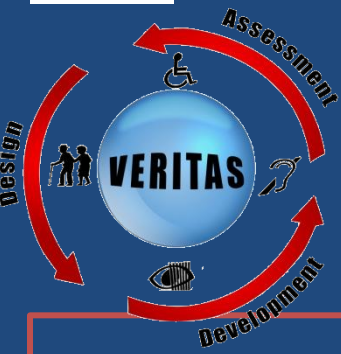


# Standardisation of user models for designing and using inclusive products

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**VERITAS:** VERITAS (Virtual and Augmented Environments and Realistic User Interactions To Achieve Embedded Accessibility Designs, <http://veritas-project.eu/>).

# VERITAS – Virtual User Modeling

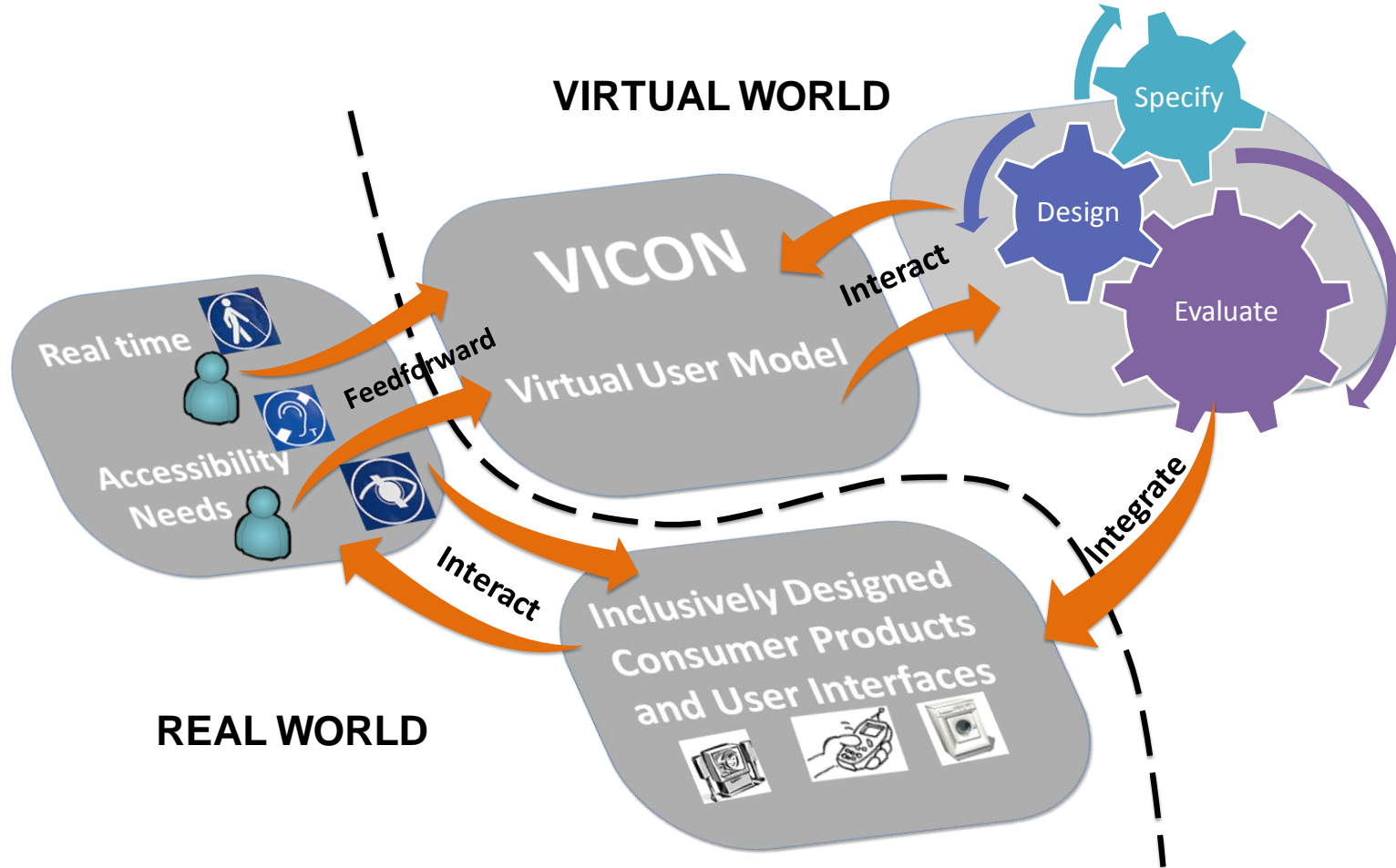


**CERTH/ITI**





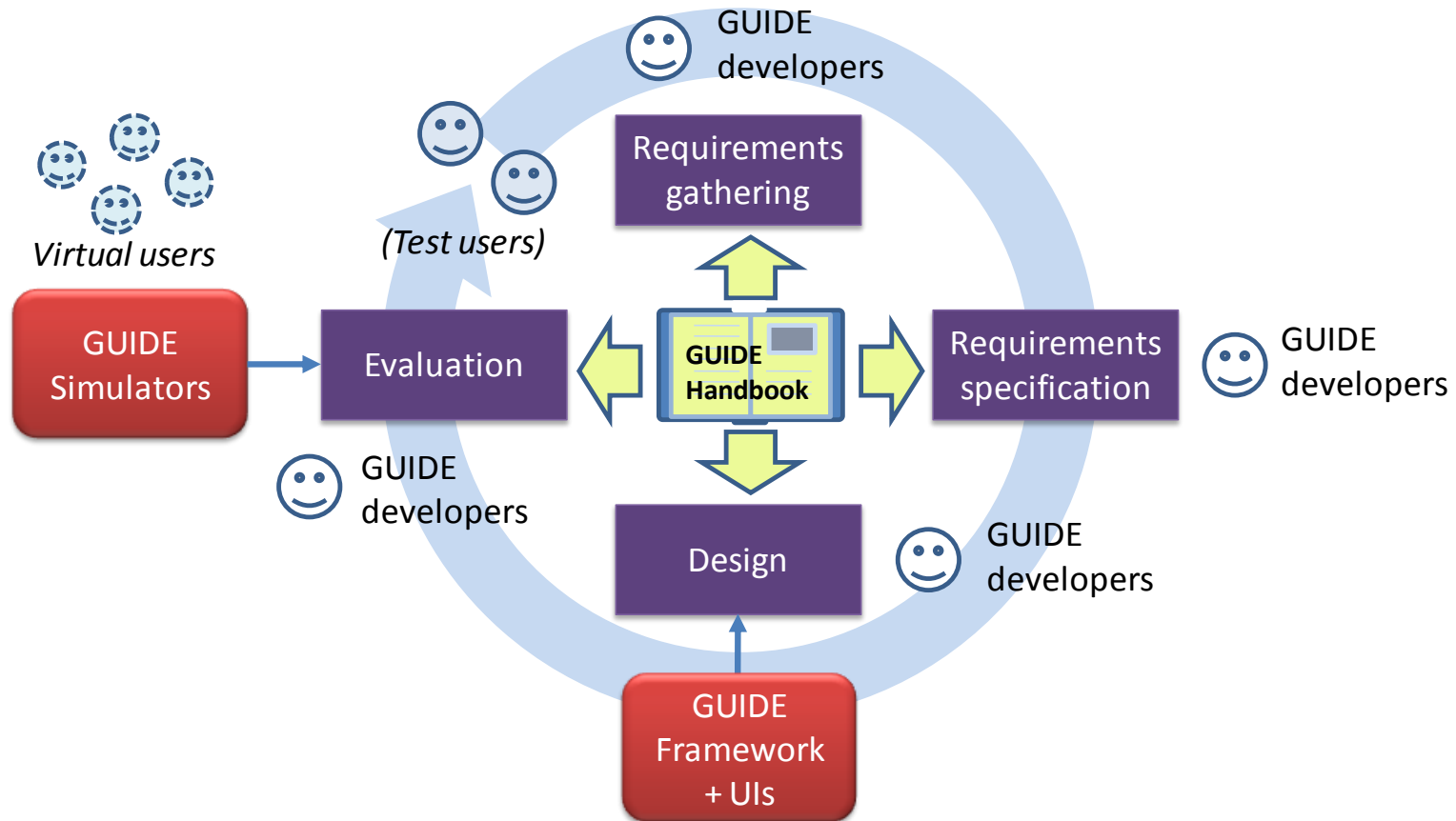
# VICON – Project: VICON (Virtual User Concept for Inclusive Design of Consumer Products and User Interfaces, <http://www.vicon-project.eu/>)



