

NEC: Going beyond usability and incremental innovation to target new markets

Ethnography in action

“The PARC approach gave us an insight and strategic innovation advantage that we did not have before or could get anywhere else...”

—Hiroaki Kosato, Senior Manager, Product Planning Department, Projector Business Planning Division



NEC Display Solutions, Ltd.

OVERVIEW:

Situation Analysis

Global Fortune 500 company NEC provides core technologies for a connected world, including broadband, e-commerce, and enterprise business solutions. One of its key businesses, NEC Display Solutions, Ltd., (a subsidiary of NEC Corporation) focusing on digital presentation and visual display systems, generated over \$1B in revenue last year. But the projector industry has matured and, despite the increased number of competitors and need for differentiation, innovations have focused only on incremental improvements or component technologies. The industry is ripe for new product concepts – especially in new markets.

Insight

With experience analyzing workspaces, people, practices, and various technologies in diverse settings, PARC ethnographers had already identified a number of problems with general projector use. The issues went beyond usability and user experience: projectors changed the social dynamics between audience and presenter.

Projectors are not designed appropriately for social contexts of use. Furthermore, the same workplace projector practices did not apply across different settings – especially in classrooms. Thus, NEC Display Solutions could not miss the opportunity to capture this rapidly growing market.



Process/Methods

Through a brief, exploratory needs-and-opportunity discovery study, PARC ethnographers had already identified a number of problems with workplace projector use. Projectors are ubiquitous, single-function devices. But how many times had presenters fiddled with projector settings, stalled while troubleshooting, contorted the physical space to deal with remote projector locations, or apologized to their audience for something on their private laptop coming up on the public display?

Classroom contexts introduced a new set of problems. Based on ethnographic observation in schools, coupled with semi-structured interviews, PARC social scientists identified important differences around projector use in the classroom. Their findings identified new opportunities for differentiating projectors in this market – ranging from core design and advanced features to training and market segmentation.

PARC ethnographers showed video vignettes for the above to NEC Display Solutions stakeholders, as part of a series of co-development workshops, so they could absorb the “a-ha moments” themselves and compare and contrast business vs. classroom uses of projectors. The workshops also included PARC’s in-house technology specialists – optics, computer vision, and display experts – who could help translate the analysis into design principles, features, and new product concepts.

Results

In practice, projectors are social objects that present problems that, in turn, cause more problems. By using ethnography to more holistically understand how they are used, PARC ethnographers:

- Enabled NEC Display Solutions to realize new ways of meeting customer needs
- Delivered new product concepts that addressed missed opportunities
- Identified opportunities for further segmentation within this fast-growing market
- Helped them realize a new approach to innovation that brought in the field and user perspective

More Information

Business Development
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A global center for commercial innovation, PARC (Palo Alto Research Center, Inc.) works closely with enterprises, entrepreneurs, government program partners and other clients to discover, develop, and deliver new business opportunities. Previously known as “Xerox PARC,” PARC was incorporated in 2002 as a wholly owned subsidiary of Xerox Corporation (NYSE: XRX).