



BRC Project Building Responsible Competitiveness

Guidelines to Enhance CSR in the Construction Sector



Sponsored by the European Commission
DG Enterprise and Industry

Grant Agreement N. SI2.ACGRACE020970800

APRIL 2010



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Executive Summary

Socially responsible and sustainable principles have for a long time been limited to isolated initiatives of single market participants. In recent years however, Corporate Social Responsibility (CSR) has made its way into the mainstream of business and an increasing number of companies are nowadays engaging in the further expansion of CSR into their core business activities.

Correspondingly, recent studies such as the Stiglitz-Sen-Fitoussi Commission¹ report and the latest Communications of the European Commission, have put focus on the necessity to go beyond an economic model solely based on economic growth as well as the awareness of the links between the adoption of virtuous behaviors and the long-term creation of value. In this context, the commitment to CSR principles may be considered a core factor for sustainable competitiveness and future growth.

Under this premise, the project “BRC - Building Responsible Competitiveness”, co-financed by the European Commission, sets out to foster Corporate Social Responsibility within the construction sector by involving large companies operating in the field, SMEs that are part of the supply chain, and relevant stakeholders² (business organizations, trade unions, universities). The project covered a period of 18 months and involved ten partners coming from five European countries: Italy, Spain, Austria, Hungary and Portugal.

The toolkit developed by the project which includes the present Guidelines for companies, aims to verify and demonstrate how the adoption of socially responsible behavior (not on a one-off case basis but according to a strategic approach) enhances the competitiveness of business in the construction sector and the territory it belongs to.

The elaboration builds upon an in-depth analysis of 44 best practices in the areas of health and safety; responsible supply chain management; eco-compatibility and equal opportunities along the lines of a social value chain model (Porter). In particular, the analysis is based on the assumption of a constant interchange between a company and its external context that is considered as having reciprocal effects on each others competitiveness.

Therefore, the assay of best practices in the present document bases itself on the interrelation between a company and its societal context. In particular, it highlights the costs and benefits for the company, the facilitating and hindering factors related to the adoption of socially responsible practices, as well as the benefits for the community. This model enables to overcome a vision according to which CSR and business are dimensions separated from one another and contributes to their integration under a logical and operational profile. The Guidelines have been developed in collaboration and with the contribution of companies from the construction sector and related stakeholders.

1 Report of the International Commission on Measurement of Economic Performance and Social Progress, under the initiative of the French government to study metric alternatives to the GDP: www.stiglitz-sen-fitoussi.fr/documents/rapport_anglais.pdf

2 Stakeholders are defined as “any group or individual who can affect or is affected by the achievement of the firm’s objectives”, Freeman, R.E., “Strategic Management: a stakeholder approach”, Pitman, Boston, 1984

Health and Safety

Due to the specific context factors and workflows that apply to the construction sector (intense use of workforce, risk of accidents, et al.), health and safety issues play a vital role in the operational performance of companies.

Looking at a company's external context of health and safety issues, it can be stated that this field reflects a high level of political attention and regulation. Hence, companies have to comply with a multitude of legislation. Being able to anticipate the future evolution of laws bears potential for the effective exploitation of a competitive advantage vis-à-vis other companies as it enables them to maintain production efficiency and to avoid wastage and costs arising from the necessity to comply to unexpected rules within short delays.

Moreover, the implementation of sustainable health and safety conditions has a positive impact on efficiency and employee well-being, in turn, increasing productivity. Furthermore, the reduction of injuries and their associated costs (penalties, social insurance, absenteeism, fall-out) directly influence operational performance.

Specific solutions to tackle the challenges of health and safety can be:

- Training programs for workers to increase awareness and knowledge on health and safety issues, also tailored to immigrant workers speaking different languages (cf p. 13);
- Control systems to ensure the application of safety standards, internally and in the supply chain (cf p. 16);
- Use of cutting-edge and safer equipments (cf p. 16);
- Improve employees health by physical activities and warm-up exercises (cf p. 17);
- Increased transparency and control along the supply chain (cf p. 16);
- Develop partnerships with external consultants and local experts to assess and intensify necessary actions in the field of health and safety (cf p. 18);
- Use of healthy building materials (cf p. 18).

Eco-Compatibility

The term eco-compatibility touches upon various issues; from the reduction of CO₂ emissions or the re-use of waste materials to noise pollution, urban and landscape impact as much as the aesthetic and practical harmonization of buildings with their surrounding contexts. According to the European Commission, buildings are responsible for the use of more than 40% of the total energy consumption of the European Union, therewith positioning the construction sector as an important strategic tool for the achievement of environmental policies. Especially in light of national government targets for the reduction of CO₂ emissions and the rising public demand for environmental sustainability (i.e. energy-efficiency), the issue of eco-compatibility implies significant challenges and opportunities for construction companies.

Adding to this, eco-compatible product innovation opens up new markets and extends the outreach to new customer groups.

The possible ways to address these issues include the following:

- Eco-compatible conception of buildings (green buildings) (cf p. 24);
- Sustainable management of construction processes and materials life-cycles to optimize resource-efficiency, waste management, transport etc. (cf p. 25);
- Implementation of environmental and sustainability management system standards into the supply chain (cf p. 27);
- Stakeholder engagement with regards to the adoption of sustainable practices during the working process (use of equipment etc.) (cf p. 28);
- Research and Development investments (cf p. 29).

Responsible Supply Chain Management

The construction sector is characterized by a multitude of actors that contribute to the production process. Here, the complex supply chain composition of individual construction companies as well as the importance of sub-contracting reflects the significance of responsible supply chain management in the sector in order to ensure compliance with social, environmental but also qualitative standards along the production process, thereby increasing competitiveness.

Measures that allow for increased transparency and control in the supply chain include:

- Responsible selection of suppliers via a set of specific CSR criteria and correspondent implementation mechanisms (cf p. 35);
- Monitoring and evaluation systems for suppliers (cf p. 36);
- Awareness-raising and proactive supplier engagement on the promotion of socially responsible behavior (cf p. 37);
- Limitation to the number of sub-contractors. (cf p. 37).

Equal Opportunities

Equal opportunities deals with the valorization of people, regardless of gender, origin, ethnicity, age and others. In this respect, the societal trends such as demographic change, an increasing number of women in higher education or immigrant inflows pose challenges to companies to adapt their recruitment and employee management systems to new conditions. Here, it is important to highlight the need to deploy a structured approach towards equal opportunities, as it deals with people from different backgrounds and with diverse needs. Because of those demographic changes, women will represent an added value for the competitiveness of a company: the perspective brought by women, their significant level of entry in the labor market and their high rates of skill and educational level provide an opportunity to attract skilled talents.

Many researches show that companies that developed diversity policies revealed that their workplace diversity has contributed to innovation and creativity in the company and is key to business performance and development³.

Hence, potential solutions and approaches include:

- Integration of equal opportunity policies into the company's organizational principles and internal governance (action plan, code of conduct, trainings for human resources managers) (cf p. 43);
- Tools for work - family life balance via supporting structures and facilitations (flexible working hours, reintegration after maternity/paternity leave via trainings, financial contributions) (cf p. 45).

The underlying contribution on "Building Responsible Competitiveness: CSR Guidelines" provides an in-depth analysis on the costs and benefits of adopting the above CSR policies and showcases the best practices in this field as implemented by construction companies across Europe.

³ For instance, see: <http://www.csreurope.org/pages/en/mainstreamingdiversity.html>

1. Introduction

These Guidelines have been created under the European project “*Building Responsible Competitiveness*” (BRC)¹. The project has carried out important theoretical research on CSR issues related to the construction sector in five countries: Italy, Spain, Austria, Hungary and Portugal. However, being aware that this is an extremely broad scope of analysis, the project partners decided to condense the field of research to the following four CSR areas: health and safety; responsible management of the supply chain; eco-compatibility and equal opportunities.

How to use the Guidelines?

The Guidelines are targeted at companies in the construction sector with the aim to promote the adoption of CSR practices and to develop business actions in accordance with desired economic and sustainability performances.

In this regard, the following elaboration has been developed as a support mechanism for enterprises in the construction sector to improve their business, by facilitating an understanding of the factors that contribute to the creation and returns of economic and social value.

The Guidelines were developed taking into consideration the exigencies of big as well as small companies (except micro ones with less than 10 employees). The concrete experiences and best practices from these companies were analyzed.

Companies in the construction sector are encouraged to use these Guidelines as a tool for supporting the practical management of responsible business practices.

For each of the four CSR topics, the Guidelines present first a brief theoretical framework, based on the document “*CSR in the construction Sector: state of the art and regulatory framework in the EU*”². Then they analyze the company’s external context, to show how best practices may be conceived as a reaction to opportunities or critical situations that tend to emerge in the external context. An analysis of the company’s internal context, highlighting that there are facilitating or hindering aspects, benefits or costs that may influence a company is also drawn. The Guidelines focus on the description of the possible solutions for each of the four dimensions. Finally, they include a brief analysis on the role of public authorities, trade unions and business associations, as well as a synthesis of the main management standards that have been set in the field of CSR.

1 BRC Project - Building Responsible Competitiveness - DG Enterprise and Industry - Grant Agreement N. SI2.ACGRACE020970800. The project (which started in 2008 and will end in 2020) aimed at investigating the relationship between the value (economic and social) gained by the company for the conduct of its business from the environment to which the company belongs, and the returned value given back from the sector to all stakeholders to downstream of the production process.

2 The document is the abstract of the research carried out in the first part of the BRC project (2009). The document is available for downloading in the “European projects” section of the website: <http://www.improntaetica.org/?lang=en>

Methodology

The Guidelines are the result of qualitative research carried out by the BRC project. The partners in the project analyzed 114 best practices within the four aforementioned focus areas. Here, the collection of best practices has been carried out through online research, consultation of national and international CSR databases, companies' sustainability reports and, in some cases, through direct contact with the companies.

An in-depth analysis of the best practices has been the manner through which the Guidelines have been developed. 44 best practices were selected for this analysis which is based on Porter's theoretical scheme of "social value chain" (briefly introduced in the next chapter). The following criteria have been used for the selection of the practices: completeness of the case study, innovative potential, transferability, representativeness of the 4 analysed CSR dimensions, and of the five countries involved; and the prevalence of general contractors over suppliers in order to focus on the main part of the production process and reduce the field of research.

The research adopted a multistakeholder approach, aiming to involve different stakeholders, such as companies, business associations, trade unions, public administrations, general contractors, research institutes and academics. For the purpose of the research, interviews have been carried out with representatives of the above stakeholders through application of a specific survey.

Moreover, the Guidelines have been validated during workshops organized in the five countries involved in the project, to which representatives of companies and other relevant stakeholder have participated.

Terminology

For the classification of companies, the definition of the European Commission of small and medium-sized enterprises has been used: *"the category of micro, small and medium-sized enterprises (SMEs) is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding €50 million, and/or an annual balance sheet total not exceeding €43 million"*³. The two parameters are therefore the number of employees and the annual turnover.

