

BBVA

Designing Radical Innovation

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THE INNOVATION IMPERATIVE

The world is changing: customers, consumers, constituents—the users of our products and services—are now in control. Users are more discerning, they have more choices and are more comfortable exercising these choices. Users are demanding that products and services work for them in the fullest sense: that their total experience is as good as it can be. Organizations, companies and even governments are finding that they have to address the demands of their users, and do so with an unaccustomed urgency. If they do not, their users will exercise their choices and change brand, change behavior, or change their government. This is the innovation imperative; we cannot rely on momentum in the market to protect us. Customers, consumers and constituents have learned how easy it is to change, and so we have to make sure that we are always providing the very best experience to stay ahead of their expectations.

What are the forces driving this change? The prime movers are communication technology and the rapid growth in new markets. Communication has fueled the growth in democracy from the fall of the

Berlin wall, to the ascendancy of democracy in Latin America, to customer reviews on Amazon.com. When people can see alternatives they make choices. And following the frontline of democratic change has been the baggage train of growing consumer markets as citizens became empowered and resources were redistributed more equitably and more productively. At the trivial end of the democracy scale, communication has made it possible for citizens to choose not only their government, but also the winners on American Idol, Britain's Got Talent, or *Tú sí que vales*. No longer are our stars chosen by record industry executives or an elite panel of judges, or in a long, painful process of working their way up. Today we get to choose them real time, live. We are becoming used to the idea of exercising individual choice, expressing dissatisfaction with the status quo, and expecting an immediate response.

Communication also fosters technical parity; it is easier to learn, to track what others are doing, and to copy. MIT has made available the best technical lectures in the world to everyone with a broadband connection, free. In China we are seeing knock-offs preceding the original brands to

the market. Today, there is little difference in the chips in our computers, in the engines in our cars, or in the ingredients of many of the foods we eat. Since the ingredients are the same, it is what we do with them that differentiates the experience of the product or service. We have to broaden what we deliver to be a more complete solution, or risk becoming just a supplier of commodity components in the global business ecosystem.

And, of course, our increasing ability to communicate has had a direct impact on how people spend their money. As a species we like to communicate. We get pleasure from talking with others and sharing the stories of our lives, and over the millennia we have learned of new things through word of mouth. Social networking tools have expanded this process over the last couple of decades. These tools greatly increase the network of advisers who tell us what we could be experiencing, how to get it, and the best offers out there. An increasing part of our monthly budget is spent on cell phone service, broadband, smart phones and other communication technologies. More of our products and services incorporate communication as an integral part of their experience; for example automobiles are now communication centers with satellite radio, cell phones, navigation systems, etc. And when we buy music or books, seeing how others have reviewed them is an integral and valuable part of the buying experience.

In parallel with increasing communication has been the growth of two extraordinary new markets, Gen Y and Emerging Markets. Gen Y—broadly speaking people born between 1980 and 2000, have grown up in a time of mostly peace and prosperity, of pervasive communication and of low-cost computing

technology—for them this is the norm. They are a large population, 80 million in the US and over 100 million in Europe. The old models of music, automobiles and banking do not work for them; they have different expectations. Not all young people in the US aspire to owning a car the way their parents did, and when they do buy one they care as much about communication and entertainment as horsepower. In addition to leading the adoption of many new specific digital and social products, they are also driving the integration of digital tools and social networking into everything else—the integration of the physical and the virtual. To hark back to an earlier time, it was not the plastic product that was revolutionary; it was the plastic in everything. Each generation establishes its own norms of material expectations and lifestyle, and Gen Y is now defining the new middle class.

