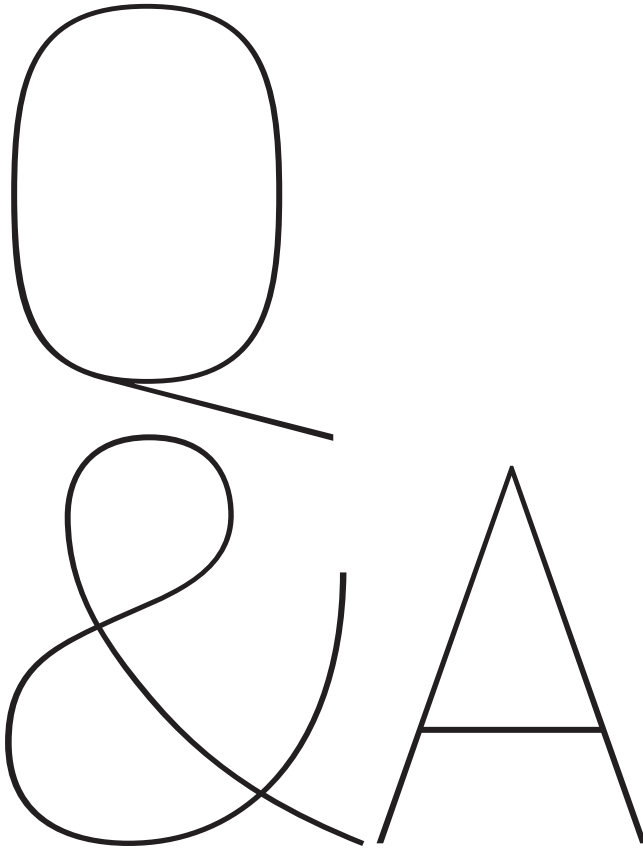


//// Questions for:
Beth Comstock



GE's chief marketing officer discusses the **importance of imagination** to her company's future.

Interview by Karen Christensen

GE's infrastructure, finance and media businesses operate collectively under the 'imagination at work' banner. Why did you decide to make imagination so synonymous with your brand?

To create a strong brand, you need to focus on something that is broad enough that it can resonate in different industries and with various different kinds of customers and employees – a unifying theme that pulls everyone together. About a decade ago, right after 9/11, we started asking, 'Where is our company going? What is the mission ahead of us?' I don't think we ever could have predicted what unfolded in the first decade of the 21st century, but we knew that things were going to be different, and that GE needed to be different, too.

Thomas Edison was one of our company's founders, and we began to focus on the idea of reconnecting with our innovation DNA. We recognized that we are a company that can use its size and scale to solve big problems, and these discussions naturally led us to the idea, 'Whatever you can imagine, we can make possible' as sort of a mantra going forward. This led to a consistent message for the entire company: collectively, we all have to think bigger, because we have some really big problems to tackle.

You are passionate about the idea of 'commercial innovation.' Please describe how this works at GE.

At heart, we're a technology company – we have been for 130 years, and what great technology companies tend to do is, they fall in love with their technology. Sometimes they even start to believe their technology is so good, it can just develop and sell itself. We didn't want that to happen to us. We recognized the need to inject more innovation into the solutions that our technologies go after. For example, with our CT scan technology, it's not just about 'how many tissue slices can we provide in a CT scan?' and with our jet engines,

it's not just about beating emissions reduction targets. All of these things are important, of course, but what is even more critical to our future is, How can we combine these capabilities in new ways? How can we find opportunities to go into new markets? Innovation doesn't just happen in a lab or on our engineering teams: it also happens in the way we connect the dots across the company to solve these bigger problems.

That's commercial innovation in a nutshell, and this approach has led us to create two of our most important initiatives: ecomagination and healthymagination, which are focused on energy efficiency and sustainable health, respectively. In both cases, we are experimenting with 'reverse innovation' – which frankly, is just innovation the way it should be done. This means going into a market like India and asking, 'How can we address a big need here with one of our current technologies?' Out the other end comes a \$500 electrocardiogram that is portable, and that basically costs a doctor in India the cost of a bottle of water per scan.

Commercial innovation recognizes the fact that technology is key, but that there can be other ways to *apply* the technology in new ways that address these bigger problems. It basically means new business models, and it represents our belief that you have to be in the lab, but you also have to be outside the lab, connected to the market.

How do you encourage your people to think about business model innovation?

I touched on reverse innovation, which involves putting marketing and technology together in places like India and China to address big issues. In China, we've been working with the Ministers of Health, who are facing massive rural health challenges. The need for a portable ultrasound machine came out of that. We were already making a great ultrasound, but it weighed a lot, and was designed for a hospital. How could we take it to a very small, regional health centre? That led our teams to think it through, and the next thing you know, we had a laptop ultrasound and then an ultrasound that basically sits in a doctor's pocket. That's just one example of how we're starting to apply all of this.

We've always got a pipeline of internal 'start up projects' in progress, called Imagination Breakthroughs. They're not all 'new-to-the-world' ideas – some of them just take us into new spaces or new ways of doing business. We keep them in a very protected space, and they are monitored by our chairman and CEO **Jeffrey Immelt**, who keeps an eye on their progress. It's a way for people to fail faster, fail smaller, and put their imaginations to work in a protected environment to make sure that process and rigour doesn't kill an idea too soon. As a result, we are always nurturing several new ideas at any one time.

Describe how ecomagination fosters 'platform innovation.'