This definition distinguishes a SME from a big company (BC). In the present Guidelines, the definition big company is used if the enterprise is working nearly totally in its country of origin, whereas the expression multinational enterprises (MNE) refers to companies that are based contemporary in different countries and have significant construction sites abroad. Throughout these Guidelines, branches of multinationals use the acronym of multinational companies.

³ Recommendation 2003/361/EC adopted on 6th of May 2003 by the European Commission regarding the SME definition which replaced Recommendation 96/280/EC as from 1st of January 2005.

2. Socially responsible company: an interpretative model

According to Porter⁴, “in order to advance CSR, it must be rooted in a broad understanding of the interrelationship between a company and society while at the same time anchoring it in the strategies and activities of specific companies”. The mutual dependence of companies and society implies that “both business decisions and social policies must follow the principle of shared value”. That is, choices must benefit both sides. “To put these broad principles into practice, a company must integrate a social perspective into the core frameworks it already uses to understand competition and guide its business strategy”.

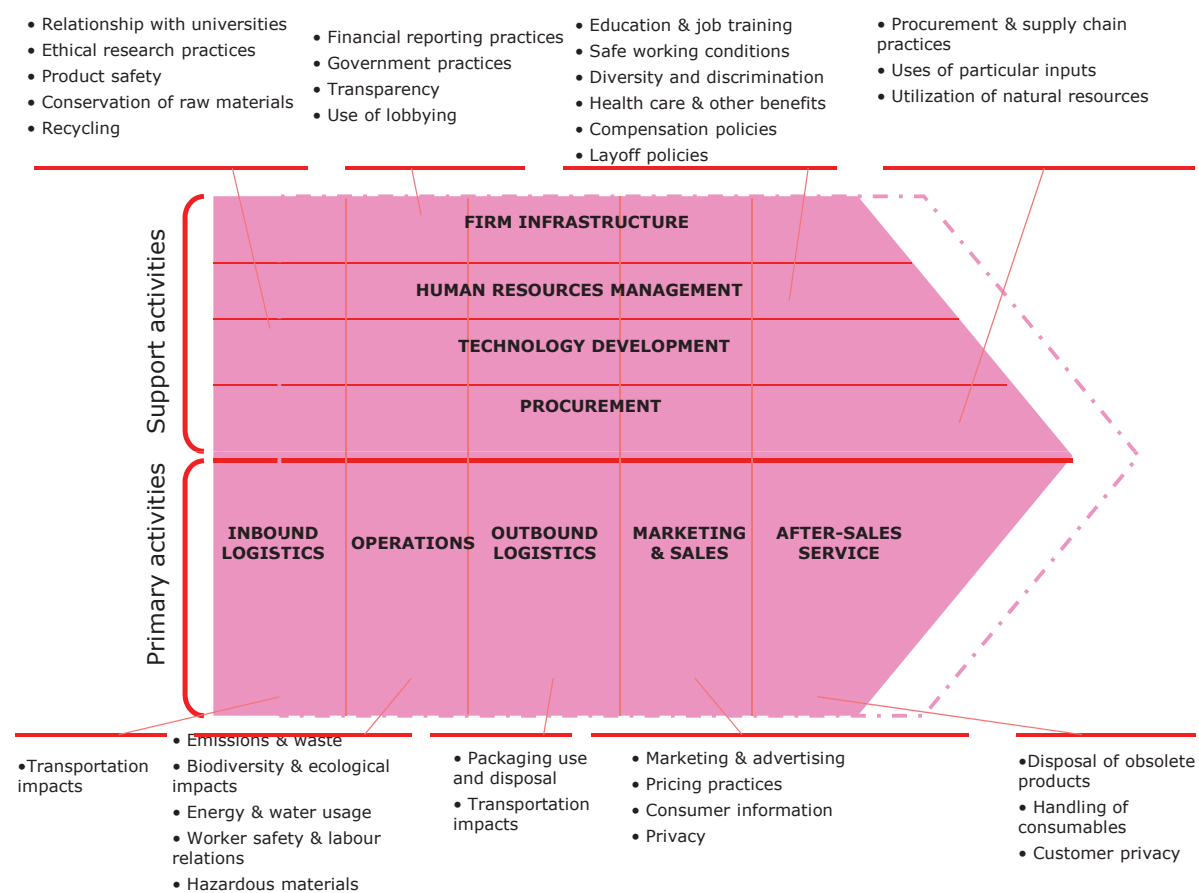


Fig.1: Porter's Social Value Chain

Source: M. E.- Porter, M. R. Kaplan, “Strategy & Society – The Link Between Competitive Advantage and Corporate Social Responsibility”, Harvard Business Review, December 2006

4 M. E.- Porter, M. R. Kaplan, “Strategy & Society – The Link Between Competitive Advantage and Corporate Social Responsibility”, Harvard Business Review, December 2006

Along the line of Porter, the interdependence between a company and society takes the following two forms:

1. A company impacts society through its daily business operations: these are *"inside-out linkages"*. Virtually every activity in a company's value chain touches on the community in which the firm operates, creating positive or negative social spillovers. The value chain that is traditionally used can be re-interpreted in order to analyze the company's processes and its strategic approach, to make their effects more explicit.
2. Not only does corporate activity affect society, but external social conditions also influence companies. These are *"outside-in linkages"*. Every company operates in a competitive context, which significantly affects its ability to carry out its strategy, especially in the long term.

Figure 2 represents the connection between a company and its external context, which takes form through *"inside-out linkages"* (time 1) and *"outside-in linkages"* (time 2).

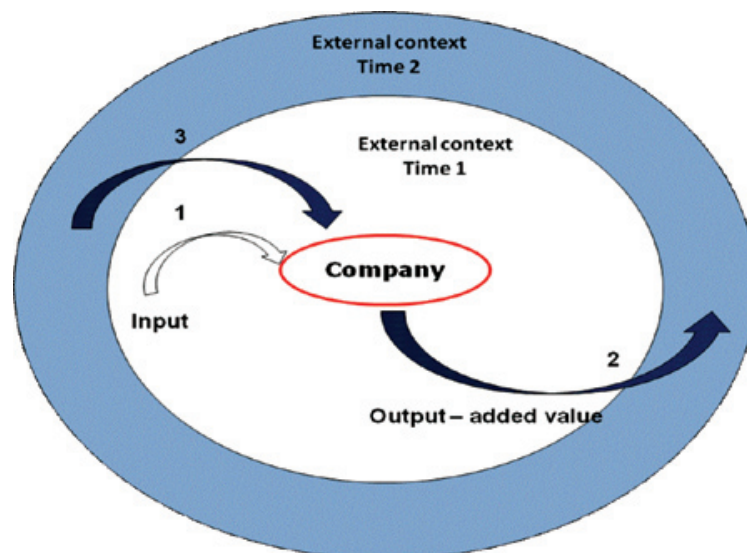


Fig.2: The relationship between company and external context

Source: BRC Project

CMB Carpi has been among the first companies in the construction sector which introduced the use of the Porter's social value chain as a logical way to analyze the company in its organizational and operational processes. The model proposed by CMB allows a more efficient system of control by the social base, the integration of environmental protection into the production line, in service provision and the increasing of the awareness of the employees.

From a methodological point of view, the project implemented by CMB Carpi specifically describes the creation of value generated by the activities of the production chain. By developing its own chain of social value, CMB has obtained a synthetic indicator system to respond to three questions that simplify reasoning that could be produced by a company in terms of CSR: does my company work well? How is the progress /development of the CSR program approved by the company? Which are the impacts generated by the company on the social-economic-environmental context?

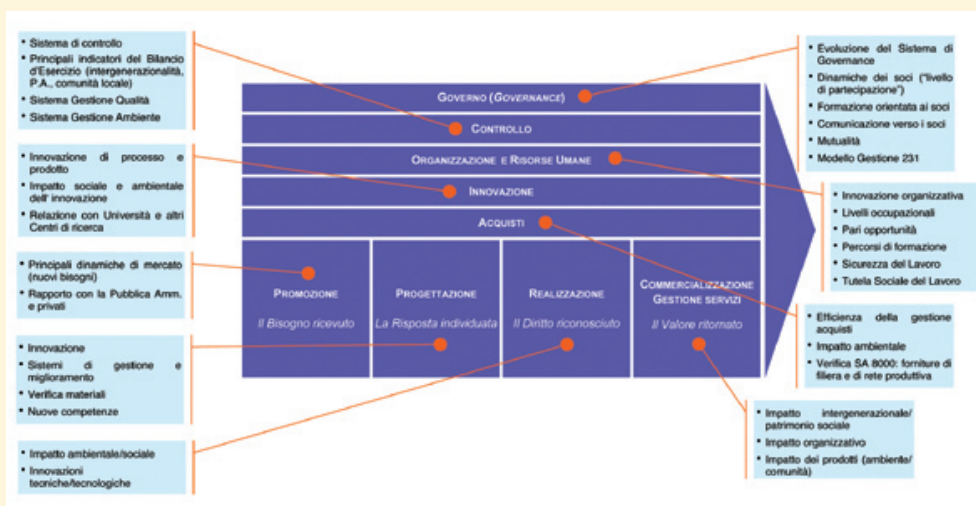


Fig.3: CMB's social value chain
Source: Social Report 2006

3. Corporate social responsibility in practice

3.1 Health & Safety

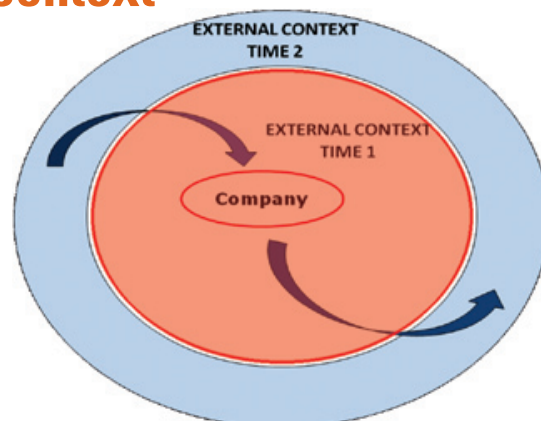
Health and safety issues are of particular relevance for the construction sector due to specific workflows and context factors that imply an intense use of workforce and high degree of exposure to the risks of accidents and injuries. For this very reason, the preventive measures and numerous legal norms that have been set by national governments must be considered as a key issue in the construction sector. Hence, if a company complies with requirements related to health and safety, it will decrease the risk and seriousness of accidents, avoid experiencing interruptions in the business process, and prevent any potential delays in terms of meeting its objectives. Moreover, non-compliance can lead to sanctions causing financial implications for individual companies.

According to the analysis, companies that develop health and safety programs, also beyond basic legal requirements, can obtain an added value for the business. Employees working in safe sites are less exposed to injuries, thus helping companies to avoid losing human resource. Employee safety may have a direct positive effect on a company's productivity and efficiency. A company which works towards ensuring that its employees are protected and safe at work is more attractive to valuable and competent resources.

Investments in health and safety can also contribute to the stability and transparency of the company's supply chain, and consequently reinforce the protection of health and safety on work sites. This is particularly valid in terms of selection of more reliable suppliers (and consequently more qualified ones), and in terms of prevention of reputational risks deriving from non-compliant behaviors along the subcontracting chain.

