



# Enhancing participation in visual data collection in online surveys: Evidence from an experimental study about remote work environments

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# Assessing Remote Work Conditions: Context and Approach

Remote work has become more widespread

+

Working conditions influence productivity as well as physical & mental well-being

=

Assessing the **quality of remote working conditions** is therefore essential

Main limitations of conventional surveys: social desirability + high burden



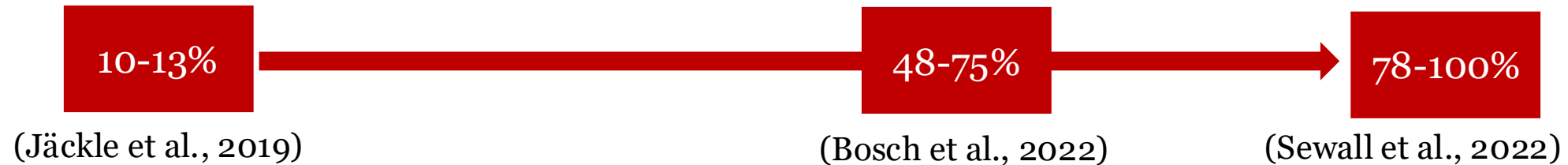
Proposed solution = **request photos**

Photos can deliver detailed and objective information about remote workstations while requiring relatively limited effort from respondents



# Main Challenges in Photo Requests

- Collecting images in web surveys presents several key challenges: specific tools needed, ethical issues, classification...