Globally the *growth* of the middle class is primarily an emerging market phenomenon. Each year about 70 million people enter the middle class in emerging markets—about the population of France. As these populations become consumer societies they are adopting many of the same expectations as North America and Western Europe, albeit with local variations. And even amongst people who are not yet middle class we can see the effect of new communication technology changing behavior. In Peru, one of the poorest countries in Latin America, frequent use of the internet extends down to level C. And ask teenagers there what would they would do if they were given a Sol and they will probably tell you they would head to a nearby internet kiosk to chat with their friends or check out what is happening on hi5.com. The Gen Y population in Latin America is approximately 200 million, and in India and China even larger with approximately

400 million each. These populations dwarf those in North America and Western Europe. They are so large that the preferences of Gen Y and emerging markets are no longer the tail of the consumer dog, they are the dog and North America and Western Europe are the tail. When the dog wags its tail established markets are shaken. We have seen this already in consumer electronics; companies based in what just a few decades ago were emerging markets have taken the lead, Sony (Japan) eclipsed Zenith (US), Samsung (Korea) is in the process of eclipsing Sony, and LG (Korea) has set its sights on overtaking Samsung. Meanwhile, fast followers in China are pulling out into the passing lane.

DESIGNING RADICAL INNOVATION

What do we mean by designing radical innovation? To innovate is to change something established by introducing new products or services, new processes, or new ideas. By radical innovation we mean that the change is fundamental; it is not the same thing only shinier, it is a complete reset of the customers' experience or a completely new business model. By design we do not mean a drawing to show how something looks; we mean the purpose and the plan for the innovation. Design is the deliberate process for purposefully creating the new.

Our motivation for designing radical innovation is not that we want to be radical for its own sake, but that the situation calls for it—the innovation imperative is radical. There are now so many points of connection between smart people, new technologies, and ambitious businesses that it is inevitable that innovation will happen somewhere in the business ecosystem. Increasingly, consumers, customers and constituents are taking control and innovating for themselves¹.

Our challenge is to help our own companies to benefit from change rather than become a victim of it. How does a company deliberately see what's next, recognize how they can profit from it, and then move their organization to lead the change?

This is difficult to do. For many businesses, innovation has not been a central part of their strategy. Successful businesses can be based on the continued exploitation of some earlier innovation, and focus on narrower goals of cutting costs, improving quality, building distribution, and promoting sales; generally tightening control over operations. It is only when there is a disruption, such as a new or reinvigorated competitor, that innovation becomes important again. The trouble is that by then the organization may have lost the ability to innovate. The trick is to learn to innovate before you are cornered.

Innovation requires loosening control. The essence of innovation is that you do not know in advance what is going to emerge, so the organization cannot define and control the innovation process in the same way it does everything else. The only rules are rules of thumb, and the organization has to put its trust in an unknown outcome. To make matters even more challenging for the business leader, it takes time to find the business value in innovation, and then time to communicate the innovation plan to the larger organization, and then more time to execute it. Radical innovation has a longer-term cadence that does not play well with quarterly reporting cycles

Successful innovation requires the careful evolution of new ideas. If we try to innovate too quickly we end up with ideas that merely reflect the current needs of consumers. The ideas will be liked today, but if they do not stake out new territory

¹ Eric Von Hippel, "Democratizing Innovation," The MIT Press, 2006.

in the minds of consumers they will not be distinct enough to be owned in the future. For many organizations it is difficult to get the pace right. They have learned to make decisions at the end of every meeting. This is great for efficiency and showing clear leadership, but not so good for nurturing new ideas. On the other hand, going too slowly is just as bad. If the project is not on a 'critical path' it becomes a second priority, part time project that risks suffocating any last traces of creative potential. The trick lies in pacing innovation so that it fits into that magic creative window of opportunity with enough time to allow ideas to percolate and enough urgency to keep the team motivated.

Innovation is counter to many of the business processes instituted in the drive towards six sigma quality, and the people who are most capable of catalyzing innovation in a company may be outside its traditional structure. To learn how to innovate, many companies are working with outside groups experienced at thinking differently—a stimulus to jolt the system into a new state. Often, these outside groups include designers, whose processes and perspectives offer distinct advantages.

