



A virtual reality showroom for technology products.
The soon-to-be mainstream shopping paradigm?

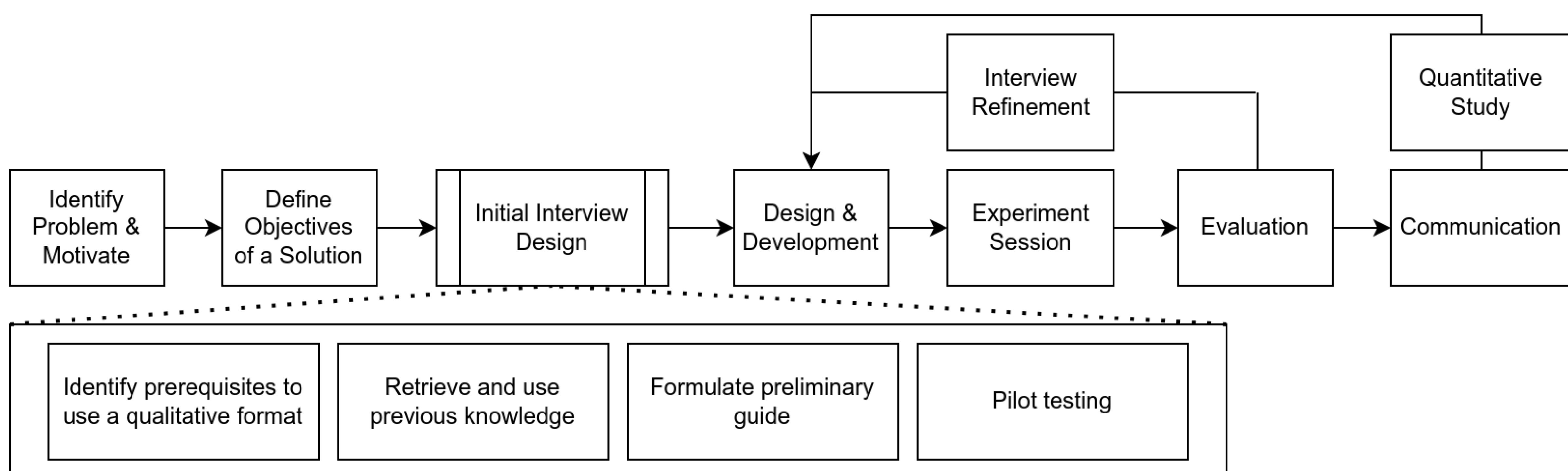


Fig. 1. Research design overview.

This study follows an agile approach with two feedback loops. We interviewed 17 participants in 5 experiment iterations about a sales agent's appearance, her/his timing, and their trust in him/her. Previous interviews informed the next iteration. The second feedback loop (a quantitative study) is envisioned for our future work.

