

IPM 11/12 – 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

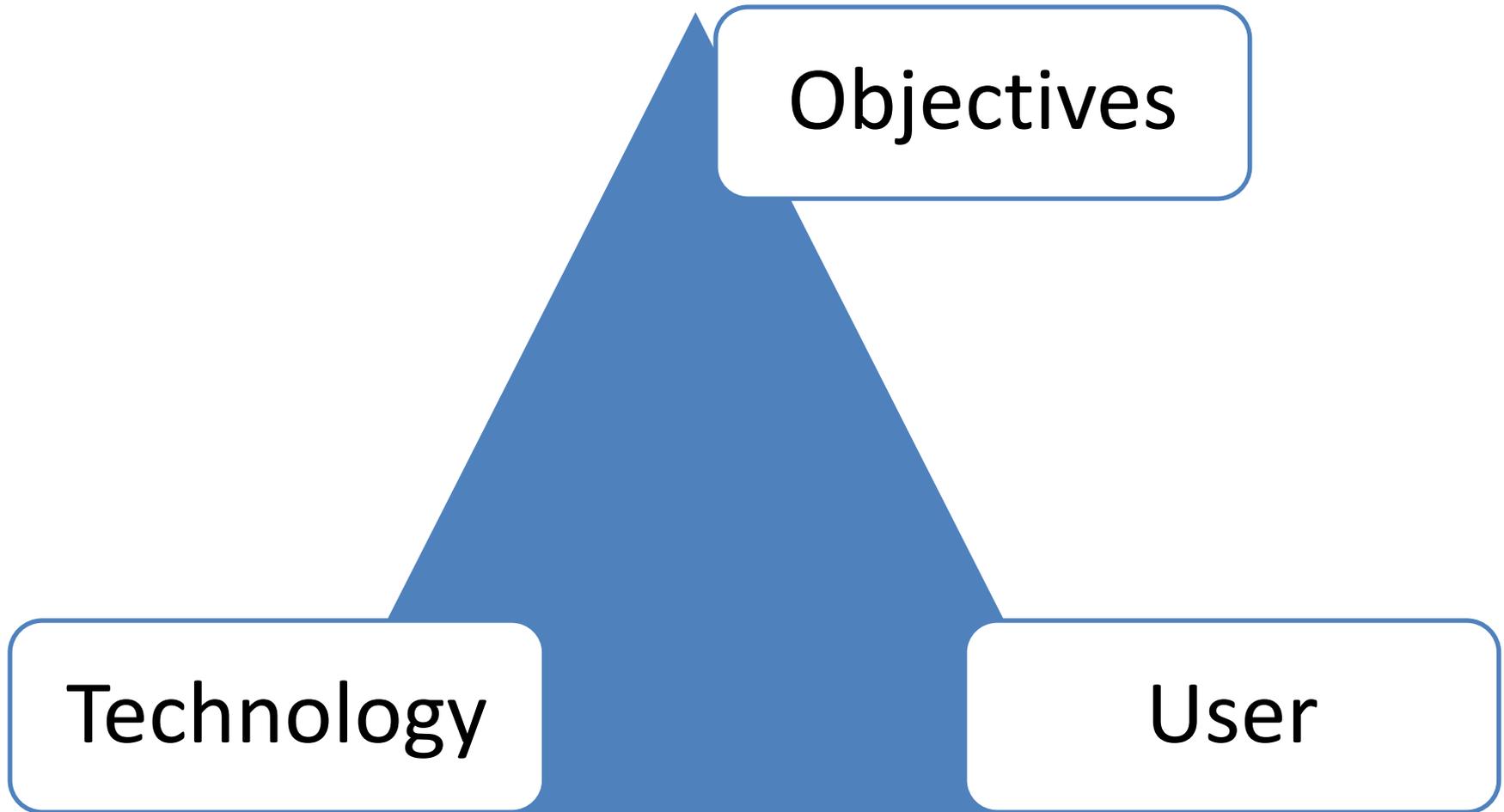
- Stakeholders are everyone who cares about the system
- Think:
  - Who is going to use it?
  - Who is going to build it?
  - Who is going to sell it?
  - Anyone else who might ‘care’
- How?
  - Tips: Brainstorm within the group. Discuss it with your friends and colleagues. Write them down on a list

# 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