



Design for Future Needs
Process of *Project F* and *New Domesticity*

Interaction Design Institute Ivrea

Introduction

Whirlpool Corporation is the world's leading manufacturer and marketer of major home appliances, and has gained much of the European market. Whirlpool Europe sells brands under the names Whirlpool, Bauknecht, Ignis, Laden and Polar.

In Europe, the major domestic appliance market is quite mature and price sensitive. It is becoming increasingly difficult to differentiate between brands solely from a technological or performance point of view, because changes in those areas are largely incremental. Design and innovation have come to be viewed as essential tools for manufacturers to highlight the values of their brands and to stand out among the conventional white boxes that predominate in the market.

Whirlpool began several years ago to develop its corporate capacity for innovation: it has enabled an innovation task force, fostered collaboration and knowledge exchange, and developed a strategic focus on design. Whirlpool Europe's design studio in Cassinetta, Italy, contributes to this effort. Led by Richard Eisermann, Design Manager, Global Consumer Design (GCD), the studio is responsible for design research, strategy development and its application to the design of home appliances.

Two years ago the design studio initiated a series of advanced research projects using design as a foresight method, in order to understand and fulfil consumers' future needs and desires. The intent is to foster design thinking as a way of provoking a strategic change within the company, by creating a climate open to innovation.

In the first of these projects, called '*Macrowave*', started in the year 1999, Whirlpool Europe invited a number of well-known designers to work with GCD to develop new ideas about the future of microwave ovens, well beyond anything currently on the market. At least one new product in the 2002 line-up was influenced by the project, and divisions within Whirlpool Europe began seeking the services of GCD for further collaboration.

Project F: design as research

A second project, called *Project F: fabric care futures*, started in 2001, as a research project and a design experiment to investigate the domestic life of consumers today and to project what it might be tomorrow. The purpose of the project was not only to extend Whirlpool's understanding of the laundry process as it exists for consumers now, but also to offer a series of imaginative alternatives for fabric and clothing care in the future, beyond the 'white box' of the typical appliance.

In order to respond to rapidly changing and increasingly sophisticated consumer needs and desires, Whirlpool's design studio uses a combination of broad-based traditional market research, trend analysis and, most importantly, local, in-home observations and interviews with householders who use the products. The Global Consumer Design team recognises that to meet and anticipate people's needs, research has to be very focused on the real contexts in which products are used. In addition to its own usability group within GCD, Whirlpool used an external research consultancy, FutureConceptLab (Milan) to carry out a research project that examined changes in domestic life within Europe, resulting in a report called '*New Domesticity*'.

The *Macrowave* and *Project F* projects signalled a departure for Whirlpool Europe's design activity: integrating contextual user research into the strategic design and product development process. The involvement of different research and design groups in combination with Whirlpool's usability team stimulated the cross-fertilisation of ideas.

Project F: goals

Project F exemplifies research aimed at overcoming current preconceptions about how domestic appliances should look, proposing new possibilities based on a deep understanding of trends and future cultural models.

The goals for *Project F* were to:

- Understand current user needs and anticipate future desires;
- Pose questions that will influence product development in the future;
- Open the way for innovation within the company;

- Provoke cross-fertilisation between internal and external design teams;
- Invite buy-in from internal constituents (executives, marketing, engineering, etc.);
- Test the marketplace; and
- Set the pace for change within the industry.

A research project such as *Project F* typically takes nine to twelve months for research, design and prototyping and another year for communications. What follows is a summary of the process and the results of the project.

