It pays to be transparent

Lessons learnt in the Green Deal Cooperation towards Transparency in Natural and Social Capital, 2014 – 2016

Green Deal

Ministry of Economic Affairs of The Netherlands, IUCN NL, MVO Nederland, True Price

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Organisations that took part in the Green Deal Cooperation towards Transparency in Natural and Social Capital, 2014-2016

ABN·AMRO
achmea
AkzoNobel
ARCADIS Design & Consultancy for natural and built assets
ASML
bam
Deloitte.
DESSO A Tarkett Company
DSM
EY Building a better working world
FMO Entrepreneurial Development Bank
heijmans
ING
Interface®
IUCN National Committee of The Netherlands
KPMG
kpn
MVO NEDERLAND
Koninklijke Nederlandse Beroepsorganisatie van Accountants NBA
PHILIPS
pwc
Schiphol Group
thermaflex®
True Price™
VBDO
vodafone

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Preface

Taking account of your capital, now and in future, seems an obvious thing to do. When buying something, the price is the first thing you consider. You deliberate whether buying this particular item will leave you sufficient money in future. To a certain extent, the impact on your financial capital determines your choice.

But what if you were to know the impact of your choice on the future extent of oxygen in the air, on the quality of life for people elsewhere in the world, or on our own children? It would seem obvious to take impacts such as these into consideration, but generally we do not. Because we do not know these things. Every single choice we make still impacts our natural and social capital, which are decisive factors to our quality of life. How we deal with social capital directly influences human welfare. Because there is only one planet Earth, and because natural capital is finite, every choice we make has consequences for our future. Moreover, our choices also indirectly influence our future financial capital, as scarcity will lead to higher costs.

Nineteen business companies, and societal, governmental and financial institutions came to realise that it should be self-evident to consider the natural and social capital on which they are directly dependent, at present as well as in the future. They signed this Green Deal, and together with nine other parties that joined them later in the process, they identified the steps that are necessary to gain insight into the impact of their activities. Some of them found the courage to be the first to openly communicate about their impact, even if that impact was predominantly negative with regard to nature. They did so to get a better idea about how to improve their performance regarding efficiency, pollution and sustainability, which would then enable them to make informed judgements and decisions, ultimately leading to better results.

That all this is obvious does not necessarily mean that it is easy. Although a certain number of methods have become available, international standards to measure and value the impact of activities on natural and social capital are still in the process of being developed. This definitely enhances my appreciation for the Green Deal participants. They dared to be pioneers and to share their experiences, both in the Netherlands as well as in an international context. Some of them thus contributed to the development of the Natural Capital Protocol, a standardised format indicating the dependencies and impacts on natural and social capital, and soon to be available to everyone.

For all these participants, this publication is not the final destination; they will continue. I fervently hope that many others will follow their excellent example. Because both the world and they themselves would benefit from this. And because, essentially, taking account of all of Earth's capital is the obvious thing to do, both now and in future.

Martijn van Dam
Minister for Agriculture,
at the Ministry of Economic Affairs

Management summary

Lessons learnt in the Green Deal Cooperation towards Transparency in Natural and Social Capital

What is the societal impact of my activities and my chain of production? How do I record this impact and how do I best express it in my annual report? These were the kind of questions that led to the Green Deal.

Insight into natural and social capital is plain necessity

Our economy has come to a standstill at the physical boundaries of our planet. Natural capital and its environmental goods and services are the foundations of the economy. Conserving that capital is absolutely essential. Companies are increasingly, required to indicate the value they add to society (value creation). Within politics and society there is a growing need to change to a sustainable economy. This need has been translated into legislation, such as the EU guidelines on publishing non-financial information and diversity, to be implemented in national legislation by 2016. Furthermore, sustainability and external costs are being taken into account in the new EU guidelines for procurement.

Creditors and investors are becoming ever more critical. An increasing number of pension funds have stopped investing in fossil fuels. Business companies with a negative impact on natural and social capital have a higher risk profile – and vice versa. All this has implications for investments and loans.

Managing businesses for the future involves reducing our negative value creation to zero, and preferably changing it into a positive impact. It is all about value creation for the short and the long term, for business and for society. For entrepreneurs this could mean that they should adjust their business strategies. For example by operating in a more climate-friendly manner, by working towards a circular economy with zero waste, and by realising an inclusive economy in which 'everybody matters'. That will be the new standard.

Better information improves decision-making

Visualising the impact of business management on people and on nature – and recognising our dependency on natural resources – leads to a more complete view of a company's performance, its risks and its opportunities.

International business cases have already been developed for essential elements such as climate action, true pricing and integrated reporting.

Adhering to the following principles will provide better insights into both financial and non-financial data:

- **Risk management** – by including external costs in the value chain, organisations are better able to anticipate changes in their operational context at an early stage.
- **Innovation** – making natural resources, value chains, production processes, and products & services sustainable, or creating new business models on the basis of a societal objective.
- **Reputation management** – because transparency and reporting on financial and non-financial aspects answers stakeholders' questions, and can even lead to brand loyalty.
- **Long-term strategy** – by enhancing financial information more integrated decision-making is possible, focused on the long term.

The following useful tools are used by an increasing number of organisations in order to arrive at the benefits mentioned above:

- **Value chain analysis**, to gain a better understanding of the value chain and of societal impacts and dependencies.
- **Monetising**, to express the extent of the societal impacts and dependencies in financial terms, so as to be able to compare the impacts of the various kinds of capital.
- **Integrated thinking and reporting**, to bring together the various types of organisation, stakeholders and information to improve decision-making.

The acquired information can be used in an integrated dashboard for managers, such as an Integrated Profit & Loss account, presenting the impact on the natural and social dimensions. This, again, leads to better decision-making. Finally, transparency of non-financial values, is a crucial step towards a sustainable green economy, in which the well-being of people is taken into account.

Do not wait any longer, just get started

Standards have not yet been developed for all elements. However, many methods and practical tools providing insight are readily available to companies.
Joining this process takes time – and requires good in-house cooperation – but also provides immediate benefits. More fundamental changes obviously take more time. This is not a sequential process during which you finalise a step before taking the next; it is an iterative and repetitive process that depends on the maturity and priority of a specific theme within the organisation.

Other tips based on the Green Deal process are:

- Take time to cooperate closely with other companies
- Learn from each other's experiences
- Involve your partners in the value chain
- Share data whenever possible – government organisations, knowledge institutes and NGOs can be of great help
- Be pragmatic and focus on the essentials – the aim is to gain insight in order to take better decisions, and to reduce negative impact; scientifically calculating to the last decimal is not appropriate.

What next?

This report presents you with inspiring best practices developed by a group of pioneers in the Netherlands, and includes items on the most important issues. It can be of help to you in starting the process of assessing your impact and dependencies on natural and social capital. It can also help any follow-up actions.

Are you interested? The coordinating participants in the Green Deal Project are keen to assist you.

Lessons learnt in the Green Deal

It pays to be transparent

What is the impact on society of my activities and my chain of production? How do I record this impact and how do I best express it in my annual report? These were the kind of questions that led to the Green Deal Cooperation towards Transparency in Natural and Social Capital.

Insight into natural and social capital is a necessity

Our economy has come to a standstill at the physical boundaries of our planet. Natural capital and environmental goods and services are the foundations of the economy. Conserving that capital is absolutely essential. Companies are increasingly required to indicate the value they add to society (value creation). Within politics and society there is a growing need to change to a circular economy and to practice transparency.

This need has been translated into legislation, such as the EU guidelines on publishing non-financial information and diversity, (to be implemented in national legislation by 2016), and as reinforcement for European and Dutch legislation on sustainable procurement. Creditors and investors are becoming ever more critical: business companies with a negative impact on natural and social capital have a higher risk profile – and vice versa. All this has implications for investments and loans.

Better information improves decision-making

Visualising the impact of business management on people and on nature – and recognising our dependency on natural resources – leads to a more complete view of a company's performance, its risks and its opportunities. International business cases have already been developed for essential elements such as climate action, true pricing and integrated reporting. Risk management, innovation, reputation management and long-term strategy provide better insight into both financial and non-financial data.

Do not wait any longer, just get started

Standards have not yet been developed for all elements. However, many methods and practical tools providing insight are readily available to companies. Joining this process takes time – and requires good in-house cooperation – but also provides immediate benefits. More fundamental changes obviously take more time.

ASML: 'This is not a sequential process during which you finalise a step before taking the next; it is an iterative and repetitive process that depends on the maturity and priority of a specific theme within the organisation.'

'AkzoNobel shows why transparency is important'

'Every company has to deal with certain dilemmas when embarking on the process of corporate social responsibility. You have to be brave to admit that not all things are going well as yet. However, by being transparent, a company can confidently discuss crucial improvements with its stakeholders. That is how corporate social responsibility can become a regular part of entrepreneurship.'
Henk Kamp, Minister of Economic Affairs on the occasion of the award ceremony of De Kristal 2015, an award for the most transparent annual report.

The award was granted to AkzoNobel because they combined an innovative way of reporting with transparency on the negative effects of their management. In their annual report, the company clearly indicated that two of the societal goals they had set themselves, needed improvement.

AkzoNobel also extensively described the causes of the problems, even if they occured outside the organisation.

Other tips based on the Green Deal process are: learn from each other's experiences, cooperate closely, involve your partners in the value chain, share data whenever possible, be pragmatic, and focus on the essentials. The aim is not to scientifically calculate to the last decimal, but rather to gain understanding to be able to take better decisions, and to reduce negative impacts.

A challenging exploration

Integrating non-financial values in management and strategy leads to an improved understanding of the 'hotspots' in the value chain, and also to better management and to more efficiency in the production process. It certainly requires courage: companies are sure to encounter dilemmas. Being transparent about these dilemmas offers the opportunity to discuss them with other stakeholders, and to learn from each other. The exercise of acquiring more insight into a company's impact on natural and social capital is a challenging exploration. Its results are uncertain, but you are sure to learn – by trial and error – how to recognise risks and opportunities at an early stage. By sharing methods and practical

The original pioneers who signed the agreement, besides its founders True Price, IUCN NL and MVO Nederland, and the Ministries of Economic Affairs and of Infrastructure & the Environment, comprised the following companies and organisations: AkzoNobel, Arcadis, BAM, DSM, Heijmans, Philips, Interface and Thermaflex. Other signing parties were Development Bank FMO, accountants Deloitte, EY, KPMG, PwC, as well as their Dutch umbrella organisation NBA, and the Dutch Association of Investors for Sustainable Development (VBDO).

dilemmas, companies and organisations discover what is successful and what is not. You become part of an inspiring setting, working together with other pioneers, people who share your sense of urgency and importance of the issue.

Pioneers show the way

Two years ago, thirteen Dutch companies, in cooperation with societal organisations, began their search to visualise their impact on nature and human well-being. Green Deal Cooperation towards Transparency in Natural and Social Capital was led by MVO Nederland, IUCN NL and True Price. They cooperated in this endeavour with the Ministries of Economic Affairs and of Infrastructure & the Environment. Further development of the Green Deal project took place in three open and accessible working groups, and many more companies joined the project during this process.

Development of methods and tools

The main aim of the Green Deal was the development of methods and tools to measure impact – and dependency – on natural and social capital, in order to accelerate the transition to a sustainable economy. The specific aims of the participants were: to better understand their own impact, to reduce potential risks (for themselves as well as for their partners in the chain), to seize opportunities for innovation, sharing each other's knowledge, and to increase support (by standardisation and the creation of an enabling environment for scaling up).

Procedure

The participants regularly convened during the two year period. They identified flagship projects, shared experiences and organised attended lectures by invited speakers. The Green Deal started with three working groups: Value Chain Analysis (coordinated by IUCN NL), Monetising (True Price) and Integrated Reporting (MVO Nederland). The first two working groups were integrated in the course of this process.

What natural and social capital?

A sustainable society uses all its capital carefully: whether it be financial, natural or social capital. For **natural capital**, think natural resources, biodiversity and ecosystem goods and services. For **social capital**, think human rights and labour conditions. But also, the social value of a sharing economy, or the value of cleaning a hospital, for example, can be taken into account. Generally speaking, the three kinds of capital match the three P's known from corporate social responsibility: People, Profit, Planet.

Companies, governments and organisations have a variety of tools at their disposal to measure their financial capital. Such tools are not yet available for measuring the other two kinds of capital. We need much more information in order to make the transition to a more sustainable society. Information indicating the impact of policy, production and consumption on nature and human well-being on the one hand, and our dependency on them on the other hand.

We also need this kind of information to change our thinking: from profits to values. Thinking in values requires long-term management. It also requires management focused on creating value for all stakeholders rather than merely creating financial value.

Lesson learnt and challenges

What did we learn?

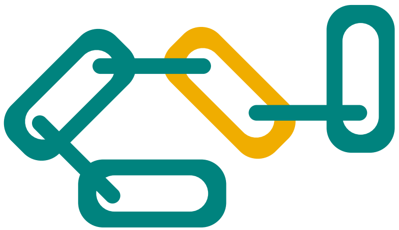
- **Starting this process requires courage, but you are rewarded in the end.** Being a pioneer brings relative gains. Do not wait until every method and tool has been completely validated: the current tools are suitable enough for the first analyses.
- **Gain commitment by using simple and practical tools.** Ease of implementation is crucial, even though the methods on which the tools are based may be complex.
- **Chain analysis, monetising and reporting are means** – all of them aiming at better decision-making. The instruments are just means to that end.
- The Green Deal process has provided its participants with **insight into which methods and tools are available**, and into what is still lacking.
- Visualising the impact of management on people and on nature, creates a **clearer understanding of the company's long-term risks and opportunities**.

What are the challenges for the near future?

- Making clear **why the notions of natural and social capital go hand-in-hand**: to some people this is crystal clear, to others less so. This is caused by the fact that natural capital has been more precisely defined than social capital.
- **Improving access to and availability of data.** Much is already known, and is sufficient to make a good start. Improvement is, however, necessary. All stakeholders need to keep gathering quality information on and in their own processes and chains. Government organisations can be of great help. *As Netherlands Statistics (CBS) explains about the potential of Natural Capital Accounts: 'It shows the value of various ecosystem goods and services, and the benefits of 'nature-friendly' measures, as well as the losses caused by pollution, fragmentation and changes in land use. It also indicates which users lose out and which users benefit.'*
- There is an enormous need to find stakeholders keen to **invest in the development of high quality tools which have to be simple and practical at the same time.**

Value chain analysis

How to gain insight into the chain? At which point in the chain can you have a substantial impact on natural and social capital? And how can you translate that insight into risks and opportunities? These were the central questions of the Value Chain Analysis working group.



Often, risks and opportunities regarding natural capital lie outside of a company's direct production process. Hidden in the chain. Upstream or downstream. You can, however, identify those risks and opportunities if sufficient product information, as well as general data, is available. A great variety of tools exists to evaluate the value chain. This enables companies to take better, more strategic decisions.'

Mathew Parr, IUCN NL

Lessons learnt

- **Value chain analysis is essential to identifying risks and opportunities, and is part of due diligence** (diligence required according to international guidelines). This means the company has to be well aware of what happens in the chain. The value chain analysis enables the taking of well-informed decisions.
  The benefits are:
  1) transparency in participants, products and other aspects in the chain.
  2) understanding the specific results of a certain approach, and
  3) better decision-making: understanding the risks and opportunities.
- **Get on with it.** Don't wait while tools are still being developed, and don't think you have to embark on a mammoth exercise to calculate your impact. Start with a quick scan, and then continue refining step-by-step in those parts of the chain that have the highest impact. And, last but not least, learn from others.
  As Thermaflex stated: 'Some of the lessons we learnt in calculating our impact: Always keep your main goals in sight – Keep it small – Use the best available data – Select a proven, and not too complicated method – Keep improving.'
- **Support and relevant issues.** It is crucial that the company's management (CEO, CFO and Board of Directors) support the importance of investing in natural and social capital.

Challenges

- **A lot has been achieved, but we have not yet been able to find the ultimate standard.** The Natural Capital Protocol (NCP; for more information see the chapter on Natural capital) offers a framework for monetising natural capital. Currently, the best available definition of social capital is given by the World Business Council for Sustainable Business (WBCSD). It needs further development, but the choice of method remains with the company.
- The **Environmental Profit & Loss Declarations** are very promising.
  As Interface explains: To be able to guarantee true transparency, calculate and finally monetise the impact on natural capital, a common basis for these calculations is crucial. We feel that the Environmental Product Declarations provide exactly the right format.'

Monetising

How can you express in monetary terms the positive and negative influences on natural and social capital in a product or service chain? This was the central question for the Monetisation working group.

'A true price allows a fair comparison between products. If governments and business companies would introduce sourcing on the basis of actual societal costs, markets could truly become sustainable.'

Michel Scholte, True Price

Lessons learnt

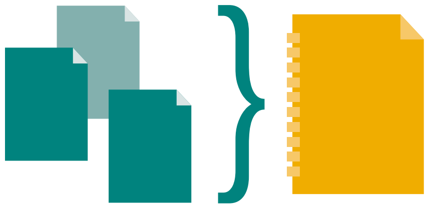
- **The difference between valuing and monetising is not clear to everyone.** Valuing starts with the realisation of the importance of natural and social capital to your company or organisation. Monetising can be a next step, and can add value by providing insight into the different kinds of impact. Comparisons and assessments then become possible.
  BAM states: 'The True Price study into the true costs of different kinds of asphalt, has provided understanding of and comparison between the environmental impacts in the asphalt production chain. The method allowed better decision-making. It helped BAM to embark on future innovations and to prove that sustainable innovations can add value for society without incurring additional financial costs.'
- To be able to compare the environmental and social impact of two products, it is essential to clearly identify in advance **all indicators relevant to differentiate between the products**.
- The next important step is to find reliable data to quantify these indicators. This will lead to better choices in process improvement and innovation.

Challenges

- Most companies and organisations use the notion of monetisation to gain insight into their impact in understandable terms. This turned out to be a common denominator for all participants in the Green Deal when measuring and validating their impacts. Some focused on production level, others looked at the complete value chain. The challenge is to focus on **managing the risks and opportunities**, and that is increasingly happening.
- Governments and businesses could really take big steps towards sustainable markets by **procurement on the basis of true societal prices**. A lot of progress can still be made here. The Dutch government has already taken steps: it has announced pilot projects in its Plan for Socially Responsible Procurement.

Integrated reporting

What does your process of value creation look like when you take both financial and non-financial values into account? How do you integrate this into your management and your strategy, and how do you transparently express this in a report? Questions such as these formed the challenges of the Integrated Reporting Working Group.



'Recognising the process of value creation by visualising both financial and non-financial values in a new and complete dashboard is the key to success. The dashboard provides management with the tools to take the right decisions. That is the way towards integrated acting.'

Erwin van Overbeek, MVO Nederland

Lessons learnt

- The process of moving towards integrated reporting leads to **stronger integration within business management.**
- Integrated reporting involves **integrated management of the organisation**, and subsequent reporting of this to the stakeholders.
  As PwC explains: Our lessons learnt are the following:
  - *Write your own story. The process of value creation should be clearly and recognisably presented to the whole organisation, even if this results in some simplification and framing. Together with external factors, stakeholders' expectations are the most important input for the Purpose, Mission and Strategy.*
  - *Engage top-level management in the dialogue with the stakeholders. These are the people who are most able to effectively spread the word within the organisation.*
  - *Focus on connectivity: 'Our ambition is to show that we steer in an integrated way using the relevant key factors for success with their corresponding KPIs. The connectivity table is the glue that holds together all the separate elements of the framework for integrated reporting.'*
- **Companies are not interested in transparency as such**. They are, however, interested, in better decision-making and better results. *Vodafone states: 'Transparency should never become just a ticking the box. What is transparency worth if the message doesn't reach the intended stakeholders?'*
- **Integrated reporting in its own right is not the aim**. The route to integrated reporting is, rather: integrated thinking – better decision-making – better results – reporting. It is a tool to realise integrated thinking. By initiating the process, you gain more understanding of the overall picture and concern for material issues.
- **Find broad support.** Is the integrated report a pet project of a few people or is it broadly supported? To really implement integrated reporting requires participation from several sections within the organisation. If the Communications Department or the Corporate Responsibility Manager take the lead, implementation could take longer. The process can be accelerated, however, if the financial section (and especially the CFO) actively support the

endeavour. It is also important for the auditors to ask the appropriate questions during their auditing of the reports.

- **Pay attention to connectivity.** The connectivity matrix (indicating in short how the company incorporates stakeholder dialogue into their management) is a very useful tool. The connectivity is often missing in current integrated reports. The process itself, however, creates the value; and this value cannot always be represented in financial terms.
- **Not every company needs integrated reporting.** For small and medium-sized enterprises (SMEs) this may often prove to be too broad an approach. For them, a limited scan of its opportunities and risks may be more effective.

Challenge

- A connectivity matrix is a very useful tool. The matrix has its limitations, however. It is often difficult to present all the different connections in a coherent manner. Further development of this tool is therefore necessary.

What next?

The Green Deal project brought together an excellent group of pioneers, and it accomplished high quality results. Now the question is how to continue. How can we best maintain momentum? Can we maintain and enhance the cooperation and the relationships developed during the project? How can we ensure that more companies join this inspirational expedition?

These are the challenges for the post-Green Deal period. How will we tackle those challenges? That is exactly what we will be working on in the near future. Hopefully, together with you.

Your ideas and suggestions are more than welcome:

- **IUCN NL** (Mathew Parr, Mathew.Parr@iucn.nl),
- **MVO NL** (Erwin van Overbeek, e.vanoverbeek@mvonederland.nl),
- **True Price** (Colette Grosscurt, Colette@trueprice.org / Michel Scholte, michel@trueprice.org).

Highlights

The main issues the Green Deal dealt with

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Natural capital is core business

Squandering our natural capital by failing to sustain soil and water ecosystems and other natural resources means we're literally sawing away at the branch we're sitting on. Increasingly, companies are beginning to realise that they are exposing themselves to significant risk and are taking steps to assess their dependence on natural capital and the environmental impact of their activities. There is growing consensus on the best tools for measurement with much work being done on the Natural Capital Protocol, earmarked to become the global standard.

'The Protocol forces you explicitly to assess the relationship of your company to natural capital.'

