

# Product Responsibility as a Part of Sustainable Development Strategy

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## *Abstract:*

Taking on challenges and seeking innovative solutions is a way to assure the future. Therefore the organization has a vital interest in protecting the environment and natural resources. The article focuses on product responsibility as a part of sustainable development. Integrated products responsibility integrates the requirements of sustainable development and environmental management. Product responsibility begins with development of products that are environmental friendly with continual improvement cycle and with processes innovations, even after their use, create the smallest possible environmental load.

*Key words:* innovation, environment, management, product responsibility, sustainable development

## 1 Introduction

In most cases, manufacturers have the greatest ability, and therefore the greatest responsibility, to reduce the environmental impacts of their products. Companies that are accepting the challenge are recognizing that product stewardship also represents a substantial business opportunity. By rethinking their products, their relationships with the supply chain, and the ultimate customer, some manufacturers are dramatically increasing their productivity, reducing costs, fostering product and market innovation, and providing customers with more value at less environmental impact. Reducing use of toxic substances, designing for reuse and recyclability, and creating takeback programs are just a few of the many opportunities for companies to become better environmental stewards of their products. In the 21st century, forward-thinking businesses have recognized that demonstrated corporate citizenship and maximum resource productivity are essential components to creating competitive advantage and increasing shareholder wealth. All products are designed with a

consumer in mind. Ultimately, it is the consumer who makes the choice between competing products and who must use and dispose of products responsibly. Without consumer engagement in product stewardship, there is no closing of the loop. Consumers must make responsible buying choices which consider environmental impacts. They must use products safely and efficiently. Finally, they must take the extra steps to recycle products that they no longer need. [1]. That means to detect trends at an early stage and put forward appropriate solutions. Integrated production processes innovation model which promotes production processes innovation was derived from the model of managing company policy following the interest theory and business excellence. The successful development and implementation of processes innovation in an organizational system can produce a significant saving in the amount of business and environment resources and therefore a smaller environmental impact [7]. The heightened awareness of the importance of environmental protection, and the possible impacts associated with products manufactured and consumed, has increased the interest in the development of methods to better comprehend

and reduce these impacts [3]. All the activities of the BMW Group are designed to increase the value of the company continuously and over the long term. In the view of the Group, long-term growth is generated by thinking long-term and acting in a sustainable manner. The central factors for success are concentrating on the premium segment, the skill and dedication of their employees, the maximum focus on what the customer wants, plus an ability to innovate, which is firmly rooted in the corporate culture [2].

## 2 Renewed EU Sustainable Development Strategy

The EU's Sustainable Development Strategy aims, in tandem with the Lisbon Strategy for growth and jobs, for a more prosperous, cleaner and fairer Europe. Sustainable Development is an overarching concept. The EU Treaty requires the integration of sustainable development into all European policies, so that they contribute in an integrated way to meeting economic, environmental and social objectives [4].

The Renewed EU Sustainable Development Strategy identifies seven key challenges:

- (i) climate change and clean energy,
- (ii) sustainable transport,
- (iii) sustainable consumption and production,
- (iv) conservation and management of natural resources,
- (v) public health,
- (vi) social inclusion, demography and migration, and
- (vii) global poverty and sustainable development challenges.

The EU SDS constitutes a general framework within which the Lisbon Strategy embodies a driving force of a more dynamic economy by stressing the importance of growth and job creation. Both strategies take account of mutual complementarities that exist between the economic, social and environmental objectives that need to be jointly developed. Both strategies further strive to foster the necessary structural changes in which the Member States' economies gain strength to face the globalisation challenges by creating equal conditions which stimulate the thriving of dynamics, innovation and creative entrepreneurship and simultaneously ensuring social justice and healthy environment. The EU SDS pays full attention to the management cyclus, whereby a crucial novelty lies in the more effective

management sustained by regular biennial progress reports. The first report that will build on the Member States' input, will be issued in the second half of 2007 by the European Commission [5].

Figure 1 presents The Flower. The Flower is the symbol of the European Eco-label – your guide to greener products and services. It is a voluntary scheme designed to encourage businesses to market products and services that are kinder to the environment and for European consumers - including public and private purchasers - to easily identify them. You can find the Flower throughout the European Union as well as in Norway, Liechtenstein and Iceland. The European Eco-label is part of a broader strategy aimed at promoting sustainable consumption and production [4].



**Figure 1:** The Flower – symbol of the European Eco-label – your guide to greener products and services

## 3 Product responsibility

Based on the programming documents for implementing the EU cohesion policy in the period 2007-2013, Slovenia will conduct public tenders for promoting entrepreneurship in a manner that in assessing the projects account will also be taken of the investments' environmental impacts. Support will only be granted to those investments in new technological equipment and machinery which, compared to obsolete technologies, are considerably environment friendlier [5]. Industrial production accounts for a significant share in the overall pollution, in particular through greenhouse gases, substances causing acidification, waste waters and waste materials. At the level of the

EU, the rules for authorising and supervising industrial activities were standardised in the form of what is termed the IPPC Directive. In compliance with the said Directive, all companies engaged in activities which might cause major pollution (there are approximately 50,000 such companies in the EU and 200 in Slovenia) must obtain an integrated environmental permit, evidencing that the company concerned operates in compliance with the best available techniques and that the public was involved in the authorising procedure. The Member States are obliged to ensure, by 30 October 2007, that their companies do not operate without such a permit [5]. The modern concept of working out environmental protection policies is based upon the notion of sustainable development. In the environmental sphere, sustainable development is understood as an interdependent relationship between the economy, infrastructure, settlement and the way of living, taking into consideration the bearing capacity of the environment and natural resources [9].

