### nakedinnovation

uncovering a shared approach for creating value

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# Prototyping MÁRCIO DUARTE/SXC.HU

## Concept Generation Shaping Great Ideas

HISTORY IS POWERFULLY PRESENT within the stone walls of Westminster Abbey in London, where British sovereigns have been crowned and buried for almost a thousand years. For American visitors who have only experienced Kings and Queens through history books, it can be overwhelming to be right there, at the nexus of so much tradition. There's more than just royal history, though: amid stained glass, gothic tracery, and breathtaking expanse of space, you also see countless memorials to individuals who have done noble deeds for Britain: Isaac Newton, William Shakespeare, Charles Dickens, Winston Churchill, Rudyard Kipling, Henry Purcell, and Händel, to name but a few. Carved into stone, these names cover such a wide swath of achievement, and are so packed in next to each other, the thought of so many great spirits being honored in one space is quite humbling. It makes you feel small—and it makes you wonder if you could ever do something to earn a space there.

We've said that Naked Innovation is about unveiling some of the mystery that surrounds innovation—and about showing you how anyone can create new and distinctive value. One

of those mysteries and misconceptions is how the Genius Innovator comes to the moment of concept creation, and a magic light bulb clicks on, and suddenly Cheez Whiz has been discovered—or something else equally thrilling, earning the Innovator a shot a getting his name carved on the wall of Westminster Abbey or whatever spot is locally convenient. By now you know that even when inspiration strikes, it does so as the result of careful preparation—and anyway, inspiration doesn't so much strike as emerge, though a thoughtful and gradual process that both can and should be open to everybody. So it won't come as any surprise that while Concept Creation is, in a sense, the turning point of the innovation process—the spot when new ideas often first appear or come together—it's also what you've been working at all along. In Naked Innovation, concept creation is only as effective as the preparation that precedes it, and the evaluation and implementation that follows. Isaac Newton and the others from the Abbey would probably agree.

Equipped with an Innovation Intent, an understanding of Balanced Breakthroughs, and a set of Design Principles for your innovation, you can focus your efforts on generating new ideas (or extensions of existing ones) that will result in a solution that fits what the market (people, technology, and business) is looking for. You might work at concept creation as a team, in a classic ideation mode; try out different concepts yourself or with customers; or throw open the whole endeavor to the world at large (doing what has been called "crowdsourcing")—but the approach remains roughly the same:

- Align concept generation to your Intent and Design Principles
- > Gather as many ideas as possible
- Organize and connect ideas in ways that multiply their effectiveness

> **Try out** and select the best ones to work on further.

The last two part will be discussed in more detail in the next two chapters on *Prototyping* and *Evaluation & Decision Making*. For now, our task will be to load up on as many good ideas as we possibly can. We'll take it step by step. While we can't guarantee you a memorial plaque, we think we can increase the chances that you'll innovate with impact.

#### **Methodical Concept Generation**

You've already framed your concept space, and the easiest way to start exploring concepts is by using your Intent and Design Principles directly. Start with a blank sheet of paper (or blank computer screen—however you like to work) and put a single question at the top. If a Design Principle was "Provide social interaction on the train that enhances the commuting experience," then the question becomes, "How might we provide social interaction that enhances the commuting experience?" Focusing on that one issue, and drawing on the background knowledge you've developed through all your research, start setting down potential solutions. It's a matter of mixing your imagination with your experience; you might come up with things like:

- Hire train conductors trained like Southwest Airlines flight attendants to engage travelers with light banter
- Offer regular commuters assigned seats, by station, put them next to people from their own neighborhood day after day
- > On Fridays have a trivia contest on each car

You can probably come up with better ideas... the point is to keep at it, and focus on just one *How might we*? at a time. *How might we*'s can also be formed from Intent statements, includ-

ing the one about Risks, except that in that case, it becomes "How might we mitigate the risk of ...?"

You also can push your idea generation by looking at outside sources, whether they are analogous projects in related industries, or case studies of exemplary innovation that happened anywhere. Ask: Who else has tried to solve similar problems? A customer service innovation challenge can learn from the experiences of any company with significant public interaction—for example, one of our projects that involved a high-volume retail environment led us to look at the New York Subway system, and the ways they've streamlined ticket purchases.