Bianca Nijhof, Arcadis

'How seriously do you take the impact you have on the world's natural resources? That is the key question underlying the attempts to embed natural capital into business management,' says Mathew Parr from IUCN NL, the Dutch umbrella association of nature and environmental organisations. 'Take coal and oil companies for example. These are not organisations with a robust future because of the risk of some of their assets – in this case fossil fuels still in the ground – becoming 'stranded' as we transition towards greener energy supplies. Shareholders and investors see this, and slowly pull out. Or oil and coal companies change.'

The profit maximisation management model – geared only to creating financial value – is under close scrutiny. There is a growing awareness that natural capital, and its accompanying goods and services, are fundamental to our economy. Conserving or strengthening natural capital is not an option but an imperative.

For a more detailed explanation, see Pavan Sukhdev's Ted-talk on The Price of Nature.

Natural capital is severely under pressure. Rather than just reaping its dividends, we are currently in the process of decapitalisation. According to Director Hans Bruynincks of the European Environment Agency, this is because of our 'linear throw-away model of production and consumption' which he neatly describes as 'mine-produce-use-throwaway'. That's because we don't sufficiently value the use of natural capital. This already became clear back in 2005, following the authoritative Millennium Ecosystem Assessment. Nearly two-thirds of the 24 ecosystem goods and services then analysed, were degraded through loss of biodiversity, pollution, climate change and negative land use. Most ecosystem goods and services are under pressure from increasing consumption and population growth.

Absolute boundaries

One of the ways to look at the pressure on natural capital is to use the so-called planetary boundaries, which are crucial for the viability of human survival: systems such as biodiversity, availability of sufficient fresh water, and our climate. For nine systems, the Stockholm Resilience Centre has calculated the current situation: for three of these, we have already passed the planetary boundaries, with regard to two others, we are in the danger zone. Whether these planetary boundaries are absolute, is not the main issue, explains European Environment Agency's Bruyninckx: 'The main issue is that uncertainties occur in a system when we cross a boundary into a certain zone. That increases the risk of instability, uncertainty and turbulence. That's why it would be foolish to focus on an absolute figure as a kind of fetish.'

What is natural capital?

Natural capital is defined as the Stock of renewable and non-renewable natural resources (e.g. plants, animals, air, water, soils, minerals) that combine to yield a flow of benefits to people. These resources support our economy by creating value for humans, directly and indirectly.

According to the United Nations Environment Programme (UNEP), land and water ecosystems provide free goods and services worth over 72.000 billion dollars.

Price tag

Companies have much to gain by mapping their impact and dependency on natural capital as accurately as possible. This leads to a better understanding of the risks and opportunities. Which resources do I use? Where do they come from? Who are the suppliers? Which resources do they use in turn? Such knowledge is required to reduce or even eliminate negative impact, while also providing the necessary insight into where the chief risks lie, such as rising natural material prices due to increasing scarcity. Such insights enable appropriate measures to be taken in good time. Knowledge also forms the basis of good corporate reputation management, guarding against unexpected negative publicity. In short: knowledge leads to better decision-making and better management.

Quantifying the impact and dependence on natural capital is crucial in this process. The next step, then, is valuing of natural capital, by using it in a respectful and sustainable manner. A further – albeit much contested – step could be the monetisation of natural capital. Those advocating monetisation argue that as long as the use of natural capital is cost-free, there are no real incentives to use it sustainably. Every economist knows that if scarcity is not part of the costs, market mechanisms do not work. By putting a price tag on the use of natural resources, it becomes an issue for even the most conservative boards of directors. Companies such as Unilever, Dow and Coca Cola already manage their operations on more than just financial figures.

Another advantage of monetising the value of natural (and social) capital, is that it enables a comparison between the different kinds of capital. They can be included in a single account. But critics point to the downsides of monetisation. They point to the suggestion of exchangeability, which implies that ecological damage can be offset financially. The key factor, however, is the measurement and valuation of natural capital. The resulting price tag for ecosystem goods and services shouldn't be used as a selling price, but as an aid to taking well-considered decisions. The trend towards monetisation – valuing natural capital and expressing this value in monetary terms where possible – is currently on the increase. Various methods are in use, but large-scale implementation has yet to materialise.

Overcoming hurdles

Various players are working to eliminate the obstacles to monetisation. One of the organisations working on the standardisation of quantifying natural capital is the Natural Capital Coalition. The coalition comprises a large and diverse group of companies, banks, societal organisations and centres of expertise. They mean to find a common denominator for the various approaches of natural capital, the Natural Capital Protocol (NCP). The diversity of the coalition acts as a guarantee that the final protocol will enjoy broad acceptance, says Matthew Parr, who together with True Price is closely involved in its development. 'IUCN is a neutral platform,' explains Parr. 'It is the world's oldest and largest global environmental organisation, with almost 1,300 government and NGO members and more than 15,000 volunteer experts in 185 countries. We have an active network of leading companies. We represent a large group of stakeholders who will decide on the functionality of this protocol world-wide. And, vice versa, we can make sure that the information from the discussions with the stakeholders reach the people actually working on the protocol.'

Global standard

Bianca Nijhof, Global Lead Natural Capital at design and consultancy firm Arcadis, is closely involved in the development of the

What is the Natural Capital Protocol?

The Natural Capital Protocol is a standardised framework for business to measure and value its direct and indirect impacts and dependencies on natural capital. It is internationally applicable, across all business sectors, geographies and organisational levels (e.g. corporate, project, product).

It leverages existing approaches and does not prescribe the use of specific methodologies or valuation techniques above others as the use of the Protocol is dependent on the intended application and context. A consultation and first piloting phase for the first draft Protocol ran from November 2015 to February 2016. IUCN NL engaged her network of companies to pilot the Protocol and to ensure that it is fit-for-purpose. Over fifty companies piloted the draft Protocol from various sectors, geographies and scopes. The final Protocol will be launched in July 2016.

protocol as well. Although its use is voluntary, she feels it should become the 'global standard'. Nijhof says that an increasing number of leading companies are incorporating the concept of natural capital in management decision-making. She also sees broad support for governments to include natural capital criteria in the purchasing process, as well as for laws and regulations that provide positive stimuli to companies. Currently, governments seem hesitant to take the lead in these issues. As Nijhof explains: 'Repeatedly, heated discussions take place on who should take the first step. Governments or business. I fervently hope that the protocol will stimulate governments to take this step.'

Not a method or tool

NCP is not a method or tool 'where you enter figures, and the results just come tumbling out', says Nijhof. Instead it helps companies to ask the relevant questions, and it provides information enabling them to determine and value natural capital. The protocol shows the various measurement tools for each kind of company or management decision, but is not prescriptive. As Parr explains: 'Set prescriptions would be an impossibility as the coalition consists of organisations that have, at least in part, developed their own tools.' Use of the Protocol is also dependent on the intended application and context.'

Parr does not believe that the protocol – 150 pages, of which 30 pages in appendices – is too complicated for companies to use. He does feel, however, that its use is easier for large companies to implement than for small and medium-sized enterprises (SMEs). 'I am hearing from smaller enterprises that they would like to use it. It offers them insight into the risks and opportunities, and into the additional steps they need to take. If they don't take those steps, they could suddenly lose markets, customers, suppliers or locations.'

The protocol starts with the question what exactly it is that requires analysis (scoping). Is it the intention to compare two products, or the possible location for a new factory? Only after that question has been answered, can impacts and dependencies be determined and measured. Then it's a question of what to do with the results.

> **'We use nature because it is valuable and we lose it because it is free.'**
>
> *Pavan Sukhdev*

Gathering data

For companies NCP is not entirely strange and new, says Nijhof. It builds on what they have been doing for decades: gathering data on their impacts, for instance on water, air and soil. Many companies know the impacts they have, and regularly re-assess these. Others derive the data from the consultants they regularly hire for such work. Data on dependencies are a different matter: usually these are unavailable. Relationships, however, are easy to grasp. During the first NCP consultancy workshop, many companies realised they had insufficient knowledge of the amount of water they used, and what the risks would be of reduced availability. As Nijhof explains: 'The protocol shows the gaps in their knowledge. It forces them explicitly to assess their corporate relationship to natural capital.'

Fruit trees

Nijhof gives the example of a factory emitting various waste products. The protocol requires the company to give detailed information on the different types of waste, the amounts emitted, and their effects on the natural environment, public health, crops, insects, etc. The next step is to calculate the impact of these effects in value terms. For example, factory emissions can result in the extinction of bee populations, which in turn forces fruit growers in the factory's immediate vicinity to resort to manual pollination of their fruit trees. In China, this is already the case. Better understanding of the impacts along the entire chain, indicates the hidden costs and risks for the company, for other enterprises and for society.

To start with, many companies will be forced to include negative impacts on natural capital in their reports. This does not have to be an obstacle, according to Parr. The financial sector will in any case require an increasing amount of information on the risks to their loans and investments, and on how a company will go about reducing those risks. 'It is definitely acceptable, if you link a negative impact to serious plans to do something about it.' Companies that are not able to manage their impact, are the ones that will have the most problems.

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Focusing on social capital

Does a company add value to society? That particular question is becoming increasingly urgent. 'To most companies, this is like a voyage of discovery of uncharted territory, evolving at an amazing rate: initiatives and pilot projects are popping up everywhere.'

'Social capital receives this much attention because it touches upon the heart of a company.'

Janne Dietz, KPMG Sustainability

A contractor does not only build houses, he improves the living standard of the future inhabitants. He provides more comfort, and ideally lower expenses by installing energy-efficient appliances. With their knowledge and expertise, his employees create positive value for the customers. This is how contractors are able to distinguish themselves in their market.

Social capital - it sounds like a term from the domain of human resources. But nothing could be further from the truth. Its concept reaches far wider. Social capital not only applies to the people within an organisation, but can also be applied to the value an organisation adds to society.

Companies influence society in many ways. In a positive sense, for example, by creating jobs, offering good service and paying taxes. And in a negative sense, by environmental emissions or accidents. Enterprises are held increasingly accountable for their effects on society. Their immediate business environment produces this accountability pressure: their shareholders, other interested parties, and also parties from within their chain of operations. Its contribution to society has become a crucial factor for a company's success and its very existence. That is why companies are keen to offer insight into their social capital, and why they want it to be calculated and, when possible, monetised.

Exploration

'Social capital receives this much attention because it touches the heart of a company', explains KPMG Sustainability's senior consultant Janne Dietz. 'If a company wants to be successful in the long-term, having relevant skills and knowledge are indispensable. Good relationships with employees, customers, suppliers, government organisations and the local community are vital as well.'

Dietz is considered to be a specialist in calculating and managing the social impact of companies. In 2015, she was seconded to the World Business Council for Sustainable Development (WBCSD). This global consortium is striving towards sustainability, and cooperates with business leaders on refining the notion of 'social capital', as well as on a Social Capital Protocol. 'Methods and definitions have not yet completely reached maturity. The most important thing is that we learn from each other, and that nobody needs to reinvent the wheel on their own', explains Dietz.

This voyage of discovery is not only interesting to large international enterprises. Mapping out their social capital can also be worthwhile for small and medium enterprises (SMEs), Dietz insists. 'Identifying your social capital and using it in your management, is relevant to every single company. My suggestion is always: start with a specific subject or product.

Social Capital Protocol under development

WBCSD, together with various partners, is developing a Social Capital Protocol to stimulate companies to measure their social value. The purpose of the protocol is provide a harmonised method for measuring, valuing and monetising social capital.

The protocol consists of five steps:

1. Identification of the impacts and dependencies on social capital.
2. Clear formulation of the goals of measuring social impact.
3. Providing insight into the company's social capital and assessing its achievements.
4. Analysing and valuing social impact.
5. Integrating this social value creation in the company's management system.

Concentrate on its most important elements and get to work.'

Value creation as a management tool

Companies usually start the process of calculating and valuing their social impact in a pilot project (1).

They then use the results in communicating the social value of a given product or service (2).

The next step is to navigate a course by creating societal value (3). That is how insurance company Centraal Beheer Achmea, cooperating with the organisation True Price, calculated the social impact of the online sharing platforms Thuisafgehaald, Croqqer, Peerby and SnappCar. In 2014, the social value of this foursome proved to be 4 million euro: sharing not only offers monetary value but also improves contact between people. By offering the stability of insurance products, Achmea is able to stimulate and support this development.

The final step a company can take is integrating social capital into its management (4). That is how brewer SABMiller firmly established in its business strategy that by 2020, half a million small enterprises in its production chain should have additional benefits from the company's commercial activities. The brewer calculates both its impact on small (family) enterprises as well as the commercial impact of its strategy.

> **'Too many companies have a tendency to drown in the umteenth report on sustainability performance, rather than using the available data to improve on their performance'**
>
> *Frits Klaver, KPMG*

Understanding

Companies can benefit enormously from the integration of social capital into their strategy, according to Roel Drost, senior manager of Cleantech & Sustainability Services at EY. 'Understanding the results of measuring their social impact can help companies in improving the efficiency of their processes and in enhancing their strategy. It becomes easier for them to predict their clients' wants, and to make better use of market opportunities.' Additionally, the company learns how to train its employees in order to optimise their value.

Meanwhile, the consultancy and accountancy firm supports various companies in so-called 'Total Value' analyses. EY has also started to quantify its own value creation. 'We are not yet completely clear about which buttons to push, but we will soon be certain. We are sure that we can then take better decisions regarding our services or on the training of our employees.'

A company can provide focus and balance by understanding its social value, according to KPMG Sustainability's manager Frits Klaver. 'This kind of analysis can also confirm current strategy. But at least it will provide the company with well-founded arguments to enter a discussion with critical stakeholders.' Klaver is the author of the 2014 publication A New Vision of Value. In this publication, KPMG shows the significance of the effects of companies' social behaviour on their results. 'First of all, companies need to ask themselves what their goal is regarding social value. That first question is frequently omitted. Too many companies have a tendency to drown in the umpteenth report on sustainability performance, rather than using the available data to improve their performance. Front runners do just that, however: using insight and data to improve their decision-making and to adjust their strategy.'

KPN's pilot exercise

'Your company has a sound story about corporate social responsibility, but what is its exact value?' Brechtje Spoorenberg, KPN's corporate social responsibility manager, is more and more often confronted with that question.

'It's a difficult question', she says. 'That is why we want to present our contribution to society in a transparent manner. We believe in the added value, because it allows us to fully justify our investments.'

A pilot exercise involved calculating the social value of a specific product, the Eventrecorder. This tool, developed by KPN Zorg, and distributed by general practitioners, allows patients with heart rhythm disorders to monitor their heart rate at home. The resulting data are automatically conveyed to a medical service centre in order to be diagnosed. In this way, patients can avoid going to a hospital to be diagnosed. 'The Eventrecorder is much less expensive than the original method of a 24-hour hospital stay and an ECG', explains Spoorenberg.

'People can also continue to go to work, and it saves a lot on travel costs and CO_2 emissions, not having to make the journey to and from the hospital.' These assumptions were quantified by KPN Zorg's financial controllers. CBS statistical data on the future development of cardiac patients were also taken into account.

'This case has shown us that there are many opportunities in calculating our social value, but we have not yet done any in-depth financial analyses. Defining social value is not the core expertise of our financial controllers.' In the next step, Spoorenberg wants to have the social impact of the Eventrecorder professionally calculated, and to have the difficulties in quantifying the effects of the instrument taken into account as well. 'What you consider as social impact can be nearly limitless. The patient does not, for example, have to undergo a hospital stay. But can you quantify this?' According to Spoorenberg, the impact analysis makes it possible to justify continuing investment in comparable services. Moreover, it may help in negotiating with hospitals and insurance companies on the reimbursement of innovations such as Eventrecorder. 'We are then able to see the complete picture. Our management is also very positive about the monetisation of our social capital. Pressure from our stakeholders is an enormous help.'

Front runners

Dutch Railway Company NS is an undisputed front runner. There are positive and negative social values attached to the daily transport of 1.2 million travellers. The positive values are that NS takes care of the mobility of all those travellers getting to work, school and leisure activities, as well as providing jobs for about 22.500 employees. In addition, travelling by train is evidently safer than travelling by car. A negative value is the actual travel time. NS aims to lower the negative impact of travel time by increasing the traveller's comfort and convenience.

'We invest in trains, materials, employees and stations. Everything to improve the service to the traveller. The question is how we should use our funds most effectively,' explains NS Policies & Procedures manager Patrick Kinds. 'Imagine wifi on every train. Should we spend 10 or 30 million euro on this service? What amount creates optimum value for the traveller? What is socially acceptable?'

NS used the True Value methodology, developed by KPMG, which calculates the social value of a product or service throughout its complete life cycle. This method includes socio-economic aspects and monetises these in hard euro. To be able to do this, KPMG built a database using data on different impacts, such as safety, public health and environmental emissions, taken from scientific papers, and social profit and loss analyses from government organisations. They also included in-house data from various companies.
'We have an advantage in that we already measure many non-financial indicators, such as the behaviour and travel time of travellers,' explains Kinds. To guarantee independent calculations, scientific data were sourced from KiM (Netherlands Institute for Transport Policy Analysis), which is a part of the Ministry of Infrastructure and the Environment. These data were linked to the socio-economic data held by NS.

Benefits for society

The negative impact of travel time consists of approximately 3 billion euro in train travel, and 1 billion euro in pre- and post- transport. Another billion is due to inconvenient

travel time caused by changing trains, waiting times and delays. 'That is where we can make improvements', according to Kinds.
The annual turnover of NS totals 3 billion euro. According to the company, monetising the social impact of mobility in hard euro emphasises that the benefits it creates for society, far outweigh its financial results.

'We have solid proof that we are adding value to society', states Kinds. This is such a strong case because NS included a social value impact in its 2014 annual report, and has had it checked by its accountant, explains EY's Drost. 'That creates trust in the data. And that is exactly why this can be considered a very robust result. As this NS case proves, social capital is not a subject that should only be on the agenda of a company's corporate social responsibility division. Acceptance within the remaining parts of the organisation, as well as commitment from the top management, are crucial to the integration of these issues into its management. Within NS, acceptance very clearly exists. Kinds, who is in the Finance Division, works closely together with the team of his colleague Carola Wijdoogen, NS Director of Sustainable Management, and there is full support from the top. 'Social impact is a fundamental part of our management model. Our ultimate goal is to be able to use social impact to manage the company. The next step is to implement our recently acquired insights into our investment decisions.'

'Social impact is a fundamental part of our management model. '

Patrick Kinds, NS

Value chain analysis sheds light

A company does not work in a vacuum: it is always part of a chain, and a value chain analysis shows where the risks and opportunities lie. That knowledge, in turn, helps enterprises to set their priorities, and to anticipate future changes. Carpet manufacturers Interface and Desso are front runners in these developments. Their methods may differ, but different methods often produce similar results.

> ‘Government should use legislation to encourage competition for sustainability innovation.”
>
> *Geanne van Arkel, Interface*

In Scherpenzeel, Geanne van Arkel, carpet company Interface's Director of Sustainable Development, has no doubts about the importance of a value chain analysis. 'Even apart from being able to reduce your environmental footprint, it is the most attractive option for your company's management. Performing a value chain analysis means you have to cooperate, which can lead to cost reduction; your reputation grows – as your company is increasingly quoted as an example – it leads to more internal and external commitment, it is a powerful driver for innovation and it makes your company future-proof.'

A value chain analysis shows the complete chain and the company's position relative to other links. Does it play a crucial role in the chain? Can it actively influence the process, and other companies? Who are its suppliers? Where do they get their natural resources? How do customers use the end-product? What is the company's impact on natural and social capital throughout the chain, and how big an impact is it? 'All of this is really basic information that you need to have to be able to run a business', says Van Arkel.

Interface, the manufacturer of Heuga carpet tiles, has indicated in its mission that it intends to be completely sustainable by 2020, with zero negative environmental impact. Interface, a world leading company in modular carpeting, is calling this its Mission Zero. Actually, the company even wants to take it one step further: its aim is to have a positive impact on the environment and on society. The European production plant in Scherpenzeel runs on renewable energy, re-uses collected carpet tiles, and produces new tiles using recycled products such as carpet yarn, fishing nets, chalk, and bio-based materials. As Van Arkel explains: 'Just imagine, we started the business with oil-based products.'

Biomimicry

Following the principles of nature, biomimicry, is a source of inspiration for the carpet manufacturer Interface. Its founder, Ray Anderson, became inspired by Paul Hawken's 1994 book *The Ecology of Commerce*. The book describes how ecology and economy should and can go hand in hand. As Van Arkel explains: 'Biomimicry means that you learn to organise your work just like an ecological system, without waste, as in natural processes, with viable materials and in a closed system.'

Transparency is very important to Interface. Its website presents, among other information, Environmental Product Declarations (EPDs) for every product. An EPD shows a product's environmental impact for its whole life cycle. This impact has been calculated on the basis of an LCA, carried out by an external independent party. Interface was the first carpet manufacturer in Europe to use environmental product declarations.

> **'A product is just a temporary, specific composition of natural resources.'**
>
> *Rudi Daelmans, Desso*

Circular model

In Waalwijk, Interface's rival carpet manufacturer Desso, also supplies high quality carpet tiles and fitted carpets. Desso aspires to a circular model, inspired by the idea of Cradle to Cradle (C2C), also based on nature. Former CEO Stef Kranendijk watched Waste = Food, a documentary by the founders of the C2C-philosophy (Braungart and McDonough). 'I started to sweat and felt panic rising: I understood that this meant we would have to totally change our way of working.'

He changed course radically. By 2020, all Desso materials should be free from potential pollutants, only sustainable energy will

Questions about value chain analysis

What is a value chain analysis?

A value chain analysis is the assessment and valuation of the complete chain of a product or service: from the extraction of natural resources to the final stage of manufacturing of the product. This analysis can be performed on the level of a single factor, such as carbon dioxide emission, on various factors, such as the financial value, or all factors, therefore including natural and social capital. The more factors that are considered in the analysis, the more complete the value chain analysis will be.

How does it work?

Different methods often produce similar results. It is often sensible to first qualitatively assess which indicators are crucial in the chain. They can then form the basis for the selection. One of the ways to analyse a chain is the so-called LCA (Life Cycle Analysis), quantifying the environmental effects of a product or a service. This concerns environmental effects such as climate change, acidification, eutrophication and exhaustion of fossil fuels. All processes are taken into account. LCA calculates the extent to which a product influences the environmental effects of all these processes, in order to define an impact score for each. The environmental profile of the product or service can be obtained by adding up all these individual impacts, the environmental profile of the product or service is.

