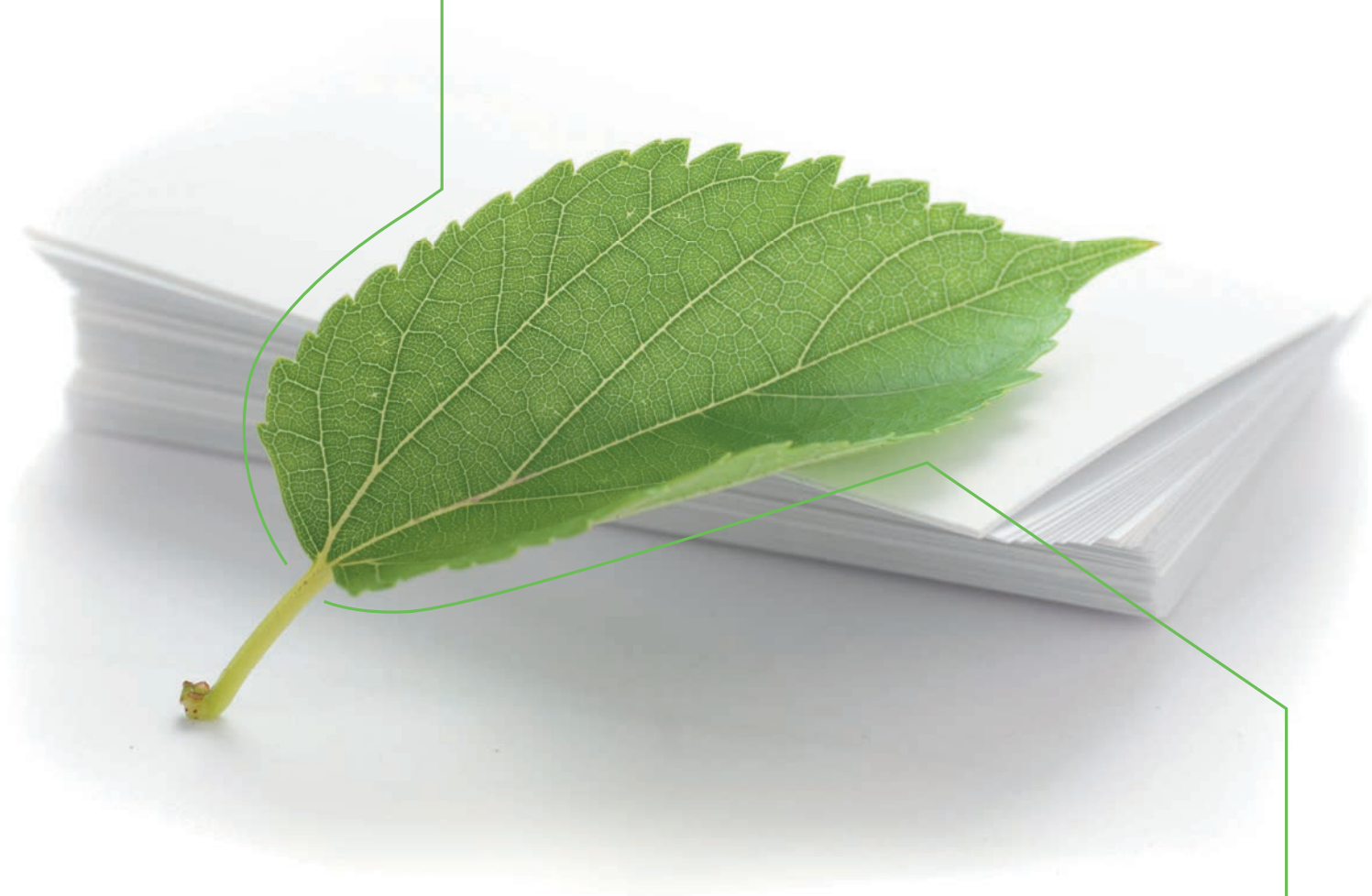


A sustainable approach for sustainable development



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Éditorial



Philippe Boulanger, Group Environmental Officer, Neopost

A sustainable approach for sustainable development

The installation of a sustainable development policy, with the cornerstone that ecodesign (*) then represents for an industrialist's solutions, requires a clear vision of the company's objectives and its customers' expectations, a well-defined organisation and responsibilities, and finally, rigorous continuity in the attention paid to the products and the processes.

“The key to the success of a sustainable development approach resides above all in effective communication control.”

For a decade or so, ecological concerns, initially sensitive among the public at large, have started to be incorporated within more constraining regulations for manufacturers. These texts - RoHS, EEEW, REACH, ErP... -, often of European genesis, have acted as catalysts in numerous companies.

The technological and regulatory dimensions are important in ecodesign approaches. But if many themes still relate to complex engineering, even R&D, the carriers of these projects fortunately have a technical base at their disposal, in addition to a regulatory corpus, which enables them quickly to bring out the priorities, the stages and a timetable.

The key to the success of a sustainable development approach resides above all in effective communication control. Technical communication with the partners for a shared contribution to the improvement of the products. Communication towards the customers in order to promote the ecodesign-related products and to convey a responsible company image, respectful of environmental issues. And of course, internal communication, in order to have a lasting influence on the employees' behaviour, to create reflexes in them and to incite initiatives on their part.

For Neopost, this human and technical adventure started eight years ago. Throughout this virtual decade, the energy and the conviction of the project's first players accelerated the awareness-raising and the mobilisation of the whole of the company, up to its highest level. This support has proved to be essential for accepting the ecodesign challenge, and for convincing people of the cogency of the approach, both the company's 5,500 employees and the customers of its 800,000 franking machines and other mail solutions.

With now eight years of perspective, and some highly tangible achievements - new franking machines of the IS range, a remanufacturing branch, etc - Neopost can testify to the cogency of the ecodesign approaches. This is the vocation of this White Paper, with its somewhat schoolmasterly tone, which we hope will be able to help other companies to approach this 21st-century challenge with total confidence.

(*) Ecodesign: a product design methodology that attempts to limit, for the environment, the impacts of its manufacturing, its transport, its use, and its end-of-life through its recycling or its remaking (remanufacturing). In the case of a mail solutions manufacturer such as Neopost, these impacts relate mainly to energy consumption, the use of certain substances, and the production of electric and electronic equipment waste

Sustainable development and companies: landmarks

Sustainable development is a new notion of public interest, applied to economic growth and considered on a world scale in order to take the environmental and social aspects of a globalized planet into account. According to the definition suggested in 1987 by the World Commission on Environment and Development in the Bruntland Report, sustainable development is «development that meets the needs of the present without compromising the ability of future generations to meet their own needs».



Mer de Glace - 1919 vs 2001

In the face of the ecological and social crisis which is now globally apparent (climate change, depletion of natural resources with in particular the imminence of the oil peak, differences between developed and developing countries, food safety, deforestation and the drastic loss of biodiversity, growth of the world population, and both natural and industrial disasters), sustainable development is a response of all cultural and social development players (States, economic players and the civil society), . (Source: Wikipedia)

The question of sustainable development was initially a matter for specialists, before challenging the general public in the aftermath of the Rio Earth Summit in 1992. The ensuing concern has been growing ever since (thus, 59% of the French population now completely agree that their environment can have consequences on their health. And 45% (up 10 points in a single year!) consider that to consume responsibly is to consume differently, i.e. to consume "sustainable" products. (Source: Ethicity).

With effect from the Kyoto Conference (1997), major rifts have appeared between the countries and their political representatives, anxious to represent their public opinions in relation to sometimes divergent concerns and priorities. In fact, establishing concerted approaches is proving to be difficult, the more so when they directly impact the daily life of the inhabitants - who are also voters.

It is finally fairly logical that the legislation concerning companies has been making the most spectacular progress for a dozen or so years. This is true despite the various lobbying practices attempting to delay or to influence the publication of certain texts. Europe, where the inhabitants' sustainable development concerns today are the most pronounced, is leading the race with regard to company-oriented legislation (see cross-referenced page on the diagram in Section 2).

Some dates

1980

The International Nature Conservation Union published a report in which the “sustainable development” concept appeared for the first time.

