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Entrepreneurship, Innovation and Sustainability

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Introduction

Today, only a limited number of entrepreneurs and managers are facing up to the relevance of sustainability issues and the ways in which these may affect their own businesses. Even fewer entrepreneurs and managers see sustainability as a potential source of profit. These are the findings resulting from research carried out by Nyenrode Business Universiteit among well over 500 entrepreneurs and managers.¹

Upon second consideration these findings would seem to be peculiar. After all, all enterprises are consumers of energy and thus have to face climate issues. Today's picture makes even less sense when we consider in addition the social factors related to sustainable entrepreneurship. Every business employing staff has to deal with recruitment and indirectly with integration issues. Inner-city safety problems give many entrepreneurs a headache. Such matters are directly related to the division of labour as they concern the question of how to deal with underprivileged youngsters. It is even more peculiar that the entrepreneurs and managers interviewed during the research project should indicate a lack of opportunities to use sustainability issues for the generation of profit. What exactly are the opportunities that construction firms and builders are ignoring when they fail to zoom in on the energy problem? Which opportunities do recruiters ignore?

Entrepreneurs would not be entrepreneurs if they were unable to spot and make the most of opportunities that present themselves. They do so, but only very reluctantly. A paradox may be witnessed here. On the one hand, entrepreneurs who make a mark for themselves in the field of sustainability are generally not perceived as true entrepreneurs. They are portrayed as idealists, as people who show concern for social issues. On the other hand, entrepreneurs who in fact manage to generate business successes with sustainable products are treated with suspicion. It is then argued that they are misusing social needs in order to line their own pockets. Their commercial success is only too quickly seen as proof of their lack of commitment to the common social good.

People involved in sustainable entrepreneurship tend to strike a careful tone in their communications. A certain fear may be witnessed on their part to be portrayed as an entrepreneur representing 'the loony left' or somebody who misuses a good cause. When it is difficult to communicate on the issue of sustainability clearly and unambiguously, it

¹ Wempe, J. (2007). Nyenrode FD Monitor June 2007. Retrieved August 2007 from http://www.nyenrode.nl/download/sustainability/nyenrodeMonitor_juni07_analyse_JWempe.pdf.

will also be difficult to use sustainability as a business motivation in the formulation of marketing strategies.

Examples

The ambiguity involved on the part of entrepreneurs as well as consumers concerning the phenomenon of sustainable entrepreneurship explains why the associated business case is developing only very slowly. Still, current signals suggest that thought in this field is changing.

InterfaceFLOR is a multinational organisation producing widely-acclaimed sustainable floor covering.² In the nineteen nineties, Interface's top manager Ray Anderson came to realise that his business had a major environmental impact – through its use of raw materials, its production process and through the fact that its products would some day turn into waste. He also realised his business would impact global welfare, not only now but also concerning future generations. This notion demonstrated to him that he was caught in a negative business spiral. Business success could only be realised by higher profits following higher turnover rates, something which simultaneously implied a larger impact on the natural environment. By radically altering the production process and even altering the entire business model, he proved to be able to turn the tide. Ray Anderson now intends his business to be fully sustainable by the year 2020. He even intends to make a business contribution to environmental recovery: not merely by offsetting emissions but by doing much more than that. This desire has fuelled the development of countless innovations in all business processes. For example, worn-out floor covering is collected and recycled as often and as much as possible. This process offers Interface an opportunity to keep in touch with clients and to maintain a fruitful business relationship as an added advantage.

Shakie's³ is a take-away food and drink chain company operating shops in some of the major Dutch railway stations. Shakes, juices, coffee, tea, bagels and brownies are sold together with other fresh snacks, whenever possible made from organically grown ingredients. According to managing director Odette Oostindiën, Shakie's also acts as a springboard to help her shape her ideas concerning sustainable entrepreneurship. "This is very much my kind of business: it has to do with who I am. For me, sustainable entrepreneurship is expressed in the way you treat your staff, your products and your customers. Many companies are conservative business strongholds and far too often led solely by short-term thinking." But can Shakie's in fact be termed a proper company? Odette: "I first set up the business without any experience in the restaurant service sector and without any proper product knowledge. I did it together with my sister, her boyfriend and another guy who was responsible for all kinds of odd jobs. We were not really prepared for any unpleasant surprises. And in those early days, I must say, some of the

² www.interfaceflor.eu. Eu (2007) Duurzaam ondernemen. Retrieved August 2007 from http://www.interfaceflor.eu/internet/web.nsf/webpages/52_nl.html .