Why is the design process good for managing innovation? Designers are innately motivated by the "new"; that is why they are designers. They have a complementary mindset to the "control" prevalent in most large companies. More than any other discipline, designers are naturally comfortable with abductive² processes in which creation precedes analysis—the knowing is in the leaping. Their "new" muscle is well developed; throughout their training they have been challenged to create ideas that are new and to communicate them to others so that they can then be critiqued and evaluated. Over the last

fifteen years designers have also learned to develop stronger customer empathy through ethnography and other techniques for immersion in the lives of the people they are designing for. As our economy migrates from being about just products to one that trades in broader experiences, designers are able to use their customer empathy to deliberately craft the emotional journey that is an essential part of experience innovation. And in interdisciplinary design, firms and department designers have learned to collaborate with like-minded engineers and business people and develop strong critical thinking skills. In parallel with the development of the innovation capabilities of individual designers, we have also developed a well honed "design process" to provide a structure for the leap into the unknown. This process is not difficult to learn, but the social and personal dynamic that supports creativity, customer empathy and collaboration is difficult to enculturate.

INNOVATION DESIGN PROCESS

There are four essential elements in the process of how radical innovation is successfully designed and deployed. We call these elements of the process rather than stages because they occur simultaneously, not necessarily sequentially—innovation is an on-going integrated process. You can think of these elements as four different spaces in the organization.

1. *Executive Space*

The first element is at the executive level of the organization. It is how you acknowledge the need for change, accept that you do not know yet what that change will be, and prepare the organization to embark on a process of learning what to do and then executing in accordance with what it learns.

² Roger Martin, "The Design of Business: Why Design Thinking is the Next Competitive Advantage", Harvard Business School Press, 2009

Challenges at this level are that there needs to be a continued focus on executing the current strategy at the same time as the organization is learning what to do next, and often these will be in conflict. As the great American novelist F. Scott Fitzgerald wrote, “The true test of a first-rate mind is the ability to hold two contradictory ideas at the same time.” In navigating change you need to manage both what is right for today and what will be right for tomorrow, and continue to remain open to completely new ideas that are not even in the framework of your current thinking.

You are asking your organization to commit to embarking on a journey without knowing the final destination.

2. Consumers, Customers, Constituents Space

The second element is how you immerse your organization in the lives of its consumers, customers and constituents. The organization is to search for new solutions, not inwardly as experts, but through the lens of its users. Your team will be conducting research as if they were anthropologists visiting an unknown tribe. The purpose of the research is for the team to be able to empathize with users and to help the team to create from the users’ point of view (see sidebar on customer research).

Challenges at this level are that users probably do not know what they will want in the future so you cannot abrogate your creative responsibility to them; your job is to create for them. Ideas that come out of this research are provisional and their validity is not knowable until they have been envisioned and modeled in a prototype form that can be tested.

You are asking people with the least formal power in the organization, not executives or experts, but users, to direct its destination.

3. Project Space

The third element is building a team to lead the process, evaluating it to make sure that the innovation is right, and deploying it so that it can be executed by the larger organization. A radical innovation team will comprise a range of people with complementary skills, disciplines, and mindsets. It should include people who understand well the constraints that the business will have to work within, and should also include people who do not see any constraints at all. The team needs a strong leader who has the confidence to listen as well as to make decisions; the leader should listen carefully to what the team is feeling even when they are obviously wrong. High-performing teams take advantage of communication technology to work remotely, but are collocated for much of the time in a dedicated project room.

A challenge at this level is that you are asking a team of people to completely focus on one thing—the future—for a long time. In that time they will become distanced from the main part of the organization that they will need eventually in order to execute the innovation.

You are asking a scouting team to make a long commitment to find the way for the main organization.

4. The Prototype Space

The fourth element is the prototype space where you model and evaluate a range of ideas to learn, iterate and refine the innovation. Great ideas with small flaws fail; details matter. The prototype space is how you get the idea right. It is also how you help the rest of the organization to understand what it is that you are going to do, and enlist their support.