What is the use of a value chain analysis?

To answer this question with a question: how can a company operate proactively and be future-proof without a value chain analysis? It is through a value chain analysis that a company can understand its risks and opportunities.

Does an LCA suffice?

An LCA is a method, not a cure-all. It provides understanding, offers tools and can lead to innovations, cost reduction, new opportunities and better management. This only works if the results from the analysis are implemented throughout the complete chain. An LCA is not yet objectively applicable to the social impacts of a value chain.

Where to start?

Start by using the Natural Capital Protocol (NCP). This can be used by every company, even those starting at level zero, although it is not simple. The protocol is based on four crucial questions: why, what, how and what next? These questions are dealt with in ten steps. Having followed those ten steps, a company knows its exact position in the chain, knows its impact on natural capital and knows its dependency on natural capital. NCP version 1.0 will be available in June 2016.

be used, and all specifically designed products will be returnable. The collected materials will then be reused in manufacturing new high quality products. 'We strive towards zero impact on natural resources', explains Rudi Daelmans, Desso's Sustainability Manager. 'In our company, a value chain analysis is not about products, but rather about the materials' says Daelmans. In a circular economy you aim for your materials to stay in the chain for as long as possible. According to Daelmans, everyone talks about recycling, but hardly anybody questions how many kilograms of synthetic material is left at the end of a product's life cycle. 'In most cases this product is burnt, which returns some energy. That, however, has nothing to do with a circular economy. The current system is simply unable to deal with circularity.'

In its brochure *Verder dan Duurzaamheid* (Beyond Sustainability), Desso states: 'Measuring future solutions with the aid of LCA is difficult and inexact, because data for such solutions are not yet available. That is why we feel an LCA is not the best tool for measuring the kind of solutions that we need in order to reach our C2C-goal in 2020.' About 145,000 chemicals are used in industry, and according to Desso, the most extensive method for measuring LCA effects, uses profiles for just 5,000 of them. The C2C-philosophy insists on the identification of all chemicals to a level of 100 parts per million (ppm).

Two carpet manufacturers, two visions

Both Desso and Interface have ambitious goals for 2020, and both are inspired by nature. They differ in the way they are getting there, says Mark Goedkoop, Pré Consultants Director and an LCA expert. 'An LCA does not contain a vision or opinion. It is rather a 'dull' tool that calculates a product's emissions during its complete life cycle as objectively as possible.'

According to Goedkoop, C2C is primarily based on closing the cycle, and especially on avoiding the use of toxins in products. Other environmental issues, however, especially those related to energy use, are hardly taken into account. 'That is because in the C2C-philosophy, fossil fuels will not be used in the future; it is thus considered to be a temporary problem.' Companies adhering to C2C, focus on the future, not on 'former' problems. 'It is characteristic of LCA and EPDs, however, that they are based on the current situation. That means that impacts concerning the use of fossil fuels are extremely dominant.'

Toxicity, on the other hand, is only one of the many environmental elements in LCA. 'And in the current EPD-standard, it is not even considered. That is why the advantages of an C2C-produced carpet tile, hardly show up in an EPD. If manufacturing that tile requires more energy, it will, in fact, only show disadvantages.'

'In our company, a chain analysis is not about products, but rather about the materials.'

Rudi Daelmans, Desso

Ikea zooms in on its catalogue

Millions of copies are printed annually of the fat full-colour Ikea catalogue describing every product of this originally Swedish company are printed every year. In numbers, it is world's largest printed product. Ikea is aiming to reduce its impact on natural and social capital.

Does printed matter still belong in these times? Is digital not far better and cheaper? These are the kind of daily questions that reach Ikea. The company is keen to discuss this, with their own employees as well as with the public in general, but only on the basis of facts. A printed catalogue may have an almost tangible impact on the environment, a digital version, however, uses a lot of energy, among other things because of the use of servers.

Except Integrated Sustainability has developed, in cooperation with Ikea, an innovative digital instrument (a dashboard) that offers Ikea procurement insight in the performance of paper suppliers and the printers of the catalogues. They, in their turn, can easily compare their own performance to a global benchmark. The purpose is: to increase the awareness in discussions with stakeholders, to allow closer contact between all partners in the chain, to ensure that management decisions are based on better information underlying management decisions, and to ensure more accountability in the supply part of the chain. The net result of all this is an improved performance on economic, social and environmental criteria across the whole value chain.

To measure this, Ikea uses Key Performance Indicators (KPIs) such as carbon dioxide emission, the proportion of renewable energy, the use of FSC-certified paper, water use, NO_x emission, waste, working conditions, child labour, wages and public health.

There is nothing non-committal about this information. The instrument has been developed in order to have implications. This, however, does not mean that Ikea immediately leaves suppliers with a performance below the benchmark. There may be justifiable reasons for that performance. The company therefore enters into discussion with these suppliers and helps them to improve. Hence the anonymity with which this instrument (dashboard) shares the best practices.

It goes without saying that Ikea can use this method and dashboard on many more of its products.

'That means we need methods based on the materials used, and that must include all toxins', explains Daelmans. 'And we need to accompany all materials with adequate information, in order to ensure the product's recyclability when it has reached the end of its life cycle. That is very challenging, because it means that other companies need to reveal much of their information.'

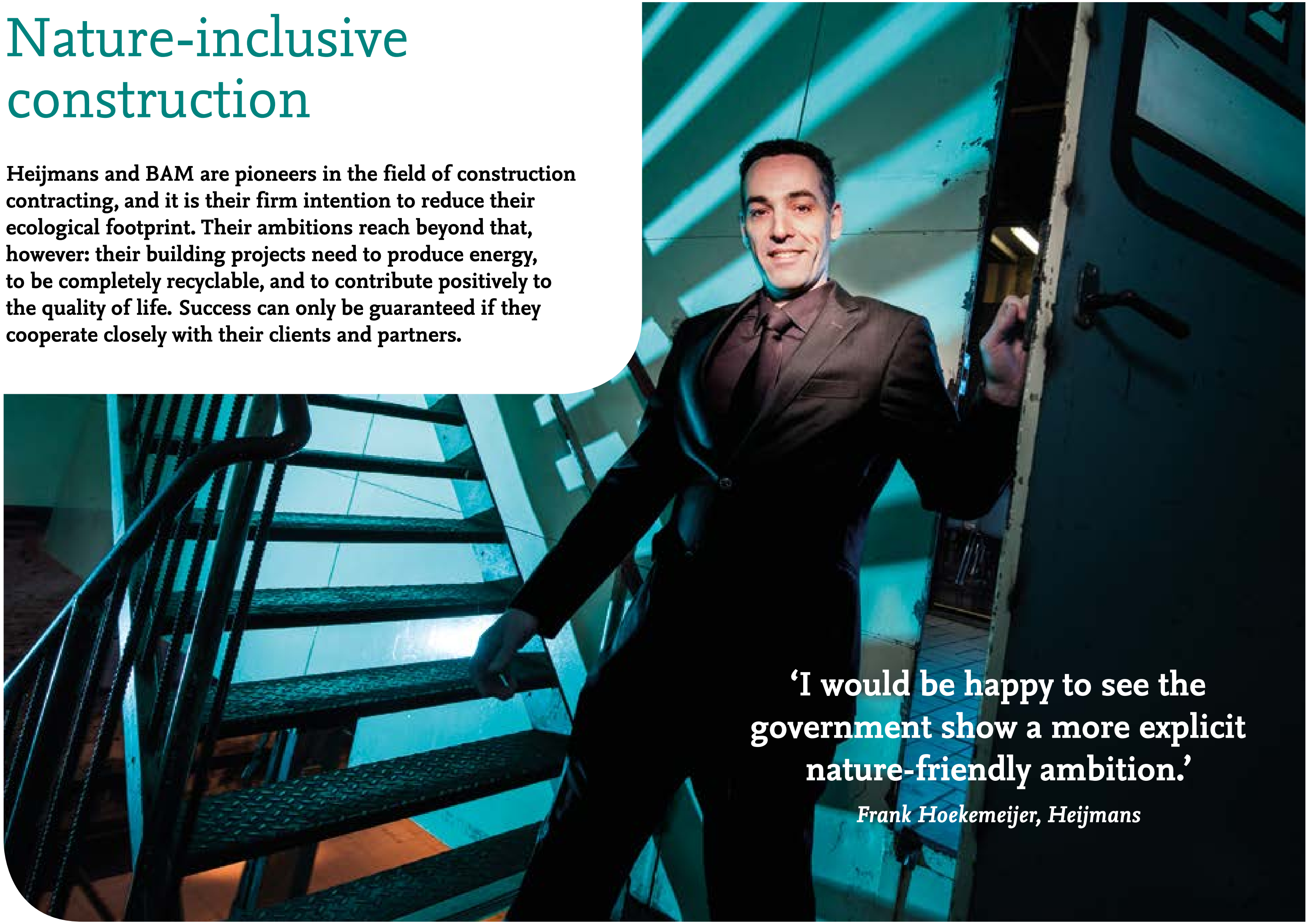
Innovation competition

Interface's Van Arkel admits that LCA is not an objective measuring tool, because every company is using its own assumptions, thus making comparison impossible. 'An LCA-based EPD, however, is specifically meant for external communication. It is currently the only way to express a product's impact.'

According to Van Arkel, communication about EPDs can certainly be improved. She takes the Food Nutrition Chart, which is mandatory for every food product, as an example. With some effort, it enables everyone to be adequately informed on the product. 'EPDs are similar. They indicate the amount of carbon dioxide per functional unit just like the calories in a nutritional chart, which is sufficient for a quick scan.'

Nature-inclusive construction

Heijmans and BAM are pioneers in the field of construction contracting, and it is their firm intention to reduce their ecological footprint. Their ambitions reach beyond that, however: their building projects need to produce energy, to be completely recyclable, and to contribute positively to the quality of life. Success can only be guaranteed if they cooperate closely with their clients and partners.



'I would be happy to see the government show a more explicit nature-friendly ambition.'

Frank Hoekemeijer, Heijmans

The A4 motorway between the Dutch cities of Delft and Schiedam will soon become the world's first Honey Highway www.honeyhighway.nl. Last year, on part of the 7 km roadsides with poor quality soil, the Heijmans contracting company sowed organic flower seeds. This spring, a resulting sea of flowers provided nectar for bees. In this way, the motorway contributed to the prevention of bee mortality.

In the coastal area of the Frisian Wadden Sea, Heijmans has been contracted to strengthen kilometres of dyke. That usually happens by depositing sand, which then completely covers mussels and other sea creatures attached to the boulders and wood of the groynes, causing coastal birds such as waders to lose their foraging grounds. Heijmans has therefore chosen to use elastocoast, which is rubble mixed with polyurethane, in Friesland. This is a kind of bi-component superglue consisting of 50 percent recyclable resources.

Innovation agenda

Elastocoast absorbs the so-called wave run-ups, but is also a perfect foundation for algae, shellfish and other small organisms growing in the coastal area of the Wadden Sea World Heritage Site. The mixture has an expected life cycle of about fifty years, twice as long as comparable conventional materials.

These are just two examples of nature-inclusive building, as it is called by Heijmans, one of the largest building contractors in the Netherlands. Heijmans participated in the Green Deal working group on Integrated Reporting. The company has taken huge steps in this important direction. Two years ago, Heijmans presented their first integrated annual report, and the 2015 report complies with the most recent Global Reporting Initiative guidelines (G4) and with the International Integrated Reporting Council's model.

Heijmans' innovation agenda highlights their ambitions for 2020. By then, all of their products (buildings, roads and structures such as bridges, tunnels, locks and fly-overs) should produce rather than use energy. An example of this is their Glowing Lines project. This product, developed by Heijmans in cooperation with designer Daan Roosegaarde, consists of fluorescent lines that absorb energy during the day, and light up in the dark. Another innovative approach involves regaining braking and vibration energy produced on or in structures. Last but not least, it is Heijmans' ambition that by 2020, all their buildings, infrastructure and structures should be 100 percent circular, on top of their contribution to an improved quality of life for humans and animals. 'It is important to have this kind of inspiration on our horizon', explains Frank Hoekemeijer, Heijmans' sustainability manager. 'In practice, not all these targets will be completely achievable, but we deliberately aim high so that we can take these crucial steps.' Heijmans is strongly aware that infrastructural activities and structures, such as the construc-

> **'In discussions with our stakeholders for the 2015 annual report, the term biodiversity was not mentioned one single time. It is simply not an issue in the constructi-on sector. It is only when government clearly present their own level of ambition, that you will force the builders to come up with appropriate proposals.'**
>
> *Frank Hoekemeijer, Heijmans*

tion of roads, contribute to fragmentation of nature reserves and to reduction in biodiversity. As Hoekemeijer states: 'Obviously, the highest impact on biodiversity results from the crucial decision of where to build that road. When Rijkswaterstaat (responsible for the design, construction, management and maintenance of the main infrastructure facilities in the Netherlands, responsible to the Ministry of Infrastructure & the Environment) decides to construct a highway right through a nature reserve, Heijmans cannot do anything to stop that.' However, by nature-inclusive building, Heijmans wants to convert the negative effects into a positive impact.

Limited impact

According to Hoekemeijer, the environmental impact of building is rather limited. That was revealed in an investigation ordered by Bouwend Nederland, *Meten is weten in de Nederlandse bouw. Milieu-impacts van Nederlandse bouw- en sloopactiviteiten in 2010*. The investigation studied building materials, transport of materials (and transport connected to building activities in general), energy use of the actual building, demolition and maintenance activities, and the reprocessing of demolition materials. One of the main conclusions from this reports was: 'In 2010, the climate impact for the total building sector, including the effects of resource extraction and production in other countries, is …approximately 5 percent of the total emissions in the Netherlands.' The use of materials is the main contributor to this climate impact.

The 2014 TNO report *Grondstoffenvoorziening voor de Bouw. Een analyse van vier grondstofstromen*, also ordered by Bouwend Nederland, revealed that resource scarcity is not an issue for the future of the building sector. The materials studied were concrete, silica, bitumen and reinforcing steel. The report declares those materials to be non-critical. 'It is clear… that they estimate the supply risks to be low because of the wide distribution of source countries, that in addition all seem to have a sound political reputation.' According to Hoekemeijer: 'The scarcity issue will not put builders on edge.'

This is why other incentives are necessary to get the construction sector (a sector that since the economic recession has been primarily concentrating on survival) to start moving. 'Sustainability still remains a low-priority issue. Companies depend on adding value, for example fulfilling customers' needs. But financial values still dominate all management reports. Natural capital is not a strategic issue in the board rooms. It is therefore in danger of remaining a marketing tool.'

Hoekemeijer expects government to be 'open and creative'. Firstly, he says, government should take their own Sustainable Buying Programme more seriously, thereby encouraging companies to seriously focus on it. 'That is an important trigger.' Government is an extremely important client for roads, structures and utility buildings (all non-residential buildings). Hoekemeijer also expects government to be clear about their expectations. 'I would be happy to see the government show explicitly nature-friendly ambitions, and for

'Sustainability criteria played a central role in awarding the contracts, which in the end we won. Let's have more of these projects.'

Céline Bent, BAM

them to indicate what the challenge is.' If nature related goals are known early enough, market participants are able to come up with innovative solutions for nature, and thereby create value.' If that is not the case, markets will continue to be dominated by budgets, and nature-friendly building will be restricted to the occasional wildlife crossing.'

As far as he is concerned, the objectives could and should be much more ambitious. 'Only then can natural capital become a strategic and risk related issue.' He gives an example. 'In the discussions with our stakeholders for our 2015 annual report, the term biodiversity was not mentioned one single time. It is simply not an issue in the construction sector. It is only when government clearly present their own level of ambition, that you will force the builders to come up with appropriate proposals.'

Fantastic project

As for Heijmans, reduction of carbon dioxide emissions is the utmost priority for the builders of the Royal BAM Group. The company realises that ambition by building energy-efficient or neutral buildings. Most of the emissions, after all, take place when the buildings are in use. Céline Bent, project leader Corporate Social Responsibility at BAM, is therefore especially proud of the project Stroomversnelling (Fast track), which BAM is undertaking in cooperation with eight housing corporations and three other building companies. 'A fantastic project,' she exclaims. Together, the parties are renovating 100,000 post-war houses, tenement by tenement. Each house will be fitted with a new facade, a new roof, new bathroom, kitchen and toilet. The residents receive a guarantee that after the renovation their house will not incur any further heating costs, and, by prudent use of power, may even produce energy. Thanks to the use of prefabrication, BAM can renovate a house within a maximum of ten days, and during the renovation, the residents can remain in their house. After the renovation, they will not be surprised by a rent increase, among other things because the houses produce energy rather than use it. BAM is the biggest building company in the Netherlands, and also plays its part internationally. In the Green Deal project, BAM asked True Price to calculate how much the use of its low-energy asphalt concrete (LEAB) would save on external environmental costs compared to using

BAM: top circular AEX-listed company

In a recent comparative survey on re-use and waste reduction of 52 Dutch AEX-listed business companies by the Dutch Association of Investors for Sustainable Development (VBDO), BAM came out as the top 'circular entrepreneur' and Heijmans came in eighth place.

VDBO was especially positive about BAM's innovations. The report mentions LEAB, which is produced at much lower temperatures than conventional asphalt. This results in a 30 percent reduction in carbon dioxide emissions, and 30-40 percent decrease in energy use. Besides, the building company puts much effort into discussions with clients, partners and suppliers about the recyclability of materials and building projects. The awareness of sustainability is maintained throughout the whole building process.

The 52 business companies were assessed on four aspects: strategy and management, implementation, innovation, and communication. BAM scored 84 percent and Heijmans 57 percent. The average score was 28 percent.

conventional asphalt concrete. The outcome: a saving of 257,000 euro per kilometre of motorway. Rijkswaterstaat approved the use of LEAB as an alternative to conventional asphalts and basic materials, so BAM Infra can now start offering sustainable asphalt mixtures for use in construction projects.
'Monetising our low-energy asphalt concrete is a pilot project', says Bent. 'We chose asphalt, because it is the only material we produce ourselves.' Monetising LEAB's total life cycle supports the company in taking better decisions and in convincing clients of the much lower negative impact of low-energy asphalt concrete. The project formed an internal stimulus for BAM to improve the management of their materials.

Circular entrepreneurship

The fact that climate change is accelerating, and the realisation that we cannot continue to exhaust our resources, have finally 'reached the boards of directors', according to Bent. BAM is member of the Ellen MacArthur Foundation's CE100 Programme, launched by the former British solo yachtswoman. CE100 is an innovation programme enabling companies to fast-track the realisation of their ambitions regarding the circular economy. As Bent explains: 'It means that we assess the remaining value of our materials at the end of their life cycle, and try to increase that value by re-using those same materials. That is how we keep that value within the company, instead of paying a waste treatment company to remove and process our waste materials.' For example, BAM, re-uses former railway chippings as foundations for roads, thereby realising a 'substantial reduction in costs.'

Welcome

Bent would very much welcome a higher level of ambition on sustainability from public clients. 'The private sector usually shows more ambition.' Sustainable solutions should score more highly in public tenders. According to Bent, the construction sector has been catching up in the last few years, and all companies now comply with the usual criteria for sustainability. 'That in itself is fantastic, but now there are no incentives to really go all the way.'

The Rotterdamsebaan project shows it can be done differently. This project concerns the new connection, including a tunnel, between the A4 and A13 motorways. 'Sustainability criteria played a central role in awarding the contracts, which in the end we won. Let's have more of these projects.' The tender included an incentive of 17.5 million euro for sustainable measures.

The frontrunners within the construction sector profess to be ready for the circular economy. Commitment of clients and other partners in their sector should speed up this development.

Government provides the foundation for green growth

The Dutch government considers it important that companies include their impact on natural and social capital in their management. Is that possible without enforcement? The consensus is that yes, they can, by setting the example, offering tools and providing the foundation for an expanded concept for well-being. That is how the government shows that they seriously mean business.

'The government wants to set an example and it therefore needs to get its own act together.'

Martin Lok, Ministry of Economic Affairs

'The combination of a growing global economy and current production methods negatively affects natural capital in the following ways: through overexploitation of ecosystems and products, global climate change and the non-sustainable use of natural resources. To tackle these threats, the transition to a sustainable global economy – with sustainable products, fewer emissions and more re-use – is crucial to save our natural capital for future generations, and to provide a basis for prosperity and wellbeing: green growth for ecology, economy and society.'

This quote is not from a radical green organisation, but is from the current Dutch Rutte-2 cabinet (*Uitvoeringsagenda Natuurlijk Kapitaal; 2013*). 'It is clear that within the cabinet the ideas on natural capital have taken root,' says Martin Lok from the Ministry of Economic Affairs.

Together with his colleagues from the Ministries of Foreign Affairs and from Infrastructure and the Environment, he strives towards firmly embedding natural capital into the decisions taken by companies, and by financial and government institutions.

A major driving force for the Ministry of Foreign Affairs in its concern for natural capital, is the Dutch footprint in developing countries, explains Omer van Renterghem. 'Business chains such as palm oil, soy and cocoa are significant for the Netherlands but have a considerable ecological footprint. We feel it is important to truly place a value on 'free' public goods.' Or, as his colleague Jan Hijkoop says: 'If we want to enjoy chocolate in twenty years' time, we have to avoid the degradation of the cocoa regions in Ghana and Ivory Coast through overexploitation.' Many developing countries have plentiful natural capital, but do not sufficiently value it.

'I'm not so much interested in whether or how companies describe their use of natural capital in their accounts. I'm interested in whether they use ecosystems sustainably.'

Mari van Dreumel, Ministry of Infrastructure and the Environment

The Ministry of Foreign Affairs wants to play a bridging role, by disseminating Dutch know-how internationally, and propagating international knowledge within the home country. In that respect, the Ministry supports capacity building in developing countries by means of the World Bank's partnership programme WAVES. This programme assists in building national environmental accounts and in calculating natural capital. The technical know-how comes from Statistics Netherlands (CBS), the Netherlands Environmental Assessment Agency (PLB) and Wageningen University and Research Centre (WUR). It resulted, for example, in Botswana now having a national water account, and Rwanda drawing up land use accounts.

