

CRTKL DIGITAL PROTO LAB

The Digital Protolab provides a framework for user testing through immersive technologies in our predesign and design process.

It addresses the scalability issues in usability testing by streamlining our prototyping phases and enhancing data-collecting capabilities, from studying human-computer interactions utilizing eye and hand-tracking technologies, measuring our users' well-being in real time, to providing rapid iterative solutions backed by data to big and small clients.



WHAT?



WHY?

Phygital spaces are becoming the norm as the "metaverse" continues expanding. We have the unique opportunity to develop and present new omnichannel and multiplatform experiences, which require extensive research.

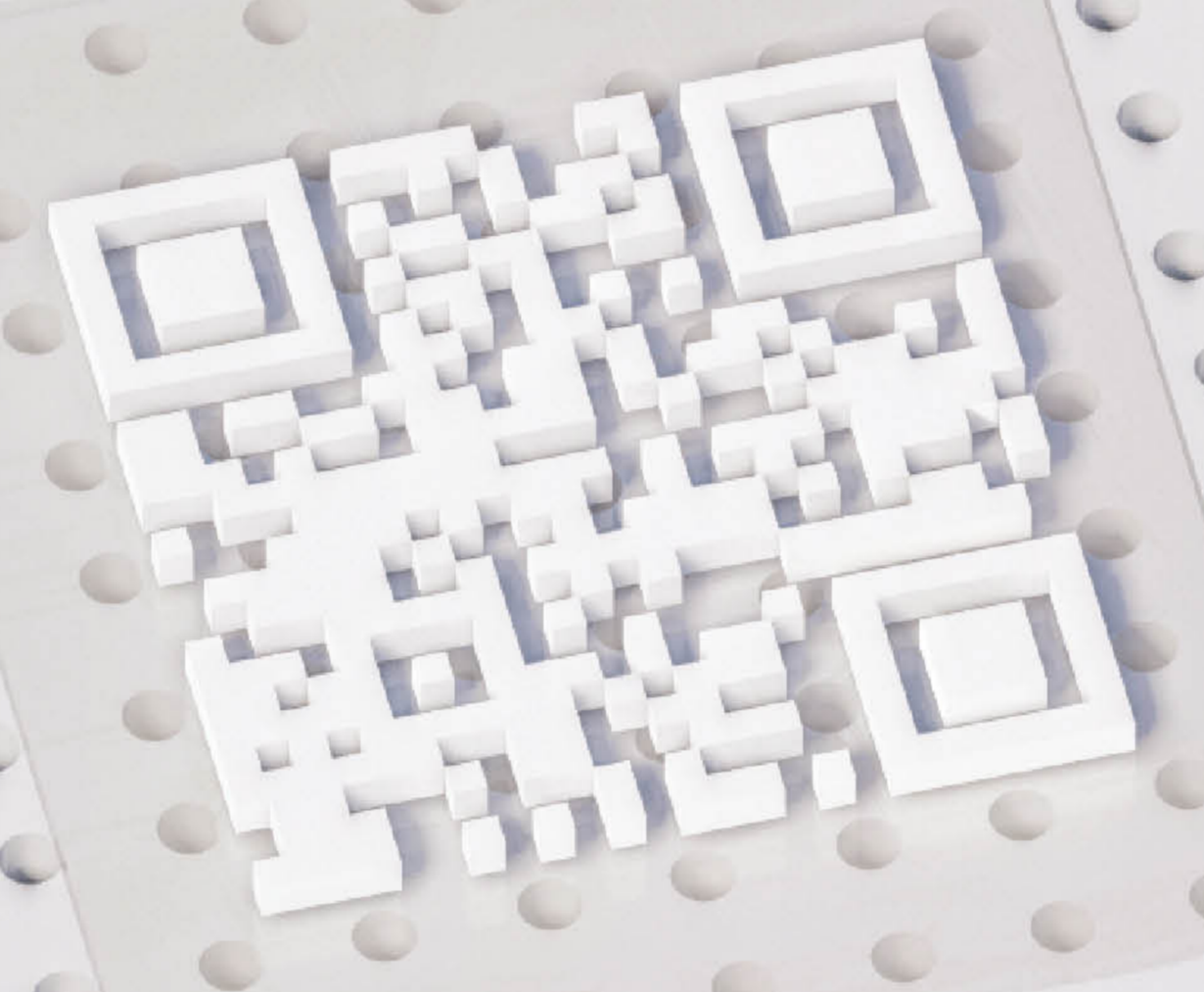
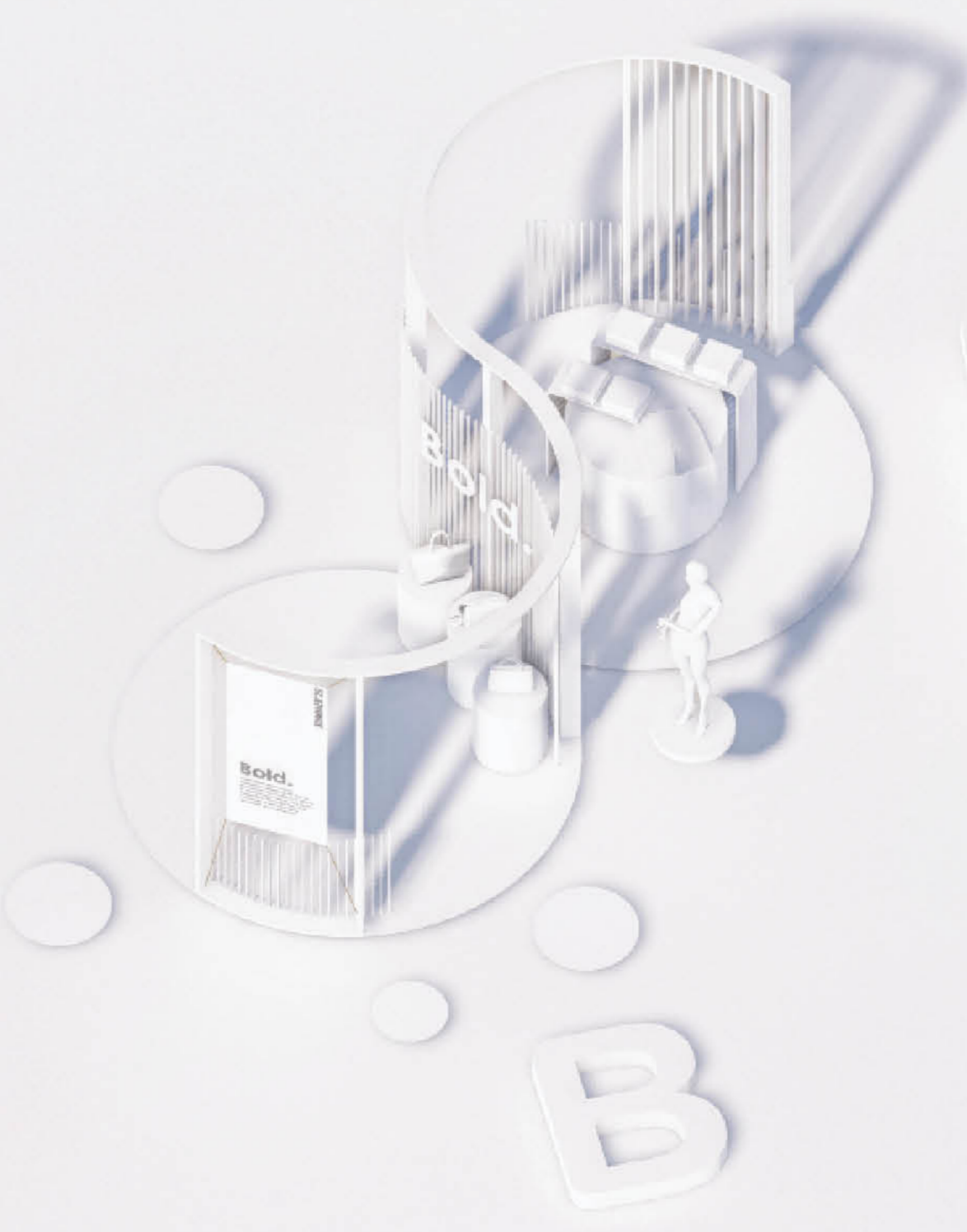
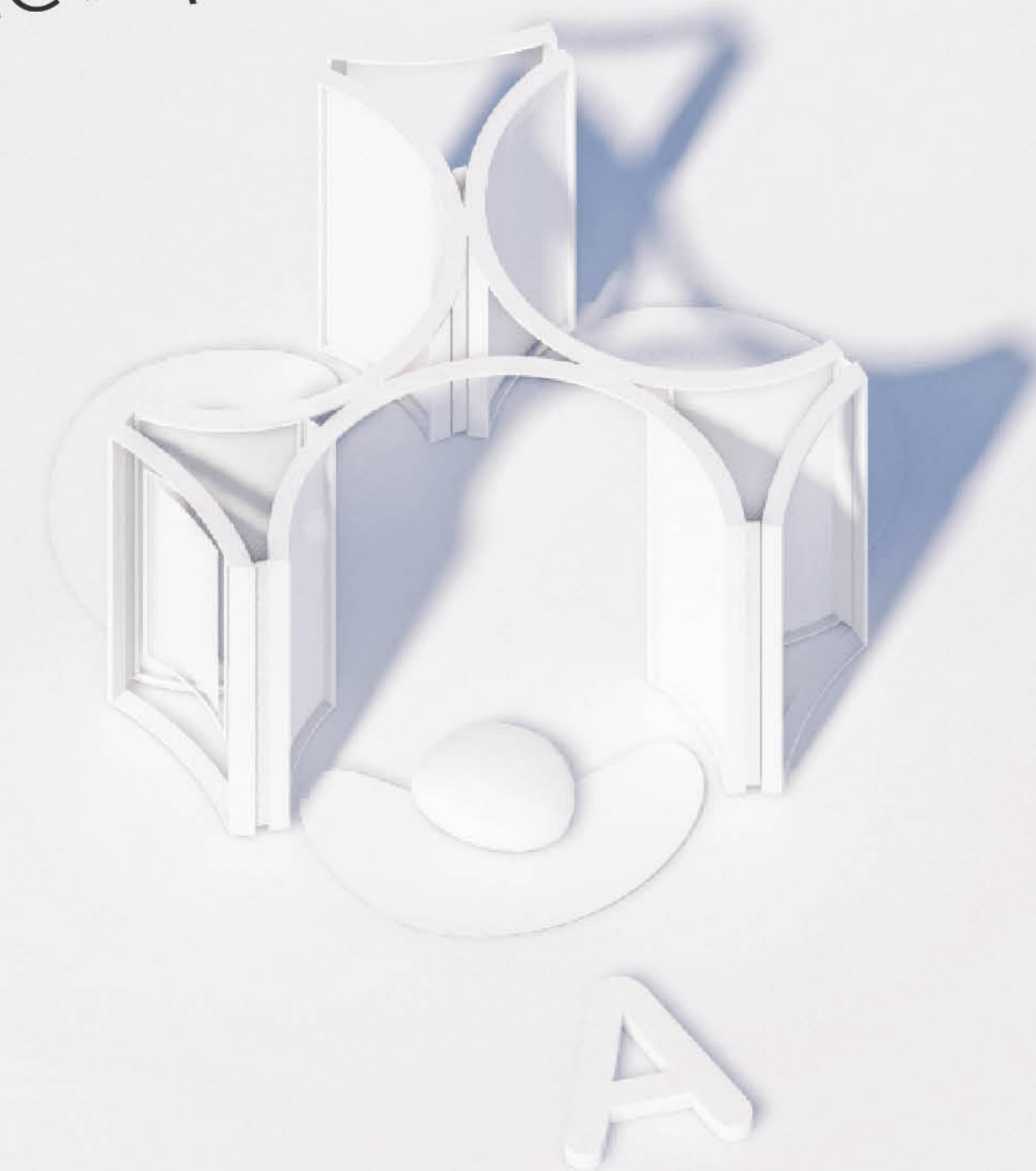
I am passionate about the human-centered design process and how it can help us sell innovative ideas while informing us of potential new technologies to develop in the future. Unlike web, app or VR UX designers, space planners have a hard time wireframing their solutions to conduct user testing, iterate, and provide strong data-backed solutions.