3.1.1 Analysis of the external context

The underlying assumption is that the external context influences the company in taking decisions. With regards to health and safety, internal management solutions are connected and influenced by this external context, mainly through two aspects: the necessity of compliance with existing legislation, and the need to prevent injuries or deaths caused by accidents that may occur in the workplace.



STAKEHOLDER	Related opportunities and limits perceived by the company
Central/Local Administration and Public Authorities with controlling functions	Securing health and safety in the workplace is of strong political and social importance. Public authorities, both at European and national level, tend to have stringent regulations on this issue. In this light, companies can choose to not only comply with existing legislation but also to go beyond existing legislation. This extends the margins to which companies are able to proactively tackle challenges more creatively and autonomously without being compelled to comply with legislative norms in a reactive way.
Employees	A company is made by its employees, and the adoption of practices which look to improve and secure their health and safety conditions, brings advantages for the company in terms of productivity and workers' retention.
Trade Unions	Trade unions are important actors in this field and can play a role in influencing company behaviour. There are many cases where trade unions promote the importance of health and safety issues and encourage that companies tackle it through openness to dialogue and partnerships for the implementation of specific projects.

3.1.2 Possible solutions: the best practices analyzed

In order to address the challenges related to the construction sector, in particular the risks of accidents and injuries in the work site, various good practices have been identified. It is worth highlighting the importance of general professional training provided to workers, as an increased quality of work is the basis for improved safety. They focus specifically on linking health and safety measures to the competitiveness of individual companies.

A company can intervene on different aspects, but one solution may be more suitable to a company than to another, according to its priorities, its features and the context.

Provide employees with appropriate knowledge and training on health and safety

Employees trained on health and safety at work are more aware of risks and subsequently will be more capable of safeguarding themselves against the risks implied in construction activities. When applying such a practice it is important not to promote isolated trainings but to build structural approaches for health and safety challenges.

It is important to underline that these good practices, related to employees' training, are an example of practices which go beyond the law, as legal systems foresee only low standards of information and training of employees. Employees operating in the construction sector are not always conscious of the risks associated with the environment where they work.

Companies should provide them with the conditions to know the risks related to their job to prevent accidents and react to emergency situations. A company needs to develop initiatives which aim to make employees aware of health and safety issues. This can be done through personal protection devices, the procedures dealing with specific situations (for example, how to turn off specific engines) and how to prevent or manage emergency situations in the best way.

These could look like primary measures, but it is important to expose and develop them, because the number of accidents and injuries shows that even these aspects often are not taken into account or are underestimated. Therefore, it is important to tackle the issue of health and safety with employees to avoid accidents.

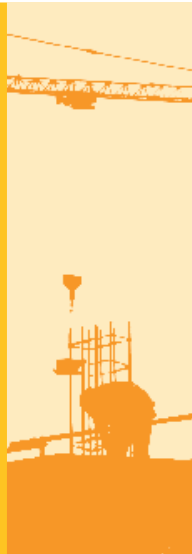
- **Bouygues Enterprises France-Europe** (France - MNE) wanted to provide training to its employees around health and safety and social development as a way to address this challenge. The company organized a meeting on *"My Commitment to Health and Safety"* held on April 2008. The event marked the launch of a proactive policy whose target was *"zero accidents"*, aimed at increasing company's reputation and reduce costs related to accidents.
- **Holcim** (Italy - BC), aware of the importance of creating the basis of a safety culture within the company promoted the project *"OH&S Awareness Campaign"*. This initiative included workshops on Health & Safety engaging all employees in the company. The company developed communication tools, such as pocket guides, posters, videos on these issues.
- **PORR Gruppe** (Austria - BC) due to the high accident rates in the construction sector in general, PORR Group decided to develop the *"More Safety on the Construction Site"* project. The program foresaw three weeks of obligatory training on safety topics for apprentices.
- **Grupo Lena** (Portugal - SME) develops a constant training for workers, in order to minimize risks and occurrence of accidents in line with the OHSAS18001 standard. In particular, the system which has been implemented aims to respond to the development of the health and safety management system, the risks' evaluation through each sector of activity, training in health and safety, internal investigation of the accidents and development of new action plans.

• Develop training tools for immigrant workers

Immigrant workers are participants in the labor market of European countries and represent a great potential for companies. The construction sector is generally characterized by a high presence of immigrant workers. Different cultural backgrounds might influence behavioral patterns of workers and may turn out to be unsecure on worksites. Therefore it is important that companies consider this aspect in order to develop specific awareness-raising campaigns for workers from different cultural backgrounds. Moreover, one of the challenges construction companies must face is to provide these workers with high-quality trainings that they are able to understand. In fact, it is critical to enable them to understand their workplace environment and the risks involved.

This improves the integration of immigrants in the company, and guarantees that immigrant workers have the capacity to respond correctly in case of emergency situations and are able to better contribute towards a safe and productive workforce.

- **Contratas y Obras Empresa Constructora** (Spain - SME) has realized that the construction boom in Spain generated a high concentration of immigrant workers in sub-contracting companies. To face this situation, it has developed on-site safety manual for immigrant workers in various languages covering most of the spectrum of countries of origin of these workers (Chinese, Arabic, Romanian and French). In the meantime, it combined this initiative with a system of control on the supply chain (see box next page).
- **CMB Carpi** (Italy - BC), in partnership with the Health service of Modena, organized health and safety lessons for immigrant workers from mostly Romanian and Moldavian heritage that constituted the main part of the company's workforce. The lessons dealt with health issues and risks linked to the use of alcohol and the consumption of alcoholics during work time. An anonymous survey was distributed to workers to learn about their daily habits with regards to smoke, alcohol and diet. Afterwards, training lessons were organized and training material written in the workers' mother tongue was distributed.



Adoption of cutting-edge equipments

The use of cutting-edge technological equipments in the worksites (such as scaffolding with devices to prevent accidental falls) may be considered as an important instrument to prevent accidents and to safeguard workers' safety.


Develop a control system in the supply chain to increase stability and transparency

The construction sector is characterized by a long and complex supply chain composition of subcontractors, where the respect of health and safety principles in the worksites is directly linked to the stability and transparency of the supply chain. An effective monitoring of the worksites and of all the actors involved is seen to improve the communication on risks and standards to workers. Moreover, it contributes to detecting non-compliant behaviours and helps in making correspondent interventions (cf chapter on the supply chain, p. 33).

Thus, improving control systems within a company, surpassing the standards foreseen by the legislation, can facilitate greater safety at work. To ensure proper control and monitoring systems are in place, companies need certain tools, especially as it relates to the monitoring of their suppliers and subcontractors.

Such mechanisms can be site inspections by qualified services (for instance an external consultant) in the general contracting company and their supplier companies or health and safety reports to assess performance and provide recommendations for improvement.

It is suggested that monitoring and control procedures are combined with training programs to ensure maximum efficiency around the creation of a safe and health workplace along the supply chain.

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- **Skanska Property Hungary Ltd.** (Hungary - MNE) developed an educational program with workers and subcontractors before they began to work on the site. This strengthened its health and safety performance assessment, planning regular site inspections, also through collaboration with an external consultant, who was in charge of writing a monthly report aiming to evaluate performances and improve safety procedures.
 - **Contratas y Obras Empresa Constructora** (Spain - SME) developed a system of control based on a personal, non-transferable identification card and access via a colour code (in helmets). This allows individuals to distinguish which supplier a given worker is from.
 - **CIMPOR** (Portugal - SME), to minimize risks for employees and other parties involved in the general activity of the company, adapted its occupational health and safety management systems to the requirements foreseen by the OHSAS 18001 standard. This measure allow the company to continually improve its H&S internal management system.

Improve employees' health

Health is strictly related to safety: a healthier work environment and employees means a safer production process for a company. Physical activities involved in the processes of construction can have negative effect to employee health. Therefore, strategies which aim to ensure health of employees and preventive measures to facilitate a health environment are crucial for the proper functioning of a company. An efficient health management strategy aims both to train employees' physical conditions to prepare them for physically-intensive labor and to improve workplace health standards.

- **Bouygues Entreprises France-Europe** (France - MNE) deployed several activities and initiatives, such as the possibility of "warm-up" exercises for their workers at the beginning of each day. These exercise aim to ensure the minimal health issues related to starting work in the morning and to prepare employees for physically challenging labor, such as that implemented within construction sites.
- **Dipl.Ing. Franz Robier Baugesellschaft m.b.H.** (Austria - SME) developed the programme "BAUfit" Twice a week a sport physician came to do half an hour of practical exercises and two hours of monitoring and individual evaluation of progress while the employees were following their daily business.
- **Construcciones Llabres Feliu** (Spain - SME) offer an external prevention service which monitors workers' health both through medical examinations and periodic check-ups. This service aims at evaluating workers' aptitude on performing their duties and/or the impact that specific tasks may have on workers' health condition. Moreover, the company drafts specific risk assessment reports, as well as provisions of the necessary training in the area of prevention of accidents in the workplace. Periodical health and safety Committee meetings also take place. They are the main tool for the integration of accident prevention in the company policy as they foresee regular periodic consultation on risk prevention actions.

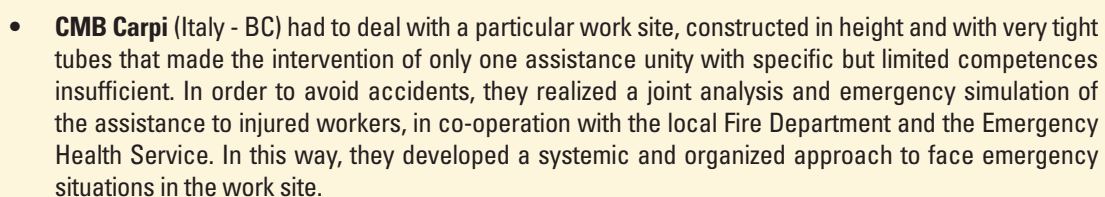


Develop partnerships with other actors in the territory

Managing health and safety requires specific competences that a company might not have. Depending on the external context of a company's operations, individuals with such competencies may or may not be easily available. Partnerships with different organizations and authorities could be a solution which makes tackling such health and safety challenges easier and more efficient.

For example, and in the context of the construction sector, it could be valuable to partner with the Fire Department of the company's municipality or province, the Emergency Health Service and with local institutions, Universities or other.

Such partnership allow for the implementation of such strategies, while reducing the amount of resources required by companies and supporting the development of skills and individuals from local, community groups. Such partnerships with other local actors can be repeated in future projects for achieving the maximum benefit for the community, its workers and the company.

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- **CMB Carpi** (Italy - BC) had to deal with a particular work site, constructed in height and with very tight tubes that made the intervention of only one assistance unity with specific but limited competences insufficient. In order to avoid accidents, they realized a joint analysis and emergency simulation of the assistance to injured workers, in co-operation with the local Fire Department and the Emergency Health Service. In this way, they developed a systemic and organized approach to face emergency situations in the work site.