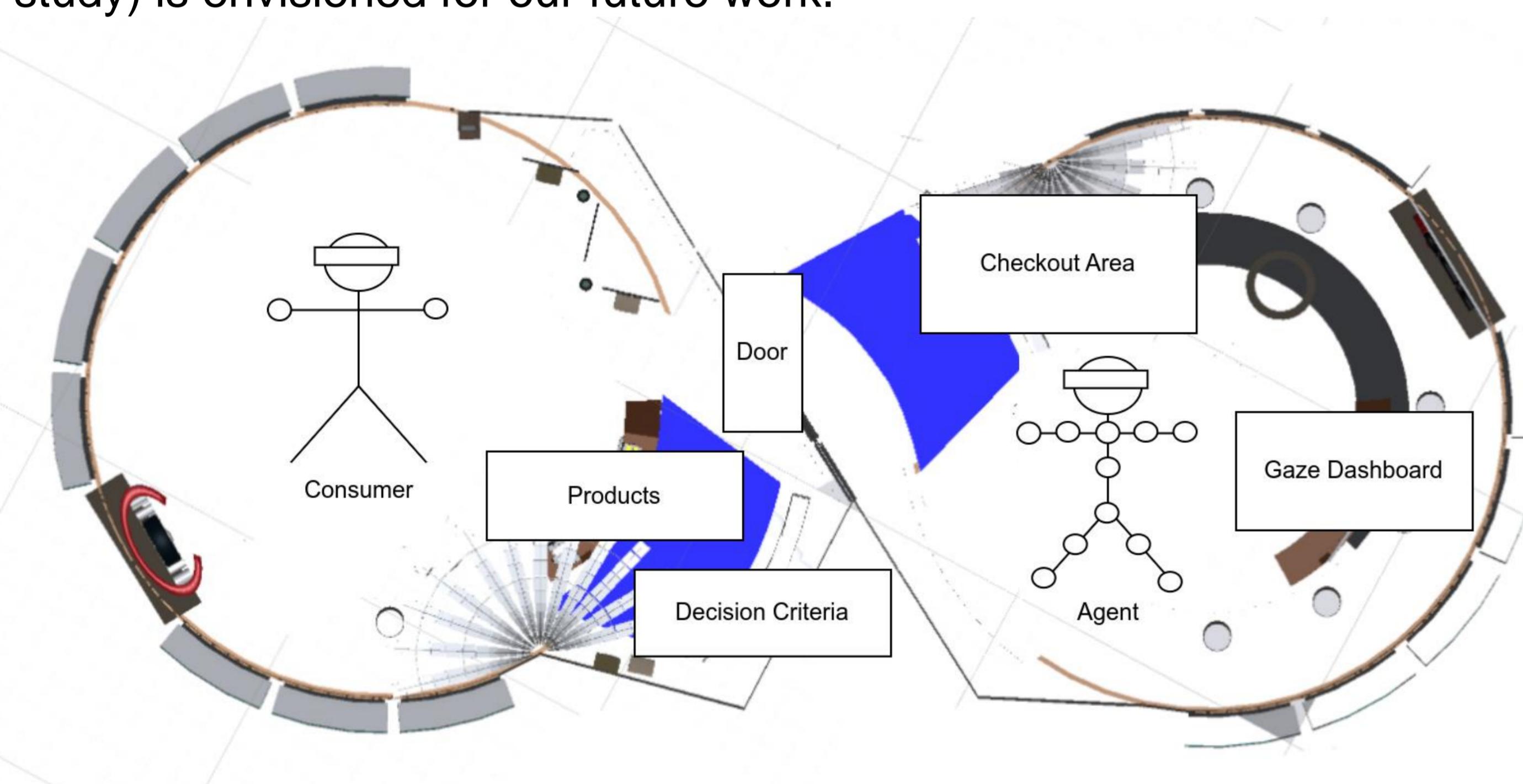


Fig. 2: Showroom layout.