- This presentation focuses on one key challenge: **participation**
- Empirical evidence shows substantial variability in participation rates



- Overall, participation is (much) lower for photo requests than conventional survey questions
- Improving participation is essential to fully exploit the potential of visual data

# Strategies to Improve Participation

This study tests the effect on participation of:



**Follow-up:** To what extent does presenting a follow-up prompt affect participation? (*RQ1*)



**Extra incentive main:** To what extent do participation rates differ when offering an extra incentive? (*RQ2*)



**Reminder email:** To what extent does sending a reminder affect participation? (*RQ3*)



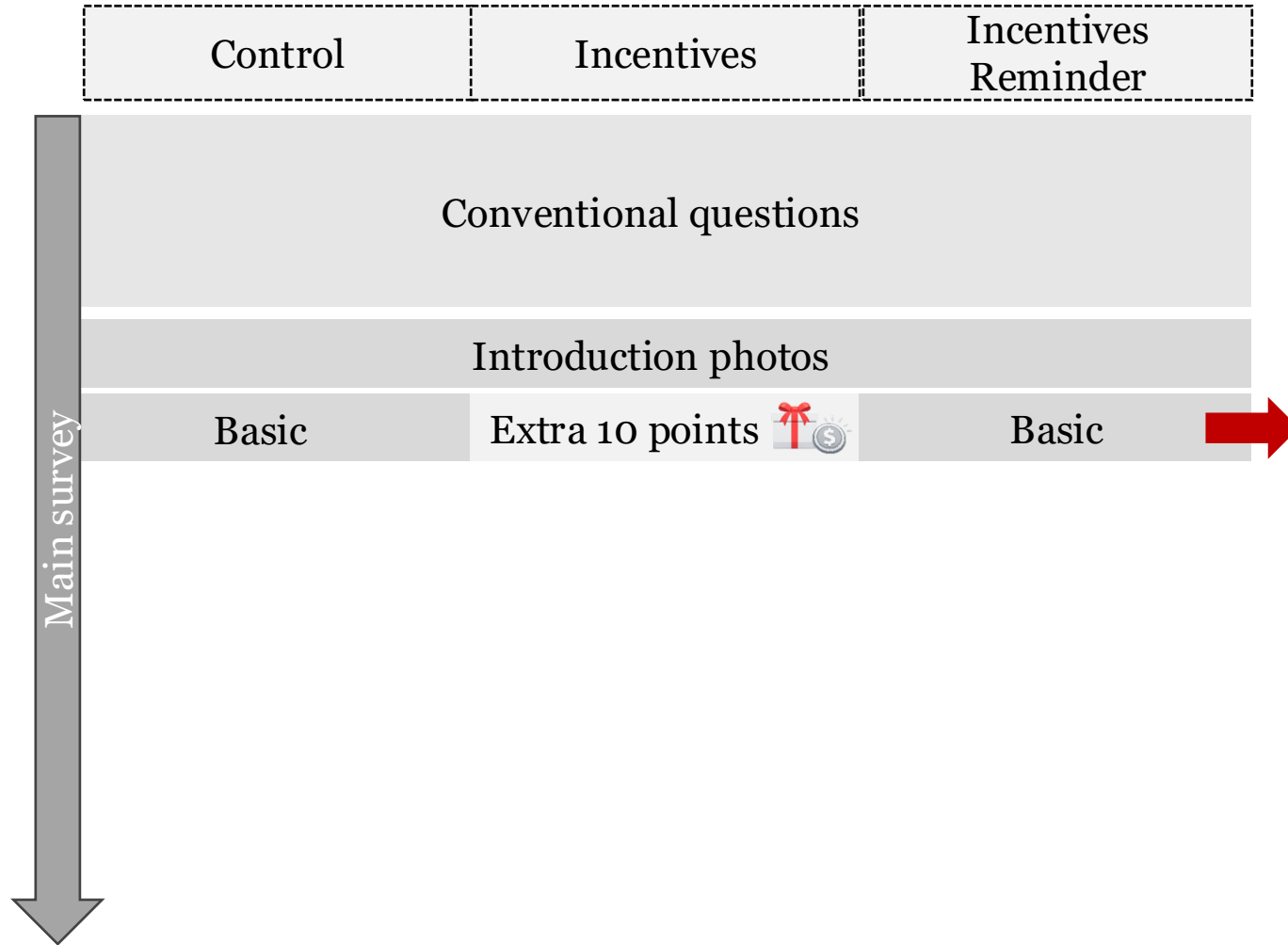
**Extra incentive reminder:** Does including an extra incentive in the reminder further increase participation? (*RQ4*)

