

User Requirements Through Scenario Analysis

Presented by Roxanne Miller, CBAP

Author of *The Quest for Software Requirements*



User Requirements Through Scenario Analysis

Who is Roxanne Miller?



- **Requirements Quest® founder.**
 - ◇ IIBA Endorsed Education Provider
 - ◇ Requirements management process improvement
- **Certified Business Analysis Professional (CBAP®).**
- Keynote speaker at **Business Analyst World** conferences.

Self proclaimed 'Requirements Super Freak'.

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Session Objectives



1. Usability
Basics



2. User
Analysis



3. Scenario
Analysis

What is Usability?



- **How well users can learn and use a product to achieve their goals, and how satisfied users are with that process.**
- Measures the **quality of a user's experience** when interacting with a product or system, including:
 - ◇ Websites
 - ◇ Software applications
 - ◇ Mobile technologies
 - ◇ Any user-operated device



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Usability Factors



- **Intuitive design:** a nearly effortless understanding of the architecture and navigation of the system
- **Ease of learning:** how fast a user who has never seen the system before can accomplish basic tasks
- **Efficiency of use:** how fast an experienced user can accomplish tasks
- **Memorability:** after visiting the site, if a user can remember enough to use it effectively in future visits
- **Error frequency and severity:** how often users make errors while using the system, how serious the errors are, and how users recover from the errors
- **Subjective satisfaction:** if the user likes the system

User-Centered Design



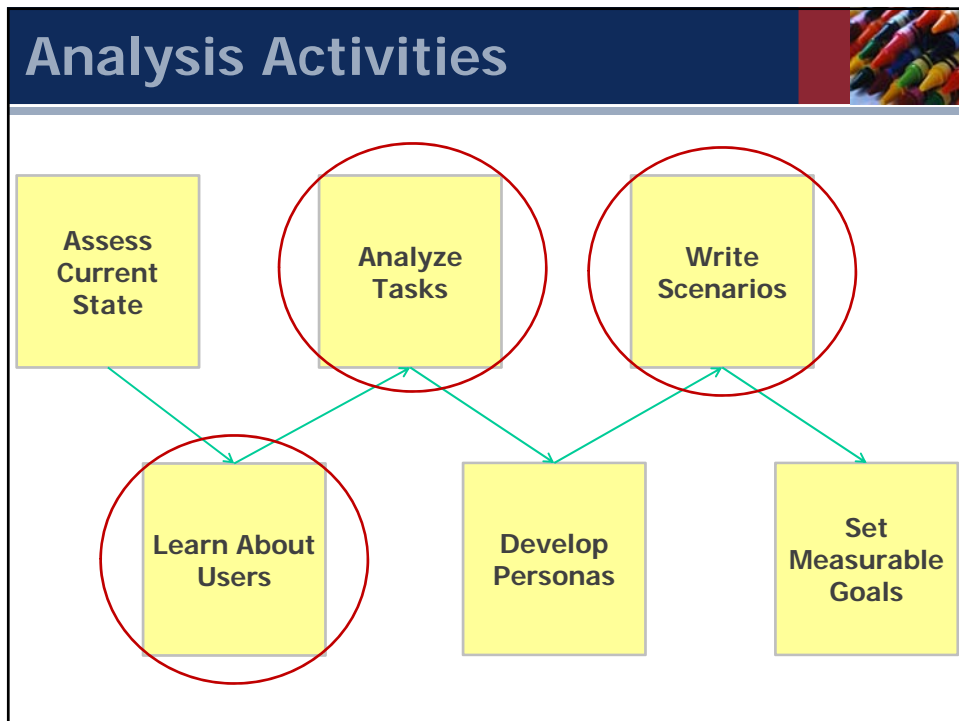
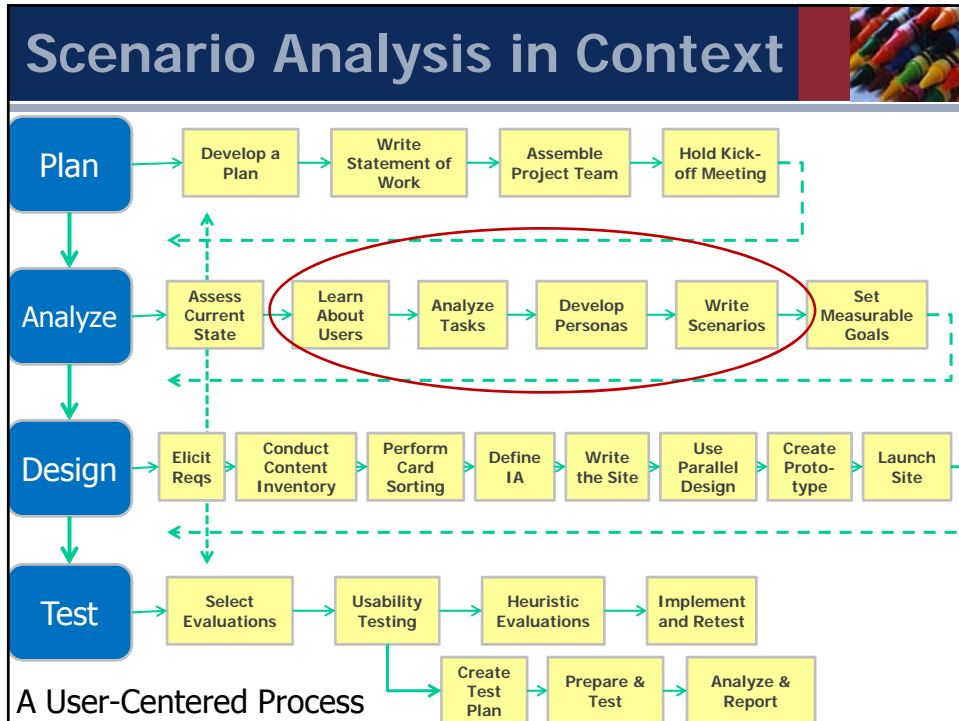
- **User-centered design (UCD)** is a process and methodology that focuses on the:
 - ◇ Needs of end users
 - ◇ Limitations of end users
 - ◇ Preferences of end users
 - ◇ Business objectives
- **Balance the needs of users and the needs of your organization.**