# GUIDE Project: GUIDE (Gentle User Interfaces for Disabled and Elderly Citizens, <http://www.guide-project.eu/>),



## GUIDE development process





# MyUI project: MyUI (Mainstreaming Accessibility through Synergistic User Modelling and Adaptability, <http://www.myui.eu/>),



- **Problem 1: Diversity and Universal Design?**
  - Individual user interfaces by modularity
- **Problem 2: Individualization by configuration is a significant barrier**
  - Self-learning and self-adaptive interfaces ...
- **Problem 3: Developers lack awareness and expertise**
  - Support for developers – The Virtual User Lab
- **Problem 4: Incorporating accessibility is cost- and time-consuming**
  - Support for developers – infrastructure for embedded accessibility



# User Model

- a set of user characteristics required to describe the user of a product.
  - The characteristics are represented by variables.
    - The user model is established by the declaration of these variables.
      - It is formally described in a machine-readable and human-readable format.
        - » An instantiation of the user model is a user profile.

# User Profile

- A user profile is an instantiation of a user model
  - representing either a specific real user or a representative of a group of real users.
    - It is an instantiation of an (abstract) user model and it is formally described in a machine-readable and human-readable format

# Virtual User Model

- A virtual user is a representation of a user based on a User Profile.
  - It includes components, which are able to interact with other virtual entities e.g. virtual products or software applications.
    - VU's intended for simulation purposes represent the human body



# Concept of the VUMS User Model

- Providing interfaces for interoperability
- Declarative approach
- Set of variables describing the user
- Machine and human readable presentation
- Flexible structure that adapts to user needs and applications
- Open standard living in the internet

# Structure of the VUMS user model

- ***A taxonomy of variables***
  - Anthropometrics: Physical dimensions, proportions, and composition of the human body
  - Motor parameters
  - Strength parameters
  - Dexterity/control parameters
  - Affective parameters
  - Interaction related states
  - Hearing parameters
  - Visual parameters
  - Cognitive parameters
  - Equilibrium
  - *Others*

# Descriptors for variables

- **Name:** The name of the variable
- **ID/tag:** The tag to be used for defining the specific variable in a user profile
- **Description/definition:** A description/definition of the variable
- **Unit:** The measurement unit of the variable
- **Value Space:** The value space of the variable (nominal, ordinal, interval, ratio, absolute)
- **Taxonomy/super categories:** Refers to the categories
- **Data type:** The data type of the variable (character/string, enumeration, list/vector, integer, float, set)
- **How to measure/detect:** Refers to techniques/devices used to measure the value of the variable (e.g. goniometer, tape measure method, etc.)
- **Reference/source:** Literature references where information regarding the variable can be found
- **Relations:** Statistical correlation to other variables, function of others, dependency of others
- **Source Project:** The name of the project of VUMS cluster that introduced the variable
- **Supported/used by Project:** The name(s) of the project(s) of VUMS cluster that use the variable in their user profiles.
- **Comment:** Comments concerning the variable (status, cross-references and others)

# ETHICS IN THE VUMS CLUSTER

- General aim: To ensure compliance with ethical issues during the whole project
  1. To organize a special session dealing with Ethics in the first scheduled workshop of VERITAS (November 2010), to which all mentioned projects were invited.

In this session a general overview about the Ethical framework in the VUMS cluster and in each one of the projects belonging to this cluster was presented.

2. Exchange of ethics forms like consent forms, manuals, etc.  
At the beginning of the ethics task force, the different ethics-related materials were exchange between the different projects.

3. To develop an Ethical Guideline or Manual about the general ethical approach to be followed throughout the projects. In this Manual a consensus about the following issues will be reached:
- How to save and exchange personal data between partners of the same project
  - How long the personal information will be saved after completing the projects
  - Which photographs or videos will be used in congresses and dissemination events (either to provide the participants with a different consent form for this issue or recruit volunteers)

The manual will be will be public so other project can benefit from it.