# Data Collection



- Online survey
- Smartphone or tablet only
- December 2025
- Target population: adults aged 18–65 who had worked from home for 7+ hours per week on average during the previous 2 months
- Soft quotas for gender & age
- 2,326 eligible respondents started
- 1,346 were assigned to an experimental group

# Study Design



12:15

Encuesta

Now we will ask you to take three photos of the space where you mainly work at home, with the device you are using to respond.

Before taking the photos, hide any personal information (for example, photos of yourself or family members).

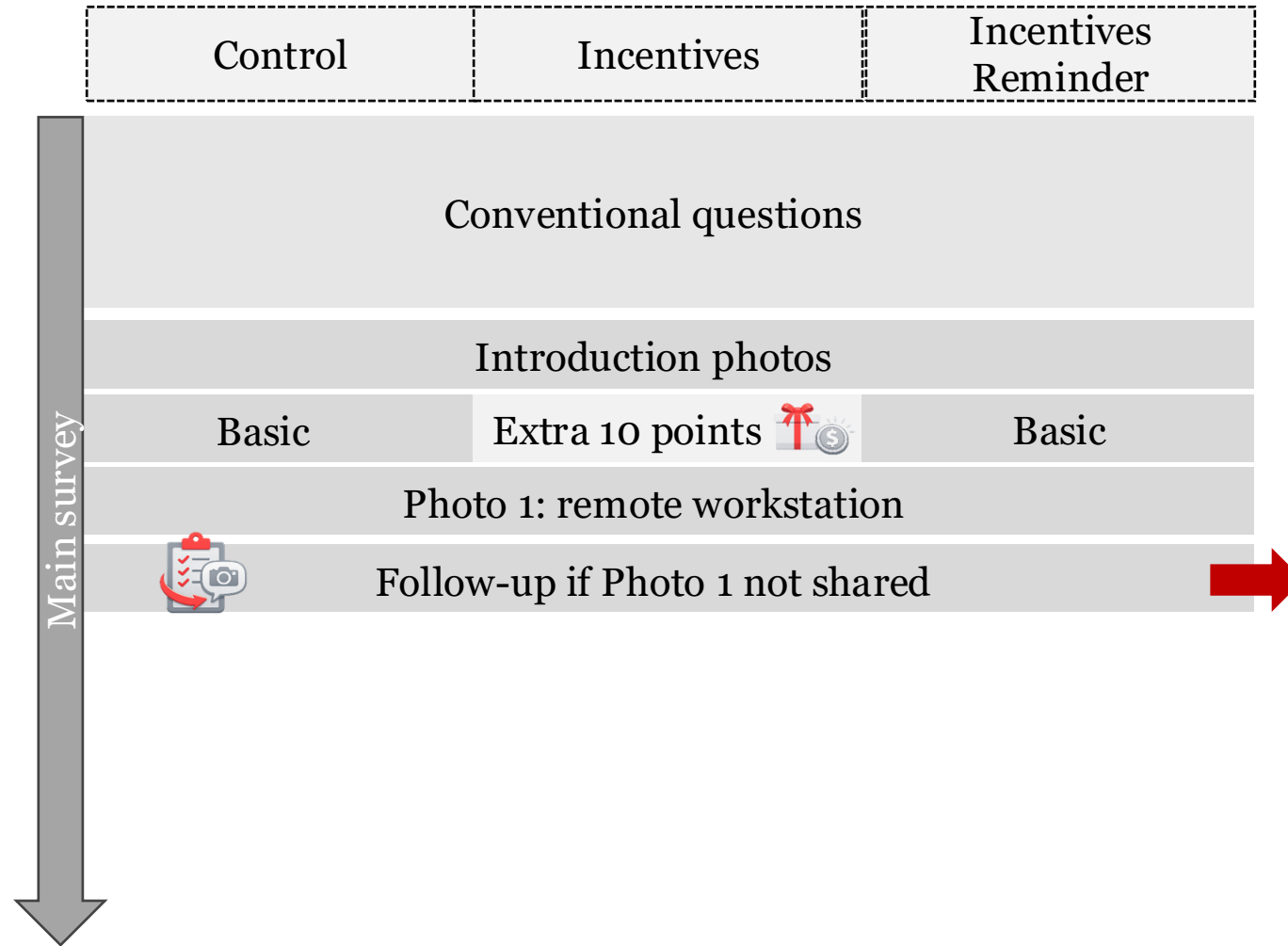
You can delete and retake the photos if you are not satisfied with them.

**⚠️ IMPORTANT:** To thank you for your effort, you will receive 10 extra Korus 🎁 in exchange for your photos, in addition to the Korus for completing the rest of the survey.

