

8. DSM

////////////////////

From Coal to Sustainability- leader



Rinus van den Berg

© Muriel Thies

Royal DSM is strongly anchored in the Limburg landscape. As an economic motor of the past and present, which has proved to be hugely flexible. Transformed from state mining company into a quoted life sciences and materials sciences group. As the time natural raw materials will become extinct gets nearer, environmental pollution has global attention and Cradle to Cradle opens doors. The company faces new challenges again.

Sustainability has been interwoven since the foundation with the company policy of DSM. Faced with the dangers the miners were exposed to and the visible pollution caused by coalmining, the base was set for sustainability awareness. From awareness via legal obligations to leader with foresight: in 2009 DSM went back to the number 1 spot in the Dow Jones Sustainability Index for the chemistry industry (the company led the list from 2004 through 2006, ed.), says proud Rinus van den Berg, industrial designer, working since 1979 at DSM and currently also Cradle to Cradle design manager. “Earning as much money as possible with respect for mankind, nature and future, that's what it's all about. Even in dire economic conditions, like in 2009, that principle stands. Shareholders want to see profits, but have over the years become increasingly more critical of the way they are achieved.”

**Earning as much money as possible
with respect for mankind, nature
and future.**

////////////////////////////////////,

Van den Berg deals with the complex intersection of material, market demand and sustainability. He is responsible for the design of plastic end products and advise to the customers with his expertise. He states that companies can only make good choices if they have sufficient knowledge about materials and their (re)use. At DSM intensive cooperation with universities worldwide contributes to this. “Sustainable design becomes increasingly

more important, just like the question what it is exactly. A car made from super-safe materials that very quickly is abandoned because it no longer is pretty or is too noisy, is ultimately not durable. In that case you haven't done your job as a designer well.” The long list of achieved successes testifies that DSM has found a balance. Just like the development of lightweight materials for the car and aviation industry, that contributes to reduced fuel use. By using CO2 as a base for plastics for example. And by cultivating 'omnivorous' yeast that can transform large quantities of sugars from waste in bio fuel, with which the company hopes to acquire a considerable market share. The chemistry giant scores high on the Cradle to Cradle list: 5 products have been certified in the meantime and others are constantly analysed.

Whereas the Cradle to Cradle philosophy has only quite recently opened the sustainable eyes of many companies, the lion's share of what the founders Braungart and McDonough is a done thing for Van den Berg. “We already knew 90% in the '70s and '80s, and recycling is anything but new. Take the Heineken WOBO beer bottle, on which I have worked too, that could be used as a building stone. But if you spoke of sustainability in those days you were a tree hugging hippie. In the past I believed that as a designer you work at a feasible better world. A bit less now, the world seems less feasible and is very complex. But it is still good that the subject has been mapped out again. And the Cradle to Cradle principle of eco effectiveness is revolutionary: define what is good for the environment, and only act afterwards.”

So far the reality is that those who produce, pollute however. "People often forget that the steadily growing consumers' society - i.e. we - defines the demand and therefore the production. But that doesn't mean that companies don't have to make intelligent choices. It costs billions to clean up the Gulf of Mexico after the BP oil disaster. If you can prevent such a situation by investing in sustainability; that's better. For the environment, for finances and socially, because the plummeting of the BP



↑
Mirra Chair Blue Fog
© Herman Miller

shares means a great danger for many pensions". Of course companies sometimes make decisions for diverging reasons that do not meet the highest possible ideals. Remaining ahead of the competition often comes first, which involves for example that expenses are strictly monitored. The DSM Triple P-report 2009 demonstrates that the use of green energy is such a (price) sensitive subject. Expenses that outweigh profits and insufficient availability led to the chemistry company deciding to not expand its use more than the already integrated seven percent. The group advocates a system in which the CO2 emission is translated in the price of a product, for example via emission trade. Decreased CO2 emission and other greenhouse gasses is a hot topic in the chemistry sector, whose emissions are relatively high. CO2 emission rights are currently granted to companies free of charge. If your emission is lower than the quantity rights were granted for you can sell the remaining rights. If a company's emission is too high, it must take measures to lower emissions or buy additional rights. Otherwise it risks a fine. At European level, it was decided that the authorised emission should annually decrease between 2012 and 2020. Less free rights are granted, which means that companies with high emissions must pay more to buy rights.

Sustainable design becomes increasingly more important, just like the question what it is exactly.

////////////////////////////////////

DSM has achieved a considerable decrease over the last years by investing in new technologies in the nitric acid factories. The decrease would equal two million ton CO2, which means more than twenty percent of DSM's total greenhouse gas emission worldwide. The company refuses to say how much it invested. Aiming for bio mass use, renewable vegetal material also offer opportunities. But the path to an eco effective society remains paved with huge challenges. "If companies want to get a grip on



the whole production and consumption cycle, something needs to change on several fronts. Things go wrong at two levels currently. At the start, where raw materials become scarce, and at the end, when we throw everything away again in a big pile. By both investing in the use of bio mass and focusing on re-using of all those materials at the end of the chain you work at both points. SABIC provides a good example, by recycling PET waste (present in many plastic bottles - ed.) into new, high quality plastic. Great, because before 'waste is food' truly becomes reality, we will be years later. We need to think today what we can do with our plastics of the car industry that will land somewhere on a dump in China in twenty years. Although DSM buys waste plastics from companies, we are not as active in that sector ourselves any more. Because it is not that attractive from an economic perspective. And maybe we should ultimately, from a Cradle to Cradle viewpoint rent plastics instead of selling them. Quite a job to make the market enthusiastic for this."

And the Cradle to Cradle principle of eco effectiveness is revolutionary: define what is good for the environment and only act afterwards.

////////////////////////////////////,

But DSM will in future still explore possible new business models that make such changes profitable. Because, as Van den Berg rightly says, raw materials and materials become scarcer. "We still have a long way to go. Nevertheless, even in my hippie days, I have never had an aversion against industry. Because I realise that we all contribute to it: everyone is a consumer."



Gwen Teo for REcentre

Interviewee / Rinus van den Berg, Architectural and industrial designer

Koninklijke DSM N.V.
Het Overloon 1
6411 TE Heerlen
The Netherlands

www.dsm.com

Sector • Chemistry

Year of foundation • 1902

Number of employees •
22.700 (worldwide)

Turnover (2009) •
7, 7 billion EUR