Interview with Theo Forbath
Global VP Innovation
Frog

Theo was the Global Vice President of Innovation Strategy at *frog* (formerly frog design) from 2009 to 2014, and is moving on to his next adventure in helping companies transform their products, services and businesses. Theo is an expert in managing product innovation, business strategy and global collaboration. For the last 20 years, Theo has assisted leading technology vendors, service providers, multi-national corporations, early stage startups and NGOs in developing successful product and service strategies, transformative business models, and innovative go-to-market plans. Currently, much of Theo's work focuses on the third wave of computing, helping clients identify and capitalize on new revenue opportunities in the post-PC, post-TV world of the Internet of Everything. Theo can be reached at theo@forbath.net

Interview conducted by Doug Berger, Managing Director, INNOVATE doug@innovate1st.com

Doug: frog is a leading design house. Would you sketch out your core business?

Theo: frog is not only a leading global design house, but one of the largest and now oldest firms focused on designing convergent experiences across all of the physical and digital touch points that our clients have with their customers. We design products and services that bring together both our industrial and digital design expertise with our insights into user experience, technology and product strategy. Over the last 45 years, frog has remained true to our heritage. We were founded in the Black Forest of Germany in 1969 by one of the great industrial designers of the 20th century, Hartmann Essinger. Hartmann grew up with his feet in the Bauhouse movement of design, predicated on the idea that form follows function. Hartmann was a futurist in realizing that form will not just follow function as we go into the second half of the 20th century and now into the 21st century, but form will follow emotion.   Everything that we do at frog is predicated on this idea.   We start by understanding the human experience, along with unarticulated or unmet needs when we work with our clients on a new product or service design experience.   We work extensively in applying innovative design approaches across various industries.

Doug: When people speak about innovation, implicit is product innovation. frog has taken a broader definition of innovation. What are the intersection points between all of the different forces that constitute true innovation?

Theo: Established companies are being challenged by upstarts that are combining exactly what you alluded to - new business models with new technologies with new user experiences. Those become the three catalysts. When companies get those right

in tandem, they often have the opportunity to disrupt a very well established company. Uber is not just addressing what many would think of as a broken system for getting taxis in large cities, but it is reinventing and creating an incredible experience for passengers and for drivers. Drivers no longer have to worry about whether they are going to get paid. They know in advance by other drivers how someone they are picking up is ranked, as a friendly person or not. For passengers, they can see exactly where the car is in relation to them, how long it will take to get to them, and how other passengers rate the driver.

It is important to point out that waking up every day thinking you are an innovator or part of an innovation team or an innovative company, you have to be willing to fail. Innovation in and of itself is about risk-taking. Successful companies that grew up in the 20th century and became leaders in their industries have become increasingly risk averse in the 21st century and because of that they will be the ones being disrupted by the Ubers.

Doug: Readers have grown a little tired of hearing about disruptions in the purely digital and social space. Companies making and selling physical goods do not see applicable lessons learned.

Theo: GE has been a leader in the jet engine space for decades and they wanted to make sure that they could keep their competitive edge. They are now hiring a generation of engineers who do not know that RTFM stands for 'Read The Friendly Manual'.   They needed to come up with solutions that allowed for the next generation of maintenance workers and engineers to quickly and preemptively troubleshoot what is happening on an engine, and even begin diagnosing potential problems. We worked with them on an idea for 'My Engine App' that provides real time diagnostics as well as historical insight on any engine.

Doug: Please give us other examples where new digital technology has become an enabler of more traditional product and service oriented businesses.

Theo: A financial services company was a leader in servicing high net worth individuals in Singapore and wanted to go into India. Singapore is a small island city-state and they could afford to open a branch on almost every street corner. India is country with one of the fastest growing upper-middle class populations in the world. How could they tap into this vastly different market?

First we framed this opportunity as a design research challenge. "What do people in India want from a bank as they become high net worth individuals?" Remember, form is going to follow emotion.

Doug: What did that look like as contrasted with their traditional business and the emotional needs in Singapore?

Theo: Their historic business was very relationship oriented. Clients would go into a branch and sit across from someone they knew by name who would work with them in making decisions about their investment portfolio. India is much more an online culture so the bank needed to create trust and engagement with people from an online experience.   They had to develop a set of engagement models to take the customer on a journey as they worked with them.   First was to build awareness about their products and services with the right messaging based on a customer's location and peer social connections. The time of day had specific implications on the kind of services they wanted. Then the design of experience would quickly get the consumer to a point of relevant content. Over time the experience would improve as the company gathered demographic and usage patterns.

Doug: So a core disruptive insight was that high net worth people in India were not looking for long term personal relationships but were looking for an online experience. If somebody were to look only through their traditional lens they would never quite understand that emotional unmet need.

