KNOWLEDGE MANAGEMENT AT WHIRLPOOL

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About the company:

Whirlpool Corporation (NYSE: WHR) is the world's leading major home appliance company, with approximately $20 billion in annual sales, 77,000 employees and 59 manufacturing and technology research centers in 2019. The company markets *Whirlpool, Kitchen Aid, Maytag, Consul, Brastemp, Amana, Bauknecht, JennAir, Indesit* and other major brand names in nearly every country throughout the world. Additional information about the company can be found on Facebook, Twitter, LinkedIn, Instagram and YouTube.

History of Whirlpool Corp.

After the machines were recalled and repaired, Federal Electric doubled the order.[9] They remained a customer for three years, then they began producing their own washers. The loss of Federal Electric forced Upton to diversify until, in 1916, they landed Sears, Roebuck & Co. as a customer. Sears began selling two types of Upton wringer washers under the "Allen" brand,[6] one for $54.75 and a deluxe model for $95. Sales grew quickly and in 1921, Sears appointed Upton as their sole supplier of washers.[6][10] To avoid becoming over-reliant on Sears, Upton began marketing a washer under their own brand name.[6]

Why Knowledge management was needed:

Every day, Mr. Dave Whitwam could see his colleagues and staff wasting precious time searching for urgent information; he could hear them frantically making phone calls while searching for competent resources to deal with specific issues; he could observe them finally managing to get some scrappy data which required further processing to have it fully available and useful; he dreaded to watch the staff of his company while they wasted most of their precious and costly time re-starting activities and projects from scratch, when the same work had probably already been dealt with by somebody in the company, but all useful data regarding the matter had been lost or was not traceable any longer

Dave shared his worries with a small group of his collaborators and he gave them the task of verifying whether those huge company resources could somehow be captured, stored and made accessible to a larger number of people in a protected, productive and interactive environment, able to enhance people ability to innovate.

Among the binding key elements agreed upon there were:

1. Whatever proposal came from such evaluation it had to be a global one, both in terms of development and implementation.

2. The President himself would have borne the designing costs of such a system for the first two years (during the evaluation and testing stages). However, these costs would have been transferred to the business as soon as possible, also to show the largest possible participation of the company management in the project, regardless of the President's sponsorship.

3. The project would have worked out an accurate analysis, involving the largest possible number of company staff members. Then it would have evaluated the different ways of implementing the system by testing it thoroughly.

START-UP ACTION PLAN:

The first thing to be identified was the reason ***WHY*** such a global, dynamic and innovative company had to face such a huge task involving company data collection and distribution. Then, a list of all the productivity and growth benefits that would have derived from it was made.

The members of the group knew that without a list of credible benefits that could be measured in terms of value and business, the project wouldn't have had any chance to be successful or, even worse, any chance at all to have the company staff of all levels pay any attention to it.

Subsequently, an accurate analysis and an evaluation of the cultural, organizational, managerial and technical environments at the start-up phase were carried out in order to better identify ***WHAT*** was needed: which knowledge and subjects should have been collected, or at least with which was the level of priority, which were the sharing and interaction tools that the company staff could have used in a fast and effective way, who were the main "providers" of such information and who were the "users" at global level, which was their knowledge sharing process and to what extent improvements could be made, and so on.

The action plan developed in this way ended with a section regarding ***HOW*** (a real sequence of activities to be performed and the times to do this) and ***WHO*** (that is to say, the kind of resources needed and the costs involved).

The plan appeared to be feasible, especially because it didn't claim to solve all the identified problems in a short time, it did not provide "master key" solutions, and it was supported by an extensive Change Management programme which, once the infrastructure and the tools for capturing, organising and sharing company knowledge had been identified, would have provided details on which were the communication, training and monitoring activities to be implemented by the group.
During the meeting held to evaluate the project and the activities suggested by the group, Mr Whitwam, approved the entire plan and assigned the first funds

CRITICAL WEB FUNCTIONALITIES AND TOOLS:

At the same time a specific subgroup of the global team designed the necessary Change Management program to support the deployment and extension of the Km within the Company: education, communication and monitoring plans.

- My Page (a global database of registered CVs which are managed by the users themselves – *Figure 4*);
- My Experience (a global database of projects which are autonomously managed by the company staff – *Figure 5)*;
- Searchable Q&A (a tool for users to search answers to frequently asked questions or to post new questions to the global Internal Communication Community, that manages the system, either without showing one's identity or showing it).