IF/THEN

Retailers have learned to leverage usability data by renting large floor spaces to prototype their solutions. However, they have also learned they are better off prototyping the solutions by themselves.

The process is slow, expensive, and very limiting. In addition, our retail solutions increasingly involve the use of optical labels, digital screens, sensors, AR gamification, and other technologies that offer new types of interactions requiring extensive research and testing. The sum of these technologies in the built space cannot be replicated and is very hard to track utilizing lo-fi physical prototypes, as it is currently done.

By creating a virtual prototyping framework adapted to CRTKL's needs, we are expanding our capabilities as a data-first company. We will be pioneering in the evolution of rapid user testing for retail design. We could positively impact our clients, especially small and risk-averse ones that otherwise could not afford our new predesign approach.



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HOW?

1 To test the feasibility of this idea, the process will start with the following question:
Is it possible to conduct relevant user testing for interactions in the built space utilizing immersive technologies?

2 We will choose a case study for a new but small set of digital interactions in a retailer's customer journey, e.g., gamification, AR sculptures, QR code interactions, digital displays, or customer-facing data visualizations.

3 We will model two or three interactive fixtures utilizing a combination of conventional 3D modeling tools and the game engine's interactive capabilities through visual and written programming.

4 At least one round of user testing will be conducted, using new VR hand-tracking capabilities, followed by design iteration utilizing AB testing methodologies. With the hope of giving light to the research question.

