

MEET



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DEVELOPING TECHNOLOGIES TO GENERATE NEW BUSINESS OPPORTUNITIES FOR PHILIPS PRODUCT DIVISIONS IS THE MAIN TASK OF PHILIPS RESEARCH. BUT SOMETIMES INVENTIONS ARISE IN THE LABORATORY FOR WHICH NO BUSINESS OR EVEN MARKET YET EXISTS, OR WHICH COULD BE APPLIED IN A MULTIPLICITY OF BUSINESSES. IN EITHER CASE, IT CAN BE WORTHWHILE TAKING THE LEAD IN INITIATING THE BUSINESS EXPLOITATION OF THE NEW TECHNOLOGY. JOOST HORSTEN IS DOING JUST THAT AFTER TAKING UP AN ASSIGNMENT AS BUSINESS INNOVATION MANAGER FOR A TECHNOLOGY THAT WAS DEVELOPED IN THE GROUP HE FORMERLY LED.

Is this your first business assignment, Joost?

More or less. My previous functions were mostly technically oriented, although there was some business flavour every now and then. After studying physics and doing a PhD in biomechanics, I started at Philips Research Eindhoven in 1990, developing numerical simulations to analyse the safety of cathode-ray tubes. In 1995, I moved to the Philips Centre for Manufacturing Technology to become a group leader, and returned to Philips Research three years later to lead the Personal Care Institute, where research on a wide range of disciplines supports Philips' Personal Care businesses. A lot of biophysical research is done in the group, for example studying the effect of shaving or depilation on the skin, but also the mechanics of brushing the teeth for example. Application research is done as well, and one of the ideas developed in our group is a display integrated in a mirror. We developed the technology quite rapidly to a state that makes it good enough for market introduction. That is where we are right now.

A display mirror?

The idea is quite simple: it is a combination of a flat display and a semi-transparent mirror in front of the display. When the display is off, it is invisible and only the mirror function remains. When the display is turned on, it becomes visible through the mirror surface. Conventional half-way mirrors work with a coating that transmits less than 50% of the display light to the viewer. We have invented a solution with 100% light transmission, resulting in a very bright display picture with really great viewing characteristics. This is done by using a reflective polarizing foil as the mirror surface and aligning it with the polarized light emitted by the LCD we use.

The funny thing is that we did not set out to invent this technology, but concluded that it was the best way to realize other ideas we had in our group. We had a programme on health and fitness-related technology, for example the integration of sensors to measure weight, heart rate and

physical activity, with intelligence to convert this into meaningful information such as a user's physical condition, or advice about a diet or workout exercises. We think that there is a market for this kind of 'health coaching', but it should be more than a program running on a PC. It should be seamlessly integrated in people's daily life, and we were looking for a user interface that could realize just that. A mirror is a very logical choice, because most of us spend at least a few minutes in front of the bathroom mirror each day. 'We've got the consumer by the (eye)balls', is a favourite expression in our group...



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So tell us about your new role

Most of the work done at Philips Research has an obvious Philips business partner that will eventually pick up the results to turn it into a business proposition. Here, it is a bit different. Because the display mirror is an entirely new concept, there is no existing business line or market for it. In addition, the technology can be used in a wide range of possible products. It is not simply a display, but it is a display plus an application, and the application can be quite diverse. In short, there is not one clear receiving party, but instead many different options.

The idea is to look from a corporate viewpoint for the best way to develop this business. We are studying different scenarios, like the Intelligent Personal Care concept just discussed. We talk to potential customers and relevant parties within and outside Philips, and in this way we try to find the best way to create value out of this technology. My assignment could go all the way to setting up the business, preferably a Philips business, but if this turns out to be the best option, we could also spin out the technology. Fortunately, I do not have to do this all by myself, but together with Mark Lazeroms and Jan van Herk of the Personal Care Institute.

You talked about the Intelligent

Personal Care scenario. Are there any other options? Within the Personal Care area we have developed more ideas such as 'oral care coaching': helping you and your children to brush their teeth better. Another option is a television integrated with a mirror. This would make the TV a functional object rather than an idle box when turned off. In the professional arena, you could envisage mirrors that switch into information or entertainment panels in hotels and public areas or at the hairdressers. It could be a design feature in a mobile phone or other products, functioning as a mirror when turned off and a display when operational. Another idea is to eliminate the blind spot of rear-view mirrors in trucks by combining a display mirror with a camera that captures the hidden area. Exciting new potential will open up if computing power allows us to combine reality and virtual reality in real-time: you could think of a virtual dressing or make-up tool that shows you how a certain shirt or haircut would suit you, perhaps in combination with an ordering facility via the Internet.

What's more fun, technology or business?

When I think about it, in certain ways they may be not that different after all. There are quite a few similarities between the way you approach research and strategic marketing issues. In both disciplines, a lot of things are new, unknown and uncertain and it takes a lot of creativity ('inspiration') and analysis ('transpiration') to gradually find the concept that enables you to understand and manipulate what is going on. To some extent it does not matter whether you look at the flow of blood in veins (as in my PhD) or at the expected development of a new market in the future. You need to make assumptions and know how these influence the uncertainty of your results. You could regard it as two different disciplines requiring a similar state of mind. I can't say which I like more, but both certainly are fun.

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