APPROACHES OF KNOWLEDGE MANAGEMENT:

1.I-pipe:

As part of its KMS, Whirlpool adapted a tracking system called the Innovation Pipeline (I-Pipe) from Strategos and placed it on the company's intranet with a little modification. The I-Pipe was a dashboard view of the innovation pipeline at Whirlpool which tracked ideas from concept to scale-up. Initially, the I-Pipe was used by innovation teams. Later, the system was opened to every employee within the company who could access it through the employee intranet portal. Through the I-Pipe, employees could view ideas or any single innovation by product category or region, contribute to them, or add to an existing idea. The goal of the I-Pipe was to convert screened ideas into innovative products and services.

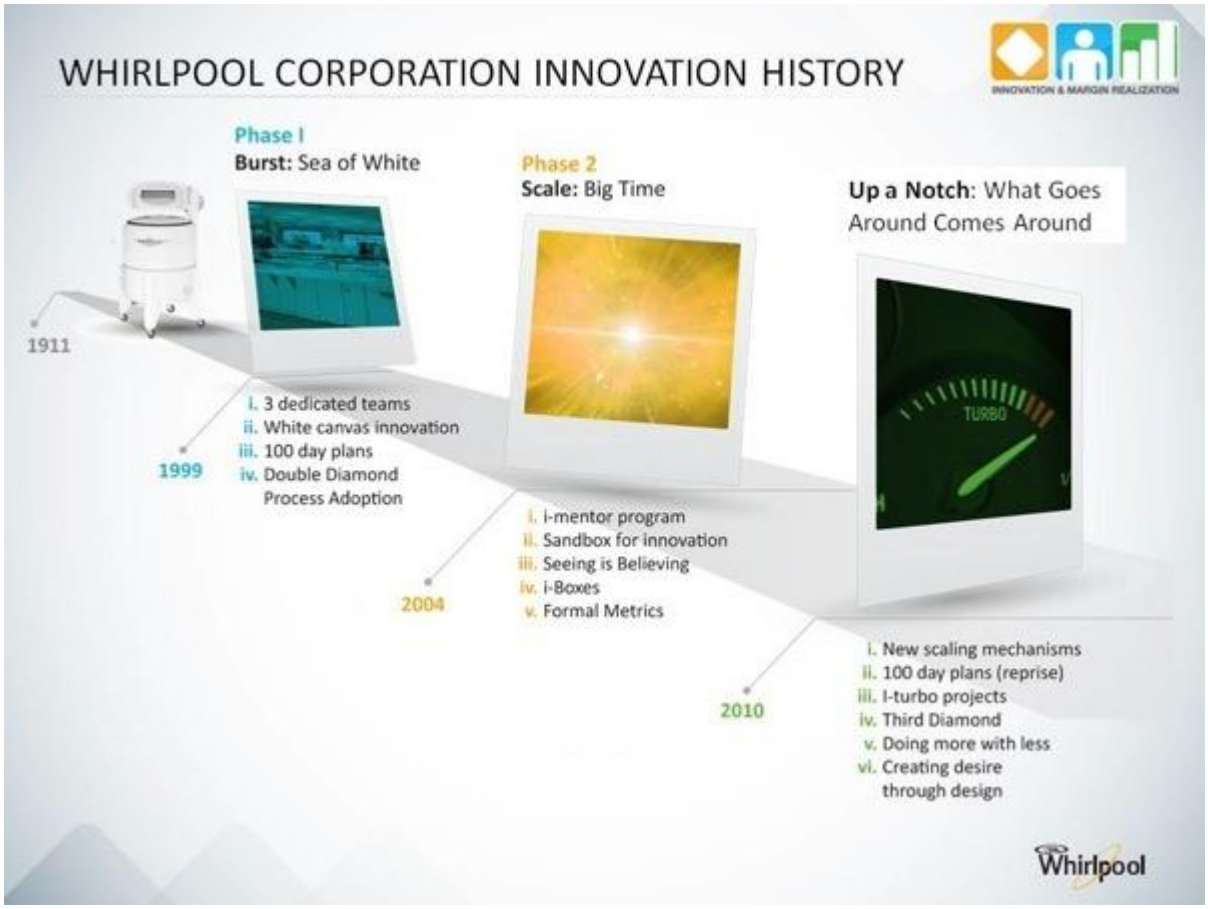
2.Innovation E-space:

Whirlpool realized that it needed to create a technical platform to engage the entire Whirlpool population in the innovation embedment effort. The company wanted to set up an efficient IT infrastructure where employees could provide suggestions and ideas, obtain feedback, and volunteer for innovation projects. The result was Innovation E-space, an intranet-based KM website that allowed all employees to keep track of innovation activities at the company. Innovation E-Space was open to anyone at Whirlpool who had access to the intranet.

