Easy to Use for Whom:

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Defining the Customer and User Experience for Enterprise Software

For enterprise software, the customer is the person or group within the organization who decides whether or not to purchase the solution while the user is the individual or group who operates and/or uses the system. The customer is interested in finding the best way to bring efficiency to their operation such as reducing cycle time, improving information, and reducing resource costs. The users, on the other hand, are more likely interested in completing their daily tasks and assignments as easily and effectively as possible. The customer is looking at the overall workflow of their organization and how specific software solutions might improve it while the users tend to emphasize the software's ease-of-use.

Enterprise software is only easy to use if the customers and users think it is easy to use. To determine "ease of use," first understand the customer and user needs. To understand their needs, conduct research, iterate designs for validation, and evaluate the design for ease-of-use.

Researching the customer and user needs

The first step in understanding the needs of customers and users is to understand their marketplace. Put the customers and users needs in context of the market, competition, and other customers and users. How does this solution serve its market? What are the strengths and weaknesses of the competitions' solution compared to your solution? How are the various customers' workflows similar and differ? How are the various users' tasks similar and different?

Then determine the vision of the solution. Understanding the short- and long-term vision of the solution answers the following questions: Is this first-to-market? Is it a major release for a mature product? Is this solution a foot in the market that will be replaced by the next version or become a component of another application? Your answers will determine the direction of the design.

Once you understand your customer and user in context of the market, competition, other customers and users, and understand the solution's vision, you can formulate a high-level plan of how much research, design, and evaluation you'll need in order to design a solution that is easy to use. Document your understanding and share it with subject matter experts to ensure that you are heading in the right direction.

Define the customers' workflow and users' tasks

To design user experiences that are easy to use for your customers and users, become familiar with the customers' workflows and the users' tasks. When conducting your research, establish a list of users by companies, departments, and roles. The company contact is usually the "customer" and the department contact is usually a manager. In enterprise software, there are customers that purchase the solution, users who use the system and, usually, managers who work for the customer and manage the users.

Tip: Include the managers in your research. Often the managers are also a user—usually using the application for operational reports. The managers have insight into their employees' tasks, like which positions are changing roles/tasks or being eliminated. Your solution is most likely going to change or eliminate their roles—this is not something you want to discuss with the user but should discuss with the managers. Sometimes it is the manager's role that changes. In this case, you need to work with the appropriate level of management at the customers' company to ensure this understanding.

Survey, interview, and observe the customers and users using their current solution. Develop diagrams of the various customers' workflows and note where they are similar and different. Group your customer and user types by similar roles, and create personas—archetypes that synthesize their skills, patterns, and goals to better understand their needs.

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Designing the customer and user experience

Designing a user experience may be easy to you, but remember that customers and users don't know what they specifically want in a solution. They know that they want efficient, effective solutions and they have ideas about how to improve the workflow, but it is up to the software solution provider to bridge the gap between the customer and user needs and the technology solution that meets that needs.

The solution usually ends up being something that the customer and user never envisioned. The real value that the software solution provider brings is the ability to interpret their needs and deliver a solution that is better then they could imagine because of the expertise that you bring in understanding their needs and the solutions that enterprise software can provide.

Customers have ideas about incremental improvements to their workflow, but if you develop something that is truly innovative, your ideas probably won't make sense to existing customers. The type of early research you'll need to conduct will change. Looking at previous solutions or workflows that satisfied the market may no longer apply. In many cases, innovation means looking at a solution in another market and adapting it to yours. Your research may include investigating the market, competition, customers, and users of the market the solution comes from and extrapolating from there.
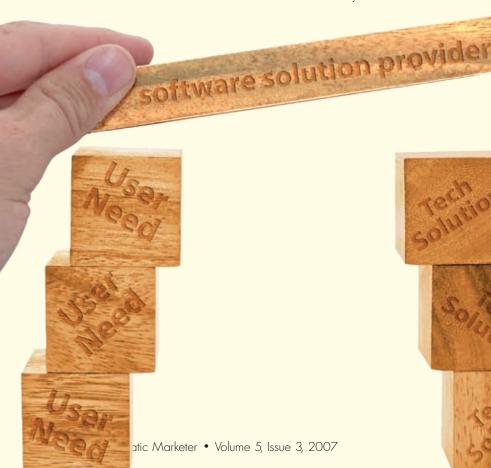
Validate the design

When validating your new idea to the market, educate your customers so they can put your solution in a new context. This paradigm shift for the customer may not come easy and they may not immediately understand the value of your solution—especially if you can't put it in context for them. Being able to put your solution in context for your customer and users is the key for validating the solution meets their needs and is easy to use.

Develop a low-fidelity prototype like a paper prototype or wireframes. Review these prototypes to ensure that the customers' and users' needs are met. Validate that the general workflow navigation, information grouping, information hierarchy, terminology, labels, and general interactions are correct. Don't be concerned with visual design at this point—in fact, the prototype should be void of all color, fonts, icons, graphics, etc. to keep the focus on the workflow and information design.

