Towards environmental inclusion:
Fostering ***inclusive mobility behaviors*** through IoT

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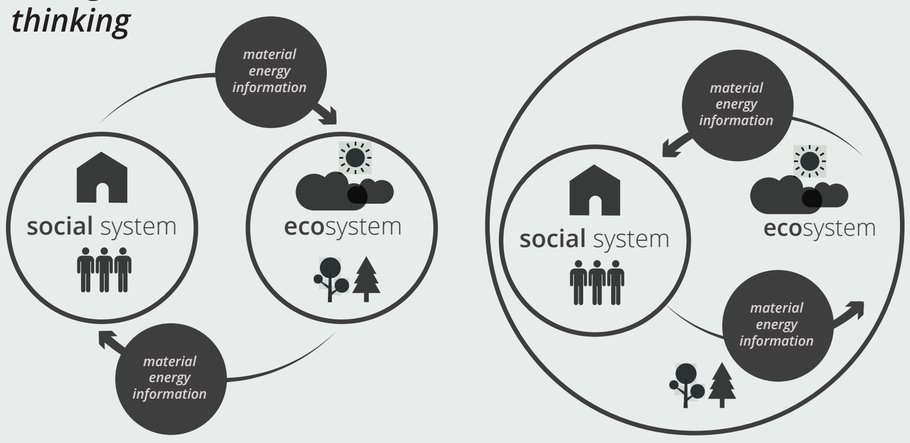
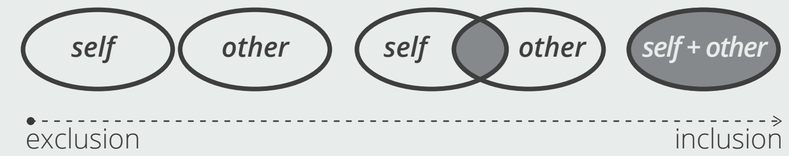
area of focus:

Broadly in psychology the term ***'connectedness'*** describes the extent to which individuals consider themselves parts of the universe and is defined as the extent individuals ***cognitively include*** natural ecosystems in their representation of selves.
As an individual or group's ***level of connectedness*** directly affects their level of ***sustainable behavior***, in this project we intend to broaden the principles of inclusive design to include the social and especially environmental aspects.
To this end, we apply inclusive design principles to ***multimodal mobility behaviors*** in order to foster ***ecological thinking***.

ecological thinking



ecological thinking *and multimodal* ***mobility behaviors***



methodology:

Online Survey:

A ***survey*** has been conducted online since April 22nd 2015, among people who are living in ***Piedmont region***, which is the largest Italian region situated in northwest of Italy.
The objective of this survey is ***evaluating and analyzing the level of ecological thinking and sustainable behaviors*** among people in order to design appropriate product and services, which would help to change, ***foster or maintain a certain behavior***.

77% My behaviors and my life-style could have impacts on climate change and the community