Results:

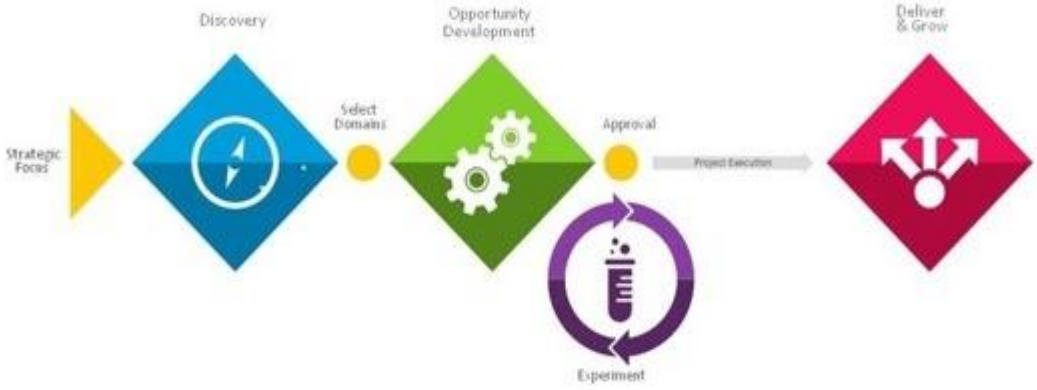
The KMS at Whirlpool contributed to innovation embedment and competency development. According to industry experts, Whirlpool had differentiated itself in innovation by creating a sustainable innovation model and by embedding it across the organization. The outcome of the KMS was a stream of breakthrough ideas for products which came from all over the Whirlpool organization and delivered value to consumers. In a stagnating industry where many of Whirlpool's rivals were struggling to survive, Whirlpool's overall revenues and profits were growing at a steady rate. Based on innovation in both products and processes, Whirlpool became a market leader in the global appliances industry, said experts.

KEY INNOVATIONS AND TIMELINE:



Whirlpools Corp's Triple Diamond Process:

1.*Process adoption:*



2.*Seeing is believing*:

Every time an innovation project is initiated, the teams are asked to create a plan to extract consumer insights by first-hand observation; the use of some tools allows them to create a relevant and robust plan.

3.Scaling mechanisms:

Management Systems – Making innovation part of everyone's job and hard-wiring it to its *modus operandi* requires holistic management system thinking.

Organizational Development Initiatives By Whirlpool

1. *Need for change in Corporate Culture*

By the late 1999, the top management at Whirlpool found itself unable to drive growth in its businesses. The company's revenues, profits, and market share were stagnant. And this, despite the fact that Whirlpool had adopted various operational initiatives to cut costs and achieve economies of scale in its operations. In December 2000, Whirlpool announced that it would cut 10% of its international workforce and initiate restructuring of its global operations

2.Innovation as a Core Competency

Whitwam believed that only innovative products could command premium prices and build customer loyalty. He emphasized the need to develop a culture that would spur Whirlpool's growth through consumer-focused innovation. This would be a part of the company's competitive strategy. In fact, Whitwam wanted to make innovation a core competency at Whirlpool. Moreover, he did not want creativity to be limited to a few people in the organization; he wanted all the employees to be creative. Nancy T Snyder (Snyder), was made the vice president of leadership and strategic competency development at Whirlpool.

3.Laying the Foundation

In 1999, Whitmam started innovation.25 workers were sent to the headquarters but unfortunately it came out to be a failure. At that point he realized the need for structured approach. He created new position - Director, Strategy and Deployment. In 2000, Consultants from Strategies trained 75 employees.