Context

There are three levels to innovating and realising new products within Whirlpool's design centre:

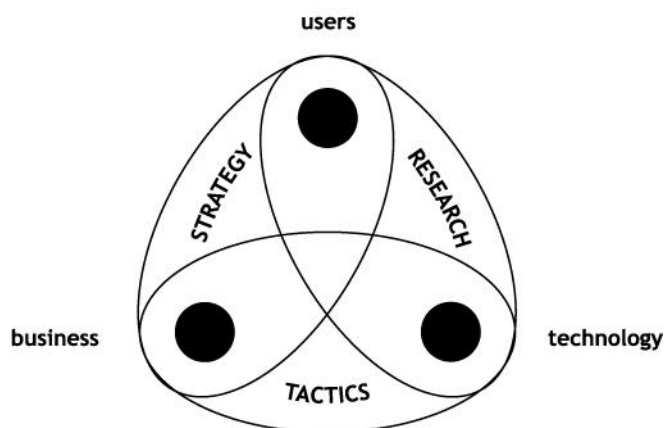
- The research level
- The strategic level
- The tactical level

The **research level** is an investigation of opportunities with few constraints, but it is always based on an understanding of three things: the potential users, relevant technological developments and the company's business aims. Whirlpool Europe began intensive design research two years ago with its '*Macrowave*' project. The purpose of the research level is not only to suggest future possibilities and get reactions from the public, but also to attain a high degree of innovation by providing a roadmap for products' development that can then be translated into specific design strategies. It serves to influence the minds of those within Whirlpool to be open to innovation. The design group translates the research insights into two- and three-dimensional concepts leading up to the development of design prototypes. These, in turn, can be important in evaluating the brand experience, product acceptance and usability.

The **strategic level** uses the investigations from the research phase to develop design solutions for the next 5 to 10 years. The product life cycle for major domestic appliances is long (10 to 20 years) compared to other industries, a factor which influences design and technological decisions for years to come. A design strategy helps to bring order and attain consistency in the range of

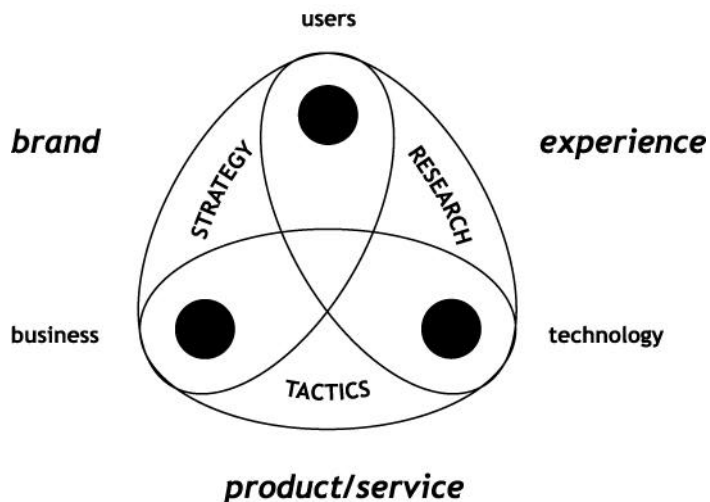
products the company presents to the market, raising the level of innovation produced.

The **tactical level** determines the day-to-day product line-up and development needs within Whirlpool. Tactical design decisions need to reflect the company's short-term goals, particularly the brand and design strategy. Here the time horizon is six months to two years. Tactical design responds to rapid changes in the marketplace, innovative competitor offerings, new consumer demands/trends, material and colour trends, and price differentiation through design.



Each level needs to inform the others. Design research uses a foresight approach and multiple techniques to create imaginable futures that inform design strategy. Design strategy guides the daily, tactical activities necessary to address the market, whilst feedback from the market may disclose new potential areas of research.

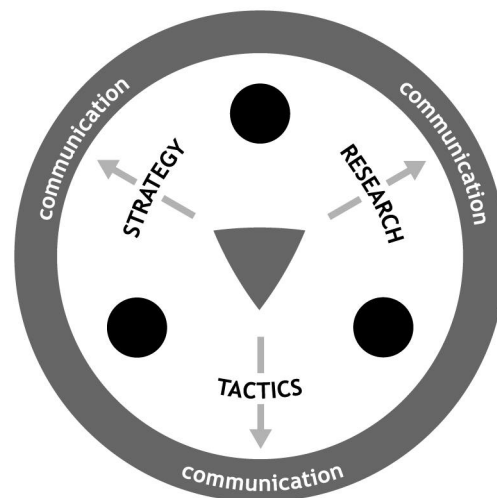
In synthesis, Whirlpool associates the tactical level with product, the strategic level with brand building, and does research with the aim of influencing imaginable user experiences.