Learning from customers

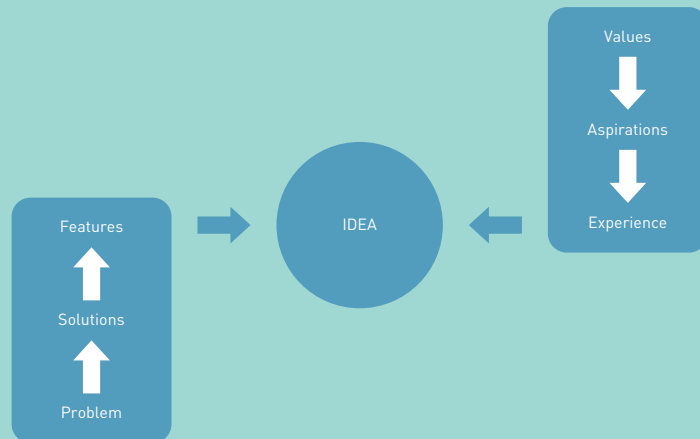
The inspiration for innovation can come directly from watching or listening to people, but often we have to reflect deeply to find the meaning in the research that has been hidden from us in its simplicity or familiarity.³

We immerse ourselves in the lives of people—consumers, customers, constituents—in an open-ended way, acknowledging that not only do we not know the answer; we do not even know the question. We must watch and listen to people to learn from them how our organization can help. We need to unlearn our vocabulary, and learn again the words that people use. We want to uncover the issues that concern people, unaided and unbiased by our preconceptions.

To do this we typically spend one to four hours with about seven people per segment. We watch them in their context; their home, work, hospital, on the street, in a store, or whatever is the relevant context. We engage them in a conversation about their lives.

Of course, such a small sample cannot be used to infer proportions in the population, but we are looking for issues that are important to most people, and you are unlikely not to uncover these issues if you have a sufficiently in-depth conversation. Remember Newton: the story goes that an apple fell on his head as he was sitting under a tree, and from that stimulus he came up with the laws of gravity and a theory to explain the motion of the planets. He did not sit under a thousand apple trees; he used that time to think instead.

So how do we think about what we learn from customers? We look for two types of information. The problems they have; can we think of a way to solve their problems? And their values that make them want to participate in a category in the first place: can we create an experience that speaks to those values? A great idea is one that combines features that solve problems in an experience that speaks to people's values.



³ Apologies to Wittgenstein

Swiffer

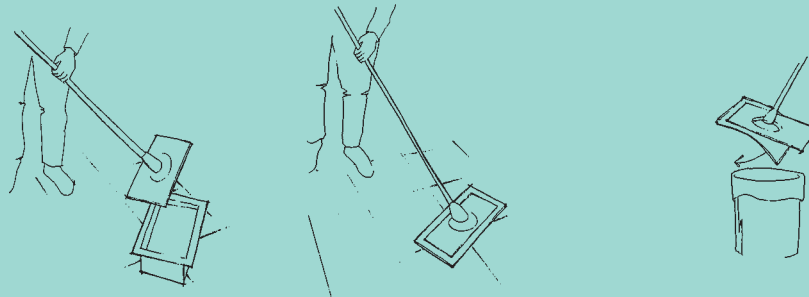
Rethinking the everyday

In 1994 Procter & Gamble was looking to grow through innovation. Craig Wynett, Director of Corporate New Ventures asked, "Is there a better way to clean a floor?" The answer to that question not only reinvented how we clean floors, but also changed how we think about the role of design in driving business innovation.

A joint team from Continuum, Northlich Stolley, and P&G set out as design anthropologists to watch how people cleaned their kitchen floors. We noticed that most people swept their floors before they mopped and they had to assemble a system of products to get the job done. We noticed that mops worked mostly by the adhesion of dirt to the mop and that people seemed to be spending almost as much time rinsing their mop as they did cleaning the floor. We noticed that people wore old clothes when they were cleaning because it was a dirty job, and we could not help but notice that sometimes people had cleaned their floors before we got there, because they did not want us to see them cleaning a dirty floor. People were concerned about the cleanliness of their homes.

