

### Systems Analysis Activities

Gather detailed information	Interviews, questionnaires, documents, observing business processes, researching vendors, comments and suggestions
Define requirements	Modeling functional requirements and non-functional requirements
Prioritize requirements	Essential, important, vs. nice to have
Develop user interface dialogs	Flow of interaction between user and system
Evaluate requirements with users	User involvement, feedback, adapt to changes

### Stakeholders

Internal – persons within the organization  
 External – persons outside the organization  
 Operational – persons who regularly interact with the system  
 Executive – persons who don't directly interact, but use the information or have financial interest

Persons who have an interest in the successful implementation of the system

### Information Gathering Techniques

- Interviewing users and other stakeholders
- Distributing and collecting questionnaires
- Review inputs, outputs, and doc
- Observe & document business processes
- Research vendor solutions
- Collect active user comment / suggestions

### What Are Requirements?

Functional Requirements	– the activities the system must perform. Business uses and functions system must carry out
Non-Functional Requirements	Other system characteristics. Constraints and performance goals.

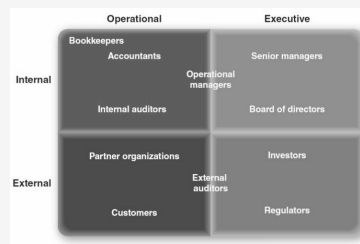
### FURPS+ Requirements Acronym

Requirement categories	FURPS + categories	Example requirements
Functional	Functions	Business rules and processes
Nonfunctional	Usability Reliability Performance Security + Design constraints Implementation Interface Physical Support	User interface, ease of use Failure rate, recovery methods Response time, throughput Access controls, encryption Hardware and support software Development tools, protocols Data interchange formats Size, weight, power consumption Installation and updates

### Reasons for Modeling

- Learning from the modeling process
- Reducing complexity by abstraction
- Remembering all the details
- Communicating with other development team members
- Communicating with a variety of users and stakeholders
- Documenting what was done for future maintenance/enhancement

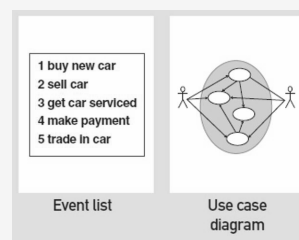
### Stakeholders Example



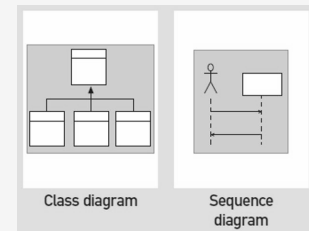
### Interviewing Users and Other Stakeholders

- Prepare detailed questions
- Meet with individuals or groups of users
- Obtain and discuss answers to the questions
- Document the answers
- Follow up as needed in future meetings or interviews

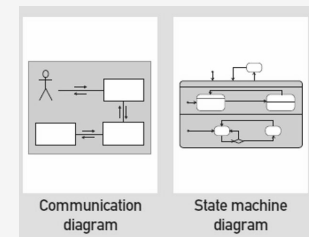
### Some analysis and design models 1



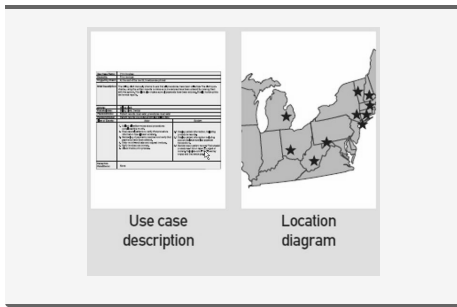
### Some analysis and design models 3



### Some analysis and design models 4



### Some analysis and design models 2



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Page 1 of 2.

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