The Ministry of Foreign Affairs also contributes to an IFC programme, a member of the World Bank Group, which helps companies in identifying their environmental costs. Van Renterghem: 'By better cooperation within the Wold Bank itself, we try to stimulate both governments and enterprises in developing countries.'

The link between natural capital and the circular economy is a major driving force for the Ministry of Infrastructure and the

Environment. Natural pollination in agriculture, natural waste water treatment or using trees and plants for urban cooling, are all good ways of saving on materials, resources and costs. As the Ministry's Mari van Dreumel says: 'The aim of the Green Deal is to make these relationships visible. When that has been done, we explain: stay away from certain parts of the natural capital, but do use other parts of it, as it saves natural resources. The insight provided by the Green Deal helps to make these choices.'

Transparency about the use of natural capital and expressing this in the company accounts, is useful, but, according to the Ministry that is exactly where the real work starts: has a business case for the company been developed? And what does it look like? As Van Dreumel explains: 'I'm not so much interested in whether or how companies describe their use of natural capital in their accounts. I'm interested in whether they use ecosystems sustainably.' Therefore, the next step for the Ministry is to encourage companies to start considering circular economy in relation to natural capital.

Full appreciation

To stimulate the conservation of natural capital, the cabinet has ordered that the Dutch ecosystem goods and services should be measured so that they can be fully taken into account in the decision-making processes of government organisations and private companies. It expects citizens and companies that benefit from natural capital, to be willing to invest in it for conservation purposes. Their existence depends on nature, after all. This fact should – according to the cabinet – be sufficient motivation for citizens, companies, social and government organisations to help conserve natural capital.

> **'If you want to talk to policymakers, you need data they can understand and you have to speak their language. That language is money.'**
>
> *Rixt de Jong, Statistics Netherlands (CBS)*

'The Government wants to set an example', as Lok explains, 'and it therefore needs to get its own act together.' This means adjusting regulations whenever necessary, assessing whether market price incentives are working, and making its relevant data easily accessible to companies. 'Government have convening power: they can mobilise people, ensuring that they meet.' Lok mentions a number of measures and fields in which government can take the lead. 'We have the National Accounts, indicating the direction in which our economy develops. Natural capital is not included in those accounts, which is why opportunities and risks cannot always be identified. That's wrong. We play our part in infrastructural projects requiring a societal cost-benefit analysis. There too, nature is not adequately represented. We will change that. And the government is a major shareholder in several companies. We can set examples there too.'

Most obvious is the government's role as launching customer, which is able to stimulate companies to include non-financial values in their management by specifically buying their products. Companies even explicitly ask for this, says Lok. The government spend 60 billion euro every year on products and services: approximately 10 billion is spent by the central government, and 50 billion by regional government organisations. In September 2015, the Minister of Infrastructure and the Environment presented the *Plan for Socially Responsible Procurement,* which explicitly mentions the conservation and sustainable use of natural capital as one of its main goals.

Courage

Government takes natural capital very seriously. Companies, however, will have to perform the lion's share of the actual work. It is they that have impact and are often dependent on natural capital. Their impact is often negative, and will remain so for some time to come. Reporting on the impact of your company on natural capital, therefore requires courage, especially when the impact is negative. There, too, government can support companies, according to Lok. 'Government and the financial sector need to create a safe environment for companies that have the courage to 'open up'. We should avoid companies with a negative footprint. We try to encourage them and show them that taking natural and social capital into account can be quite lucrative.'

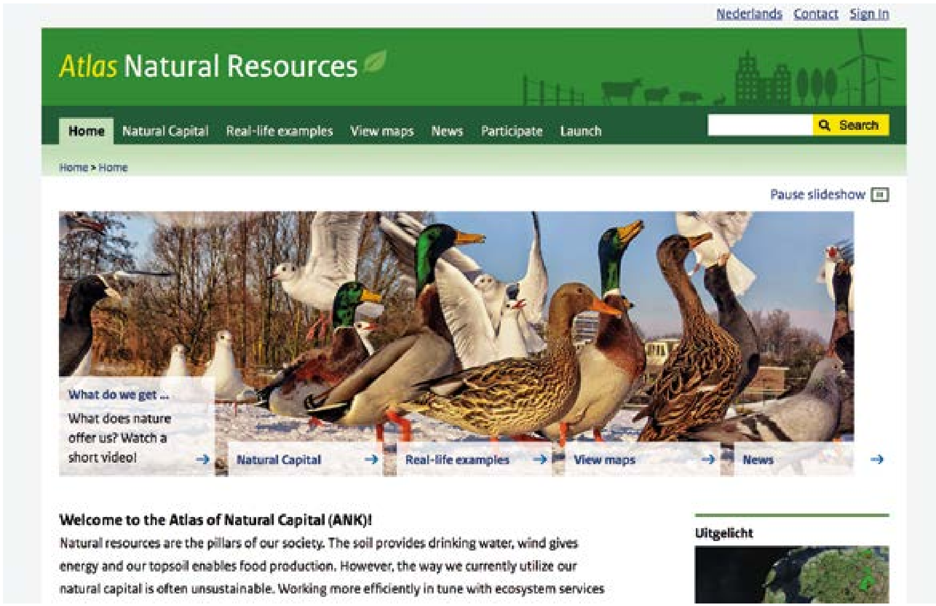
That is why Economic Affairs Minister Henk Kamp profusely praised AkzoNobel for the most transparent annual report at the Kristalprijs award ceremony last year. Before that, the National Railway (NS) received praise for its open communication on the Fyra debacle in its annual report. This company climbed from 28th to first place on the Transparency Ladder within just three years. 'Its annual report complies with nearly all of the criteria of the Transparency Benchmark.' The Transparency Benchmark is the annual assessment of the content and quality of the social reports of Dutch companies.

The emphasis on natural capital sometimes comes at the expense of developments in social capital. Wrongly so, according to Lok. 'The biggest mistake policymakers can make is to state that one is more important than the other. According to many companies, they go hand-in-hand.' He takes palm oil as an example. 'A forest in a tropical country, providing the local inhabitants with food, is to be replaced by a palm oil plantation. The impact of the plantation on both natural and social capital is considerable. It all depends on which angle the problem is considered from.'

The language of money

More is needed to give natural capital its rightful place in the economy. Statistics Netherlands (CBS) and Wageningen University and Research Centre (WUR) carried out the pilot project National Capital Accounts, in which they examined the monetary value of a limited number of ecosystem services in the Dutch province of Limburg. They calcu-

Homepage of Atlas Natural Resources



lated that approximately 20 per cent of the total proceeds of the Limburg hotels and campsites near nature reserves can be attributed to nature. By putting a price tag on ecosystem services, we can compare them with the monetary values which are the basis for the National Accounts and the Gross National Product.
Rixt de Jong, who is responsible for the project at CBS, admits the difficulty of monetising services that have no market price. She understands newspaper articles on the pilot project in the province of Limburg, calculating the monetary value of the nature reserve Mookerheide down to a euro ('10.8 eurocent per square metre, up to a maximum of 35.5 eurocent') but is not happy with them: they suggest that the health's value has been accurately calculated, whereas the calculations are based on a series of best guesses. 'Reality is the problem: when taking decisions on land use, nature is implicitly given a value, usually zero. So if you want to talk to policymakers, you need data they can understand and you have to speak their language. That language is money. Only that will give you the chance of a widely understood assessment.' The value of the Limburg project, according to De Jong, is not that CBS has calculated a price for the Limburg ecosystem services. That price is based on only seven ecosystem services, and for some of those a market price does not even exist. The real value is the possibility to see trends, when you repeat the calculations every couple of years. Then you will be able to see whether the value of an ecosystem service increases or decreases. As De Jong says: 'Only then can you see the impact of your policy.'

Combining the National Accounts and the Natural Capital Accounts is therefore not CBS's ambition. If De Jong gets her way, a palette of figures will become available which together will provide insight into our welfare situation in the broadest sense: the Gross National Product, the impact on eco-

The role of the Atlas of Natural Capital

The Atlas Natural Capital (ANK), came online in 2015. ANK consists of detailed and downloadable maps containing underlying data on natural capital and ecosystem goods and services. See also Best Practice ANK.

The Atlas can play a role in the municipal decision-making process in every single phase of a project:

- It can help management services to analyse the groundwater levels, inventories of species, or the energy potential – the so-called opportunity maps;
- It can help nature associations, citizens and social organisations in finding stakeholders to achieve solutions to local problems;
- It can enrich analyses by adding map-layers, assist in making viability quick scans and in adding nature values to a given set of programme requirements. For companies, ANK can identify positive business cases that are valuable to companies as well as to nature;
- Its maps can also play a role in communicating positive impact results, in enhancing stakeholder dialogues and in providing insight in a company's impact on its direct surroundings, linking it to an action perspective.

system goods and services, and the impact on social capital. 'It is much better to present all these data separately, rather than striving towards a single indicator. A single indicator will not help understanding the sum.'

Modelling

When ecosystem goods and services have been well defined, it becomes possible to model and evaluate the impact of policy decisions on natural capital. The Atlas of Natural Capital, a cooperation of the Deltares, Alterra, LEI, BIJ12 and the RIVM knowledge institutes, is the means to provide just those definitions. The Atlas is still under development. ANK consists of detailed and downloadable maps containing underlying data on natural capital and ecosystem goods and services. They support decision-making and help stakeholders to manage their exploitation of natural capital using nature-based solutions.
In words and in actions, government clearly considers natural and social capital as part of green growth, just as it seriously considers welfare to be much more than just money. It has now laid the national and international foundations, in cooperation with knowledge institutes. The next step needs to be taken by the companies, as they have the largest impact on natural capital.

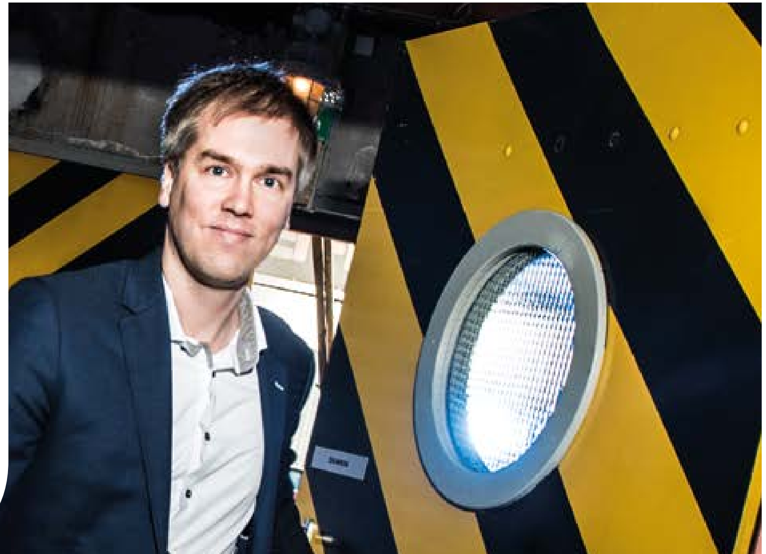
Demand and supply of ecosystem goods and services

Alterra (knowledge institute of Wageningen University and Research Centre) and the Netherlands Environmental Assessment Agency (PLB) have developed maps that give insight into the differences between demand and supply of ecosystem goods and services.

According to Bart de Knegt, who is involved in the study, the general trend has been negative for the last twenty years. 'For all ecosystems, the demand is higher than the supply. Usually, the demand increases, whereas the supply stagnates.' De Knegt's method enables the agricultural or fresh water sector to determine which ecosystem goods can best be employed for a more sustainable use of natural capital. This knowledge is of great benefit to policy-makers: it clearly indicates where actions will be most effective.

Financial sector is key to a sustainable economy

Companies with a negative impact on natural and social capital have a higher risk profile – and vice versa. That influences investments, loans and shares. The Dutch Association of Investors for Sustainable Development (VBDO) provides the financial sector with tools to enable them to include biodiversity and ecosystem goods and services in their financial decisions. ABN Amro already offers a reduced risk profile and more attractive financial terms to the new circular approach to building construction.



The financial sector is in the middle of a velvet revolution. Several banks, insurance companies and pension funds are working hard to green their investment portfolios and to change to sustainable financial policies. The sector's pioneers calculate their own ecological footprints and examine those of their clients. Just like commercial companies, they have embraced the concept of People, Profit, Planet: the triad of fair treatment of clients and employees, making a profit, and adding value to society and the environment. Investing in fossil energy sources is a subject of strong debate.

The financial sector can take the next step, according to Frank Wagemans, if they make room for natural capital in their investment and financial policies. 'Several front runners have already started experimenting. We are waiting for the crowd', says the VDBO's project manager for Responsible Investment.

Wagemans is one of the authors of the Guide on Natural Capital & Financial Institutions, which was published in late 2015. The guide is a co-production of VDBO, which has extensive knowledge of the financial sector, and consultancy firm CREM for sustainable development, a specialist in the field of natural capital. With the help of best practice cases, step-by-step procedures and a self-assessment tool, financial organisations are starting to work with natural capital.

The reason for the production of this guide, explains Wagemans, is that 'many reports have been produced for companies, but for financial organisations the information lags behind'.

Natural capital is an important pillar of sustainability, and it introduces a new way of thinking, according to Wagemans. 'Natural capital provides a broad variety of themes for companies to implement sustainability.' The VDBO/CREM guide focuses on biodiversity and ecosystem goods and services, the biotic part of natural capital. Nature supplies services and goods, such as wood for various purposes, fresh water, clean air, a green environment, food for humans and animals, and resources for industrial use. This broad variety enables

Natural Capital Declaration

Launched in 2012, the Natural Capital Declaration (NCD) is a fast-growing initiative of the international financial sector, with CEO-level support. Its aim is to make natural capital an integrated part of the management of financial institutions, ranging from offering loans and products, to investing in funds and preparing annual and other reports.

From the Netherlands, ASN Bank, Rabobank and the Development Bank FMO are participating in the NCD. ABN Amro could also sign this declaration, according to Kooloos. 'Several of our activities are mentioned in the NCD and could thus easily be included. We can prove that natural capital has been incorporated into our business. The question is, however: does NCD participation have added value? We will continue with our activities, regardless. We prefer to show our achievements, such as our energy-neutral office building in Alkmaar.'

Wagemans does not, however, want to reject the entire NCD initiative out of hand, 'but only if financial institutions, after signing such a declaration, immediately set to work. What I like about the NCD, is that they offer the tools to practise what they preach, but the signatories really need to start using them.'

financial organisations to further explore or develop these themes, according to Wagemans. ‘Often, they restrict themselves to one or two themes, such as CO_2 emissions and scarcity of water and natural resources. With our guide they discover many more themes in which they could become active. They will then start to see connections. ‘Natural capital also covers the notion of circularity, which is currently fashionable in association with the circular economy.’

An increasing number of companies are beginning to realise that extraction of resources from ecosystems is not limitless. They have to ensure that resources retain their value and can be reused. By definition, that takes circular thinking, according to Wagemans.

Lending

According to Wagemans, companies with a negative impact on natural capital have a higher risk profile. This fact is crucial for the financial sector, which sets loan and investment terms for companies. ‘What if a bank has invested in a fishing company, but general overfishing has depleted the stocks. Obviously, this has financial consequences not only for the company itself, but also for the bank as investor or lender. The negative effect on natural capital is therefore of direct financial concern to both the company and the enabling financial institution.’

The VBDO/CREM guide mentions several financial organisations that have integrated issues, such as biodiversity and ecosystem goods and services, into their financial policy. Rabobank, for example, has determined that extraction of a variety of resources negatively affects biodiversity. Producers of cocoa need to refrain from deforestation before they become eligible for loans. ASN Bank has also established a biodiversity policy with clear criteria for lending.

> **‘What if a bank has invested in a fishing company, but general overfishing has depleted the stocks. Obviously, this result has financial consequences not only for the company itself, but also for the bank as investor or lender.’**
>
> ***Frank Wagemans, VBDO***

The issue of biodiversity is not new for ABN Amro, but until two years ago, the bank had only been marginally interested. As explained by Richard Kooloos, Director of Sustainable Banking: ‘We mostly funded butterfly gardens and bee hives and we encouraged clients to sow their fallow land to encourage the creation of temporary nature.’

The issue reached the top of the agenda, however, through the Brazil office of ABN Amro, where the bank funded many coffee and soy producing companies. In cooperation with a research institute, the bank is examining how to measure clients against a biodiversity yardstick. Together with two large clients, the bank is developing a classification system for the activities in its agriculture branch. The climatic extremes in this South American country cause diseases and drought. The assumption is that a more balanced environment with a larger variety of tree and plant species will have better chances of withstanding these. ‘If we can prove that biodiversity is a significant indicator for a company’s level of robustness’, explains Kooloos, ‘we will add that criterion to our lending policy worldwide, and

not only in Brazil. Clients with low biodiversity criteria will then be categorised as having a higher risk profile, which in turn will affect the loan price and our willingness to lend. The impact of biodiversity on the business management of clients in countries with fewer climatic extremes will obviously be lower.'
In 2017, Kooloos expects to be able to indicate whether or not that hypothesis is correct. 'Apart from these results, we currently stress the importance of biodiversity in our discussions with clients, and we encourage them to seriously take it into account.'

Circular construction

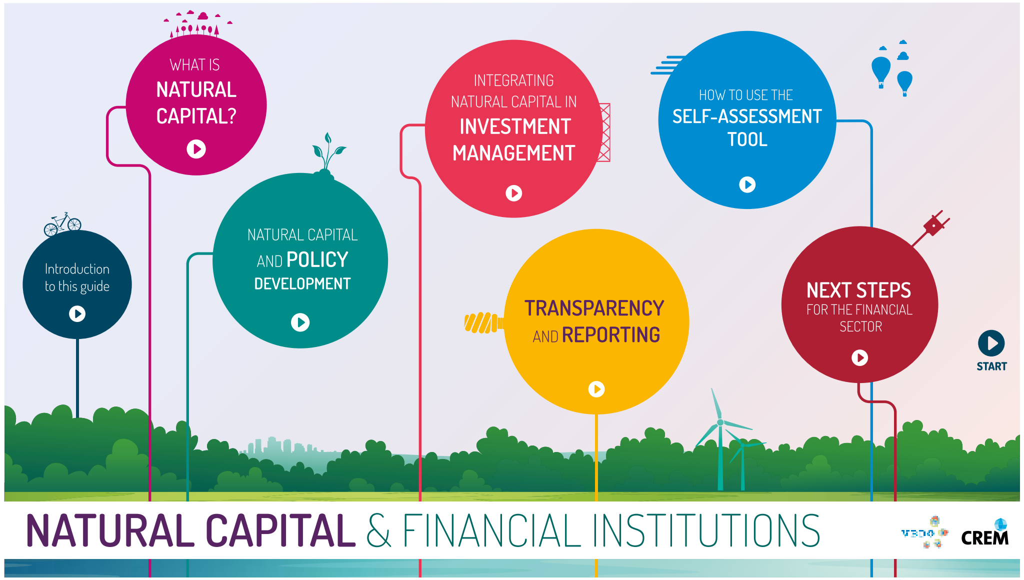
ABN Amro is involved in another natural capital issue in the Netherlands: energy-efficient and circular construction. The major share of ABN Amro's funds in its home country (more than 60 percent, about 165 billion euros) is in real estate, both in housing and in commercial real estate (offices, shops and other investments).

'A lot of natural capital can be gained in that field', according to Kooloos, who explains that the bank has the improvement of the sustainability of its real estate investments firmly on

> **'Buildings constructed using a circular approach are financially more robust. New buildings constructed this way are already given more attractive financial terms.'**
>
> *Richard Kooloos, ABN Amro*

the agenda. Clients are required to increase the energy-efficiency of their buildings. Thirty percent of the real estate needs to be A-labelled for sustainability by the end of 2017, against the current one percent. 'That is a fixed objective. We will do our utmost to reach that goal and will report each year on its progress. If we are threatened by failure, we will have to increase our efforts. There is no other bank worldwide that has enough knowhow to improve the sustainability of clients' buildings on this scale.'

Park2020 is one of the new projects financed by the bank. The office building is located in the Dutch city of Hoofddorp, and is a combination of a healthy working environment, sustainable energy sources, and smart systems for management of its water, waste and transport. 'This project has provided us with first-hand experience of circular construction having a lower risk profile than regularly constructed buildings', explains Kooloos. 'They are finan-



Financial institutions, open up!

Transparency is an important item in the guide developed by the VBDO and consultancy firm CREM for sustainable development. It is an issue that has entered the sustainability field in recent years, and is extremely important to VBDO. 'It is crucial for financial institutions to provide insight into their actions and their impacts on society' according to VBDO's Frank Wagemans. 'They should not just be self-congratulatory, but more importantly, they should demonstrate where they have been going wrong or what they are struggling with.

Transparency will get the dialogue going, both in-house and outside of the organisation. By using the resulting feedback, an organisation can improve. We are pleased to see that financial institutions are showing an increasing openness. The majority of pension funds has become more open in their annual and other reports. There is a growing pressure for others to follow suit.'

Frankness about tax payments is important as well. Currently, ING Bank's annual report lists the countries in which it pays taxes. This goes beyond the suggestion of the Organisation for Economic Co-operation and Development (OECD) for country-by-country reporting. ABN Amro has taken up their suggestion from July 2015.

Openness about tax payments is, according to ABN Amro's Richard Kooloos, especially important for activities in developing countries. 'So many businesses extract resources in developing countries, whereas these particular countries see little in return. These countries are not capable of collecting their legitimate share in taxes. ABN Amro has put this issue on the in-house value-agenda as part of their so-called tax principles, not just to include in its own tax declaration, but also as a customer service.'

cially more robust. When dealing with new projects, the circular approach to constructed buildings already provides a lower risk profile and more attractive financial terms. There is much we do not yet know about the circular use of materials in existing buildings. That is why we prefer to first take the step towards energy-efficient buildings, and meanwhile learn more about how to encourage circular approaches to construction.'

Six dimensions

ABN Amro considers natural capital as only one of six dimensions, the others being financial, social, human, intellectual and manufactured capital. On the basis of an Integrated Profit and Loss (P&L) analysis, developed for them by True Price, the bank knows exactly which activities create, and which activities reduce capital. 'This enables us to make strategic choices and to better express our relevance to society. A bank does not only have a financial value, after all.'

