

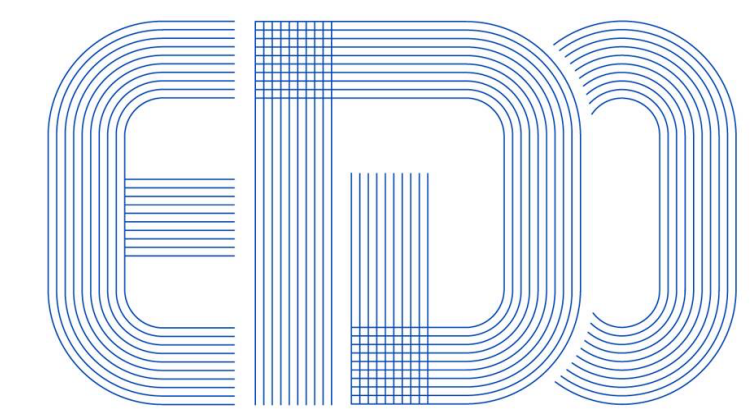
CONTRIBUTION TO HOMECARE SYSTEMS FOR OLDER ADULTS THROUGH ITV

PhD Programme in Information and Communications Technology

Pedro César Santana Mancilla
Student
University of Vigo

Luis E. Anido Rifón, PhD
Advisor
University of Vigo

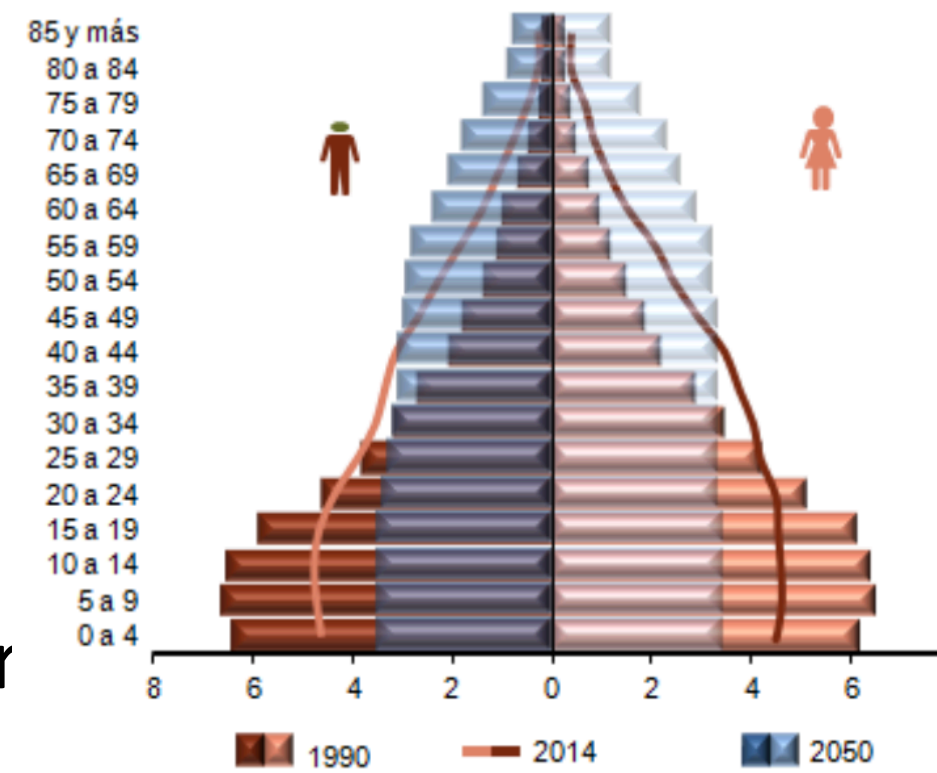
Escola de Enxeñaría de
Telecomunicación



Motivation

Understanding Mexican Elders

- ▶ Aging can be understood as a biological degeneration of body functions.
- ▶ In México, 9.7% of the population is 60 years or older.
- ▶ 1 out of 10 adults lives alone. This is highly related with the migration of one or more of their relatives.
- ▶ In the State of Colima, 9.1% of the population is 60 years or older



Usage context

- ▶ Elders have difficulty caring for their health.
 - ▶ Elders are open to learn new things.
 - ▶ 99% are TV users.
 - ▶ 24% cannot use a computer. They consider that computers are too complex, which stops them to even try to start using them.
- n = 500*

Thesis objectives

General

- ▶ Design, development and validation of a home care platform for older adults using interactive television technologies in order to improve their technology adoption.

