SCENARIOS

INTRODUCTION

- Requirements Analysis
  - Scenarios
  - How to create scenarios
  - Types of scenarios

REQUIREMENT ANALYSIS: SCENARIOS

Application level:

"Scenarios are usually narratives that tell a **story** describing one or more **tasks** in a specific **environmental** situation"

(Shawn Lawton 2007)

System level:

"A **concise** description of a "**persona**" using a software-based product to achieve a **goal**"

(Allan Cooper, 1999)

CREATING SCENARIOS

- **Who is the user?**
  - Remember the targe user or actors
- **What are the specific tasks/activities?**
- **Why does the user perform a specific activity/task or use a system?**
  - expectations or motivations of the user
- **What goals does the user have?**
  - Specific needs

CREATING SCENARIOS

- **Goals, expectations, motivations, actions**, etc.
- Describe the **real context**
- Based on **research** about the **users**
- Does not include yet **system-specific** solutions

Example:

- **Good:** Maria sends a reminder…
- **Not good:** Maria clicks the **submit button** to send a reminder…

TYPES OF SCENARIOS

- **Goal**- or **Task**-based Scenarios
- **Elaborated** Scenarios
- **Full Scale Task** Scenarios
- **Use** Scenarios

Photo cred: http://infodesign.com.au/usabilityresources/scenarios/

GOAL/TASK-BASED SCENARIOS

- States only what the user wants to do
- No information about how to do it
- Often used in usability test

Examples:

> ***Ines*** *is traveling to San Francisco to attend a conference next week and she* ***wants to check*** *the amount of money she needs for her trip to be able to get reimbursed for meals and other expenses.*

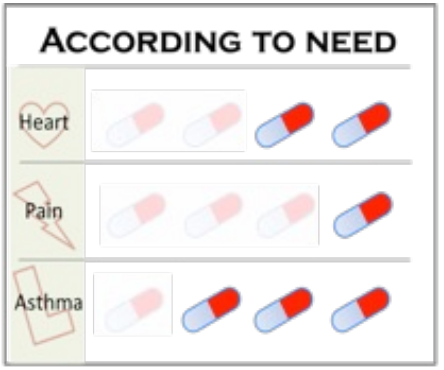
> ***Charles Xavier*** *is arriving to Barcelona from Birmingham at 2am as his flight was delayed for 4 hours. He* ***needs*** *some cash for the bus or taxi. He asks around for an ATM. At the ATM, he asks for €200 specifying that he would like to get the money in €20 bills. He* ***does not wan****t a printed receipt.*

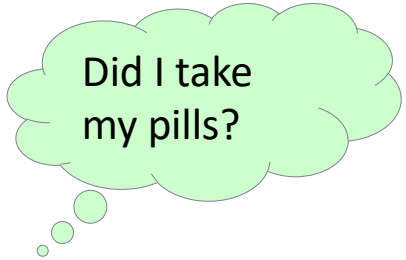
EXAMPLE: MEDICATION MANAGEMENT

Anita – 73 years old

(Grönvall & **Verdezoto**, PervasiveHealth 2013)

Complexity of the medication intake





Forgetfulness

Substitute medication

Delayed medication intake

Doctor's insights

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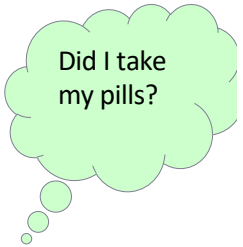
ELABORATED SCENARIOS

Ann is 73 years old; she lives alone since her husband died two years ago. She suffers from a range of illnesses including diabetes, osteoporosis, back pain and hypertension. As a result, she ***takes up to 19 medications*** *a day, spread evenly throughout the day. Indeed, Ann* ***finds it hard to remember*** *to buy new medications as all packages contain different amounts of medication and so it happens that* ***she runs out of medication****. Another challenge for Ann is when the pharmacy* ***substitutes her medication****, due to a cheaper price. Ann likes the cheaper price, but the new medication's name sometimes* ***confuses her****.*

Ann takes great pride in going to the local elderly center to follow their activities, including bingo events and 'eat togethers '. Her son Thomas lives in the same town and he, and her two grandchildren, visit her every second week. When home alone, Ann usually remembers to take her medication. However, when Thomas and the grandchildren visit her, she ***tends to forget her pills*** *during their stay. When Thomas cooks for her,* ***he usually cooks very differently*** *from what Ann usually does and she knows that she has to* ***pay attention*** *to what she* ***eats*** *with some of her medication. Ann really doesn't know what to do when she forgets a dosage of medication, sometimes she* ***takes a double dose*** *at the next scheduled time and sometimes she just* ***skips it****. She has planned to speak with her doctor about this, but when at the clinic she never remembers to ask. Furthermore, Ann's doctor is* ***not aware*** *that* ***Ann does not take her hypertension*** *medication once in a while when she visits her neighbor for evening tea…*



Dalgaard, L. G., Grönvall, E., & Verdezoto, N. (2013, May). Accounting for medication particularities: designing for everyday medication management. In 2013 7th International Conference on Pervasive Computing Technologies for Healthcare and Workshops (pp. 137-144). IEEE.