³ www.meldjeheld.nl (2007) Odette Oostindien, come on shake it baby! Retrieved August 2007 from <http://www.meldjeheld.nl/cms/index.php?id=29> and also www.mvonderland.nl (2007). Shakie's Fresh Fruit Shakes. Retrieved August 2007 from <http://www.mvonderland.nl/overmvonderland/partnersinonsnetwerk/overzichtpartners/view/29239>.

blows came rather unexpectedly. But I was brimming with enthusiasm and full of ideals. I had a business idea, knew a business name as if by instinct, I saw the right colour. Yet when does an idea materialise into a proper business? You find that out when your coffee machine breaks down, or when somebody reports ill very late in the day. Only then do you realise that you actually are in business.” In 1997 Odette opened her first take-away shop at Utrecht Central Station. Today, Shakie’s has developed into a much-respected chain company with additional shops located on the premises of other major Dutch railway stations: Amsterdam Amstel and Amsterdam Central Station in addition to Eindhoven and Leiden.

Valid Express⁴ is a company offering courier services. It employs people with a slight physical handicap. And it was actually feelings of frustration that led its founder Nicolette Mak to launch the business in 1999. Nicolette Mak: “It all started with my brother. It proved impossible for him to find a job, even though he never gave up trying. My brother suffers from a hereditary muscle disorder and had been on the dole for as long as ten years – in actual fact ever since he left school. At that time I was working as a freelance courier and it occurred to me that this would be a perfect job for my brother. Together we went to talk to the Social Services Department and asked if they could give my brother a car instead of social security benefits. We expected him to be able to pay back the car within a year because of the work he would then be able to do. The Dutch social welfare system proved – and still proves – to be absolutely unable to accommodate this type of request, so our audience with the people in charge lasted about five minutes and then we found ourselves back in the street. I then thought of a plan to start a courier service employing only drivers with a physical disability. And we have been growing ever since: from one single client to well over six hundred, and from eight permanent staff members to fifty-five.”

The multinational chemical company DSM⁵ has developed a very inexpensive and extremely effective water purification filter especially for the benefit of developing countries. It is currently manufacturing these in India in cooperation with the development organisation Oxfam Novib and with Proshika, one of Bangladesh’s largest NGOs. On the occasion of its centenary anniversary DSM furnished five million euros for their Dream-Action project. Staff members were given the opportunity to submit their ideas expressing how knowledge and talent present within the DSM organisation could be put to good use and serve a good cause. Alex Vrinzen and Paul Vergossen offered suggestions to improve the quality of water supplies with their knowledge of membranes. They went on field trips to Bangladesh and heard what people needed most. Next, they built ten filter prototypes, each of which was tested in the field for a period of five months. Inexpensive filters operating with natural materials - known as drip filters - have been around for some time. Vrinzen and Vergossen, however, decided to filter water under pressure so that it became possible to filter more water at higher speeds within the same period of time. The major advantage of this kind of technology lies in making

⁴ www.validexpress.nl (2007). Retrieved August 2007 from <http://www.validexpress.nl/site/content/view/4/4/lang,nl/>.

⁵ www.dsm.com (2007). Water4Life. Retrieved August 2007 from www.dsm.com/nl_NL/html/sustainability/dream_straw.htm.

water readily available without running the risks associated with long-term water storage. The DSM membrane filter costs less than ten US dollars and currently provides many families, schools and hospitals with clean drinking water.

What is striking about all these examples is that they concern ordinary commercial businesses offering products in a competitive market. As happens in every enterprise, an enthusiastic entrepreneur has a bright idea and is able to give it the right shape. The difference with an 'ordinary' entrepreneur is in fact the social issue which acts, so to speak, as the entrepreneur's source of inspiration. He sees business opportunities in the issue concerned. The social cause itself does not take centre stage. It is nevertheless served well, particularly by operating successfully as a business. Business aims and social aims are interconnected. What is also interesting about these examples is that employees, customers and (social) partners become involved with the social choices a company makes. New and surprising organisation and financing methods are also included here. Innovation funds are preferred to the well-established suggestion box in honouring proposals.

