

# Part One

## **THE ANATOMY OF INNOVATION**

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# 1

## EMBEDDED INNOVATION IN ACTION

Storytelling is the most powerful way to put ideas  
into the world today.

—Robert McAfee Brown

As we explained in the Introduction, Whirlpool’s model of embedded innovation accounts for both the rational business framework that leadership has to put in place, and the emotional drivers that the people of your company will bring to innovation. Subsequent chapters will present the rational framework and the emotional drivers in detail. Before we describe those, however, we want to show you what embedded innovation looks like in action, close up. One story that shows both the advancements we have made and our dissatisfaction with where we are is that of the Centralpark port connection system. (Centralpark is a trademark for the port connection system on home appliances, which will hereafter be referred to simply as “Centralpark.”)

High fives went up all over Whirlpool’s headquarters in Benton Harbor and at locations worldwide when we learned in November 2007 that Centralpark had won the Consumer Electronics Show’s coveted Innovations 2008 Design and Engineering Award in the home appliances category. Centralpark is a refrigerator with an edge: it is aesthetically pleasing and reasonably priced and includes a customizable interface that allows customers to add digital modules to the door for information and entertainment. We first introduced Centralpark with the promise, “Your Kitchen. Your Entertainment. Your Way,” at the Consumer

Electronics Show (CES) in Las Vegas in January 2007—and it had been an immediate smash hit. It was even featured in stories on CNN and HGTV. And now all our hard work had been recognized with this prestigious innovation award. The Innovations 2008 Design and Engineering Award for Centralpark is a tribute to innovation from everyone and everywhere—and to the hard work of hundred and hundreds of people.

When we began our innovation effort, no one predicted this outcome. The CES is the world's largest annual trade show for consumer technology, with more than 140,000 attendees. Many innovative products have debuted at the CES, including the videocassette recorder in 1970, the camcorder in 1981, digital satellite TV in 1994, HDTV in 1998, Microsoft Xbox in 2001, and Blu-ray in 2003. The show is the epicenter of electronics launches in the world.

What makes Centralpark so innovative is its use of customizable modules. With our competitors' products, digital devices were built into the refrigerator at the factory. With Whirlpool's Centralpark, customers are in control and can decide when to upgrade digital modules. In short, Centralpark is not a “me too” product. It offers customers a differentiated customized solution in the space that is the heart of their home, their kitchen. It completely changes the value proposition. What is unique about Centralpark is that it separates the buying decision for the refrigerator from the buying decision for digital modules. Perhaps the best feature is that Centralpark is not a permanent part of the refrigerator. If you decide not to add the module, the refrigerator looks beautiful without it.

### **How Centralpark Began**

In early 2006, a few people in Whirlpool began working on closely related innovative ideas in separate, unconnected corners of the company. Eventually these ideas would come together like pieces of a puzzle in a Whirlpool innovation

called Centralpark—and the innovators would grow from a handful to dozens and into the hundreds. As you will see, the story of Centralpark is the story of embedded innovation, from everyone and everywhere. It is not about a few isolated geniuses, but many smart and dedicated people from all corners of the company—including finance, engineering, logistics, manufacturing, procurement, legal, quality, product safety, and more—working together to meet the challenges of innovation. There are four phases to the story: ideation, prototype, launch, and post-launch.

## **Ideation**

Hank Marcy, the head of innovation and technology, led a core group of innovators in phase I, the ideation phase. Hank joined Whirlpool in 2001 from Rockwell Scientific. Hank, along with a handful of other people at Whirlpool, believed that refrigerators could do more than just preserve food. They also knew that some competitors were launching halo products—products that marketers use to create “sizzle” on the shop floor but that lack the “steak” that customers demand for such a large purchase. These included refrigerators with built-in televisions and general Internet interfaces.

Whirlpool’s customer research showed that competitors’ refrigerators with TVs or digital screens were a great showstopper on the retail floor, but few customers were buying them, for three reasons. (We use “customer” and “consumer” interchangeably to mean the end user.) First, the cost of the added devices is too high. Second, a refrigerator may outlast any permanent digital device fad, and customers worry that the device will become obsolete over the longer life span of the refrigerator. Third, some competitors did not base their device on consumer insights. For example, one competitor placed a TV low in the refrigerator door, forcing customers to crane their neck or bend down to watch TV.