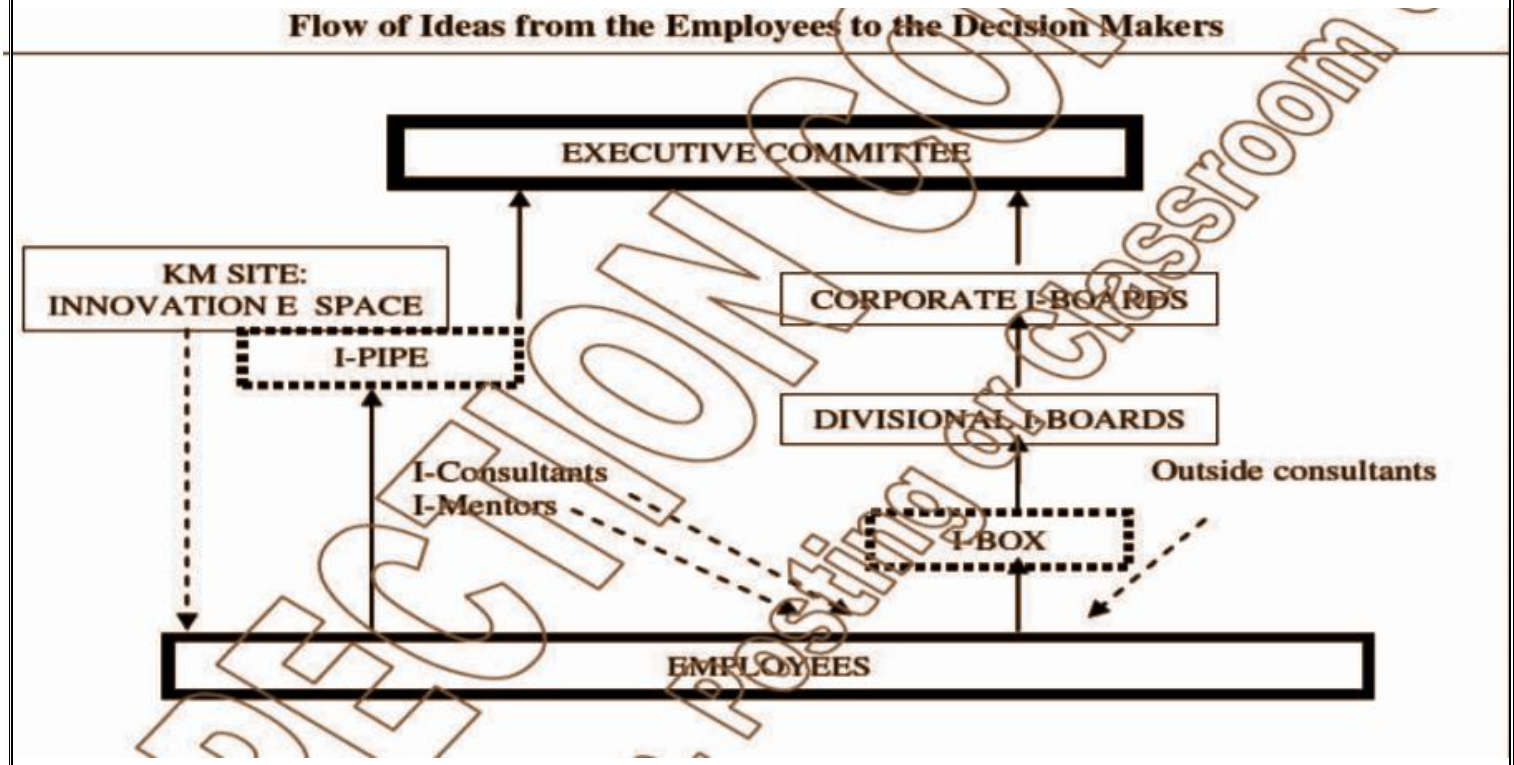
4.*Building The Framework*

While the core groups were being trained, Snyder focused on getting the rest of the company's global workforce involved in the initiative through the Internet and innovation fairs. Strategos helped Whirlpool to put the necessary infrastructure in place and to use Information Technology (IT) to facilitate the objective. Whirlpool **re-engineered** management processes that slowed down innovation and used IT to improve and accelerate the innovation chain from idea to final product. Instead of going in for a few big projects, it encouraged many low-cost "stratlets" (also known as small strategies).

5.Reinventing The Corporate Culture

Employees were enthusiastic about the various innovation initiatives started by Whirlpool between 2001 and 2002 and it was evident from the fact that the KM site recorded up to 300,000 hits per month. In 2002, Whitman decided to bring in more structure into the innovation process so as to increase the participation to include all employees and also to get more practical ideas. In monthly I-Board meetings, the top management evaluated and funded new proposals. Only new ideas that helped enhance Whirlpool's existing brands or products would be considered (Refer to Figure I for flow of ideas from the employees to the decision makers).Snyder also came out with an "I-box" to ensure that only brilliant ideas reached the I-board. The I-box was a two-step graphing tool. In the first step, the employees had to demonstrate that their proposals were something that people would buy. These arguments had to be backed by market research.

6.Flow of ideas from employees to decision makers



7.The Results

- According to the company, revenues from innovative products were almost US$800 million in 2005 as compared to just US$10 million in 2001. The share price had also doubled.
- Between 2003 and 2005, Whirlpool's revenues had grown at an average of 9% per annum. Fettig had attributed one third of this growth rate to innovative new products.
- As of April 2006, Whirlpool's innovation pipeline had 568 projects under development of which 195 were being scaled up for commercial launch.
- The company expected these new appliances to rake in another US$ 3.3 billion in annual sales once they were launched .
- Commenting on these improved results, Fettig explained, "We're seeing evidence of what we call a "want in." In other words, consumers see something that is so different or innovative that they want to buy it as opposed to: they have to buy it.