1987

A definition of sustainable development was proposed by the World Commission on Environment and Development (the Brundtland Report). The Montreal Protocol relating to substances that impoverish the ozone layer was signed on 16 September, a sign that collective commitment is possible

1990

The first report of the Intergovernmental Panel on Climate Change (IPCC) started to alert the international community to the risks of global warming due to the concentration of greenhouse gas in the atmosphere.

1992

Second Earth Summit, in Rio de Janeiro. Establishment of the term “sustainable development”: the concept starts to be widely hyped by the media to the general public. Adoption of the Rio Agreement and Agenda 21.

1997

3rd United Nations Global Warming Conference, in Kyoto, during which the protocol of the same name was drawn up.

2002

(26 August to 04 September) Johannesburg Summit: In September, more than a hundred Heads of State and several tens of thousands of governmental and NGO representatives ratified a treaty developing a position on the conservation of natural resources and biodiversity. Some large French companies were present.

2005

Coming into effect of the Kyoto Protocol on the reduction of greenhouse gas emissions in the European Union. Adoption, in France, of an Environment Charter, emphasising the precautionary principle.

2007

In France, the Neopost Group's country of origin, the Grenelle de l'Environnement brought together many politicians, economic players and ecology specialists for two months on the subject of sustainable development.

2009

2009 Copenhagen Conference on the climate

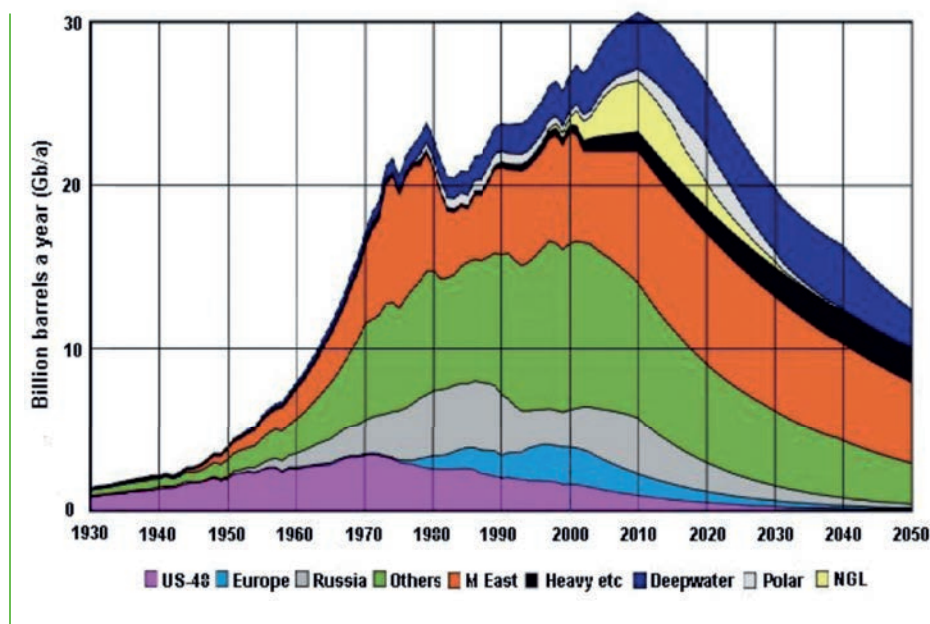
2011

Durban Conference in South Africa.

Today,

according to a survey conducted among 200 French captains of industry and leaders of service companies, 95% of the large French companies have incorporated sustainable development measures, recognise them to be priority and believe that they are making profits from them. (Source: Stratégie)

World production of oil by big region / origin according to forecast published in the Newsletter by Association for the Study of Peak Oil and Gas (ASPO) of 2004. (Source Wikipédia)



SECTION 1

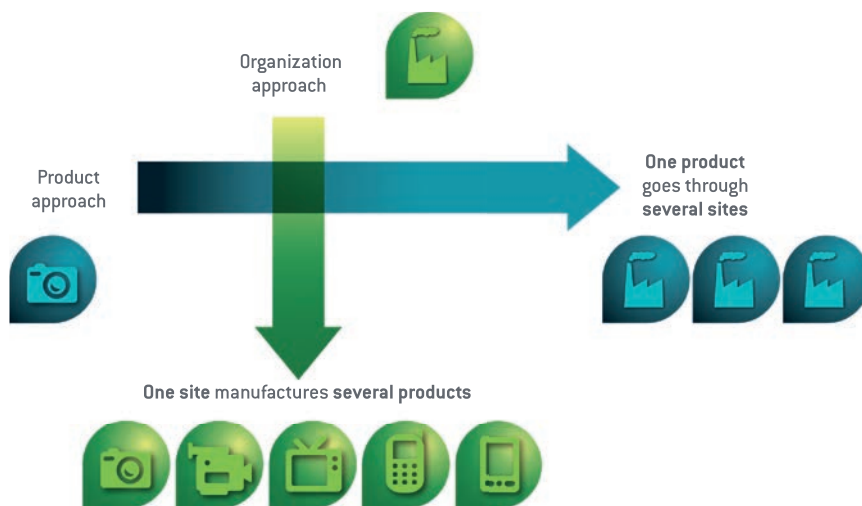
BACKGROUND: AN AMBITION DEPLOYED AND DISSEMINATED LONG TERM

The ecodesign approach is an integral part of Neopost's CSR strategy (Corporate Social Responsibility), which has been deployed from 2004. Its major stages first saw ISO 14001 certification of the majority of the Group's entities in 2005, then OHSAS 18001 certification in 2007. Today, all the new business franking or insertion machines are benefiting from this ecodesign approach, with spectacular results in terms of their environmental performance. Some good practice guides and an external and internal communication policy help to disseminate the messages effectively, to customers and employees alike.

SECTION 1 Background: an ambition deployed and disseminated long term

The cornerstone of Neopost's sustainable development approach was the setting up of a dedicated Steering Committee in 2004, with at the time an essentially HSE (Health, Safety & Environment) orientation and calling. From the beginning, a voluntary team of enthusiastic employees has worked to create consistency in the exercise on the ground, by appointing local correspondents, by organising inter-site exchanges, and by discussing matters with all of the departments as soon as they had expressed an interest in sustainable development and wanted to incorporate it into their process- or product-improvement deliberations.

Various approaches for integrating



Caption: The organisation approaches (ISO 14001) and the product approaches (ISO 14002) can be pursued separately or jointly, according to the companies' strategic decisions)

2004

Creation of a Sustainable Development Steering Committee

Several approaches, possibly complementary, process- and/or product-oriented, are possible for launching a sustainable development exercise, as shown by the attached diagram. At Neopost, and from its very creation, the Committee has consisted of two groups, one working on processes and organisation (SBD), and the other on products (SPD).

The SBD Group (for Sustainable Business Development) set itself the objective of deploying an approach that would lead to ISO 14001 certification (environmental management system validation). This concerns not only all of the company's sites, the R&D centres (Bagneux, Drachten and Shelton), and the two production sites that manage the machine shipments and

returns, but also the entire distribution network (fourteen subsidiaries at the time). Each site soon had its own HSE correspondent. The first concrete results started to arrive in 2005, with ISO 14001 certification for the Group's two factories, and for the main marketing subsidiaries. Also anxious to base the exercise on environmental requirement standards, the SPD Group (for Sustainable Product Development) was for its part working on the Ecolabels aspect (for example Energy Star) and on the qualification of the Neopost products according to the criteria of those seals of approval.

The Steering Committee went a step further and assumed the responsibility for managing an environmental legislation that was growing apace, especially in Europe. Several projects saw the light of day: creation of MSDS (Material Safety Datasheet)/PSDS (Product Safety Datasheet) which described in detail the contents of the components and the products, introduction of the process of collecting end-of-life electrical and electronic equipment in each country of Europe (in the context of EEEW Directive (Electrical and Electronic Equipment Waste), installation of

an ink cartridge collection process with Conibi in France, follow-up of the RoHS legislation for the Restriction of Hazardous Substances from products, etc.