At the moment, the school of thought covering sustainable entrepreneurship is in a state of flux. In particular, a definition is being sought for the concept of 'entrepreneurship'. Sustainable entrepreneurship is a way of doing business. In order to develop a better understanding of the various ways in which this is taking shape today, it is advisable to consider the development of thought on sustainability as a business strategy. The general outlines will be discussed below.

The relationship between entrepreneurship and sustainability: thought categories

For the past twenty years sustainability and the role played by social enterprises have been the topics of many discussions. These discussions may be divided into three broad categories⁶:

- 1 The passive approach (before 1985)
- 2 The defensive approach (from 1985 to approximately 2005)
- 3 The entrepreneurial approach (following 2005).

The passive approach

The passive approach concerning the relationship between entrepreneurship and sustainability states that local and national authorities by definition take responsibility in addressing social issues and should therefore act accordingly. The authorities draw up legislation with which businesses should comply – just like everybody else in society. This approach slots in with classical economic thought and acted as the dominant approach until well into the nineteen eighties. The world-famous economist Milton Friedman⁷ gave a clear and straightforward description of classical economic ideas

⁶ This division is a very general one because some firms will always be ahead of their time and others will lag behind.

⁷ Friedman, M. (1970, September 13). The social responsibility of business is to increase its profits. *The New York Times Magazine*, p.2. See also: Kaptein, M. & Wempe, J. (2002). *The balanced company: A theory of corporate integrity*. Oxford University Press, p.p. 110 – 117.

related to an enterprise's social responsibility and, in connection, to sustainable entrepreneurship. He stated that businesses should be led solely by the desire to make a profit and that it is the authorities that should spend their energy on social issues. If needs be, the authorities can adopt a position in which they can steer enterprises through legislation. As soon as firms start minding social causes – out of their own free will - they will become engaged in a type of business for which they are not equipped because the people in charge will not have been trained for this, and neither are any democratic checks available. And there are more arguments. If it becomes accepted for an enterprise to adopt an additional social role, this may harm not only the company's shareholders when they receive lower dividends but also its customers, who will then pay too high a price⁸ for products supplied or services rendered, and it may finally harm staff members when they see that their employment conditions deteriorate.

The defensive approach

According to the defensive approach towards entrepreneurship and sustainability, businesses should take social issues into account. Companies should earn public trust and for that reason they should meet a number of minimum standards in serving this trust. This stage in the development of thinking about entrepreneurship and sustainability is characterised by the defensive attitudes expressed by enterprises of the time. Memorable and remarkable events pointing at a thought revolution taking place at the end of the nineteen eighties and in the early nineteen nineties include:

- the rise of sound business ethics and conduct codes (80s and 90's)
- the famous Brundtland Report entitled "Our Common Future"⁹ (1987),
- the United Nations' Conference on Environment and Development held in 1992
- and the publication of John Elkington's book *Cannibals with Forks*¹⁰.

It is in this period that the development of business ethics demonstrated that enterprises have to carry their own responsibilities. These can and must be organised well. Good citizenship means taking up an active role encompassing all the tasks and social responsibilities displayed by all those involved: the various social actors, enterprises, local and national authorities, and finally NGOs.

The Brundlandt Report makes it absolutely clear that environmental sustainability for the benefit of future generations cannot be viewed separately from social and economic conditions. The report also makes it absolutely clear that such a comprehensive approach needs the full commitment of all social actors concerned.

During the United Nations' Conference on Environment and Development held in Rio de Janeiro, enterprises acknowledged the fact that their businesses had a considerable and significant impact on society, not only ecologically but also socially and economically.

⁸ Wegener, D.T. & Petty, R.E. (1994). Mood management across affective states: The hedonic contingency hypothesis. *Journal of Personality & Social Psychology*, 66, 1034-1048.

⁹ WCED (1987). *Our common future (The Brundtland Report)*. New York: Oxford University Press.

¹⁰ Elkington J. (1997). *Cannibals with forks: The triple bottom line of 21st century business*. Oxford: Capstone.

They also acknowledged this impact had to be taken into account in their business processes.