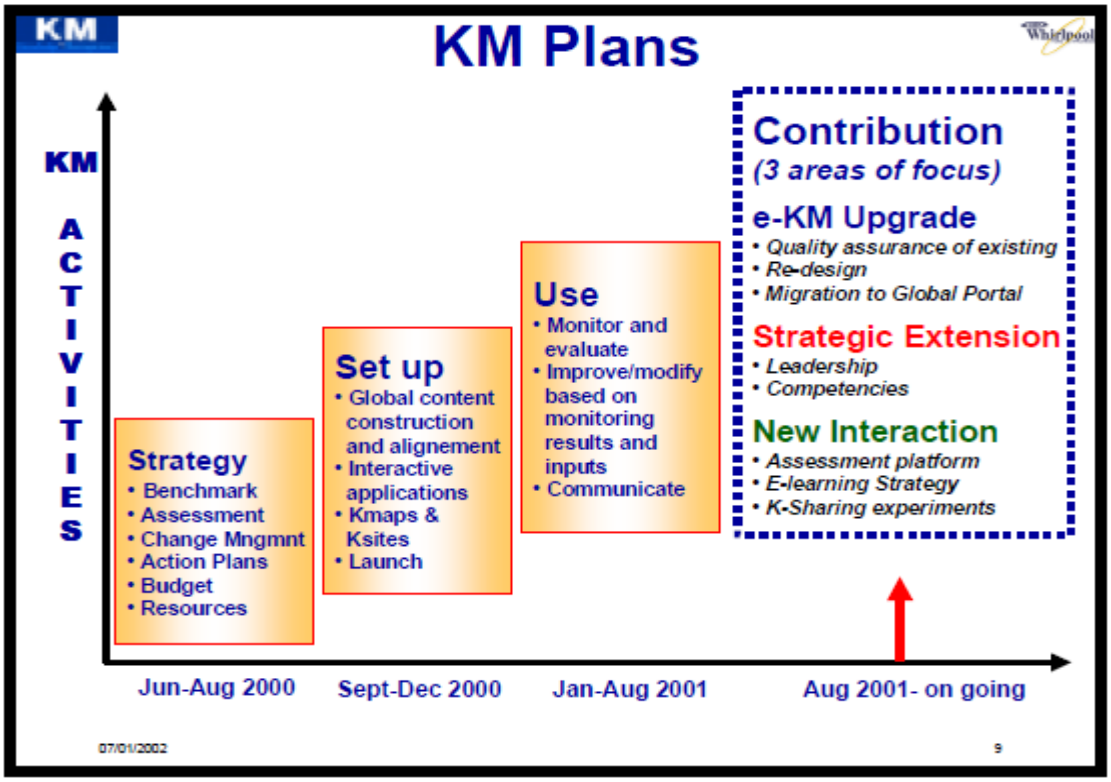
***8. Other factors which led to such amazing results*.**

- If we sieve the entire case to obtain the sole reason that has driven the change, we get **"Competition".** Competition resulted in stagnation of the company's growth and had reiterated the need to innovate, in order to survive the onslaught.

- Change will always be resisted in large organizations: first from the top Management and then the rest.

- The credit must go to the Top Management for taking the initiative and holding things together.

- Apart from innovation, Effective Leadership, Teamwork and collaboration, Belief in the system and the Willingness to improve were the factors responsible to bring about this change



Case Study: Enabling Strategy Deployment at Whirlpool Corporation

Whirlpool Corporation, the world's largest manufacturer of home appliances, launched a knowledge management system in 2000 that provides a gateway for its employees to innovate and become closer to its customers by leveraging knowledge globally. The system, which provides a set of e-tools and facilitates knowledge-sharing sessions, is a robust approach that equips employees with the information they need to deliver innovative customer solutions. Linking the knowledge management system to the company's global strategy makes it a powerful tool for employees and serves as the primary enabler for strategy execution.

The knowledge management system is an integral tool for nearly every team at Whirlpool Corporation, especially the innovation teams found around the world. The "Innovation e-Space" section provides a place for innovation team members to manage their portfolios and share projects with others across the globe. One of the tools, the Brand Idea Pipe, tracks and reports the progress of each stage of an innovation project. These reports enable Whirlpool's leaders to understand the number of projects per stage, speed of the projects, use of innovation experts, and important financial metrics. This, in turn, helps develop resource funding and leads the organization to generate even more ideas.

