THE ROLE OF ENVIRONMENTAL MANAGEMENT IN BUILDING RELATIONSHIP WITH SUPPLIERS

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Abstract
The aim of the article is to present the requirements for suppliers related to the implementation of the concept of environmental management. The article analyzes the requirements set by the multinationals to suppliers in the implementation of elements of a environmental management concept. Economic entities’ focus on environmental management systems is aimed at taking actions (both organizational and investment) related to improving not only their environmental impact but also that of their partners in the supply chain. Enterprises which are buyers are not limited to placing stringent requirements on suppliers, many multinationals offer their providers special support programs for the implementation of a environmental management concept.

Keywords: Supply chain management, environmental management, supplier relationship management.

1 INTRODUCTION
Analyzing global trends, it may be noticed that in recent years more and more international companies which are producers of finished products -OEMs (Original Equipment Manufacturers) - pay attention to their suppliers' implementation of the concept of sustainable development, and especially their environmental management systems [1] [2]. This is evident particularly in the case of companies that are signatories of the Global Compact Initiative, one of whose principles is to promote environmental responsibility. These companies specify to their suppliers the requirements necessary to reduce the negative environmental impact of their processes and products, often based on the guidelines contained in the ISO 14000 series. They evaluate and qualify their suppliers guided by ethical standards in codes of conduct To ensure quality of supply, companies require ever closer cooperation on improving products and processes. Increasingly, corporate customers (especially manufacturers) are beginning to focus on the selection of key suppliers, forming long term relationships with them based on improving the technical quality of the product [3]. Many companies, especially those operating on an international scale, in order to further reduce the risks associated with potential bidders, emphasize aspects such as financial standing ethics of suppliers, and also promote their pro-environmental actions. Observing global trends, one may notice that more and more suppliers are monitored in terms of fulfillment of the principles of sustainable development, following the economic aspects (requiring high technical quality, reliability of supply, price competitiveness, service support) and environmental aspects [4].

2 THE TRENDS IN BUILDING RELATIONSHIP IN THE SUPPLY CHAIN
Regarding environmental protection requirements, special emphasis is placed on suppliers by certain Japanese firms, which laid down detailed guidelines for suppliers. Many international concerns more frequently require from their suppliers (of materials for production, equipment, office materials, packaging) detailed confirmation defining environmental goals, documentation, activities aimed at limiting consumption of resources, employee training, reducing factors harmful to the environment (resulting from processes e.g. gas emission, noise, vibration, waste) and disseminating information on performance connected with environmental protection [5]. Attention is most often paid to the following elements while carrying out audits aimed at the evaluation of the functioning of suppliers' environmental management:

- an environmental culture which is connected with the adoption of an environmental policy, identification of environmental aspects and defining environmental goals and tasks;
- adherence to laws concerning environmental protection;
- supervision of the system of environmental management by means of ensuring appropriate documentation (procedures, instructions, records) and resources (infrastructure, technology processes, information systems, appropriately qualified employees) as well as employment of environmental indicators (e.g. those related to energy consumption, natural resources, The waste economy, pollution);
- internal and external communication;
- employee trainings;
- cooperation with suppliers in the area of environmental management (establishing criteria concerning qualification, and monitoring suppliers from the point of view of their environmental operations [6] [7] [8].

3 ENVIRONMENTAL EVALUATION OF SUPPLIERS
The purpose of the environmental evaluation of suppliers is to determine whether the supplier meets the environmental requirements in order to begin (preliminary evaluation) or to continue cooperation (periodic evaluation). Such evaluation includes many criteria, e.g.:

- using an environmental management system (EMS);
- consumption of materials;
- consumption of energy and water;
- air emissions (including greenhouse gases);
- solid waste emissions;
- biodiversity;
- end-of-life product management.

Nielsen et al. emphasize the importance of; using an environmental management system, a green image, environmental competences, environmental performance and environmental improvement costs [9]. Hashemi et al.
highlight environmental training for staff and management commitment [10], while Genovese et al. accentuate the availability of waste management system and green design capability [11].

4 THE EUROPEAN AUTOMOTIVE WORKING GROUP ON SUPPLY CHAIN SUSTAINABILITY

Many programs regarding environmental issues in the supply chain are conducted by automotive companies. The European Automotive Working Group on Supply Chain Sustainability (EAWG) is a sector initiative of several automotive manufacturers, coordinated by CSR Europe, working together to improve sustainability in their supply chain. It consists of several members: BMW Group, Daimler, Ford, Honda, Jaguar, Land-Rover, PSA Group, Scania, Toyota, Volkswagen and Volvo.

Objectives of the group are as follows:

- Sharing experiences and information on sustainability issues in the automotive supply chain.
- Developing and applying common tools.
- Working together on common projects in order to improve sustainability in supply chains.
- Sending a common message to their supply chains concerning sustainability activities and requirements.