In his book, John Elkington demonstrated what this impact entailed. He argues that businesses are cannibals engaged in a struggle for life to the detriment of the ecological, social and economic environment. Elkington states that not only financial bottom lines exist for companies – below which they should never sink – but that there are also ecological and social bottom lines. This is why he advises businesses to develop Triple-P policies (People, Planet, Profit). In the mid-nineteen nineties various enterprises embraced the issue of sustainability, with the Shell oil company acting as the first multinational organisation to opt for a change of course, following the Brent Spar disaster. In many companies, this change of course was triggered by risk expectations or a desire to improve their reputations. Enterprises wanted to prevent becoming associated with environmental disasters, human rights violations, situations involving child labour or corruption payments made to certain (government) officials.

The defensive approach towards sustainability issues adopted in those days was laid down at the time in a number of codes and regulations. Compared with the obsolescent business codes from the nineteen seventies, the new OECD guidelines were an important upgrade, formulating business ethics and international business standards for multinational companies. The code introduced by the Dutch Tabaksblat Committee suggests new standards for ‘good internal governance’ to be adhered to by Dutch listed companies. Meanwhile, various types of sustainability indicators and process improvement systems such as ISO 14001, SA 8000 and AA1000 have found their way into the present world of business. GRI guidelines have become widely accepted. These guidelines offer enterprises the necessary support to enhance internal understanding - and thus to increase awareness - of their own behaviour in terms of sustainability issues. These guidelines also assist them in streamlining their external reports.

During this period, the relationship between sustainability on the one hand and the commercial side of business operations on the other was viewed from two perspectives:

- commercial and reputation risk management
- and what is known as ‘eco-efficiency’.

Companies have come to realise that social acceptance is a prerequisite for commercial viability. Simply following the law may in itself be a necessary condition to do well in business, but a company should also earn its so-called ‘licence to operate’ in the eyes of the general public. Reputation risks are an important motive for spending time, money and energy on sustainability.

Companies have also come to realise that more money must be spent on the environment. Depletion of energy sources and raw materials leads to drastic price increases. Additionally and in line with the principle that the polluter should foot the final bill, businesses find themselves increasingly often confronted with the costs involved in combating pollution and remedying other adverse environmental effects resulting from the introduction of certain production processes and products. It is more and more

becoming a matter of common business sense to use the available raw materials sparingly and to keep the environmental costs as low as possible. Environmentally friendly behaviour has thus become synonymous with sensible business operations. It is in this respect that the term eco-efficiency is used.

Both reputation or risk management and eco-efficiency are based on a defensive approach towards sustainability. Sustainability implies a reputation risk which must be managed and controlled. Raw material price increases or the internalisation of environmental costs - as part of doing business - as well as production and product costs are all based on the notion that each business activity taxes the environment. In essence, the relationship between entrepreneurship and sustainability, as viewed in this period, is of a defensive and negative nature.

A lot has been accomplished in the previous (defensive) period. The positive effects of sustainable entrepreneurship have become visible. Much has been achieved by and within a number of enterprises, and it would even seem that local and national authorities as well as NGOs are now focusing especially on the consolidation of their achievements. They have developed a likeness to conservative parties that wish to write down in laws what has been attained in environmental and social areas.

The entrepreneurial approach to sustainability

The past few years have seen the rise of a new vision of sustainable entrepreneurship. Trendsetter businesses are starting to spot the opportunities offered by sustainability issues for the introduction of new products and services, and last but certainly not least the introduction of new business models. This type of innovation potential stems from the various technological advances that leave ample room for innovations and sustainable development. Innovation potential is also embedded in market dynamics, in which a growing number of so-called 'cultural creatives' is establishing itself next to a small group of front runners making certain sustainability demands. These groups account for 20 to 25 per cent of market demand. The business sector increasingly often acts on its own initiative where sustainability is concerned, not lastly because it recognises the innovation potential available.