Hank started to gather innovators to work with an idea that the refrigerator would be a center for information and entertainment. They included Paul Hurley, global consumer design senior manager. Paul came to Whirlpool from Johnson Controls, where he had worked on minivan accessory modules. Paul suggested that the refrigerator had to look nice without an accessory, an idea that became instrumental to a Centralpark differentiated offering.

In another corner of Whirlpool, Randy Voss was working on an adjacent idea. Randy is a trained I-mentor—one of many throughout the company who had learned a set of embedded innovation tools, methods, and techniques. (I-mentors are highly trained innovation facilitators; we discuss them throughout the book.) These included methods to generate ideas that could be leveraged into innovations, and to evaluate ideas and experiment with them to ensure that they were turned into innovations that were valued by customers. Randy had a long history of work on digitally connected interfaces for consumer products. He had worked for Panasonic and then for IBM, leaving when it halted its home technology initiative.

Randy joined Whirlpool when we were trying to market Internet-connected appliances. He came to Whirlpool for a chance to innovate. Whirlpool had been working for several years on a number of projects to connect appliances to the Internet. For the purposes of this story, I am grouping all those projects and calling them Project Internet. Project Internet comprised several product development projects in the late 1990s, predating embedded innovation. Project Internet did not materialize and wedged into Whirlpool's collective memory as a failed attempt to innovate.

Randy Voss and Mike Kauffman, who joined Whirlpool in 1989 as a mechanical engineer and progressed to become general manager of refrigeration engineering, knew about Hank's interest in a refrigerator to meet customers' digital information and entertainment needs, so they began talking to Hank about

adding external modules to refrigerators. Partnering with others who had a dream of advanced electronic interfaces in appliances, Randy pulled some people together and used the innovation tools (approaches that help teams expand their thinking, create the best innovative products or services, and test and launch them in the market) to create a connected group of ideas related to electronic interfaces, which were collectively referred to as WOW Electronics. This concept would soon become part of the puzzle that made up Centralpark.

In yet another corner of Whirlpool were “shelved” innovations that related to customized appliances. I-mentors from one of the first innovation teams of embedded innovation launched in 2000 had generated one of these “shelved” innovations. These I-mentors had worked on a group of ideas called Customized Home Solutions and conducted successful experiments in a handful of retail stores offering various types of options (such as shelves, configuration, and functionality) to customers, who could customize a refrigerator in the store at the time of purchase. Hank started talking to one of the innovators, Barbara Rand, a skilled I-mentor, to bring some of the learning from Customized Home Solutions to Centralpark. The rumor of a concept called Centralpark started to spread in the informal networks at Whirlpool, and it started to attract other innovators; the puzzle was coming together.

In June 2006, while skateboarding with his children, Hank fell and broke his pelvis. As he recuperated at home, Hank started to write an innovation brief that became one of the catalysts for Centralpark. In July, he presented the innovation brief in the innovation portion of a strategy review meeting, while standing on crutches. Centralpark was starting to take shape.

Hank’s innovation brief acted like a magnet to pull these adjacent ideas that were under way into a larger innovation. The innovators started to see their ideas bundled into a bigger innovation. Hank began by assembling the early innovators of Centralpark. Matt Newton joined Whirlpool in 2003 as an

MBA intern from Purdue. Bryan Aown rejoined Whirlpool in 2001 after going to work for Dell; he came back because of his interest in the innovation opportunity at Whirlpool. He helped on the business model for Centralpark. Bryan Aown became a trained I-mentor (his present title is director of customer and profit pool revolution). The rest of the team represented equally diverse backgrounds: Eric Johnson, a senior manager of business strategy; Mike Huie, who joined Whirlpool in 1998 working in procurement, quality, and the brands; Rich McCoy, whose skills and techniques include advanced electronics applications; and Jim Kendall, who joined Whirlpool in 2002 with a strong background in industrial design.