Mortgage lending in the Netherlands has been analysed in a similar manner. As Kooloos explains: 'We have mortgages worth 150 billion euro. This creates social value, because we facilitate the buying of houses. It also builds material capital: usually the value of a house increases over time, but its energy use negatively affects natural capital. We cannot force people to save energy and use sustainable energy sources, we can only try to persuade them. Since 2009, we have been offering a special product financing solar panels. With these Greenloans, we are creating positive value.' Greenloans, an ABN Amro product, offers loans for energy-saving investments, such as solar panels, heat pumps or insulating glazing.

The impact of the bank on social capital is an important concern as well. 'We explicitly investigate violations of human rights in the chains of our customers' activities', explains Kooloos. 'In 2014, we examined the complete diamond chain. Exploitation of employees appeared to be worst in the first, mining phase of the chain, as well as in the cutting process, which is mainly carried out in India by small subcontractors. We do not finance those particular parts of the chain, but by actively sharing this knowledge with our clients, and helping them to develop a policy to diminish these practices, we are still able to positively influence that part of the diamond chain.'

Monetising reveals hidden costs

What are the hidden costs of pollution, climate change and underpayment? Society wants to know, and increasingly, companies do too. Where does a product come from and how has it been produced? What are its true social and ecological costs? And how can we reduce those costs? To be able to answer all those questions, we need methods to measure impact and – where applicable – to help translate those impacts into monetary values. Transparency is also needed, in order to gain more insight into the hidden costs, which can, consequently, lead to better choices, investments and policies.

The Dutch term 'monetariseren' is a literal translation of the English term 'monetising', which in turn comes from late 19th century French: *monétiser*. The term is increasingly being used. Putting a price on hidden costs is what it's about. Puma started using the term when, some years ago, they were the first worldwide company to present an Environmental Profit & Loss account (EP&L) on the sports footwear they produce. They did not risk calculating the societal costs, and did not disclose their underlying data. They just presented the results, as well as their conclusions: use less leather and more recyclable materials.

Since then, a movement that wants to stimulate companies to draw up EP&Ls has been gathering momentum. Good for the companies, proponents say, and good for the customers: ideally, they gain insight into the true price of the product they wish to buy. Their pressure will encourage companies to innovate in order to reduce the damage caused by production. It hasn't reached that stage yet, says Adrian de Groot Ruiz, True Price Director. But things are moving in that direction.

'Monetising the impact of companies has moved forward quite a bit in the last two years. The Green Deal project contributed to this.' True Price coordinated the working group on monetising within the Green Deal

Why would we want to express natural values in monetary terms?

In discussions about monetising, there can be confusion about both the concept and the aim. The main objections to monetising, as well as the reactions of proponents include:

- **Nature has an intrinsic value which cannot be expressed in money.** This is quite true, but that is no reason not to give its functional values a place in our economy. Monetising is just a means to connect costs and profits. That is how it can be an answer to the saying 'all things of value are defenceless', and therefore a potential tool to defend this value.
- **There are no really good methods, thus it always is a bad guess.** That has been true, but we have been developing proven methods. Furthermore, to monetise or not to monetise has ceased to be a choice. Actually, we already do so, using the worst available method, in which nature's price tag reads zero euro.
- **Money can be used as a license to continue exploiting nature.** That is indeed a conceivable danger. There are, however, regulations protecting nature. Applying these same regulations to the market economy addresses that danger. Just as other parts of the market economy are regulated.
- **Monetising is not necessary, as there are other tools which take natural values into account.** True. Companies with a high profile in sustainability, also use methods such as distance-to-target or planetary boundaries. But, if a company's director or management is not keen on sustainability, monetising is certain to catch their attention.

project. True Price cooperates with government organisations, financial institutions, companies and NGOs.

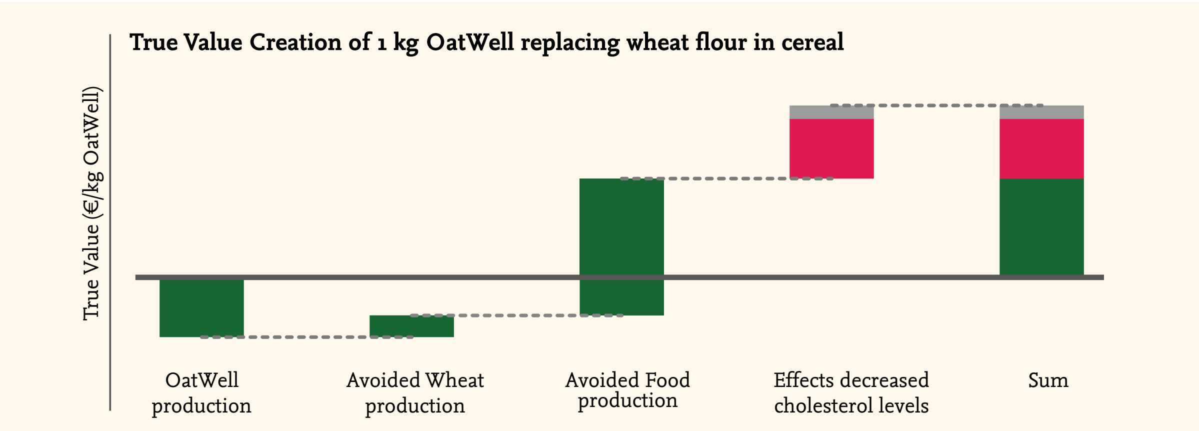
Innovation as a driving force

Within the Green Deal, the pilot projects of AkzoNobel, DSM and BAM impressed De Groot Ruiz the most. The former fascinated by presenting a four-dimensional profit and loss account. It was the first time ever, worldwide, that a large enterprise carried out a P&L exercise on part of its production (their pulp and chemicals plants in Brazil) at a financial, natural, social and human level. DSM performed a similar exercise on one of its products (food product OatWell®). Whereas international contractor BAM used their P&L to prove to potential clients such as Rijkswaterstaat (a government organisation) and local councils how well their new low-energy asphalt concrete scored on environmental criteria compared to traditional asphalt.

'The innovation driver in this latter domain came as a surprise', explains the True Price Director. On reflection, however, it is obvious that companies like to try out the true pricing method on newly developed products. 'Innovation means looking to the future. It becomes increasingly clear to companies to also look at the future impact of a product. Monetising can be a very useful tool. Not if you are only interested in knowing your CO_2 emissions. Rather, it is useful if you are

Example value creation OatWell®

DSM, in cooperation with True Price, analysed the possibility of expressing the environmental and social impact of the food product OatWell in monetary terms. Green indicates environmental impact, red social impact, and grey stands for financial value.



Vodafone calculates environmental profit & loss

Last year, Vodafone Netherlands published its first environmental profit and loss account. In this account, all their products and services from both the business and consumer market, were assessed on carbon dioxide emissions, other emissions, waste, and use of water. They concluded that the environmental losses as a result of their business activities, to a value of 21.6 million euro, can be set against an environmental profit of 37.4 million euro. It also appeared that only 9% of the total measured environmental pressure is due to their own business activities. The remainder is found in the rest of the chain, caused by their suppliers.

‘The environmental profit is completely due to the use of our products and services’, according to Martin de Jong, Vodafone’s sustainable business manager. The telecommunications industry, therefore, affects the environment positively. This environmental profit cannot, however, be completely attributed to Vodafone, but relates to the complete chain.’ De Jong says that the most important factors for this are efficient production as a result of scalability, increased energy efficiency in the end-use of products, improved quality of re-use and recycling, and integration of ICT into the lives of consumers and companies. The most important reason for Vodafone to undertake the exercise is that its results may improve business management, says De Jong. Besides, it presents a strategic awareness: where does the company add value to society? What future risks can be expected, such as potential scarcity of resources or new EU regulations?

Availability of data crucial

According to De Jong, defining the focus, scope and environmental issues is the main challenge for the development of an environmental profit and loss account. ‘Which products and which services do you include in the analysis? How far back in the chain can you realistically go? Which environmental issues are sufficiently substantial?’ Vodafone chose to go back in the chain as far as possible, and to take all products and services, as well as all relevant environmental issues into account. Halfway through the process, they organised a round-table discussion with their stakeholders to discuss these assumptions. The project made good progress, according to De Jong. The availability of data was deemed crucial. ‘Because a complete and detailed description of a complex and large-scale chain is an impossibility, we chose to work with the Life Cycle Assessment method. As we were already in possession of such data on mobile phones and the IT hardware we use, developing the environmental profit and loss account was easier than expected.’

His advice to other interested companies is: ‘Seriously consider the purpose of your EP&L account. Its purpose determines its success. Transparency cannot itself be the purpose. What you actually do with the resulting transparency, can very well form the purpose.’

Here’s the link to the complete report Environmental Profit & Loss Account 2014-2015.

researching various dimensions and wish to compare them.'

Part of AkzoNobel's Brazil pilot was the development of the innovative concept of 'chemical islands': instead of producing chemicals (in this case bleach for the paper industry) in huge factories and laboriously transporting it to the clients, you can build small-scale production facilities right next to the paper mills themselves. The benefits of this include saving significantly on transport costs, strengthening the relationship with the client, and offering the possibility of using the residual materials of paper-making as biomass for energy production.
As De Groot Ruiz explains: 'Together with AkzoNobel we have calculated this. An important conclusion was that the impact of their own operations in Brazil was relatively limited. The impact of those paper mills on natural capital is, however, large. Much larger than the impact of AkzoNobel's suppliers. Thus, the final conclusion was that if you want to influence the impact of the whole chain, you have to do so in cooperation with your clients.'

What next, we asked De Groot Ruiz? As cynics often say: 'Pilots never fail, and never scale.' 'It's certainly true that companies haven't yet completely adapted their strategies,' he admits. 'They just haven't reached that stage yet. It's AkzoNobel that had the courage to communicate it in their annual report. Many companies, however, are afraid of external transparency. We can understand that, because it often concerns strategic issues. Companies prefer to think these issues through completely themselves first: what is our impact, what are the risks? Monetising makes it possible to compare impacts, and then prioritise the main issues and risks. Pricing can inspire professionals from various backgrounds. If you can express it in euro, you can get people interested who do not traditionally much care for sustainability. That holds for the financial controller as well as for the salesperson. So it will need time, but the process has been set in motion.'

Small and medium enterprises

According to De Groot Ruiz, monetising is not restricted to large companies. 'We especially notice growing interest from small and medium enterprises (SMEs). They are very interested in sustainability, but you do have to keep it simple. They have less time for it. So, you need to bring it back to one crucial criterion they can use in their management: How do I calculate the true value of my product? For SMEs, this could be the way to distinguish themselves from their competitors. Using certificates or labels has become less and less effective, but by showing your product's true price, you can prove you're better than the others.'

> **'The True Price method starts with a hotspot analysis, roughly scanning the economic and social costs of a product. We then perform a life cycle analysis, gathering a variety of data. During the final phase we valuate the product and we put a price tag on it.'**
>
> *Adrian De Groot Ruiz, True Price*

Deloitte believes in social impact bonds

Can you address social issues with the aid of innovative financial tools? In Rotterdam, they believe they can. In mid-2015, the Social Impact Bond WRZ was launched. Its participants were the local council of Rotterdam, Deloitte, Social Impact Finance, and Werkplaats Rotterdam Zuid (WRZ). It was one of the first social impact bonds in the Netherlands, and, in terms of the size of its investment, second-largest worldwide. Globally, the appeal of this approach is increasing. A social impact bond consists of a number of participants, with a minimal participation of one government organisation, one social entrepreneur and investor(s). First, the investor provides the necessary funds for the intended social intervention. When there is proof of saving, the government organisation returns the invested sum, possibly with the addition of revenue from the savings achieved.
Rotterdam created a centre consisting of branches of participating firms from various sectors. They all train unemployed people from within the Rotterdam region. More than sixty people have thus found a job. The investors receive an incentive payment based on the total saving in terms of unemployment benefit.
‘As yet, that is the only example of monetising’, explains Deloitte’s Daniel Charite. ‘Other savings are possible, for instance in the field of health care. But these are impossible to quantify beforehand, and impossible to incorporate into a business case. Concluding agreements with more participants, such as insurance companies, makes it far more complex. This is enough, at least for now. These social impact bonds already require a different mind-set from all participants.’

Charite is manager at GovLab NL, a Deloitte branch focusing on innovations in government organisations. Charite considers social impact bonds to be the best way to improve the public sector and to solve social problems.

For more information, see their (Dutch-language) report Investeren in sociale innovatie – Samen anders kijken, Deloitte, Social Impact. April 2015.

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The case for integrated reporting

The accountancy Big Four and business pioneers are quite confident: integrated reporting is the new way, and companies explain holistically how they manage financial and non-financial capital. Integrated reporting itself is not the main goal, but rather the final step in a process: 'The route is: integrated thinking – better decision-making – better results – integrated reporting.'

'Accountants will save the world.' This quote from Peter Bakker, President of the World Business Council for Sustainable Development (WBCSD), has become quite famous. He regularly used this statement at various events leading up to the 2013 large-scale UN conference on Sustainable Development (Rio +20).

In Rotterdam, for example, during the Dutch preparatory meeting for the conference, he continued: *'I really mean this. To engage all companies in finding solutions to our biggest global problems, we need to change the regulations for reporting….We have to make sure that companies do not only report on their financial profits, but also on how they made those profits.'*

In his answer to questions from Erasmus University students, Bakker advised them not to seek a job as a corporate sustainability manager but rather to specialise in the field of assessment and valuation. Bakker proved to be a fervent supporter of the idea that business is the most important stakeholder in the change to sustainable economic growth. We do need new rules and regulations, however, to define the operational playing field. It takes one to know one, and for companies to develop sustainability rules themselves, and adhere to them, is possibly asking too much. That explains Bakker's urgent call on government organisations to set regulations, and his appeal to accountants to verify compliance.

Clear government regulations are not yet available. The accountancy firms, were, however, only too ready to fill this gap. Obviously, not only on the basis of Bakker's statements: the trend towards integration of annual reports and sustainability reports did already exist. In the same year that Bakker made his statements, the International Integrated Reporting Council (IIRC) – consisting of government organisations, investors, business companies, accountants and NGOs – presented a detailed format for this new way of reporting.

Central to the new format is the thinking with regard to capital, whether it be financial, industrial, human, intellectual, natural, or social. The basic idea is that, if companies have better insight into all these forms of capital, they will gain a more complete (holistic) view of their own risks and opportunities. A company needs to know how to make use of the various forms of capital, and understand their dependency, as well as their impact, on these.

Consolidation

Right from the start, Deloitte participated in the development of IIRC's Integrated Reporting Framework. To flesh out this theoretical format, Deloitte Netherlands publishes an annual report on the progress towards integrated reporting of thirty large companies, most of them AEX-listed. Using publicly accessible documents, they rank these companies according to the Guiding Principles and Content Elements of the <IR> (Integrated Reporting) framework. The model consists of four levels of maturity, from Starting, through Progressing and Leading, and finally, to Innovating. In 2015, in cooperation with MVO Nederland (CSR Netherlands), Deloitte extended this annual report to include business interviews and desk research (see also

> **'This way of reporting will contribute enormously to transparency and will also stimulate more improved impact-focused management.'**
>
> *Anneke Sipkens, Deloitte*

Deloitte's Best Practice). 'It can be concluded that more and more companies find ways of using the <IR> framework,' says Anneke Sipkens, Deloitte's Director of Sustainability Services. Five large companies top the list at the highest level of maturity, that of Innovator: KPN (telecommunications), Heineken (brewing), NS (railways), BAM (construction) and Aegon (insurance).

In the preface of the report, Willem Lageweg, Director of MVO Nederland (CSR The Netherlands), points out that, apart from the well-known frontrunners in the world of multi-national companies, there are hundreds of leading small and medium business enterprises that integrate the societal and environmental impacts of their management in their thinking, as well as in their actions. 'To many organisations, integrated reporting equals taking action. It stimulates change, presenting a new way of managing their business. Supply chain management has increasingly become a regular part of normal business management, together with approaches such as inclusive business, finding new ways to involve stakeholders, circular economy and integrated reporting. By being transparent and reporting on value creation and innovation, companies avoid the so-called reporting trap', explains Lageweg. That is the danger of conventional reporting: it is often no more than a time and energy consuming check-the-box exercise: of little or no value to the organisation and its stakeholders.

Total Value/ True Value

Other members of the Big Four, which are the largest globally operating consultancy and accountancy firms, see a profitable future for integrated reporting. EY (formerly Ernst & Young) developed the Total Value analysis, which it currently uses to advise numerous companies. EY was co-author of the report 'The Business Case for True Pricing', together with Deloitte, PwC and True Price. This report shows business companies the benefits of integrating natural and social capital into their management. More recently, EY was involved in formulating the White paper Social Value Analysis, cooperating with True Price, KPMG, Het Groene Brein (Green Brain) and De Groene Zaak (Green Business). See also EY's Best Practice.

> **'We have to ensure that companies not only mention their financial successes in their reports, but that they specifically indicate how these successes were achieved.'**
>
> *Peter Bakker, WBCSD*

At KPMG, EY's Total Value is known as True Value. With this tool, they assist organisations in assessing and managing their economic, social and environmental impact. KPMG shares its experience with the World Business Council for Sustainable Development (WBCSD). In 2015, the two parties carried out a common investigation into the way in which more than twenty large companies integrate social value creation into their management. The results were published in Social Capital in Decision-Making, and formed the basis for a universal method to assess social capital, the so-called Social Capital Protocol (see also the Highlight on Social Capital).

Roadmap

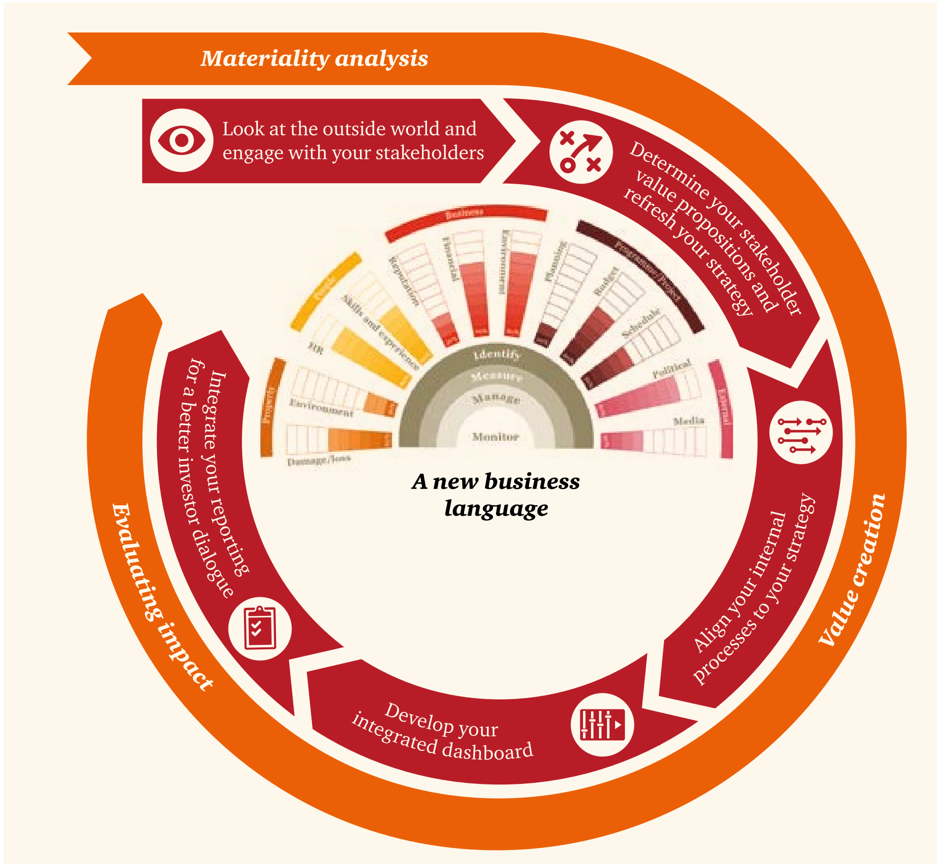
During the past two years, and within the Green Deal working group Integrated Reporting, the companies Achmea, FMO Development Bank, Schiphol Airport, Vodafone, ING Bank, international contractor BAM and ASML, together with several large accountancy firms, cooperated in the development of integrated reporting, as well as a corresponding 'dashboard' for managers. Central to this development was PwC's practical manual, as described in the report 'Implementing Integrated Reporting: PwC's practical manual for a new business language'. This manual includes a Roadmap, consisting of five steps that will help organisations moving further forward. The first two steps consist of having a dialogue with stakeholders, and the next, drawing conclusions on the value the company aims to create, together with its stakeholders. 'Those steps are still relatively easy', according to Robert van der Laan, a partner in PwC. But he warns that it can easily take a couple of years before the complexity of that dialogue is really understood. 'Experience has taught us, however, that even during the first year, the dialogues provoke a lot of reactions within a company.'

It is much more difficult to take the next steps: adapting the management strategy, and aligning internal processes to the new strategy (step 3). The same holds for developing integrated performance indicators (step 4). The final step is integrated reporting (step 5). The process often seems to grind to a halt at steps 3 and 4. Although it is exactly those steps that can create additional value to the company and its stakeholders, the stagnation occurs for a reason. These steps are challenging and time-consuming exercises, and also very difficult to quantify.

'No-one is against integrated reporting and its underlying ideas', according to Van der Laan, who, together with Eric Roelofsen from Erasmus University, in 2014 presented the (Dutch-language) publication *Integrated reporting: Voorkauwen of vaag houden?* (Spelling it out or keeping it vague?).

PwC's Integrated Reporting Roadmap

Five stages towards integrated reporting



Crash course Integrated reporting

By means of integrated reporting (<IR> for insiders), companies prove that they have a coherent vision of their current and future ways of value creation. They take various forms of financial and non-financial capital into account. Integrated reporting stimulates integrated thinking, and vice versa. Ultimately, this should lead to better business decisions, and improved results.

Value creation is central to <IR>. It means that the focus of organisations needs to be on the long term, rather than the short term, and to take the costs and benefits for society and other stakeholders into account, rather than just the value created in-house. Examples of external costs and benefits are emissions, consequences for the job market, and labour conditions further up in the chain of suppliers.

