THE DESIGNER'S GUIDE TO PRODUCT VISION

LEARN TO BUILD YOUR STRATEGIC INFLUENCE TO SHAPE THE FUTURE

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New Riders

VOICES THAT MATTER™

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The second concept, first principles thinking, is more elusive and challenging to master:

First principles *are measurable and proven truths or fundamental laws of nature.*

First principles thinking *involves identifying and challenging assumptions and breaking problems down into their component parts to truly understand them.*

Perfecting these approaches will enable you and your team to identify and verify what your users really need and deliver the most original and cutting-edge concepts that have the potential to truly transform your users' lives, the business, and the respective industry at large.

In this chapter we'll dive into these two seemingly unrelated practices, both of which challenge the basic tendency for most of us to *mistake assumptions for facts*. Techniques that apply validation and first principles thinking to your process will give you confidence in your product vision endeavor. Like any worthwhile skill, mastering these more advanced concepts will take perseverance and patience; it may also make those around you who are pleased with the status quo very uncomfortable. In the end it will be worth the effort. Let's begin.

SHADOWS ON THE CAVE WALL

Plato, in Book VII of *The Republic*, shared his famous "Allegory of the Cave." This tale describes a group of people confined to the inside of a dark cave for their entire lives. Not only that, but their heads are directed only at the cave wall immediately in front of them upon which shadows are cast. These shadows, projected by the people, animals, and objects in the light of a fire behind them, represent the cave dwellers' only reality. This life and these shadows are all they've even known until one day, one of the prisoners is freed from the cave.

The freed prisoner is able to turn around, and after his eyes begin to adjust, see and feel the fire that was projecting the shadows on the wall. Finally, after gaining the strength to walk, he's able to leave the cave entirely to explore the world beyond. After exiting the dark cave, he's nearly blinded by the sunlight. He finds himself confused and frightened by the forms that he encounters. The colors, textures, and dimensions are far richer and more tangible than the shadows the cave dweller was accustomed to experiencing. It's difficult for the freed prisoner to accept the new forms, but eventually he realizes that the shadows on the wall were just dark, one-dimensional images of a more vivid, multisensory reality.

What does this bizarre cave story have to do with a product vision? Pause for a moment to question how you developed your understanding of the world around you. Consider the acquired "knowledge" that will lead you to decide how to design, what to design, who to design for, what problem to attempt to solve, and what ultimately will be considered successful:

- Where did your perceived understanding of the customer and their needs come from?
- How much of your information comes from firsthand, fact-based inquiry?
- How much of that information was passed along to you, filtered from second and thirdhand sources (like a game of telephone)?

Too often, those of us tasked with creating products that our end users will value are doing our work based on shadows cast on the wall. We're making important decisions based on assumptions and shared beliefs. Too often these assumptions and shared beliefs can feel so real that we accept them as truth without questioning whether there's more to the story—more than shadows cast on the wall.

WHAT ARE FIRST PRINCIPLES?

In Plato's cave allegory, first principles are represented by the forms that the freed prisoner experienced when he left the cave. These forms—material objects and living creatures that exist beyond the dimly lit confines of the cave—were the true fundamental components that produced the shadows projected on the cave wall. The shadows that the cave dweller perceived as reality, or shared beliefs, represent reasoning by analogy—knowledge based on unearned, assumed information.

First principles are not shared beliefs. They're not cliched platitudes often heard in business like "This is the way we've always done things around here" or "This is how our competition does things." Again:

First principles *are measurable and proven truths or fundamental laws of nature.*

First principles thinking *involves identifying and challenging assumptions and breaking problems down into their component parts to truly understand them.*

This way of thinking is very challenging—challenging to do it yourself and challenging to advocate to others. Succeeding with first principles thinking will require a two-pronged approach consisting of diligently focusing on and highlighting truths over assumptions and using diplomacy to bring others around to your way of truly seeing the world.

