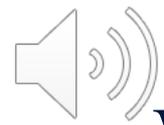# Investigating System Requirements
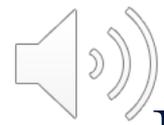
What are Requirements?

- System Requirements =
  - Functional requirements
  - Non-functional requirements

- Functional Requirements– the activities the system must perform
  - Business uses, functions the users carry out
  - Conforming to business rules

- Non-Functional Requirements– other system characteristics
  - Constraints and performance goals

FURPS Requirements Acronym

- Functional requirements

- Usability requirements

- Reliability requirements

- Performance requirements

- Security requirements

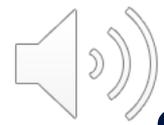| Requirement categories	FURPS categories	Example requirements
Functional	Functions	Business rules and processes
Nonfunctional	Usability Reliability Performance Security	User interface, ease of use Failure rate, recovery methods Response time, throughput Access controls, encryption

Additional Requirements Categories – FURPS+

- Design constraints
  - Specific restrictions for hardware and software

- Implementation requirements
  - Specific languages, tools, protocols, etc.

- Interface requirements
  - Interface links to other systems

- Physical requirements
  - Physical facilities and equipment constraints

- Supportability requirements
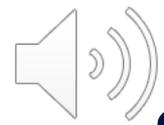 - Automatic updates and enhancement methods
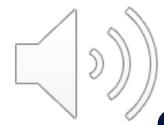
Stakeholder

- **Stakeholders** – persons who have an interest in the successful implementation of the system

- **Internal vs. External Stakeholders**–
    - Internal: persons within the organization
    - External: persons outside the organization

- **Operational vs. Executive stakeholders** –
    - Operational: persons who regularly interact with the system
    - Executive: persons who don't directly interact, but use the information or have financial interest

Stakeholders

- Example: Stakeholders of an accounting system for a public company

	Operational	Executive
Internal	Bookkeepers Accountants Operational managers Internal auditors	Senior managers Board of directors
External	Partner organizations External auditors Customers	Investors Regulators

Stakeholders

- Stakeholders for RMO CSMS Project:
    - Phone/mail sales order clerks
    - Warehouse and shipping personnel
    - Marketing personnel who maintain online catalog information
    - Marketing, sales, accounting, and financial managers
    - Senior executives
    - Customers
    - Partner companies, e.g. shippers.

❖ *Can you use the classification matrix to classify these stakeholders?*