

# Co-designing conversational agents with older people for enhanced home care

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## Priority needs

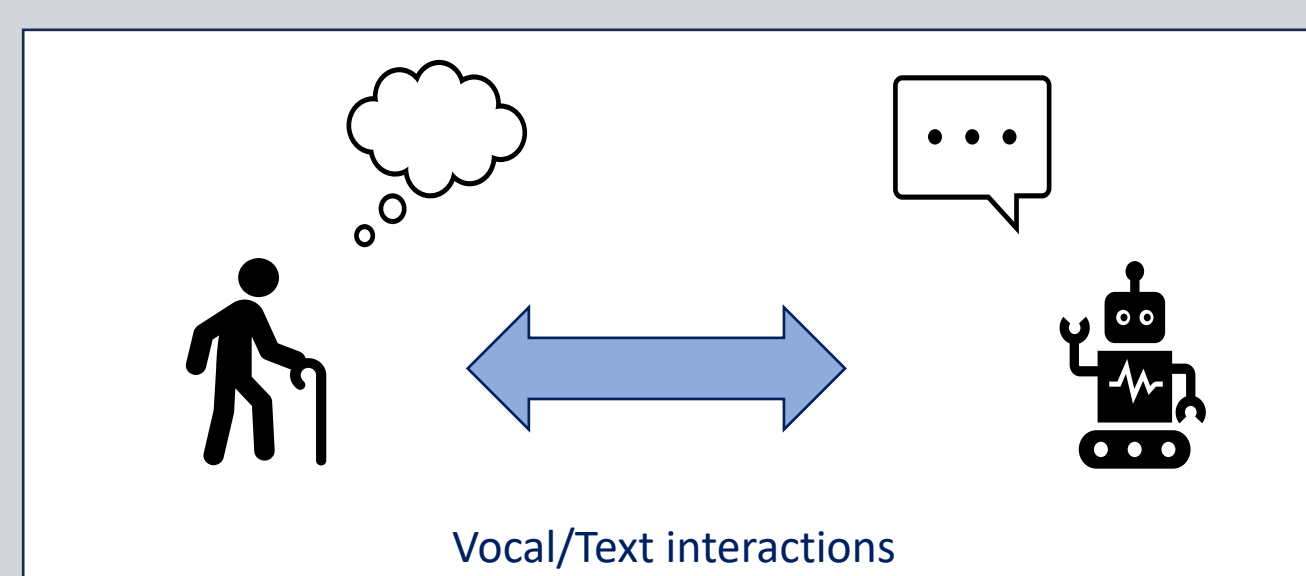
Ageing is accompanied by an **increased risk of loss of autonomy** [1][2], and ageing people want to **stay at home**[3].

➔ Loss of autonomy is associated with an increased **of domestic accidents**.



## A solution: conversational agents

« A **conversational agent (CA)**, often referred to as a chatbot, is a type of **artificial intelligence** software that can **simulate a conversation** (or a chat) with a user in natural language through messaging applications, websites, mobile apps, or through the telephone ».



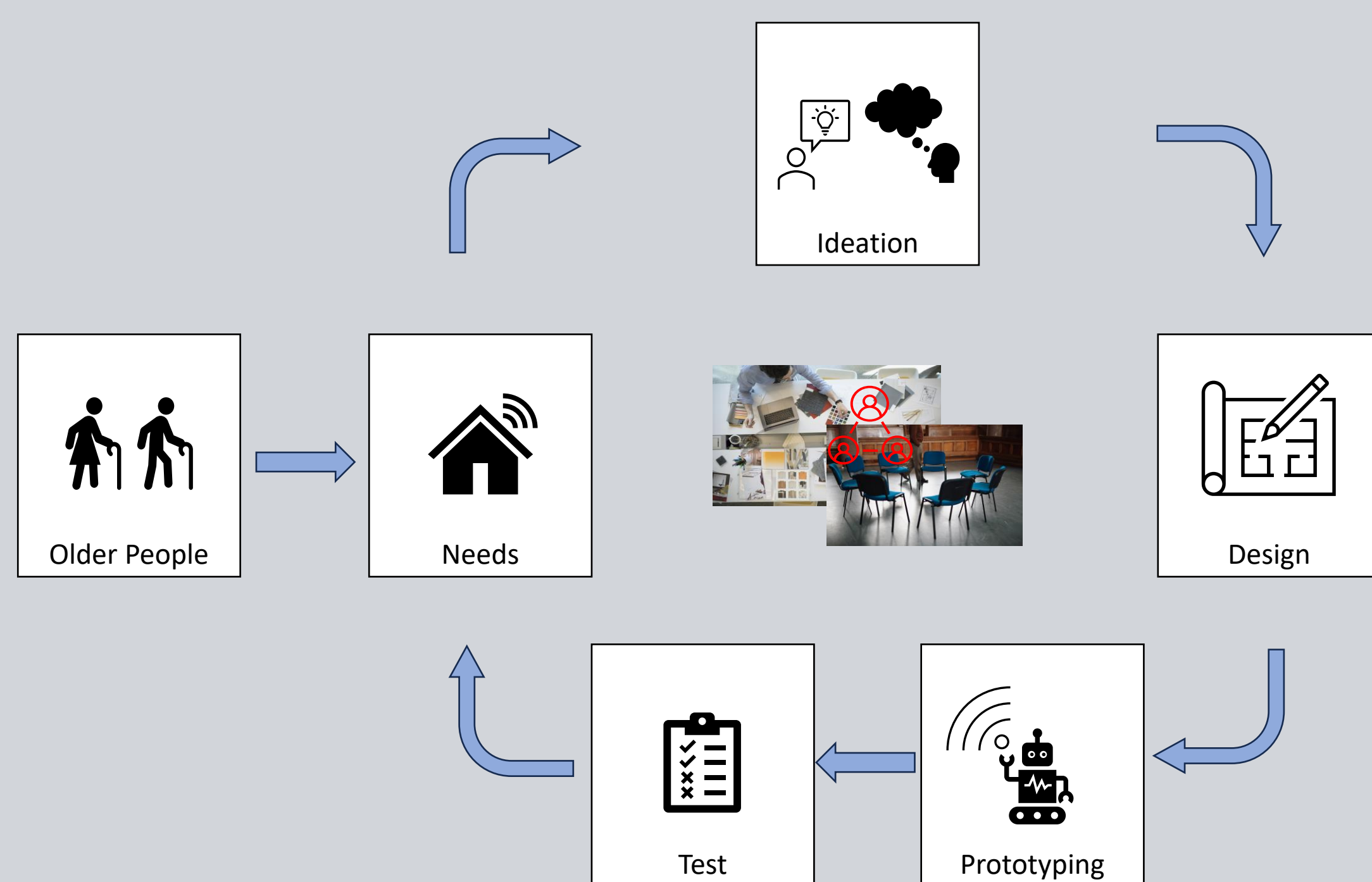
**Advantages:** help limit domestic risks and are recognized as acceptable for seniors [4].