A good product development is achieved when the company succeeds in coordinating innovation at the research, strategic and tactical level by creating the right balance between interests and needs of all the stakeholders involved with the poles of the user-technology-business triangle cited above.

Maintaining the link between strategic and tactical levels within an international company that operates at multiple locations, such as Whirlpool, requires effective internal communication, whether done in person or remotely. For example, the various divisions dealing with the design, production and marketing of laundry appliances are scattered throughout Italy and beyond: design takes place in Cassinetta, marketing in Comerio, and engineering in Naples (Italy), Amiens (France) and Schorndorf (Germany). Whirlpool as a multi-national company also has to coordinate design and production between Europe and its US operations.

Whirlpool attains this goal by supporting both internal communication and a proper dissemination of information in the different environments where it operates, as we describe in more detail in the following sections.



Project F –the process

Design research: understanding the user

In *Project F*, Whirlpool used both qualitative and quantitative research. The qualitative research was conducted by the Whirlpool Usability Group (4-5 people), which included a cultural anthropologist, a usability specialist and support staff. The research team conducted a study across Europe of in-home behaviours of people doing their laundry; the study focused on the user experience and the problems and tasks that users were trying to solve. The researchers observed the activities related to washing, the steps in which the laundry process is divided, and the factors affecting it. Visual considerations or brand perceptions were not evaluated.

The various field research methods included in-home video ethnography, researchers shadowing subjects' activities and tasks, in-depth interviews and visual self-documentation by users (prompted by diaries, and cameras, etc.).

In contrast to quantitative research, qualitative research uses a limited sample size but probes deeply to reveal information about families and their behaviours. For research to gain relevant insight, the critical factor is to choose representative households.

The study included households from Italy, France and the United Kingdom. Different typologies of families were studied during a period of 2-3 months: older couples, younger couples, with or without children, living in capital cities or smaller towns.

The researchers observed some differences between countries, mostly having to do with where consumers located their washing machines. (In Italy, machines were usually put in the bathroom; in the UK, in the kitchen or utility room.) The location suggested what kinds of activities might be related to the process of doing laundry and what associations consumers might have about them.

One subject that clearly emerged from the study was the psychology of 'things being clean'. Across cultures, consumers shared a positive feeling about being able to put on clean garments. There was a satisfaction in being able to do a load of laundry and have freshly scented clothes; this satisfaction was

linked to a feeling of control and, in some cases, even to pride (e.g. a mother's pride at being able to offer a clean school uniform to her child).

The concept of cleanliness that emerged from *Project F* went beyond the notion of hygiene or eliminating dirt, however. What 'clean' has come to mean for many is a sensorial experience of purity and transparency, linked to a feeling of well-being. Another finding was that design preferences are increasingly guided by a person's sense of self and a desire for products that reflect the articulated self-image.

In addition to the various field research methods, the company also used a second method, a focus group study carried out at Whirlpool Usability Laboratory. People were invited to describe their typical laundry activities. The aim was to better understand users' needs within the whole laundry process and to possibly rethink the design of their approach to clothing care, not just their interaction with the functional aspects of the washing machine.

One of the main findings was that for most users the complete laundry cycle usually lasts two days (starting with the step of separating clothes, and moving on to washing, drying, ironing, etc.). Users normally waited until they had accumulated a certain number of clothes before starting a new laundry cycle. It became clear that a purely technical improvement to the appliance, such as shortening the duration of the washing action by a few minutes, might not produce a significant benefit for users because of the mental model of the multi-day laundry cycle.

Although not applied to *Project F*, in this instance, the third phase of research is usually quantitative, focusing on reactions of consumers to specific designs and aspects of products. Its reach is wide, in its attempt to establish results of statistical significance.