The need was also felt to formalise the company's principles, as well as the new methodologies that were beginning to emerge. Thus, Neopost's values have been listed in a leaflet that is given to each employee. And the first edition of an ecodesign guide, common to the various R&D centres, then followed. It highlighted the need to go further, to improve the method all the time, and the need for a lifecycle analysis approach (LCA). After having participated in the publication of an analysis of the AFNOR study (*) devoted to this ecodesign theme, Neopost commissioned the Bureau Veritas CODDE firm for some coaching on its future approach.

SECTION 1 Background: an ambition deployed and disseminated long term

2006

Beginning of the OHSAS 18001 Certification - Beginning of the Ecodesign Approach

In 2006, while the ISO 14001 certification programme was continuing for all of the entities, the Steering Committee set a new course, namely the acquisition of OHSAS 18001 certification for all of the Group's sites.

This standard, of British origin, proposes a management system model in respect of health and safety at work (Occupational Health and Safety Assessment Series), i.e. occupational risk prevention. The factories and several marketing subsidiaries obtained the certification as a result of that exercise, which also saw all of the franking machine ranges and the insertion and envelope-stuffing solutions made RoHS-compliant.

Still on the products side, the coaching by Bureau Veritas CODDE enabled Neopost to launch of a first life cycle analysis (ACV), which related to the IJ-70 franking machine, and allowed an environmental state of play to be established. Finally, a first research project, named ECO' EEEW, got underway. It was conducted in conjunction with a research laboratory, and with some industrialists who, like Neopost, were faced with the problem of improving the recyclability of end-of-life electrical and electronic equipment. The project was mainly to result in end-of-life indicators and guides for the industrialists' use.

2007 was all about deployment: general extension of the OHSAS 18001 certification to all the entities, incorporation of the HSE requirements into the purchasing policy, which henceforth requires dual ISO 14001 and OHSAS 18001 compliance from OEM suppliers (Original Equipment Manufacturers), an environmental study for the new range of IS franking machines, compared en route to the former IJ range, raising operational marketing team awareness, and so on and so forth.

2008, 2009

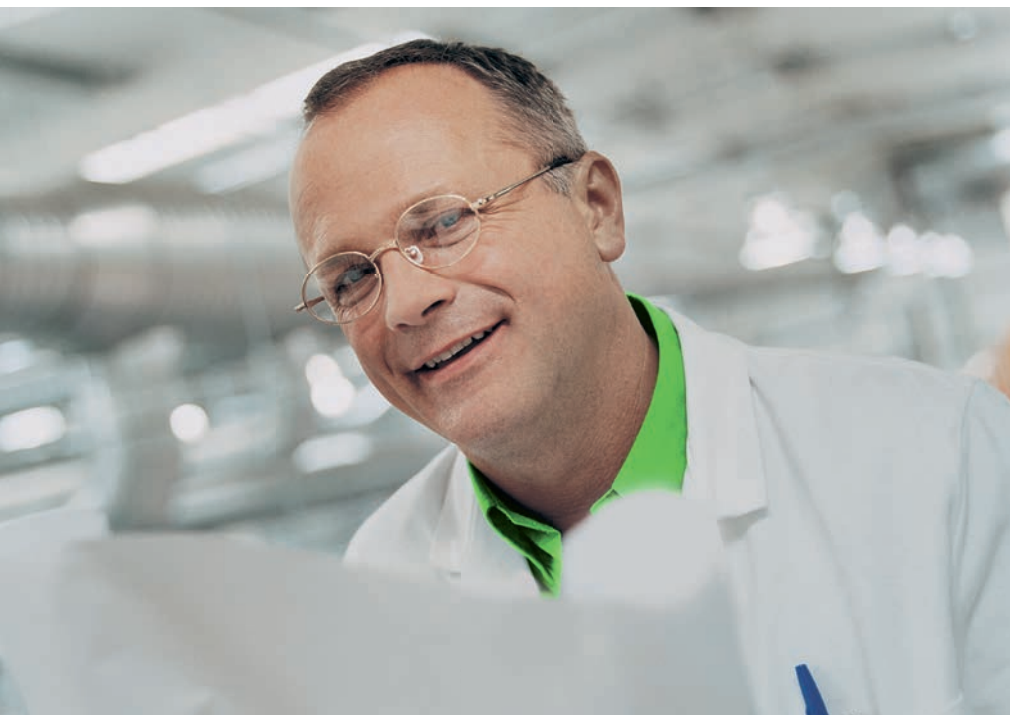
Introduction of the CSR Policy

In 2008, an audit was conducted in order to detect and assess the CSR practices in all of the Group's companies. The audit revealed the existence of local initiatives and good practices that were seldom consolidated at Group level. It also enabled Neopost's future priorities and issues in this field to be pinpointed.

The ecodesign guide was still being updated, whereas the ECO'EEEW project had been completed, being the object of several external communications - for example at the "Electronic Goes Green" conference in Berlin (**), and two new research programmes were started:

1. Synergic, with the objective of optimising energy consumption throughout the life cycle of the machines produced by Neopost, in particular during the use phase;
2. MacPMR, dealing with the remanufacture and the recyclability of the machines, and the organisation, as of their initial design, of the remanufacturing operations, including their reverse logistics.

In 2009, the Steering Committee has pleased to include the DRH Group in the person of its Investor Relations Director. It was furthermore renamed and became the RSE/CSR Committee. This transformation was accompanied by a roadmap, which envisaged a revision of the Group's values in order to reaffirm their social, ethical and human resources aspects.



Communication Time

When the Synergico and MacPMR research programmes came to an end, Neopost was nominated for the first Digital Green Growth Award (**), organized by the ACIDD Association. It was Communication Time, and the following two years were to record numerous initiatives in that respect: creation of the “Challenges, Actions, Results” material for the marketing companies in order to help them to present the ecodesign issues, and the benefits of Neopost’s approach, to their customers; launch of the in-house Econews newsletter in order to encourage internal information and employee motivation, and many more of a similar vein.

Furthermore, in the wake of the Synergico and MacPMR projects, Neopost’s team of experts was frequently in demand for publishing technical articles, or for speaking at conferences such as “Care Innovation” in Vienna, or “ICOR - International Conference on Remanufacturing” in Glasgow.

Finally, the first Ecodesign White Paper, the historical and technical account of this already long story, was published in 2012. The story is not finished, far from it, because the deliberation on sustainable development cannot be subject to limits, whether they relate to the duration of the exercise, or to its fields of application.

(*) [Panorama of French Ecodesign Initiatives - AFNOR - March 2005]

(**) New indicators for the calculation of recoverability rates - G.Moenne-Loccoz, F.Mathieux, L.Lescuyer, D.Brissaud - Sept 2008 - EGG2008+ - Berlin

Proposition of new recoverability indicators as support for the product design process: the electr(on)ic sector experience - F.Mathieux, L.Lescuyer, G.Moenne-Loccoz, D.Brissaud - Mars 2008 - LCE 2008 - Sydney

(***) Référence <http://www.prixdelacroissancevertenumerique.eu/prix-de-la-croissance-verte-num%C3%A9rique-2009/nomin%C3%A9s-laur%C3%A9ats/n%C3%A9opost/>

The Pioneers’ Decisive Motivation and Passion

Although the sustainable development approaches - and today those that are CSR-related - are now part of the corporate landscape, such was not the case at the beginning of Neopost’s project in 2004. Self-starter employees and managers were needed, often motivated by personal conviction, in order to identify the environmental issues, to seek out the technical expertise, and finally to start initiatives on some first machines, or on some seal-of-approval and certification processes.

DEFINITION, CONCEPTS AND PRINCIPLES ECODESIGN, A COMPROMISE

How is a project team structured?



The power of the personal commitment of the people involved - on a voluntary basis - must be properly emphasised. Because this initial motivation also enabled the project to “grow”, quietly and unassumingly, and “sense” to be made of it. It gave the pioneers the time to structure the exercise, to nourish it with a technical and regulatory corpus, before using, why not, the legal constraints as leverage for getting the projects financed or for obtaining consequential decisions.

