Why collaborate in long-term innovation research? An exploration of user motivations in Living Labs

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Living Lab research

- The Living Lab process
- Living Labs within NPD processes
- Case studies and applications
- The nature and setup of a Living Lab
- The definition and typologies of a Living Lab
- Tools for and methods within Living Labs

- User-centric, but lack of user insights
Understanding user motivations in a LL

- User involvement in innovation development ➔ Lead Users
- Users experiencing a need for certain solutions or products
- End-user participation in LL research often has a different nature
- Locus of control and place in the NPD process
- Between LU and market research
Research context

Mostly SMEs close to market
Panel based, iterative, co-creative, multi-method

... (+5) ... (+1)
Methodology

- Online (intake) survey, co-creation workshops and field trial
- Binary motivation scale
- Samples
  - 1 online survey (VPP), n: 639
  - 10 co-creation workshops (Mediatuin, LeYLab), n:63
  - 1 field trial (LeYLab), n:26
- Recruitment: on CC workshops & e-mail
- 17 motivational factors
Results: overall motivations

Percentage of the population indicating this factor as a main motivator for LL participation

- Collaboration with others: 83.3%
- Solving challenges: 81.2%
- Personal interest: 78.1%
- Being the first: 69.4%
- Contribute to society: 58.1%
- Curiosity: 57.1%
- Use of skills: 54.8%
- Learning: 54.1%
- Influence: 51.9%
- Fun: 43.4%
- Expected professional benefit: 41.4%
- Financial or material incentive: 39.3%
- Doing friends a favour: 36.5%
- Peer influence: 35.6%
- Duty: 25.9%
- Other: 14.1%
- Unknown: 2.5%
Results: overall motivations

- Most people indicated **three** options/motivations – see top three answers.
- “financial/material incentive” – only 9 people indicated this as a single answer
- most people indicated “financial/material incentive” as the fifth or third answer
Results: differences between types of user interaction

- Overrepresented motivations for **co-creation workshops**
  - To have an influence ($\chi^2=40.4$, p<0.01, Std. Res.=4.4)
  - Curiosity ($\chi^2=64.6$, p<0.01 , Std. Res.=4.3)
  - Contribute to society ($\chi^2=12.8$, p<0.05 , Std. Res.=2.2)

- Overrepresented motivations for **field trials**
  - Curiosity ($\chi^2=64.6$, p<0.01 , Std. Res.=2.4)

- Underrepresented motivations for **field trials**
  - Use of skills ($\chi^2=24.2$, p<0.01 , Std. Res.= -2.9)
Results: differences between types of user interaction

Percentage of the CC workshop population indicating this factor as a main motivator for LL participation

N:63
Results: differences between types of user interaction

Percentage of the field trial population indicating this factor as a main motivator for LL participation

- Curiosity: 95%
- BeingTheFirst: 82%
- CollaborationWithOthers: 77%
- SolvingChallenges: 68%
- Influenza: 59%
- ContributingToSociety: 55%
- FeelingPartOfCommunity: 55%
- DoingFriendsAFavour: 18%
- FinancialMaterialIncentive: 18%
- ExpandingTheSocialNetwork: 14%
- UseOfSkills: 14%
- PeerInfluence: 9%
- PersonalInterest: 0%
- Fun: 0%
- Learning: 0%
## Results: differences between types of user interaction

T-test for the difference in motivation between CC and FT (measured on a 6 point scale from 1: not important at all to 6: very important)

<table>
<thead>
<tr>
<th></th>
<th>Co-Creation versus Field Trial</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer influence</td>
<td>CC</td>
<td>63</td>
<td>2.25</td>
<td>1.40</td>
<td>2.36</td>
<td>66.49</td>
<td>0.02</td>
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<tr>
<td></td>
<td>FT</td>
<td>22</td>
<td>1.68</td>
<td>0.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected professional benefits</td>
<td>CC</td>
<td>63</td>
<td>3.11</td>
<td>1.40</td>
<td>3.85</td>
<td>48.02</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>FT</td>
<td>22</td>
<td>2.00</td>
<td>1.07</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of skills</td>
<td>CC</td>
<td>63</td>
<td>3.87</td>
<td>1.36</td>
<td>5.49</td>
<td>83.00</td>
<td>0.00</td>
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<tr>
<td></td>
<td>FT</td>
<td>22</td>
<td>2.09</td>
<td>1.15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expanding social network</td>
<td>CC</td>
<td>62</td>
<td>3.27</td>
<td>1.31</td>
<td>3.60</td>
<td>82.00</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>FT</td>
<td>22</td>
<td>2.14</td>
<td>1.17</td>
<td></td>
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</tbody>
</table>
## Results: influence of repeated participation