Identifying opportunities: the design workshops

The research insights were used to inform the concept stage of *Project F*, which took place in a series of design workshops. Richard Eisermann invited three external design consultancies and the internal Whirlpool design team from Global Consumer Design to be part of the *Project F* initiative. The internal six-person team had considerable industry experience. Three external design groups were chosen to generate fresh ideas and add an international perspective: '[designkoop](#)', based in Hanover/Berlin/Milan; '[deepdesign](#)' from Milan; and '[designRAW](#)' from San Francisco. Eisermann made a conscious decision to avoid well-known individual designers who might opt for an expected visual language or a signature style; instead, he selected groups of product designers for their ability to bring innovative solutions to the mix.

Both sets of teams were invited to a two-day workshop, held in June 2001, where they were first informed about consumer trends, advances in laundry technology, and the results of the qualitative and quantitative research. Using all this information, designers then took part in a number of creativity sessions where they brainstormed on the future of the laundry process. Together they identified opportunities for *Project F*, moving around a large room to various stations, jotting down ideas, making sketches and then collectively discussing the scenarios they had created.

One problem that arose during this initial workshop was that the research results had been very rich and suggestive of possibilities, but were not immediately meaningful or 'actionable' for the design teams. If anything, the problem with the research was that it was almost too complex, too 'woolly', suggesting a great deal, yet difficult to grasp, much less to narrow into a useful direction.

The difficulty of readily translating research insights into design solutions, as described by the Whirlpool team, is a common issue in foresight and strategic design. (The discipline of design planning has grown out of this very difficulty and need.)

One solution to this problem involves taking advantage of the fact that product design is an iterative process (in which designs are created and refined incrementally in each successive version). Going back and forth between the research problem and the

design solution, during each successive iteration, allows for the true development of design concepts informed by research. Integrating researchers and other stakeholders in the evaluation of proposed design solutions can also be valuable.

Another possible way to deal with the issue of translating research into design is to have designers and engineers participate in field research and user experience assessment (usability) studies to gain knowledge on location.

Some designers keep visual reminders of the research at hand, such as memorable images of users doing a particular task, which needs to inform the design. Others create profiles (also called 'personas') of prototypical users based on the research findings. These profiles can be used as a device to measure how well a particular design solution will serve the sample user. (How would User A act on this concept? How would this design solution fit into the life of User B?)

In *Project F*, after the workshop the design groups used the mapping made from the research findings to enrich their proposals and ideas. Some came back with many ideas; some groups were more focused on specific solutions. Early on, five themes emerged:

- An awareness of the senses;
- Space (and how to address the choice of location of an appliance);
- Ritual, social interaction;
- Fabrics of the future;
- Environmental concerns.

At this stage, ideas emerged about the possibility of fabric care as a service business apart from the manufacture of appliances. Whirlpool decided not to follow up on the service ideas at that time, because they foresaw difficulties in communicating those concepts to a larger audience at a design or trade fair, which was how they planned to display the concept prototypes.

The theme of connectivity was also suggested, but many companies were already looking at this subject, usually from the technological perspective rather than the user perspective. Even with a focus on the user, it didn't appear that this would be as fruitful a direction as some of the others.

The designers looked at innovative technologies such as nanotechnologies and waterless washing systems for cleaning future types of fabrics, such as those equipped with electronics. They also examined environmental and ecological concerns, especially about energy consumption and water conservation¹.

After the themes were established, each design group worked separately from the others—gradually developing ideas over the course of about a month through sketching, making 2-D models and refining them. Two of the design teams created animations, showing how people would use the imagined products and in what setting.

It should be noted here that the internal GCD designers had easy access to their research colleagues; the two groups worked closely together at Whirlpool and there was considerable informal discussion about the user research findings beyond the information given to designers in the initial workshop. GCD designers also had informal interaction with the company's engineers.

A second workshop was held at the beginning of August 2001. In a team session, all the proposals and concepts were presented and the strongest ideas were selected to be refined in further iterations in the design process.

¹ Whirlpool's actions in response to environmental policies, both voluntary and legislated, are too extensive to detail here and beyond the scope of this paper.