If Hank's innovation brief was the first catalyst, a meeting with Dave Swift, then head of Whirlpool North America, turned out to be the second catalyst. Dave came from Kodak in 2001. He met with the Centralpark team in September 2006, after seeing Hank's innovation pitch. Dave had an interest in launching Centralpark in the North American market as quickly as possible. By the end of the meeting, he gave the Centralpark innovators a "big hairy audacious goal." He wanted three working prototypes designed and built for the January 2007 CES in Las Vegas. The magnitude of his request was at first lost on the team in the excitement of the meeting.

## **Prototype**

When Swift stated the goal, some team members missed the date; they thought he was talking about an event later in the year. When it finally sank in, they walked away wondering if they could do this at all. Three working prototypes in four months? Hank told me that by this point they were battling self-doubt and not sure they could meet Swift's challenge.

First, Project Internet was looming over their heads. Some people in Whirlpool had a bad memory of Project Internet and were comparing it to Centralpark, even though the two



projects had different aims. Second, the team “knew” that building one working prototype took at least six months, and they needed three built in three months. To make matters harder, building the prototypes would require intellectual property and safety matters to be resolved before the CES. If that was not enough to shake anyone’s confidence, there were two other barriers they were not sure how to attack. First, the economic engine of Centralpark required partnering with exemplary computer and digital electronics companies to create the modules. As of September 2006, they did not have one partner signed up. Finally, presenting at the CES was an unbelievable goal for Whirlpool; the last time we had attended this particular show was in 2000. The show is so popular that presenters need to secure space a year in advance. The Centralpark innovators would be trying to find floor space in October, only four months before the show. However, in typical Whirlpool fashion, they met and made assignments and started to work. When facing great uncertainty, Whirlpool people jump in and start working; it’s Whirlpool’s version of whistling in the dark. Between hard work and raw passion for their innovation, they knew they would find a way to address the barriers.

Other prototype barriers arose. Legal was not used to securing intellectual property rights in such a short period of time, and the department had a long list of projects on the docket ahead of Centralpark. By the time of the CES, an intellectual property (IP) team consisting of more than ten professionals inside and outside Whirlpool filed twenty-one patents in ten weeks, with the first patent granted in October 2006, an unbelievable feat. They worked over holidays and weekends, often working as a high-performing virtual innovation team, to meet the January 4 deadline to file all patents. Rich McCoy told me that in the IP strategy alone, the innovation tools they used included having the IP subteam hosting an online ideation session for all Whirlpool employees, a war-game event, and an innovation workshop.

Part of the economic engine of Centralpark involved licensing the interface to electronics companies. That was Terry Deegan's role. Terry joined Whirlpool in 1996 from Zenith with a strong background in materials, operations, and strategic supplier management. Some Whirlpool leaders were skeptical about the consortium of partners that we needed to make the economic engine work; after all, there was not a long-standing precedent for securing partners from such diverse industries. Finding the first partner was a tall task. Hank and company started talks with both the giants and the up-and-comers in the computer and electronics industries.

The most likely partner they identified, one of the giants, could not make a final commitment in the time required. They finally decided to go with a smaller but growing partner for the first offering, the digital picture frame. Working through these issues took much of the Centralpark team's time and attention, but they were now on a roll, and nothing was going to stop them. They were deeply committed to their innovation. Their attention turned to building the three prototypes for the CES show. Their passion was contagious.

They called on Doug LeClear to build the prototypes. Doug started with Whirlpool in 1979 and progressed through engineering to become a lead engineer. His job is to convert industrial design renderings into safe, functional models. When I asked him about joining this innovation with the odds stacked against it, he took a very humble view of his role. He too had projects backed up in the shop. He could easily have said it was impossible, or not moved other projects to the side to accommodate unrealistic demands for Centralpark. But Doug is not made like that; he likes a challenge, and he loved the innovation. He told me that the idea of Centralpark excited him because he could see Centralpark in *his* home on *his* refrigerator. He believed in it. He and a colleague went to work and created the unthinkable: three working models for the CES. As he said, "This was not like a model that you can just throw in your

