

Outside the BOX: Design

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Soft morning light streamed through the 24 pane windows into the working space in San Francisco as 37 of us struggled with the concept of human-based design. For years, I had considered design as something belonging to fashion gurus, architects and software engineers.

However, the facilitator was confronting my bias by explaining that human-based design is universally important.

The concept is based on the notion that to create truly great products and services, two things must occur: User behavior in real time must be

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observed and, by having a very clear understanding of the user's experience, empathy can then be applied to assure that the problem-solving process actually results in a workable solution.

The greatest appeal of design is that it recognizes the critical importance of functionality. Elon Musk, the founder of Tesla, frames design succinctly with his belief that “any product that needs a manual to work is broken.” Steve Jobs, the creator of Apple and Pixar, was adamant that design was not only about the beauty, appearance and feel of a product, system or service, but also how the blasted thing actually works.

As I pondered the potential applications to agriculture, my mind conjured up an experience from my youth that may have been my first encounter with a design problem. I was 9 or 10 years old and my dad had sent me ahead of the herd to open a gate between pastures. The barbed-wire fence was newly constructed and, as I approached, it was apparent that the five-strand wire gate had been stretched to create a perfect barrier to intrusion. The new steel glistened and shined — it was beautiful.

I dismounted and put my shoulder to the post so I could slip the wire holder off, allowing the gate to open, but I was no match for the tension. I knew that I had limited time before several hundred pairs would appear, so I pushed, pulled and strained with all my might, but to no avail. Fortunately, one of the cowboys on the drive recognized my dilemma and came to the rescue.

Thinking back to the panic I felt in not being able to open that gate provided insight into the dilemma of creating great design. While the mainstream user was perfectly capable of opening that gate, it was nearly impossible for the extreme user — kids. Eventually we forged a solution by attaching a “cheater” bar and chain to the latch post. Nonetheless, the original design was flawed.

Empathy

As our workshop progressed, our coach kept reminding us that great designers spend considerable amounts of time with existing and potential users. She told us the story of a design team given the task of improving the lids for medication

bottles so that elderly folks could more easily manipulate them. As the team began its work, lots of interviews were conducted with venerable users who took daily medications.

One interview was particularly memorable. A nearly 90-year-old woman suffering with arthritis told the team that she had absolutely no problem removing the lids from medication containers. This seemed odd, so the team asked for permission to watch her open a bottle or two, and the woman invited them to come to her home for the demonstration. She led the designers into her kitchen, grabbed one of the containers they had brought for the demonstration, walked over to the electric meat slicer on her counter, and promptly sheared the lid from the plastic bottle — a perfect example of a user finding an extreme adaptation to overcome a design flaw.

Consider how many design flaws we encounter in our daily lives. Start a list and ask your staff, customers or vendors for their input. You may well be surprised by the length of the list, and by the reach and breadth. Once you have the list in hand, ask the following questions: Do we simply accommodate to those flaws while accepting the direct and indirect costs they create? Or, do we have an intentional process to significantly improve the design of the things, processes and systems required to keep our businesses flourishing?

If the goal is to tackle problems from a design perspective, the following process will be useful:

1. Define the problem by observing users of the item, system or process under consideration. Be sure to learn as much as possible about the actual user experience while removing your own bias as to what experience was intended.
2. Create and ponder a large number of solutions/options.
3. Pick the most promising alternatives and refine them.
4. Repeat steps 2 and 3 until a truly winning idea emerges.
5. Execute the winning idea (remember to make user observation and empathy an ongoing process during the execution phase).

Design thinking can be a great tool for improvement of a ranch with opportunities ranging from building gates that everyone on the crew can open to creation of preventative maintenance processes, or creating great synchrony between the production process and the allocation/timing of resources required to make the system work.

As a starting point to learn more, consider the following resources: *The Art of Innovation* by David Kelley; and *Creative Confidence* by Tom Kelley and David Kelley.



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