From design ideas to 3-D prototypes

The designs created by the teams were translated into three-dimensional prototypes during the fall of 2001. Some of the mock-ups fared better than others in the translation to 3-D; it was important, however, that all be at the same level of finish in order to be convincing. (Whirlpool built all the prototypes except for one, which was built in Milan.) The design manager acted as producer to oversee the prototyping process and ensure consistency of design quality and innovation.

The resulting prototypes represented a range not just of typologies of product, but different potential points on the timeline of product development. One or two of the concepts (e.g. designkoop's 'Body Box') could be realised with current technology; several others were dependent on the development of future technologies.

What follows are brief descriptions of the five concept prototypes:





'Body Box', the concept developed by designkoop is a piece of technological furniture that brings together both body care and fabric care. It houses a normal washer and dryer, along with different bins and containers—where tagged fabrics can be collected, sorted and washed automatically with the appropriate care cycle by using data stored in their label. *Body Box* is also designed to provide room for relaxing body-care activities, like chromo-therapy.



Deepdesign's concept for 'Pulse' made the process inside the washing appliance more transparent and visible. They designed a new type of wash cycle based on centripetal (inward) force, typical of traditional hand wash, instead of centrifugal (outward) force. The rhythm of air and water flowing in and out of the machine was designed to give the sensation of a heart pulsing as the machine massages the load of laundry.





'Cleanscape', the proposal by designRAW, builds on the social aspects of laundry as a domestic activity done in the public realm. This concept is based not only on the memory of villagers washing clothes at a river bank, but also on the contemporary trend toward the development of 'third places', here a public laundry where social interaction is combined with other activities, tasks or services.



The GCD internal group developed a project called 'OM,' the design of a waterless washing appliance utilising nanotechnology, for better care of different kinds of fabrics in the future, such as those that would be electronically enhanced. Mounted on the wall, this system suggested how fabric technology would evolve and be cared for in ways no longer dependent on conventional household plumbing.



The prototype that has stirred the greatest interest among audiences so far is called '*BioLogic*', also designed by Whirlpool GCD. *BioLogic* uses a 'slow wash' approach based on cyclical, natural processes of regeneration. Instead of a single wash drum, the laundry is distributed to a number of washing pods in a low unit containing hydroponic plants (plants which grow in a nutrient liquid without gravel, earth or another supporting medium), which, if feasible, would purify grey water used in washing. Power for the unit would come from fuel cell technology, producing only water and heat as by-products. *BioLogic* would capture and retain these as part of its resource conservation approach.



It is interesting to note that this project, which proved most intriguing to the public, was designed by the internal team, who had the most access to ongoing input about research and engineering from their colleagues at Whirlpool Europe.



The next steps in the innovation and research area would be for the internal design team to continue the development of product ideas with the same depth and conceptual quality as those in *Project F*—but more readily achievable within strategic and tactical timeframes. Resulting product concepts would need to undergo continuous user evaluation, beginning with the early design prototypes, perhaps even involving users in participatory design sessions.

Project F ideas are questions being posed. The answers to these questions will influence the product direction of Whirlpool Europe in the future.

Communicating the prototypes

After the prototypes were completed, *Project F* went into the communication phase. A great deal of work went into the physical display of the concept projects: an exhibit, a book, a CD-ROM and a website were all created to kick off the 'road show' that began in February 2002.

The physical prototypes presented alternative and innovative ideas about the future of the laundry process that readily captured the attention of stakeholders and provoked feedback.

Project F was introduced at Hometech Berlin to a mostly industry-specific audience. There Whirlpool Europe presented a symposium to discuss the insights gained from the *Project F* and the *New Domesticity* research studies. Follow-up presentations were held at the Salone del Mobile (Milan Furniture Fair) in April 2002, and at other trade or dealer-only showings, such as the 'Step into the Future' shows in Paris (June 2002) and Brussels (August 2002). Whirlpool Europe has been observing the reactions of the various audiences.

However, so far the company has had to rely on casual and anecdotal responses to the prototypes, because they could not send their usability group to gather input from the communication phase, which would have given valuable information from measurable feedback. A more structured process for capturing reactions will be done early in 2003, when the prototypes will be brought back to the usability lab for serious evaluation of user preferences.