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2: User Analysis



1. Usability Basics

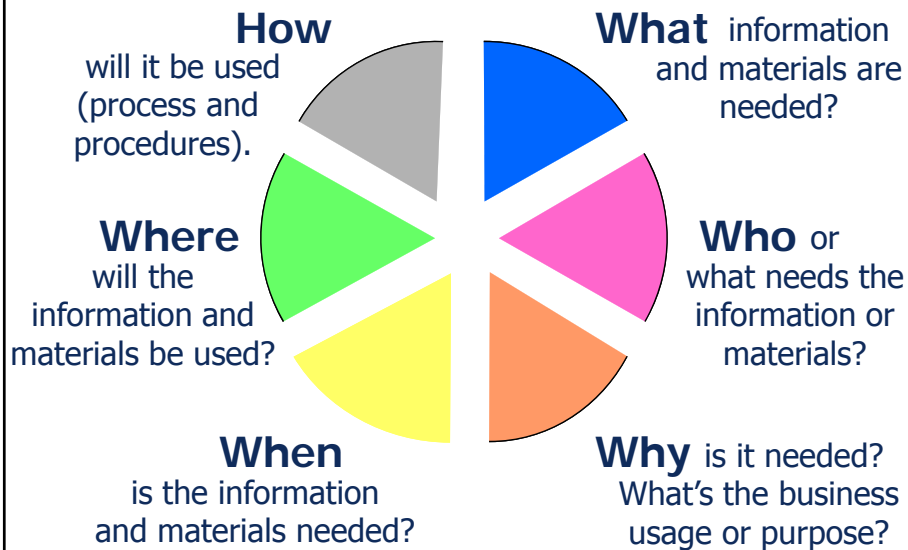


2. User Analysis



3. Scenario Analysis

Learn About Your Users



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Elicitation Techniques



- Online surveys and questionnaires
- Individual interviews
- User Observation
 - ◇ Active
 - ◇ Passive
- Focus groups
- Workshops