Coordination of the companies present on the construction sites

As many construction sites tend to involve different companies, they could join forces to ensure that for a given site health and safety strategies are a combined effort. Thus, reducing the amount of resources individual companies need to implement and reduce the occurrence of potential problems linked to the presence on a given construction site of workers employed by different companies and involved in different tasks with different risks potentials.

Use of healthy building materials

In order to ensure a greater protection of workers' health, it is important that the company chooses building materials that are as healthy as possible, mainly by paying attention to the composition of materials that are used and by giving preference to natural, healthy and ecological materials. Moreover, a greater attention given during the construction and design phases can ensure more safety in the internal environment, to the benefit and protection of the final users.

3.1.3 Analysis of the effects

The internal context

In adopting such practices there are costs and benefits as well as facilitating and hindering aspects for a company that may influence its action, directly linked to its internal context.

BENEFITS arising from the adoption of socially responsible behaviors

- *Substantial reduction of injuries and collateral damage for workers*
- *Development of a systematic approach to emergencies derived from accidents*
- *Lower costs associated to injuries (for social insurance and to cover work absenteeism)*
- *Reducing costs related to suspension of the production process*
- *Lower risk of penalties, suspension of activities, foreclosure financing*
- *Preventing the risk of occurrence of social tensions related to injuries in the work place*
- *Increasing employees' commitment and loyalty as well as a company's attractiveness for specialized workers*
- *Improvement of the institutional reputation within the company (employees) and externally (Public Administration, banks, supplier, civil society)*

COSTS related to the adoption of socially responsible behaviors

- *Indirect costs related to the impossibility to carry out normal work activities of employees attending educational trainings*
- *Indirect costs related to organizational change in the internal culture, and to the overcoming of internal resistances due to changes in procedures and processes*

FACILITATING FACTORS related to the adoption of socially responsible behaviors

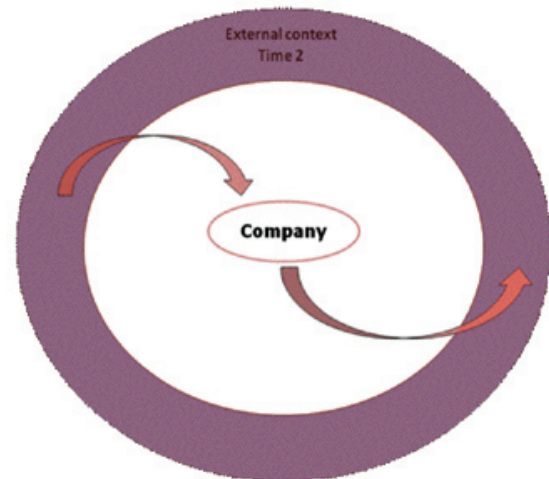
- *Awareness and commitment from the company's top management on the importance of a right approach to the management of emergency and prevention issues in the construction sector*
- *Internal collaboration and readiness to change among workers*
- *Widespread culture of health and safety protection and respect of law in the territorial context of reference*
- *Adequate availability of time and money, for the realization of specific training activities*
- *Ability of the company to cooperate and create partnerships with other social actors to achieve specific objectives*
- *Greater enhancement of Health and Safety issues in public procurement, and other initiatives coming from public authorities*

HINDERING FACTORS related to the adoption of socially responsible behaviors

- *Lack of innovation within the company's culture, hostility to change, consolidated processes*
- *Lack of awareness on the importance of protecting the health and safety, from companies' management and employees*
- *Tolerance of lawlessness within the territorial context of reference*
- *Limited amount of resources, in terms of money, time and human resources*
- *Poor relational capital of the company and consequent difficulty in establishing synergies*
- *Widespread use of subcontracting, unstable working collaborations*

The external context

The adoption of socially responsible practices by a company has an influence on the external context of reference, and contributes to change it.



BENEFITS FOR THE COMMUNITY related to the adoption of socially responsible behaviors

- *Increase in the confidence towards the construction sector*
- *The establishment of synergies and partnerships between different local actors that can be applied in future projects and could generate important benefits for the local society*
- *Lower level of health care expenses and people with higher health level*
- *Positive social impact on the life of employees and their families in the community*
- *Reduction in social uncertainty*

3.2 Eco-compatibility

The term eco-compatibility touches upon various issues that impact on the operational business of construction companies; from the reduction of CO₂ emissions or the re-use of waste materials to noise pollution, urban and landscape impact as much as the aesthetic and practical harmonization of buildings with their surrounding contexts.

Especially in light of national government targets for energy saving and reduction of CO₂ emissions and the rising public demand for environmental sustainability, the issue of eco-compatibility implies significant challenges and opportunities for construction companies. Hence, on the one hand the European Commission estimated that buildings are responsible for the use of more than 40% of the total energy consumption of the European Union, therewith positioning the construction sector as an important strategic tool for the achievement of environmental policies. On the other hand, increased public awareness towards sustainable environmental performance has given rise to new requirements and demands in the construction process and the final product, such as limited environmental impact or low energy consumption.

Following this, a commitment to eco-compatible performance improves the reputation of a company and encourages the development of innovative practices. In particular, eco-compatible product innovation and the construction of buildings under application of green criteria opens up new markets and extends the outreach to new customer groups.

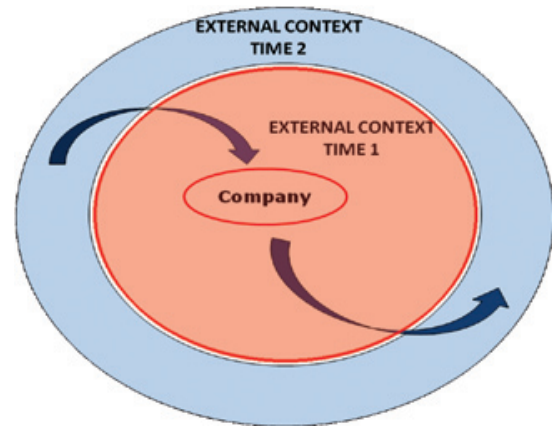
In order to respond to these challenges and capitalize on potential benefits, management and governance systems have to be build upon concrete eco-friendly principles to be further cascaded into the operational process and the supply chain.

Moreover, specific training programs can be used to train workers on the issue of eco-compatibility, therewith raising awareness for the need of efficient implementation of environmental principles on all company levels and promote coherence of eco-compatible behaviors and objectives.



3.2.1 Analysis of the external context

The construction market is changing rapidly. This is due on the one hand, to the evolution of legislation in this sector that imposes more and more restrictions in favor of environmental protection, and, on the other hand, to customer demand which is characterized by an increasing focus on sustainability.



STAKEHOLDER	Related opportunities and limits perceived by the company
Clients/ consumers	Private and public clients preferences are changing. There is an increased attention towards sustainability criteria (in particular, with regards to energy efficiency).
Local Administrations/ central administrations	Here, the influence of local and central administrations on construction sector companies is mainly linked to: <ul style="list-style-type: none"> - the continuous evolution of laws on eco-efficiency and eco-compatibility and the tendency of companies to anticipate those changes; - provision of incentives and support (financial & non-financial)

3.2.2 Possible solutions

Eco-Compatibility may refer to numerous aspects of environmental sustainability that can be tackled on different levels of corporate structures, such as companies' internal systems, their construction sites and/or the supply chain.

Moreover, a company approach towards eco-compatibility needs to be holistic in order to include all operational activities that may have environmental impact, such as waste management, energy consumption, transports et al.

Development of eco-compatible buildings

In the field of eco-compatibility, one approach for construction companies can be to develop a strategy for eco-friendly buildings that is based on environmentally responsible and resource-efficient processes, structures and tools. In particular, the criteria of green building foreseen and certified at an international level by the World Green Building Council¹ cover: the reduction of energy consumption; raw materials saving; restraint of water consumption; reduction of CO2 emissions; choice of materials according to health and eco-compatible criteria.

The sustainable planning of a building's life-cycle is of major importance in order to optimize eco-compatibility from the location to the construction, from the design to the maintenance and renovation. Especially it is important to ensure a regular interaction among all the designers involved (architects; engineers; installers, etc.), in order to guarantee more efficiency and an optimal coordination.

1 <http://www.worldgbc.org/>

- **Pirelli & C. Real Estate** (Italia - MNE) responded to the evolution of the construction market in launching an “*Eco-building*” program for operating in an environmental respectful way and to offer products that comply with high sustainability standards. The program foresaw four areas of intervention: energy efficiency, eco-compatible materials, renewable sources, and home comfort.
- **Mischek Bautreger Service GmbH** (Austria - SME) developed the “*eco-pass*” project, in collaboration with the Austrian institute for biological and ecological construction (IBO) and construction experts. The project foresaw a general set of legal, ecological and biological standards based on comfort, health and energy-efficiency and ecology. In particular, some evaluation criteria were based on noise protection, quality of internal air, use of water and ecological materials. The IBO institute gives the eco-pass after operating controls on the buildings to check their conformity with those standards.
- **Contratas y obras** (Spain - SME) considered the fact of having a LEED (Leadership in Energy and Environmental Design) certification to promote actions and projects aiming at increased sustainability. For this reason the company set up a new business unit in charge of designing sustainable projects. The company also trained and raised awareness of employees and the human resources unit on issues related to sustainability. Moreover, the company promoted a collaboration with the University in order to develop a research on sustainable innovation,. Finally it bound its contracts with suppliers to the use of resources and materials with reduced CO2 emissions.
- **Geda Construction** (United Kingdom - SME) built an eco-village (residential sector), Coill Darach, on the basis of high sustainability and energy efficiency standards. The buildings of the village had solar panels for water heating and a system of rainwater recycling.

Sustainable management of construction processes and materials' life-cycles

Construction processes are characterized by a multitude of activities. The reduction of environmental impacts of each single activity in the process, from waste management or recycling of materials to transport and use of equipment, offers the potential to optimize the use of available resources.

The starting point for such efforts is the analysis of the internal management, where environmental impacts need to be evaluated and tools for their reduction can be developed. Here, construction companies need to consider the entire life-cycle of materials that are used for reaching the final output. In the end, decisions taken at management level need to cascade efficiently to the construction sites as they represent the main “centre of activity”, therewith, offering the greatest potential for eco-efficient operational performance.

Hence, eco-compatible management of construction processes and product life-cycles can optimize resource-efficiency, for instance waste management, transport, use of equipment, etc.

• Develop tools for an efficient use of resources

One of the major aspects for the reduction of environmental impacts is related to the efficient use of resources. At construction sites and in internal management, a company can reduce its environmental impact by following concrete eco-efficiency standards and models aiming to optimize the use of resources related to the activity of the company (such as reduction of water consumption; use of renewable energies; use of ecological vehicles for workers and company's employees displacements).

This can also be related to the reduction of CO2 emission through a strategic choice in the two stages of the operational process (on the side of suppliers and of the customers) and the involvement of local actors operating on the territory. In particular, the choice of partners should respect the criteria of proximity in order to minimize displacements.