Ecomagination was created to provide answers to the question, 'How can we apply all the great technology we are producing towards creating a sustainable environment?' We knew there had to be ways to connect what we're doing in aviation,

A Sampling from the Ecomagination Product Portfolio

Appliances: ENERGY STAR qualified dishwashers, clothes washers, refrigerators and high efficiency water heaters

Aviation: TrueCourse Flight Management System; GENx Aircraft Engine

Commercial Finance: Environmental Performance Services with Telematics

Consumer Finance: Australia Eco Mastercard; Energy-efficient Home Improvement Loans

Energy: Jenbacher Biogas Engine; Solar energy; Wind energy; Zonal combustion tuning for coal-fired boilers

Energy Financial Services: Greenhouse Gas Services, LLC (a GE AES Venture)

Healthcare: Centricity Enterprise Electronic Medical Records; Digital mammography; Digital X-ray; High Efficiency CT (Computed Tomography) Systems; High Efficiency MR (Magnetic Resonance) Systems

Lighting: ENERGY STAR qualified compact fluorescent lighting; High Efficiency Evolve LED Fixtures for general lighting; High Efficiency Halogen Lamps

Transportation: 1033 Locomotive Emission Kits; China Mainline Evolution Locomotive; PowerHaul Engine; SmartBurn technology; Trip Optimizer Software

Water: Advanced Biological Metals Removal system; Desalination; DusTreat Control Treatment Programs; Homespring Central Water Purifier

rail, energy, water – and even capital – to come up with some really interesting solutions for energy efficiency.

We talk about *platform innovation* because these projects involve connecting existing technology with new software, data and some really interesting partnerships. The latter is key: we could never do these things alone. We have partnered up with varied organizations ranging from **Duke Energy** to **Canadian Pacific Rail**, start-ups like **PrimeSolar** and **Ar23 Batteries**, governments ranging from the City of Portland to China and non-governmental organizations like the **World Resources Institute** and the **Pew Charitable Trust**. For the past 10 months we've been running the ecomagination Open

Innovation Challenge with four venture capital partners. To date, we've invested in a couple dozen new ideas and are evaluating more out of the nearly 5,000 submitted. Talk about partnership potential!

Our initiatives around electric vehicles are a great example of platform innovation. Clearly, no one really knows where that industry is going to go, but there's lots of innovation happening in the space. When you look at a big company like GE, we've got the connections with the utilities; we have the technology that goes into some of the engines; we have charging stations and the smart analytics capabilities that connect consumers and utilities; and we have a very robust car-leasing business. All of this led us to say, 'We're going to try to be a player in this market.' But this isn't just about selling our charging stations. We decided to buy and lease 25,000 electric vehicles over the next few years, and every GE salesperson will drive one. We're going to work with utilities to try to be a connection point to get them to consumers. For us, platforms mean connecting all the pieces in new ways to find value.

It has been said that few companies outside of the banking sector were hit as hard by the financial crisis as GE. How has it changed your company?

No one wants to go through that kind of crisis, but what it did for us was, it gave us the 'gift' of re-evaluating what is truly important. We had to ask, What is our core strategy? Are all of our actions matching that strategy? Coming out of the downturn we have focus much more on energy, health care and transportation, and getting into new markets with new models, new technology, and a more streamlined GE Capital. Basically, the crisis allowed us to focus on what our imaginations are going to be working on going forward, so it's been a good thing in that sense.

Your CEO has called for doubling manufacturing employment in America, to 20 per cent of the work force. Do you believe manufacturing will experience a renaissance?

I absolutely see a renaissance ahead for manufacturing, and 'imagination at work' is tied to this idea. We're asking ourselves, How can we put our imaginations to work to get more people to work? A lot of the technology development that our folks are doing involves taking manufacturing to the next level; and then there's our effort to increase the market for electric vehicles, which would also create lots of jobs. Energy storage and batteries is another space where we're investing in business model innovation, trying to get battery technology into new places, whether it's telecom towers in the U.S. or in India.

As a company, we believe that there is still real value in 'making stuff'. For us, it's making big stuff – like jet engines and gas turbines – but I think you'll see more of this from us, going forward.

Implementing imagination in any realm entails lots of trial, error and risk; how does GE handle this?

It's a work in progress. Everybody wants to be creative; I'm convinced that it's a core human need. But with large scale companies such as ours, a lot of energy is put into processes to make things repeatable and scalable, so there's a constant tension between creating the new and then scaling and 'templating' it. Historically, we've been a company that loves process, the Six Sigma kind of rigour that gets embedded into a company. So one of our first challenges was to get people to realize that creativity and developing new things also follows a sort of process. Let's face it, creativity unfettered is chaos; there is a way to work through ideas. For us, a lack of ideas is never a problem: we have more than we can ever do anything with. It's about giving people the confidence to try things, and getting closer to customers.

The imagination at work umbrella has also led to lots of customer discovery sessions where we 'dream' with customers. We try to understand the following: if they could invest our money for the future, what would they invest in? This helps us make the right kind of decisions, and helps us align ourselves with the same future that our customers want.

In everything we do, there is a core recognition that you need to create and you need to execute, and there is always going to be some tension in that. As a result, you have to create some special spaces to allow things to incubate and sometimes, to fail. But even failing takes imagination. **R**

Beth Comstock is the senior vice president and chief marketing officer at GE, where she leads the company's organic growth and commercial innovation initiatives, and the sales, marketing and communications functions.

Did You Know?: GE traces its beginnings to Thomas Edison, who established Edison Electric Light Company in 1878. In 1892, a merger of Edison Electric Light Company and Thomson-Houston Electric Company created General Electric Company. GE is the only company listed in the Dow Jones Industrial Index today that was also included in the original index in 1896.