The management of such projects must also adapt to the subject and to the need for motivation and awareness-raising. Simplicity is therefore required in the messages, and anticipation of the problems and the questions to come, probably in order to avoid authoritarian decisions in favour of negotiated solutions. It is finally furthermore no longer a question of proselytisation or forced march, which makes the internal and external communications operations crucial, the success of the external communication helping to improve the internal motivation, all the more critical when such projects involve numerous players, so far not always able to enjoy regular exchanges.

SECTION 2

ECODESIGN, A PROGRESSIVE APPROACH FOR DEVELOPMENT ON SEVERAL FRONTS

In six years, Neopost has been able to structure its ecodesign approach through its technology and regulation watch, its industrial research projects and partnerships, and its adoption at a very early stage of a systemic vision of its products' lifecycles. The company has given itself a strategy and some methods, tools and processes that have enabled it to achieve some very encouraging results concerning the environmental impact of its new generations of mail products.

Today, its entire ecodesign approach can be used as a basis for other organisations wanting to "recycle" their output.

SECTION 2 Ecodesign, a progressive approach for development on several fronts

Ecodesign is a relatively recent term, with research work starting in 1995. A first thesis furthermore was to be published in 2000 (Marc Janin - Ecodesign Approach in Companies, a Challenge: To Develop Tool and Process Coherency). ADEME and AFNOR then started to produce summaries on this theme. And the first experimental ecodesign standard, the ISO 14062, appeared in January 2003.



A generally accepted definition of ecodesign, also called ecoconception, is that "it consists of taking the environmental impact of a product or service into account, over the whole of its lifecycle and in relation to various environmental aspects, while maintaining its functionality".

In practice, these project players often went through the following stages:

- State of Play: measurement and assessment, for example with product lifecycle analyses, and the checking of checklists, benchmarks, comparative studies, etc
- Analysis and understanding of the problems: the objective being to incorporate the environmental criteria into the design phase, as well as the economic criteria,

the technical criteria, and the various customer requirements

- Definition of the issues, i.e. the priorities within the company, in response to the internal and the external issues (regulation, competition, and customer requirements);
- Internal and external communication,
- Incorporation at product, process then organisational levels.

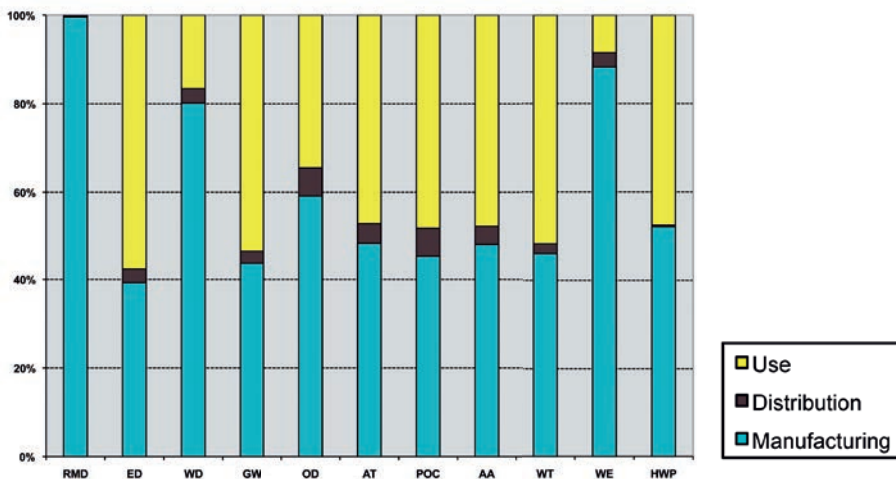
Beyond this "standard" agenda, each company has retained its own specific priorities. Each one's ecodesign approach has been original and single, due to the fact that it was based on its context, ambitions, issues, products and economic model.

A 6-year timetable already

At Neopost, it started in 2005/2006 with an exploratory phase, both of the regulatory constraints (RoHS) weighing on the mail machines designed by the company, of the state of the technological and methodological art and finally of the economic issues: big customer and public sector invitations to tender were indeed starting to formulate environmental requirements, and in the US market, the acquisition of the Energy Star seal-of-approval for franking machines had become mandatory.

This exploratory phase was to be prolonged by the installation of an active watch on all of the above fronts. The interest in ecodesign was quick to take root and a first pilot project, with the financial aid of ADEME and the expertise of Bureau Veritas CODDE in 2006, related to a franking machine (the existing IJ-70 model, in the photograph opposite).

The volition was to end up with a finer knowledge of the product, from an environmental point of view, well beyond the traditional aspects such as its production costs, its quality or its manufacturing lead-times (see computer graphic opposite). It also related to a quantification of the product's environmental impact and the identification of its possibilities for technical improvement.



Computer graphic caption: on eleven environmental indicators, an analysis of the respective weight of each phase reveals the major impact of the IJ-70's use phase.

SECTION 2 Ecodesign, a progressive approach for development on several fronts

Computer graphic caption: on eleven environmental indicators, an analysis of the respective weight of each phase reveals the major impact of the IJ-70's use phase.

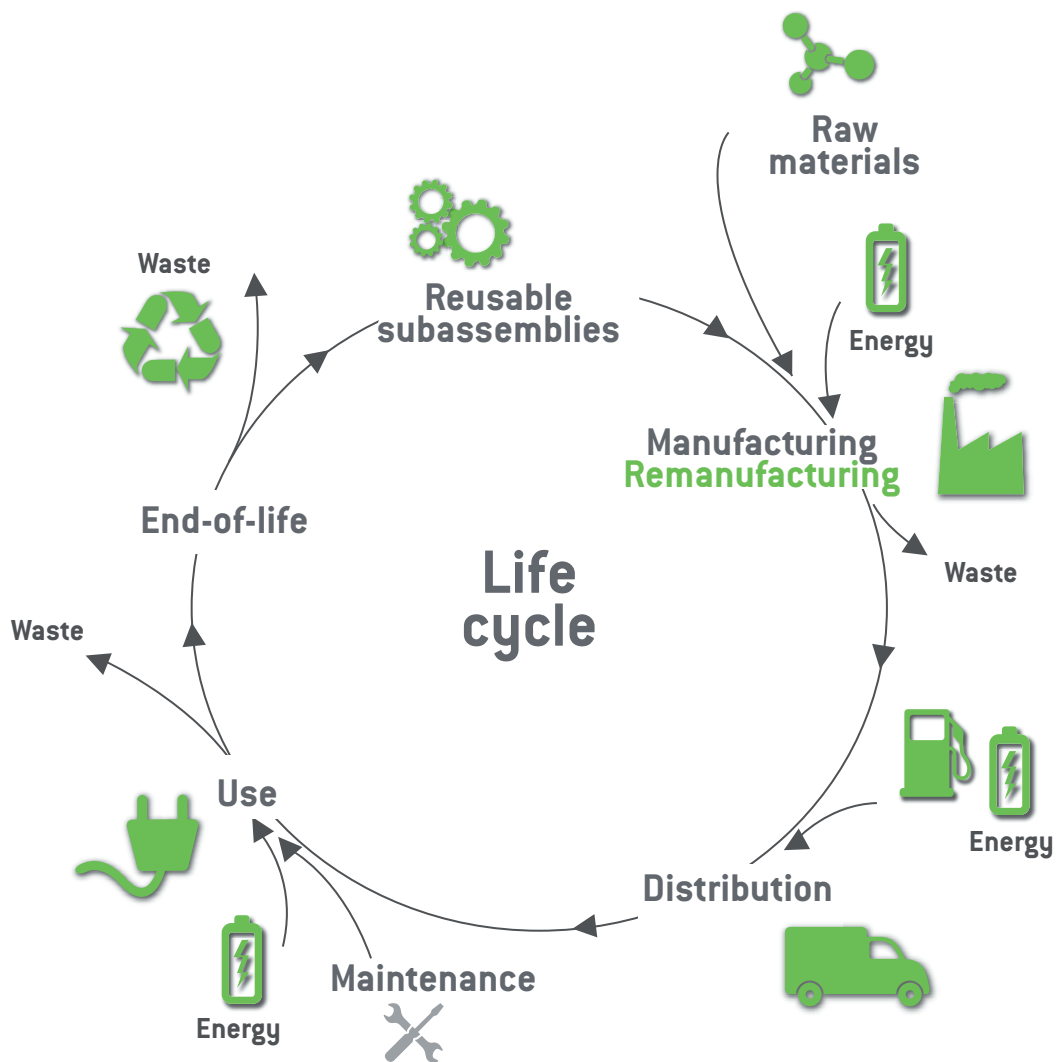
With regard to the improvement fronts, the use phase is clearly crucial, with energy consumption that needs to be improved in anticipation of the Energy Star seal-of-approval trend or as preparation for the European ErP regulations. But the design and manufacturing phases were also receiving considerable attention, since the RoHS then REACH texts had already laid down strict rules for the use of hazardous substances. Furthermore, the EEEW Directive in respect of all electric and electronic equipment was already enabling questions to be asked about the equipment's end-of-life phase. It was thus questioning the machines'

recycling and remaking (or remanufacturing). This phase also enabled the awareness of the Neopost teams involved in the design of new IS-480 machine to be raised.