# Study Design



# Study Design



**Encuesta**

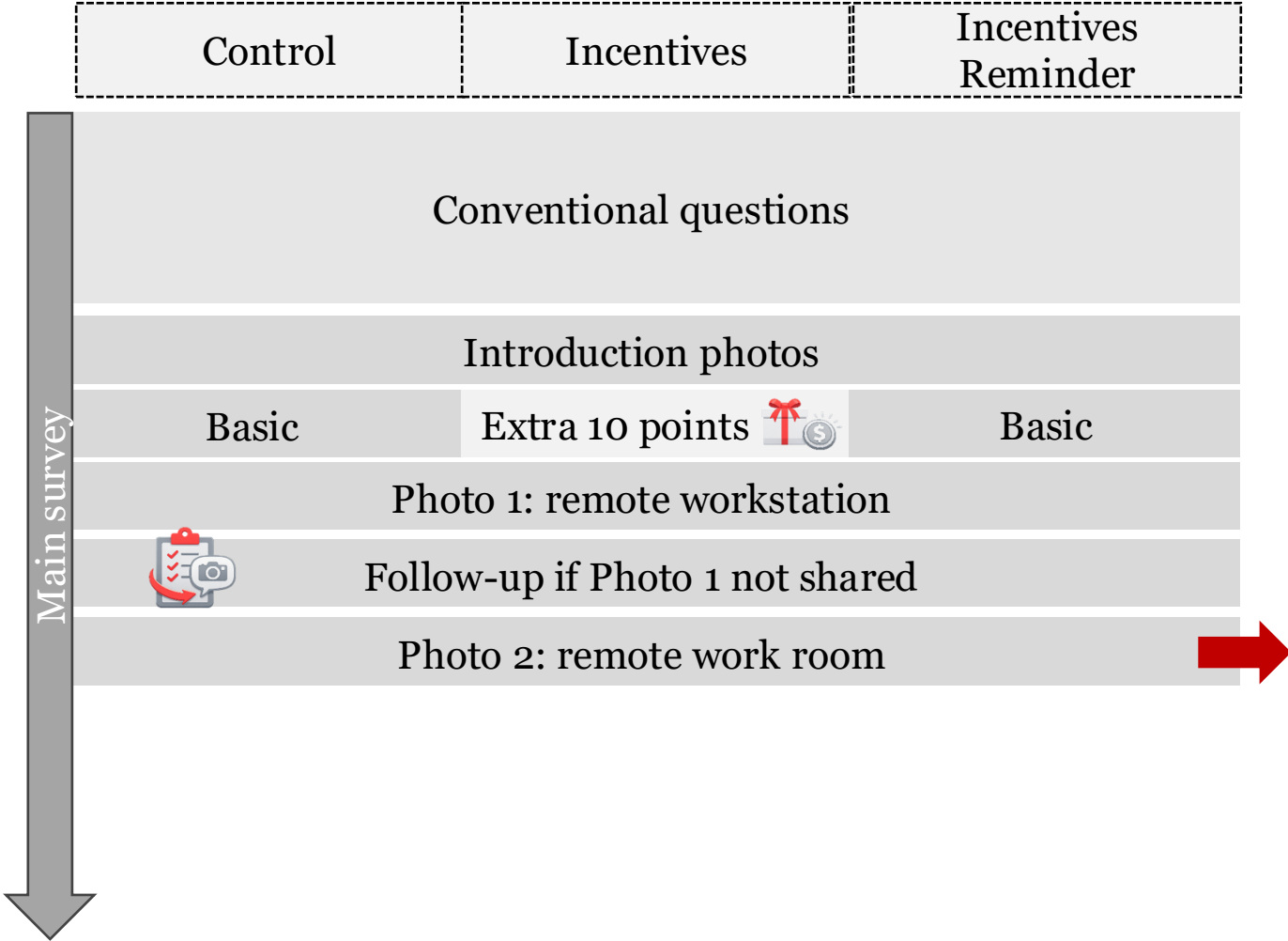
You have not shared any photo of your workstation in the previous question. This photo is essential for our research. Please, consider taking and sharing it.

If you are having problems with your camera, you can access the survey from your smartphone or tablet. If you are not at home, you can access the survey later and return directly to this page to continue where you left off.