Conduct Task Analysis

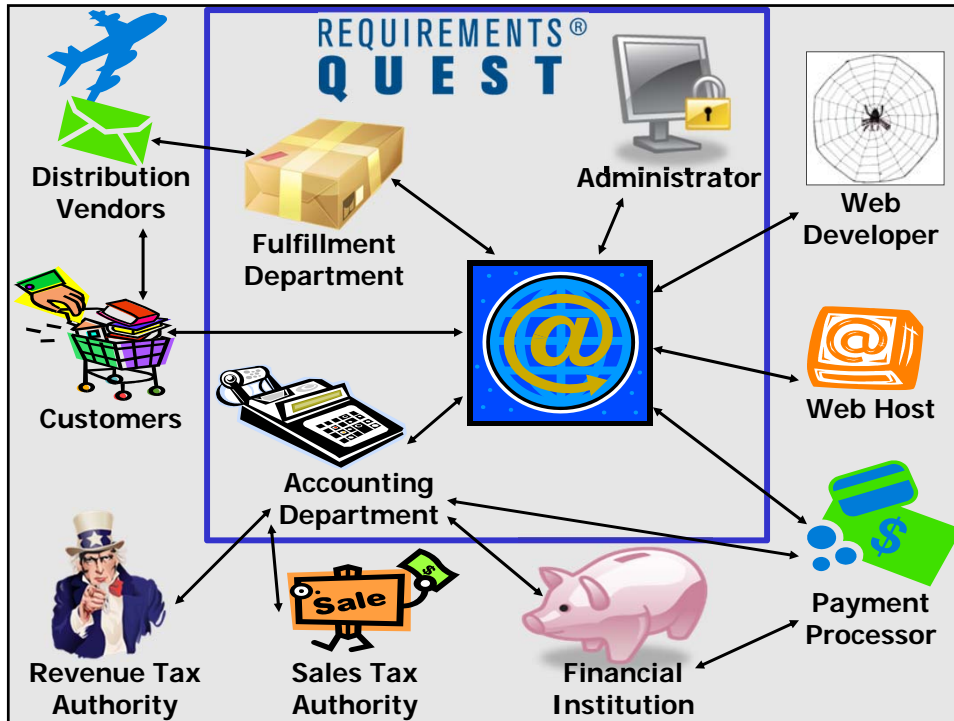


- **Users' goals** and how they achieve them
- Personal, social, and cultural characteristics users bring to their tasks
- Physical environment's influence on users
- The influence of previous knowledge and experience on:
 - ◇ How users think about their work