In addition, the Innovation e-Space provides a wealth of opportunities for employees not directly involved in innovation projects, as any employee can post an idea to the bulletin board or find the tools necessary to get their project funded.

In addition to finding tools and ideas, previously employees struggled to find the right people for their innovation projects. A yellow pages tool called "My Page" simplifies that process. My Page allows individuals to identify projects and opportunities that interest them. In turn, innovation teams can find talented employees throughout the organization. Since the tool's inception, the knowledge management team added a feature called "Meet the Expert," which helps employees find experts in each strategic area.

In addition to innovation, the knowledge management system furthers progress in other strategic areas, including customer service. Sites such as "Customer Excellence" provide a place for employees to access and share customer insights and findings. A library of studies and customer data provides a robust base of knowledge for employees working on new projects. The site also includes tools, external and internal resources, and links to Whirlpool's learning management system.

To boost Whirlpool's competitive advantage, the knowledge management system includes a "Competitive Knowledge" section. This site hosts competitive profiles and important strategic studies that previously could have taken someone days to find. Now, employees can search and retrieve relevant information in a matter of minutes.

Success Contributors

What contributes to the success of the knowledge management system at Whirlpool? This can be summed up in four elements:

1. Customer focus.
2. Strategy alignment.
3. Executive sponsorship.

4. Cohesive virtual knowledge management team

Dynamically enabling employees to deploy the global strategy is becoming the legacy of knowledge management at Whirlpool Corporation. The global reach of the system is a powerful tool and key to differentiating Whirlpool from its competitors.

Open Innovation helps Whirlpool Corp. discover new market opportunities

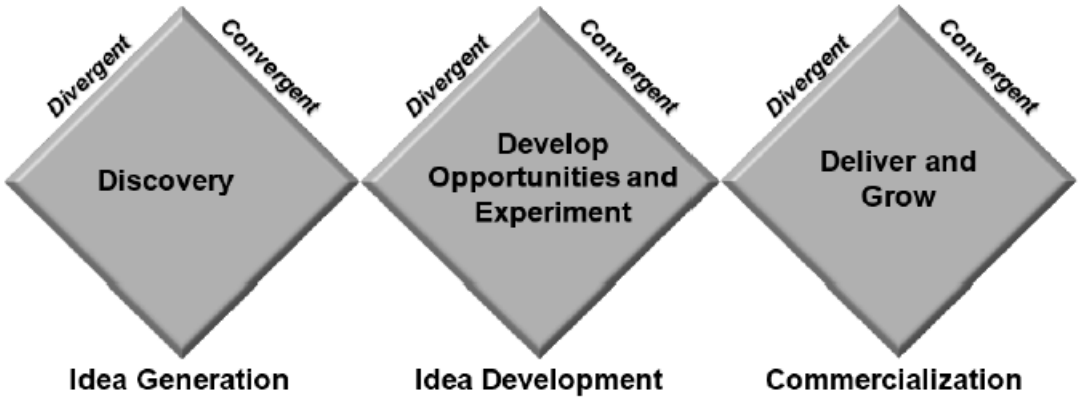
Open innovation is the practice of sourcing ideas and expertise from outside a company to stimulate or supplement internal initiatives that can promote new business opportunities when applied at all stages of the innovation process namely idea generation, idea development and commercialization. To manage the process effectively, the company learns to understand which stages of the innovation pipeline will benefit the most from recruiting outside perspectives and expertise.

Whirlpool Corp's new line of consumer products, affresh appliance cleaners, is an example of open innovation in action. Since its successful launch in 2007, affresh has grown into a family of related cleaners and products and has opened doors to further success for Whirlpool Corp. in the consumer goods space.

Open Innovation at Whirlpool Corp.: a set of principles and tools

Innovation at Whirlpool started in 2000 with the objective to know its core competence. In 2010, Whirlpool Corp. reported revenues from innovation of $3.6B, approximately 20% of its total year's revenue which also bought its name under the top 10 innovative companies in consumer products by ***Fast Company*** magazine. Innovation has enabled the company to successfully venture into adjacent consumer product businesses beyond its traditional core – including garage organization, countertop appliances and water filtration

Exhibit 1: Whirlpool Corp.'s Triple Diamond Process



The first cycle, "**Discovery**" is focused on generating new insights about Whirlpool Corp.'s customers, competitors, macro-trends, and corporate capabilities to fuel innovation. Ideas are generated at the intersection of the insights in "ideation" sessions.