Out of watching those 18 women in Boston and Cincinnati (yes, they were all women, tsk, tsk) emerged an idea that we affectionately called "a diaper wipe on a stick" and that in consumer testing we called "Fast Clean". When we first showed consumers the concept for "Fast Clean" they did not like it because they did not believe that it would clean well and they thought it would be expensive. We made a working prototype, an experiential model, to communicate the idea. Once people had experienced using "Fast Clean" they were sold.

It took several years to go from the first sketches and prototypes to launching what we know as Swiffer, but it is now one of the most successful new products that P&G has ever launched with sales of over \$500 million per year. Swiffer succeeded because it is not just a new mop or a new broom, but a completely new and seamless home cleaning experience. It solves the technical problems people encountered cleaning their floor, by making the process quicker and cleaner for them, and it spoke to people's value for the cleanliness of their home.



Insulet

Launching a new business

Insulin pumps are the most effective tool for managing diabetes because they closely mimic the function of a pancreas—delivering a constant stream of insulin to the body. The Insulet Omnipod is the first discreet, disposable, human insulin pump and has launched a new category.

Prior to Insulet the stakeholders in diabetes care—the patient, doctor, and insurance company—often advocated multiple daily injections instead of a pump. Patients struggled with technical issues: pumps were complicated, confusing, and uncomfortable at the injection site. Insurance companies were wary of the up-front costs associated with buying pumps, which were often abandoned. Doctors found pumps too complicated for patients to use effectively.

But the biggest barrier was an emotional one: unlike injections, a pump and its tubes broadcast to the world that the user had diabetes, and technical constraints prevented the user from showering, swimming or sleeping while wearing it.

Insulet, a small VC funded start-up, partnered with Continuum to systematically solve these problems. Together, we developed a pump system that was not just a medical solution for patients, but a human solution for people.

The OmniPod is the first wearable insulin pump that attaches directly to your skin. It is small, low cost, and disposable; after three days you simply replace it with a new one. It reduces pain by automating the insertion of the cannula into your skin. It is easy to use: instead of buttons on the pump, it is controlled wirelessly using a handheld device that looks like a cell phone. The wearable pump provides complete freedom—you can shower, swim, and sleep wearing it. And it is discreet—there are no tubes; managing your blood sugar looks like you are texting a friend. It is a completely new healthcare experience.

Each one of these breakthroughs is a revolution in diabetes care. Bringing them together was a business breakthrough. Doctors prescribe Omni-pod because they have confidence in its simplicity and efficacy. Insurance companies support it because its costs are distributed over a 2-3 year period. Users want it because it gives them back their freedom and privacy.

Working as Insulet's user research, product design and engineering development team, Continuum partnered with Insulet for 3 years through initial 510k clearances. Insulet launched the OmniPod and completed an initial public offering of \$116 million.



Spence Diamonds

Helping people to make a lifelong decision

Choosing an engagement ring is a big decision. Spence Diamonds is the largest diamond retailer in Canada and their business depends on helping people through this process.

Talking with customers in-store and in their homes we heard their anxiety about cost, style, and about making such an important decision. After all, it is not just a diamond; it is a commitment.

We choreographed a new sales approach that is more self-service so that customers can manage the pace themselves, reducing anxiety and freeing up staff to engage later in the process when their expertise is most needed. We designed breaks into even this last part of the customer journey for our happy but anxious couples to talk in private; sometimes good service means stepping back. There are also moments when the brand should step forward to share its expertise and to take some responsibility in the decision. Based on what we heard from our customers we instituted a new, simpler language supported by professional tools to give customers the serious information they need to make the right "investment" decision. This new sales process was executed through the design of the retail environment, crafting of collateral and fixtures, and training for employees.

