

The bottom line? Organizations that have applied User-Centered Design methodologies are introducing products that are easy to buy, easy to learn and easy to use by core consumers – all while simplifying the design process.

The User is King

Focusing on User-Centered Design Research to Improve Perceived Design Quality

Marketing 101 says the number one rule of product creation is to design a product that satisfies a consumer need in the marketplace. However, the El Dorado of product creation is to make that product easy to buy, easy to learn and easy to use by core consumers. The gold an organization has been looking for is closer than it thinks if it continuously places product usage – and more importantly the user – at the center of product design.

The old adage was that the “customer was king” – an often-used mantra for giving consumers concessions during the sales process to move product off the shelves. Forward-thinking organizations move far beyond the mere sales connotation of that statement. In today’s experiential marketplace, existing and potential *users* dictate what products look like, feel like, sound like, smell like and taste like before they ever hit the shelves.

Successful organizations find it is better to capture user information during every phase of the product design process to ultimately give users exactly the product they want and expect – without having to give sales concessions later on because of a design or experience inconsistency. By placing the user at the center of the product development process, organizations can more easily design a product because they clearly know what product consumers want, what benefits they derive from the product and how they use or misuse it. In the end, it is fair to say that these product users “are king.”

“User-centered design is focusing the design on the user, plain and simple.”

- Peter J. Bogaards

What is User-Centered Design?

Traditional market research focuses on understanding the market and those features that trigger buying behavior. User-Centered Design research focuses on understanding users and specifically those benefits that consumers find satisfying and dissatisfying with the product. In other words, User-Centered Design processes focus research activities directly on *and only on* the user experience.

Summed up, User-Centered Design is a product development process which:

- Focuses on core users as the center of the design phase;
- Uses user data throughout the process to validate designs; and
- Draws on multiple disciplines and skills in a team environment early in the design process.

Key User-Centered Design Principles

All product development processes include the following five activities in one form or another – from initial target market investigation, to the creation of design alternatives, to the evaluation of those alternatives.

Market Definition

Determining the target market, intended users and primary competition is essential to the design processes. Small group interviews, focus groups and survey research can uncover answers to the questions of:

- Who are the users of this “thing”?
- Who is supposed to be the user of this “thing”?
- What other similar products are there?

Understand Users

User-Centered Design seeks to answer questions about users and their tasks and goals associated with the product. A commitment to understanding and involving the intended user is essential to the design process. Research that involves a combination of observational, interviewing and using techniques, such as observational shadowing, observational interviewing or observational task analysis can uncover answers to the questions of:

- What are the users’ tasks and goals?
- What are the users’ experience levels with this thing and things like it?
- What functions do the users need from this thing?
- What information might the users need, and in what form do they need it?
- How do users think this “thing” should work?
- How can the design of this “thing” facilitate users' cognitive processes?

Competitive Evaluation

Products do not exist in a vacuum – they exist in a marketplace. It reasons that product design must not be conducted in a vacuum either. Determining the strengths and weaknesses of the competition helps organizations design products that improve upon, rather than just copy, the competition.

It is possible to gain competitive knowledge through focus groups and individual interviews. However, the real value comes in actually observing users work with competitive products during usability studies. Data from usability studies eliminates the issue of participants saying one thing about the product, but doing something completely different. In the end, usability testing gives insight into how and how not to design the product.

But how do you measure how usable a product is? One way is to measure results from usability research studies designed according to the ISO9000 usability definition. Specifically, users are asked to complete a representative set of tasks and data is collected on:

- How effective users are at completing tasks (Could they do a task or did they give up?);
- How efficient users are at completing those tasks (How long did it take them?); and
- How satisfied users are with the experience of completing the task (Was it a positive or frustrating experience?).

Design Evaluation

Data gathered up to this point are used by your multi-disciplined product development team to design a product that most meets the users' needs. This includes the way a product is designed, built, packaged, maintained, installed, used and documented.

Participatory Design sessions allow designers and users to work together – in the same environment – to design a solution. Besides providing a forum for identifying issues, it gives users a voice in the design process, thus increasing the probability of a usable design.