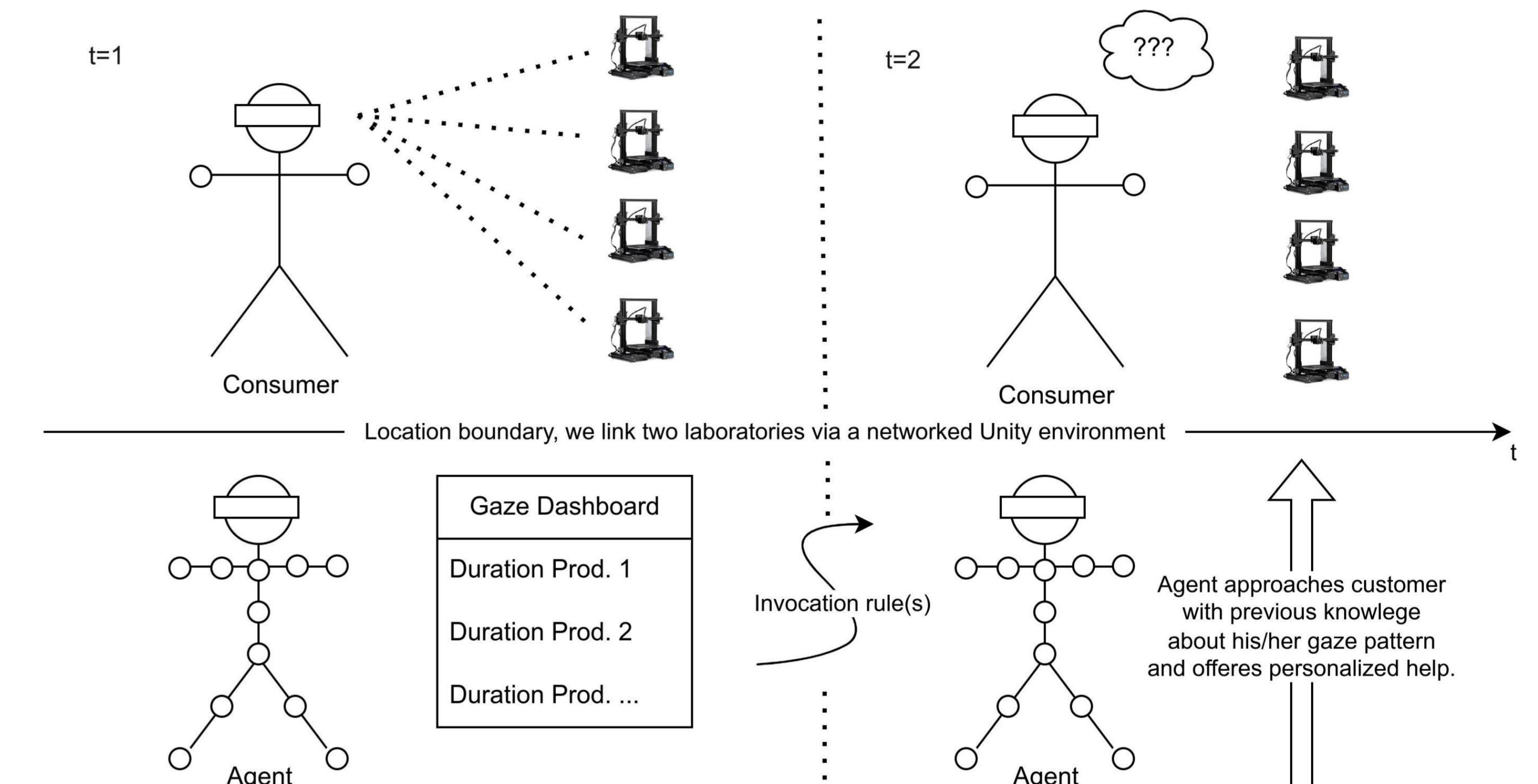
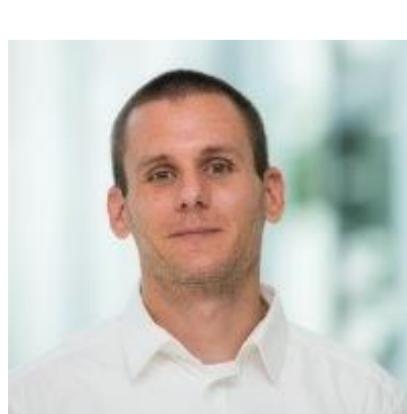


Fig. 3: Experiment setup.

Results:

- Participants appreciated a digital human sales agent.
- Full-body motion tracking is no panacea to avoid the uncanny valley.
- Trust in a human is higher than in an artificial intelligence but participants are willing to try.

Future work: A larger-scale quantitative study using a machine learning model for agent invocation timing.



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Tab. 1: Development and design iterations.