The net result is a better way for Spence Diamonds to help their customers that goes beyond traditional one-on-one customer service, enabling Spence Diamonds to continue to expand their business and to support their customers in the right way.



A challenge at this level is allocating the resources to build experiential models that will enable the learning and refinement needed before committing to launch. It is sometimes easier for an organization to commit resources to a specific idea even if it is not right, than to fund the open-ended exploration of the right idea.

You are asking your scouting team to show the rest of the organization where they will be going by building a facsimile of it in detail.

These four essential elements in managing radical innovation are linked by the project team, but cannot be the responsibility of the team alone. Without executive support they will become disconnected from the mission of the company.

DESIGNING EXPERIENCES

In the process and examples just discussed we have turned convention on its head. *Radical innovation design* asks first, how can we make the experience of our customers' lives better? And then only second, how can we use this to drive business innovation and support the needs of our company? This is counter to a conventional approach that starts with the opportunity for the firm and then looks for ways to make it wanted by customers. Even among sophisticated companies that are espousing customer centricity, it is the day-to-day language spoken by executives and written in presentations that demonstrate whether or not they are truly thinking about the future from their customers' point of view, or just trying to be more sophisticated in how they exploit them. To be clear, we understand the needs of business and our motivation is not altruistic or philanthropic, but we have seen how companies that benefit consumers the most succeed the most. The way to business success is

“*Radical innovation design asks first, how can we make the experience of our customers' lives better? And then only second, how can we use this to drive business innovation and support the needs of our company?*”

through a relentless focus on the good of the consumer.

The change we are going through is a self-reinforcing cycle. As consumers, customers and constituents experience a better product or service their expectations ratchet up and they continue to look for what is even better. Furthermore, people have learned to transfer their expectations from one category to another: *If it is so easy for me to buy music online, then why can't I buy shoes the same way? Don't tell me reasons why it is difficult; I don't care that music is digital and shoes are physical; the cost of shipping is your problem; I have no respect for the former hierarchy in the shoe industry and will go with whoever solves this problem for me.* Today, Zappos.com is a major US shoe retailer with sales of over \$1 billion a year. A big part of their success goes beyond just the shoes themselves: Zappos offers free shipping, free returns, and is constantly looking for ways to interact more with their customers through their website, by phone, or through social media.

As a result they have become widely known for their great customer service and have a very loyal customer base. Zappos has created what for many people is a better shoe buying experience.

Putting customers, consumers and constituents at the center means we consider the total experience of the user. Consumers improvise their experiences out of the products and services available to them; they make choices from available alternatives and substitute one for another. By designing better and more complete experiences we give the consumer bigger building blocks to construct their lives, which makes it simpler to construct richer experiences. We reduce the need for the consumers to improvise, and make it less necessary for them to consider different options. Taking responsibility for more of the total experience of the user is in the best interest of the firm because in a world of technical parity products are easily copied, but a seamless customer experience is more difficult to imitate.

Experiences are more personal and emotional than products. Designing experiences means we need to be attuned to local nuance. As corporations developed global businesses, they moved from locally designed products to globally distributed ones. We are now in the process of transforming again to “globally local experiences” that are customized to the specific needs of each group of local consumers.

We are nothing but the experiences of our lives. We want these experiences to be as good as they can be, and we want them to be validated by others. As users—customers, consumers and constituents—we are becoming accustomed to being in control and are demanding the right experiences; the simplest experience,

“By designing better and more complete experiences we give the consumer bigger building blocks to construct their lives, which makes it simpler to construct richer experiences”

the most reassuring experience, the richest experience. Some experiences are seemingly trivial, like cleaning the floor; some are life changing, like managing diabetes; and some are emotionally charged, like buying an engagement ring; but together these experiences add up to the whole of our material lives. Each part of the human experience deserves our respect and should be designed with care. As a result of advances in communication technology and increasing globalization it is now possible to think more carefully than ever before about each element of our experience and to amortize the design cost over ever larger numbers of users. As designers we are privileged to be able to use our talents to help people in this way.