Theo: Yes. They wanted a very different type of experience and they were very comfortable with it.

Doug: Let's shift gears now and talk about medical devices.

Theo: We are now living in the connected world and this has huge opportunities and challenges in the healthcare and medical space, for example, developing products that help people age and live longer independently. You can enable them with simple monitoring solutions that were not necessarily designed to be used for the elderly. Things like 'FitBit' are being used in what is broadly called the 'quantified self-movement' to allow for caregiver involvement and for family and friends to have a channel into the activity for an elderly member of their family.   They can offer real-time encouragement, reassurance, and support.

          Leading pharmaceutical companies are working on Ingestible Event Markers (IEMs), which are sensors that you swallow in pill form with medication. They dissolve in your stomach with no adverse reaction and send a digital signal that the medication has been taken. Caregivers know that you are taking your medication. The patch can also track the temperature and the moisture of your body and that the medication is having an appropriate reaction.

Doug: If you were giving advice to people making medical devices, or medications, or industrial equipment, what would you tell them are potential disruptors with which they should be minimally conversant?

Theo: I think about them in four broad categories. The first is that within 5 years everything over $25 is going to have a sensor and/or a communication stack attaching it to some network. Some companies like Cisco put that number at billions of sensors coming online in very short order.

          Then, there is a whole set of implications that we can dig into as a result of these billions of connected *things,* but a very important one is all of the data. It's what I think of as the digital exhaust from these devices. All of that data is going to become the new digital oil and there's going to be a wealth of insight, information, and knowledge that could be gleaned from that. Those companies that are already investing in data analytics will have distinct advantages, regardless of industry.

          Another category centers on the way we live in a multiscreen world. The first screen has shifted from either the TV or computer to the one that we carry around in our pocket all day. The implication of mobile means information at our finger tips all the time, anytime, anywhere. Today this is the screen that is constantly interrupting our physical lives, and we constantly have to babysit these devices. Everyone is an analyst, a critic and a reviewer whether you are working in a consumer or B2B environment, whether you are a doctor or a lawyer, a business person, retailer or a manufacturer.   People get information from other people who are your customers, or who used to be your customers and are going to your competitors. Your brand is no longer about your slogan or your logo, your brand is about how you choreograph the experience that customers, employees and partners have with every touch point in your business.

The last one I call a sea change in the cost of technology. Technology is going through an incredible de-capitalization, and we are not anywhere near done with that. Products are being transformed into services. That trend is only going to accelerate and you can already see for businesses that are just starting up how they have an incredible competitive advantage because they don't have that entire legacy infrastructure.

Doug: When we are talking about commercializing bold innovation, it is obvious that if I am going to commercialize something in the digital arena, I can get to the market really fast. I could test things rapidly and my cost of failure is very low. Now I am going to commercialize something with a strong newness factor but it is a medical device or industrial equipment and the cost of development is non-trivial. The cost of regulatory approval is non-trivial. How are companies beginning to stage development, beginning to shift the way that they financially evaluate these bolder innovations?

Theo: A key tenant in that arena is around modularity and future proofing. We think around three broad phases: discovering new markets and opportunities, aspirational design, and designing for execution. How do you design solutions that allow for future proofing? So today you may use RFID technologies but you want to be able to swap it out for Near Field Communications (NFC) within the next three to five years. Therefore you design and architect complex solutions that allow for the ability to upgrade components without having to upgrade the whole system over time.

Doug: When you are dealing with newness that is an enabling technology one can somewhat reliably predict the lines of evolution. How are you helping companies to resolve early whether or not that newness will result in a business worth building?

Theo: I have a set of tenants around innovation. One is about taking the time to really know and understand the needs of your customer, prototyping quickly and getting feedback often. We worked with one client, 'Touch Tunes', a digital jukebox company. Next to iTunes, they are the largest channel in the world for selling digital music. We all remember playing jukeboxes when we were growing up. There were a number of companies trying to play in this space, but Touch Tunes came to us to co-innovate with them. I just worked with Harvard Business School to write a case study on this. The key part was having a prototype early on and going into bars and restaurants and understanding what would get the next generation of young drinkers interested in a digital jukebox. This is a gaming generation. This is the Facebook generation. This is the generation that is empowered to say "If there's not an app for that, then I am going to write one."

We used gamification coupled with a really intuitive and fun user interface to allow people to go up to the jukebox and look for music using the swipe of their hand. If they just got to the bar and saw that there was a long queue of songs ahead of theirs they could pay extra to have their song come up next.