Sometimes, randomized input can help—there are a variety of decks of innovation cards that can jolt your thinking by considering an entirely new way of thinking about the problem. You can also (temporarily) remove some constraints to explore more fanciful ideas, and see if they point towards something that you could realistically do: What would you do if money were no object? What would you do if you were trying to do the exact opposite?

Whether you tackle methodical concept generation with a team or by yourself, don't be afraid to suspend judgment. Don't even worry about how to execute the idea, or whether it fits with other parts of the problem—just try to get a lot of ideas down on paper. There will be plenty of time to develop them later.

#### Structured Ideation

Brainstorming has been around for more than fifty years, ever since an ad executive suggested that people working together could be more creative than people working alone. But much of what is called brainstorming today tends to be less effective—

elaborate offsite meetings that squelch day-to-day creativity on-site; too many people participating, with too many vested interests to try truly new directions; idea generation that results in flights of fantasy but few implementable concepts; timid variations on existing realities due to poor direction-setting or hasty, negative critiques. Too little structure, or too much, and the brainstorming session won't generate results that justify the effort of putting it together. By contrast, the process we describe below maintains a good balance between structure and imagination, is optimistic and far-thinking, yet focused, and in practice produces viable concepts with some consistency. We call it *Structured Ideation*, but it naturally draws on much of the best thinking about intentional concept generation (and we'll refer you to key references at the end of the chapter).

The first step is to think about who will participate. If you're working with an Innovation Team, they are naturals—they already know the topic, and probably have many nascent ideas already in their heads. You could also invite others who could bring additional, diverse points of view. Be sure to you've got people who are willing to play along and commit to the exercise. You may have to deal with people who have axes to grind, or who remember how "we tried the same thing three years ago and it didn't work." Help them understand the reason for the meeting and the context provided by your research, to keep them from impeding the flow of ideas. (By the way, if you can lend your copy of *Naked Innovation* to others in your organization, it can help put everyone on the same page about concept creation and the roles that people with different job titles and levels of responsibility can play.)

Perhaps the most delicate question is whether the boss should be there. In many organizations—even healthy ones—having a top decision maker present at an ideation session can subtly alter the feel of the room, and make people less willing to ques-

<sup>&</sup>lt;sup>1</sup> We learned the simple and powerful "How might we?" framing device from Chris Conley, professor at IIT Institute of Design and co-founder and director of gravitytank.

tion long-held ways of thinking. We often recommend that the project team work independently of the group or individual making decisions, until specific, well-developed proposals are ready. In the interim, if executive participation in idea generation is desirable (either for the ideas themselves, or for the sense of involvement that will foster uptake later—see Chapter 13), separate ideation sessions might be better.

Establish some ground rules with the **Ideation Guidelines** (see the box below). This should be a Bill of Rights that anybody in the group can refer to.

#### **Ideation Guidelines**

- 1. Align on Innovation Intent
- 2. Capture every idea—even the crazy ones
- 3. Be visual; sketch
- 4. Push for as many ideas as possible—quantity is more important than perfection
- 5. Build on each other's ideas
- 6. Evaluate later

Keep these guidelines visible while you are generating ideas—and give everyone present the right to refer to them as a way of keeping the group on task.

Guidelines like these have existed in various forms for more than a generation, but can be traced back to the 1953 book *Applied Imagination* by advertising executive Alex Osborn (the "O" in the legendary ad agency BBDO). IDEO has a similar set of brainstorming rules that have been effective over time. The version above is our adaptation of this collective wisdom, informed by our own experience and input from colleagues and clients.

#### Key Roles & Room Setup

A Facilitator will help keep things on track by offering ideation topics to the group. He or she can encourage participation from each person, but also sense when it's ready to move on. (If you're the facilitator, just be sure you don't let your personal ideas dominate!) If the group is made up of people who don't feel very creative, it may also be helpful to have a Sketcher capture ideas in a visual form as people share them—though we vastly prefer to have everybody sketch for themselves (it doesn't have to be art—just more than words). Both the Facilitator and Sketcher can stand near a large whiteboard or wall space, but it's also important for the rest of the group to be in a semi-circular arrangement, where they can clearly see and engage with each other, as well as the Facilitator and Sketcher, Make sure everybody has paper and pens or pencils. M&Ms are almost mandatory, too—don't blame us if you forget them and people tire out quickly.