- **Skanska Property Hungary Ltd** (Hungary - MNE): in order to respond to the increasing demand for green construction in Hungary, the company developed an eco-design tool to ensure its sites were energy efficient and included a lifecycle perspective. At the same time, the company organized a training program on environmental education for workers and contractors before they start working on the construction site.
- **Herbsthofer** (Austria - SME) in the context of a "greening" program aimed at reducing its emissions chose to work closer in the local region, therewith reaching that 80% of its customers/suppliers were within 50 km from the company site in 2008.
- **Strabag SE** (Austria - MNE) developed guidelines for environmental friendly planning and execution of its construction sites to reduce noise, waste and emissions.
- **GRUPO LENA** (Portugal - SME) implements an environmental management system (in line with ISO 14001) aiming at the development of sustainable construction trough the implementation of measures that will reduce the environmental impacts. The company implements two different kind of controls: Execution Control (that allows to verify and inform about the actions in course) and Objectives Control (that indicates if the decision making process is producing the expected effects).

• Reducing company waste: recycling and reusing materials

The efficient management of waste and product life cycles opens up a variety of opportunities. Thus, the quantitative reduction of materials used and their reintroduction into the production process after first use, potentially lowers operational costs.

Thereby, the evaluation of recycling methods and the re-use of material can represent interesting advantages in terms of efficiency.

This can imply their simple re-use after cleaning them up or their introduction into a different stage of the production process, such as use for replenishment. In addition to this, a company's specialization in recycling management provides the opportunity to offer services and expertise to customers and partners, therewith creating company value.

- **Green Network Kft.** (Hungary - SME) deepened the commitment to eco-friendly construction activities in amplifying its engagement on the recycling of building materials and offering this service to business partners. In fact, the company created a specific *“Environmental protection”* business unit which takes care of recycling and waste reduction management.
- **Wates Group** (United Kingdom - BC) in a proactive response to new Government legislation, developed the *“Zero target”* plan, a waste management plan for reducing and reusing waste. In particular each worksite developed a waste management plan aiming to evaluate the opportunities related to reduction, re-use and recycling of waste. This has been done in combination with an effort to consciously engage employees in this process.
- **CIMPOR** (Portugal - SME) the cement manufacturing process generates a substantial quantity of waste heat that is often not harnessed for other uses. Even if a part of hot gases from the pre-heating tower and the clinker cooler can usually be recovered, there is a significant part which cannot be reused. CIMPOR implements a system to recover the waste heat from production gases in order to generate electricity. The company obtained an operating licence for energy recovery from hazardous waste. This licence allows hazardous waste to be used as alternative fuel for the main burner. The use of such fuels allowed a 0.80% reduction in the use of non-renewable natural and imported fuels, as well as the reduction of CO2 emissions associated to the cement manufacturing process.



Promote a sustainable supply chain

The construction sector is characterized by a multitude of actors that contribute to the production process. As a result, consistent selection and evaluation of suppliers and business partners offers the possibility to exert control on the compliance with eco-compatibility standards in each step of the production process.

For example the further suppliers are located from the construction site, the higher the environmental impact of transport. Therefore, if the company chooses nearby suppliers, it positively influences the eco-compatibility of its supply chain.

A significant focus has to be put on the importance of designers in the supply chain, as the design represents the core and the starting point of the following construction phase. Indeed the building characteristics are highly influenced and/or determined by the choices that are done during the design phase.

• Engage suppliers in more sustainable practices

A construction company's day-to-day business is characterized by interaction with a multitude of actors that make up the supply chain. Hence, an approach to ensure eco-compatibility should consist of both, a sustainable selection of suppliers along the lines of eco-compatibility criteria and the involvement and awareness-raising of suppliers to sustainable practices and compliance with eco-standards.



- **Wates Group** (United Kingdom - BC) developed a “*Target Zero plan*” (cf box on previous page). The company applied this initiative to suppliers and procurement in order to raise awareness on the company’s commitment to eco-compatibility.
- **Carillon** (England - MNE), in order to respond to local demand and national legislation for the reduction of CO2 emissions, launched a sustainable procurement policy which, in turn, is also communicated to customers.

Stakeholder engagement

The stakeholder engagement in the decision-making process can be very useful. It may improve the identification of the main performance indicators in the environmental field through diversified points of view. It may also contribute to prevent forms of tensions or contests towards the company, in case of highly-impacting works.

Among the most relevant stakeholders, there are employees that can be involved towards a correct use of equipment, in order to reduce the use of energy during the main production phases.



- **Autostrade per l’Italia S.p.a.** (Italia - MNE) set up an exchange mechanism with local actors (local institutions, such as Municipalities and Regions, and local citizens’ committees). Following this interaction, the company created environmental observatories to execute audits on the effectiveness of its environmental protection system. Members of the observatories are elected by the local institutions and organizations involved in the agreement.
- **Rhomberg Bau GmbH** (Austria - SME) developed the “*Factor 2*” project aiming to double the life expectancy of the equipment within three years. This initiative foresaw on one hand the organization of trainings and seminars in order to raise the awareness of workers for the right handling of equipment, and on the other hand the purchase of high quality and easy to handle building site equipment.

Develop research on eco-sustainable building

R&D investments can further develop the eco-compatibility landscape and encourage the individuation of sustainable solutions. This can foster the evolution of the construction market, develop new housing typologies and represent an important opportunity in order to face the evolution of the market demand, increasingly oriented towards greater sustainability.

The involvement of private/public research institutes or universities in the realization of R&D measures bears the potential to increase quality, credibility and efficiency.

- **UNIECO** (Italy - BC) developed the “*Astrolabio*” project that foresaw training programmes and practical work experience for current and future employees. The initiative aimed at creating awareness on all aspects related to eco-compatibility. In parallel, the company developed a research program on the implementation of new materials and innovative building techniques. The project has been realized thanks to the involvement of young researchers both in the research phase and in view of their entrance in the labor market, taking into account the innovative potential that young people can bring to the company.



3.2.3 Analysis of the effects

The internal context

In adoption of best practices, there are cost and benefits for a company, and facilitating aspects or hindering aspects that may influence its action, directly linked to its internal context.

BENEFITS arising from the adoption of socially responsible behaviors

- *Increased ability and attitude to innovation*
- *Possibility to detect new market opportunities and extend the outreach to new consumers/clients*
- *Improvement of productive process efficiency due to, for example, a reduced waste of resources*
- *Ability to anticipate the evolution of legislation and consequently to be one step ahead of competitors*
- *Improvement of the reputation within the company (employees) and externally (Public Administration, supplier, civil society, customers)*
- *Thanks to the current attention of mass media to the environmental sustainability issues, realized actions are valorized*

With regards to the self-promotion market :

- *Reduction of the cost of maintenance of buildings in the medium-and long-term*
- *Competitive advantage derived from the opportunity to raise higher selling costs than for traditional building*

COSTS related to the adoption of socially responsible behaviors

- *Direct cost for providing specific trainings*
- *Costs related to the study and development of technological knowledge and skills*
- *Direct costs for the promotion of awareness-raising campaigns, inside and outside the company*
- *Costs for the adoption of new technologies*
- *Costs related to R&D investments*
- *Costs related to the selection of eco-compatible materials (in some cases)*

FACILITATING FACTORS
related to the adoption of socially responsible behaviors

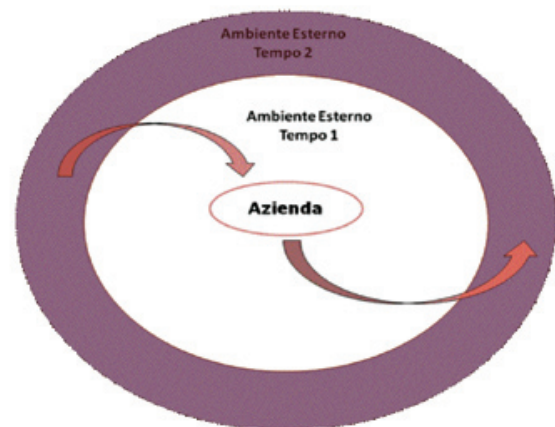
- *Awareness and clear commitment of the company's top management*
- *Public administration attentive to the issue and encouraging the adoption of sustainable solutions when awarding tenders and in other initiatives*
- *Availability on the territory of potential partners interested in collaborating to start innovation processes*
- *Sensitivity of clients/consumers and public/private general contractors*
- *Internal collaboration and readiness to change among workers*
- *Availability of adequate resources and know-how*

HINDERING FACTORS
related to the adoption of socially responsible behaviors

- *Short-term assessment of investments by the company's management*
- *Under-estimation of potential savings*
- *Indirect costs related to company's culture change and to the overcoming of internal resistances due to the change of processes and procedures*
- *Little awareness from employees and the company's top management*
- *Limited amount of resources*
- *Limited availability of actors with whom to activate partnerships (Universities, research institutes, etc.) on the territory on which the company operates*
- *Low attention on the territory towards environmental issues*

The external context

The adoption of socially responsible practices by the company influences the external context of reference, and contributes to change it.



BENEFITS FOR THE COMMUNITY related to the adoption of socially responsible behaviors

- *Less environmental impact (reduction of noise, dust and emissions on construction sites, landscape preservation, biodiversity protection, water saving, energy saving, reduction of CO2 emissions, healthier environments, etc)*
- *Increasing environmental sensitivity of the community*
- *Increasing confidence towards the construction sector*
- *Promotion of high living-quality areas as a consequence of urban renovation and environmental improvement measures*

3.3 Supply chain

The construction sector is characterized by a multitude of actors that contribute to the production process. Here, the complex supply chain composition of construction companies as well as the importance of sub-contracting reflects the significance of responsible supply chain management in the sector in order to ensure compliance with social, environmental but also qualitative standards along the production process.

The concept of supply chain can be defined as *“all the steps that define a production process, namely the set of phases and actors that contribute to the realization of a particular product / service”*¹. On the basis of this definition, the different actors in the various stages of the supply chain can be divided into:

- *main actors that are directly involved in one or more stages, and*
- *actors in support that carry out support functions for the sector (individuals, institutional or otherwise, the key players that provide a range of support functions, coordination and control, detection and resolution of problems of the sector)*².

The construction company supply chain is very long, going from the building planner to several craftsmen which take care of the final adjustments. The longer the supply chain, the more fragmented it is, as many subcontractors intervene. Moreover, the supply chain tends to be particularly unstable, because of the frequent changes in its composition.

As already mentioned, the complex and fragmented composition of construction companies' supply chains complicate the exertion of control on the different stages of the construction process, the assurance of stability and transparency as much as the compliance with existing laws and company standards.