A systematic vision quickly became necessary

The ecodesign guide, in its first 2006 version, sharpened the focus by defining the priorities. They related to the use of the materials and the component count, to the relationship between the products' mass and the packaging volumes, to the noise levels, to the energy consumption, and to the end-of-life recyclability and dismantling.

The managers nevertheless were soon convinced that it was necessary to raise their game, not to be content just to look at the product but to include the various processes (design, transport, etc). To acquire therefore a systemic vision, provided by the LCA (lifecycle analyses) carried out by Bureau Veritas CODDE and its EIME ecodesign software (Ecodesign Impact and Management Evaluation). The results obtained included a diagram that depicts all of the product's phases of life and then the actions that had to be taken in order to improve its environmental impact.

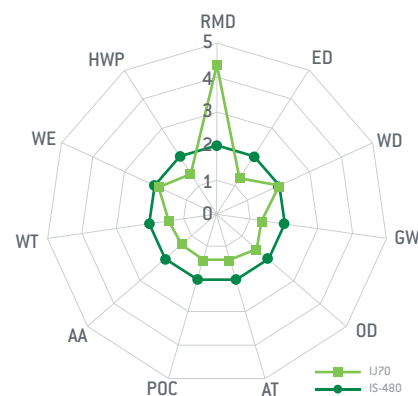


SECTION 2 Ecodesign, a progressive approach for development on several fronts

First concrete achievement with the new IS-480 franking machine

This initial diagnosis then enabled specifications to be drawn up for a new franking machine, the IS-480, which came out in 2008. In order to fuel the thinking on the technical feasibility and the ecodesign methods, three research programmes were started in parallel with the development of the new platform (ECO/EEEW, then SYNERGICO, and finally MAC PMR: see box). Joint projects with specialist schools also saw the light of day, in packaging optimisation, for example (ESIREims ex ESIEC).

The results obtained related at the same time to the machine's specific environmental performances, and to those of the processes implemented in order to design, make, transport and recycle it. It should be noted that these results, in accordance with the ecodesign precepts, were obtained in equivalent functional units (for example the same number of letters stamped per hour) but with additional functions and services (connectivity-related, in particular).

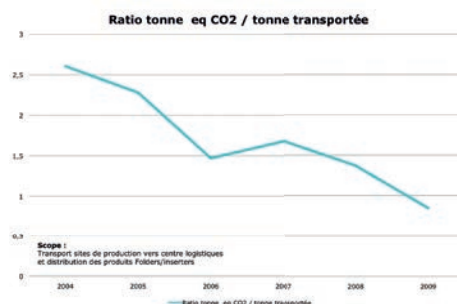


Environmental Gains (comparison between the IJ-70 and the IS-480)

- Reduction of the number of materials by 10% and of the mass by 44%
- 7% reduction of the packaging/product volume ratio. Henceforth, the machines have been 100% transported in cartons, including recycled fibres therefore.
- First initiated by an economic optimisation exercise, the choice to switch gradually to sea transport for the transport of the machines from the factories, rather than by air, has had a powerful impact on the amount of CO₂ that is emitted. The reduced packaging volumes have also influenced this reduction
- At the energy level, 50% less impact during the life of the product at the customer's, thanks to the standby mode especially.
- Reduced CO₂ emission during the use phase of about 4kg per annum from a IS-480 versus a IJ-70. For a stock of some 800,000 machines, the theoretical gain would be around 3,200 equivalent CO₂ tons
- The calculated recovery rate reached 78% (74% from recyclability and 4% from energy recovery, i.e. reclamation of energy during waste disposal). It was in particular obtained thanks to the removal of the metal inserts from the plastics, enhanced electronic board accessibility and other elements that have been withdrawn.

The economic gains were also significant. The reduction of the product's mass as well as of the number and volume of the materials used, enabled simultaneous reduction of the manufacturing costs, the packaging costs and the transport costs – optimised, furthermore, thanks to the switch to sea freight.

Maintenance was made easier by the choices made during the design phase, which are also valid at the end of the product's life, whether it is dismantled or remanufactured. The customers are also winners, in particular during the use phase, thanks to the energy optimisation, but also during maintenance.



SECTION 2 Ecodesign, a progressive approach for development on several fronts

Generalisation and Systematisation of the Approach

This demonstration of the compatibility of the economic and environmental aspects enabled Neopost, with effect from 2009, to take the ecodesign approach a stage further. Firstly to other franking machine projects, then to the Group's other R&D entities, to Drachten in the Netherlands, for example, for the envelope-stuffing machines. Henceforth, all of the projects carried out in the Group incorporate environmental criteria, which are kept up to date in the ecodesign guide, and in the regularly reviewed ecodesign strategy.

Remanufacturing, Towards the End of the Road?

The last important part to be dealt with related to remanufacturing. This is a question of an industrial process during which a product is recovered from the field (end-of-contract, demonstration or exchange product) then inspected, dismantled, cleaned and updated in terms of its functionalities (hardware and software). The worn parts are replaced by new parts or by ones that have been remanufactured themselves. After reassembly, the unit is tested, packed and then put back on the market, with a new product warranty.

These remanufactured products are therefore the equivalent of new ones, in terms of functionality, quality and aesthetics. They offer the same services and have the same technical features and reliability. But the environmental impact can be reduced by up to 40%. This concerns in particular, and initially, the carbon footprint, the raw material savings, and the manufacturing processes.

For Neopost, whose economic model is not based on the sale of machines but on the supply of services (rental or leasing), the recovery of the machines in working order but at the end of the contract has been historically essential, in particular because of the postal regulation that envisages the mandatory destruction of the franking machines' stamps. However with the advent of inkjet printing technologies, certain products were still operational at the end of the rental or leasing agreements. It became appropriate to put those products back on the market, once they had been remanufactured.

To go a step further, a research partnership was established. This MacPMR project highlighted the need for a per-process approach. Three of them were to be considered.

The first, known as reverse logistics, related to the recovery of the machines from the customer's premises. It was a question of detecting the appropriateness of returning them to the remanufacturing plant - or perhaps of putting them up for recycling -, depending on their degree of wear and their working order (technical conditions). Once this decision had been made, the packaging and the transport had to be optimized according to economic and environmental criteria alike.

The second process related to the treatment of the machine itself, to its analysis, dismantling and cleaning, and to the replacement of certain components - by new ones or already remanufactured ones, and then to its repackaging.

Lastly, the last process to be reviewed related to the product's very design. How could the remanufacturing process be anticipated, by facilitating the inspection, the accessibility of the worn parts and their extraction, the cleaning, and so on? The MacPMR project helped to identify the optimisation points, for example the storage period, the packaging of the return flows or even the design constraints, and then contributed to resolving them.

Today, the development of remanufacturing appears essential, both to cope with the scarcity of certain materials, and to limit the energy expenditure and the carbon footprint during the manufacturing phases. The companies which, following Neopost's example, market the services provided by their machines, rather than just selling their products, are reaping rewards. Indeed, the development of the remanufacturing rate of these machines is paving the way for an efficient transition towards an economic model that is even simpler in terms of its consumption of natural resources.