EAWG developed a set of rules regarding sustainable operations for its members. It is called the Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain and consists of three parts: business ethics, environmental standards and working conditions, and human rights [12].

Environmental standards included in the guiding principles are as follows:

- Reducing energy and water consumption.
- Reducing greenhouse gas emissions.
- Increasing the use of renewable energy.
- Enhancing appropriate waste management.
- Training of employees.

The second accomplishment of EAWG is the common Self-Assessment Questionnaire (SAQ) on Sustainability for Automotive Sector Suppliers, developed in order to assess the sustainability performance of automotive suppliers. The environmental section of this questionnaire contains the following points: company environmental policy, environmental management system, use of restricted substances and chemicals, environmental audits and supplier sustainable policy [13].

The Self-Assessment Questionnaire is based on The Automotive Industry Guiding Principles to Enhance Sustainability Performance in the Supply Chain.

5 TOYOTA MOTOR CORPORATION

An example of a sustainable management program is the initiative conducted by Toyota – Toyota Environmental Challenge 2050, which is the main theme of the Toyota Environmental Report 2016. Toyota Environmental Challenge 2050 includes six goals to be achieved by 2050:

- New Vehicle Zero CO2 Emissions Challenge – target: to reduce global average new vehicle CO2 emissions by 90% from Toyota’s 2010 global level.
- Life Cycle Zero CO2 Emissions Challenge – target: completely eliminate all CO2 emissions, including materials, parts and manufacturing from the vehicle lifecycle.
- Challenge of Minimizing and Optimizing Water Usage – target: enact effective wastewater management and minimize water consumption based on individual local situations.
- Challenge of Establishing a Future Society in Harmony with Nature – target: promote global rollout of the nature conservation activities beyond the Toyota Group and its business partners [14].

Moreover, Toyota Environmental Challenge 2050 influenced their revised Green Purchasing Guidelines, which is a set of requirements established by Toyota for its business partners in order to enhance environment-friendly business operations. Green Purchasing Guidelines 2016 consist of following requirements:

- Establishment of an environmental management system.
- Reduction of greenhouse gas emissions.
- Reduction of the impact on water environment.
- Promotion of resource recycling.
- Management of chemical substances.
- Establishment of a society in harmony with nature [15].

In comparison to the 2013 version, Green Purchasing Guidelines 2016 places more emphasis on the issues of environmental management of the entire supply chain, recycling, greenhouse gases emissions, water environment and biodiversity.

6 VOLKSWAGEN AG

The environmental policy regarding suppliers of Volkswagen is based on ideals and rules described in two documents: Sustainability in Suppliers Relations, and Code of Conduct for Business Partners.

The main goal of Volkswagen described in Sustainability in Supplier Relations is to become the most sustainable automobile manufacturer in the world. This concept is based on four pillars:

- Sustainability requirements for suppliers that have to be acknowledged by all suppliers before submitting a quotation.
- Contractual integration of the sustainability requirements into the procurement process.
- An early warning system for identifying and minimizing risks along the supply chain.
- Supplier monitoring and development [16].

Sustainability requirements consists of environmental requirements and social requirements.

The process of implementation of supplier compliance of sustainability requirements consists of the following activities: registration on the central portal of Group Business Platform, contractual integration of the sustainability requirements, completing the sustainability questionnaire and using the sustainability training module.

Sustainable requirements consist of environmental requirements and social requirements. Environmental requirements are as follows:

- Creation and application of environmental management systems.
- An active approach to ecological challenges.
- Avoidance of damage to health and the environment; lower resource consumption and greenhouse gas emissions.
7 MAZDA MOTOR CORPORATION

Mazda Motor Corporation implements its Green Purchasing Guideline as a part of Mazda Supplier SCR Guide in order to facilitate activities to protect the environment. Therefore, two initiatives regarding environmental protection are undertaken: Mazda Global Environmental Charter and Mazda Biodiversity Protection Guidelines [18].

Mazda Global Environmental Charter consists of two parts: environmental principles, and action guidelines. Environmental principles are as follows:

- We will contribute to society by creating environmentally friendly technologies and products.
- We will use the Earth's resources and energy sparingly and never overlook environmental considerations when conducting our business.
- We will do our part to improve the environment by working with local communities and society [18].

Action guidelines are presented below:

- Creation of environmentally sound technologies and products.
- Corporate activities in considerations of conserving resources and energy.
- Corporate activities in pursuit of a cleaner environment.
- Working with business partners to create a better environment.
- Creating a Better Environment in Cooperation with Local Communities and Society [18].

The purpose of Mazda Biodiversity Guidelines is to contribute to the conservation of biodiversity through its corporate activities with the following ‘Priority Initiatives’:

- Creation of environmentally sound technologies and products.
- Corporate activities in consideration of conserving resources and energy.
- Collaboration/cooperation with society and local communities.
- Awareness enhancement and information disclosure [18].