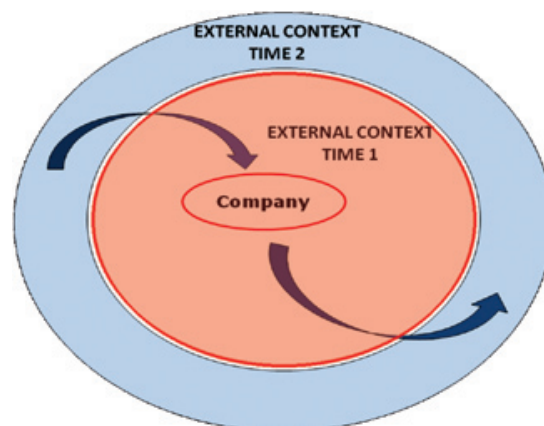
The difficulties in effectively managing supply chains in the construction sector, directly affect the aforementioned issues of health & safety and eco-compatibility. In this regard, health and safety on the construction site must be considered as being linked to the transparency of the supply chain. Thus, the effective monitoring of the site and involved actors improves channels for consistent communication of risks and standards to workers and allows to detect non-compliant behaviors and to intervene accordingly. In line with this logic, the issue of eco-compatibility is also linked to effective monitoring and evaluation of the supply chain as it potentially ensures the effective communication of eco-standards and assesses the compliance of suppliers and sub-contractors with company targets.

1 The region of Emilia Romagna, Nuova Quasco, IPL, Nomisma Foundation: T.e.r.s.o .Project, 2007.
For further information: <http://www.terso.it/index.htm>

2 Ibidem

3.3.1 Analysis of the external context

The external context influences the company in its decision-making process. With regard to the supply chain, companies that developed virtuous practices have been influenced by their external context in particular via two aspects: the awareness of the central feature of the supply chain, and indirectly, the controlling function assumed by the public administration.



STAKEHOLDER	Related opportunities and limits perceived by the company
Suppliers	Supply chains in the construction sector are usually long and highly fragmented, due to a strong use of subcontracting. Efforts to increase responsible management of supply chains is often related to the awareness of the need for increased control over several suppliers involved in the production process, in order to assure the necessary transparency and compliance with the standards established by the company.
Local/ central administration	In some cases, construction companies are led to exert a stronger control on their own supply chain so as to prevent negative consequences that could potentially derive from illegal behaviors, or in any case, from the sanctions set by the subcontractors.

3.3.2 Possible solutions

The complex compositions of supply chains offer a myriad of possibilities to intervene via consistent methods of management, selection, monitoring and evaluation.

Definition of suppliers' selection criteria

Construction companies are sub-contracting business partners to provide them with raw materials necessary for the realization of buildings and/or infrastructures, equipment or professional expertise. Therefore, the responsible and consistent selection of suppliers and sub-contractors is of major importance to ensure compliance with social, environmental but also qualitative standards along the production process.

- **Establish specific criteria for the choice of suppliers and adopt adequate tools for their implementation**

For the selection of suppliers, service providers and sub-contractors it is important to establish and make explicit specific criteria that guide the choice of suppliers, in order to reduce discretionary choices and encourage a selection process that is in line with the company's objectives. In this regard, a company may develop a set of criteria that translates its CSR priorities and strategy into concrete action and allows for its implementation in the supply chain. The selection criteria can be identified in analyzing risks and opportunities for the company, potentially involving the point of view of stakeholders in the decision-making process. Once the criteria are identified, the company needs to put in place implementation measures in the selection process operated by the purchasing function. Tools such as the creation of a database of qualified suppliers or lists of suitable or unsuitable suppliers could be set. Monitoring and evaluation activities, as the one presented in the next chapter, will be then necessary to keep those tools up-to-date.

- **Fratini Costruzioni** (Italy - SME) aimed at globally complying with the SA 8000 standard and at the same time respond to the difficult conditions related to supply chains in the construction sector. The company developed a monitoring program in order to evaluate and select its suppliers and partners on the basis of ethical and socially responsible principles. These criteria set out to guide the procurement choices of the company.




Monitor and evaluate company's suppliers

In order to be efficient, responsible supply chain management should foresee monitoring activities on the suppliers' entire performance.

Supplier monitoring and evaluation needs to be based on a set of parameters that correspond to the company's CSR strategy and targets. These indicators should be in line with the criteria that guided the selection procedures in order to ensure a coherent process. Following this, concrete implementation measures for monitoring and evaluation need to be taken. Possible methods include developing of self-assessment tools such as questionnaires, elaborating supplier audits or providing them with guidelines for the implementation of their tasks in line with company targets.

As a result, the company should then adapt its strategy according to the monitoring process: this can imply follow-up audits in order to check if effective improvements have been realized, or the organization of trainings for suppliers to enable them to comply with company criteria and standards.

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- **Skanska Property Hungary Ltd.** (Hungary - MNE) in order to capitalize on the competitive advantage and cost savings, invested in a responsible supply chain and introduced several measures on supply chain management such as supplier questionnaires about management of H&S and environmental issues, providing trainings in the chain about H&S and environmental issues etc. Each supplier was asked to assure compliance with criteria set by Skanska.
 - **Holcim Italia S.p.a.** (Italy - BC) developed a system of vendor rating on its main suppliers in order to provide stakeholders with transparent information on its supply chain. In this process, suppliers were evaluated along the lines of established parameters on aspects, such as health & safety and environmental responsibility. In order to test compliance with these parameters, the company developed self-assessment questionnaires, internal audits and direct controls.
 - **Astaldi Spa** (Italy - MNE) engaged to improve the processes of communication with suppliers in response to the need for transparency and traceability of each phase of the selection and allocation of suppliers and procurement. Therefore, the company developed an e-Sourcing and e-Vendor management system for the control of selection procedures. The system also foresees a virtual online platform in order to ensure a high level of transparency.

Develop tools to involve suppliers as active partners in the process

The overall aim of a company should be to seek sustainable relationship with its suppliers and build a responsible supply chain able to last in the long term. According to this, the company should also intervene proactively and try to improve performance along the supply chain in order to create the conditions for a system of stable relations, based on reciprocal reliability and trust, and able to produce an added value for all the components of the supply chain.

Possible ways to proactively engage suppliers in sustainable performance include training measures and the improvement of communication and information flows.

- **Ferrovial** (Spain - MNE) developed tools aiming to encourage suppliers to pro-actively incorporate CSR principles into their operational performance. The tools include: a centralized purchase management system, corporate responsibility clauses and a supplier evaluation plan, to ensure transparency and compliance with company standards along the production process.

Limitation to the number of sub-contractors

Greater transparency and traceability of the supply chain can be facilitated by limiting the maximum number of subcontracting in the productive process of a company, with the aim to ensure a better control along the whole supply chain.

- **Coop Costruzioni** (Italy - BC) decided to limit the use of subcontractors, by fixing a limit to the maximum number of subcontracting in the productive activities, by releasing a formal authorization in case of subcontracting of subcontracting and controlling all the steps of the supply chain with the aim of having a greater control and an easier assessment of safety in all the worksites in order to ensure greater transparency in the supply chain.

3.3.3 Analysis of the effects

The internal context

The adoption of best practices engenders costs and benefits for a company. In the following, facilitating and hindering aspects are presented that spring from a company's internal context and may influence operational performance.

BENEFITS arising from the adoption of socially responsible behaviors

- *Ability to prevent possible negative consequences (reputation, sanctions, etc.) deriving from wrong behaviors of the supply chain's components*
- *Greater transparency in the supply chain and easier identification the causes of inefficiency*
- *More stability of the supply chain, that means more quality of work thanks to the selection of qualified subjects and to the creation of bonds based on trust*
- *Increased process efficiency through the implementation of new methodologies and know-how related to purchases, supplier selection and processes of communication*

COSTS related to the adoption of socially responsible behaviors

- *Direct costs for the development of new systems of supplier management and the adoption of adequate tools and technologies*
- *Direct costs for the evaluation and monitoring activity*
- *Direct costs for training staff in using new supply chain management systems*
- *Costs related to the realization of awareness-raising campaigns and activities*
- *Indirect costs related to the change of the internal culture, and to the overcoming of internal resistance to changes in procedures and processes*

FACILITATING FACTORS related to the adoption of socially responsible behaviors

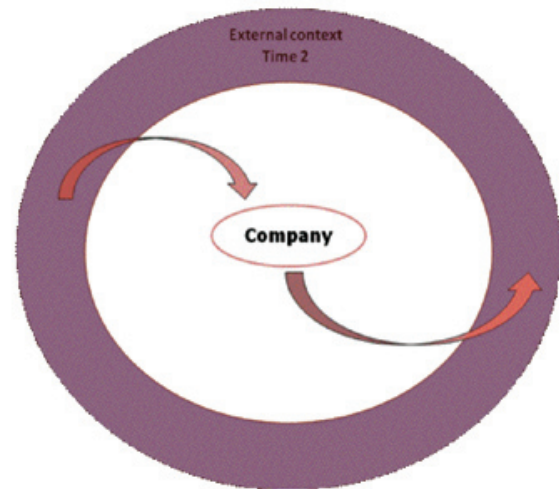
- *Internal collaboration and readiness to change in particular by those responsible for purchasing functions*
- *Awareness and clear commitment from the company's top management*
- *Company culture oriented to transparency, efficiency, process innovation and open to dialogue with stakeholders*
- *Sufficient availability of resources and know-how*
- *Integration and collaboration between the design area and the purchasing function*
- *Stable relationships with suppliers*
- *Increased awareness by the companies that are part of the supply chain and diffused culture of transparency*
- *Increased awareness on these issues by public administrations and valorization by the companies that adopt virtuous behaviors.*

HINDERING FACTORS related to the adoption of socially responsible behaviors

- *Lack in culture of respect of law and transparency along the supply chain*
- *Widespread use of unstable working collaborations and difficulties in access to information about suppliers*
- *Inadequate availability of resources to set controls and monitoring tools in the supply chain*
- *Reluctance to control and ensure transparency both by the company and its suppliers*
- *Indirect costs related to the change of company's culture and to the overcoming of internal resistance to the change in procedures and processes*

The external context

The adoption of socially responsible practices by the company influences the external context of reference, and contributes to change it.



BENEFITS FOR THE COMMUNITY related to the adoption of socially responsible behaviors

- *More reliability and quality of actors in the territory that are part of the supply chain*
- *Greater protection of workers and the environment through the spread of a culture that promotes the respect of the law*

3.4 Equal Opportunities

Equal opportunities deals with the valorization and non-discrimination of people, regardless of gender, origin, ethnicity, age and others. It is important to highlight that equal opportunities requires a structured approach, as it deals with different people with diverse needs, implying an in-depth analysis of a company's internal context to identify the specific needs of employees. Given the vastness of the topic, the section focuses on gender equality, being aware that it is not the only one relevant to diversity management.

More precisely, it has been considered that this aspect can be important for the construction sector, due to the fact that there is a quite diffused tendency to not pay an adequate attention to equal opportunities related to gender.

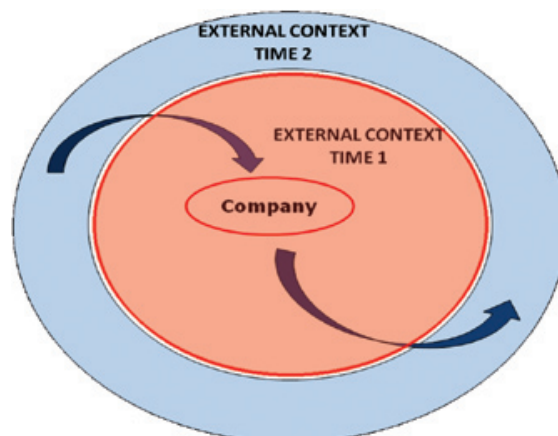
Due to current demographic changes which will become more visible in Europe within the next years women represent an added value for the competitiveness of a given company. The perspective brought by women, their significant level of entry in the labor market and their high rates of skill and education level provide an opportunity to attract skilled talents. According to these considerations, the integration of women in the labor market follows economic efficiency criteria, as it valorizes an important resource for the economic development of a country and ensures a more efficient use of people available in the territory and of the potential of women workers.