It would therefore be logical that an ever-increasing number of manufacturers in future base a part of their economic model on services. These are strategic decisions, for managers who will be able to feed their theoretical thought processes in the same way as those that surround the circular economy concept, which envisages a re-use ad infinitum of technical material flows, with recourse to biodegradable and environment-friendly materials.

SECTION 2 Ecodesign, a progressive approach for development on several fronts

Regulatory levers

Environmental regulation was in several cases acting as a catalyst for the introduction of corporate sustainable development approach, even though one has also had to reckon on fertile ground in terms of motivation (emergence of the theme at general public level) and on a consciousness of the issues (customer requirements in their invitations to tender).

Europe is leading the race in terms of directives, whether in the energy field (see diagram), the materials/substances field, or in that of waste recycling and processing, thus covering all of the various stages of the products' lifecycles. Neopost's European leader position has led it not only of course to comply with the directives in the European Union, but also to consider that, in for a penny in for a pound, it should adhere to the most constraining regulation.

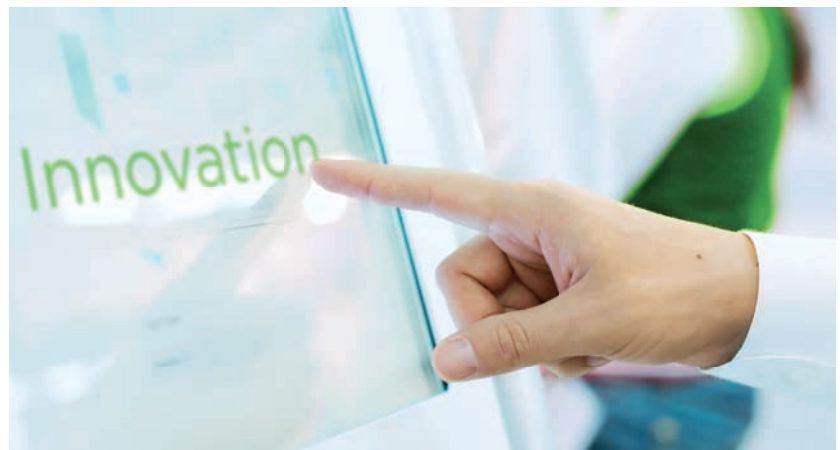
Waste limitation and treatment

- Implemented since 13 August 2005 in Europe, Directive EEEW - 2002/96/EC (Electric and Electronic Equipment Waste) has introduced greater liability for the manufacturer into Community law: when a product is put on the market, the manufacturer must envisage or finance a collection system for products at the end of their lives. This directive also imposes EEEW collection rates on the Member States.
- The European B&A Directive (Battery and Accumulators) 2006/66/EC limits the use of certain hazardous substances and lays down rules for the collection, treatment, recycling and disposal of battery and accumulator waste. Each country has been given national collection targets - for example, in France, to reach at least 25% in 2012 and 45% in 2016, with the average of the last three years' annual sales as the reference. Objectives on recycling efficiency have also been set in the form of the percentage of matters extracted and reclaimed compared with the weights of the batteries and accumulators entering the recycling plant: 75% for nickel-cadmium

Three Major Research Programmes

Since 2006, Neopost has been engaged in several partnerships with the research world, also in conjunction with other industrialists sharing its problems relating to the ecodesign of the products.

- **Eco/EEEW**, from 2006 to 2008 : cofinanced by the ADEME, this project sought to detect areas in which electric and electronic products could be improved in order to facilitate their recycling and to reduce their pollution, as well as to define some end-of-life indicators. Partners: Bureau Veritas CODDE, the French INPG G-SCOP research laboratory, and five big industrial players - the Fagor-Brandt and SEB Groups, Neopost Technologies, Sagem Communications and Schneider Electric.
- **Synergico**, (2009-2011) : This project was selected at the time of ADEME's 2008 call for Research, Development and Innovation projects in the ecodesign field. Its objective was to develop a new method enabling the designers to control the energy performance of a product that was being studied. Partners: the G-SCOP and G2E Lab research laboratories, and the industrialists Neopost Technologies and Sagem Communications.
- **MacPMR** (2008-2010) had the objective of improving the remanufacturing rates. (i.e. of products put back on the market on an as-new basis). It was a question of limiting the production of a product's end-of-life waste, not only by improving the associated reverse logistics and the operations on the remanufacturing sites themselves, but also by designing more easily "treatable" products and parts, for example by making them easier to extract, clean and inspect, and so on and so forth. Partners: Neopost and several schools and research laboratories - USMMA (Sup Méca Toulon - Project Leader), G-SCOP (INPG), CRET LOG, IWF (TU Braunschweig)



CHAPITRE 2 L'éco-conception, une démarche de progrès à développer sur plusieurs axes

accumulators, 65% for lead-acid batteries and 50% for the other types of batteries and accumulators.

Restriction of the use of hazardous substances

- The European RoHS Directive (Reduction of Hazardous Substances - 2002/95/EC) prohibits the sale, in the European Union, of new electric and electronic equipment which contains non-approved levels of six hazardous substances: lead, mercury, cadmium, hexavalent chromium, PBB (polybrominated biphenyl) and PBDE (polybrominated diphenyl ether). Voted through in 2003, it came into effect on 01 July 2006 and relates to all products that have been marketed since that date.
- The REACH Regulation (Registration, Evaluation and Authorization of CHemicals - Nr 1907/2006) frames the use of chemical substances in preparations or articles circulating on the European Community market and supervises their use, in such a way as to preserve the health of the inhabitants and the environment.

Voted through by the European Parliament at the end of 2006, it was applied directly within the European Union; it came into effect as from July 2007.

Energy control

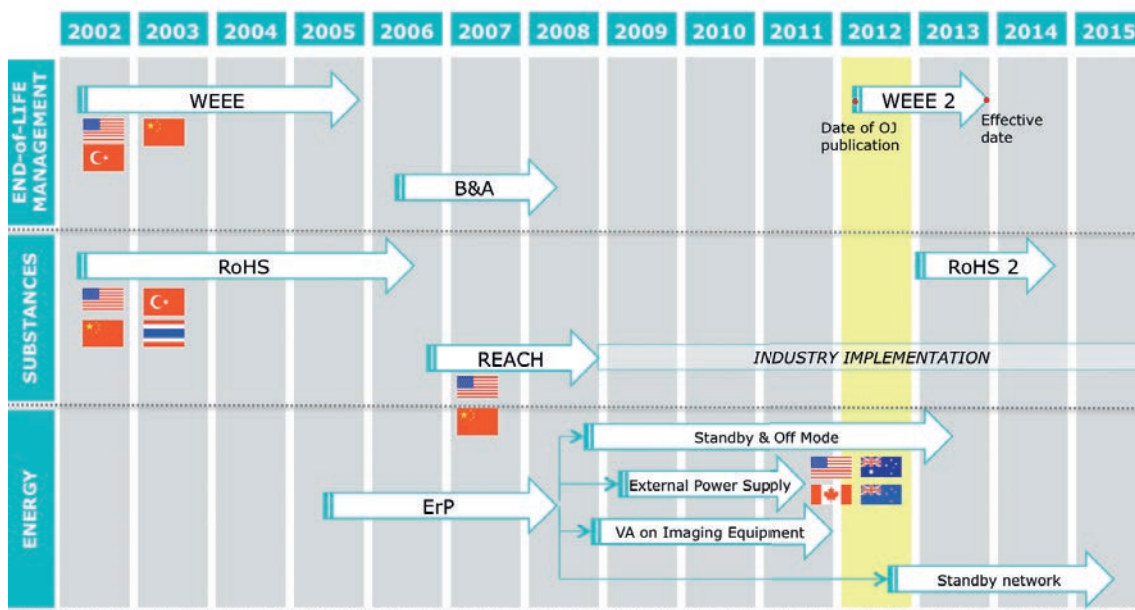
- The ErP (Energy related Products - 2009/125/EC) ecodesign directive provides a legal framework for the ecodesign applied to products that consume energy, throughout their lifecycle - from their recourse to raw materials, until their final recycling, via their manufacturing, transport and of course use stages. Incorporated into the Community "EC" marking policy, it has come into effect through various enforcement measures.
- The Energy Star seal of approval, of American origin, was created by the US EPA (US Environmental Protection Agency). It was then recognised by the European Union, through various framework agreements. It defines the energy consumption criteria for offering office equipment as having

optimized energy efficiency. This efficiency depends of course not only on the electricity consumption during use but also on the existence of a standby mode. All the manufacturers and the performance of their models are referenced in a database that is accessible to consumers.

