



# ABB User Requirements for Sustainability Issues

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## ABSTRACT

This report was made within the project DANTES that is supported by the EU Life Environment Programme.

Twenty-eight decisions-makers in ABB were interviewed during Q2 2003 to map the demands and requirements in the sustainability area. The results from the interviews have provided a lot of input that will be useful in the realization of ABB's sustainability strategy.

### Results and conclusions

- The interviews show that there is, in general, good awareness and a positive attitude towards environmental and sustainability issues in the company.
- Communication of environmental performance to customers gives a possibility to strengthen the competitive edge. The large amount of environmental studies (e.g. LCA, EPD) conducted in ABB should therefore be used more in marketing & sales.
- The results from the environmental studies have mainly been used in product development but are mostly too complex to be useful in market communication. It is therefore necessary to adapt these studies to be suitable also for ABB's marketing functions.
- To conduct an environmental study demands special competence that is hard to maintain in ABB's local organization. Easy accessible specialist competence could increase the number of performed studies and make the conducting process more cost efficient. This is in line with ABB's new sustainability organization with a small group of environmental specialists at Corporate Research, managed by GF-SA and available to globally support all BAs.
- There is a large demand for easy to use software tools and environmental knowledge that can be used by users. The Sustainability Toolbox established on inside.com in the beginning of 2003 is a useful platform that fulfills these demands.
- The knowledge about the Sustainability Tool Site should be spread not only to product management & development but also to marketing & sales and supply management functions in all BAs through information campaigns.
- The demands and requirements from the interviewees are an important input to the EU founded DANTES project. The DANTES project will therefore contribute to accomplish the work outlined in the conclusions above.

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## 1. INTRODUCTION

This is the internal ABB version of a report which belongs to the project DANTEs that is supported by the EU Life Environment Program. More information about the DANTEs project can be found on <http://www.dantes.info/>

General perspectives related to sustainability and environmental issues, as well as more specific user requirements of tools and methods were evaluated by interviewing a number of people at ABB and Akzo Nobel Surface Chemistry during May and June 2003.

The intended use of the original DANTEs report, "01/07/2003 User requirement report" is to serve as an input to the DANTEs' strategy. The ABB version of this report includes some additional views that came up during the internal interviews whilst the results from Akzo Nobel are excluded.

## 2. METHODOLOGY

The interviews were conducted as telephone interviews. A questionnaire or "check list", (shown in appendix 1), was used to support the interviews. The questions were grouped under four headings:

- General-about environment and sustainability.
- Strategy- ABB's policy and strategy and implementation of environmental work.
- Communication to customers- how is environmental information used in marketing & sales?
- Communication to suppliers-what information is requested from suppliers?

One critical aspect was to achieve a picture of the "real demands", the expectations and the views on how to best implement environmental work.

The methodology was to let the interviewees talk freely under the different headings in the questionnaire and then afterwards to structure their answers. A summary of each interview was submitted to the interviewee for comments or corrections.

The next step was to perform an interpretation of the answers into tables and statistics. The result gives both a comprehensive description of implementation of environmental work and a base for further work and development of tools and methods.

Twenty-eight people from three different fields participated in 27 interviews.

The three fields are:

- 1) Technology
- 2) Marketing & Sales
- 3) Quality and environmental work

Almost all of the interviewees were managers, all male, and represented every business area within ABB. Six are business area managers. The distribution of the interviewees is illustrated in Figure 1 and 2.

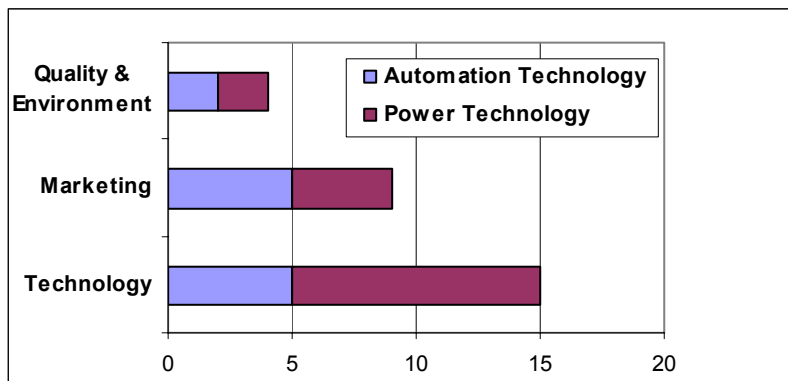


Figure 1.  
The working field and distribution of the interviewees between ABB's two divisions Automation Technology and Power Technology.