Exposure and outcomes

Whirlpool as a company wants to position its namesake brand as innovative and user focused. The road show displayed innovative design in new products that reinforced the brand strategy. *Project F* (like the *Macrowave* project before it) helped Whirlpool Europe to break out of a stalemate in the domestic appliance industry, to provoke both imagination and discussion on future home appliances and beyond. At the same time, the project offered tangible examples of how these ideas could be implemented in new products that might redesign our physical and social interactions in the domestic environment in the near future.

Exhibiting concept products is not unusual, however. What makes this project noteworthy is that not only the products, but also the research itself, piqued the interest of the European press. The combination of the research from *Project F* and the *New Domesticity* study provided European media with a wealth of material that stimulated commentary and debate around design, consumer trends and societal behaviour. This helped Whirlpool to present and communicate the relevance and foresight value of the *Project F* concept prototypes to a general audience, the international press, consumers and the trade.

This project also aimed to reach decision-makers, opinion-makers and influencers who specify Whirlpool products in domestic or institutional environments. The press coverage of the project helped achieve those goals. The business, style and design press all covered *Project F* extensively, enhancing the image of Whirlpool Europe as an innovative and design-oriented company. *Project F* caused a significant increase in the quantity of material published about the company, especially in magazines dealing with the 'leading edge' in technology, trends and style.

Results of the project

As an exemplar, *Project F* shows how foresight activities deploying design can contribute to a company's strategic aims and vision.

With this project Whirlpool Europe:

- Integrated exploratory and strategic design thinking into its approach to innovation;
- Used design research to understand users' current needs and behaviours, and to anticipate future ones;
- Created prototypes both as physical embodiments, answering these needs, and as imaginable futures;
- Stimulated internal strategic decision-making and knowledge exchange;
- Opened up a dialogue about future fabric care with many levels of stakeholders;
- Supported Whirlpool's brand strategy to position itself as an innovative company.

The project also showed that integration between foresight research and design is more effective when there is a user experience assessment group working very closely with the designers' daily practice.

Internally, *Project F* was a motivational experience for many employees of Whirlpool Europe. An internal communication audit would be the next step to gauge the perceived value of *Macrowave* and *Project F* among employees. Such an audit would be valuable as a measure of the 'softer' motivational value and benefits of design research and communication.

Externally, *Project F* has established a unique position for Whirlpool within its industry; there are very few other competitors who are yet acting in the arena of design research.

In terms of economic benefit to the company, the value of the media coverage and space in publications at least matches the original budget allocated to the project's development. Whirlpool is currently assembling a regional analysis and measurement of the media coverage achieved by *Project F* in terms of monetary value and space in publications as a return-on-investment. The percentage increase in unsolicited media calls will also be measured.

Beyond *Project F*

Foresight initiatives like *Project F* could be enhanced and extended in a number of ways. First, participatory design approaches and techniques could establish a closer and more direct interaction between users and designers. Stronger involvement of users throughout the design process could extend the influence of user data on the designers' work until the prototypes are released to a wider audience.

Second, within the short duration of an effort such as *Project F* (less than a year), building finished prototypes became very time consuming. While the level of finish of the models was consistent with those of the previous *Macrowave* project, other ways of prototyping are possible. The use of other design techniques, such as computer visualisation, video and animated scenarios might sometimes be appropriate to stimulate discussion of foresight ideas, with the added benefit of being more feasible to rework if necessary.

Project F prototypes were exhibited as individual objects with only a computer display showing their actual use. The display of prototypes during communication events would be enhanced by showing specific scenarios of how people might actually use them, based on actual interface elements and routines. Both designers and audiences would benefit from seeing proposed solutions in clear contexts that could be experienced more directly.

Third, a more systematic approach to collecting the reactions of visitors to the *Project F* exhibitions could feed back to designers and company decision-makers, to inform future projects and product development.