suitcase. It was three big refrigerators. We had to build and ship them to Las Vegas on time.” So rushed was his timeline that the models went on the truck with the paint still drying. Doug jumped on a plane and flew separately to the show to set up the models. It was going to be tight. When he got to Las Vegas, he found that the show organizers had moved the Whirlpool booth from a hotel for last-minute entrants to the main floor of the show’s convention center. Once Doug found his way to the new location, he discovered that the desk assigning entrance passes was closed. It was too late to get a pass to get inside. With little time to spare, Doug waited for the guards to turn their heads, allowing him to steal past the guard at the main entrance of the show to get in to finish his work. He got the models up and running without a minute to spare. The Centralpark innovators told me that one of the highlights of the innovation process was seeing their booth at the show, creating a buzz with their three magnificent prototypes. It was a moment they would never forget.

Matt Newton remembers Las Vegas as a blur of new and exciting experiences, and as a test of nerves. “Up until this point, we were talking with the representatives of enormous electronics companies and not even batting an eye. Then it got ratcheted up and the stakes started to escalate. Dave Swift’s secretary started calling us and setting up meetings with the VPs and presidents of these giant companies. The pressure was palatable. We were now feeling the need for a new level of preciseness and absolute certainty required to close the negotiations. These weren’t just ordinary meetings we were setting up; these people were running billion-dollar companies! Butterflies to say the least.”

Two of the people with whom they met were the developers of a mega California housing development with state-of-the-art electronics and Internet services. One of the important channels that Whirlpool sells to is the home builder channel, which is often led by premium builders like these developers. They

could be a potential partner on Centralpark for their upscale, connected new housing development. When Matt met them, he was pretty comfortable answering their questions and showing off Centralpark. Later, when Matt found out who they were (two gazillionnaires) and that they were building an entire city, he said that he never thought he would meet anyone of their stature in his life. Centralpark was providing once-in-a-lifetime experiences to the innovators.

The CES was a huge success. We met with a large trade partner, and it committed to being our exclusive launch partner. This partner was also looking for ways to energize this category, and it immediately understood how this was a more flexible path than what our competitors were doing with their TVs in the door.

Later, Dave Swift said, “I was really proud of what this Centralpark team accomplished, because they realized that innovation does not have to come solely from within and, in fact, in the case of electronics, needs to result from partnerships at several levels (base unit, devices, and retailers) in order to have the speed and breadth necessary to compete and to delight consumers.” The CES was a real-enough external milestone that it forced the speed that we needed and the different way of thinking needed to be successful in the electronics world. One of the best outcomes of the show was that Whirlpool earned the opportunity to move beyond our key competitors in home appliances equipped with electronics because Whirlpool is innovating an approach in which partners are invited (in fact, expected), whereas some of our competitors are so vertically integrated that if the innovation is not created and built in their shops, then they won’t implement it. Whirlpool has the opportunity to create a much more open and innovative offering.

After the show, the launch phase required ten thousand units to be ready for sale by October 2007 and then scaling that number to hundreds of thousands.

## Launch

Enter Lori Cook. All was not dreamy and glamorous when she joined the team. She had heard the “rumors” of Centralpark, and when her supervisor asked her to take the lead on phase III of the project, which involved moving from the three prototypes to getting ten thousand units on retail floors and then scaling up to fifty thousand units by mid-2008, she had doubts. Lori started with Whirlpool in 1982 as a co-op engineer and worked her way up through engineering to project manager, working in the technology center in Evansville, Indiana.