<http://www.eu-energystar.org/fr/database.shtml>

EU regulation, a key driver for sustainable development

WEEE Waste of Electric and Electronic
B&A Batteries and Accumulators
RoHS Restriction of Hazardous Substances
ErP Energy related Product
VA Voluntary Agreement



The various regulations can be classified in four categories

SECTION 3

GETTING ORGANISED FOR SUSTAINABLE DEVELOPMENT

A company's primary objective in terms of sustainable development is to perpetuate its activity. Behind this seemingly self-evident truth lie three major objectives. Firstly, to adapt the CSR strategy to the organisation in place, rather than instinctively to call it into question. Then, to afford sustainable development its legitimate place in the company's strategy and organisation. Finally to communicate properly, especially within a decentralized group like Neopost, to maximise the collective results and to respect each individual company's initiatives.

SECTION 3 Getting organised for sustainable development

The sustainable development policy was introduced into the Neopost Group, with effect from 2004, by instituting a specifically dedicated Steering Committee. The following years saw leadership teams being mobilised around this federating theme, concretized in 2009 in particular by the arrival on this committee of the DRH Group, whose activity was likewise being reoriented towards CSR.

However ambitious a sustainable development strategy may be, it should nevertheless not weigh, at least a priori, on the company's organisation. It should rather, as the specialists agree, be adapted to the inherited situation. Indeed, these sustainable development concerns help to reinforce a company's future competitiveness, by integrating en route two pillars - the societal and the environmental one. The Grenelle de l'Environnement, in France, has furthermore taken note of this need by making the production of extra-financial ratios mandatory (*).

Adapting to a decentralized structure

In Neopost's case, the organisation is greatly decentralised, with in particular five R&D and three industrial sites in five different countries. Eighteen marketing subsidiaries also have to be taken into account, on the European, North American and Asian continents.

However if decentralisation means flexibility and speed of action, as each entity can launch initiatives and develop its projects without depending on the others, nor without having to wait for them, such a configuration becomes a hindrance in terms of consolidating conducts, good practices, methodologies and figures. In order to get the Group's messages across, Neopost has focused on the supply of supports for the sales people. It was a question of helping them to adopt

a homogeneous discourse, in relation to their customers, on the positive consequences of the ecodesign from which Neopost's new-generation products were benefiting. Because ecodesign solutions are not enough on their own: they still have to be sold.



IDEAS TO BE RETAINED

Adapt the strategy to the organisation in place and not the reverse

Communicate by good practices and by example

Perpetuate the company's activity, the primary objective of sustainable development and CSR

Recognise and know how to use the trends of opinion around sustainable development

SECTION 3 Getting organised for sustainable development



The role of the management and its integration of sustainable development into the company's objectives are decisive. It is not only a question of "setting an example", by choosing, for example, company cars that discharge less CO₂. Management must also, as the project's players have done, give perspectives and objectives to the various departments, even to individual volunteers. At Neopost, a particular campaign was thus conducted with the car fleet managers in France. Indicators were created in order to involve the various company car drivers. And in another subsidiary, a green driving challenge was created, which included in particular certain indicators such as fuel consumption, the number of speeding tickets or compliance with the planning of the revisions.

Persuaded that, in order to have a lasting influence on behaviour, it was better to convince than to impose, the project managers preferred to produce good practice guides rather than dictatorial methodologies.

In same logic, the raising of the leaders' awareness enabled, gradually, the founding principles of sustainable development to inspire the company strategy, such as they determine it and impose it. In particular, the circular economy concept (also called the functionality economy) which, when applied to industrial production, integrates, at all levels, the design, production and recycling of the product, an ecological requirement whose principle is zero pollution and 100 % recycling. A manufactured product must therefore be able, in theory and ideally, once recycled, to reproduce that same product, with only an addition of renewable energy intervening in the cycle.

Communication to the sales and marketing teams becomes a major issue in order to proclaim the quality of the products that have benefited from an ecodesign approach, and in particular to defend the intrinsic value of the remanufactured products, the proportion of which, in an increasingly service-oriented economy, has to increase. It is also a question of getting it understood

that environmental criteria – now systematically monitored through four to five key indicators – have become as important as the more traditional criteria of price or functionality. Initiated in 2010, this communication policy is starting to bear fruit, the more so as behaviour is changing on the customer side: thus, in the public sector's invitations to tender in France, sustainable development criteria can already represent as much as 20% of the score allocated to the tenderers.

These changes of mentality, not only on the customer side but also among the general public and by rebound among the employees, constitute furthermore one of the great challenges, but also the great innovation, that are enshrined in the sustainable development strategies. For the managers of a company that initiates this movement, the keys to success reside in the control of ground that is still considerably moving.

(*) Articles 225 and 75 of the Act.

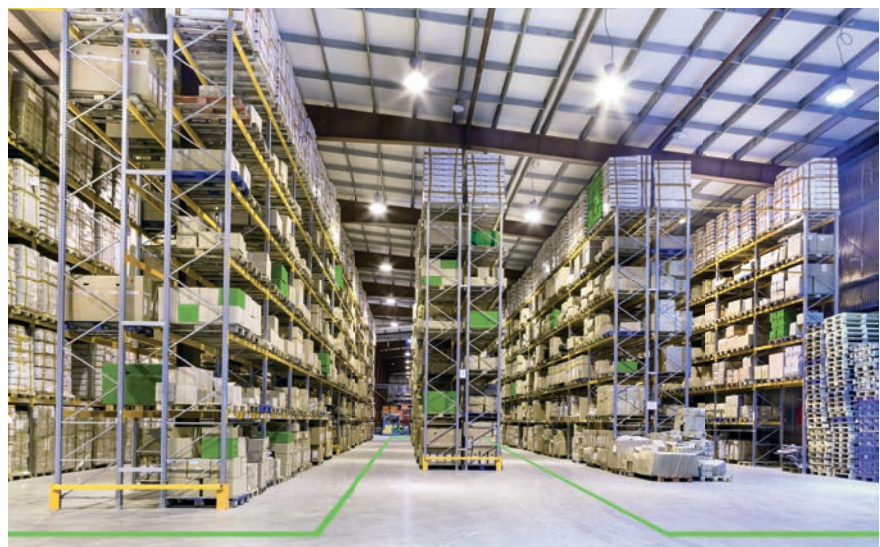
SECTION 3 Getting organised for sustainable development

Mutually Spread and Reinforced Behaviour

Although the cogency of a pilot project approach, which was the tactic adopted by Neopost to introduce its sustainable development strategy and its ecodesign approach, needs no further proof, the generalisation phase of the concepts to all of the company processes requires, on the other hand, special attention.

Several examples have illustrated and punctuated this extension phase. The most spectacular concerned two R&D centres, in France and in the Netherlands. The first was dealing with franking machines, the second with envelope-stuffing solutions. After France had carried out a first ecodesign project culminating in the launch of the IS-480, the Netherlands adopted the approach themselves: firstly by making an LCA of the DS-70, then by developing a new model showing potential environmental performance improvements (energy, mass). Finally, the two R&D centres worked together on the revision of the ecodesign guide, in the light of their respective experiences.

R&D activities would seem by their nature to be more inclined towards rapid integration of the innovation induced by the ecodesign exercises, something which Neopost furthermore had taken into account in 2011 at the time of the updating (more distinctly product-oriented) and the distribution of its ecodesign guide. But other functions were concerned.



The strategic marketing teams thus recognised and integrated the approach in 2010, and played a driving role in the definition of a strategy, the establishment of a product roadmap and the search for green seals-of approval, all crucial factors in the entire organisation's consciousness. Communication Management had for its part enshrined sustainable

development in its messages with effect from 2009, both internally and externally, with there too, an important effect on the mobilisation and the motivation within the entire organisation.