#### Ideation Steps

The following practical stages for preparing and facilitating an ideation session are drawn on the work of Institute of Design Professor Vijay Kumar, as taught in his Design Synthesis class and Strategic Design Planning Workshop. That's where we learned much of what we know about structured ideation. Our thanks to Prof. Kumar, and to the classmates with whom we interacted as we were all figuring out how to apply this knowledge.

- > Set the stage. Frame the brainstorming session by briefly explaining the background of the project. This is not an elaborate presentation—keep it short! (5 minutes)
- Define the objective. Clarify what kinds of ideas the session will focus on—you might be only working on one portion of the overall project, for example. Your Innovation Intent document will guide you here. (5 minutes)

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- > Warm up (optional). We like do some quick and informal "Mind Mapping" to get things going. Identify some of the key components of the topic you're working on, and as people call out sub-parts, write them on the whiteboard in clusters, connected by lines. It can be loose and free-form—just get your minds working. (10 minutes)
- > Start with individuals (optional). The facilitator can introduce one of the larger ideation topics, and give people a few moments to begin thinking and sketching their ideas on their own. This gives everyone a chance to get some momentum going, without feeling a need to be first off the block with something brilliant. (10 minutes)
- > **Ideate as a group.** With open-ended framing from the facilitator ("How might we \_\_\_\_\_?"), the group can work together on the problem. As each person develops an idea, they can share it with the group. Conversation is natural, but don't get into evaluation—try instead to build on each other's ideas. (20 to 60 minutes)
  - » Capture ideas on concept sheets. Whether you're using a single Sketcher to capture each idea as it is shared, or having the idea originator sketch their own, be visual wherever possible—diagrams and stick figures are perfectly fine. Sheets can be posted on the wall, and clustered on-the-fly by the Facilitator, near related ideas. We like to use simple, printed sheets with a spaces for a sketch, a brief (two- to sevenword) description ("what it is"), and a brief list of essential functionality ("what it does").
  - » Generate many ideas. You'll get the most benefit from a concentrated ideation session by pressing on to

generate lots of ideas; don't stop to refine or embellish.

- > Combine and cluster ideas. As topics are exhausted and the session winds down, the Facilitator can help the group re-examine clusters of ideas, or to see ways that disparate ideas can reinforce or complement each other. Move the concept sheets around to build meta-concepts of several sheets taped together. (10 minutes)
- > **Highlight obvious winners.** The time-honored method to do this is with colored stickers or small Post-It notes: each participant gets a small number (three to five, usually) and can vote on their favorite concepts of the day. While this is not a definitive evaluation (that process is explored in depth in Chapter 12), it can help surface the clear winners—some of which might be so good, you'd want to start working on them right away. (10 to 20 minutes)

We've seldom seen a good ideation session last longer than two hours. Keep an idea on the energy level in the room, and make sure there are appropriate breaks—concept generation can be exhausting.

One last comment about structured ideation sessions: while we think they represent a critical opportunity to pool the emergent, collective wisdom of the team, you also should not expect all your ideas to surface here. Structured ideation should be used in concert with other intentional methods described in this chapter.

#### **Crowdsourcing**

Whenever you have more people working on a problem, the theory goes, you have that many more brains who could potentially run across The Answer. Instead of outsourcing concept

generation to a design consultancy, why not crowdsource—turn the problem over to a large group outside the initial innovation team. It could even involve the public at large, or at least whoever is interested in the topic. The Open Source software movement is a perfect example: people around the globe, connected by the Internet and united in their passion for solving technical problems, have created millions of lines of software that rivals or exceeds the work of Microsoft, Oracle, and others. Wikipedia is a another example—perhaps rough around the edges, but a far more robust and rich collection of content than could ever have been created by the handful of people who organized the project.

Crowdsourcing involves providing a simple statement of the project's background and goals (why not draw them directly from your Innovation Intent?) and then setting up a way for contributors to submit their ideas. Be sure intellectual property and compensation issues are very clear up front!