 - ◇ The workflow users follow to perform their tasks

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Identify User Goals

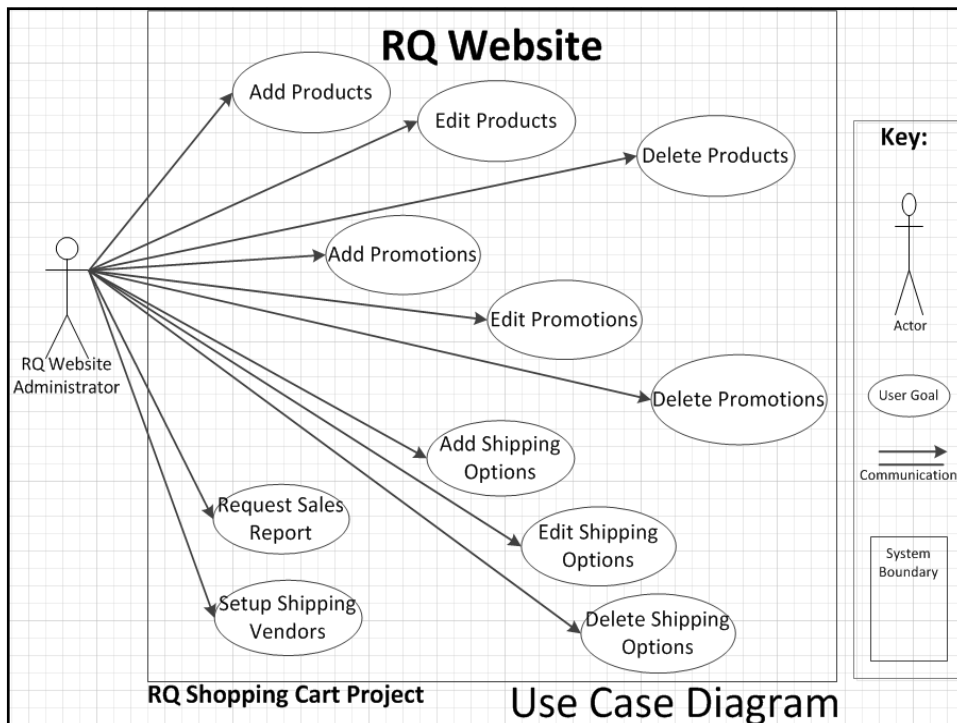
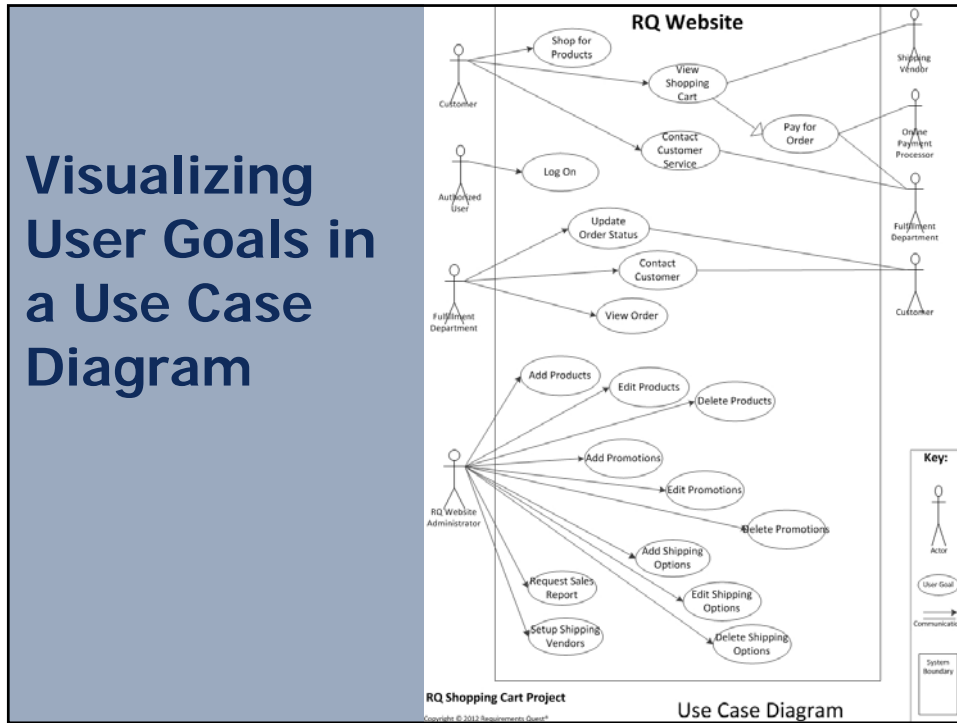
 Customers	 Administrator
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Visualizing User Goals in a Use Case Diagram