She had her own bad memories of Project Internet. She told me that she could not recall any of the leaders of the Project Internet initiatives ever coming to the refrigeration technology center, where the delivery team worked. It was frustrating and confusing to her and the design teams that a project could get so far in its promise to the market without enlisting the people who would have to design and build it. Project Internet seemed more like an exclusive idea that a few people at headquarters were leading. Her Project Internet experience is what prompted her to do a very unconventional thing. On one of Hank Marcy’s extremely hectic visits to the technology center, Lori made sure he met with the design team to talk to them. He patiently listened to their concerns, agreed that this was a tough innovation challenge, told them to “push back” if there was a better way, encouraged them, and built trust. Hank, in this fifteen-minute meeting, convinced them that he was behind them and could be counted on for support. Centralpark was starting out differently than Project Internet. Still, Lori faced many challenges in leading the project. She needed to transform the prototypes into working appliances, not a small task. Among her many challenges was that the design cycle to launch a project like this is typically eighteen months, and Lori had half that time. She decided to jump in with both feet and prove to Hank and the team that working together, they could develop Centralpark. Lori and her team rapidly addressed the obstacles.

Now that Lori was on board, she found herself in the unlikely role of salesperson for the innovation, explaining to skeptics who wanted to paint Centralpark with a Project Internet stigma that this was a completely different concept. The success at the CES was not enough. She remembers having to “sell” Centralpark at almost every turn. It was not easy. The rest of the team became salespeople as well, selling it to others within Whirlpool and explaining how it was *not* Project Internet. Clearly, even at Whirlpool, innovations do not receive a special pass to zip through the system.

Lori and her team were successful. The Centralpark units were launched at Best Buy across the country in October 2007. There was enormous excitement from both customers and store professionals.

## **Post-Launch**

Whirlpool appointed Mark Hamilton in May 2007 to lead the post-launch phase of the project, which included the scale-up of production to hundreds of thousands and the development of the long-range business plan. Mark came to Whirlpool in 1995 with an MBA from the University of North Carolina-Chapel Hill. The current business plan for Centralpark shows a significant revenue stream from introducing new and exciting electronics modules fueled by relationships with at least ten leading partners. It also projects a significant profit pool in four years using a business model that includes consortium membership fees, royalties, and revenues. Centralpark is a compelling value proposition for our customers, partners, and shareholders. The call of innovation brought together a team of dreamers and heroes who did the impossible.

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This story stands as a testament to what is possible when you pursue innovation from everyone and everywhere. It shows

that innovation is not always or even usually the result of the brilliant idea or the big breakthrough. It shows that all is not rosy for innovators, even at Whirlpool, where we pioneered embedded innovation. It also shows that no matter how well you design your innovation machine, it is the innovators who make the innovations work, often against daunting odds.

### **What Motivates Innovators?**

Perhaps the biggest enigma of embedded innovation for people who are not part of Whirlpool is the nagging question about why our people do it. Do innovators get a percentage of the profits from their innovation? When innovation is embedded, all the management systems that drive it need to be embedded as well. One of those management systems, innovation compensation, is embedded into Whirlpool's total compensation system; it is not a separate program. If you start with the understanding that Whirlpool offers a competitive compensation package to attract the world-class talent we need for innovation, you start with the foundational compensation for innovators. As innovation became part of our company, masses of people started to create innovation objectives in their performance plans. It is likely that the Centralpark team's performance and overall pay was based, in part, on how they performed on this innovation. That is the foundation, the extrinsic rewards. The intrinsic rewards for innovation are a different matter and, innovators tell me, far outweigh any monetary amount Whirlpool could give them.

When I assembled part of the Centralpark team in 2007 to tell me their innovation story, I asked them, "If I had a million dollars to give to the innovators on Centralpark, who should get it, and how should I divide it?" My question elicited a chuckle, the kind you get when the questioner missed something so elementary that you are not sure how to explain it to her. Doug responded first with a great deal of pride about his extraordinary feat to bring Centralpark to the show: "It's my job." He went on

to say that from his standpoint, if a person cannot get “charged up about working on something this exciting, then you need a new job.” He loves an innovation challenge, and this one was huge. He went on to tell me an interesting side note. When the prototype was built and he was getting ready for the show, Doug needed digital pictures for the display. He loaded pictures of his kids and grandkids on the Centralpark digital picture frame. Because Centralpark was such a hit at the CES, television channels like HGTV and CNN covered it. Doug’s kids and grandkids got to see their picture on TV. That meant more to him than anything. While his appraisal and pay for 2006 and 2007 compensated him for his outstanding contributions, he also created his own reward.