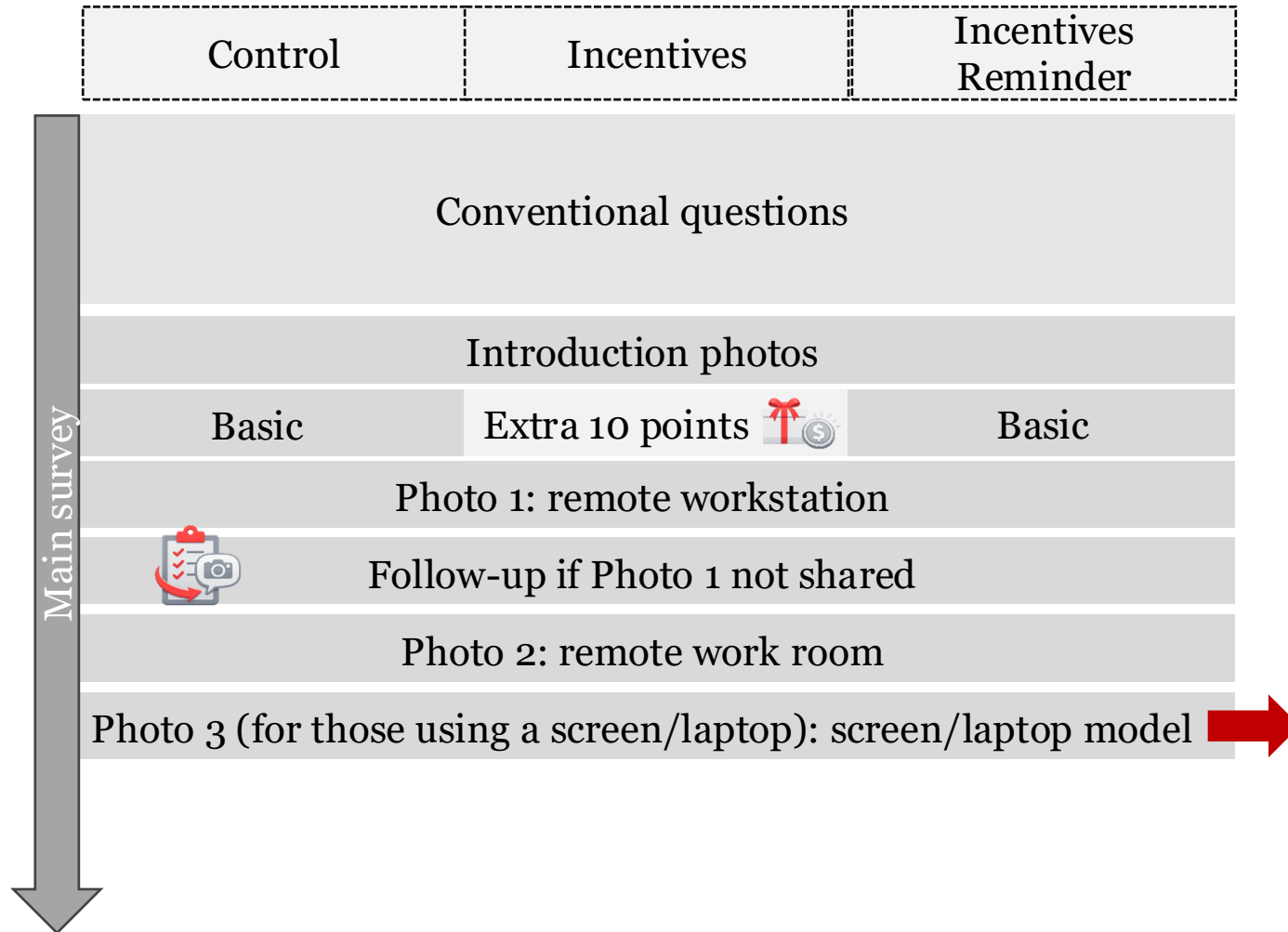
Please indicate what you would like to do:

- Upload the photo now
- Come back later
- Skip to the next photo
- Skip to the next question that does not require photos