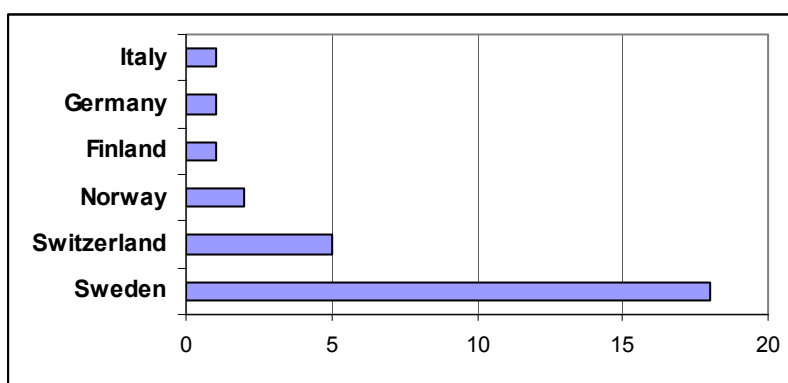


Figure 2.  
Distribution of the interviewees between countries.

### 3. RESULTS AT ABB

The results are visualized in graphs showing the different views that came up during the interviews and the number of interviewees that hold these views.

#### 3.1 Environmental aspects

The interviewees considered at least one, sometimes two; environmental aspects as important for their business. The environmental aspects and the number of interviewees that mentioned them are reported in Figure 3.

Energy came out as the most important environmental aspect, both for ABB and for our customers. Internally decreasing our energy consumption reduces our costs. Likewise, for our customers, if we sell them our low energy consumption products and control systems we also assist them in reducing their costs.

Other important aspects that were mentioned were emissions and hazardous materials.

SF<sub>6</sub> was mentioned by several of the interviewees. The production units have successfully reduced the emissions and handling instructions and leakage proof products have been developed. However, investment in equipment with SF<sub>6</sub> is still doubtful for some customers and the increased sale of vacuum breakers may be a result of this doubt.

Oil leakages from e.g. transformers, are avoided by building a retaining dike. Some

years ago this was sometimes included in the offer. Now it is not built if the customer is unwilling to pay.

Land use is an aspect that is important for transmission lines owners.

Fields in the diagram stand for electrical and magnetic fields (EMF). The interest for EMF and noise is increasing and for some applications close to populated areas, shielding and noise reduction are used as sales argument.

Recycling is an important environmental aspect and ATDM have developed a scrap handling system which has already been introduced in Finland and in the U.K.

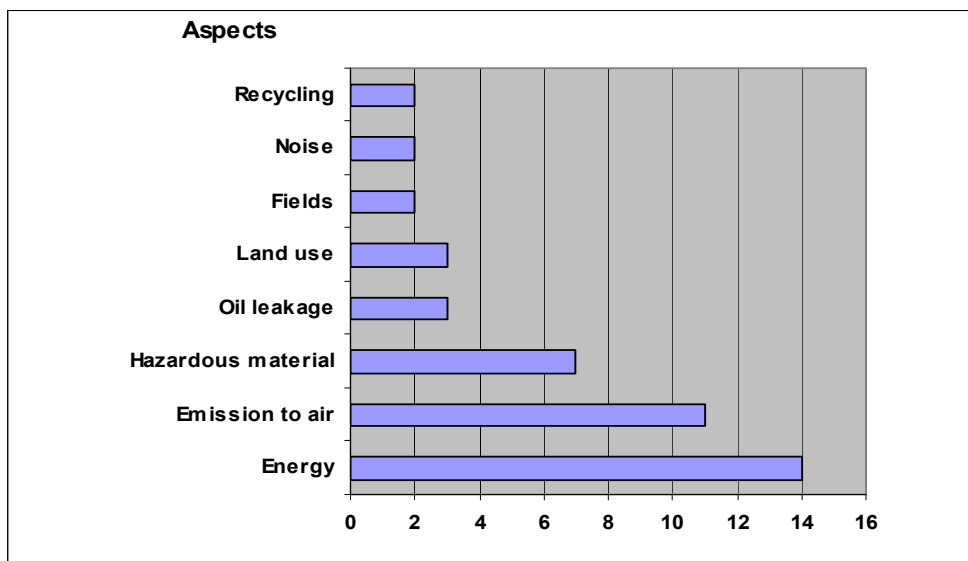


Figure 3 .  
Important environmental aspects and the number of interviewees that mentioned them.

### 3.2 Driving forces

*“What are the main driving forces for working with environmental issues?”*

The answer to this question could be, on the one hand the driving forces for internal environmental work at ABB and on the other hand, the driving forces for the customers leading to requirements of product development at ABB.

Legislation, public opinion and management are examples of driving forces for internal work and implementation of environmental concern in the organization.

The market is an important driving force for both internal environmental work and for product development.

Increased profitability (lower costs) for the customers, legislation and sometimes public opinion leads to requests of e.g. improved energy efficiency or non-hazardous material that in the end will affect the product development at ABB.

Other important factors for environmental work are ISO 14001 and personal interest. Although not mentioned as an answer to the questions raised, the further discussions showed that ISO 14001 plays a very important role in the every day work leading to

continuous environmental improvements, both in production and product development. Management and staff with personal interest were also mentioned as important for implementation of environmental concern.

A summary of the driving forces can be seen in Figure 4.