Design

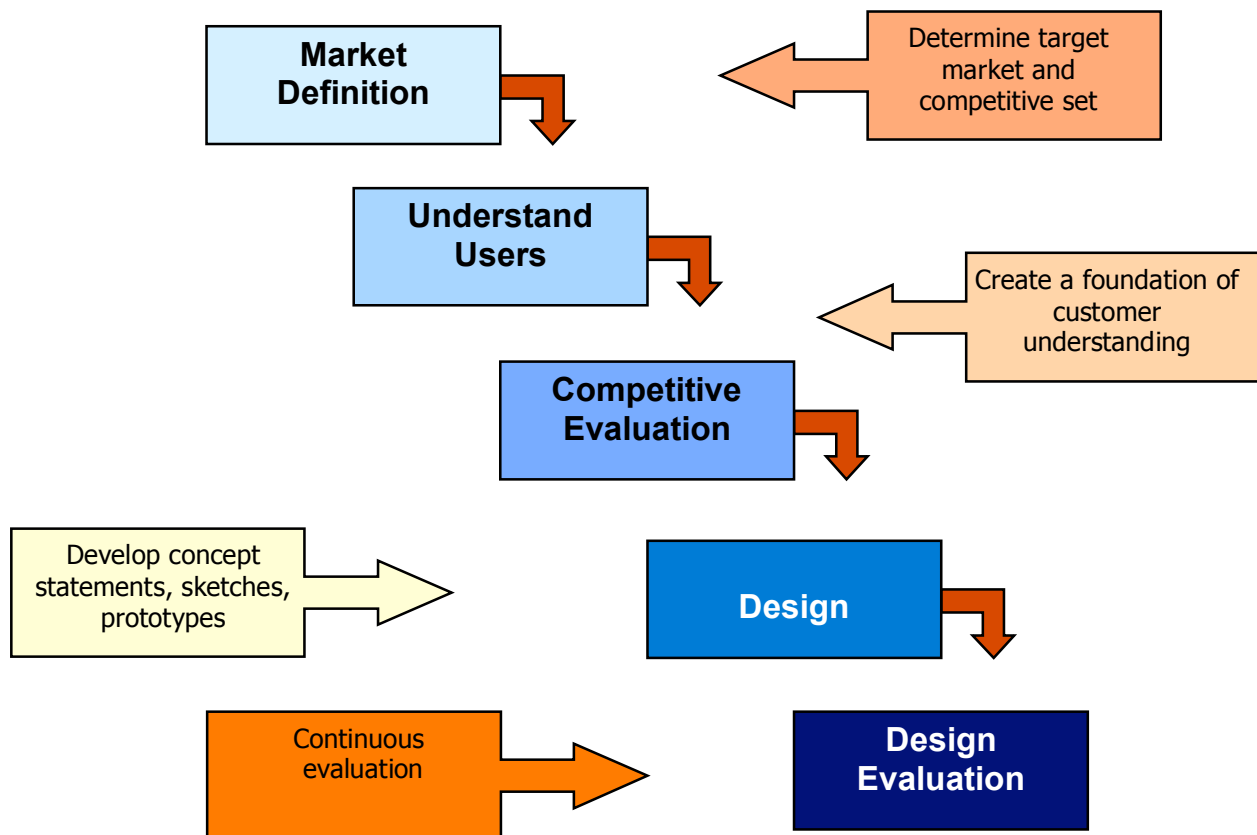
In addition to usability testing and interview techniques, larger scale surveys can be conducted to evaluate prototype or final product designs. Surveys allow statistical analysis of results, which can increase a study's credibility through its scientific appearance. This makes it all the more important that the questionnaire is well-designed and asks non-biased questions.

Data gathered during the design phase can also include comparative measures such as your product vs. previous designs or competitors' products or over a length of time. Specific design research uncovers answers to the questions of:

- What are the satisfaction levels associated with your product?
- What are the strengths and weaknesses of your product?
- How usable is your product?

When to Use Its Methodologies

Every step in the traditional product design process requires consumer data to be used as a roadmap for product creation. Thus, User-Centered Design research methodologies can be used at any point during the product design process.



More importantly is your team struggling with developing product designs that are just not producing a “wow” effect? Are product developers not sure how to proceed? Is the project stalled? If so, the first question to ask the team is have they correctly defined who the audience is for the product. If the answer is no, research is needed to determine this using User-Centered Design methodologies.

Once that question is resolved and before the team moves on to design, the team must decide if they have all of the information they really need to effectively and efficiently

deliver consumer-driven product designs. Quite simply, do they have enough data to design? If not, User-Centered Design methodologies will help continuously feed data throughout the design process.

Lastly, did the team really do their homework by gathering the right kind of feedback from users to make sure the prototype or final designs not only met the users' needs, but exceeded them. If not, user-centered design methodologies will help gather data to make that decision.

The Benefits of User-Centered Design

User-Centered Design enables multi-disciplinary teams to consistently develop engaging products that are designed for ease of use based on the total user experience. In the end, User-Centered Design research is focused on researching behaviors, use and perceived quality to help the product development team design every part of the product the user sees, hears and touches. The benefit? Developing easy-to-use and aesthetically pleasing products will give users an increase in the confidence of the brand and ultimately lead to loyalty.

“... an approach to design that grounds the process in information about the people who will use the product. UCD processes focus on users through the planning, design and development of a product.”

- Usability Professionals Association

User-Centered Design processes can also advance a product's release date. Product development teams can more easily design a product because they clearly know consumers, what benefits they derive from the product and how they use it.

It is estimated that every dollar invested in ease of use during product design returns \$10 on the same issue during development and \$100 after the product's release.¹ Kalin also warned that companies that skip ease of use in the design phase can end up spending as much as 80 percent of their service costs on unforeseen user requirements. Simply put: designing something right the first time is better – and certainly cheaper – than going back to correct it later.

This is what makes User-Centered Design and its research methodologies so invaluable and truly each user “king” in the marketplace.

¹ Kalin, 1999.

About the Author

Andrew Zernia is a research consultant at Marketing Partners, Inc. His areas of interest and experience include product research, user-centered design and usability testing. He also has developed and executed both quantitative and qualitative product satisfaction, customer loyalty, association, health care, information technology and manufacturing industry studies. Methods for conducting research include in-depth, one-on-one interviews, web, mail, e-mail, fax and telephone. Andy holds a master's degree in business administration from DeVry University's Keller Graduate School of Management.

Marketing Partners, Inc. is a research, strategy and business services organization serving consumer packaged goods, consumer durables, associations and health care clients across the United States. The firm's focus is on business improvement, especially in the areas of:

- Product Value Creation, which includes using research to create market-driven products and processes designed to brand organizations and sustain customer and member loyalty; and
- Organizational Advancement, which views the organization itself as the product and focuses on developing both strategy and organizational capabilities including custom-designed strategic and breakthrough planning processes.

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