In Slovenia, the preparations for meeting the conditions for the operations of such companies have been underway since 2000[10]. During that period, many companies have modernised their technologies, thereby reducing pollution, and many companies still have to take that step. The best available techniques do not only imply technical possibilities for limiting emissions, but also sustainable use of raw materials and energy [5]. Packaging has an important role. In most parts of the developed world, packaging constitutes as much as one-third of the non-industrial solid waste stream. As the developing world races to raise living standards, more countries are seeing significant growth in their packaging waste. At least 28 countries currently have laws designed to encourage reduced packaging and greater recycling of packaging discards. Many of these countries require manufacturers to take back packaging discards or pay for their recycling. There are no federal packaging mandates of a similar nature in the United States. However, state and local government concern about packaging waste continues to grow, while new containers emerge that complicate recycling. More recently, government reductions in recycling subsidies and a growing demand for secondary materials from abroad have placed increased pressures on domestic recyclers, especially plastics recyclers, who are competing fiercely for limited feedstock. New ways to increase the recovery of secondary materials, including packaging and plastics in particular, are clearly needed. Packaging can be made more sustainable by applying the principles of product stewardship. This means:

- Eliminating toxic constituents
- Using less material
- Making packaging more reusable
- Using more recycled content
- Making it more readily recyclable [1].

There needs to be a change in the Waste Management approach philosophy – from managing to economizing waste [6]. This approach means a change in the philosophy of the management of a company, which proves that environmental policy is a part of business policy. So the elements of Environmental Management are included in all elements of business processes, activities and products of this company as in planning, producing and the life cycle of individual products. For this purpose there are various tools and regulations in the organisational and technical-technological field and in the field of controlling human resources and the treatment in line with employee's abilities. The consequences of this (tools and regulations) are economy effects which develop into Sustainable Development effects [8]. Especially in the case of environmental protection and Environmental .

#### **4 Research, development and innovation**

Research, development and innovation are one of the fundamental prerequisites for success in competitive market. The BMW Group is the most successful premium manufacturer in the automotive industry. One of the fundamental prerequisites for this success was and is ongoing leadership and innovation in the construction of cars perceived and acknowledged as leaders by the customer. Innovation upgrades the product in its substance, and only attractive product substance can secure the long-term success of a company in sales [2]. A further point is that innovation is the right tool to clearly stand out from the competition in an increasingly competitive premium market. Modern premium cars today have reached a comparably high level of technology in many respects, the customer taking features such as passive safety and quality for granted right from the start. Innovations in technology give the car maker the opportunity to stand out clearly from the competition and to express the features so typical of a BMW, MINI, or Rolls-Royce in and through the very substance of the product. A further point is that innovative technologies enable the manufacturer to minimise or completely overcome conflicts in interest in the development of a car. But innovation, as seen by the BMW Group, does not

mean developing new concepts and technologies simply because they happen to be new. Instead, new technologies must fulfil specific requirements in order to be acknowledged as genuine innovations [2]. The BMW Group supports the Kyoto targets and has been working intensively for years to reduce its fleet's fuel consumption. The energy strategy pursued by the BMW Group is sub-divided into three steps. In the short and medium term, the fuel consumption of vehicles will be reduced by new, highly efficient engine generations, active aerodynamics, the use of innovative lightweight materials and intelligent energy management within the vehicle. For the BMW Group, all of these activities fall under the concept of BMW EfficientDynamics [2]. Figure 2 presents The BMW Group long-term energy strategy – innovation for lower fuel consumption.



**Figure 2:** The BMW Group long-term energy strategy – innovation for lower fuel consumption [2].

Because of innovation and sustainable development meaning for Slovenian future, the Ministry of Education and Sport supports and co-finances two research projects under the theme of the inclusion of the elements of sustainable development. Within the framework of Target research projects for 2006, the Ministry of Education and Sport co-finances two research projects under the theme of the inclusion of the elements of sustainable development in the school curriculum (Analysis and promotion of integration of education for sustainable development in primary schools; Integration of elements of consumption and sustainable development in school curricula) [5].

The Ministry of Higher Education, Science and Technology promotes research into sustainable development by applying the respective guidelines to its tenders for basic and applied programmes and projects as well as for target research projects (TRP). The following basic research projects are thus

currently co-financed: Sustainable development of urban ecosystems, Sustainable MINLP optimisation of the life cycle of chemical processes; applied research projects Rational use of wood in the context of sustainable forest management, settlements and towns, Sustainable optimisation of the production process for special chemicals; post-doctoral research project Monitoring sustainable competitiveness and development of monitoring in the fields of individual policies; as well as the TRPs Genetic improvement of qualitative and quantitative features of economically-significant agricultural plants for competitive and sustainable production in Slovenia, Intensification of wood production and use as the basis for developing sustainable forest management in Slovenia, Classification and valuation of forest structure adequacy for planning sustainable multifunctional and close-to-nature management, Processing and sustainable use of agricultural physical space in Slovenia, Integration of criteria and measures for achieving sustainable spatial development of towns and other settlements in the broader urban area, Sustainable development of protected areas – integrated approach and the active role of the state; sustainable management in protected areas from the point of view of achieving a well-balanced regional development, Sustainable regulation of transport at the local level, Inclusion of the Koper Port in the framework of sustainable development of the littoral region [5]. Figure 3 presents Koper Port.



**Figure 3:** Koper Port [11]

## 5 Conclusion

In this paper product responsibility is presented as a part of sustainable development and a tool for processes innovation. The importance of Product Responsibility is increasing within a broad range of industry areas. Therefore, what we should develop is an innovation management culture with Product Responsibility. Integrated products responsibility integrates the requirements of sustainable development and environmental management [6]. Product responsibility begins with development of products that are environmental friendly with continual improvement cycle and with processes innovations, even after their use, create the smallest possible environmental load.

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