Smart Living in the Smart Territory
Sustainability through Citizens’ Empowerment

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Citizen Participation in the Smart City

From a techno centric…

…to a citizen centric approach of the smart city through citizens’ empowerment, in order to ensure the Smart City model’s sustainability.
Citizen Participation in the Smart City

From a **techno** centric…

Why ?
When ?
Who ?
How ?
Impacts ?

…to a **citizen** centric

approach of the smart city through **citizens’ empowerment**, in order to ensure the **Smart City model’s sustainability**
Where does this come from?

1. FEDER Wal-E-Cities Research Project
   2016-2020 - *Smart Living & Participation*

2. Wallonia E-Health Living Lab
   since 2015 - [www.well-livinglab.be](http://www.well-livinglab.be)
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WHY ? WHEN ?
Clients

I love it!

Me too!

Users

VK.COM/PITERSKII_PUNK_WALL
1. End-users «own the factual problem», i.e. are experts of their own personal experiences and issues associated with their personal situations [Reymen, Dorst & Smulders, 2009; Siva & London, 2011; Biau, Fenker & Macaire, 2012]

2. End-users are part of the team and no longer willing to undergo the whole process simply as external observers or design recipients [Cole-Colander, 2003; Luck & McDonnell, 2005; Sanders, 2005; Glock, 2009]

3. While focusing too much on post (-occupancy; -process) assessment, we tend to neglect satisfaction towards the process and how it unfolds [Ahmed & Kangari, 1995]
Designers heavily impact the quality of the living environment while

End-users give sense to the living environment (make designed artifacts meaningful or meaningless)

[Lawson, 2005; le Maire, 2005; Estevez & Léglise, 2015; Sarkar & Gero, 2017]
feasability 
sustain-ability 

gain empathy

define

create

iterate through « protocepts »

get feedback

Desirability

Feasability

Sustainability
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WHO ?
Various profiles of « Smart Citizens »… but never « once and for all »

1. The passive end-user
2. The reactive end-user
3. The creative end-user

[Hill, 2003]
Various profiles of « Smart Citizens »… but never « once and for all »

- **Attitude**
  - Positive
  - Negative

- **Expectations**
  - Positive
  - Negative

- **Agenda**
  - Available
  - Urgent

- **Environment**
  - Relaxing
  - Stressful

- **Origin of the task**
  - Intrinsic
  - Extrinsic

Based on [Daumal, 2015]

- under normal conditions
- prépare ses vacances
- longtemps à l’avance
- prépare sa déclaration
- d’impôts en ligne
Various profiles of « Smart Citizens »

1. the « experts » vs. the « lay people »
2. the « extreme » vs. the « regular »
3. the user with « chronic dissatisfaction » vs. the « lead user », the « intra-preneur »
4. the « laggard » vs. the « early adopter »
5. the « primary » vs. the « secondary » user
Each profile has something to offer

<table>
<thead>
<tr>
<th></th>
<th>Domain Knowledge</th>
<th>Experience of Use</th>
<th>Level of Dissatisfaction</th>
<th>New Needs and Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Expert</strong></td>
<td>++</td>
<td>+/-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td><strong>The « Extreme » User</strong></td>
<td>+/-</td>
<td>++</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
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<td>+/-</td>
<td>+/-</td>
<td>++</td>
<td>+/-</td>
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<tr>
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<td>+</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td><strong>The Intra-preneur</strong></td>
<td>++</td>
<td>+/-</td>
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<td>++</td>
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<tr>
<td><strong>The Laggard</strong></td>
<td>-</td>
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<td>+/-</td>
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<td><strong>The Early Adopter</strong></td>
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<td><strong>The Secondary Users</strong></td>
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<td>+</td>
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</tbody>
</table>
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HOW ?
what they say is not enough
What they say is not enough

IDEO™ «observing users»
What they say is not enough

Gap between... 

the behavior and the implementation

> What we see
> Explicit

> What is done
> Explicit AND Implicit
What they say is not enough

- say
- do
- know
- use
- feel
- imagine

- interviews
- observations
- generative sessions

- explicit
- tangible
- tacit
- latent

what the end-users...

... type of collected data
A continuum of approaches, methods and tools

**end-users seen as partners**
« users-driven » approaches

- co-design
- DIY
- Hackers
- Makers...

**end-users seen as resources**
« users-centric » approaches

- design thinking
- in situ observations
- focus groups
- interviews
- users’ diaries
- surveys, online platforms, …

**end-users seen as distant subjects**

- projection into future scenario
- data collection
- sensors, wearables, …
- introspection
- customer journeys
- market research

based on [Cardon, 2005; Lawson, 2005; Sanders, 2005; Chesbrough, Vanhaverbeke & West, 2006; Barcenilla & Bastien, 2009; Reymen, Dorst & Smulders, 2009]
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**SOME EXAMPLES**
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Tidy Street Project, Open University, Goldsmiths, Sussex University, Nottingham University
A continuum of approaches, methods and tools

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Co-design Workshop, Designing a health-care center, University of Liège
A continuum of approaches, methods and tools

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Co-design Workshop, Designing temporary use for brownfield site, University of Liège
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1. Return on Investment?
2. What about radical innovation?
3. Does it require Change Management?

[Cain, 2005; Norman & Verganti, 2012; Postma et al., 2012]
Return on Investment
Return on Investment

Old Methods | User-centred
---|---
Timing of Development
67% less!

Old Methods | User-centred
---|---
Average selling, after 5 years
~ 8 times more!

Old Methods | User-centred
---|---
Market Shares, after 5 years
> 2 times more!

Old Methods | User-centred
---|---
Average number of new Product Lines introduced every 4 years
> 3 times more!

What about radical innovation?

«If I’d asked customers what they wanted they would have said a faster horse»

H. Ford, ca. 1908
What about radical innovation?

> get rid of preconceived ideas

(Midler, 1996)
What about radical innovation?

- get rid of preconceived ideas

(Midler, 1996)
What about radical innovation?

> associate « technology change » with « user-centric /-driven change »

[Norman and Verganti, 2012]
Does it require Change Management?

Craftsmanship, Guilds

Middle-Age  Renaissance

Designer = Artist

Modernism  Post-modernism  Now

Designer = Facilitator

Designer = Subcontractor

Designer = Partner; Expert support

Authority of the designer

Time
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