Randy said that he came to Whirlpool to innovate and that “he was getting to do just that.” To Randy, the pay is nice, but working on innovations is its own reward. Hank added that he too came to Whirlpool for a chance to innovate and that Centralpark was as exciting and thrilling as anything he has ever worked on. He especially liked that they were working against the odds and won. Matt told me that he enjoyed the entire Centralpark process. It is intrinsically rewarding to him. One team member after another told me that it is not about money; it is about the excitement of innovating and bringing something compelling to the market. In fact, Matt told me that following our discussion he was taking his kids to Best Buy for a “field trip” to show them what he helped build. I could sense his pride in the innovation and imagine the field trip to show it to his children. They all said that “opportunities like this are rare, but you can make it happen.” I wonder how they would have responded to the question I didn’t ask: “How much would Whirlpool have to pay you *not* to innovate?”

When we began our innovation effort, we could never have accurately predicted this outcome. We knew that there was something compelling and very human about the need to create. What we did not fully comprehend at the outset was how driven all people are to create, innovate, and contribute, not only to



business results but to efforts bigger than themselves. It took us quite a while to truly appreciate the power of the emotional drivers of innovation.

The team members' comments are consistent with the results of our interviews with I-mentors and their experience with innovation. I-mentors are innovation "black belts" whom we have trained to facilitate innovation teams. One strong theme we found was that the I-mentors never got involved with Whirlpool's innovation process because of extrinsic rewards, such as money, status, or visibility. They sought to be I-mentors because they had an inherent need to create and wanted to do meaningful work, fulfill customer expectations, and make a contribution to Whirlpool and its success. Many also cited as main drivers the ability to work with other creative people and transfer what they had learned about innovation to community activities outside Whirlpool.

Finally, we asked the Centralpark team who the innovation heroes were on Centralpark. There were so many heroes that helped bring Centralpark to market that they could not count them all. There were lawyers who moved mountains to get the intellectual property rights ready. Engineers who designed the product and the interfaces. Marketers and public relations teams who created a "thunder" on the retail floor for the launch. Model makers. People who worked through the holidays to make a deadline or came in sick to attend meetings. These heroes took their discretionary time and energy and applied it to an innovation they believed in and wanted to have succeed. They were rewarded for their results through the compensation process, but their biggest reward was intrinsic and unique to each person. It is true that not everyone who worked on Centralpark pursued innovation as a high calling, but the ones who did made all the difference. I asked Lori for her list of innovation heroes. The list she sent me included more than forty people from a dozen different functions and departments all over the company. And that was just Lori's list.

Hank, Randy, Matt, and others have similar-size lists of heroes. Who's to say which heroes were crucial to the Centralpark success and which were supplementary? To whom would you pay an "extra" innovation bonus, and how would you determine how much each hero receives? More important, how can you be sure that the extra compensation encourages the behaviors you need and does not destroy all the heroic acts you want in embedded innovation? The biggest incentive for embedded innovation, besides sincere acknowledgment for effort and fair compensation for results, is creating the conditions for each of us to learn, create, and become part of a spirit of winning that fosters innovation heroes, but to do so on our own terms.

### **Embedded Innovation Made Centralpark Possible**

If the *Centralpark* story does not sound monumental to you, consider the following. Before 1999, when Whirlpool launched innovation, several drivers that made Centralpark successful were not in place. First, there was no systematic transformation to create a culture of innovation. Nor was there an environment that expected and supported innovation. The tipping point that we saw in Centralpark would never have occurred, at least not under the banner of innovation. Some of the puzzle pieces, such as Randy's WOW Electronics, might not have existed at all. We suspect that before embedded innovation, funding for such a project would have been impossible.

Second, there were not deep customer insights in 1999 that every innovator could find and utilize. As in most companies, market research information was generally available for a few people in marketing and was not seen as accessible to people in all parts of the company. Embedded innovation requires that market and customer information be accessible to everyone. Deep customer insights and the requirement to start with the customer's needs are clear outcomes of embedded innovation.