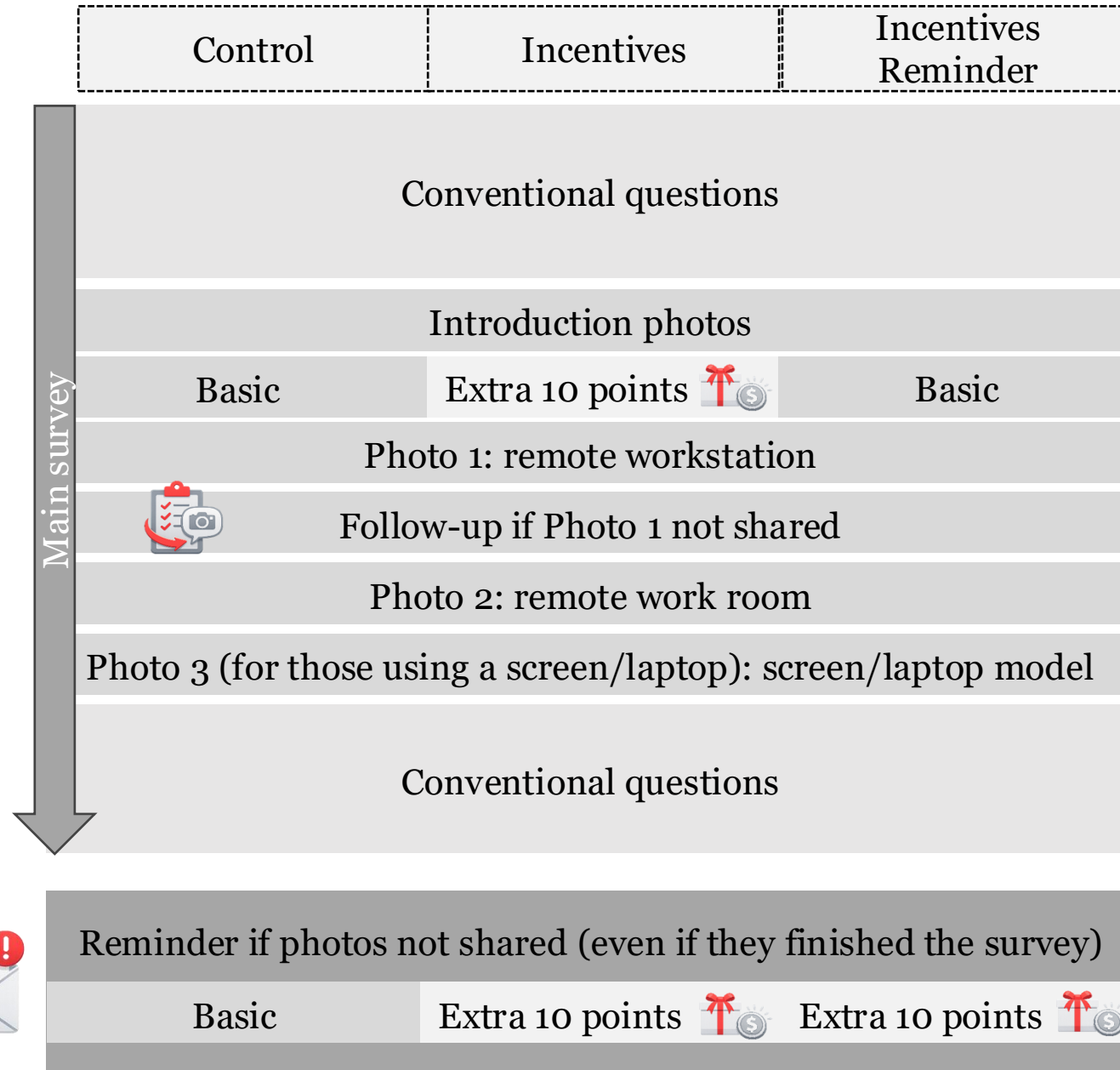
# Study Design



# Study Design



# Study Design



# Initial Results: % Sending the Photos (of those assigned to a group)

Follow-up  
(RQ1)

In %	Total	Control (a)	Incentives (b)	IncentivesReminder (c)
Photo1 Initial	54.9	56.3	54.7	53.7
Photo1 Follow	9.2	10.2	7.5	9.8
Photo1 Reminder	4.2	3.0	4.2	5.5
<b>Total Photo 1*</b>	67.5	68.9	65.9	67.7
Photo2	58.2	59.1	56.5	59.0
Photo2 Reminder	6.5	5.4	6.1	7.9
<b>Total Photo 2*</b>	63.8	64.1	61.7	65.5
Photo3**	58.7	59.5	57.2	59.5
Photo3 Reminder**	6.5	4.9	7.2	7.4
<b>Total Photo 3*</b>	64.0	63.7	63.0	65.1

\* Total is not the sum because some people sent the photos twice.

