



## 慶應義塾大学ビジネス・スクール

### Panasonic: Nanoe

Nanoe is an ingredient brand that Panasonic Corporation first carried in a product in 2003 and now (2010) is tackling with ever-increasing enthusiasm. Ingredient branding refers to the practice of incorporating the key attributes of one specific brand into another brand as ingredients. Examples include Intel's Pentium, Gore-Tex, Tempur, Xylitol, Aquos, and Antibacterial Ion.

#### Outline of the Air Purifier Market

The following is an overview of trends in the air purifier market, which is the subject of this study. In Japan, air purifiers for business use first appeared in the market in the 1960s. After that, a full-fledged market for household air purifiers formed around 1982, following the appearance of cheaper and simpler products.<sup>1</sup> As of autumn 2009, household air purifiers were selling quite well. In response to the increasing demand for antivirus measures to counter the spread of a new strain of influenza, shipments in fiscal 2009 were expected to reach a scale of 1.7 million units, an increase of 16% over the previous year.<sup>2</sup>

In recent years various secondary functions have been added to household air purifiers, but the principal functions are dust collection, deodorization, allergen neutralisation, and virus removal. Although there is no clear definition of technological categories, the representative ones are the fan type, the ion type and the air filtration type, which have been attracting considerable attention in recent years. Companies are incorporating ingredient brands into their products and proclaiming their benefits.

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I preparing this case, valuable information was provided by Panasonic Corporation's Mr. Ichiro Yamada and Mr. Masaki Morita, and Panasonic Electric Works Co., Ltd.'s Mr. Shousuke Akisada.

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<sup>1</sup> *Matsushita Technical Journal*, Vol. 51, No. 3 (June 2005).

<sup>2</sup> *Nikkei Sangyo Shimbun* (September 18, 2009).

## Panasonic's Nanoe Technology

Nanoe is an ingredient brand that Panasonic Corporation first introduced in a product in 2003 and is now (2010) deploying with ever-increasing enthusiasm (see Diagram 1). The Nanoe ingredient brand name means an ion that converts moisture in the air into ultrafine droplets and gives them an electrical charge.<sup>3</sup> By incorporating the Nanoe device's technology enabling the generation of nano-level charged ions into final products, Panasonic has created products carrying the Nanoe brand.

The Nanoe device was first carried in an air purifier as "Air Refresh Nanoe" in 2003. After that, it was also used in hair dryers in 2005, and presently it is adopted in an extremely wide range of products, including air conditioners, bathroom dryers, refrigerators, washing machines, and beauty products.

Diagram 1: The Nanoe Logo



Source: From Panasonic's website.

*"nanoe," an ion from water, provides as a beautiful, clean, and tasty life (in Japanese)*

Nanoe was the name of a project conducted in 1997 by the former Ministry of International Trade and Industry, to develop a technology to measure droplets. After 2001, it became the name of a technology developed in a joint academic-industrial project by Hiroshima University and Panasonic to generate fine water droplets.<sup>4</sup> At first, Nanoe used a technology that required water replenishment, but in 2005 the Peltier technique that did not require water was introduced. Since then, efforts have been made to reduce the size of the device and to improve its efficiency, and several patterns are now used to fit the finished product in which it is carried. In this way, the technology that supports the Nanoe ingredient brand is continuing to evolve so that it can adapt to as many products as possible.

<sup>3</sup> <http://panasonic.co.jp/ism/nanoe/nanoe01.html>

<sup>4</sup> <http://panasonic-denko.co.jp/corp/philosophy/torikumi>

The following four points describe the effects of an ingredient brand in the product development process as confirmed by the results of interviews. First, there is large-scale organisational change and top-down promotion. Looking at the corporate history of Panasonic (formerly Matsushita Electric Industrial Co.),<sup>5</sup> one can see that it has come through a long series of major changes, including a large-scale business reorganisation in 2003, the absorption of the “mega-active ion” of Matsushita Electric Works, Ltd. following the absorption of the marketing division in 2005, the appointment of President Ohtsubo in 2006, the change of the company name to Panasonic in 2008, and the integration of product groups.