Finally, integrating the Whirlpool usability team into a more structured and systematic evaluation of user experiences (during the exhibitions and beyond) could establish a feedback loop from the imagined future products into strategies the company could act upon. Setting up clear evaluation criteria during the design process, covering perceptual-motor, cognitive and emotional aspects of the user experience with the prototypes, would be valuable for obtaining relevant feedback from users to inform the company's next steps.

Data obtained from these observations could inform the implementation phase of the project, but also better link its research and tactical levels. They could suggest ideas for establishing partnerships with other product or service companies to promote further innovation in fabric care in the future.

New Domesticity: Current Trends in European Domestic Life

A sociological approach to forecasting future needs

New Domesticity was a research study on new trends in European domestic life developed by FutureConceptLab (FCL) for Whirlpool Europe, as part of the activities informing *Project F*. The study was led by sociologist Francesco Morace, president of FCL, a research institute in Milan (Italy) specialised in marketing issues and trends in consumption.

The investigation ran parallel to *Project F*, and was carried out during the period of September-November 2001, building on a long-standing collaboration between Whirlpool and FCL, which had begun in 1997.

The study applied a sociological approach to the integration of different forecasting techniques. It combined a qualitative and ethnographic-oriented method for hypothesis generation in addition to the use of more traditional, quantitative market research tools aimed at extending the investigation's scope.

What follows is a description of the research: its forecasting methods, its findings, the trends it identified, and the contribution it made to *Project F*.

FCL research methods

According to Dr. Morace, the shared perspective at FutureConceptLab is not to 'follow trends passively' but 'to construct them together with those who create them'. The method used at FCL for reaching this aim is to uncover concepts that may represent new worlds of reference and help to increase awareness about new modes of thinking and behaviours emerging in our society.

FCL research practices are informed by disciplines such as semiotics and those of the social sciences: sociology, social psychology and anthropology. FCL seeks to integrate methods and contributions from several of these fields, depending on their relevance to a particular study.

The observational infrastructure supporting this activity was set up about 8 years ago when FCL developed a network of 50 correspondents (called 'cool hunters' and 'cult searchers') operating in 25 different countries worldwide. About 20 are currently operating in Europe.

The people FCL involves in this network are young professionals and researchers that work as highly sensitive 'antennae' within a specific geographic territory. Their role is to detect interesting signals or behaviours emerging in that zone which, when analysed, can help FCL client companies understand the cultural characteristics and consumption patterns of a particular market.

Correspondents are asked to constantly observe, capture and send documentation of fresh and spontaneous cultural expressions noticed during their daily life. They pay attention to the look and behaviours of people encountered in the street; to the places that attract interest and become important nodes of social activity (like new shops and bars); to projects and plans promoted by magazines; and to successful events at universities or other local institutions. In short, their job is to monitor cultural tastes.

These data, mainly photographs, form an information resource on which two FCL initiatives, the *Body Signals* and *Street Signals* Programmes, are based.

While the specific focus of these programmes consists in observing behavioural expressions and phenomena, another initiative at FCL, the MindStyles Programme studies thinking processes and styles by sifting through a collection of expressive media that affect people's imagination all over the world: music, cinema, literature, but also new media, art, fashion and design.

The analysis, integration and interpretation of this information is carried out by a task force of experts involved in a programme FCL calls the *Genius Loci* Program. Started in 2000, this programme

identifies and defines specific profiles and keywords that help to characterise each of the different countries observed.

The kernel of the *Genius Loci* Program is to uncover the talent or energy of a place, a concept that might be useful to companies or other business operators to develop customised solutions and successful marketing strategies to promote innovation in that specific city or region. The concepts and keywords emerging from this ethnographic-oriented research programme are often used to generate more detailed hypotheses and focused studies that may require the application of traditional and quantitative methods of inquiry.

Although this research approach may lead to designing studies biased towards the confirmation of the initial hypotheses and an underestimation of other potentially relevant signals of change, its value consists in providing a very flexible and updated information repository to work from; a resource from which ideas and guidelines for further investigation or interpretation of social trends can be generated relatively fast.

