

# Evaluating trust-building mechanisms in Design Science Research collaborations

## BACKGROUND

This survey assesses your opinions about trust-building in **research** collaborations.

Trust is defined as a "psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of the other party". As one of the factors influencing research, trust plays a significant role. Trust is highly contextual. Hence, interventions for promoting trust vary widely among settings.

Our setting is "research", specifically, Design Science Research (DSR). DSR is often characterized as transdisciplinary, and hence, chances are that a single group is hardly self-sufficient so distinct teams need to collaborate. This brings about **trust-building in inter-group collaborations**. Specifically, we want to identify which interventions help build trust in DSR collaborations where members from different (research) organizations are involved. This study does **not** consider collaborations with practitioners.

Trust-building interventions are arranged along with three big themes:

- calculus-based trust
- knowledge-based trust
- identification-based trust

This survey is organized along with these three themes.

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\* Indicates required question

## INFORMED CONSENT

**Please read this consent agreement carefully before you decide to participate.**

In this study, you will complete a survey of trust-building in a DSR setting. It will take you about 20 minutes. Filling out this questionnaire does not imply any risk or personal benefit. The study may help us understand which interventions are more appropriate for trust-building in a DSR collaboration setting.

### **Confidentiality.**

The information that you provide us with in this study will be handled confidentially. We will use your email address to contact you only for the purpose of this survey. We will not link your name or email address to the survey data and your personal information will never be released. Your data will be recorded, stored, and shared anonymously.

### **Right to withdraw**

Your participation in the study is completely voluntary. You have the right to withdraw from the study at any time without penalty by closing the survey window.

### **Payment.**

You will not receive compensation.

### **Contact.**

If you have questions about the study, contact:

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## 1. Agreement to Participate \*

*Tick all that apply.*

- I have read the informed consent statements above and agree to participate.
- I understand that participation in this study is voluntary and I agree to immediately raise any concerns or areas of discomfort with the study administrator.
- I understand that all data gathered in this questionnaire is anonymous. I am aware that results from this survey might be published.

## DEMOGRAPHICS

The following questions collect your experience in research collaborations. Please indicate the degree of agreement with the following statements.

2. I consider myself knowledgeable about **Design Science Research (DSR)**. \*

*Mark only one oval.*

Completely disagree

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Completely agree

3. I have experience in **group collaborations** (i.e., research with members from other research teams) in the setting of a DSR project. \*

Mark only one oval.

Completely disagree

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Completely agree

4. In my experience, the rationales for group on DSR collaborations often include **knowledge exchange** (e.g., domain expertise, methodological expertise). \*

Mark only one oval.

Completely disagree

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Completely agree

5. In my experience, the rationales for group on DSR projects often include the **development of an artifact** (e.g., technological expertise). \*

Mark only one oval.

Completely disagree

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Completely agree

6. **Projectability** is the extent to which a purposeful artifact can be successfully applied for achieving different or varying purposes in different contexts or problem domain. For example, a DSR project might use or adapt an existing artifact in a new setting related to another domain. In my experience, the rationales for collaborations often include **improving projectability**. \*

Mark only one oval.

Completely disagree

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Completely agree

7. **Fitness** is the extent to which a designed purposeful artifact achieves one or more of its purposes. It involves continuing design activities to improve an existing solution by addressing a part of the problem space in more effective ways. For example, a DSR project might involve redesigning a purposeful artifact or including new design principles that improve the solution for a concrete problem. In my experience, the rationales for collaborations often include **improving fitness**.

Mark only one oval.

Completely disagree

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Completely agree



8. **Confidence** is the degree to which the body of evidence from one or more evaluations of how well a designed purposeful artefact achieves its purpose(s) is of high quality and is convincing. It involves conducting a new research evaluation to measure the assessed qualities of the evaluations performed on the existing design knowledge. For example, a DSR project might entail improving the quality and rigor of the evaluation or replicating existing evaluations. In my experience, the rationales for collaborations often include **improving confidence**.

Mark only one oval.

Completely disagree

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Completely agree

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### CALCULUS-BASED TRUST

Calculus-based trust is based on one's subjective assessment of the costs and benefits of creating and sustaining a relationship.

Please indicate the degree of agreement with the following statements.