Validate where various customers' workflow and content overlap and differ, and start thinking about the right design solution to support the differences in their workflow and content. For web-based solutions, it is as simple as leveraging login ID to drive customization. For example, IF company A THEN this screen, label, etc. IF company B THEN this. If it's a desktop experience, then you may want to create an Admin area where each key customer can select the difference that fits their own needs.

Validate the UI prototypes and customer and user needs with Engineering. Involve Engineering as early as possible in the product lifecycle. When possible, share early research and design direction with the technology architects and engineers. The early prototypes are an excellent tool to provide to Engineering as the best technical solution. Many times, the engineers know of future components or pieces of technology that can reduce or eliminate the need of a component or screen—enhancing the ease of use of the workflow.

Once you're confident that you understand your various customers' workflow and content, it's time to develop the visual design—color scheme, fonts, iconography, branding, and all graphic elements. Work closely with the visual designer or visual design team to ensure that the visual design elements support the company's brand and enhance the ease of use of the application.

Develop a medium-fidelity prototype that reflects the information and visual design. This prototype should also encompass the screen flow and interaction. Depending on how the design team is structured, this is a good time to bring in the interaction designers. Sometimes the interaction designer is also the information architect or a user interface developer. Interaction Design defines the behavior of how your customers and users interact with your solution. Interaction design is focused on making products more useful, usable, and desirable.

Work with customers and users and conduct reviews of the prototypes for feedback. Wash, rinse, and repeat, as needed. This is an iterative process that should include all the solution stakeholders.

Conduct usability evaluations

Once you have validated the workflow meets the customer and user needs, evaluate the tasks to ensure that they are easy to complete. Usability evaluation assesses the degree to which the system can be operated by its users, the efficiency of the solution and satisfaction. These evaluations validate that the tasks are easy to complete—a test of the ease-of-use of the application, not the intelligence of the users. If the tasks are hard or impossible to complete then the system is not easy to use.

In today's enterprise software market, applications need to be easy to use. Good technology is ubiquitous or invisible. Customers and users have come to expect easy-to-use solutions. In today's mature software market where the technological solutions are similar, usability is an important differentiator when considering a purchase as important as an enterprise solution.

Pre-development usability evaluation

There is a one to one hundred dollar return-on-investment (ROI) for correcting usability issues prior to development. Eighty percent of the issues can be identified by evaluating it with as few as three iterations with five users. Conduct the evaluation on workflows and tasks that the customers and users determined to be most critical. Measure the efficiency, effectiveness and satisfaction by time on task; completion of task; and expected and actual perceived easiness of the task. Seventy percent completion of tasks for first-time users with little or no instruction is a pass rate by software industry standards.[1]

Correct any issues in the design releases from iteration to iteration. Document the evaluation in a report that explains who participated in the evaluation, what was evaluated, how it was measured, the findings, and recommendations based on the findings. Use these findings and recommendations to determine the final design, and develop design specifications for Development.

Post-release usability evaluation

After the solution has been in production for six to eight weeks, conduct a follow-up usability evaluation to ensure that all the issues have been properly addressed and measure your usability ROI. For example, if you knew the number of service calls associated with a particular task in the previous release, measure it now with the new release. Multiply the number of call reductions by the cost of a call to calculate the actual dollars saved by this design.

Document your ROI and any other issues that may have been discovered that you can incorporate in your next design solution.

Support corporate strategy

Only with a thorough understanding of your customers' and users' needs can you design easy-to-use enterprise software solutions. Early research and validation of those needs reduces cycle time in defining requirements. More thorough user interface designs— prototypes and specifications— reduces cycle time in development and testing. Easy-to-use enterprise software solutions reduce training and support costs, and increase customer effectiveness, efficiency, and satisfaction. Ultimately, easy-to-use enterprise software reduces cost and increases retention, adoption, and revenue.

As with any process, the amount of customer and user research, validation, and evaluation you conduct varies with the company's objective and the need of each release. New releases to the market require more research and validation while major releases of a mature product require little or no research or validation, but should evaluate usability of new features and measure ROI post-release. Ultimately, it is up to your company to decide how much of this process makes sense to support the company's overall strategy. But remember that your ROI is directly proportional to your investment.

TPM

Sean Van Tyne is CEO and Principal Consultant of Van Tyne Consulting, Inc. Van Tyne Consulting helps corporations realize their user experience strategy—bridging Marketing and Technology— marrying Product Management frameworks to Development best practices. From strategy, goal, and direction through process, tools, and resources, Van Tyne Consulting helps your company deliver innovative solutions with best-in-class user experience. To learn more, please visit www.vantyneconsulting.com

[1] http://www.useit.com/alertbox/20000319.html