Businesses are now viewing sustainability as an important stepping stone for the development of their business strategies, new products and new product market combinations. They are also becoming increasingly aware of the need to adapt business models that are currently employed in the industrialised world and in emerging and developing economies. Sustainability has entered a new phase in its development. In it, related issues have become an additional determining factor next to the business-economic focus required today.¹¹

Sustainable entrepreneurship as a comprehensive strategy aimed at the creation of added value in a business-economic, social and ecological sense greatly differs from approaches adopted in earlier stages of environmentally friendly production – going back some twenty years. Businesses themselves were able to deal with the various stages involved in

¹¹ Keijzers, G (2005). *Business, government and sustainable development*. New York: Routledge, p.p. 91-104.

environmental clean-up operations necessitated by their own production. They were also able to manage the processes involved in eco-efficiency improvements within their own organisations. But sustainable entrepreneurship involves more than that: it requires the integration of environmental and social aspects related to business strategies, marketing policies and also to investment decisions. In the current, new phase attention is shifting from a reduction in pollution to a reduction in the depletion of natural resources and to improved production conditions. This shift is taking place on a global scale: not only within individual businesses but also in those run by their suppliers, something that is much more difficult to manage by the enterprises themselves. It explains why close external cooperation is necessary in order to deal with sustainability issues in a successful manner.

New business ethics

The defining features of the entrepreneurial approach to sustainability can probably be characterised best by contrasting them with those of the defensive approach.

The defensive approach towards sustainable entrepreneurship has two basic characteristics:

- There are clearly defined responsibilities and the way in which the business operates can without a doubt be seen as the one and only cause of the resulting social issue. It should be possible to pinpoint a specific business operation as having resulted in environmental disaster, human rights violations or corruption payments. Another feature is that business responsibilities must be laid down in a series of straightforward and legitimate expectations on the part of the stakeholders. Also, the business should respect the rights held by its stakeholders and it should be committed to the prevention of damage to third parties. And finally the responsibility of the business is limited solely to those effects generated by its operations that can - from a causal point of view - only be attributed to the business itself.
- The rights and interests represented by the enterprise are seen as (absolute) prerequisites for sound business operations. They also impose certain limitations on these operations and are mostly seen as cost factors.

The entrepreneurial approach to sustainable business differs from the defensive approach on both counts. This will be shown below.

- The responsibilities of the enterprise are *not* limited solely to what can be attributed to certain business operations from a causal point of view in retrospect. The responsibilities of the business are also included in its task to use its capacities in resolving the various social issues.
- Responsibilities are primarily viewed as business opportunities.

The entrepreneurial approach leans in fact on a new code of ethics. In the previous period, business responsibilities used to be a matter of cause and effect: what did the company instigate and what can it be held accountable for? Today, however, business responsibility has come to be viewed in terms of the company's role in society with the enterprise acting as a corporate citizen making its contribution to the way in which public society is organised. Instead of pointing out the culprits when the damage has been done, the new business ethics code is concerned with the application of competencies as a valuable contribution to the resolution of social issues. These issues are seen as business opportunities and not as potential costs or fixed conditions for business operations. This new way of looking at the role of an enterprise also leads to new approaches and attitudes towards business partners. For example, what matters most in a chain company is not the formulation of conditions to be met by suppliers and customers, but it is instead the partners working together in their attempts to tackle the various social issues. Thinking out-of-the-box and looking beyond the obvious is of significant importance in this process. Businesses are looking for cooperation not only with their business partners, but also with social interest groups and with the authorities, for example.

The entrepreneurial approach to sustainable business does not neglect or ignore the rights and interests held by the various stakeholders, but it puts them in a wider context. This way, some of the problems described above are resolved to a lesser or greater extent. The approach places particular emphasis on the various opportunities presented by sustainable business. Zooming in on particular social issues is seen as a promising opportunity for successful entrepreneurship and turns sustainability into a truly viable way of doing business. The issues involved are dealt with through the application of the business talent available within organisations. Social issues thus stand a much better chance of becoming resolved.

It is of vital importance that the various issues involved are seen and understood as being interconnected. The answer to one particular question may lay the foundations for solutions to other social questions. Human rights issues or looking after the natural environment are also seen as tools to construct appropriate solutions to other sustainability issues. According to the entrepreneurial approach it is not so much a question of which stakeholder interest should be selected or how certain scarce resources should be used, but much more how social issues may be interpreted as business opportunities and how solutions to the one type of question may contribute to the resolution of others.