Managing diversity does not only concern identity diversity, but also cognitive diversity, considered as the exposure to diverse points of view and experiences that can encourage people to think from different angles. It increases the global perspective of reference and, consequently, company's productivity.

The integration of women in the construction sector can bring about greater innovation and creativity by having different perspectives and experiences, that can contribute to enrich company's view by improving their ability to renovate. In this sense, women's integration can improve product's quality, because it implies a wider consideration of different needs which can be considered by the company. There is still much work to be done today to integrate women in the construction sector in an equal manner.

3.4.1 Analysis of the external context

As shown below, the biggest influence for the implementation of diversity practices in companies in the construction sector come directly from the evolution of the workforce in terms of structure, motivation and behaviors.



STAKEHOLDER	Related opportunities and limits perceived by the company
Employees	<p>The strong influence of workers around the adoption of equal opportunities practice in a company could be primarily connected to:</p> <ul style="list-style-type: none"> - Increasing number of women with an higher level of education and greater technical expertise in the labor market - The awareness of the increasing needs and difficulties for employees in terms of work-life balance - The lack of supporting facilities on the territory - The important demographic changes in progress which lead to a stronger and increased number of elderly persons, that is related to the need for work/life balance for those who have to take care of them and for the necessity to reproduce workforce
Trade Unions	<p>In the construction sector trade unions tend to be open to fruitful debates and they have often participated in the ideation and implementation of specific projects.</p>

3.4.2 Possible solutions: the best practices analyzed

If they are implemented with the solid commitment from top management and integrated as part of the company's general CSR strategy, equal opportunity initiatives can positively transform the organization. Here, companies tend to develop public or private partnerships which offer specific competences to enhance internal research capacities or realize specific interventions.

Integrating equal opportunities' promotion in the company's organizational principles and internal governance.

Introducing equal opportunities in the internal policies can help to develop the right approach towards diversity management based on the companies and workers' needs and priorities. For this, it is important to involve and train a company's subsidiaries and branch offices responsible for human resources management. In particular, a focus on a human resource department is necessary to implement such diversity management strategies and to obtain the benefits that it offers.

• Realize an internal analysis of the company's organization in a gender perspective

In order to develop an efficient strategy, a company should realize a previous analysis of its internal organization, aiming to describe the organizational state of the company. On the basis of this data, the company can lead a redefinition of its organizational processes in a gender perspective and for the integration of equal opportunities in its internal governance.

• Introduce Equal Opportunities in the company's code of conduct

A code of conduct sets out the general principles about a company's responsibilities and practices. It defines rules of behavior that guide decisions and procedures for that company. It provides the basis for behavior of a company and thus, introducing equal opportunities within the code, would mean integrating this issue in the genetic of the company.

- **Skanska AB** (Sweden - MNE) revised and updated its Code of Conduct, including targets on diversity in all levels of organization, diversity goals for every business unit, the appointment of a person responsible for diversity strategy in each Business Unit, and the addition of diversity in top managers' development program.

• Create a company's Equal Opportunities Plan

Develop specific policies or protocols that aim to promote equal opportunities could be the basis for responding to the growing social concern about the role of women in the labor market. Such policies need to ensure respectful and non discriminatory gender policies. Generally, an equal opportunity plan is a written statement about a company's commitment and intent with regard to equal opportunities and diversity management, followed by the definition of suitable internal procedures to be implemented. Such policies are developed on the basis of an internal diagnosis of the current situation and needs to foresee an implementation strategy, targets and assessment systems.

Trade unions' can be a partner in the field of equal opportunities mainly through a contribution in policies as they have specific competences and knowledge of employees' needs and the challenges within the construction sector.



- **CMB Carpi** (Italy - BC) introduced an innovative figure in its human resources branch: a “*reliable advisor*”, specifically involved for the identification and correction of possible mobbing episodes, sexual harassments or gender discrimination.
- **Ferrovial** (Spain - MNE), in order to respond to the diffuse social concern about equal opportunities, developed the “*Plan Iguala*”, consisting of a group of measures on labor flexibility, parental leave, etc. The plan was developed in four successive phases: evaluation of the present situation, planning, implementation and evaluation. This involved the Internal Communication and Employee corporate responsibility Department, specifically.
- **Contratas y Obras** (Spain - SME) articulated a “*Plan for equal opportunities between men and women*”, establishing a Protocol to prevent sexual harassment based on sex; equity and equality in remuneration and working conditions; a study for facilitating the implementation of work – life balance measures.
- **Pas** (Spain - BC) created an Equity Committee, composed of representatives of workers and representatives of the company, which aims to promote measures that are in the “*Equality Plan*”. Under the Equality Plan framework they conducted a training and awareness session on Equal Opportunities between women and men directed to all employees of the organization. Pas also made agreements with some associations (as Caritas and other NGO’s) and training bodies to facilitate the incorporation of women into positions where they are underrepresented.

• Training for human resources managers

It is important to consider training of human resources managers because of their key role in the selection of personnel and in the general management of employees. A company should foresee specific training programs addressed to its human resources branch to avoid unconscious biases, to be aware of specific needs of different types of employees, contributing to the valorization of the potentialities of each worker and avoiding discriminations which are not always obvious.

Create tools for conciliating work and family life

The needs for work-life balance are increasing and the way of organizing the work can contribute to address those needs, also thanks to the development of new communication technologies.

One of the main obstacles related to conciliation between work and family can be related to the need of taking care for family members, such as children, elderly, or disabled people.

The flexibility in terms of working hours and worksite can represent an answer to the needs of work-life conciliation of workers. These practices are tools that can help the employee to better manage personal responsibilities in line with work.

Examples of forms of flexibility can be the encouragement of part-time work, a concentrated working time, work at distance, home working. For example, these tools can help, parents in the management of the implications related to having children.

- **Pas** (Spain - BC) allowed the office workers to have flexibility with regards to working schedule. Thus, during holidays period in schools, Pas has introduced an adjustment of working hours so that employees have the possibility to spend time with their children of school age.

• **Facilitare l'accesso dei dipendenti ai servizi che possono favorire la conciliazione vita-lavoro**

The lack of appropriate supporting facilities on the territory (such as nurseries, schools, facilities for elderly and disabled people, etc) as well as the difficulties to conciliate working hours with the opening hours of main public facilities, can represent a problematic element for work-life balance.

In order to provide support to their employees in the area of work/family balance, companies can provide different services within the company, such as facilities for child care and social centers for elderly, or develop agreements with the main facilities.

Such practices can contribute to more productivity from the side of employees, thanks to the improvement of the working life and better responses to their needs.

- **Todini Costruzioni S.P.A.** (Italy - MNE) faced the need for its employees to be closer to their children during working hours, due to the lack of childcare support facilities in the neighborhood. Thanks to a partnership with an Educational Services society (*Gruppo Matarazzo per l'Infanzia*), the company was able to build a nursery for children from 3 to 36 months, with the capacity for 46 children from 8 a.m. until 18.30 p.m.

• Introduce support tools for return from maternity

A further challenge related to work-life balance is the reintegration of women workers after a maternity leave, which often implies a series of difficulties that could discourage their return to work. For this purpose, it could be useful to invest resources in the training of those employees or in forms of tutoring aiming to ensure a progressive and efficient reintegration in the company. Another measure that could facilitate the return from the maternity leave is the regular updating on the company's activity provided to women during their period of leave. Return to work can also be facilitated through economic incentives aiming at supporting expenditures of the family.

- **Coopsette** (Italia - BC), following a survey on the company's internal climate, deemed it useful to deepen the research on working conditions of women to identify suitable measures to valorize women's work. Therefore the company supported the development of a study by the Psychology Department of the University of Bologna, that developed a research on the internal climate of the company, aiming to point out its employees' wellbeing. The research highlighted the main exigencies of female workers within Coopsette and introduced actions such as the possibility of flexibility and of weekly scheduling of working hours. The company also provided economic contributions for needs related to childbirth.
- **Confector Mérnök Iroda Kft.** (Hungary - SME) in order to respond to the increasing demand for equal opportunities, the company established an indefinite time contract with pregnant women. This is an exceptional practice in Hungary, as contracts are usually signed within a fixed time. The company created new positions for them when returning from maternity leave (which is 3 years long in Hungary) and gave them the possibility to work through telecommuting during pregnancy and motherhood.

3.4.3 Analysis of the effects

The internal context

In adoption of such practices, there are cost and benefits for a company, as well as facilitating and hindering aspects that may influence its action and that directly linked to its internal context.

BENEFITS

arising from the adoption of socially responsible behaviors

- *Improvement of the reputation within the company (employees) and outside (Public Administration, supplier, civil society, customers)*
- *Improving the company's ability to attract and retain talent offering better conditions than other companies in the same sector and region*
- *Greater innovation, creativity and competitiveness associated with the variety of different points of view and experiences within the company*
- *Increasing of the sense of belonging to the company by employees, and consequent more relaxed and serene internal atmosphere*

COSTS

related to the adoption of socially responsible behaviors

- *Indirect costs related to the change of the organizational culture and the overcoming of internal resistances to the change of processes and procedures*
- *Costs for specific training to human resources responsible*
- *Costs for the introduction of adequate technologies (such as work at distance)*
- *Costs for the realization of internal facilities and the activation of agreements*
- *Costs for economical bonus aiming to support parenting*

FACILITATING FACTORS related to the adoption of socially responsible behaviors

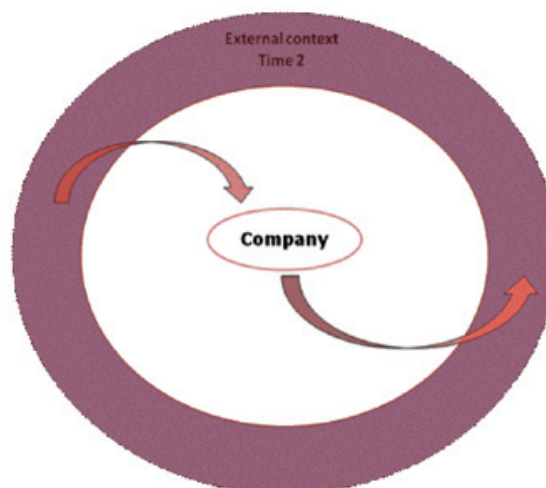
- *Widespread culture of equal opportunities in the territory*
- *Presence in the territory of aware and committed public administrations for the creation of a shared culture on the valorization of equal opportunities and the valorization of best practices adopted by companies*
- *Increased availability of women with adequate technical qualification*
- *Awareness of the importance of the issue inside the organization (both from the employees and from the management), internal cooperation and good will to the project implementation*
- *Adequate availability of resources for the implementation of specific trainings and the setting of suitable tools*
- *Ability of the company to set up collaborations and partnerships with other actors on the territory*

HINDERING FACTORS related to the adoption of socially responsible behaviors

- *Little interest or inadequate consideration, from companies' management and employees, with a consequent lack of cooperation*
- *Lack of equal opportunities culture in the territory*
- *Indirect costs related to change in the organizational culture and to the overcoming of internal resistances to change in processes and procedures*
- *Lack of trained and specialized female workers in areas related to the work-site*

The external context

Through the analysis of the inside-out linkage between a company and its external context in the implementation of equal opportunity practices, the following kind of benefits produced for the society/ community have been identified.