All interested parties together, are called 'the **stakeholders**'. To be able to know their expectations of the company, **stakeholder dialogues** should be organised. Possible methods for the dialogues are: round-table discussions or series of interviews.

Ideally, the results of the dialogues should be integrated into business management. The extent to which integration takes place, is called **connectivity**.

PwC developed a connectivity matrix which provides a quick and up-to-date scan of any situation. This matrix includes every step: from the stakeholders, the issues they deem important, and the risks connected to those issues, to how all this connects to the **strategic goals** and the **key performance indicators** (KPIs), and finally, to the impacts of the results. This connectivity matrix can form the basis for an **integrated dashboard**. This dashboard uses all available data to produce an effective summary of the way the company creates value.

Such a fundamental change in reporting procedures cannot be realised overnight. There are manifold and often imperceptible obstacles, but, apart from everything else, in an international context, Dutch organisations are front runners. That means there still is a world to win.

Risk assessment

'Keep it applicable', is Van der Laan's main advice. Large companies have specific departments working on the assessment and management of risk. Have them reflect on the consequences of the stakeholder dialogue. 'And re-examine your strategic goals. Ask yourself whether they currently provide answers for the stakeholders. If you promise your stakeholders to become climate-neutral, is that reflected in your strategic goals?' And then translate those same goals into your business management. During that phase, top-level management involvement is an absolute necessity.

'Then you have translated the stakeholder dialogue into risk and strategy, and into performance indicators. In that way, you get deep inside the organisation. That is where value creation begins. Your business management begins to integrate with the stakeholder dialogue. After that, the classic image of shareholders, strategy and financial profits, and its corresponding business management, starts to fade.'

It is important not to think you can realise this in just a couple of years, Van der Laan warns again. That is an illusion; the necessity, however, is clear. The recent tampering with emissions in the car industry is a clear example that distinctly proves the necessity of integrated thinking. 'That is where it went completely wrong because of prioritising financial capital way above all other forms of capital. That bias should be prevented.'

Empirical proof

According to Van der Laan, recognition is growing that fundamentally better reporting and a more fruitful dialogue with stakeholders really imply a different approach to the management of an organisation, on the basis of integrated management information. The benefits of integrated reporting can be observed at a very early stage in the process. 'Each step adds something specific. The roadmap offers organisations new perceptions and connectivity.'

Scientific proof that integrated thinking and integrated reporting provide benefits is, however, still lacking. Scientists are not yet certain. Such proof is a firm condition for a final breakthrough, insists Van der Laan. Deloitte's Anneke Sipkens, is, however, more optimistic. 'It is merely a matter of time', she thinks. 'Because it is clear now that there is a positive connection between integrated reporting and business results.'

Best practices

Which flagship projects have been developed in the past two years by the participants in the Green Deal? The next pages show their summarised presentations.

The use of wool, the natural resource least used by carpet company Desso, turns out to have the largest impact on natural capital. This fact emerged from the company's assessment by means of the Globio method. To reduce this impact is challenging.

Desso identifies its natural capital hotspots

DESSO
A Tarkett Company

Desso wanted to know the impact of its activities on natural capital in the value chain of its company. Otherwise it makes no sense, according to Rudi Daelmans, Desso's sustainability manager. The learning curve is crucial. 'We want to know what natural capital is, and which methodologies or benchmarks we should use.'

The impact of the natural resources it uses and which it can actively influence, were measured in a pilot study. Desso used Globio, a method developed by the Netherlands Environmental Assessment Agency (PBL). 'What I particularly like about Globio', says Daelmans, 'is that it is not based on so-called planetary boundaries – scientifically acknowledged boundaries to the planet, leading to conclusions showing the minimum amount of biodiversity needed. Globio first establishes a zero-situation, which is how the planet looked devoid of human habitation, and then establishes what changes to biodiversity have been caused by human activities. Comparing these two situations helps understanding of whether the company's impact is diminishing.'

Luxury market

Desso already knew that wool has a high impact, but was unaware of just how excessive this impact turned out to be. 'Wool is the resource we comparatively use least, whereas it seems to have the highest impact.' With an annual total of 50,000 tonnes of natu-

'Gathering the data was the biggest challenge. Data on land use of natural resources are especially difficult to find. The same holds for calculating the total amount of carbon dioxide equivalents of the natural resources Desso uses. Using weighted assumptions got us relatively far.'

ral resources in general, Desso uses just one thousand tonnes of wool to produce carpets for the luxury market (hotels and cruise ships) and for airlines (because of the flame-retardant properties of wool). To a certain extent, the excessive impact seems to be caused by the Globio method, which calculates the carbon emissions in the complete supply chain, the land use and the nitrogen and phosphate pollution. With regard to land use, the original state is used as its point of reference. As Daelmans explains: 'The land where "our" sheep now graze, was once forested. It has now been turned into fields, with a much-diminished biodiversity as compared to the original forests.'

Better understanding

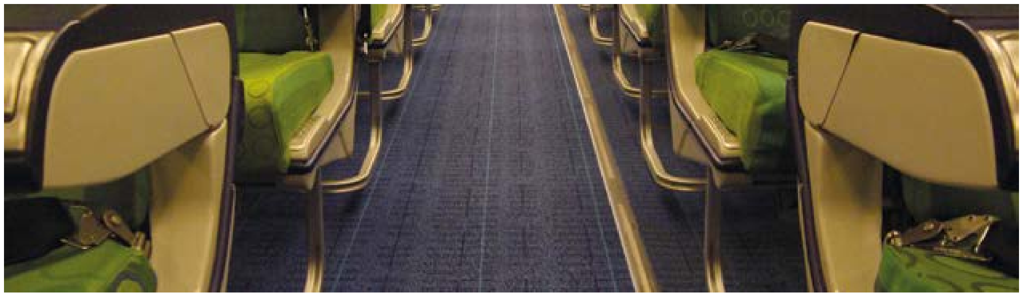
Desso has certainly acquired more knowledge of natural capital. 'We now better understand the impact of our company, we know where the hotspots of natural capital are, and we can now decide on the steps we need to take to reduce this impact. It has also become clear that the Globio method definitely needs further development. There are still too many uncertainties, and after all, our Cradle to Cradle strategy is not so bad.'

Another important lesson for Desso was that bio-based materials are not always better than conventional materials. Some time ago, Desso held in-house discussions on whether the company should become totally bio-based, 'I'm glad we did not do so. If you turn bio-based, it should be a carefully considered decision.'

Intensive or extensive

Reducing the impact of wool is a challenge. Scientists do not agree on whether more intensive or more extensive (using more land) sheep farming is the solution. The fact that buyers of wool carpets are 'hardly interested' in sustainability is an additional challenge, according to Daelmans.

- Desso has learnt where the hotspots of natural capital are, and can now decide on the steps needed to reduce their impact.
- Bio-based materials are not always superior to conventional materials.



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Together, IUCN NL and the Port of Amsterdam developed sustainability guidelines supporting the port's ambitions regarding a bio-based and circular economy. The guidelines are available to other companies requiring a better understanding of their complete value chain.

Sustainability guidelines help Port of Amsterdam understand value chain

The Port of Amsterdam is showing strong ambition in its approach to the bio-based and circular economy. This holds for new companies as well as for the port's joint ventures. The port can enhance its greening with these two kinds of activities, and take responsibility for its natural capital. But in a circular and bio-based economy it is important to also take into account the origins of resources and the energy efficiency of processes.

The transition towards a circular or bio-based economy regularly raises questions, making it difficult for the port to make the best choices. The reason the port established close cooperation with IUCN NL was to better understand the complete economic chain.

Multiple purpose

IUCN NL possesses considerable knowledge and extensive experience in greening the economy, and seeks pragmatic solutions to the corresponding sustainability issues. In this project, the environmental umbrella organisation and the Port of Amsterdam developed Sustainability Guidelines: a pragmatic tool using a step-by-step approach to help companies gain a better understanding of the sustainability of their production and handling processes. For the port, this is

'While the daily grind continued, taking a step back to look at things from a fresh perspective proved to be extremely valuable.'

a multi-purpose project: it increases internal awareness, it serves as a starting point for customer dialogue, as an instrument for communication, and as a basis for taking a stand on sustainability.
The Sustainability Guidelines focus on inputs (natural resources, energy and water) and outputs (emissions to soil, water and air, waste disposal, transport and logistics, and the production processes in the port). Inputs are its main focus because of their potential ecological and social impacts on production.
The project enabled IUCN NL to immerse itself in the daily operations of the port and to support its authorities in taking responsibility for impacts outside their own port boundaries. The Sustainability Guidelines can be used by other companies, although they might need to be re-formulated and possibly adapted.

Level of ambition

One of the challenges was to find a common level of ambition. As IUCN NL's Marieke Harteveld says: 'We organised quite a lot of meetings, held many presentations and ran test cases, in order to find out if our route was sufficiently realistic. All this led to fruitful discussions and specifically provided useful feedback. In this way, we have tried to work towards Sustainability Guidelines which are as applicable as possible.'

The Port of Amsterdam and IUCN NL have learned to speak each other's language and have developed a deeper understanding of each other's position. The project has stimulated a lot of discourse and discussion in the port, and IUCN NL has gained better understanding of the strategic processes within companies. The organisation has acquired more factual information by doing desk research where necessary. In this cooperation with a commercial company, IUCN NL has learned to clarify its partner's intentions and desires as clearly and as early as possible. As Harteveld says: 'You have to be sure that you are dealing with the most relevant issues, that you look for shared interests, and only then work towards results.' She also recommends planning realistically, and having the product regularly assessed by colleagues. 'Keep the lines open, keep asking 'stupid' questions, keep informing all participants, and report reliably.'

Lessons learnt

- Establish the intentions and desires of the company and the advisory partner as clearly as possible and as early as possible.
- Plan realistically and have the product regularly assessed by colleagues.

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If carpet tile company Interface had its way, the whole sector would be using a communal method for measuring its impact on natural capital, and then being crystal clear in its communication. To explain just that, Geanne van Arkel from Interface, takes a food nutrition chart as an example: a simple visualisation everyone can understand.

Radical transparency throughout the whole sector

Interface®

Interface has been assessing and reducing its impact on nature since the 1990s. The company wants to contribute to the revitalization of society and the environment, including biodiversity. Discarded and dumped fishing nets, which form underwater hazards in the coastal areas of India and the Philippines, are given a second life as carpet tiles. The company aims to have no negative impact on the environment whatsoever by 2020.

General sector methodology

Being a front runner, Interface especially wants their colleagues in the sector to join it. Interface is therefore searching for a generally acceptable methodology, in order to create sector-wide transparency. The company suggests the use of Environmental Product Declarations (EPDs). These EPDs are independently verified declarations, classifying the environmental impact of a product throughout its whole cycle and in the total chain.

In case of carpets, the declarations provide information on the company's energy use, its greenhouse effect, and its effects on acidification, ozone depletion, agricultural pollution, photo-chemical oxidization and its human toxicity. As Van Arkel, manager of Sustainable Development, explains: 'We use these insights in our further product development, but they

> 'Environmental Product Declarations (EPDs) make all other environmental labels and quality marks redundant.'

are of interest to all stakeholders. These EPDs should be introduced throughout the whole sector to allow comparisons to be made. That is exactly the lesson we have learned, as only this can be called objective transparency.'

Summarised in a number

Van Arkel is the first to admit that declarations on the environmental impact of a product should be easier to understand and interpret for more people. 'Currently, they are very unattractively designed. You could use spider graphs, which show your own impact against a benchmark at a glance. Another possibility is to indicate the impact in a CO_2 equivalent, as a kind of summarised number: if the CO_2 emission changes, nearly all other indicators change accordingly. It therefore concerns only a few relevant impact categories per sector.'

Competition

If the whole sector joins in, a sustainability competition will ensue. After all, the method provides a continuous visualisation of your company's results against the average in the sector, and moreover, shows the 'best in class' solutions. As Van Arkel explains: 'In addition, it gives governments the opportunity to actively stimulate innovative solutions regarding sustainability, by showing the actual possibilities within a particular sector'. This already happens in Japan, where the government encourages constant innovation. Periodic evaluations facilitate regular examination of average and best practices in the sector.

This makes it possible to stimulate proven, above-average sustainable innovations by means of tax relief. Interface intends to seek government support for this plan. 'Whereas they fear it will turn into a tax burden, we think it will instead bring a tax reduction.'

Lessons learnt

- Environmental Product Declarations are of interest to all stakeholders. They should be introduced throughout the sector to allow comparisons to be made. Only this can be called objective transparency.
- Environmental Product Declarations should be made easier to understand and interpret, and should show the product's impact at a glance.

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Currently, Thermaflex connects more than 80,000 people in 40 countries to sustainable municipal thermal energy networks. The environmental track record of the company's innovative piping and insulation solutions is extremely transparent. For each and every metre of piping leaving the factory, the company can accurately estimate the CO_2 emission savings and the amount of renewable energy realised, based on specific project information and the energy mix of a particular country.

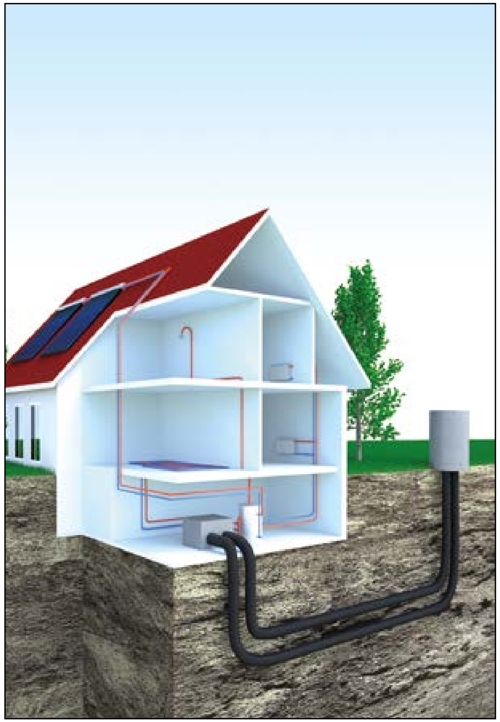
A pragmatic solution for transparency

The kilotons reduction in CO_2 emissions continue to grow as can be seen by clicking on the website of Thermaflex. This also holds for the number of gigawatt hours (GWh) of renewable energy. The manufacturer of piping and insulation products used in cooling and heating buildings, has been able to save more than 300 kilotons of CO_2 emissions, which is the equivalent of the emissions of 70,000 medium-sized cars. The total distribution of renewable energy, as prominently displayed on the Thermaflex website, accounts for more than 200 GWh. This equals the annual production of 80 wind turbines. 'We find it very important that everyone can check our figures', explains Mirella Zuidgeest, programme manager for corporate social responsibility (CSR). 'We aim to be completely transparent.'

The company preferred a pragmatic approach and used the data from its own databases for the calculations and estimations. 'We know exactly which products we make, and in what quantities, and we also know which and how natural resources are necessary for their production. These data formed the basis for life cycle analyses in all our branches and locations. The mandatory ISO-quality standards enabled us to calcu-

'We now have a truly reliable indication of our environmental impact. We are very satisfied, because we can prove that we are actually realising our mission to minimise energy waste and to maximise the use of renewables.'

late the energy loss per metre of piping.' All this information was set against data from minimally insulated products. The comparison made it possible to build a model indicating what level of CO_2 emissions can be saved per product. They also took into account the various kinds of energy mix per country which uses Thermaflex products. This made it possible to estimate the proportion of green energy in its distribution networks.



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'Although we can only present approximations, it is obvious that the figures on which they are based are extremely accurate. They give a truly reliable indication of our environmental impact. We are very satisfied, because we can prove that we are actually realising our mission to minimise energy waste and to maximise the use of renewables.'

Connectivity matrix

When participating in the Green Deal Working group Integrated Reporting, Thermaflex made good use of the PwC connectivity matrix which indicates the steps a company needs to take to create value for its stakeholders. 'We have learnt that our social impact can be primarily based on the amount of CO_2 we have saved and on the amount of renewable energy we have produced.

Customers choose us for our sustainable products which enable them to save energy, and also because we use recyclable and safe materials. Part of our product range is certified 'Cradle to Cradle'. In the Netherlands these products form 25 percent of our turnover.'

Lessons learnt

- Work with accurate data, even when approximations are presented.
- Focus on the indicator for societal impact most relevant to your business.
- Choose your stakeholders carefully. Consult people with a clear vision of future developments.
- Keep it simple. We have chosen a pragmatic approach. To present models of our CO_2 emissions, we have used our own data as much as possible.

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An increasing number of people share cars, tools and even meals by means of online platforms. Sharing has proven not only to be good for the purse, but it is also a source of happiness. Insurance company Achmea, together with True Price, has analysed the social impact of four online sharing platforms. Their combined social value turned out to be 4 million euro in 2014.

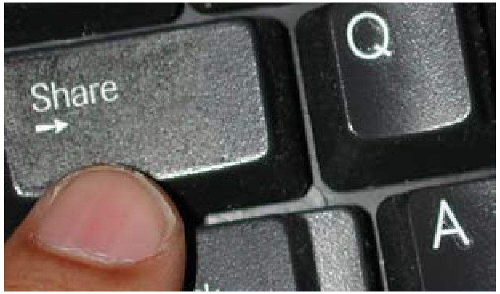
Demonstrable social value for shareconomy

A taste of tortiglioni with aubergine from Thuisafgehaald, taking on an odd-jobbing neighbour through Croqqer, hiring a hammer drill through Peerby, or a large estate car through SnappCar. Sharing is replacing buying. People increasingly share their goods and talents with others in their neighbourhoods by means of online platforms. Figures show that the four sharing platforms have already led to more than a hundred thousand hire, loan or share agreements.

Sharing not only offers financial profit, but also social value. As Peerby indicates on its website: 'A social neighbourhood is a pleasant neighbourhood.' 'It is obvious that the contact between people that stems from sharing contributes to a feeling of trust, as well as to health and general well-being of people', according to Achmea's Sophie Hulshof. 'People on the verge of loneliness can become involved again in a meaningful way.'

'When in future, these kinds of initiative scale up, the sharing economy will make an increasingly large contribution to society. By offering security through insurance products, Achmea is able to play an important role in the stimulation and support of these developments.'
In 2011, Centraal Beheer, Achmea's insurance branch, took the initiative of offering the

'When in future, these kinds of initiative scale up, the sharing economy will make an increasingly large contribution to society. By offering security through insurance products, we as Achmea, are able to play an important role in the stimulation and support of these developments.'



possibility of insuring shared cars. In 2015, the company developed an insurance policy for the goods-sharing platform Peerby.

Life Satisfaction Index

In order to measure and evaluate the significance for society of the sharing economy, Achmea, together with True Price, studied the social impact of the four online platforms Croqqer, Peerby, Thuisafgehaald and SnappCar. 'Apart from the financial profit, we wanted to know the social value of these initiatives', says Hulshof.

In order to indicate the social value, the so-called Life Satisfaction Method, a profit-loss analysis method used by researchers and policymakers, was applied. As Hulshof explains: 'If making five new friends increases someone's well-being by 1 per cent, and if a 500 euro salary increase also increases someone's well-being by 1 per cent, it can be concluded that five new friends are worth 500 euro.' On the basis of this principle, a method was developed to calculate the social value of online sharing platforms in euro. It is a flexible method, enabling other sharing platforms to measure their social value as well.

Extremely interesting research, according to Hulshof, because it not only shows the importance of stimulating this social value creation through online sharing platforms, it has also shown Achmea what more, apart from insurance possibilities, the company needs to offer for further development.

Lesson learnt

- Unlocking data is complicated. Gathering the relevant data, such as contact encounters and number of agreements, to be able to calculate the social value of the various sharing platforms, was a complicated task. Large databases from each of the four sharing platforms needed to be unlocked.
The different technical formats of the databases required additional steps in the process. In the end, however, the flexible model allowed Achmea and True Price to easily integrate the data into a measuring tool.

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AkzoNobel has developed a four-dimensional profit and loss report measuring the impact of its business. A pilot of this new method was carried out at their pulp and chemicals businesses in Brazil. In the new approach, both positive and negative impact can be measured, across the whole value chain, for financial, human, social and natural capital.

Measuring impact in four dimensions for better decision making

In 2014, six Brazilian plants, all part of the AkzoNobel Pulp and Performance Chemicals division, participated in a pilot study. The results were shared in the Green Deal, and analysed together with True Price and with the assistance of the economist Pavan Sukhdev.

Positive and negative

The results of the pilot show that the impact of the financial dimension on the value chain is positive, and substantially higher than according to traditional profit calculations. The reason for this is that the combined salaries, taxes and interest payments make a substantially higher contribution to wealth in society than what is traditionally taken into account in the profit and loss calculation. Taking more types of payment into account generates a broader description of value creation for the various stakeholders, such as employees, governments and financial institutes.

The impact on natural capital is predominantly negative, mainly due to the use of oil and natural gas, and emissions such as CO_2, SO_2, and NO_x across the whole value chain. The positive impact on human capital resulted from employee training programmes and

Ton Buchner, President of the AkzoNobel Board of Directors, is enthusiastic about the four-dimensional method: 'We wanted to push the boundaries of our impact assessment and develop a deeper understanding of our influence across the whole value chain. By attaching an economic value to the positive and negative aspects of each dimension, we gain valuable insights into how we can drive longer term value not only for our shareholders, but also for the environment, people and society at large. In addition, the results will inform our strategic decision-making and provide further momentum for our ongoing efforts to do more with less.'

career opportunities. The impact of the social capital dimension is limited, due to the nature of this particular industry: larger production volumes involve fewer personnel in comparison to other industrial sectors.

What they learnt

The approach resulted in a number of lessons for AkzoNobel. The company was already fully aware that the production of sodium chlorate requires a large amount of energy, but it became apparent that more measures were possible. For example: increasing the use of hydropower in the electricity mix, enhancing energy efficiency, improving the transportation of raw materials, and strengthening the collaboration with customers when choosing bio-based chemicals.
The company also learnt to estimate the value of corporate training investments, and to benchmark comparable units. This knowledge of their human capital allows them to take measures necessary to retain useful and valuable employees.
The Brazilian plants can increase their impacts on social capital through targeted interventions addressing material social risks. Looking at the complete value chain, social capital can be further enhanced by creating awareness and by continuous improvement in health and safety issues, in labour rights, as well as in relations with local communities.