Sustainable entrepreneurship: a comprehensive approach

The defensive way of thinking was heavily based on a strong sense of responsibility. Some of the questions asked included: "What wrongs may be attributed to the enterprise and what can it be held accountable for?" The accompanying business-economic vision entails the idea that social issues represent certain costs or risks. Paying costs should be avoided as much as possible, or at least reduced to minimum levels, and risks must be managed. For the past decades, enterprises have shown greatly improved efficiency levels. In the development of business management knowledge, business operations have always been concentrated upon. And this is exactly the way stakeholders view their

companies. If certain business parts show higher yields than the business as a whole, a reorganisation will follow. Companies have also gone through internal rationalisation processes. Certain targets have been set for the various business units, and as a result individual staff members were presented with goals to accomplish, too. It was universally felt that business aims should become 'smart'. Attitudes towards sustainability issues predominantly illustrate attempts at shifting costs and risks, at preventing them, and - if the worst should come to the worst - at insuring against them.

Whenever sustainability issues are seen as business opportunities, a special emphasis is put on new markets, new products and services, and also on new business models. This is first and foremost a matter of attitude: a different mind-set is involved in which a near-empty wine glass is viewed as a glass that nevertheless still contains a drink. How and where can these business opportunities be found?

The opportunities become visible the very moment we are able to cross borders and transgress the self-imposed limits of our business systems. Opportunities in the field of sustainable development can be found where we least expect them: we tend to remain so preoccupied with our own targets and the realisation of the targets set for the business unit that we fail to see we are letting others foot the social bill and that we also no longer able to contemplate the development of new products and services, new production methods or new business models. Defining a new focus, thinking in terms of compliance and working in accordance with certain protocols will help support this development.

The concept of integration has come to play an important role in newly developed thought on sustainable entrepreneurship. What is needed is the integration of:

- a. Environmental and social considerations with economic aspects
- b. Operational, environmental and social management with strategic management
- c. Lessons learned by the various parties involved: business-internally and business-externally (in the production chain and on the part of buyers and consumers).

Table 1 The entrepreneurial phase of sustainable business

Integration	Comprehensive business-strategic intentions to effectuate 'industrial transformation'
Focus on the part of authorities and businesses	Global development of natural capital reserves in balance with global social welfare in which economic and technological opportunities are put to maximum use
Parties involved	Changing coalitions between enterprises and stakeholders

Interaction	Combination of competition, strategic cooperation, rules and regulations, participative decision-making, collective learning
Dominant instrument	Strict conditions defined by local and national authorities within which varying combinations of public and private partners can develop their activities in a situation of dialogue
Results	<p>Value creation through the development of products with added economic, social and ecological value</p> <p>Exploration of new growth markets in non-OECD countries</p> <p>Development of inherently sustainable products and processes in terms of energy consumption, land use and emission profiles</p> <p>Fundamental changes concerning the limits imposed upon production and consumption systems – and the accompanying modification of business horizons</p>

The latest developments in thinking about sustainable entrepreneurship do not aim to belittle the excellent results achieved so far thanks to tremendous efficiency improvements. On the contrary, it is now important to develop new efficiency improvements. We have in effect reached the limits of the rationalisation process which Adam Smith initiated and which has permeated society on all possible fronts for the past decades. New organisation strategies are needed for further progress.

It is of key importance here to grab the opportunities presenting themselves outside the structures of strongly focused organisation systems. This is in fact the essence of true innovation: crossing borders and thinking outside the sectors defined by efficiently organised existing systems will help entrepreneurs develop a keen eye for new business opportunities.

In sustainable business, what matters is the ability to view and understand the activities of one's own enterprise, one's own department or one's own position in a broader perspective. The comprehensive approach involves going beyond the limits that have been imposed upon us by current systems: it requires the start of thought processes embedded in a wider context. System boundaries must be razed that separate the enterprise from its stakeholders; that separate the various parties in the chain and that prevent short-term visions from turning into long-term visions. It is precisely the act of breaking the chains presented by the current systems that enables us to analyse the interaction between the enterprise and its stakeholders as well as the interrelationship

between the various parties involved in the chain. It also allows us to raise our awareness of the impact that our own actions are likely to have on future generations – and the associated perspectives for the enterprise with a view to business continuity.

In our attempts to clear the system boundaries we are currently looking for new organisation patterns, new products, new services and new business models. In short, we are looking for innovations. These will be the ultimate representatives and stimulants of sustainability. Examples include innovative designs, materials and business processes, new cooperatives, new financial constructions and new contract forms.

