

# Essentials of project management

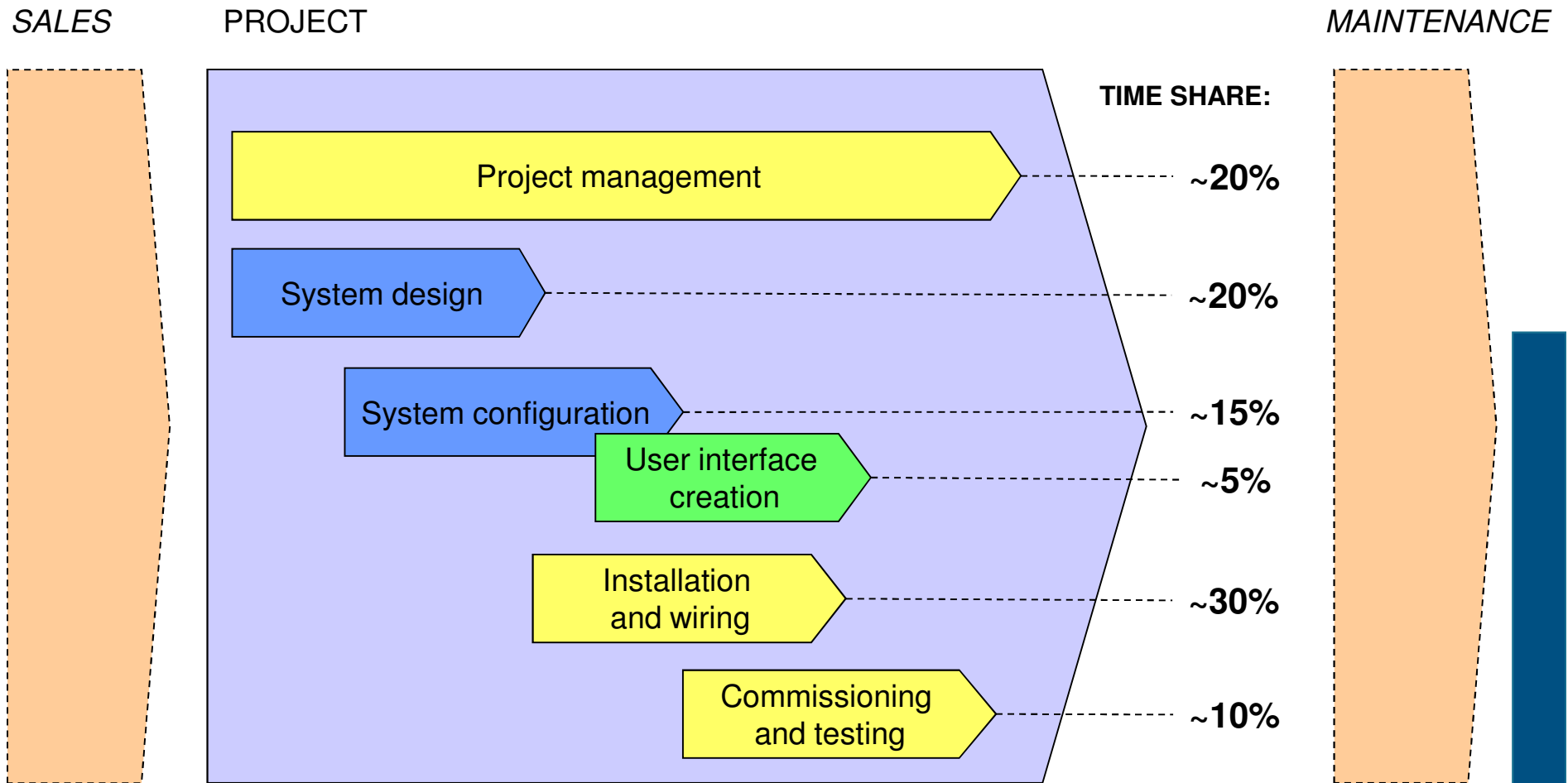
## Lecture 6

# Targets of Lecture

- Introduction to project management
  - Understanding the target process in typical projects
  - Required tools in each phase of the project
  - Key requirements for a successful project
- Duration: 1 hour



# Typical project tasks



# Typical project tasks, detailed

- Shop Drawings
- Data Point Schedules
- (Valve selection & ordering)
- Network design
- Cabling
- I/O points to modules/controllers
- Cabinet layouts
- Internal connections of cabinets
- Module/controller configurations
- Cabinet build-up & installation
- Field device connections
- Module/controller commissioning & testing
- COBA UI creation
- COBA server installation
- COBA testing & final fixing



# System design

- Design documents: Layout pictures
  - Electrical, air-conditioning and piping, automation, security, etc
- Functional description
- Network design
- Automation cabinet design
  - Layout picture (needed for producing automation cabinets)
  - Internal connections (needed for producing automation cabinets)
- Device design
  - Field devices
  - Valve selection
  - I/O-point allocation to modules/controllers
- Cabling design
  - Cable list
  - Connections between cabinet and distribution box (needed at the site)
  - Field device connections

# System configuration

- Lonix automation system:
  - Configuration of system and I/O functionality (PCT)
  - LON network database (NL220)
  - LON network bindings (CSV-file) (PCT)
- Lonix security system:
  - Configuration of door and intruder alarm functionality (PCT)
  - Door group, schedule and access right definitions (PCT)
- COBA user interface for automation and security
  - User interface modeling (COBA Editor)
  - Graphical drawing for user interface (COBA Editor)



# Installation

- Cabinets
  - Manufacturing of the cabinets
  - Installing modules/controllers, relays etc to cabinets according to design documents
- Wiring
  - Wiring cables according to cable list
- Installation
  - Installing field devices (sensors, actuators, switches etc)
- Coupling
  - Coupling of field devices according to cabling design documents



# Commissioning and testing

- Testing of all I/O points
  - Documented in the Testing table (PCT)
- Setting the setpoints and other settings
- System tuning



# Customer training

- Creation of user documents
  - SCADA system instruction
  - Maintenance instructions for field devices
- Hands-on training for users



# Important in project management

- Characteristics of a good project manager
  - Technical competence (automation)
    - General knowledge about building management and security systems
    - Understanding of HVAC processes
    - Knowledge about LonWorks technology
  - Other favorable characteristics
    - Diligence and preciseness
    - Ability to make decisions as the project requires
    - Ability to learn from earlier mistakes
- Challenges
  - Doing things only once in the right way
  - Avoiding unnecessary complexity
  - Keeping the project continuously moving into right direction
  - Effective coordination of tasks between everybody involved in the project
  - Keeping the ultimate target in mind instead of only small details
- Important routines
  - Regular supervision work (weekly/monthly visit to site)
  - Regular working routines (meetings, discussions, e-mails, documents)