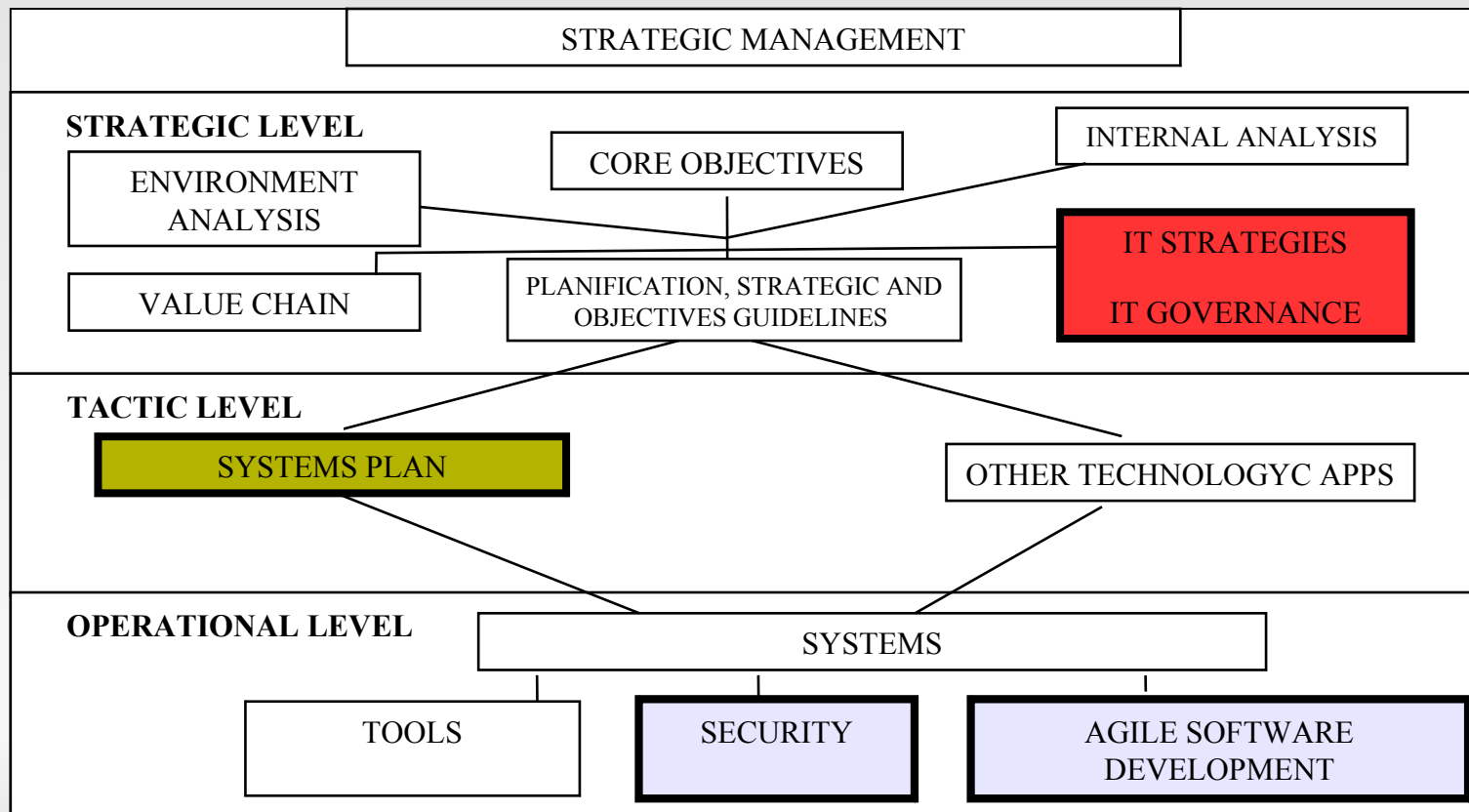
- This is the real strategic value

# Technology framework

- How an agile development process contributes to IT governance?:
  - Quick development or adoption of new solutions to ensure the competitive advantage
  - Highly reactive to **strategic** decisions
  - Ensure technology adoption
  - Software reuse to increase development **performance**
  - **Strategic** commitment to open source
  - Up-to-date technical skills in several areas (**human behavior**)