The second cycle, "**Develop Opportunities and Experiment**" focuses on screening ideas and assembling them into larger product groups that provide a common customer benefit. The most promising ideas are selected for further development and elaboration.

The objective of the third cycle, "**Commercialization**," is to maximize the value of innovations in the market place through iterative, market-based experimentation

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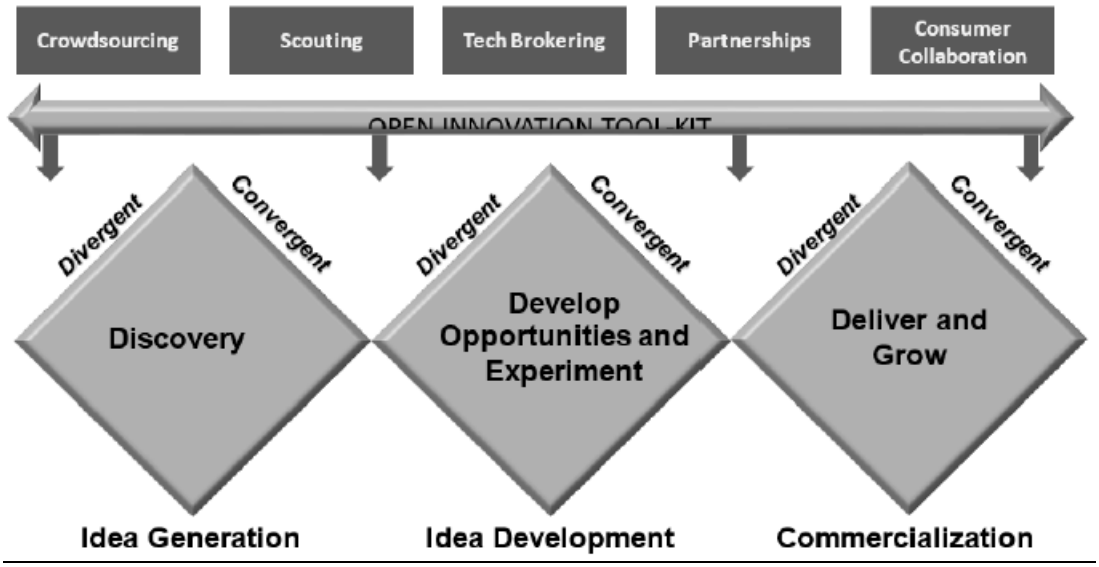
Innovation at Whirlpool Corp. is truly company-wide. Every employee receives training in the importance of innovation, how innovation works at Whirlpool Corp., basic innovation skills and how to use the company's innovation tools and concepts. The "innovation infrastructure" includes I-Mentors, and I-Consultants to guide and mentor employees on innovation projects. "Innovation boards" exist at several levels to screen, prioritize, and fund innovation projects.

Applying open Innovation to the Triple Diamond

Motivated by the desire to get innovations to markets faster and by the need to gather deeper insights into its customers, Whirlpool began to augment its current innovation system to make it more open. The guiding principle of its open innovation is collaboration and sharing of capabilities and resources and its mantra is "we win together." Its goal is to build the most robust business model possible around new opportunities, regardless of whether all the capabilities and assets required to execute the model are available within Whirlpool Corp. This requires a delicate balance between open innovation and internal innovation and an awareness that the company needs to do both

Exhibit 2: Whirlpool Corp.'s Open Triple Diamond process



In its open innovation "toolkit" are the "macro-tools" of crowdsourcing, partnerships, technology scouting, technology brokering and consumer collaboration. At a more granular level, the "tools" used are basically a set of questions and discussion guides that help to inform the decision to go "open" or not at each step of the innovation process

Crowdsourcing is the practice of obtaining information or input into a task or project by enlisting the services of a large number of people, either paid or unpaid, typically via the Internet.

Technology scouting is an element of **technology** management in which (1) emerging **technologies** are identified, (2) **technology** related information is channelled into an organization and (3) supports the acquisition of **technologies**.

Technology brokering is to span multiple, otherwise disconnected industries, to see how existing technologies could be used to create breakthrough innovations in other markets.

A **partnership** is a business with multiple owners, each of whom has invested in the business.

Collaborative CRM is an approach to **customer** relationship management (CRM) in which the various departments of a company, such as sales, technical support, and marketing, share any information they collect from interactions with **customers**

Exhibit 3: Open innovation screening questions raised during each stage of development

The tools that are used at each step of the process are designed to raise questions that examine the potential benefit of seeking outside resources for a specific contribution.