SECTION 4

NEXT STEPS

The first years of Neopost's ecodesign approach, and beyond that, its CSR approach, can be assessed with satisfaction. But what about the future? From an overall point of view, how can environmental indicators as a measurement of global warming be made to evolve?

What is to be expected from the regulations, and from the behaviours and expectations of customers, employees and the general public? The unknowns are numerous and will impact business strategies. The only certainty: this development is not a phenomenon of fashion but one of our society's major and lasting trends.

Predicting the future is always tricky. In the engineering business, product development can certainly be planned, according to known facts concerning the progress of the components, for example. It has thus for a long time, for more than forty years, been permissible to envisage that the storage and calculation performances of electronic equipment would double every eighteen months (Moore's law).

This can enable a company such as Neopost to plan what it will be possible to produce in a few months, even a few years, time. But this traditional logic is breached by the principles of sustainable development. Because the evolution of the environmental situation, of the regulations that could arise from political decisions, or of the customers' purchasing behaviour, will inevitably impact the design of the products, their production

methods, the energy consumption objectives, the means of transport and the waste-processing and remanufacturing rates.

These uncertainties and the influence of new factors, in particular the need for innovation and agility, oblige the company's managers to make unprecedented decisions, both in terms of the topicality and the typology of the facts that they have at their disposal. An understanding of the new challenges, and the detection of the basic tendencies, will help management to anticipate and to make the right decisions. Neopost has already issued several of them.

- The environmental dimension must be incorporated into the product strategy, and put to the fore during its marketing. Gains are expected in particular vis-à-vis the competition, but they remain hard to quantify.
- The internal and external communication efforts, the one reinforcing the other and vice versa, will be continued and increased, because they affect customer and employee behaviour by enhancing the company's image.
- The remanufacturing question becomes central, not only in order to achieve the regulatory and economic objectives but also

within a more systemic approach, in search of new balances and a circular economy, which would tend to make the equipment parts reusable ad infinitum, with the help of a specific energy contribution. This goes in the direction of history, in a context of a scarcity of natural resources and of geopolitical tensions affecting the countries that possess those resources.

- One of the most tangible certainties relates to the progressive increase of the energy and raw material prices. The improvement of the energy performance, not only of the Neopost machines, but also of the entire process which goes from their design to their remanufacturing, will therefore remain a major issue.
- The ecodesign teams must continue their technology, regulation, marketing and competition watch, in order to anticipate the requirements and the solutions for meeting them.

To finish, how can one not suggest that the good practices be also disseminated beyond the company, possibly amended, but in a rationale of re-use of the deliberations already accomplished by others? It is in this sense that this White Paper is published, above all intended for sharing and for subsequent debate. The sustainable development approaches' future cannot be conceived in isolation.



TESTIMONIALS

Laetitia Caraes-Lecluse,
QSE Manager,
Neopost France

“At our customers, the demand in terms of sustainable development has remained stable since 2008, but its content has evolved. Their concerns, which previously related to a particular point of regulation, have now become global. They express them in particular through their invitations to tender, in which they require answers about our environmental initiatives or our CSR strategy. With increasingly precise questions about the freight transport management, about our choices with regard to the treatment of end-of-life equipment or about the management of our supplier relations”.



Thierry
Le Jaoudour,
Supply Chain
Director,
Neopost

“The trend towards remanufacturing is important for the Group’s factories which, until now, have been involved in refurbishing operations. It is no longer a question of just working on the machine’s appearance, but of producing, on the basis of units returned from the field, as-new products, with equivalent warranties. That means in particular reorganizing the flow of parts arriving in the Group’s specialist factories. We are convinced of the need and the validity of this orientation, the installation of which ought to be made easier by a service-oriented economic model. Beyond the technical and logistical aspect, our communication towards the internal teams and the customers is a key element of the approach”.

Daniel Brissaud,
Professor, Ecodesign
Manager of the G-SCOP
Research Laboratory,
(INP Grenoble, France)

“Why has the collaboration between my team and Neopost been so fruitful for both partners? First, thanks to its duration, and to the existence of three projects, which have enabled huge trust to be established and which have led Neopost becoming really organized in order to encourage the exchanges. A contact person “who stays the course”, who is trusted by his or her management and who has access to research firms - these are the conditions of an effective collaboration which enables not only research results to be achieved, but also their practical use in a corporate context. Then because the collaboration is a two-way affair. We have, of course, responded to requests such as those concerning energy performance or recyclability calculations, but we have also been able to suggest developments such as those in relation to the processes, and especially in relation to the remanufacturing sector. Finally, for us, this fieldwork at an industrialist has also proved to be highly positive and constructive for our research work as a whole. This partnership is in my opinion a fine example of the balance that needs to be found between the world of industry and that of research, even more so when the field being studied - in this instance ecodesign - involves major breaks both in terms of technological and organisational innovations and of economic models”.



Guillaume
Moenne-
Loccoz,
Sustainable Development
Manager, Neopost Group

“Communication about the EcoDesign@Neopost project only really started when the first results confirmed for its managers that they were on the right track. It had furthermore started towards the outside, with scientific publications, then speeches in conferences such as Electronic Goes Green in Berlin. These “external” validations provided confirmation of what was being said in-house, further reinforced by the Digital Green Growth Prize. The pride followed by employee motivations then enabled specific in-house communication exercises to be undertaken, intended, for example, for the sales reps. Who now convey the right words to Neopost’s customers. The mutual reinforcement of internal and external communication can clearly be seen here”.

GLOSSARY

EEEW (Electric and Electronic Equipment Waste): Directive that has introduced greater manufacturer responsibility into European Community law: when a product is put on the market, the manufacturer must envisage or finance a collection system for those products at the end of their lives. This directive also imposes EEEW collection rates on the Member States.

Ecodesign: approach that consists of taking the environmental impact of the product or service into account, over the whole of its life cycle and on various environmental aspects, while maintaining its functionality.

Circular Economy: doctrine that envisages infinite re-use of technical matter flows, with recourse to biodegradable and environment-friendly materials.

Energy Star: American seal-of-approval created by the US EPA (US Environmental Protection Agency), subsequently recognized by the European Union. It defines the energy consumption criteria for offering office equipment as having optimized energy efficiency. This efficiency depends of course not only on the electricity consumption during use but also on the existence of a standby mode.

ErP (Energy related Products – 2009/125/EC): Directive that provides a legal framework for the ecodesign that is applied to energy-consuming products, throughout their lifecycle - from their recourse to raw materials to their final recycling.

ENVIRONMENTAL INDICATORS

RMD: Raw Material Depletion

ED: Energy Depletion

WD: Water Depletion

GWP: Global Warming Potential

OD: Ozone Depletion

AT: Air Toxicity

POC: Photochemical Ozone Creation

AA: Air Acidification

WT: Water Toxicity

WE: Water Eutrophication

HWP: Hazardous Waste Production

Reach (Registration, Evaluation and Authorization of Chemicals – Nr 1907/2006): Framework regulation on the use of chemical substances in preparations or articles circulating on the European single market.

Recycling: any operation by which the materials coming from end-of-life equipment are used in a manufacturing process for the same initial use or for others, other than use as a means of energy production.

Remanufacturing: industrial process during which a product is recovered from the field, and then inspected, dismantled, cleaned and updated in terms of its functionalities. The worn parts are replaced by new parts or by ones that have been remanufactured themselves. After reassembly, the unit is tested, packed and then put back on the market, with a new product warranty.

Reutilisation (or re-use): Re-use (or re-employment, reutilisation) indicates the systems or sectors enabling an object to be re-used (for the use for which it was initially planned or for another use. Such re-use can relate to a product or to all or some of its components.

ROHS (Reduction of Hazardous Substances – 2002/95/EC):

European directive that prohibits the sale, in the European Union, of new electric and electronic equipment that contains unapproved levels of six hazardous substances: lead, mercury, cadmium, hexavalent chromium, PBB (polybrominated biphenyl) and PBDE (polybrominated diphenyl ether).

Calculated Recovery Rate:

sum of the recyclability rates and the energy recovery rate, i.e. the energy recuperation rate during waste disposal.

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