**Disadvantages:** However, few technologies correspond to older individuals real needs [5], and ethical issues [6] must be considered.

➔ It is essential to prioritize placing the user at the center of the design process."

## Co-design methods

One potential solution lies in adopting co-design methods specifically tailored for older individuals.



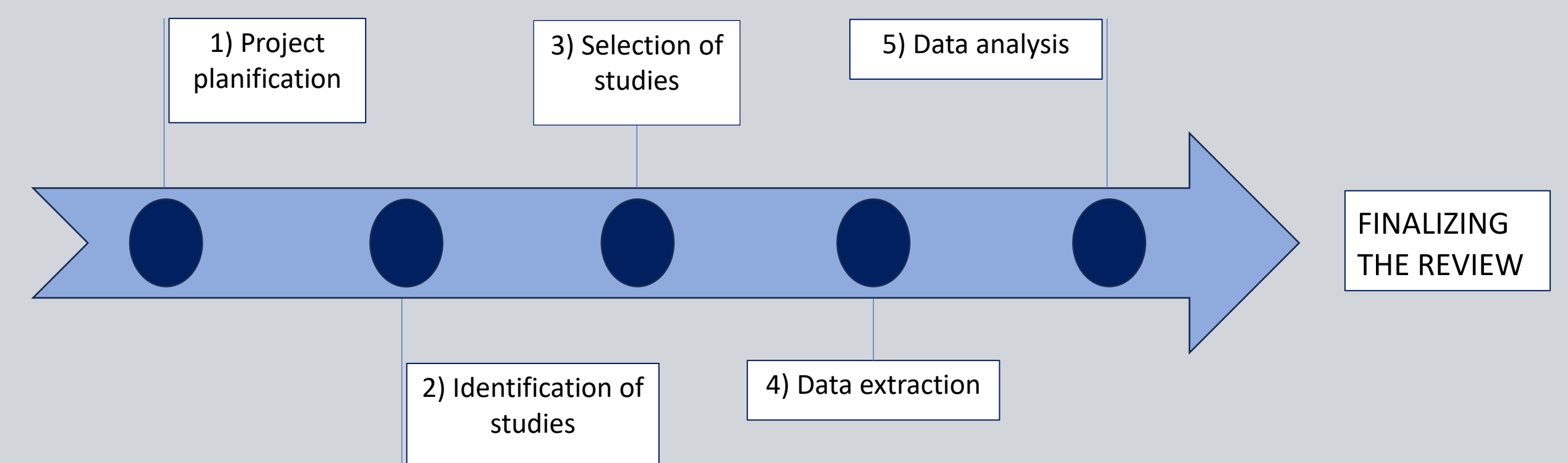
Participatory design is based on **close collaboration** among end-users, designers, developers, and other stakeholders throughout the design process. This ensures that the system is **easy to use, efficient, and adapted to users' needs** [7].