As one may see, the first two points of the Action Guidelines and Biodiversity Guidelines are the same, which may indicate the coherence of the actions of the two guidelines.

In compliance with their philosophy, Mazda developed a set of requests for their suppliers to take the following actions:

- Compliance with environmental laws & regulations.
- Establishing an environmental management system.
- Taking actions to reduce environmental impact from business by: developing a greenhouse gas reduction plan, proposing ecofriendly design/products/service, proposing measures to cut greenhouse gas emissions in the logistics process and conduct a life cycle assessment (LCA).
- Controlling the use of substances of concerns (SOC) and recycled materials by compliance with Chemical Substance Regulation (Japan), End-of-Life Vehicle (ELV) Directive (EU), REACH Directive (EU), self-imposed regulation by the Japan Automobile Manufacturing Association and Global Automotive Declarable Substance List (GADSL), reporting the use of SOC and recycled materials using the International Material Data System (IMDS) and compliance with Mazda’s internal standard, MES MA 010 Restricted Substances Management Standard [18].

The Green Purchasing Guidelines were revised in 2014 in order to clarify and revise the management of data regarding parts, materials and substances (e.g. by adding nitrogen trifluoride, recognized in 2013 as a greenhouse gas, to the greenhouse gas list).

8 OTHER COMPANIES OF EAWG

Other members of the European Automotive Working Group also implement their own sustainable supplier management initiatives.

PSA Peugeot Citroen Group applies its Sustainable Procurement Program in order to monitor the environmental performance of its suppliers using the Ecovadis Platform – the first collaborative platform providing supplier sustainability ratings. PSA Group also assesses suppliers by its social and environmental responsibility questionnaire, through which it requires implementation of an environmental management system certified by the ISO 14001 standard, a research and environmental policy, compliance with regulations regarding the usage of prohibited substances and materials. PSA Group also requires its suppliers to have a similar relationships with their own suppliers [19] [20].

Daimler AG addresses sustainable supplier requirements in its code of conduct – Ethical Business: Our expectations of business partners, containing social and environmental requirements for suppliers [21].

BMW Group requires its suppliers to complete a sustainability questionnaire before receiving an order. If there is non-compliance with BMW supply chain principles, the BMW Group Supply Chain Response Team may terminate business relations [22].

Ford Motor Company describes the actions it took to achieve environmental benefits (improvement of fuel economy and reduction of greenhouse gas emissions) as the Blueprint for Sustainability. It is incorporated in its One Ford plan containing requirements for members of the Ford Value Chain [23].

Honda Motor Company also developed green purchasing guidelines, in which the following environmental activities are determined:

- Environmental management activities to ensure environmental control for products (parts and materials) and corporate activities.
- Corporate activities (covering all activities related to Honda products, including not only first-tier but also sub-tier suppliers) to supply these products – development, purchasing, production, administration, transportation, sales, recycling.
- Products (parts and materials) purchased by Honda [24].

Scania applies its sustainability supply chain standard (STD4427), which complies with the Global Compact’s ten principles regarding environment, human rights and labor, and requires from its suppliers transparency on materials by reporting to IMDS (International Material Data System) and the creation and application of an environmental management system [25].

Volvo also follows the principles of the Global Compact Initiative in its Volvo Car Group Code of Conduct for Business Partners. It also abides by the rules of Omtanke, a Swedish concept meaning the care, consideration and protection of what is important. In this context, it means...
minimizing the negative impacts of the company and its products, and contributing towards a better society [26].

The majority of members of EAWG publish sustainability reports and require from their suppliers the application of an environmental management system. Membership of EAWG also provides them with the possibility of sharing their knowledge, practices and using common tools regarding sustainable supplier management and supplier environmental assessment. As of now (March 2017), the European Automotive Working Group on Supply Chain Sustainability is the only sector initiative associated with CSR Europe, and the only formal international sustainable initiative of the automotive sector.

As far as the forecasts regarding automotive suppliers are concerned, a number of factors, that might determine the future trend of environmental management in building relationship with suppliers, can be specified, f.e. increasing significance of circular economy concept, which is consistent with the growing popularity of sharing and service models like carpooling and Uber, public transportation or energy-saving electric and hybrid cars. Suggestions for future research are following: to determine the role of environmental criteria in automotive supplier evaluation and to compare supplier evaluation management systems in different businesses affiliated to different sectoral initiatives, for example: Together for Sustainability (chemical sector) and Electronic Industry Citizenship Coalition, taking into consideration the difference between activities that are voluntary and those required by the law of specific countries.

9 REFERENCES


[21] Daimler AG, 2016, Ethical business: Our expectations of business partners, retrieved from