Third, tools and processes for innovation were not common across the enterprise. I heard the Centralpark team talk about orthodoxies, migration paths, customer value proposition, economic engine, and marketplace experiment, to name a few terms, using a common language to describe the innovation process. This common language did not exist before 1999. The team could also draw on previous innovations, such as Customized Home Solutions—again, an outcome of embedded innovation and the work of generations of innovators, such as Barbara Rand, that now exist at Whirlpool. I-mentors did not exist before 1999 to help innovators transform ideas into innovations. Creating rich external partnerships in diverse consumer product industries would have been countercultural and probably would not have happened without the drumbeat of embedded innovation. The strategy to execute rapid and stalwart intellectual property on adjacency modules would not have occurred; the focus would have been only on the refrigerator.

Innovation heroes may not have emerged with such passion and dedication to overcome the odds. Before 1999, it was easier to maintain the status quo. Embedded innovation taps into the inherent needs of people to create and to produce something unique and admired. It also sets up a dichotomy that both attracts people to innovation and also makes it inescapable. Whirlpool trained many people from within to be innovators, but consider the talented people who joined Whirlpool from world-class companies to bring world-class talent to innovation such as Centralpark. Many of these innovators told me that they came to Whirlpool specifically for a chance to innovate. They came to be part of the vision of innovation from everyone and everywhere.

Embedded innovation makes all of this possible. Of course, even after years of work to transform the company, it is not a panacea. There were still many barriers that could have stopped Centralpark, and aspects of embedded innovation failed the team. For example, the team did not tap into the knowledge management system to go online and find other similar innovations, the

very reason we created it. They had to rely on their memory of other innovations, but the “who you know” system in a company the size of Whirlpool will not suffice. Seed money for Centralpark was hard to find. The team had to do a massive selling job to get some people within Whirlpool to support it—the waters did not part for them in the name of innovation. Overcoming skeptics is still a skill that innovators need.

The other note of interest to this story is the differing ways that people perceived Project Internet. Many saw it as a failed project that loomed like a dark cloud. Yet others saw it as one of the building blocks needed to get to Centralpark. For embedded innovation to prosper, institutional memory can’t demonize innovations or projects that did not succeed in every aspect. These have to be seen as learning and, in that regard, as valuable intellectual assets from which future innovators can draw.

Despite the many obstacles the innovators encountered, there was no stopping them. They had a dream to create a compelling customer offering, and they succeeded with hard work and dedication. That cannot happen when innovation is the domain of the few or when people cannot choose to apply their discretionary time and energy to their passions and dreams. Their spirit and energy, not the innovation machine, buffered Centralpark against failure.

It’s hard for us to identify all the people who made Centralpark a success. We are sure that the people we have mentioned are not the only early innovators; we apologize if we have overlooked someone. Identifying the people from the early days of Centralpark represents an interesting insight into embedded innovation, the processes of which are porous and organic, not organized and controlled by a central group. In the best scenarios, the informal network takes over, and colleagues join because they are voting with their feet, not because of a memo from headquarters. Although the early innovators do not see themselves as heroes, they are indeed innovation heroes whom other people at Whirlpool learn about and want to emulate. As the

Centralpark innovation snowballed, the team attracted more and more innovators. Embedded innovation that leads to such opportunities as Centralpark develops into a virtuous innovation cycle: more innovators join the cause and do so on their own terms, in turn creating more innovations that cause others to join.

### **Could Centralpark Have Happened with Other Innovation Frameworks?**

Could the type of innovation effort demonstrated by the Centralpark story happen using other innovation constructs or frameworks? Could an effort led out of a traditional R&D group or using skunk works produce the same synergy, level of commitment, energy, and results? Our answer is, probably not, and here is why.

First, an R&D or skunk works innovation framework could never have drawn ideas and energy from disparate parts of the organization the way Centralpark did. These frameworks partition ideas and innovation only in one part of the organization. Centralpark was a success because it drew from so many people in different parts of the company. The fundamental assumption of embedded innovation is that innovation comes from everyone, everywhere. By nature, restricting innovation activities to one group within the organization or, in the skunk works case, to those from a self-contained unit outside the company, obviates that premise.