Let us correlate the changes in Nanoe with these organisational changes. First, in 2003, when the large-scale business reorganisation took place, Panasonic installed its minus ion technology, which until then nameless, in air purifiers for the first time as the Air Refresh Nanoe. In 2005, when the mega-active ion of Matsushita Electric Works was absorbed, Panasonic unified the group’s minus ion technology into Nanoe, adopting the present logo in 2007. In August 2008, when product names were united under the Panasonic brand, the president himself, in a press conference to announce the integration, revealed the policy of making a companywide effort to promote Nanoe. In this way, as a result of the large-scale organizational changes, it became possible to establish companywide support for product development using Nanoe.

Interviewees remarked that because policies relating to the Nanoe brand had all been promoted in a top-down manner, today the brand has firmly permeated down into diverse workplaces. The Nanoe ingredient brand has been placed on the same level as the Panasonic corporate brand, and each business division uses it based upon a brand management manual. As a result, interviewees stated that nowadays it is possible to promote new product development using Nanoe that transcends the barriers between business divisions in the company and in the group. At the same time, because in-house recognition of Nanoe is unified, following its top-down promotion, interviewees say that in-house actions during development have become smoother, benefiting from various forms of cooperation. In other words, if Nanoe is used, companywide, cross-departmental product development can be facilitated.

Since the policy and management setup relating to Nanoe have been established and horizontal development across business divisions and groups has become possible, one interviewee remarked that the ingredient brand covers the widest range and is a shared theme in the company. At present, various business divisions have plans for new products using Nanoe.

Second, according to interviews about Panasonic’s product development process, after the integration with Matsushita Electric Works, the Panasonic culture became more integrated, and the marketing division came to participate early on in the development process.

The interview survey revealed that the marketing division and, in particular, the advertising division are participating in product development from an early stage. Intervention by the planning

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<sup>5</sup> <http://panasonic.co.jp/company/info/history/>

division is also typical. One can speculate that the marketing division's involvement in the development process at an earlier stage strengthens the market orientation of product development as a whole.

5 Strikingly, one interviewee commented that if Nanoe had not been developed, the technical division and the marketing division would not have communicated with each other, and it is easier to obtain companywide cooperation for product development using Nanoe. These outcomes can be assumed to result from the clever fusion of changes in the corporate culture brought about by organisational changes and the permeation of policy through a top-down approach.

10 Third, determining to what extent advertising and PR expenses should be allotted to ingredient brands is an extremely difficult problem because it is hard to measure the cost effectiveness. According to the interview results, however, because the policy of promoting Nanoe has permeated the company, it has become possible to acquire an advertising and PR budget for Nanoe.

15 At Panasonic, usually advertising and PR budgets are allocated for each product, and it is difficult to acquire budgets directly for devices. However, the hurdle of allotting advertising expenses for Nanoe, a cross-departmental project within the company, from the budgets for each product decreased as its level of recognition within the company rose. Furthermore, as installation of the Nanoe device spread from air purifiers to air conditioners, dryers, passenger cars and other products, interviewees said that  
20 it became possible to bring individual product advertisements together on the basis of Nanoe and to use advertising expenses more efficiently. In other words, it can be expected that the effects of improved advertising efficiency through the ingredient brand will increase as the ingredient brand's potential for expansion becomes greater.

