

CASE STUDY

How a simulator manufacturer revolutionized medical training



THE CHALLENGE

Our client, a major manufacturer of various simulators, hypothesized they had an opportunity innovate on how doctors trained for a particular set of invasive medical procedures. For decades, training for these types of procedures was carried out using plastic models or pig cadavers, but neither captured the look and feel of the human body, and both involved considerable expense. In some countries, students trained on actual patients, which had its dangers. Was there a better way? The innovation team at this leading simulator manufacturer had built a prototype that used a dramatically different technology – 3D virtual reality simulation – but needed to test its appeal with end users and purchase decision makers.

WHAT WE DID

The innovation team began by engaging Applied Marketing Science (AMS) as its partner for its Voice of the Customer effort. Ordinarily, conducting research to understand customer needs occurs at the beginning of the development process. In this case, the engineers had already produced a prototype, but the marketing department encouraged them to obtain customer feedback before finalizing their design.

- First, AMS conducted in-depth qualitative interviews and ethnographic observations of key “users and choosers” in the field, including professors, students, and clinicians, as well as technicians and administrators across the U.S., Europe, and Asia. The team gained valuable insights into necessary improvements and enhancements for the simulator.
- Next, to prioritize which capabilities should be included in the 3D virtual reality simulator, AMS facilitated a Quality Function Deployment (QFD) exercise.
- Finally, AMS led the team in a brainstorming and concept generation session to come up with imaginative technical solutions for the product capabilities. The team designed cutting edge concepts for different markets, subject to cost constraints.

THE OUTCOME

The Voice of the Customer research, QFD and concept generation sessions resulted in two very different concepts. The first concept was a high-end product that would realistically simulate the entire body of the patient, and the surrounding equipment, targeted for the U.S., European and Japanese markets. The second concept was a product that cost very little, since it made use of simple parts and independent iPad technology, for the South Asian market. The results positioned our client as the technology leader in the 3D virtual reality simulation medical training market. Their market will continue to grow as medical schools move toward this sort of technological solution for more and more aspects of medical training.

CLIENT

Simulator Manufacturer

INDUSTRY

Healthcare Markets, Medical Products and Pharmaceuticals

SERVICES

Design Thinking, Concept Testing and Prototyping, Ethnographic/Observational Research, Ideation and Co-Creation, Quality Function Deployment (QFD), Voice of the Customer

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