Second, the success of Centralpark relied not only on the integration of efforts of people from across the organization but on the ability of Whirlpool's systems and processes to integrate and reinforce those efforts. Without the hard work on creating and embedding systems that tracked innovations, made resources available, and produced long-term migration paths, Centralpark probably would have died under the weight of trying to manage the complexity of bringing such an effort to market. Traditional structures for innovation typically do not make enterprise-wide innovation

machines available for everyone. Thus ideas and efforts from across an organization, if they do arise, can be advanced only by an act of senior management, not by the masses. If an organization wants to capture the hearts and minds of everyone capable of innovation, the idea of a lone innovator or an innovation office, either through R&D or skunk works, is flawed.

Embedded innovation establishes the conditions for innovators to use the tools and process to create differentiated customer solutions. Building the machine is critical to your success in innovation. More critical, however, is to unleash the passion and energy of your innovators.

### **How Embedded Innovation Has Changed Whirlpool**

The story of Centralpark demonstrates what really happens inside Whirlpool's innovation machine. It also shows why Jeff Fettig is perpetually dissatisfied; he knows that the more we deliver and learn about innovation, the more there is to do to make embedded innovation a reality in every part of the enterprise.

Fueled by Whitwam's prophetic vision of innovation from everyone and everywhere, the approach we took was shaped by our culture and the transformation of Whirlpool led by Whitwam in the late 1990s. We also planned and created it as we went along; there was no ten-year master plan of how it would work. We knew what we did not want. Whitwam did not want a skunk works of elite innovators. He knew the inherent dangers of moving innovation out of the core of the business; the movement back into the business was treacherous and often did not work. He knew that organizations often reject an innovation created by other entities. He also knew that our industry was ripe for what he and Jeff Fettig called innovation at the core. We did not have to invent a discontinuous series of innovations to change the dynamics of our industry; rather, innovating around articulated and unarticulated customer needs

at the core of our business would have a significant impact on our success. Finally, Whitwam wanted to build a competency, so hiring consultants to create innovations or partnering with companies for innovation was not going to work. Embedded innovation was the best way to introduce innovation to Whirlpool. It was the best innovation method given the state of our industry in 1999 and our long-standing company culture. The results have been astonishing. Now, with perfect 20/20 hindsight, we can say with confidence that there is no other way Whirlpool could have innovated.

The results of Whirlpool's innovation are impressive. First think about the number of innovators involved just in the Centralpark innovation. Now multiply that times hundreds of innovations led by people in multiple countries, across the value chain, and in every function, and you begin to get a sense of how many people at Whirlpool are contributing to innovation.

The tools and process of innovation have changed our company. The language and shared beliefs about embedded innovation created an innovation culture that did not exist in 1999. Introducing I-mentors has opened a unique and valued skill set to hundreds of people at Whirlpool. We have trained over eleven hundred I-mentors. There are also less tangible, but equally critical results to consider. Our confidence in innovation has increased; very few spaces now intimidate our innovators. We are working on second-generation innovations, meaning that we have a history of innovation from which to draw. More important, we have a second generation of innovators. People who are recent hires to Whirlpool think that innovation has always existed. Whirlpool and only a handful of companies around the world are into second-generation innovation and the problem set that comes with it. It is new territory to explore.

In financial terms, the results are equally impressive. We have sold over \$8 billion of innovative products since 2002. These are products that meet the high standards that our innovation criteria define. Many of these innovations have created

significant margin lift. Innovation is driving toward a 20 percent balance of sale by 2009, with seven consecutive years of innovation pipeline value and in-market improvement. Perhaps most impressive is that we have experienced close to 100 percent compounded annual growth rate of innovation revenue in six years. This means that, on average, we have doubled innovation revenue every year.

But what may be most impressive is our engagement of our people and the acclaim we are beginning to receive through awards and the business press for our success in embedded innovation.

Now that you have seen embedded innovation in action, we are ready to take it apart to see what makes it tick. In the next chapter, we will discuss the rational drivers which ensure that embedded innovation makes business sense and the emotional drivers that fuel it.