BENEFITS FOR THE COMMUNITY related to the adoption of socially responsible behaviors

- *Increasing rate of employment in the territorial context*
- *Higher level of economic welfare due to an increasing in the familiar wages*
- *Greater incentives for employees to career paths and job growth through an approach based on the valorization of diversity*
- *Encouragement of a "fairer" society, in which equal opportunities (for everybody, not only with reference to gender) is a fact (something that happens) and not a right, or something to fight for*
- *Improvement in the territory of the availability of services of which can benefit the whole community*

4. The role of the Public Authorities

Local and central Public Authorities, both at European and national level, may play an important role in advancing or promoting socially responsible practices within the construction sector. Public Administrations have a particularly important role in the construction sector, as they have a regulatory function, a control and evaluation function and at the same time represent one of the main clients of the construction companies.

The efforts of public authorities in promoting CSR and increasing the sustainability within the sector could take two ways: on the one hand, strengthening the system of control on compliance with laws, and on the other hand increasing the integration of CSR indicators in procedures of public procurement.

In this regard, enhanced control by public authorities is a form of protection for companies that respect the laws against unfair competition from companies that, on the contrary, are not complying with existing laws. Tightened legislation tends to generate a sort of reverse competition, where companies tend to increase their competitive advantage in reverse by violating the existing rules.

In addition to this, in the last years the EU has undertaken steps towards its modernization in terms of legislation governing public procurement procedures.

Directive 2004/17/EC and Directive 2004/18/EC on the coordination of procurement procedures represent the starting point of the process of integration of social indicators in public procurement, initiated in 2001 with the Commission Communication on public procurement (COM/2001/566). National legislation of EU Member States reflects the transposition of Community rules mentioned above. In the implementation of the Single Market, Community law took into account the legislative diversities and different contexts of States and has gradually built provisions to ensure adequate social clauses dedicated to workers. Following this, it can be stated that local and/or national public authorities may play an important role in fostering the emergence of a culture of sustainability and responsibility, giving increased attention to issues of CSR and implementing systems of assessment and scoring in public tenders that take into account CSR indicators. It would be important to review the mechanisms of procurement, based on cost pressure, and to introduce the centrality of planning, in order to allow the introduction in the projects of increased CSR values and their valorization in the selection procedures.

- **Emilia-Romagna Region (Italy):** an example of the proactive role that the Public Administration can play in the reinforcement of the attention to CSR issues is the law of Emilia-Romagna Region of 2nd march 2009, nr. 2 on *“Work protection and safety at construction and civil engineering sites”* which aims to valorize socially responsible companies, by going beyond the minimum requirements of the national law on health and safety at work (D.lgs 81/2008). In particular, the regional law foresees economic incentives in favor of buyers that choose companies according to CSR principles, it enlarges the definition of workers by including also the self-employment categories and it foresees incentives to companies that ensure greater levels of safety with regards to the ones foreseen by the Law on health and safety at work.

5. The role of trade unions and business associations

Trade unions and business associations can play an important role in promoting socially responsible behaviours among companies operating in the construction sector.

Hence, the various representative organisations can play a stimulating function towards companies in controlling that specific rules apply. As a result, trade unions and business associations can contribute to the marginalisation of those companies that compete by pursuing policies of social dumping.

Trade unions in particular can be an important partner for companies in the sector, contributing for instance to policy developments for health and safety on construction sites. Exerting constructive presence, trade unions have shown in recent years to be able to be interlocutors helping to develop innovative ways of protecting workers, and interesting paths for professionalization and training.

Business associations in particular can play a stimulating role towards companies in providing them with opportunities for reflection and awareness-raising via the organization of public meetings, the activation of working groups and discussions, the development of guidelines and the execution of advanced studies.

Moreover, they can play a strategic role for encouraging the development of networks and relations among SMEs and between SMEs and big companies of the construction sector. These activities materialize into support for innovative development of enterprises, and potentially into the identification of new markets and methods of operational performance. In order to build a virtuous cooperation it is important that a dialogue and a regular exchange among companies, trade unions, employers organizations and other stakeholders is established.

- **The Circle of Sarnes** (Italy) since 1996, every year, trainers, technicians, entrepreneurs, trade unionists, meet in a training center near Bressanone, called "S. Giorgio di Sarnes" house, in order to debate about work safety in the construction sector with the aim to concretely contribute to the reduction of work accidents, injuries and working diseases.



6. Management system standards

The following part aims to briefly introduce the main management system standards (set at the European and/or international level) with regard to issues of sustainability.

Corporate Social Responsibility

UNI ISO 26000 is an international standard that will come into force in near future and deals with corporate social responsibility. The standard is based on a broad concept of CSR that includes companies and all kinds of organizations, public and private, governmental and nongovernmental. The criteria of UNI ISO 26000 are: responsibility, accountability, ethics, and the respect for stakeholder interest, law, international behavioral standards and human rights.

Environment

ISO14000 includes a series of internationally recognized standards on environmental management system. ISO14000 provides a framework for the development of an environmental management system and a supporting audit program. These standards are applicable to any organization that aims to establish, implement, maintain and improve an environmental management system.

The ISO14000 has the advantage that it can be easily integrated with other management systems complying with specific standards, such as ISO9000:00 and OHSAS 18001.

EMAS is the European Union Eco-Management and Audit Scheme. It is a management tool for companies and other organizations to evaluate, report and improve their environmental performance by committing themselves to evaluate and reduce their environmental impact. The EMAS scheme foresees, an audit mechanism assessing the management system in place and conformity with the organization's policy. Moreover, a program and an environmental statement which provides information on environmental impacts and performance of the organization to the public is intergrated. EMAS is based on the ISO14001:2004 norm.

Health and Safety

OHSAS 18001 is an international occupational health and safety management system aiming to minimize risks for employees and improve the existing H&S management system of a company. OHSAS 18001 has been designed to be compatible with ISO9001 and ISO14001 in order to help an organization to meet their health and safety obligations in an efficient manner. OHSAS 18001 can be adopted by any organization aiming to implement a formal procedure to reduce risks associated with health and safety in the working environment for employees, customers and the general public.

Human Rights

SA8000 is the first social standard dealing with human rights of workers. It is an auditable standard suitable for organizations of all sizes. SA8000 provides a framework for assuring all stakeholders of a company or organization that the protection of workers' fundamental rights are guaranteed. SA8000 is grounded on the principles of core ILO conventions, the UN Convention on the Rights of the Child, and the Universal Declaration of Human Rights. One of the major elements of the SA8000 is that it deals with the whole supply chain, foreseeing control and the involvement of company suppliers.

Products' certification

In contrast to the standards introduced above, LEED (Leadership in Energy and Environmental Design) certification does not refer to management systems and processes but to products. LEED is an international system of certification applied in more than 100 countries in the world and promoted by the nonprofit organization US Green Building Council. This system provides third-party verification that a building or community was designed and built based on sustainable strategies and performance, such as energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. It aims to develop green buildings functioning in a sustainable way.

BRC project's Project Leader	
	<p>Italian non profit organisation for the development of Corporate Social Responsibility culture (www.improntaetica.org)</p>
BRC project's Partners	
	<p>Research institute of the Region of Emilia Romagna, with specialization in the construction sector. (www.nuovaquasco.it)</p>
	<p>Association representative, on national scale, of co-operatives of production and work. (www.ancpl.legacoop.it)</p>
	<p>University of Bologna Department of Management (www.ing.unibo.it)</p>
	<p>Italian social and economic research institute linked to one of the most important trade union in Italy, CGIL. Ires is engaged in the promotion, planning, and conduction of studies and research work. (www.ires.it)</p>
	<p>respACT is the leading business platform for Corporate Social Responsibility and Sustainable Development in Austria. It is exclusive partner of the world business council for sustainable development and of CSR Europe as well as national focal point for the United Nations Global Compact. (www.respect.at)</p>
	<p>Spanish association for the promotion of ethical and socially responsible policies among companies and institutions at the core of their corporate values, providing them with frameworks for auditable management systems. Foretica is member of CSR Europe. (www.foretica.es)</p>
	<p>The Hungarian Association for Sustainable Economies (KÖVET) was founded as institution to raise awareness, spread the idea and tools of environmental management and corporate social responsibility, providing assistance for small and large businesses on the way towards sustainable development. Kovet is member of CSREurope. (www.kovet.hu)</p>
	<p>RSE Portugal is the leading association for CSR in Portugal and aims to build bridges between the private sector and key stakeholders towards a more responsible and sustainable future. RSE Portugal is member of CSREurope. (http://www.rseportugal.eu)</p>
	<p>CSR Europe is the leading European business network for corporate social responsibility (www.csreurope.org)</p>

Special thanks go to the following companies and other stakeholders that have cooperated actively in the project:

Companies:

Austria

Dipl.Ing. Franz Robier Baugesellschaft m.b.H.; Herbshofer; Mischek
Bautraeger Service Gmbh; PORR Gruppe; Rhomberg Bau; Strabag SE.

Hungary

CONFECTOR Mérnök Iroda Kft.; Green Netwok Kft.; Skanska Property
Hungary Ltd.; Ferenc Fóris, Állami Autópálya Kezelő Zrt.

Italy

CMB Carpi; CCC – Consorzio Cooperative Costruzioni; Coop Ansaloni; Coop
Costruzioni; Coopsette; Unieco; Italfer.

Spain

Contratas y Obras Empresa Constructora; Ferrovial; Llabres Feliu, PAS.

Portugal

Cimpor; Grupo Lena; Mota Engil; Somague.

Other countries

Bouygues Enterprises France-Europe; Wates Group; Geda Construction.

Other stakeholders:

Austria

Austrian Federal Economic Chamber (Geschäftsstelle Bau); Federal
Ministry of Economy, Family and Youth (Department for Tourism and
Historical Buildings)

Hungary

László Koji, ÉVOSZ; Dr. Tamás Pálvölgyi (Associate professor - BME)

Italy

Acer Forlì-Cesena; Ance, Provincia di Reggio Emilia; Fillea CGIL; Regione
Emilia-Romagna; Unionapi Emilia-Romagna; Unioncamere Emilia-
Romagna; CNA Costruzioni Emilia-Romagna; CISL; UIL; CECOP.

Spain

CCOO (Confederación sindical de comisiones obreras); SEOPAN; IPE-NH





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