# Technology framework

- To adopt IT governance we need to:  
**Know where IT governance will focus:**



# Technology framework

- To adopt IT governance we need to know that ISO 38500 defines a set of characteristics that a good corporate governance must consider:
  - Responsibility
  - Strategy
  - Acquisition
  - Performance
  - Adherence
  - Human behavior

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# IT Governance

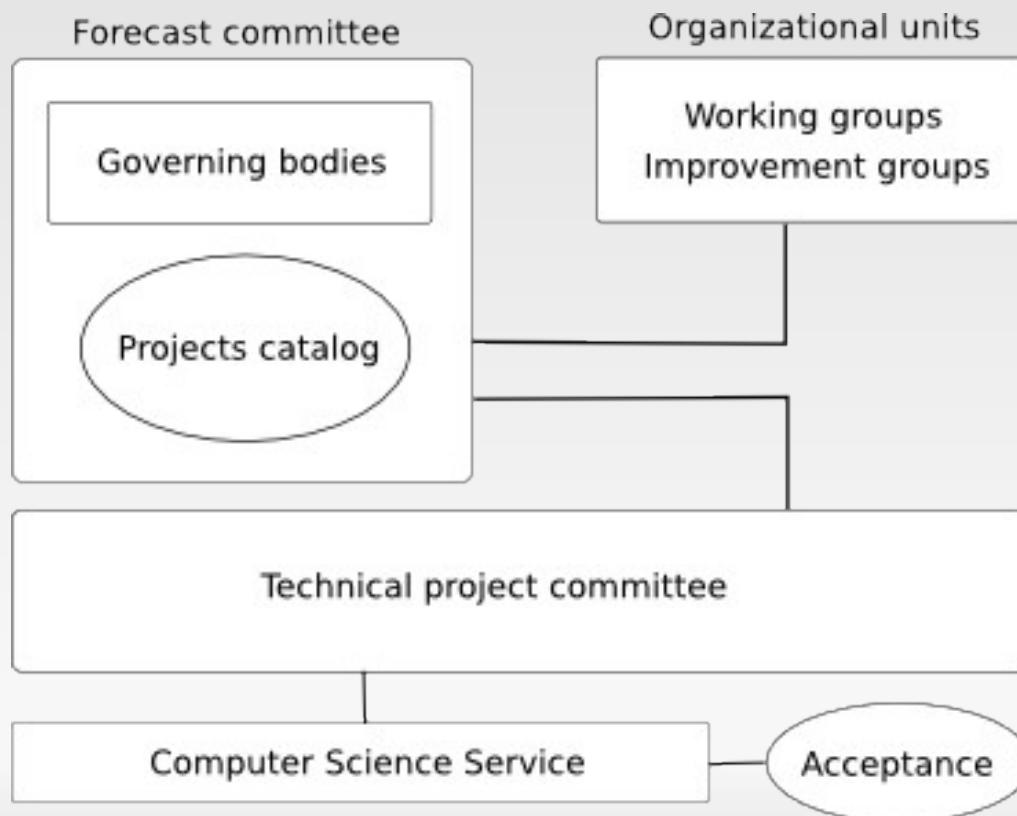
- GTI4U arises as a proposed concretion of ISO 38500 best practices
- Defines a maturity model based on 5 levels
- Ensures IT incorporation

**GTI4U allow you to check if your technology framework is adequate for IT governance**



# IT Governance

- Adaptation of our internal structure to the new process



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# Conclusions

- Why we can say that Universitat Jaume I is using an IT governance system?:
  - IT based strategic decision system
  - Secure and audited information system
  - Information technology system built on top of the Agile Methodologies, open source and in-house development
  - Set of reference models, metrics and indicators to compare against including GTI4U, ISO and EFQM

Thank you

Questions & Answers