Nr.	ID	Sales agent avatar	Sales agent steering mode	Facial animation	# Interviews
1	RB-FB-VI	Rocketbox	Full-body motion tracking in VR	Vive Facial Webcam	2
2	RB-TP-SF	Rocketbox	Third Person on desktop PC	Static face	3
3	RM-FB-SF	Readyplayerme	Full-body motion tracking in VR	Static face	4
4	RM-TP-OC	Readyplayerme	Third Person on desktop PC	Oculus lip sync	3
5a	RM-SB-OC	Readyplayerme	Static body in VR	Oculus lip sync	3
5b	RM-FB-OC	Readyplayerme	Full-body motion tracking in VR	Oculus lip sync	2

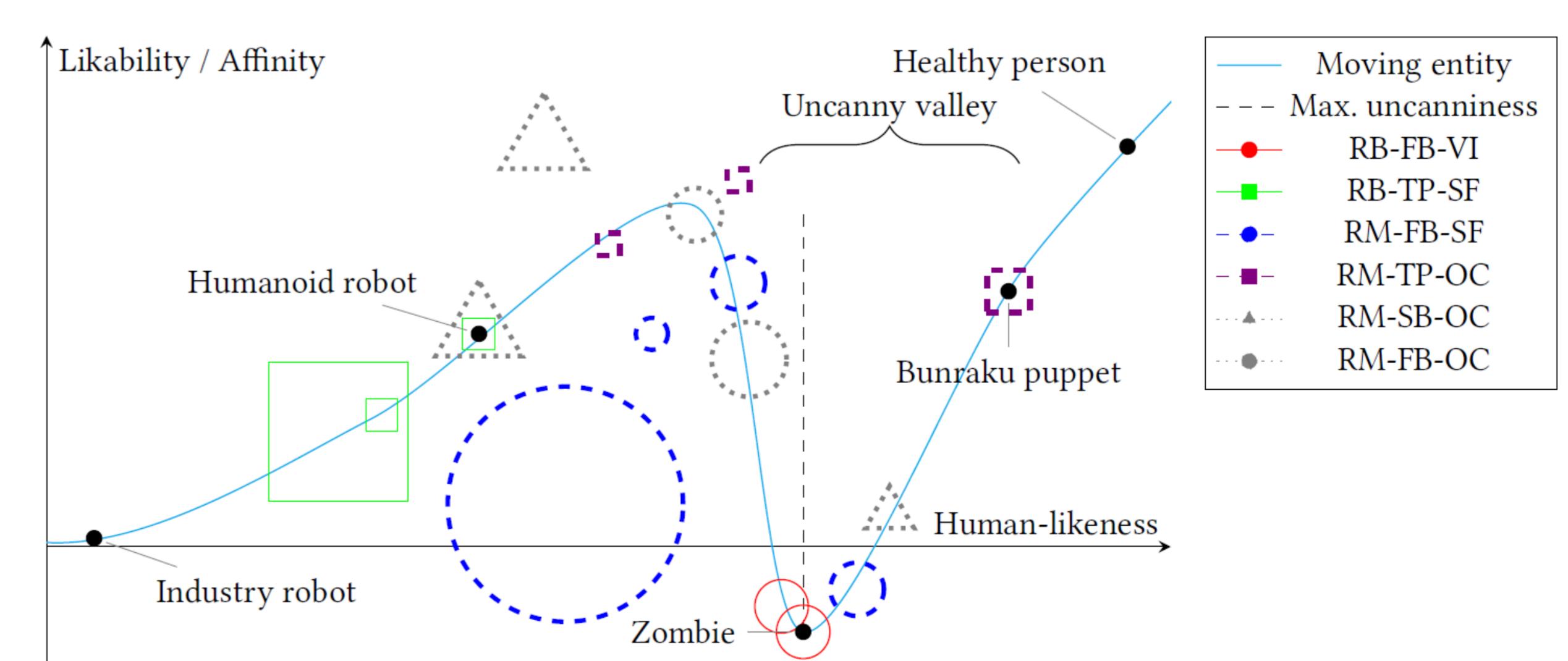


Fig. 4: Uncanny valley diagram with participant opinions.