\*\* N=1,304 for Photo 3 vs 1,346 for Photos 1 and 2

**Substantial improvement:** overall, **+9,2%** of the respondents assigned to a group (= those who saw the introduction about photos) shared Photo 1 thanks to the follow-up

# Initial Results: % Sending the Photos (of those assigned to a group)

Extra  
incentives  
main  
(RQ2)

In %	Total	Control (a)	Incentives (b)	IncentivesReminder (c)
Photo1 Initial	54.9	56.3	54.7	53.7
Photo1 Follow	9.2	10.2	7.5	9.8
Photo1 Reminder	4.2	3.0	4.2	5.5
<b>Total Photo 1*</b>	67.5	68.9	65.9	67.7
Photo2	58.2	59.1	56.5	59.0
Photo2 Reminder	6.5	5.4	6.1	7.9
<b>Total Photo 2*</b>	63.8	64.1	61.7	65.5
Photo3**	58.7	59.5	57.2	59.5
Photo3 Reminder**	6.5	4.9	7.2	7.4
<b>Total Photo 3*</b>	64.0	63.7	63.0	65.1

\* Total is not the sum because some people sent the photos twice.

\*\* N=1,304 for Photo 3 vs 1,346 for Photos 1 and 2

**No significant differences:** participation is not increasing thanks to the extra incentive, against our expectations, but in line with research on voice (Höhne et al., under review)

# Initial Results: % Sending the Photos (of those assigned to a group)

Reminder  
(RQ3)

In %	Total	Control (a)	Incentives (b)	IncentivesReminder (c)
Photo1 Initial	54.9	56.3	54.7	53.7
Photo1 Follow	9.2	10.2	7.5	9.8
Photo1 Reminder	4.2	3.0	4.2	5.5
<b>Total Photo 1*</b>	67.5	68.9	65.9	67.7
Photo2	58.2	59.1	56.5	59.0
Photo2 Reminder	6.5	5.4	6.1	7.9
<b>Total Photo 2*</b>	63.8	64.1	61.7	65.5
Photo3**	58.7	59.5	57.2	59.5
Photo3 Reminder**	6.5	4.9	7.2	7.4
<b>Total Photo 3*</b>	64.0	63.7	63.0	65.1

\* Total is not the sum because some people sent the photos twice.

\*\* N=1,304 for Photo 3 vs 1,346 for Photos 1 and 2

**Substantial increase in participation:** less than the follow-up prompt, but still up to 7.9% of respondents assigned to a group sent the photos thanks to the reminder → not negligible

# Initial Results: % Sending the Photos (of those assigned to a group)

Extra  
incentives  
reminder  
(RQ4)

In %	Total	Control (a)	Incentives (b)	IncentivesReminder (c)
Photo1 Initial	54.9	56.3	54.7	53.7
Photo1 Follow	9.2	10.2	7.5	9.8
Photo1 Reminder	4.2	3.0	4.2	5.5
<b>Total Photo 1*</b>	67.5	68.9	65.9	67.7
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\* Total is not the sum because some people sent the photos twice.

\*\* N=1,304 for Photo 3 vs 1,346 for Photos 1 and 2

**No significant differences:** participation is not increasing significantly, even if there is a trend toward higher participation for the IncentivesReminder group

# Unexpected issues

- Although infrequent, several types of practical implementation problems occurred:
  - Respondents seeing follow-up prompt after already sending Photo 1
  - Respondent seeing Photo 3 but not Photo 2
  - Respondents receiving the reminder despite having already submitted the photos.
  - Etc.
- We need to further investigate why these issues occurred
  - Problems in the paradata collected?
  - Respondents navigating back using browser buttons?
  - Errors in the reminder programming logic?
- Fortunately, these were isolated cases (sometimes only one), thus they should not affect much the results
- However, they highlight that **practical implementation remains complex and can easily go wrong**

# Future steps & conclusions

## Conclusions

- Visual data have the potential to provide very rich information
- However, there are still challenges, especially limited participation
- Nevertheless, participation in this study is quite good ( $\approx 64-67\%$ )
- Some strategies are efficient in improving the participation: we recommend using both follow-up prompts and email reminders
- Extra incentives are less effective
- Practical implementation and data protection issues remain

## Next steps

- Classification of 60+ variables for Photos 1 and 2
- Classification of screen size using Photo 3
- Validity and quality assessment of submitted photos
- Investigation of underlying behavioral mechanisms
- Comparisons with conventional answers
- And more!

# Thanks!

*Any questions?*



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<https://www.upf.edu/web/webdataopp>