Specifics

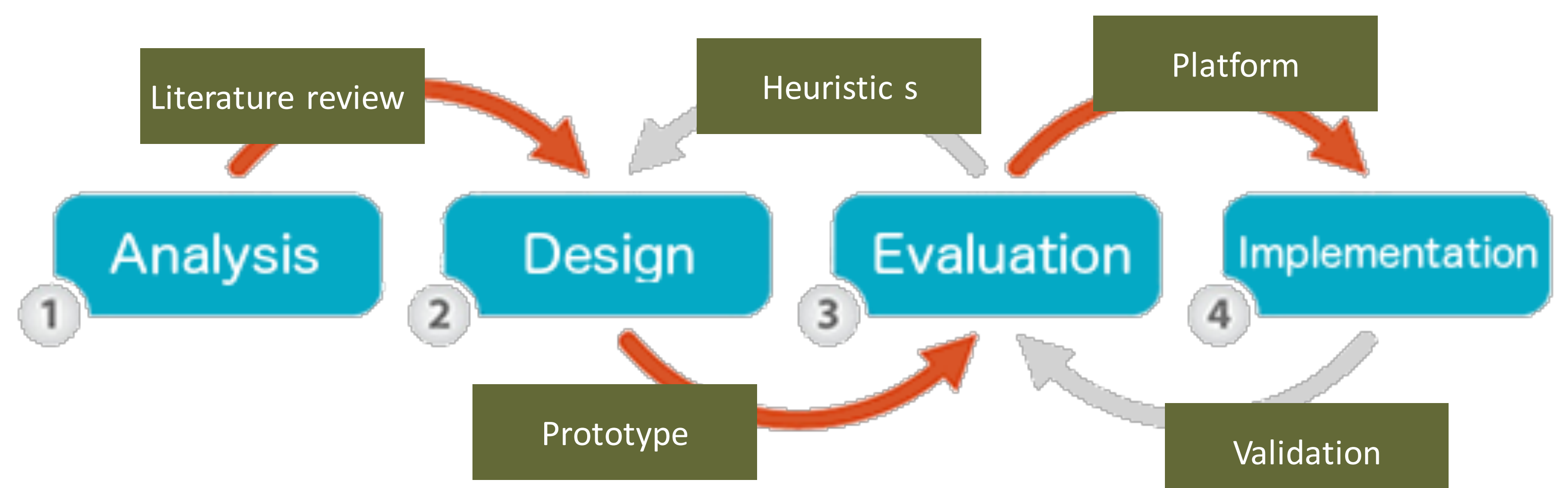
- ▶ Understanding older adults needs.
- ▶ Requirements specification.
- ▶ Identify appropriate technologies for the development of interactive television applications.
- ▶ Field evaluation of the platform.

Next year planning

- ▶ Once the context and design of the architecture are identified, the work of the next year will be the creation of a platform of interactive television based on Android TV technology.
- ▶ An assessment of the user experience of the system should be performed in the second part of the year. The planned evaluations are:
 - ▶ Heuristics evaluation.
 - ▶ Usability evaluation with users.
- ▶ The year will conclude with the analysis of the evaluation and one paper submitted to a JCR Journal.

Research plan

- ▶ Analysis.
 - ▶ *Specify the usage context:* Identify people that will use the product, which are the goals and under which circumstances it will be used.
 - ▶ *Specify requirements:* Identify all business requirements or user objectives that the product must meet to be successful.
- ▶ Design: This part of the process must be executed in stages, building from a simple concept to a finished layout.
- ▶ Evaluation: The most important part of the process is the evaluation, ideally through usability tests and real users.
- ▶ Implementation: Deployment of the platform with real users.



Preliminary results

- ▶ iTVCare
- ▶ Database
- ▶ Android TV
- ▶ Android SDK
- ▶ Cloud
- ▶ Medication intake
- ▶ Medical appointments
- ▶ Entertainment