Scaling up

The results are already being used to carry out improvements at the six plants in Brazil where the pilot took place. The company is looking into scaling up the project and introducing the findings into its Pulp and Performance Chemicals businesses worldwide. Using the method as a basis for every decision and as a tool for its external reporting, would be an obvious next step.

Lessons learnt

- Analysis of the impact of all dimensions throughout the value chain shows that the environmental footprint can be reduced even further.
- Estimating the value of training investments and benchmarking comparable units allows AkzoNobel to take measures to retain useful and valuable employees.

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Most companies struggle with determining their impact and dependency on biodiversity and ecosystem goods and services. The integration of ecosystem services in the daily practice of management is also not a straightforward process. BESmetrics can offer support to companies in that process, and is providing important input for the Natural Capital Protocol.

Impacts on nature made tangible to companies

ARCADIS Design & Consultancy for natural and built assets

FrieslandCampina aims to support farmers in enhancing biodiversity on their farms. 'Biodiversity strengthens a farm's resilience,' explains Guus van Laarhoven, project leader on Biodiversity at the dairy giant.

'For example, it enables dairy farmers to cope with the effects of climate change. Their business case improves, which makes them less vulnerable. Our company then benefits from a more stable supply of milk.'

This is just one example of how companies can simply and pragmatically react to their impact on biodiversity and ecosystem services (BES). Although it is by no means simple to find your way in a forest of suitable and unsuitable methods, an increasing number of companies are aiming to integrate nature into their strategies, as they realise the possible risks they are running. Apart from that, a majority imply that they perceive specific opportunities for ecosystem services.

These findings stem from BESmetrics, a research project aimed at offering support to companies in reducing climate change effects by increasing their knowledge of BES-impacts and dependencies, and by improving their ability to measure these impacts.

This knowledge also facilitates companies in integrating biodiversity and ecosystem services into their business strategies, their decision-making processes and their daily operations. This should ultimately improve their management of the risks and opportunities in this field. BESmetrics is an exploratory project, funded by ClimateKIC. The project was run by design and consultancy company Arcadis, in cooperation with Imperial College London, Cofély, DSM, Philips, PwC and IUCN NL.

Hero Boonstra (Cofély) on BESmetrics: 'BESmetrics helps Cofély to identify hotspots reliably in our impact on biodiversity and ecosystem services.'

Business risks

Ecosystem degradation is a business risk. Companies are increasingly aware of this, as was shown in eighteen interviews held for the purpose of the BESmetrics project. Companies consider the identification of ecosystem services and their integration into their daily business operations a tremendous challenge. This is due to the complexity and the limited availability of practical methods.

BES integrator

BESmetrics responds to companies' needs for practical understanding of the requirements and dependencies of biodiversity and ecosystem services. The project responds by researching indicators for mapping and monitoring BES, thus enabling companies to estimate their natural capital precisely, and to use a uniform language in their communication on these matters. The development of the BES-integrator (open source) helps companies find their way in current knowledge of biodiversity and ecosystem services, and supplies the link to their business strategies and daily operations. The project also resulted in a further development of the business case for biodiversity conservation. A large majority of the interviewees foresees concrete business opportunities related to BES. Fourteen of the eighteen companies indicate that they consider the conservation, restoration and development of ecosystem services to provide added value to their businesses.

FOTO: KATE TER HAAR, FLICKR

Lessons learnt

- Companies welcome pragmatic tools, such as relevant indicators and practical valuation techniques, for measuring and estimating their BES-impacts and dependencies.
- Companies especially demand step-by-step tools, enabling them to identify BES-risks and opportunities. The results of these methods form the starting point for further elaboration of the risks and opportunities.

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The Low Energy Asphalt developed some twenty years ago by international contractor Royal BAM Group, decreases environmental costs by 257,000 euro per kilometre of highway compared to conventional asphalt. BAM requested True Price to calculate the 'true pricing' of different varieties of asphalt.

New asphalt reduces environmental costs

Production of asphalt is energy intensive. In 1998, BAM therefore started the development of Low Energy Asphalt Beton (LEAB). It lasts as long as the conventional Stone Mastic Asphalt Beton (STAB) and is equally resistant to road damage. Its impact on the natural environment is, however, much lower. LEAB is produced at lower temperatures than STAB (100 as opposed to 160 degrees centigrade), resulting in 20-40 percent energy savings and a 30 percent reduction in CO_2 emissions. LEAB consists of 60 percent recycled asphalt and is fully recyclable. Up to and including 2014, 250,000 tonnes of LEAB had been used in more than 150 infrastructure projects, with nearly half (118,000 tonnes) having been used in 2014.

> **'The True Price method supports better decision-making. The results help BAM to direct future innovations and to prove that sustainable innovations, such as LEAB, can create value for society without additional financial costs.'**

Potential

As part of the Green Deal, BAM commissioned True Price to compare LEAB and STAB in order to investigate the potential of this new type of asphalt and to quantify its value for society. This study indicated that LEAB decreases environmental costs by 257,000 euro per kilometre of highway compared to STAB. This is the same as the external environmental cost of the annual energy use of 120 Dutch households. To calculate this 'true price', the main aspects concerning environmental impact of asphalt production were measured and converted into costs for society as a whole: land use, energy use, use of materials, water use, climate change, air pollution, and the pollution of water and soil.

Better environmental performance

The results of the comparison between LEAB and STAB show that the environmental costs of LEAB asphalt are 30 percent lower. This percentage coincides with an equal reduction of 30 per cent in energy use and CO_2 emissions, but these are caused by other factors. Céline Bent, project manager CSR at BAM says: 'This

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makes LEAB an undisputable proposition for government and other buyers, since it is of the same quality as conventional asphalt, but has an equal or even lower market price and shows a better environmental performance.'

The study provided BAM with valuable insight into the various kinds of environmental impact of the asphalt production chain, and it enabled comparisons to be made between the different kinds of impact.

Circular mobility

Royal BAM Group's road construction activities specialise in the end-of-life treatment of asphalt. BAM strives to achieve circular mobility by focusing its innovations on achieving lower CO_2 emissions and a more efficient use of energy and materials. One of the key goals of BAM is to reduce its CO_2 emissions by 15 per cent in 2015, compared to 2009. Whether BAM has actually reached this goal is not yet clear as not all 2015 data have become available. CDP has, however, named BAM a world leader in battling climate change. CDP is an international non-profit organisation that has developed its own system for cities and companies to measure, make transparent and control relevant environmental information.

Lesson learnt

- The study into the 'true price' of different kinds of asphalts has provided BAM with valuable insight into the various kinds of environmental impact of the asphalt production chain, and it enabled comparison of the different kinds of impact.

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As part of the Green Deal project and in cooperation with True Price, DSM explored the possibility of monetising the environmental and social impact of its food product OatWell®. The study aimed to gather knowledge on the methodology, and gain understanding of the possible applications of the resulting information. DSM's Leaders for Nature team also conducted a complementary study into social capital, matching it to the DSM's People+ programme indicators.

DSM measures the impact of a food product

OatWell is a food product containing oat beta glucan. These fibres are known to lower cholesterol levels and thus reduce the risk of heart and bowel disease. OatWell also has a positive environmental impact in general: people adding a daily dose of the fibres to their food eat less, due because the product is filling.

'The OatWell study provided valuable insight in what is necessary to measure impact. The current results have given DSM a tentative impression of the extent of OatWell's impact.'

The results are of huge benefit for society: improved health and reduced costs for health care, and reduced levels of absence from work due to sickness. Other social indicators also score positively, such as the working conditions of the employees producing OatWell. The oat-growing regions that supply DSM with the basic raw material (oats), benefit from improvements in employment and prosperity. Because of the explorative nature of the study, DSM has published the results in the 2015 annual report, but not yet the monetary values.

The main challenge

The main challenge of the study was how to deal with the social capital, because this is a rapidly developing area. Currently, insufficient data are available to provide a solid basis for the calculation of social costs and benefits. DSM has carried out its own investigations to solve this problem, and has developed a database.

The basis for their monitoring study, identifying OatWell's environmental and social impact, was formed by DSM's ECO+ and People+ programmes. The ECO+ framework is a method of analysis of the product life cycle which measures the environmental benefits for every single product. ECO+ products contribute positively to social issues such as climate change, resource reduction, state of health and the quality of ecosystems. DSM's aim is to produce eco-effective products that have a distinctly positive environmental impact rather than a less negative impact.

The People+ method calculates the product's impact on people during the product's entire life cycle. This impact is measured in four dimensions: state of health, comfort and prosperity, working conditions and the development of the region.

Lessons learnt

- It is necessary to be transparent about data and to share these in-house and with all suppliers. Calculations have to be as simple as possible, and it is desirable that the method is sufficiently transparent to be replicable. DSM's multi-disciplinary knowledge and expertise is extremely valuable.
- The enormous variety of methodologies used, made it a huge challenge to harmonise all kinds of quantitative data.
- DSM's multidisciplinary knowledge and expertise is extremely valuable.

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Being a knowledge provider, EY did not present a concrete business case in the Green Deal project. They were, however, together with Deloitte, PwC and True Price, directly involved in the development of the report The Business Case for True Pricing. This report demonstrates the profitability of integrating natural and social capital into company management, and is based on the cases of ProRail, DSM, BAM, Hivos and Tony's Chocolony.

EY develops plan for social value creation

Senior manager Cleantech & Sustainability services at EY, Roel Drost, is pleased with the process. 'The initiative has contributed very satisfactorily to the development of a shared vision and a shared terminology in the field of natural and social capital. Themes such as risk management and innovation have received maximum attention, while the emphasis was on the complete value chain.'

Four pioneers

Recently, EY, together with De Groene Zaak (The Sustainable Business Association) and other knowledge partners, has been closely involved in the White Paper Social Value Analysis. The report describes the explorations of four pioneers (NS, Primum, USG People and Vebego) in their attempts to make their social value measurable and transparent. Within this process, EY was responsible for, among other things, the development of a protocol.

'The reports provide companies with insight into the Why, What and How of natural and social capital.'

The Why, What and How

Drost: 'The two reports are separate documents, but are clearly linked. Both help to provide insight into the Why, What and How of natural and social capital. The business case document reports on Why businesses should take the step to integrated reporting. The report is a first step, with many steps to follow. The report of the Groene Zaak explores and explains the How. It is not simple, but we've made a good start.'

EY's own steps

EY itself has also recently taken steps. 'We have started to quantify our own internal value creation as well', explains Drost. 'Our transparency reports show a high score on the Transparency Benchmark.' The Green Deal's cooperation with other parties turned out to be very beneficial. 'We supplied a certain amount of knowledge, but at the same time acquired a considerable amount of knowledge. That is the essential importance of such a project. We will use this accumulated knowledge to facilitate our customers, thereby spreading the results of this initiative beyond the original participants.'

FOTO: IVAN CHUYEV, DREAMSTIME STOCK PHOTOS

Lessons learnt

- EY has observed that in many of its cases, the crucial ingredients are the scope, a qualitative description of the value creation process, and a clearly formulated purpose.
- If those conditions are well-defined, the rest will follow automatically.

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Many options are available for reducing the environmental impact of public transport. Are hydrogen, diesel, biogas or electricity preferable as fuels? Volvo and KPMG took up this challenge by monetising the values of operating city buses, including their environmental and social impacts. Volvo hoped to prove that the electric public bus is less expensive than conventional alternatives using fossil fuels.

Electric buses not only greener but also less expensive

Municipal and transport authorities base their investment decisions regarding the public transport system on the purchasing price. Manufacturers of electric buses find it difficult to convincingly present the positive aspects of their relatively more expensive but much cleaner, less noisy and more efficient buses. Volvo and KPMG have managed to monetise the environmental and social impact of city buses in Sweden. To achieve this, they used KPMG's True Value quantification methodology, which calculates the lifetime value of the product as the True Total Cost of Ownership (True TCO).

Conventional TCO mainly takes cost of purchase into account, as well as some additional costs of leasing, fuel, employment of drivers, and garage and servicing facilities. The True TCO approach also considers environmental costs (reduction of CO_2 emissions, air and noise pollution) and socio-economic costs (safety, travel time and the role of grants and tax incentives).

Relevant data

True TCO proves the electric bus to be far superior compared to transport using diesel or biogas. Reduced costs to society as a result of lower consumption of fossil fuels, turns out to be the decisive factor. The 14 million fewer travel hours (by enabling speedier boarding

'If all the buses in Sweden used green fuel, it would save the country approximately 199 million euro in social costs, including public health.'

and disembarking of passengers) result in a national reduction in CO_2 emissions of 84,000 tonnes annually, equalling the annual emissions of 15,000 Swedish citizens.

It is crucial for a reliable comparison between buses using electric or fossil fuel, for all relevant indicators to be clearly defined. The next step is finding relevant data to quantify the indicators. KPMG owns a database based on scientific research and on social profit and loss analyses, containing objective data on various impact factors, such as emissions, noise pollution and public health. To determine the cost of CO_2 or NO_2 emissions, the researchers used the analyses of social profit and loss in the transport sector gathered on behalf of a Swedish government transport institute which also provided data on the cost per decibel. These data indicate that a noise level of, for example 75 dBA, costs in total 3,200 euro per person in health care in cases of cardiac problems or stress.

All the calculations for these comparisons were based on independent data, and Volvo also provided internal data. These data were linked to financial indicators and to the decibel level.

Realistic comparison

KPMG affirms that this analysis helps to increase awareness of the social and environmental impacts of city transport. It also constructively assists municipal and transport authorities in their decision-making processes as regards the future development of their transport systems. After all, the city is also responsible for the additional costs of public health in case of air pollution and for all kinds of safety measures regarding storage of flammable fuels. All of these relevant costs are taken into account, leading to a more realistic comparison between the systems.

Lessons learnt

- For a reliable and honest comparison of the social and environmental impacts of two products, it is essential that all relevant indicators characterising the differences between each product, are clearly defined.
- The next step is finding reliable data to quantify the indicators. In this case, the database contained data from scientific research and from social profit and loss analyses.

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In 2014, insurance company Achmea presented its first completely integrated annual report. Its next challenge is to visualise the value creation of different products to stakeholders. How to quantify the added value of health insurance against the insurance of a laptop?

How to measure the social value of insurance?

With regard to transparency, it is Achmea's firm ambition to stand at the summit of Dutch companies, especially the insurance companies. Another important aim of their reports is supplying appropriate information to stakeholders. In order to do that, they follow the newest Global Reporting Initiative (GRI) guidelines and the Transparency Benchmark as issued by the Ministry of Economic Affairs.

More and more, investors request reports on non-financial performance. The annual report is therefore based on the International Integrated Reporting Council (IIRC) framework. 'It was rewarding to exchange experiences on these issues with other companies within the Green Deal', said Loek Dalmeijer, Achmea CSR-advisor. 'It has been possible to firmly anchor this theme within Achmea.'

Stakeholder dialogue and social trends

Achmea is the largest insurance company in the Netherlands and is proud of its cooperative origins and identity. The company distinguishes four types of stakeholder for which it is important to create value: customers, employees, (business) partners and shareholders. By organising regular dialogue with each of these stakeholders, combined with identification of social trends, they are able to define important themes. The materiality matrix in the 2014 Report describes seventeen trending

'These developments raise CSR right above the level of philanthropy and naive idealism. The management is quite convinced of that.'

themes. In order for the organisation to retain its relevance, and to be able to accomplish the chosen strategy, these specific trends need to be clearly reflected in its activities and policy. For a new update of the materiality matrix, as carried out by EY, extensive stakeholder consultations were held. ‘Until recently, the index was primarily based on desk research’, according to Dalmeijer. ‘For the recent version, more research was carried out, and a large number of stakeholders were consulted. That has allowed us to take a major step forward.’ Achmea has also analysed the materiality matrices of other companies, such as the Dutch National Railway Company (NS). ‘Although they have inspired us immensely, we will do it our way.’

Value creation

The cooperative concept sets Achmea apart in the world of insurance companies. Achmea’s Council of Members is its largest shareholder, which means that the customer has direct influence on the company. Achmea’s Stakeholder Value Management model shows how the company aims to create value, not only for its customers but also for the other three types of stakeholder mentioned above.
Critical performance indicators have been developed to control the strategic risks, and to anticipate impending changes in a timely manner. By periodically measuring these indicators, and by making adjustments where necessary, Achmea aims to realise its strategic goals, thereby responding to social developments.

Integrated thinking

‘It is difficult to relate the critical performance indicators to the actual quantification of the value creation for the four stakeholders and society at large’ according to Dalmeijer. The problem is not so much the value for the shareholders. That is relatively easy to indicate in the return on investment. ‘But we want to give concrete indications of value creation to our stakeholders.’ How can you, for example, measure the value of a certain type of insurance? ‘We know that insurance acts as a social safety net, ensuring that people do not return to poverty. We also know that health insurance constitutes more value than a laptop insurance. We cannot yet quantify this, however, and measuring impact still remains a challenge.’

Lessons learnt

- Achmea has determined one or more Key Performance Indicators (KPIs) for each of the six perspectives in its strategy. Achmea aims to achieve its strategic goals by periodically monitoring these KPIs, and adjusting its course whenever the values measured show it to be necessary, and in that way go along with social developments.
- Currently, however, neither KPIs nor goals are completely compatible with the course adjustments that are necessary to measure value creation for the stakeholders and for society.

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In 2013, the Dutch electronics giant ASML started the process of redefining its corporate social responsibility strategy. In this process, the focus was on identifying material themes, on impact areas (society, the environment and the economy) and ultimately, their integration into the 'business as usual 'strategy. Taking part in the Green Deal helped them to get to grips with this process.

ASML redefines CSR-strategy with stakeholder analysis

ASML initiated a corporate responsibility materiality assessment. For this purpose, the company conducted interviews with forty senior managers – including members of the Board of Management – and staff from all their business divisions all over the globe (the Netherlands, the U.S., South Korea and Taiwan). They were asked which non-financial issues they considered most relevant for their stakeholders, or for a specific group of stakeholders. The next question was which non-financial issues they considered most relevant for the long-term business success of ASML. On the basis of their answers, they were invited to elaborate on where (within and/or outside of the organization) these subjects were relevant.

The foundations for these interviews were the non-material issues as stipulated by the Global Reporting Initiative (GRI) Guidelines, used annually by ASML. The questions were complemented by other sustainability guidelines such as the social responsibility guidance ISO 26000, global and industrial issues, organisation-specific issues, and issues raised by stakeholders in previous dialogues. The interviewees were also invited to introduce additional issues themselves.

Benchmarking

In order to validate and confirm the findings of this process, ASML weighed them against

> 'With respect to the PwC Roadmap to Integrated Reporting, we have been active in all its five stages, but some themes are much further developed than others. The next step for ASML would be to clarify the link with the correlations between key and core performance indicators.'

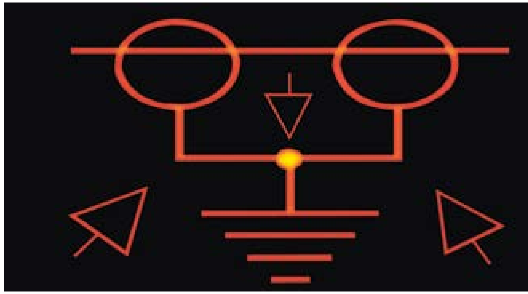
FOTO: PIXELCARPENTER, DREAMSTIME

requests they had received earlier from the different stakeholders, as well as benchmarking the results against industrial and global trends. 'We also performed a sector analysis and a media analysis to ascertain whether the findings of our materiality analysis deviated from what other organisations in our sector were reporting, or what the media were publishing about us', stated corporate responsibility manager Daniela Voinea. 'From these analyses we learned that no other material or Corporate Social Responsibility (CSR) issues needed to be added.'

ASML has identified seven non-financial material themes related to technology leadership, people, and customer and supplier contacts, all of which directly contribute to the potential for innovation and excellence. Voinea: 'It is clear that we can and must differentiate regarding these themes. We also realise that there are a number of issues on which our stakeholders have certain expectations. We have labelled these as 'responsible business behaviour themes'.'

Connectivity matrix

In 2015, ASML took further steps by developing a connectivity matrix focusing on the links between identified risks and opportunities, and by incorporating this into their strategy. The results will be published in the CSR Report in February 2016. ASML also developed the CSR (Key) Performance Indicators. These indicators focus on definition, boundaries and benchmarking tools.

Lessons learnt

- One of the main challenges is to measure the specific impact on and contribution of ASML to the value chain (e.g. impact areas: available technology and resource-efficient chips) – and to decide which indicators are most relevant to support management decisions.
- This process – stakeholder analysis, defining material themes, impact areas, etc. - is not a sequential process during which one step is finalised before the next is taken; it is an iterative and repetitive process that depends on the maturity and priority of a specific theme within the organisation.

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Joining forces with MVO Nederland (CSR The Netherlands), Deloitte presented a report on the progress of integrated reporting within AEX-listed companies. Its purpose was to show how companies report, and to describe 'the drivers of and the barriers to' integrated reporting. The report also mentions 'the lessons learnt' by the front runners.

Applying the Integrated Reporting yardstick on companies

Deloitte.

Director of Sustainability Services at Deloitte, Anneke Sipkens, has no doubts: integrated reporting is the new way of reporting in which companies present how they deal with financial and non-financial capital in a holistic way. 'This kind of reporting will be an enormous contribution to greater transparency and will stimulate managements to explicitly use impact as a way to manage their companies.'

The report *Integrated Reporting as a driver for Integrated Thinking – Maturity of <IR> in the Netherlands 2015*, presents the research on 30 companies, most of them AEX-listed. Deloitte Netherlands ranks companies according to the Guiding Principles and Content Elements of the <IR> framework each year, using publicly accessible documents such as annual reports, CSR reports, combined reports and Integrated Reports (whenever available) as the basis for their research. The model consists of four stages of maturity.

Top of the list

The cooperation with MVO Nederland involved supplementary interviews and desk research. This resulted in additional information on companies' opinions on output and on impact, on monetising and especially on integrated reporting.

The report concluded that more and more companies use (part of) the <IR> framework.

'We hope that our account will stimulate other companies to report according to the guidelines, and that our tips & tricks, as well as the positive experiences of the innovators will act as inspiration.'

Five of the companies investigated top the list: KPN (telecommunications), Heineken (brewing), NS (railways), BAM (construction) and Aegon (insurance).