## Bibliography

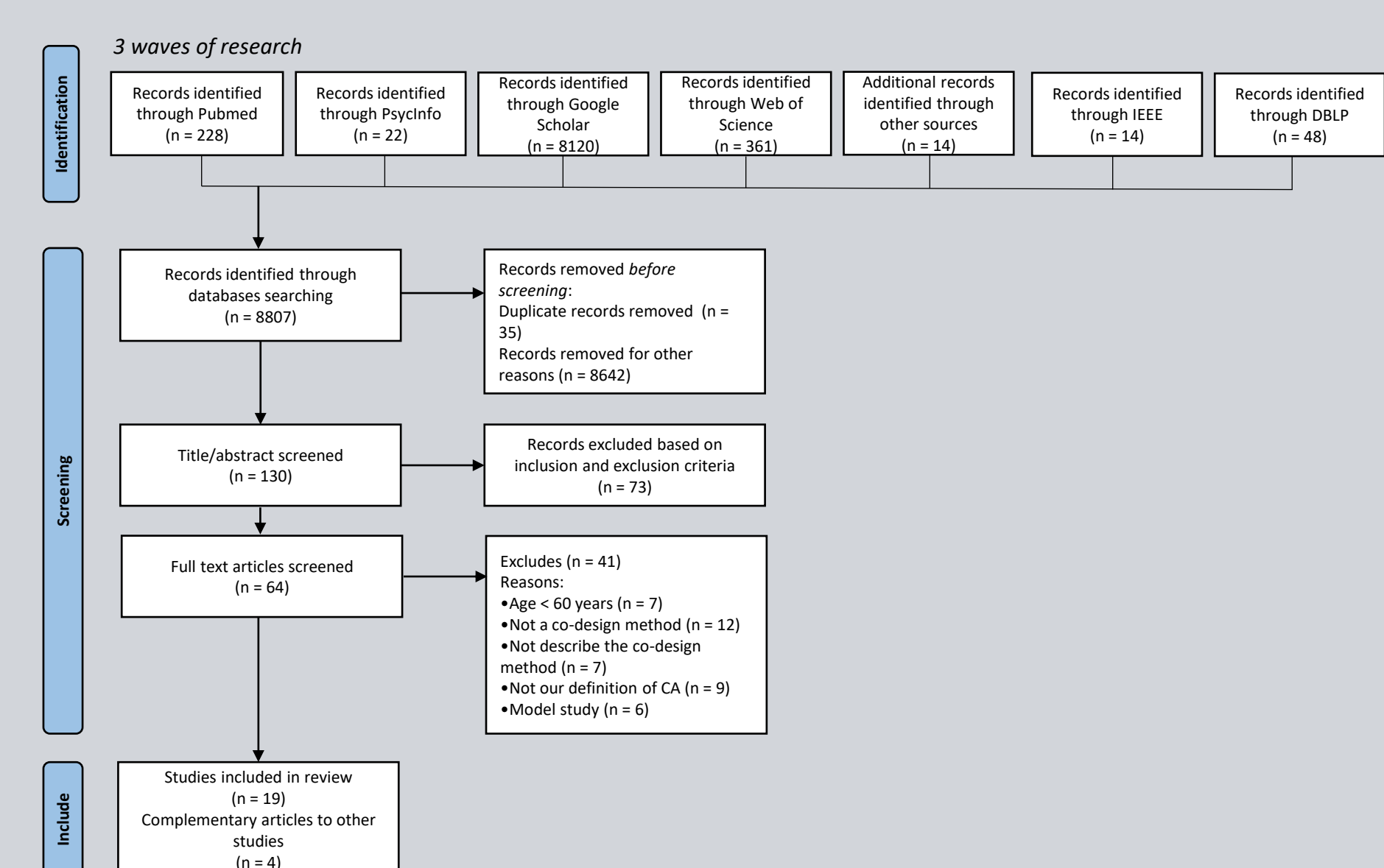
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## A review of AC co-design methods

In this context, we carried out a **literature review** using the **PRISMA** method [8] to assess existing data on co-design in relation to older people and CA.



**Results:** 19 projects identified.



- ✓ Few projects reported age-related changes in methods,
- ✓ Numerous sampling biases were observed
- ✓ No consensus was identified on the form or structure of methods,
- ✓ A lack of description of co-design workshops was noted

## Focus on Method Effectiveness

Measuring the effectiveness of AC co-design was limited by:

- ✓ The absence of criteria for defining effectiveness,
- ✓ The lack of measures to evaluate the effects of co-design on CA beyond usability measures,
- ✓ The lack of objective measures in the reviewed studies,
- ✓ The limited number of CA prototypes created by the authors,
- ✓ The lack of a comparable CA prototype

## Our Recommendations

To enhance the quality, transparency, and reproducibility of AC co-design studies for the older peoples, we propose the following:

- ✓ Include a diversity of participants to represent the variability within the older peoples,
- ✓ Evaluate co-design approaches using uniform evaluation criteria,
- ✓ Establish a theoretically sound frame of reference to standardise practices

## What about the future?

Create and test a method for co-designing CA for the older peoples. This involves:

- ✓ Integrating a wide diversity of older peoples individuals,
- ✓ Identifying indicators associated or not with the effectiveness of the co-design method,
- ✓ Identifying factors that contribute to the effectiveness, acceptability, and usability of CAs.