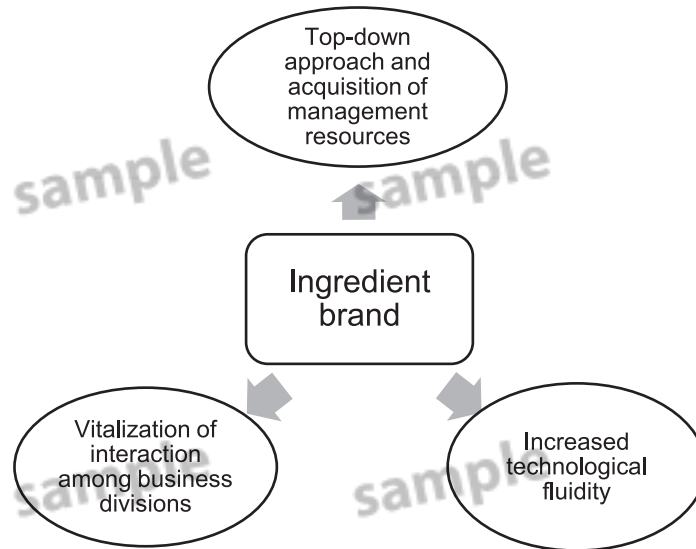
25 In this way, against the background of Panasonic's organisational integration, Nanoe appears to have had the overall effect of bringing the entire company together in the form of backup support through a top-down approach. Thus, it became possible for the marketing division to become involved in the product development process at an early stage, and the promotion of cross-departmental projects  
30 within the organisation is being implemented in relation to advertising and PR expenses and product development. As a result, both inside and outside the company, Nanoe has become a representative ingredient brand ranking alongside Panasonic's corporate brand.

35 Finally, generally speaking, specified technologies are frequently confined within a single business division. In the case of large companies, in particular, it is rare for people related to specific product development to have good knowledge of all the technologies used within the company, so that even outstanding technologies are hardly ever used in a cross-departmental manner. However, an ingredient brand attracts users within the company and is incorporated as a component by other divisions; therefore, the technology is applied cross-departmentally. As a result, Nanoe has come to be used not  
40 only in air purifiers but in a wide range of product categories, including beauty products, dryers, washing machines, refrigerators, toilets, and vacuum cleaners.

## Product Development Effects of Ingredient Brand

From the analysis above, it can be concluded that an ingredient brand has three effects on product development: (1) top-down approach and acquisition of management resources, (2) stimulation of interaction among business divisions and (3) increase in technological fluidity (see Diagram 2).

Diagram 2: Effects of an Ingredient Brand on the Product Development Process



### (1) Top-down Approach and Acquisition of Management Resources

At Panasonic, as a consequence of organisational changes, the rearrangement of product groups and other developments in recent years, the product development process has gradually become cross-departmental in line with modern practices. In particular, the companywide policy of actively developing Nanoe has promoted the further elimination of barriers between organisations. At Sanyo Denki Co. as well, the announcement of a policy of promoting their ingredient brand through a top-down approach has increased the opportunities for the marketing department to become involved in development. The number of people engaged in research and development has also reportedly increased. These findings confirmed that the top-down promotion of an ingredient brand provides justification for the marketing department's involvement and makes it easier to acquire management resources, such as promotional expenses and personnel.

### (2) Vitalization of interaction among business divisions

It was confirmed that there is a unique characteristic interaction, caused by the ingredient brand, such as mutual communication, in relations among divisions involved in product development. For example, at Panasonic, one interviewee remarked, Nanoe is the most wide-ranging technology and has become a shared theme. If that were not the case, we probably wouldn't be here. At Sanyo Denki, an interviewee commented, when design improvements are made, a person from the head office comes. And when marketing improvements are made, a person from the head office comes. Rather than just thinking that we can make decisions ourselves, we move forward together. That is the image. These observations suggest that the introduction of an ingredient brand promotes

interaction between the head office and workplaces and between the marketing division and technological and product development divisions. One may also predict that divisions' differences in orientation will also be mitigated.

5 (3) Increased Technological Fluidity

10 It was also discovered that product development incorporating an ingredient brand has the potential to alleviate excessive technological obsession and fixation upon technologies because, as stated above, ingredient brands include market information such as the benefits and significance of the technology and materials to the consumer. For example, one interviewee stated, the brand has become established as Nanoe, but the devices are changing. Another observed, back in April 2004 [when the name Nanoe first appeared], a thermoelectric device was used. But this changed in 2005, when a water-exchange method that did not use water came to be employed. These observation reveal that while the core of the Nanoe brand remains, the element technologies that supply benefits to consumers can change repeatedly. In view of the fact that engineers usually tend to prefer their own technology, this point suggests a highly unusual change in attitude toward greater cooperation in the interest of shared goal.

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