Development Stage	Open Innovation Screening Questions	Open Innovation Tools
Idea Generation	1. What complementary or adjacent industries can inform our point of view about this subject, and provide insight that we don't have? 2. What other fields of expertise or technologies might impact this? 3. What consumers, beyond our traditional appliance consumers, are likely to have experiences or needs that relate to this?	• Crowdsourcing • Engage partner companies in ideation • Engage outside experts in ideation
Idea Development	1. Does the innovation require a "technology" answer that we don't have? 2. Does the idea require core competences that we don't have? Who might provide this competence? 3. Are there other ways to think about how to extract value from this idea, or relevant insights or models from other industries?	• Technology scouting • Technology brokering • Venture investing
Commercialization	1. Do we have the necessary expertise in the intended market for this innovation? If not, who does? 2. What are the best channels for distribution – beyond our traditional channels? 3. Is this something we should manufacture ourselves?	• Partnerships • Alliances • Joint ventures • Acquisitions

Open innovation at Whirlpool Corp. – Affresh

Innovation teams listened to new voices both inside and outside the company, including suppliers, channel partners, consumers, and experts. The company began to regularly solicit customer input on its brand websites, and also involved representatives from complementary industries in many of its ideation sessions. One of the early successes of Whirlpool Corp.'s open innovation process was affresh, a detergent tablet that cleans front and top loading high efficiency washing machines and eliminates odours

Whirlpool Corp. being an appliance maker went beyond its traditional expertise to open its innovation process to outside perspectives and capabilities in order to successfully conceive and launch the new offering.

Idea generation:

Whirlpool Corp. explored when searching for new growth ideas were complementary products and services that enhance the consumer's experience with existing products at some point in the usage lifecycle. Conversations with customers identified the need for an odour-removal solution in their washing machines. Whirlpool Corp.'s high-efficiency front-loading washers have many advantages, but because of the low water usage and low-spinning action they are also vulnerable to the build-up of an invisible odour causing film. Though the washers provided a cleaning cycle, it was obvious that more was needed to address this consumer issue.

Whirlpool Corp.'s engineers first thought of mechanical solutions to this problem, such as a more rigorous cleaning cycle. However, it quickly became clear to the innovation team that conventional mechanical solutions

alone would be inadequate to meet the consumer's expectations for cleanliness and a pleasant odour. So the team began to pursue a chemical solution in addition to more robust agitation.

Idea development:

Whirlpool Corp. managers knew that its expertise in mechanical systems and appliances didn't extend to cleaning chemistry. The new issues they came across were

- Does the innovation require a "technology" answer that we don't have?
- Does development of the idea require core competences that we don't have? Who might provide this competence?
- Are there other ways to think about how to extract value from this idea, or relevant insights or models from other industries?

After addressing these questions, they became convinced that this was not a traditional "internal" innovation project.

Whirlpool Corp. explored partnerships with several major players in the consumer-packaged-goods industry, but all passed on the opportunity. They then explored partnerships with chemical technology suppliers, finally choosing a small technology company to develop the chemical solution. The two companies worked closely together to develop and test the new cleaning product. The partner company worked on candidate chemical solutions while the Whirlpool Corp. engineers tested a clean-out washer cycle that optimized the performance of the chemical residue remover.

Commercialization:

Whirlpool Corp. entered the unfamiliar arena of manufacturing, marketing and selling a consumer product.

- Critical questions the team asked themselves about the capabilities needed to commercialize affresh
- Do we have the necessary expertise in the intended market for this innovation? If not, who does?
- What are the best channels for distribution – beyond our traditional channels?
- Is this something we should manufacture ourselves?

The company that Whirlpool Corp. partnered with to develop the chemical solution brought in a company in their network for volume manufacturing of the product. Additionally, they knew that they quickly needed to learn about marketing (branding, pricing) in the consumer product space so they enlisted the help of an external consumer products expert. Their usual channels of distribution (appliance retailers) seemed like a logical start for the new product. In introducing the product, they bundled the afresh product and coupons in its new high efficiency washers. They followed up by selling the product at the same appliance retailers – targeted at the owners of all brands of high efficiency washers, not just theirs. The success of afresh in these limited outlets convinced the team that there was opportunity beyond their normal appliance channels and they recruited a partner (distributor) that could help them extend the product into the food, mass, and drug channels.

Results :

- Whirlpool Corp. was well-positioned to coordinate all its competitors
- Whirlpool Corp's brands provided them access to consumers
- Their expertise in clothes laundering enabled them to understand the critical performance requirements of the chemical solution
- Their vast size gave them clout with potential channel partners that would be essential for distribution