T-test for difference in motivation, depending on previous experience (measured on a 6 point scale from 1: not important at all to 6: very important)

<table>
<thead>
<tr>
<th>Previous LL experience?</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>51</td>
<td>3.76</td>
<td>1.41</td>
<td>2.72</td>
<td>83.00</td>
<td>0.01</td>
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<tr>
<td>Yes</td>
<td>34</td>
<td>2.88</td>
<td>1.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial/material incentive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>51</td>
<td>1.98</td>
<td>1.16</td>
<td>2.65</td>
<td>83.00</td>
<td>0.01</td>
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<tr>
<td>Yes</td>
<td>34</td>
<td>2.68</td>
<td>1.22</td>
<td></td>
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</tbody>
</table>
Results: relation with repeated participation (VPP)

- When the element of fun is integrated within research projects, the response rate over time will be higher
- When you are eager to learn something from the research project, the response rate over time will be higher
- When having a personal interest for the themes, the response rate over time will be higher
- When you participate to win a financial/material incentive, your response rate will slowly decline over time
Results: profiling - gender

Men mostly participate to research projects out of
(1) Personal interest
(2) Learning
(3) Contribute to society

Female mostly participate to research projects out of
(1) Fun
(2) Curiosity
(3) Financial/material incentive
Results: profiling

- Besides gender, no other remarkable/significant profiling differences (sociodemo) between motivations to participate could be found.
- Interesting tendency: The Ghent region (iMinds’ center of activity) is overrepresented for financial material incentive and duty (feeling obliged to participate) ➔ fading away from intrinsic motivations?
Results: profiling – cluster analysis

<table>
<thead>
<tr>
<th>Final Cluster Centers</th>
<th>Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4</td>
</tr>
<tr>
<td>Personal interest</td>
<td>1 1 1 1</td>
</tr>
<tr>
<td>Fun</td>
<td>0 0 0 1</td>
</tr>
<tr>
<td>Curiosity</td>
<td>0 0 1 1</td>
</tr>
<tr>
<td>Financial/material incentive</td>
<td>0 1 0 1</td>
</tr>
<tr>
<td>Learning</td>
<td>0 0 1 1</td>
</tr>
<tr>
<td>Contribute to society</td>
<td>1 0 0 1</td>
</tr>
</tbody>
</table>

- Cluster 1 = intrinsic, volunataristic
- Cluster 2 = extrinsic, prizes
- Cluster 3 = intrinsic, individualistic
- Cluster 4 = multi-leveled motivation
Results: profiling – cluster analysis

- All: need for personal interest
- Cluster 2 (extrinsic, prize): lower response rate over time
- Cluster 3 (intrinsic, individualistic) & 4 (multi-leveled motivation): higher response rate over time
Conclusions

- Motivation to participate in a LL is a **multidimensional** construct
- **Intrinsic** motivations for LL participation are most important and sustainable
- Nevertheless there is a relation between repeated participation and an increased importance of a **financial material** incentive
- While intrinsic motivations should be central in the design of a LL, extrinsic motivations should not be neglected as a **combined** incentive design is the strongest over time
Conclusions

- Living Labs as a challenging social game
- Creation, intellectual tasks (self-actualization)
- Attraction to ‘the new’ + importance of personal interest
- Adapt to the different sensitivities of each research method
- Adapt to gender differences in order to overcome bias
And now …

- Search for *theoretical models*, revealing more complex motivational constructs and connect with theories in other domains
- Need for *measurement*: self-representation versus experimental environment/setup
- Elaborate on the impact of *contextual factors*
- Understanding *power-users/alpha-users*
- *Longitudinal* research on changing motivations over time, in relation with panel drop-outs
More information?

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- [http://www.leylab.be/](http://www.leylab.be/)
- [http://mediatuin.be/](http://mediatuin.be/)
- [http://vlaamsproeftuinplatform.be/](http://vlaamsproeftuinplatform.be/)