FULL SCALE TASK SCENARIOS

- Include **all the steps** to accomplish the task
- How to support the goal-oriented scenarios
- From the **user's perspective**

*Ines is traveling next Monday and she is currently **planning** her activities before, during and after the conference in SF. She **checks** the conference website and realized that coffee breaks and lunches are included in the registration fee. For dinner, she **makes** a list of the available restaurants close by the hotel and the conference location. By looking into each restaurant's website, she gets an idea of an average price for dinner in two particular (Spanish and Korean) places she would like to try. She also **consults** information about public transportation to decide how much cash she might **need** upon arrival for the bus or taxi. She also **needs** to print a poster after arriving and she **sends** an email to the hotel asking for suggestions. The hotel replies with a list of possible places to print with the average cost of an A0 poster. After the conference, she is **planning** to visit the Alcatraz Island with her friend Rob and **made** the reservation paying with credit card…*

USE SCENARIOS

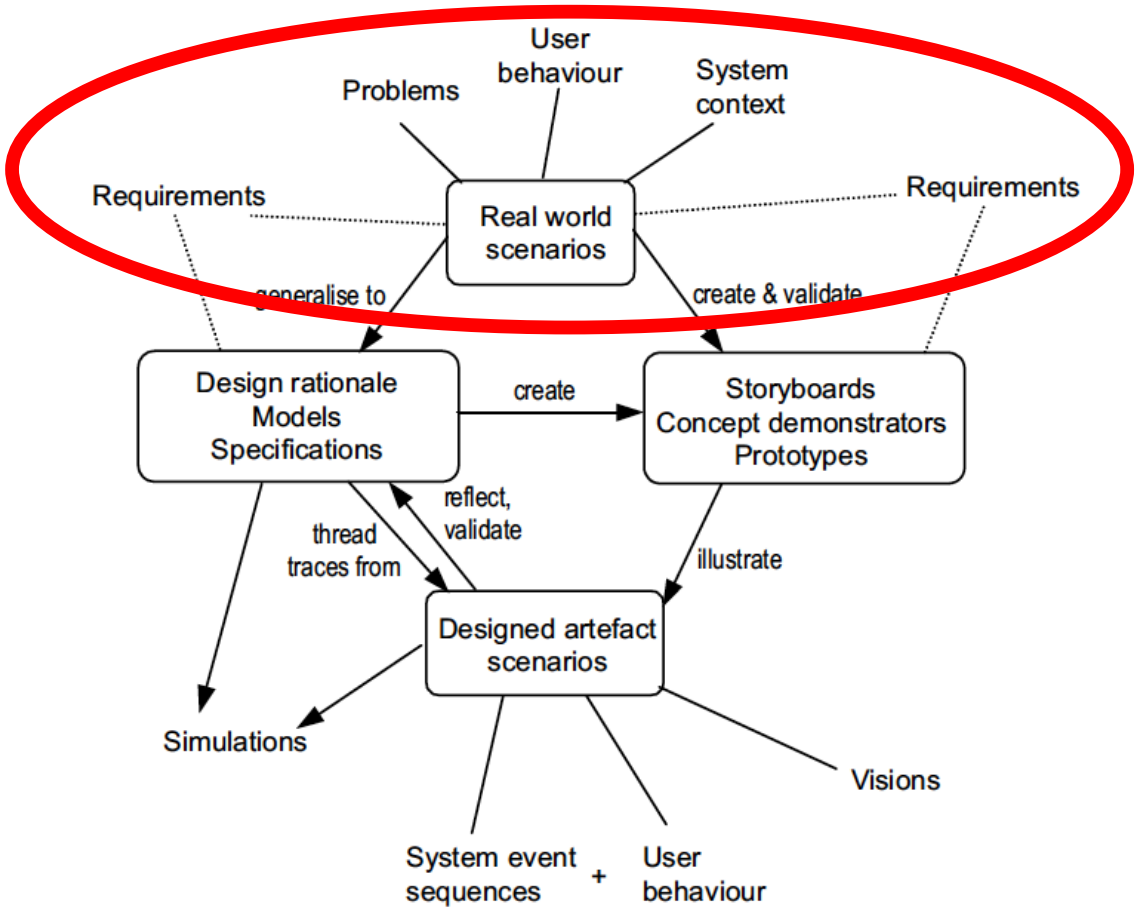
A use scenario is a story or narrative to explore the **set of tasks** and **interactions** between **types of users** (personas) and the **system**

Example: Use of Blackboard

*Charles Xavier arrives to his lecture and **opens** BlackBoard on his browser. While waiting for his lecture to start, he **checks** the latest **announcements** of the course, his results from the last week test and the feedback from the last formative assignment. He reads the feedback from the last assignment and he looks for "Send Email" option in the **Course Tools** menu. He starts **writing** an **email** to students **highlighting** the main issues in yellow. He **sends/submits** the email to sharing his major concerns and asking for another meeting with students.*

SCENARIO-BASED REQUIREMENTS ENGINEERING

Role of scenarios and their relationship to requirements specifications and prototypes



Sutcliffe, A. (2003, September). Scenario-based requirements engineering. In Requirements engineering conference, 2003. Proceedings. 11th IEEE international (pp. 320-329). IEEE.