Leaders in industries today are not just making products or services. They are making platforms. The platform becomes the foundation for ecosystems of other partners to drive revenue and build businesses. Touch Tunes is a great example of this as bars and restaurants could use the Touch Tunes platform to bring a live concert into their venue. Touch Tunes runs Halloween costume contests around the United States. People can use the Touch Tunes platform like a photo booth. It is also a karaoke station. The ability to prototype and test often and early and to future proof has applicability in all industries.

Doug: Where has frog's approach evolved over the past several years as you have learned from your experiences and failures?

Theo: Large organizations are not designed to foster interdisciplinary teams innovating together. That is challenging for a company like frog that has built organizational teams around multi-disciplinary collaboration. It is not easy to bring together the right stakeholders and have them work together with us. It is often a challenge for us to bring together the right decision-makers at critical points in the process, especially when we are being asked to innovate an entire business model.

           What makes so many of these experiences so innovative, delightful and compelling is that companies are beginning to understand the importance of contextual awareness. They have much more information about the user, about the use cases, about what the user is trying to do and where the user is. So it's about building trust and becoming what I call a listening organization. It is not easy to actually listen to your user and understand how they want you to use that information. But this is something that companies really need to understand, otherwise they're going to experience a backlash from customers who are not comfortable with the amount of personal data that a company maybe capturing or using to tailor personalized experiences.

Doug: I think of failure as two kinds. There is the outright failure where you not only got the particular offering wrong, but you completely misjudged the market.   I would look at Cisco buying the flip camera phone or HP introducing its tablet. Then there is a different kind of failure where a particular offering either doesn't meet the need or cannot manufacture at scale to make money. I think of these as the experiment failed, however the arena that we were looking at is still very promising.   Could you speak to your different views of failure?

Theo: This is an area that I'm particularly passionate about.   I call it the realm of intelligent failure and how to design organizations that are innovative in the way that they learn from their failures. That intelligent failure gives birth to new ideas and new business opportunities.

           In terms of the HP tablet, I think HP just completely underestimated what it would take to commercialize a viable alternative to the iPad. If they had been willing to understand the broad range of industry specific use cases that still haven't been solved for tablets, they could have had a very viable business. Think about the UPS driver or someone on a shop floor - they all need tablets but no one has given them that rugged tablet that is also water proof, drop proof, shock proof, etc.

           Recently, Nike made the decision to stop manufacturing the 'FuelBand'. Nike was one of the first movers in quantified self-movement. Low and behold, just a month or two ago they disbanded the whole organization.

           I think there were some real shortcomings and opportunities that they missed out on. Imagine if as they collected all of that information about how active I was as a Fuelband wearer, and then started to send me invitations to Nike running events in my town. That's where Nike didn't think it completely through. They got the new technology right; started to define a new set of user experiences right; but nobody really explored what the new business models could be for Nike to form a deeper ongoing digital and physical connection with its customers through the Fuelband.

           Had they, in terms of bringing together like-minded athletes in the community and doing Nike sponsored events, they would have gotten huge participation because these are already Nike evangelists. They were wearing their clothes; they were wearing their logos; they were wearing their sneakers. They wanted to wear these

cool new connected devices. Nike had all of this digital data about their most enthusiastic customers and they didn't do anything with it.   They proved that there was a serious market segment that wanted wearable devices like the FuelBand, which provided meaningful data.

Let's jump to another one - Google Glass. I don't think anyone would call Google Glass a wild market success. I think Google considers it a success because Google was able bring to market something radically new and demonstrate to both the consumer and the business world a huge potential that no one had tapped into yet.

Doug: Glass is an example of Google looking at this as a huge platform. And of course at the same time, Google can afford to underwrite certain kinds of technology experiments in the market for a number of years that a lot of other companies don't have either the capital or the appetite to underwrite.

People do not come to frog for you to tell them that there is a good chance the project we are going to do for you might to fail. People do come to frog for you to create designs and run market-based experiments. Then an outcome could be intelligent failure.

Theo: Yes. We do tell clients that the design experiment might fail but we want that to be an intelligent failure that leads to insights, ideas and other commercial opportunities.   We have had clients work closely with us on designing, prototyping and market testing innovative product and service concepts only to learn that they are not going to be successful. Clients still view these engagements as worthwhile, as it can often mean that we have helped a company avoid years of investment in time, effort and resources to launch a product that no one wants to buy.

I say to clients that we should rename failure, and instead call it experimentation. To overcome the psychological and organizational barriers to project failure, managers can re-cast failure as 'progressive experimentation'.   The leap from recognizing that there is value in failure to transforming a company's culture to capture that value is not an easy one. In the end, progressive experiments allow companies to advance toward a marketable product or service in manageable increments that enable rapid course corrections at a lower cost. Who wouldn't want to encourage more of that?