



# Towards Crowdsourcing for Requirements Engineering

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## Towards Crowdsourcing for Requirements Engineering

This questionnaire helps to explore how crowdsourcing can be utilized to elicit requirements in requirements engineering processes..

Crowdsourcing is an emerging paradigm for harnessing the power of the crowd for problem solving.

The questionnaire contains 20 Questions and should take around 8 minutes to answer. It may take more time if you like to add your valuable comments.

This survey will be used for research purpose only. Your name will not appear in any published work.

There will be a prize draw with the a random selection of responders each receiving **one of three £30 Amazon vouchers**.

Please provide your **name and email address** if you would like to enter the draw and also if you like to be sent the results.

If you would like to know more about crowdsourcing before starting this survey, you may refer to the following links:

<http://www.merriam-webster.com/dictionary/crowdsourcing> (Dictionary definition, shorter)

<http://en.wikipedia.org/wiki/Crowdsourcing> (Wikipedia definition, longer)

Alternatively, you may watch the video below to know more about crowdsourcing:

The survey is prepared by:

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- \* 1.**  
**How do you classify your expertise in Requirements Engineering?**
- Academic expertise
  - Industrial expertise
  - Both

- \* 2.**  
**What is your area(s) of expertise in Requirement Engineering?**

- \* 3.**  
**How long have you had this experience (in years)?**

- \* 4.**  
**How much are you familiar with crowdsourcing?**
- No familiarity
  - Low familiarity
  - Good familiarity
  - High familiarity

**\* 5.**

**Are you aware of any study or product which utilizes crowdsourcing for Requirements Engineering?**

- No
- Yes (please give us some hints below if you remember)

**\* 6.**

**How do you see the potential of Crowdsourcing in aiding Requirements Elicitation?**

- Low
- Medium
- High
- I do not know

**7.**

**How does the LARGENESS of the crowd engaged in requirement elicitation affect the quality of elicited requirements?**

	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>Typically, a large crowd supports getting more accurate requirements</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Typically, a large crowd supports having objective and non-biased requirements</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Typically, a large crowd supports reaching a saturation</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Typically, it is difficult to organize and coordinate a large crowd for eliciting requirements</b>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Please add any comment you may have.**

8. How does the DIVERSITY of the crowd (in expertise, age, gender, locality, etc.) affect the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, diversity makes it hard to reach a consensus/agreement on requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, diversity increases the relevance and meaningfulness of requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, diversity supports creativity in requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, diversity causes inconsistency problems in elicited requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.



9.

When the crowd participates ANONYMOUSLY, how would this affect the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, the crowd will give their honest opinion when they are anonymous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, the credibility of the elicited information cannot be guaranteed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

10.

How does the crowd **COMPETENCE** in the problem domain affect the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, the crowd competence supports getting the right requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, the crowd competence supports getting creative requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, the crowd competence supports getting more relevant requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, a competent crowd is more willing to see positive changes and, hence, willing to provide their requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

11.

The crowd could collaborate to come up with their collective requirements. How does such **COLLABORATION** affect the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, the crowd collaboration means an extra overhead from the management perspective	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, collaboration leads to clusters of users with different and sometimes conflicted views	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, collaboration leads to dominance of certain opinions and missing that of less powerful users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, collaboration helps requirements engineers to understand the rationale of elicited requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.



12.

How would INTRINSIC MOTIVATIONS (e.g. self-esteem, love of community, personal skills development) in the recruited crowd affect the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, the crowd motivation supports getting the right requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, the crowd motivation supports getting more relevant requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, the crowd motivation means that the crowd will give a more complete and detailed answer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

13.

The crowd could be recruited on a voluntary basis through an open call. How does this VOLUNTEERING in an OPEN-CALL settings affect the the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, a volunteering crowd is more likely to state their true and genuine requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, open calls provide a chance for malicious users to enter the elicitation process and affect the overall quality of elicited requirements.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

14.

How does PROVIDING EXTRINSIC INCENTIVES (e.g. providing financial incentives) to the crowd affect the quality of elicited requirements?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, incentives motivate the crowd to be more active during requirement elicitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, incentives increase the number of participants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, incentives mislead the crowd from acting truly on requirement elicitation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

15.

If participants who are committed to the requirement elicitation are given **THE OPPORTUNITY TO OPT OUT** at any time they wish, either with or without any consequences (like being banned or reputation damage), does it affect the quality of the elicited requirements, and how?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, providing such an opt-out opportunity motivates the participants for active involvement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, providing such an opt-out opportunity attracts more participants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, providing such an opt-out opportunity allows only motivated participants to carry on to the end, which means an improved quality of the elicited requirements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

16.

During the requirements elicitation, how does providing the crowd with feedback, on the intermediate or final results of what has been collected from them, affect the elicitation process?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Typically, feedback motivates the participants to engage	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, feedback disturbs participants' comfort	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, feedback could influence their opinion for the next stages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, feedback gives participants the feeling that their ideas are important	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Typically, feedback increases the willingness of participants to participate in future studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please add any comment you may have.

17.

Finally, would you please add comments and/or elaborate on the challenges for utilizing crowdsourcing in Requirements Engineering in general and in Requirements Elicitation in particular?