QUESTION EVERYTHING

At this level you're aware that design is so much more that "how it looks." Design is a process. It's a mindset—a way of thinking. The best designers ask the best questions. Asking great questions is at the heart of first principles reasoning. Zen Buddhists have a concept known as Shoshin (初心) or "beginner's mind." Practicing Shoshin means leaving behind your

preconceived notions about a subject—even a subject that you may know very well—and being open to learning as if you were still a beginner. Asking "why?" and "what if?" is a young child's approach to learning about the world. Kids are the best learners because they have no preconceptions. They're constantly asking questions about the world around them. They haven't yet learned that asking a lot of questions is a good way to get into trouble with an impatient adult.

Let's take it back to the ancient Greeks for a specific method of questioning that will help you drill down to first principles: Socratic Questioning.

- Ask clarifying questions—What does this data actually mean?
- Ask questions that challenge assumptions—How might we validate or disprove this assumption?
- Ask questions that probe for evidence—What caused this to happen in the first place?
- Ask questions that probe alternate perspectives—What's the alternative? Who benefits from this?
- Ask questions about the consequences of your thinking—What are the ramifications of assuming this is true?
- Ask questions that challenge your original question—Why is this important?

When you and your team make observations that are indicative of possible user problems, turn to the Socratic Questioning method of asking questions to identify and challenge assumptions. It will be difficult for most at first, but like anything with practice and repetition, it will eventually come more naturally. This approach will open doors to new visionary ideas that lead you away from doing things the way you've always done them or imitating your competitors.

APPLYING FIRST PRINCIPLES: VERIFY INFORMATION

Thanks to lessons learned from Plato, we should keep in mind that, depending on how we learned about an opportunity, a user, and their problem, we can't automatically take these findings at face value. Even discoveries based on empirical data, like shadows that appear real, can be worth deeper analysis to validate their credibility and relevance to our work.

USER FEEDBACK

With an existing product or service, it's important to collect and review user feedback, keeping in mind that *the plural of anecdote isn't data*. Where possible, collect quantitative data—typically larger quantities of data that's measured and expressed numerically—about how your product is being used. Even with hard data, however, it's important to challenge assumptions and question how the information is interpreted from the standpoint of the target audience.

For instance, your business partners may value a "time spent on site" metric as proof indicating a successful product and user experience (i.e., the more time people spend interacting with the product, the more engaged and satisfied they are). But the case may be that users are frustrated that it takes too long to find the information they're looking for, and they end up deciding to leave the site without successfully completing their task. This single quantitative metric without additional context is capable only of showing how much time users spend on your website; it can't explain that, for many users, more time on the website may indicate a frustrating and negative experience.

Beyond app store ratings and reviews, some larger companies are using data analytics teams and tools to monitor customer sentiment from a

variety of sources. These sources may include long-form articles and blog posts by professional journalists/reviewers and customers, ratings and reviews from a variety of retail websites, user-generated content on social media, customer service call logs, and comments submitted directly to the business via a feedback form. The data is compiled and analyzed to present user feedback trends. Machine learning can be deployed against large data sets to attempt to analyze user sentiment. However, errors can occur. For example, consider a vacuum cleaner company that is trying to determine customers' true meaning of the word "sucks."

SURVEYS

Surveys (we're seeing them all too often popping up on websites these days) are another way of collecting large amounts of user praise and criticism to spot potential problems. NPS (Net Promoter Score) has become a common (albeit controversial) single-question survey that companies use to measure user loyalty and satisfaction. Similar to qualitative analytics, the power in surveys lies in making sure the questions you ask capture the right *kinds* of information. Notably:

- Is the feedback you're collecting from users actionable?
- Does it deliver insights aligned with your product strategy?

Only then can your team confidently use the feedback to make decisions about future improvements.

With surveys it's also important to keep in mind that users willing to take the time to complete a satisfaction survey often do so in response to a negative experience. Though still extremely valuable, these surveys can tend to make the results appear more critical than those of a more unbiased general population.