9. In my experience, establish a **strong reputation** for trustworthy collaboration and successful DSR project completion fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

10. In my experience, the **involvement of an auditing party** (e.g., funding agency, university board) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

11. In my experience, **getting acquainted** (e.g., through personal visits, conference meetings, etc.) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

12. In my experience, demonstrating **honesty** (e.g., fulfilling promises , forthrightness, frankness) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

13. In my experience, **showing willingness to contribute** (e.g., prompt to act or respond lending a willing hand) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

14. In my experience, **accepting the risk** of being harmed (e.g., by the opportunism of the other party taking advantage of your work done for his own benefit) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

15. In my experience, demonstrating a **team-working** attitude (i.e., proactive behavior in helping and working collaboratively) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree



16. In my experience, **behaving consistently** (i.e., performing always in a similar way, unchanging follow-through on the routines, policies or procedures) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

17. In my experience, a **demonstrating an appreciation of partners' complementary knowledge and skills** (i.e., partners are different in ways that enable them to fit or work together well) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

18. In my experience, **demonstrating and encouraging confidence** that a DSR project will be successful fosters trust-building in DSR collaborations.

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Mark only one oval.

Completely disagree

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Completely agree

19. In my experience, **establishing norms** (i.e., principles of right action binding upon the members of a group) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

## KNOWLEDGE-BASED TRUST

Knowledge-based trust is grounded in the other's predictability, i.e., knowing the other sufficiently well so the other's behavior is anticipatable. It develops over time, as a function of the parties having a history of interaction that allows them to develop a generalized expectancy that the other's behavior is predictable and that the other party will act trustworthily.

Please indicate the degree of agreement with the following statements.

20. In my experience, **encouraging communication** (e.g., schedule weekly team meetings, provide enough context around assignments...) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

21. In my experience, the **provision of timely feedback** (e.g., answer emails on time) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

22. In my experience, **sharing knowledge and appropriate information** (e.g., keeping the information flow transparent and make resources easily accessible for all) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

23. In my experience, **creating a shared vision** (i.e., setting expectation and establishing common goals) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree



24. In my experience, **handling expectations** (i.e., preventing disappointment by establishing in advance what can realistically be achieved in a regular basis) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

25. In my experience, **open and clear communication** (e.g., offering explanations for decisions and avoiding misinterpretations and ambiguity) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

26. In my experience, **communication receptivity** (i.e., conveying enthusiasm and feedback responsiveness) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

27. In my experience, a **cultural sense of cohesion** (e.g., creating a common language and internalizing and integrating one's other values) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

28. In my experience, **adapting to the needs of the collaboration** (e.g., bridging time zone gaps, being aware of language limitations for non-native speakers) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

## IDENTIFICATION-BASED TRUST

Identification-based trust develops as one knows and predicts the other's needs, choices, and preferences. At this point, the parties effectively understand and appreciate the other's wants.

Please indicate the degree of agreement with the following statements.

29. In my experience, **shared leadership** (e.g., sharing control or letting each partner freely take their own courses to fulfill the obligations) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

30. In my experience, **equity in rewards** (i.e. parties involved feel they are getting fair reward for the work they are putting into the project) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

31. In my experience, **caring for others** (e.g., by quickly and genuinely apologizing for unpleasant events or consequences, and demonstrating concern for specific stakeholder interests) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree



32. In my experience, **familiarizing with the process and milestones** (so that members can present their progress in an understandable way to the rest of the team) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

33. In my experience, **demonstrating concern about the long-term interests of other team members** fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

34. In my experience, **confidentiality** (i.e., abstaining from sharing personal or potentially sensitive information) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

35. In my experience, **achieving early results** (i.e., demonstrability of the work done) fosters trust-building in DSR collaborations.

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Mark only one oval.

Completely disagree

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Completely agree

36. In my experience, **the performance of participants** (both individually and <sup>\*</sup> as a group) fosters trust-building in DSR collaborations.

Mark only one oval.

Completely disagree

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Completely agree

37. In my experience, **loose schedules with soft deadlines** fosters trust-building in DSR collaborations.

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Mark only one oval.

Completely disagree

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Completely agree

38. In my experience, a **good management style** (e.g., listen before decision <sup>\*</sup> taken, task delegation, partner appreciation) fosters trust-building in DSR collaborations.

Mark only one oval.

Completely disagree

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Completely agree

39. In my experience, being a **good follower** ... i.e. agreeing to what the leader/management/group decides and fulfilling commitments that are delegated, etc. Not quibbling, complaining, or undercutting about management unless there is really a problem fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree



40. In my experience, **information system support** (e.g., to facilitate communication or planification) fosters trust-building in DSR collaborations. \*

Mark only one oval.

Completely disagree

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Completely agree

THANK YOU!!!

41. We value your input! Feel free to share your thoughts and suggestions below.

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42. Thank you for taking the time to complete this questionnaire. To receive a copy of the results, please provide your email address below. We respect your privacy and will not use your email for any other purpose. Thank you for your participation!
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