10% use carpooling or car-sharing

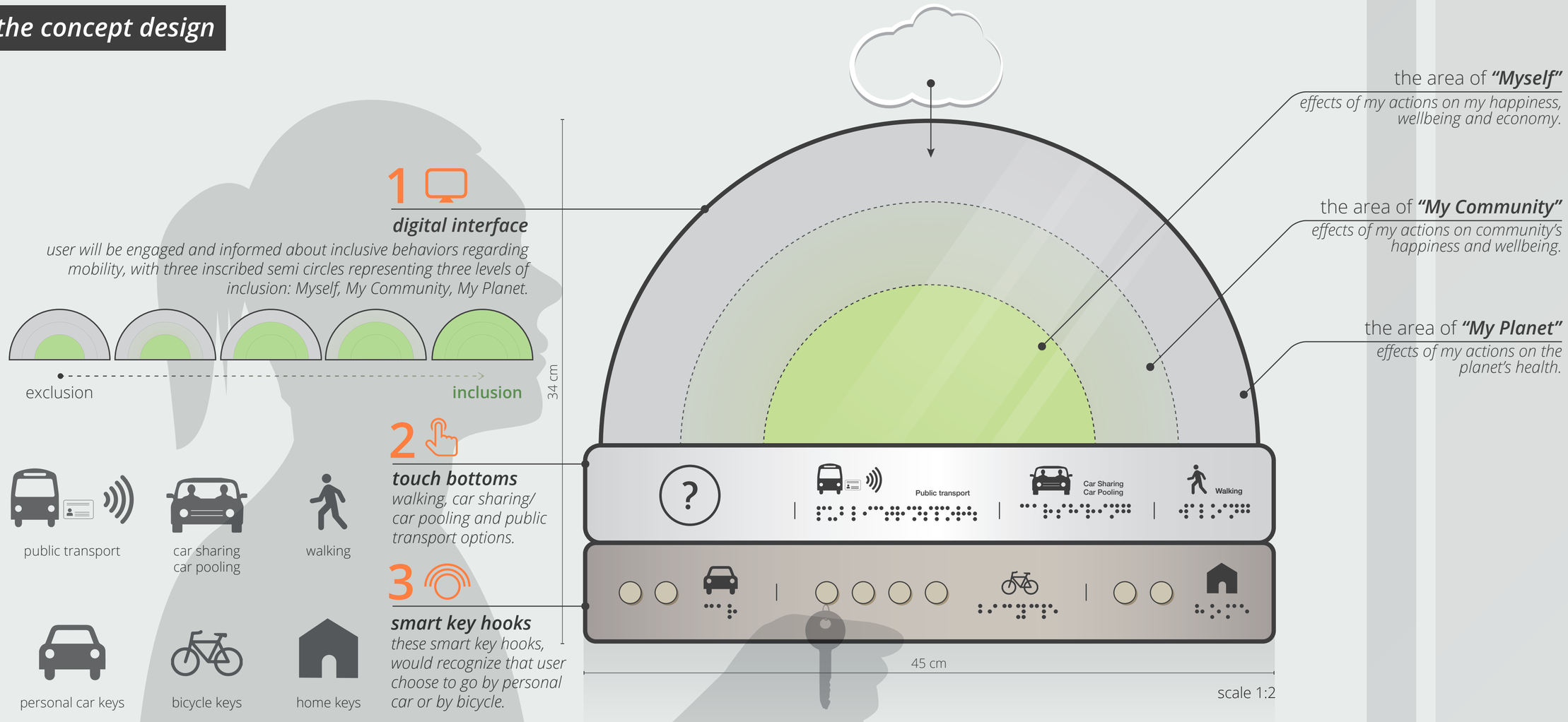
50% prefer to drive my personal car, even though can reach my destination within 30 minutes, walking or riding bicycle.

84% A smart service/product that would be able to recognize my mobility behaviors and give me some tips in order to having less negative impact on the environment

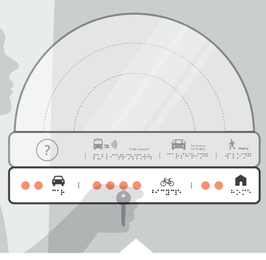
Participatory Design Tool:

For validation purposes and to discover other factors which may influence user's decisions and might not been expressed in the online survey , we have designed a specific generative tool, which will be demonstrated during the ***participatory design session.***

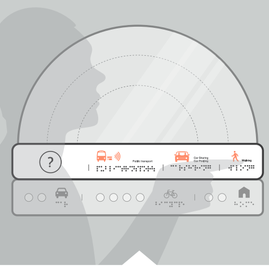
the concept design



story board

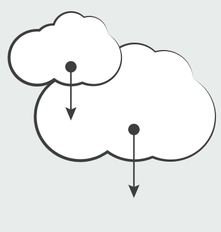


user picks up the car or bicycle keys from **smart key hooks**.

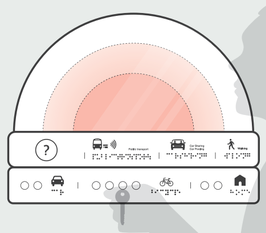


or chooses alternative ways of transport, such as public transport, car-pooling, car-sharing or walking, by touching the relative **touch bottoms**.

the **digital interface** will receive information and displays the transformations within the ecosystem while the user is out of the home.



the data and the related metrics, are accessed from credible sources and are [near] real-time data. e.g. local traffic monitoring, local environmental monitoring, social networks.



user comes back home, puts back the keys on the smart key hooks. The device offers **educational value** by presenting the **effect of user's decisions** in choosing different modes of transportation.

resources:

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Anthony W. Layne, The Role of Connectedness Theory in Sustainable Architecture, University of Minnesota, Minneapolis, Minnesota, ARCC, 2007