Innovation holds the key

Innovation holds the key to this new phase in sustainable business: in product development as well as production and organization processes. Three factors can be distinguished when we consider innovations that can make a valuable contribution towards new and affordable quality:

- a. Technical quality: better products, meeting (new) demands in more efficient ways
- b. Natural and environmental quality: sustainable use of natural resources (“less can be more”), more energy-efficient products imposing fewer strains on resources and the natural environment (the disconnection of materials, energy consumption and economic growth)
- c. Social quality: humane products furthering humane existence.

The following businesses offer examples of new product portfolios:

- InterfaceFLOR, acting as a lease company for floor covering. It is thus not only building up a solid and permanent relationship with its clientele but also creating added value in taking back and recycling its worn-out products.
- Shakie’s, with its ability to combine sustainability and fast food.
- Valid Express, mobilising a highly motivated group of staff members.
- DSM. This multinational company has combined a special innovation fund and a design contest in calling for sustainable applications based on the company’s internal knowledge and suggestions for external cooperation.
- Various banks that are currently marketing micro-finance products in developing countries in addition to offering them new and sustainable investment products. These banks have also joined so-called ‘clean technology’ participations and have structurally increased their leniency in terms of credit criteria aimed at the stimulation of sustainable investment in the small and medium-sized business sector.
- Philips Medical Systems. The company is currently developing the health care market in rich countries, offering products aimed at quality improvements in terms of medical support. The company is also focussing on cost reductions in response to fast-growing health care expenses. Innovations include the development of molecular imaging techniques in improved early-monitoring systems as well as the development of telemonitoring devices to remotely diagnose patients and to monitor chronic disease patients in their homes.
- Philips. In its position as a global player, the company is also involved in health care markets in developing countries. It is working on the introduction of

innovative 'smart products' such as ultraviolet water purification systems, fuel-efficient 'smokeless' stoves for safe cooking in addition to setting up mobile clinics offering telemonitoring services and support. The energy sector is another field Philips is involved in. The company has presented various examples of innovative products intended for rich countries (energy-efficient lighting for office use and use in street lamps) as well as innovative products for developing countries (LED light applications, rechargeable lighting products as well as sophisticated and clean power generators based on biomass combustion). So far, Philips has doubled its portfolio of so-called 'green flagships' to as many as 200 products. Present turnover rates are nearing 2 billion euros.

We expect market research and market development to become increasingly synonymous with active stakeholder management strategies in the new business models. That way it will be possible for the joint group of social organisations, customers and supply chain contacts to learn more and more about the new quality requirements posed by consumers in both rich and developing countries. In fact, the process will have even wider ramifications - as Albert Heijn (Ahold) and Unilever have already discovered. It means involving and even educating consumers: teaching customers to appreciate new types of quality and creating a willingness to pay higher prices.

Learning processes are involved which steadily affect and alter corporate cultures. Enterprises that have successfully embarked on this project have always first dealt with the environmental performance related to their primary production processes. These were later integrated in the other business segments. The ensuing wider integration into the business organisation increasingly often led to a second culture shift cum learning process, involving areas such as purchasing, marketing, logistics, sales and finance. It is difficult to include these business areas as they operate outside the primary production process. Managers responsible for these business segments should learn to understand the importance of improved environmental performance in attempts to accomplish general business-economic goals. New, additional tools are developed as well. Here we can talk about new systems for the assessment of price/quality ratios in the buying and selling processes as well as comprehensive administrative systems to measure financial and environmental performances. New ways of discussion and innovative operating strategies are needed to ensure the integration of environmental issues throughout the company. Clear commitments expressed by senior management and backing-support offered by the Management Board are indispensable in the process.

Product-related care for the natural environment, sound product stewardship as well as social innovations fuel the development of sustainable innovations. A definition of long-term goals is necessary for the internal business organisation to re-orient itself. Conduct codes are required for the internal organisation to focus on new business ethics and moral standards related to sustainable development. Through jointly organised workshops and education programmes, businesses may share their learning experiences and actively contribute towards the learning processes involved in organisational changes. Thus, environmental and social aspects of the entire business organisation can be upgraded and extended.