Companies lower on the list seem to have find the following aspects of Integrated Reporting most challenging:

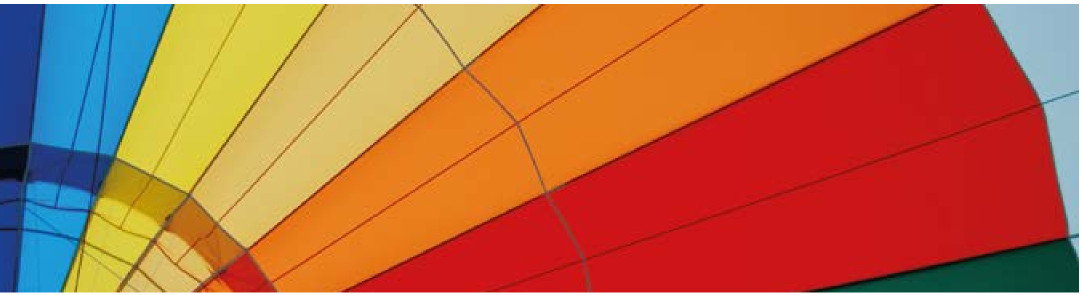
- *Business model* (how to create value; which input, output and capital to use?)
- *Strategy and resource allocation* (what is the company's goal, how far have strategic goals been realised, and, how are resources being used to realise the strategy?)
- *Performance* (overview of financial and non-financial results, how do they compare to earlier targets and goals?)
- *Outlook* (future challenges and uncertainties, and their implications for future possibilities for value creation, and thus for the company's business model).

Positive relationship

'Companies seriously defining their goals and strategy, that implement innovative technology, that innovate their culture, processes and systems in order to develop integrated performance management systems, are well prepared for the future,' states Sipkens. She is firmly convinced of this, even though a direct link has not yet been proven. 'It is clear that there is a positive relationship between integrated reporting and a company's profits. It won't be long before this relationship is recognised.'

Lessons learnt

- The number of published integrated reports is increasing.
- A positive score on the principles of integrated reporting is possible without the company actually producing an integrated report.
- Overall, companies are making good progress with the implementation of the principles of integrated reporting.
- Most progress is being made on the level of the Guiding Principles of <IR>, whereas the higher level of Content Elements, related to Integrated Thinking, remains a challenge.
- Companies find it difficult to collect non-financial data in a timely manner.



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Two years ago, the Dutch Development Bank FMO set an ambitious strategy 'to become the leading impact investor by Doubling Impact and Halving Footprint by 2020'. With this strategy, they aim to significantly increase the development impact of new loans and investments, and at the same time reduce the negative environmental impact. All this is planned without damaging the financial position of the bank. FMO especially appreciated the shared learning process during the Green Deal.

Managing impact by means of integrated reporting

FMO
Entrepreneurial
Development
Bank

'We started the process because we wanted to learn how to develop integrated management reporting, and to share this with other parties. We are particularly interested in the inter-actions between the various strategic goals', explains Justine Chang Pan Huo, manager of integrated reporting at FMO. 'This supports our own learning curve in how we, in turn, can support our own senior management in the best possible way.'

In order to fit new investments into the latest strategy of maximising impact and minimising footprint, FMO has developed a set of measuring tools. The bank has also formulated appropriate operational targets. FMO defines economic growth and green development as its goals for impact. The former goal can be measured by the number of jobs a specific investment supports. Avoidance of greenhouse gas emissions is the benchmark for its goal regarding green development.

Opportunities and challenges

By measuring the outcomes and using these outcomes to develop a policy, FMO is able to direct its investment portfolio where the impact is greatest. As Chang Pan Huo explains: 'We start by considering the wants of our stakeholders. As a next step, we try to translate

'FMO is the first bank using three quantifiable criteria to assess its performance. Obviously, the return on investment is a fundamental prerequisite, but environmental and social impact will in future carry the same weight in the annual reports as financial information does now.'
Chairman of the Board Nanno Kleiterp

their wants into outcomes. Lastly, these outcomes are translated into strategic objectives, KPIs and targets, and are matched with FMO's business model (inputs, activities / products).

The challenge for FMO was to transform their 'opportunity based strategy' into a 'stakeholder-risk based management dashboard'. The approach to connect various integrated reporting elements, offers first-rate opportunities for future expansion of and adjustments to the dashboard. 'After all, we learn from the interaction and the results of our strategic objectives.'

Results

Although it is not always simple to integrate the risk-based stakeholder perspectives into the management dashboard, according to Chang Pan Huo it definitely does add value. 'Connecting the various integrated reporting elements clearly shows both the links and the gaps, and ultimately supports integrated decision-making.'

- Developing the dashboard ran parallel to the development of a materiality assessment. Although the separate elements of integrated reporting alone (links between strategic objectives, KPIs and targets) already support a more integrated decision-making process, it is also useful to first clearly understand the material wants of the stakeholders in order to develop strategic KPIs and targets.
- The dashboard can be enhanced by widening its scope: not just by adding risks but also opportunities. This will facilitate a better fit with the business strategy, and enhance management buy-in.

FOTO: JAMES WASSERMAN

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Joyful recognition', that was the Green Deal process according to Paul Hurks. The step-by-step method of the working group on Integrated Reporting matches the current approach of the Dutch accountants' association NBA. During the last few years, their policy was primarily inward-looking but currently social expectations form its main driving force. The dialogue with stakeholders has become the foundation of NBA's policy and strategy.

Social expectation as a driving force

Koninklijke Nederlandse
Beroepsorganisatie
van Accountants

NBA

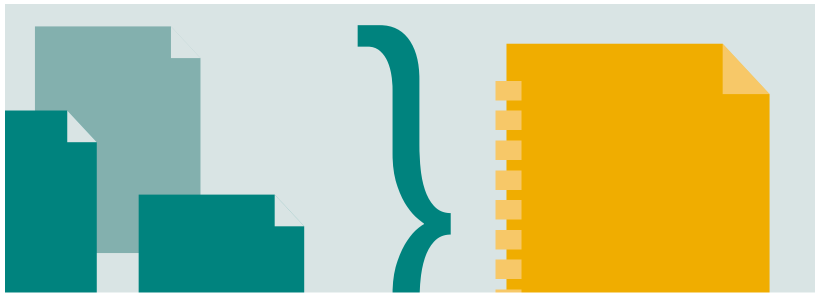
Paul Hurks is manager for international affairs at Royal NBA, the Dutch accountants' association (22.000 licensed members). The major tasks of NBA are to guarantee competent and professional practice, and to protect the interests of its members regarding their profession.

Their professionalism is a civic duty. After all, the main task of an accountant is adding credibility to accountability information – usually financial, but increasingly non-financial – by controlling the accounts and reporting on them. Many non-controlling accountants have a general financial function. What unites all NBA members is the code of conduct to which all accountants have to adhere. The fundamental principles of this code of conduct are integrity, objectivity, expertise and accuracy (quality), confidentiality and professionalism. Independence is an additional stipulation for controlling activities.

In the limelight

In recent years, accountancy has been very much in the public eye. In these discussions, morality and quality demand supreme consideration. Because of their legal duties, NBA maintains continuous dialogues with its stakeholders: members, offices, staff, supervi-

'Determine your stakeholder value proposition and refresh your strategy.'



sory bodies, customers, government, interest groups, etc. This dialogue and the public debate form the basis for the 'Refreshed Strategy'. Its specific approach has been described in the 2014 report *In publiek belang (Of Public Interest)*. The measures described are primarily aimed at enhancing the relevance and credibility of the profession.

Ambition

NBA and its professional members in their offices, are currently integrating these measures into their internal processes. It is NBA's ambition to translate the strategy into the types of capital used in the International <IR> Framework, and ultimately, to present an Integrated Report. The principle behind this is the opinion of the International Integrated Reporting Council (IIRC) that communication on value creation is the next step in the evolution of reporting. NBA's Refreshed Strategy process coincided with the Green Deal programme.

Lesson learnt

- Morality and quality demand supreme consideration in the discussions. NBA's dialogue with its stakeholders and the public debate form the basis for the Refreshed Strategy. The measures are primarily aimed at enhancing the relevance and credibility of the profession.

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It is no coincidence that at present, integrated reporting is growing. More and more, extensive groups of stakeholders expect clear accountability from companies and organisations. 'PwC's current challenges run parallel to these challenges for society in general', explains Anouk Wentink.

Show, don't tell

Integrated reporting responds to the stakeholders' needs. Because this kind of reporting does not have a long-standing tradition, it is important to learn from one another, says Wentink, together with Robert van der Laan PwC's integrated reporting specialists.

Achieving connectivity

How has PwC incorporated integrated reporting into its own organisation? 'Of course, at the outset there was the risk of it being a plaything for a small group of enthusiasts working in isolation', explains Anouk Wentink. In the meantime, however, the whole organisation has embraced integrated reporting.

This happened because integrated reporting brings together a large number of pressing issues. 'Who are our stakeholders? What are their expectations? Can we fulfil those expectations? What is our value creation? And if those questions have been answered: do we use the most relevant indicators to determine our course? Integrated reporting has not only stimulated the discussion tremendously, it has also resulted in a logical, clear and concrete framework.'

> **'This is probably the most important lesson learnt. Integrated reporting concerns managing the organisation in an integrated way and being able to report just that to the stakeholders. Our motto is: Show, don't tell.'**

Lessons learnt

Write your own story
PwC used the International Integrated Reporting Council (IIRC) framework, but at the same time, selected its own essential ingredients. Its choice reveals itself, for example, in the process of value creation. This should be clearly and recognisably presented to the whole organisation, even if this results in some simplification and standardisation.

Engage the management in the dialogue with stakeholders
PwC, supported by changing to the Global Reporting Initiative (GRI) reporting framework, restructured the stakeholder dialogue which in its turn formed the basis for a materiality matrix. As Wentink explains: 'The explicit expectations of the stakeholders, and the notion of materiality for the non-financial reporting, have been of enormous help. The materiality index is the starting point for everything we do.' PwC also learnt to actively involve the Board of Directors. These are the people who are able to effectively spread the results of the dialogue within the organisation.

Focus on connectivity
In its 2013/2014 report, PwC took a further step by drawing up a connectivity table. Such a table, presented on one A4 page, shows how the company has translated the stakeholder dialogue into its management. 'Our ambition is to show that we move forward in an integrated way, using the relevant key factors for success, with their corresponding Critical Performance Indicators. The connectivity table is the glue that holds together all the separate elements of the framework for integrated reporting.'

The next step forward

To connect the Critical Performance Indicators to the key success factors is the next step PwC hopes to take. It should create a tool enabling the company to actually progress in an integrated manner towards the realisation of its strategic goals.

The Critical Performance Indicators are not novel, but until now they have reached the desks of management as fragments in the numerous different reports. The purpose of the next step is to provide a clear and simple overview – an integrated dashboard – showing, with the simplicity of a traffic light, the progress towards the realisation of the strategic goals.

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Value creation is Schiphol Group's focal point in its 2014 annual report. The value created is expressed using the types of capital identified by the International Integrated Reporting Council (IIRC). The output consists of issues relevant both to the group's airports and to other participants in the chain.

Value creation the focal point in Schiphol's annual report

In 2015, Schiphol Group won the Ministry of Economic Affairs' award for the most innovative annual report. The jury praised Schiphol Group's integrated report for starting with the model of value creation, 'even before mentioning the most important results, and it is the common theme throughout the whole report. That means it is not only a lucid and readable report, but it also provides readers with a benchmark which enables them to correlate all other information.' With this annual report, Schiphol Group won the prestigious Henri Sijthoff prize, awarded by the newspaper Financieele Dagblad in the category 'non-AEX-listed enterprises'. According to the jury, Schiphol Group won because of 'their transparent and concrete way of reporting. The airport is not afraid of calling a spade a spade when describing their dilemmas and choices.'

CFO of Schiphol Group, Els de Groot's reaction was: 'We consider the award to be an acknowledgment of our efforts to communicate about the airport in an open and transparent manner. We will certainly continue reporting in this way.'

Schiphol Group did not need the Green Deal project to be able to present an integrated report. 'We have been working on this for approximately four years', explains Marianne de Bie, who is senior advisor, corporate affairs,

> 'Our licence to operate and to grow, completely depends on public support for our activities. Schiphol belongs to all of us and everyone has an opinion on Schiphol. That is why we have had regular contact and discussions with our stakeholders, for several decades now.'

at Schiphol Group. 'It is a continuous process.' She did, however, find the cooperation within the Green Deal 'useful and motivating. We were able to look over the shoulders of others, which underlined our own process.'

Value creation embraced

Schiphol Group's management and directors have completely embraced the idea of value creation. As De Bie explains: 'Of course, that does not mean that all colleagues think about the value chain on a daily basis. We are a very diverse company; with colleagues operating in fields from baggage handling to the fire service, and to colleagues developing commercial concepts. Value creation, however, clearly shows our real impact, both the positive and the negative.'

Schiphol is right at the centre of society. 'That is in our DNA. Our licence to operate and to grow completely depends on public support for our activities. Schiphol belongs to all of us and everyone has an opinion on Schiphol. That is why we have had regular contact and discussions with our stakeholders, for several decades now.' In 2013, Schiphol Group began to find out whether the issues raised in its annual report were of material benefit to its stakeholders. In 2014, that resulted in a materiality matrix which graphically showed the issues important to the stakeholders and to Schiphol Group. The management has validated the matrix, which will be reviewed in 2016.

Monetising

The 2014 report is not the final element of a process. As De Bie explains: '*Noblesse oblige*. Every year we will improve on presenting the complete story and on assessing the impact of our company on all kinds of capital.' In 2016, two projects will be executed: on monetising the non-financial values of Schiphol's carbon dioxide emissions and of going on holiday.

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Since 2012, Vodafone Netherlands has been working with an integrated business strategy. The focus of the strategy is on the company's relationship with its stakeholders, and on building a future-proof technology that also takes its environmental impact into account. Presenting the outcomes in an integrated report was a logical result of this new approach. Thus began a search for the best presentation to the stakeholders, as well as finding a way to implement integrated thinking and working within the company.

Vodafone Netherlands adopts integrated thinking and working

Two principles underlie the development of the reports. The first concerns the format: the five strategic ambitions, as chosen by Vodafone, form the foundation of every report. It seems logical to use these strategic ambitions as a framework for the communication to the stakeholders, explaining the company's goals, and describing why and how they will try to arrive at those goals. The second principle is that the report should be accessible and should appeal to the stakeholders. 'What is transparency worth if the message doesn't reach the stakeholder?', asks Floor Klein, CSR manager at Vodafone Netherlands. 'Most reports are long and boring. Our principle of accessibility and appeal is reflected in every aspect: design, format, content, style, navigation and communication. Our principle remains a challenge, because our report should also adhere to Global Reporting Initiative (GRI) guidelines, the <IR> Framework and the Transparency Benchmark Indicators.'

The process

The report describes how Vodafone creates value for its stakeholders. The process of value creation has been mapped by means of a connectivity matrix. As Klein explains: 'Its purpose was to learn whether our strategic activities

'What is transparency worth if the message doesn't reach the intended stakeholders?'

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comply with relevant external developments. By using this analysis, it became clear to us that the link between material themes and our strategy was vague. It also clarified how we can improve on explaining our way of reducing risks or exploiting opportunities.'

These insights are very important for the business units. 'We want to use these insights to stimulate outside-in and inside-out thinking', Klein explains, 'and in this way further develop integrated thinking and working. The strategic implementation of stakeholder management is an important part of achieving this.'

One of Vodafone Netherland's five strategic ambitions is to increase the trust in the company by addressing the stakeholders' worries and desires. A next step is to carefully analyse the strategy to find out whether they are using the relevant activities to realise the goals they have set themselves, and to answer the question of whether every activity truly contributes to these goals. 'Systematically scrutinising our company forces us to identify our core value, and to adjust our processes according to external changes.'

Lesson learnt

- A connectivity matrix is a useful tool, but it has its limitations. When you have a great mass of data, it becomes difficult to clearly see and present the various connections between them. Vodafone Netherlands therefore, takes part in a pilot from Software for Sustainable Business (IT6 Integrated), a software tool which can make these connections visible.

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The recently published Atlas of Natural Capital allows companies, governments, organisations and citizens to assess the impact of spatial planning, environmental activities and building activities on natural capital before starting a project. The Atlas data can thus assist in the decision-making process. The data also enables stakeholders to use natural capital in nature-based solutions in an innovative and resourceful way.

Better data leads to better decisions

Rijksinstituut voor Volksgezondheid en Milieu
Ministerie van Volksgezondheid, Welzijn en Sport

Ministerie van Infrastructuur en Milieu

The Atlas, published in September 2015, fills the need of governments, societal organisations, businesses and citizens, to pool and concentrate the many snippets of available information on natural capital and ecosystem goods and services. The Atlas is an open access resource (and consists of detailed and downloadable maps, with data on natural capital and ecosystem goods and services, such as soil fertility, water storage capacity, carbon dioxide storage, pollination, erosion reduction, geothermal energy, and more. It also offers the opportunity to raise questions, make remarks and hold discussions with other users.

'The Atlas shows companies the impact of their business activities on natural capital. It indicates how and where to reduce these impacts. It also indicates, on the other hand, where there are opportunities for intelligent use of natural capital, often in terms such as nature-based solutions and green infrastructure.'

The Atlas is part of the Dutch Ministry of Infrastructure and the Environment's programme 'From Waste to Resource', and represents the Dutch implementation of the European Biodiversity Strategy. The Atlas should be completed in 2020, but according to its compilers, cannot ever be complete because the use of natural capital will never stop. New data and insights will therefore constantly be added to the website, and the input of the users will play an important role.

High expectations

It is too soon for concrete results, but expectations are high. The Atlas shows companies the impact of their business activities on natural capital. It can also show them how and where to reduce these impacts. It also indicates, on the other hand, where there are opportunities for intelligent use of natural capital, often in terms such as nature-based solutions and green infrastructure.

Florian Boer is co-founder of the Rotterdam design studio De Urbanisten. His studio was asked by the government to analyse and design the possibilities for improving the green-blue infrastructure of the Dutch town of Zwolle, in the light of climate change. A difficult request, especially as Zwolle has already done a great deal with regard to green and blue infrastructure, and what does improving the green-blue infrastructure mean? As Boer says: 'The Atlas was an immense help. The maps supported us in finding out which issues we should concern ourselves with. A designer's focus is visual: a map speaks to us much more clearly than a graph. Most useful, however, were the definitions of ecosystem goods and services: clearly defined both in words and in diagrams. This enabled us to immediately focus on searching for the relevant additional and detailed information.' The Atlas contains hundreds of maps. According to Boer: 'Not all of these are relevant and some miss relevant information at the most detailed (pixel) level.'

Businesses can use the Atlas to reduce the negative impact on ecosystems in the Netherlands, to increase their positive impact, and to make better use of the ecosystem goods and services. The Atlas enables societal organisations to better focus their actions, and finally, it offers local governments a well-argued basis for their decisions.

Information need

Many potential users seem to find it difficult to exactly specify their needs for information. Therefore, at the launch of the Atlas, groups of users offered suggestions for specific cases, to be researched in 2016.

FOTO: PAUL IJSENDOORN, FLICKR

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The woods, natural grasslands and hedgerows of the Dutch province of Limburg are a vital contribution, among other things, to ecotourism, carbon storage and the filtering of fine particulates. These landscapes contribute to a healthier environment more than any other form of land use in Limburg. Their contribution is also economically relevant: approximately 20 per cent of the total profits of hotels and campgrounds near nature reserves in Limburg stem from nature.

Nature too comes at a price

This is the conclusion of the project Natural Capital Accounts in which the value of various ecosystem services has been monetised. This is useful information for policymakers and companies that are dependent on natural capital, according to the Statistics (CBS) and Wageningen UR (WUR).

> ‘Mentioning the fire salamander or indigenous orchids does not make an impression if large economic interests are at stake. People do listen, however, to reports on the financial value of the loss of ecosystem services.’

Nature is a major contributor to the economy: for recreation, crop production and filtering air and water. Until now, these values have not been monetised. Nature is considered to be ‘free of charge’. This, however, makes it impossible to accurately weigh different interests, for example in a case of choosing between the development of an industrial area and the conservation of heathland. In a pilot study, CBS and WUR monetised various ecosystem services as offered by nature in Limburg. The results make it possible to compare those values with the National Accounts and the Gross Domestic Product (GDP). The method follows UN guidelines.

Ecotourism

CBS and WUR have gathered physical and financial data for various ecosystem services – nature services that contribute to the economy. They have also developed a detailed typological ecosystem map as well as an economic land use map. In this way it will be pos-

sible to determine the effects of specific policy decisions on nature, and to determine which economic users benefit, or lose out. The Natural Capital Accounts will only be really useful if they are regularly updated. Then developments and trends will become evident. According to Rixt de Jong from CBS, policymakers specifically request relevant, usable data. ‘Mentioning the fire salamander or indigenous orchids does not make an impression if large economic interests are at stake. People do listen, however, to reports on the financial value of the loss of ecosystem services as a result of certain decisions. Especially if that information is also available to other users of the ecosystem services, such as citizens, farmers or water companies.’

The development of essential definitions and accounts took an inordinate amount of time. This was due to the lack of clear guidelines from the United Nations Statistics Division, a fact which made the project much more complex than was foreseen. Because these definitions have been newly developed, they do not always correlate to the data already available in the Atlas of Natural Capital. At the moment, consultations are taking place with the National Institute for Public Health and the Environment on how this discrepancy can be adjusted.

The perfect opportunity

The project offers CBS the perfect opportunity to play a role in the international search for ecosystem accounting and new standards for public welfare in a wider sense. Instruments are being developed to measure public welfare other than simply in percentages of economic growth or decline. CBS and WUR will consult national and international experts on the methodology and uncertainties when monetising ecosystem services.

Lessons learnt

- The broad composition of the project group Natural Capital Accounts and the large pool of people providing feedback, resulted in diverse and extensive knowledge.
- The development of essential definitions and accounts took an inordinate amount of time, due to the lack of clear guidelines. A fact which made the project much more complex than was foreseen.

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Natural Capital Protocol
www.naturalcapitalcoalition.org/natural-capital-protocol.html

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PwC (2015) *Implementing Integrated Reporting: PwC's practical guide for a new business language.*

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