SPECIFICATION BY EXAMPLE AND GHERKIN

Think about the user's workflow through examples

Every scenario should – *The Given-When-Then Template*

1. Define context (the ***givens***)
2. Describe an event that occurs within the system (the ***whens***)
3. Ensure that expected outcomes take place (the ***thens***)

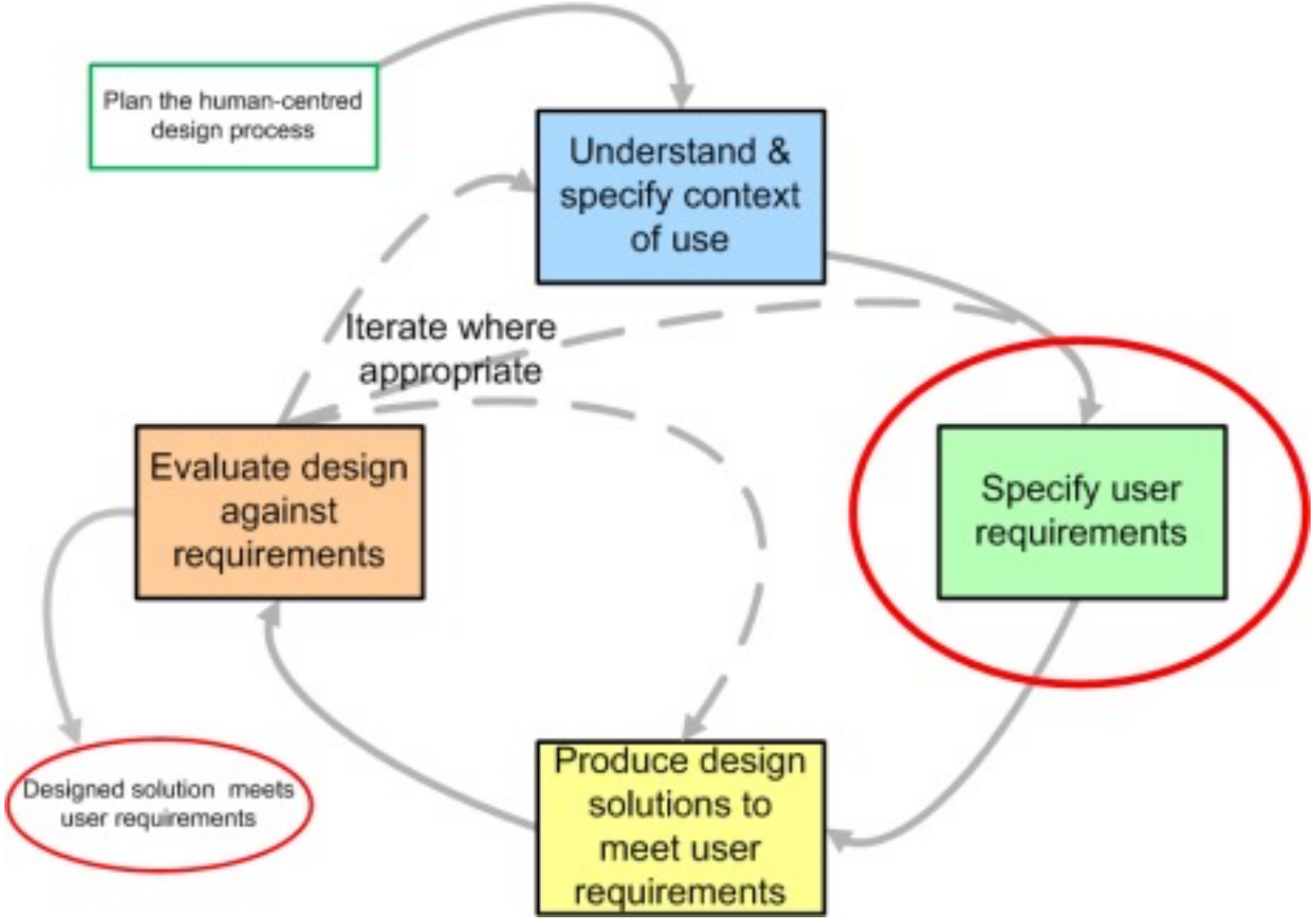
SPECIFICATION BY EXAMPLE AND GHERKIN

Feature: *Setting starting points and destinations*

Scenario: *Starting point should be set to current location*
Given *a commuter that enabled location tracking*
When *the commuter wants to plan a journey*
Then *the starting point should be set to current location*

Scenario: *Commuters should be able to choose bus stops and locations*
Given *a bus stop at Edison Street*
And *the Edison Business Center building at Main Street*
When *the commuter chooses a destination*
Then *the commuter should be able to choose Edison Street*
But *the commuter should be also able to choose Edison Business Center*

REQUIREMENTS ENGINEERING



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