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3: Scenario Analysis



1. Usability Basics



2. User Analysis



3. Scenario Analysis

Types of Scenarios



Goal- or Task-Based

- State only what the user wants to do.
- Do not include details on how the user would complete the scenario.
- Gives a reason for interaction with the system.
- Usually one sentence.

Elaborated (User Story)

- Describe more user story details.
- Provides understanding of the users, and the users' characteristics.
- Usually a lengthy paragraph.

Full Scale Task (Use Case)

- Include steps to accomplish the user's task/goal.
- Lay out the steps from the user's point of view rather than the system's point of view.
- Can be used to identify steps taken now (current state), and/or steps you plan to implement (future state).

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Use-Case Scenario Analysis



What is it?

A scenario is a use case instance or one particular path through a flow of events. (The test-based use case defines a set of logically related scenarios.)

Also known as:

- Use case scenarios
- Business scenarios
- Business-level scenarios

A Use-Case Instance

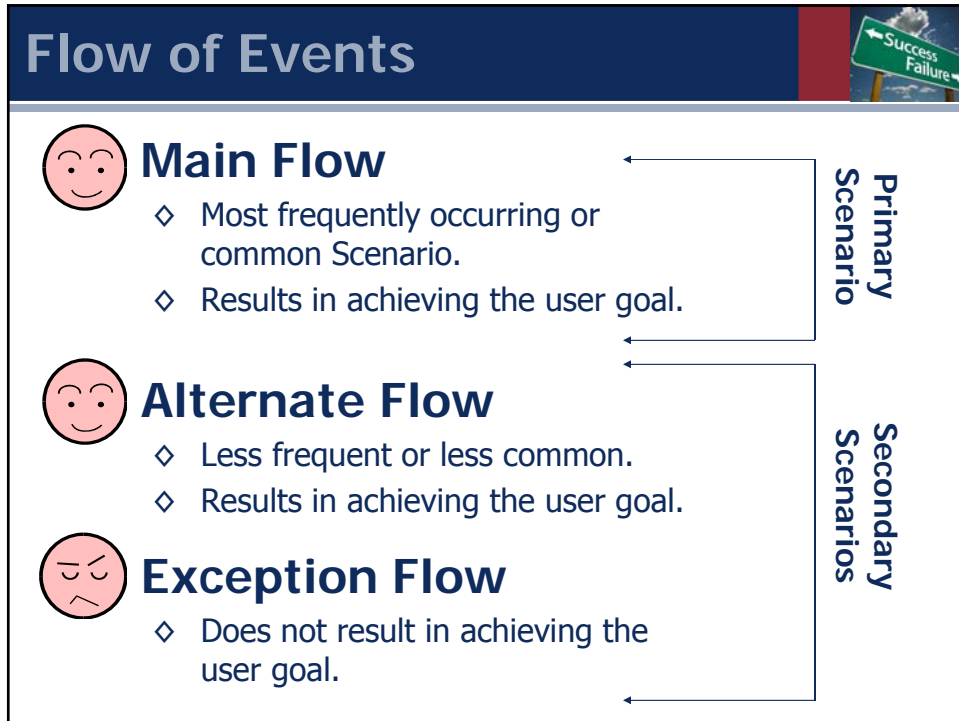


- One particular path through the flows of events.
- A **specific sequence of actions** that illustrates the interaction with the system.
- The **use case** defines a set of **related scenarios**.
 - ◇ Represents all possible sequences that might happen until the resulting value is achieved.

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Scenario Analysis Table

		Main	A1	A2	E1	E2	E3	E4
Step ATM User Actions:								
1	Account Type / Checking	◆						
	A1 Savings		◆					
	E1 Invalid Account				◆			
2	Fee Response / Accepts	◆						
	E2 Declines Fee					◆		
3	Inputs Requested Amount	◆						
	E3 Invalid or NSF						◆	
4	Requests Receipt	◆						
	A2 No Receipt			◆				
Any	E4 May Cancel any time							◆
5	Confirm Transaction							
	Yes, Receive Cash	◆	◆	◆				
	No, Cancel							◆

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Optional View #1			Main	A1	A2	E1	E2	E3	E4
Step ATM User Actions:									
1	Account Type (Chkg or Savg)		◆		◆				
	A1 FAST CASH			◆					
	E1 Invalid Account					◆			
2	Fee Response / Accepts		◆	☒	◆				
	E2 Declines Fee						◆		
3	Inputs Requested Amount		◆	☒	◆				
	E3 Invalid or NSF							◆	
4	Requests Receipt		◆	☒					
	A2 No Receipt			◆	◆				
Any	E4 May Cancel any time								◆
5	Confirm Transaction								
	Yes, Receive Cash		◆	◆	◆				
	No, Cancel								◆

Optional View #2			Main	Alt 1	Alt 2	Excp 1	Excp 2	Excp 3	Excp 4
Step ATM User Actions:									
1	Account Type		Chkg	Savg		Invalid Acct			
2	Fee Response		Accept Fee			Decline Fee			May cancel at any time
3	Requests Amount		Valid Amt					Invalid Amt	
4	Receipt		Yes Recpt		No Recpt				
5	Confirm Transaction		Confirm						Cancel
	Goal Achieved		Yes	Yes	Yes	No	No	No	No

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		Identifying Test Cases														
		Test Case ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Step	ATM User Actions:															
1	Acct Type / Checking	◆		◆				◆		◆		Cancel				
	A1 Savings	◆	◆		◆				◆		◆					
	E1 Invalid Account	◆					◆									
2	Accepts Fee	◆	◆	◆	◆					◆	◆		Cancel			
	E2 Declines Fee	◆						◆	◆							
3	Requests Amount	◆	◆	◆	◆								Cancel			
	E3 Invalid or NSF	◆								◆	◆					
4	Requests Receipt	◆	◆											Cancel		
	A2 Declines Receipt	◆			◆	◆										
Any	E4 Cancel any time	◆										◆	◆	◆	◆	◆
5	Confirm / Get Cash	◆	◆	◆	◆											Cancel
	Do Not Get Cash							◆	◆	◆	◆	◆	◆	◆	◆	◆

Usability Testing

- **Test the system, NOT the Users**
- **Metrics:**
 - ◇ Performance (e.g., success, time, errors)
 - ◇ Subjective (e.g., user self-reported ratings)
- **Make Use of What You Learn**
 - ◇ Consider findings, set priorities, change the prototype
- **Find the Best Solution**
 - ◇ Factor in constraints (time, budget, and resources)

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Session Recap



1. Usability
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Today's Presentation



- **Source:** <http://usability.gov>
for more details about user-centered design and testing.
- **Handout:**
<http://RequirementsQuest.com>
for a presentation handout copy (click on Resources, then Tools).

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