Businesses that manage to upgrade and extend their stakeholder management strategies and also manage to integrate (embed) them in the company's internal organisation have proven to be much better equipped for the development of sustainable innovations. Stakeholder commitment is needed for active knowledge acquisition: not only to learn about changing social conditions but more particularly to gain a clearer impression of changing consumer needs and demands – including markets that are generally regarded as less promising and that have so far been somewhat neglected. Wider stakeholder management strategies should be tied more securely to internal business organisation routines in order to acquire an even better position to match internal expertise with customer requests - and with external expertise in the hands of suppliers providing the necessary technology. This way, stakeholder management will enhance internal organisational learning processes. This approach is aimed at social contacts, at cooperative business partners in the supply chain and also at (potential) customers. It will undoubtedly lead to new forms of business cooperation and business contracts.

Ten tips for sustainable innovation

1. *Show a visible commitment to the causes presented by sustainability and demonstrate a clear awareness of social issues.*
Find out how your competencies may contribute towards the resolution of these issues. Today's questions may be answered by tomorrow's products, services and ways of doing business (transaction forms).
2. *Adopt a wide perspective in your orientations.*
There is no need to act like the Disney character Gyro Gearloose to be able to innovate. In addition to the more technically-oriented product innovations, innovation may be realised in the various business processes (ways in which the work at hand is organised) but developments may also take place in the field of transactions (buying and selling, staff recruitment and securing capital). When it comes to improvements it is not so much radical and drastic innovations that matter most - such as the development of the Senseo coffee maker or the revolution caused by the introduction of computerised systems - but much more changes that are taking place in a gradual, step-by-step fashion. Indeed, it may even be argued that radical or revolutionary (disruptive) innovations owe their very existence to gradual (incremental) innovations.
3. *Recognise ecological, social and economic value and make sure it is maintained.*
Braungart and McDonough¹² indicate the need to maintain ecological value and argue in favour of product reuse ('from cradle to cradle' instead of 'from the cradle to the grave'). This approach may be extended to include social as well as economic value.
4. *Try to find suitable candidates for cooperation.*

¹² Braungart, M., & McDonough, W. (2000). A world of abundance, *Interfaces* (Special Issue: Sustainable business,) 30 (3): 55-65

Here not only internal cooperation within the individual sectors is meant, but especially new and surprising forms of cooperation outside the individual sectors. Cooperation between Philips and coffee maker Douwe Egberts has given us the Senseo coffee machine. The very best ideas for innovative products are born when people are prepared and able to cross the boundaries presented by their own companies or their own commercial sectors. Cooperation may be initiated with other enterprises in the chain, but also with businesses from other sectors or with social organisations (NGOs) and (government) authorities.

5. *Do not attempt to resist strict rules and regulations.*
Instead, try to understand why these rules and regulations were formulated in the first place and look for opportunities to make the most of them. Negative attitudes prevent you from searching for innovations and they will lead to a more intolerant atmosphere in society.
6. *Innovation requires a style of leadership aimed at showing appreciation and a sense of pride with respect to innovations.*
Innovation can only flourish in cultures in which people keep an open mind with respect to social developments and in which new products are truly appreciated. The results of all the energy spent on innovation and the yields produced by the ensuing successes should be shared by everyone involved.
7. *Do not manage innovation merely with a view to the short-term results that will be generated.*
In innovation processes, it is usually the middle-term and long-term developments that will ultimately generate the best returns. This does not imply, however, that innovation cannot be adequately managed from a short-term results perspective. The means and resources made available for innovation should focus on a well-considered choice for the kind of new development that is most likely to achieve middle-term and long-term success. This allows innovators to take small steps (incremental innovations) that may in themselves already have a certain short-term market value.
8. *Target small markets*
Do not immediately take it for granted that the intended innovation is an answer to the company's growth demands. It is especially the niche markets and the so-called 'emerging markets' in addition to the developing countries that offer the opportunity of realising new developments on a limited yet profitable scale.
9. *Accept failures*
True innovations are only realised through trial and error: if it does not kill you, it will only make you stronger.
10. *Make the most of opportunities already on offer in the business sector concerned*
The small and medium-sized business sector is the perfect sector for cross-fertilisation between the various disciplines. This is due to its relatively small

scale and its lack of highly specialised tasks. Novice entrepreneurs are in a much better position to open up niche markets, to initiate daring business experiments and also to take risks. Larger enterprises tend to last longer, have a larger infrastructure including (international) stakeholders and are in a position to initiate new impulses in the business chain.

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