The downside of crowdsourcing, though, is that revealing proprietary research and technology can give your competitors a huge boost. (Which still may be to your advantage if you are creating a new platform.) You also may find yourself distracted by having to chase down irrelevant, non-aligned ideas from people who don't fully understand the challenge. Crowdsourcing is not easy to manage, but it is an emerging approach that shows some strong potential.<sup>I</sup>

#### **Gathering Emergent Concepts**

If all of the above has given you the impression that ideas can *only* emerge during a specific Concept Generation phase of the project, then we need to re-assert something we said in the Getting Started chapter (Chapter 3): you should always have a way

of capturing ideas that emerge throughout the project. Even from the very start of research, you may have a flash of inspiration, and you should try to capture that idea in a way that will make sense later on, so that you can measure it against your Design Principles, and weave it into connections with other concepts. A simple notebook (we like the slim Moleskine line, with its elastic band) can be a great place to jot down ideas on the run, but a more formalized way of recording concepts is important too. We often find ourselves using stacks of the same Concept Worksheets that we prepare for a ideation session, and then post them on the project board.

The lessons of successful group brainstorming also apply to the informal interactions your team may have here and there—and even with those chance encounters with people off the team. Telling the story of your project to a colleague in another department can reveal hidden essences that prompt one of you to say, "Hey, what if...?" Whenever you hear a phrase like that, be sure to capture the idea, build on it, and defer evaluation until you've had a chance to let the moment of inspiration run its course.

For most people, idea generation is always happening—sometimes at inappropriate moments—remember Archimedes running down the street, naked, having lept out of his bath in a "eureka!" moment about corkscrews? Even David Letterman is fond of saying that "there is no off position to the genius switch," so be sure to be ready in season and out of season to snag those ideas, wherever they come from.

#### **Filter through Design Principles**

You may also discover that a concept that seems to be just right doesn't actually fit with your Design Principles. That could indicate that you need to add a new Design Principle (or jigger them around a bit), or reexamine the Innovation Intent.

<sup>&</sup>lt;sup>1</sup> For a more complete guide, see Eric Von Hipple's *Democratizing Innovation* (The MIT Press, 2006), available as a free download from http://web.mit.edu/evhippel/www/democ1.htm.

Remember, innovation is iterative, and you need to give yourself permission to revise your initial plans, thoughtfully and deliberately, as you learn more about your innovation space and the people it will impact.

With whatever combination of concept generation methods you choose, try to continue developing ideas even beyond the ones that seem like they're the perfect solution. The pressures of today's high efficiency workplaces means each of us can be tempted to settle for the quick win. By starting with a lot of concepts, you may find not only even better solutions, but also system solutions that combine several concepts into something truly powerful and revolutionary. The chapter on Evaluation will show how to pick which ideas should be developed into marketable products or services.

#### Before You Go On...

Ask yourself a few questions, just for review:

- > Have we done enough concept generation? A trick question—you can always seek more ideas. But your structured concept generation phase can probably draw to a close when you've got more ideas than you can entirely keep in your head all at once—we mean three or four dozen or more, rather than just five or fourteen. You also should feel like there's enough good ideas to pursue that you have to choose carefully between them—that way you'll be evaluating between strong ideas, and not just picking the only one that isn't pitifully weak.
- > Have we covered the solution space broadly enough? Make sure you include concepts that anticipate a variety of ways your market might evolve in coming years. As we discussed in Chapter 6, we are big fans of the Scenario Planning method.

> What if we're stuck? Do something different for a while. See how others have solved similar problems—reason by analogy. If you're working on a customer service problem in the airline industry, look at how hotels address similar issues for a similar set of customers. It's probably best, though, not to look directly at competitors, since copying their strategies is unlikely to provide distinctive value within your industry.

#### RESOURCES FOR CONCEPT GENERATION

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MacKenzie, Gordon. Orbiting the Giant Hairball: A Corporate Fool's Guide to Surviving with Grace. New York: Viking, 1998.

Nalebuff, Barry J. and Ayres, Ian. Why Not? How to Use Everyday Ingenuity to Solve Problems Big and Small. Boston: Harvard Business School Press, 2003.

Yamashita, Keith and Spataro, Sandra. *Unstuck: A Tool for Yourself, Your Team, and Your World.* New York: Portfolio Trade, 2007.