Studying domestic change

At the beginning of the *New Domesticity* study, the idea was to analyse current and future changes in domestic life by observing certain primary factors, such as the relationship between couples in the different European countries and their everyday interaction with specific objects in the house, especially home appliances.

Quantitative research based on focus groups and phone interviews was set up by FCL in collaboration with various market research institutes around Europe, who contacted about 2000 couples living in Germany, France, Italy, Poland, Spain and the UK. About half of these couples had children; half did not. The target group consisted of working women between the ages of 27 to 45.

The findings

The results of the *New Domesticity* study revealed some traditional attitudes, on the one hand, but also indications that a new vision of domestic life is surfacing, one that embraces conviviality and shared domesticity.

One of the study's main findings was that although couples share some household tasks, European workingwomen are still the real 'managers' of domestic life. They are in charge of the home and look after its general running and upkeep. The data also showed that there are some kinds of tasks that women are not willing to delegate to other members of the family. For example, 80% of the women interviewed said they preferred to personally take care of the laundry and to exclusively manage the use of the washing machine.

The study also showed some differences between countries. In Italy, for example, women generally carry out all everyday duties, from the laundry to the table setting, while in northern Europe a larger number of household tasks are shared with the partner.

For other types of household chores, like general cleaning, gardening, maintenance or administrative jobs, the burden is more equally shared between the couple; likewise, with all the activities related to the kitchen, like cooking for guests, preparing the table and washing the dishes.

One interpretation of the ethnographic signals collected by FCL suggests that the concept of domesticity has changed in recent years. Domesticity is a shared experience. The home is increasingly assuming more positive connotations both as a space for peace and family privacy, and as a place to enjoy social gatherings with friends.

Another change is in the relationship between public and private space. As the two now have much more in common, the preciousness of the private becomes more important.

The study also looked at the changing models of family, from the traditional family structure to more alternatives emerging in the last two decades, for example, more single-parent families and families without children.

The personal relationship between members of a couple is also changing and affecting how people experience domesticity. One trend is toward the formation of 'twin couples', where partners seek similarities and affinities in their companions, as in professional partnerships. However, this relationship is also kept open to include family and a close circle of friends.

The study also looked at the role of technology in the house, and showed how technology today has a pervasive presence in the domestic environment. Because technology can isolate people, the reaction is a desire for conversation and 'sociable domesticity'.

Yet the increased sense of the home being a hub of activity also derives from the so-called 'intelligent home' and 'home automation' models, proposing highly rational and rationalised kitchens based on advanced technology. These innovative design models have to be user-friendly and flexible, not only efficient.

Setting up a home is not just about furniture; it's about the relation of the body to the environment. Consumers are spending increasing amounts of money on both food and body care.

FCL is presently working to extend the results of this investigation by using qualitative research methods, to overcome the limitations inherent in interview-based studies, where people are typically asked to describe their everyday practices instead of being directly observed in action. With a more qualitative mode of research, FCL hopes to integrate 'street signals' with 'home signals' and to observe people's behaviours in real life situations.

The impact of the *New Domesticity* study

The findings of the *New Domesticity* study were first communicated to the public in collaboration with Whirlpool Europe at the HomeTech Exhibition held in Berlin, in February 2002. Other presentations of results specific to the different countries investigated, took place in Italy and Spain this year.

FCL's research findings did not become available to Whirlpool Europe until after the design concepts for *Project F* had already been developed and were about to be translated into prototypes. These findings were used to inform the *Project F* communication

and implementation activities currently in progress, and certainly constitute an important source of knowledge to draw from in Whirlpool's next phase of product innovation.

However, striking parallels emerged between the qualitative approach of *Project F* and the findings of *New Domesticity*. According to Richard Eisermann at GCD, the strong correlation between the two demonstrated the value of a polyvalent approach to consumer understanding.

According to Dr. Morace, ten years ago, a foresight activity like *Project F* might have been too difficult to present to a general audience. Today such a strategic design project is considered useful to stimulate curiosity and interest on the part of consumers, to get buy-in and understanding from various stakeholders, and for Whirlpool itself to effectively communicate its image as an innovator.