

IPM 15/16 – T0.3

So you want to design an HCI
system?

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What do you mean?

- You want to pass the IPM course

So

- You need to do a nice course project, which involves HCI design

But...

- You don't know where to start!

Read on: This is for you

The Secret

- Plan ahead!
 - Break everything into small steps so things become manageable
- Before you even begin to plan:
 - Choose a group (you need 3 people)
 - Choose a topic (one that everyone is comfortable with)
 - Discuss group management (meetings, contacts, etc.)

Tasks

Advice: Perform tasks using this sequence

- T1: Identify the stakeholders
- T2: Initial studies
- T3: Conceptual design
- T4: Evaluation
 - Or at least propose an evaluation methodology

T1: Identify the stakeholders

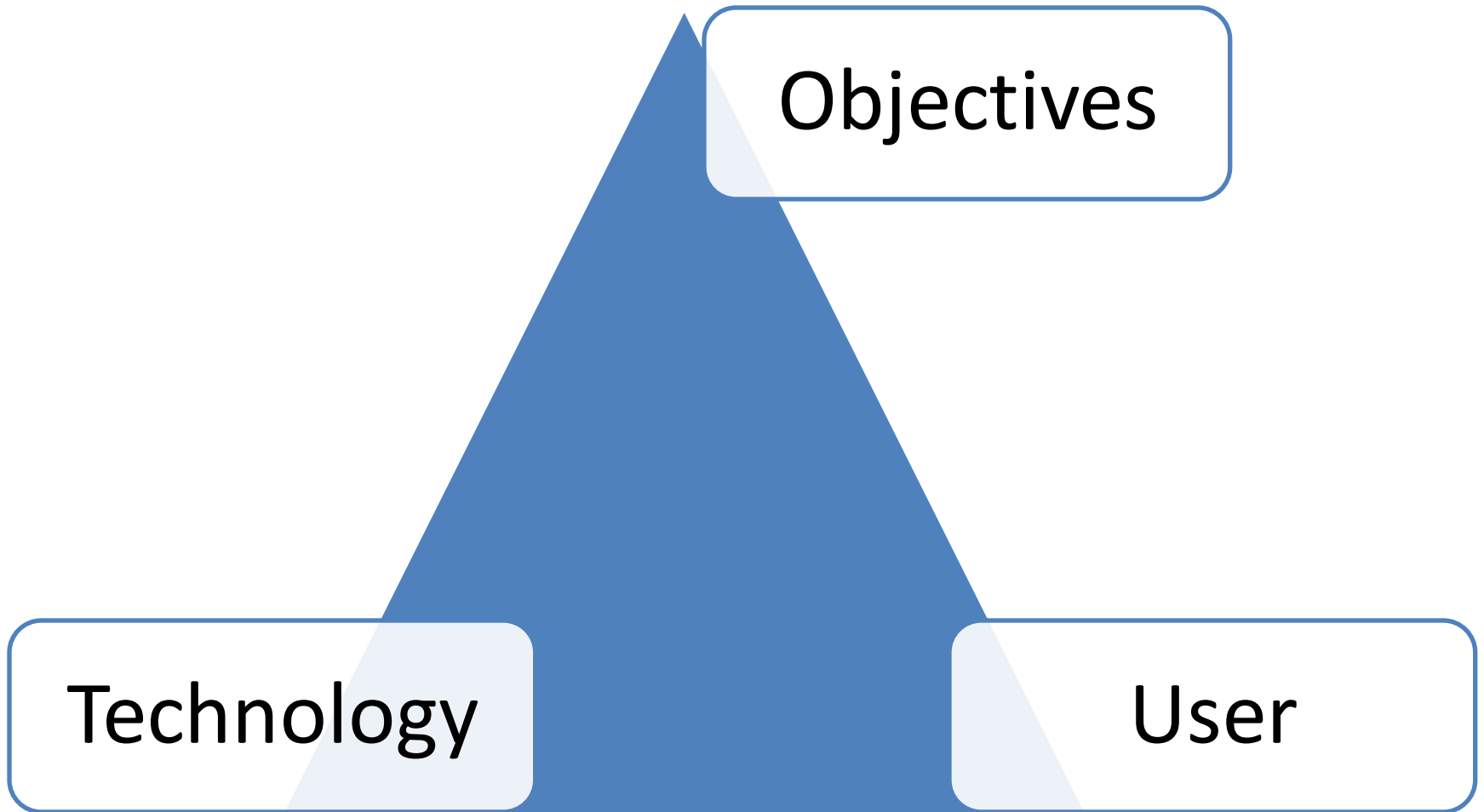
- Stakeholders are everyone who cares about the system
- Think:
 - Who is going to use it?
 - Who is going to build it?
 - Who is going to sell it?
 - Anyone else who might ‘care’
- How?
 - Tips: Brainstorm within the group. Discuss it with your friends and colleagues. Write them down on a list

Design as a negotiation process

There are conflicting objectives in a design task.

- Stakeholders
 - Simple: Consider the user as the single stakeholder
 - Complex: Consider all stakeholders
 - Too complex for this course!!
- System design
 - Functional objectives must be met
 - User limitations must be taken into account
 - Technology limitations must be taken into account

The Magic Triangle



Tips for your design

- Each of the three group elements studies one triangle corner
- Group meeting:
 - Each member ‘defends’ one ‘corner’
 - Group ‘negotiates’ a design solution
 - The negotiation stops when all participants are satisfied with the compromise
- Suggestion: This works better if one of you is the ‘boss’

T2: Initial Studies

- User
 - What does the user know? What does he want? What is he capable of doing? What metaphors does he recognize? What is his technological awareness?
- Technology
 - What technology can I use? What characteristics does it have? What alternatives can I find?
- Objectives
 - What should the system do? Is something critical? Is something optional? What are the priorities of the various objectives?

But... how can I do this?

- Get creative. Get on the field and dig
 - The web is powerful
 - Do you know anyone with a stakeholder profile?
 - Find contacts of final users: ask your lecturer, ask your family/friend, pick up the phone and call institutions, do something!
 - Remember: You are a student of the University of Porto. You are responsible for upholding the University's reputation. Do not only be tenacious. Always be respectful.

T3: Conceptual design

- Mental models
 - Design the system
 - Define how the system really is
 - Build a conceptual model
 - Define how you want the user to see the system
 - Build a system image
 - Define an image that will make the user create the intended conceptual model

Tip: Use a cheap prototype. Paper or a simple GUI will do

T4: Evaluation

- How will you know that your conceptual model is good?
- How will you know that your system image is good?
- Evaluate!
 - Prototype (cheap!)
 - Use adequate evaluation measures

Final tips

- Plan ahead!
- Whenever possible, use solid well-studied methodologies
 - Conceptual design, contextual inquiries, horizontal prototypes, semi-structured interviews, discount evaluation methods, etc.
- Pay attention in class and use the slides for reference!
- Use tutorial classes to discuss your project with your lecturer