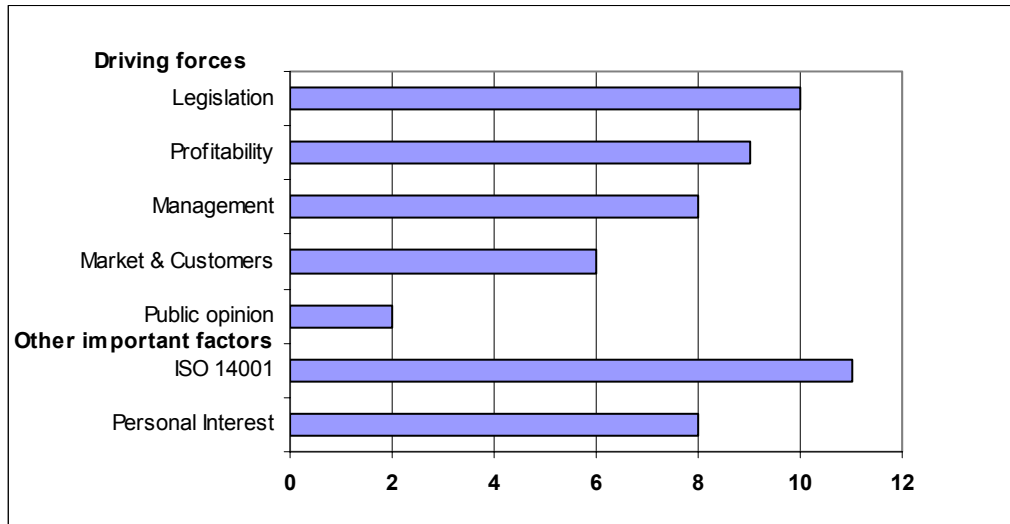


Figure 4. Driving forces or other important factors for environmental work and improved environmental performance as prioritized by the interviewees.

### 3.3 ABB's policy and strategy

#### 3.3.1 Implementation

ISO 14001 was introduced in ABB in 1996. Much effort has been put on certifying all production units and this work was almost finished in 2002. As mentioned in 3.1 this environmental management system is the most important driving force for the every day environmental work.

The first LCAs (Life Cycle Assessments) were performed in 1993 and the method is now well established in product development in most business areas. At least seventy but probably nearer one hundred, LCAs have been performed so far. Although LCA is judged to be an important and useful tool it is also perceived as being too complex (see figure 5) in daily use since it requires skilled personal.

A bonus from conducting LCA studies that was mentioned in at least two of the interviews is an educated staff that are more sensible and interested for approach in the environmental performance of the products.

In recent years some business units have enlarged their environmental work to the field of marketing & sales by producing a number of "Environmental Product Declarations" (EPD) to be used as communication to the market.

Figure 5 shows the implementation of ISO 14001, LCA, EPD as the number of certified production sites and performed LCAs and EPDs within ABB.

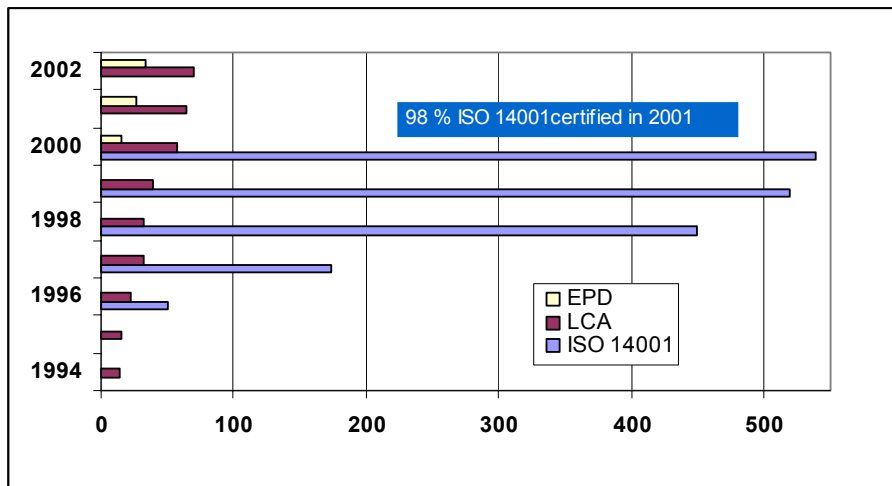


Figure 5. The implementation of ISO 14001, LCA and EPD as the accumulated number of certified production sites and performed LCA and EPD within ABB.

### 3.3.2 Environmental work at ABB

*“What parts of your organization are relevant in relation to environmental issues?”*

The answers to this question were understood as a measure of the grade of implementation of environmental work in the organization. The results can be seen in Figure 6, together with the number of interviewees that mentioned ISO 14001 and LCA as tools used in their own organization. Several interviewees regarded LCA and EPD as complicated or too complicated.

Unfortunately environmental work is not prioritized in product development and even less so during periods of cost reduction. In fact, *“It is the first that is dropped”*.

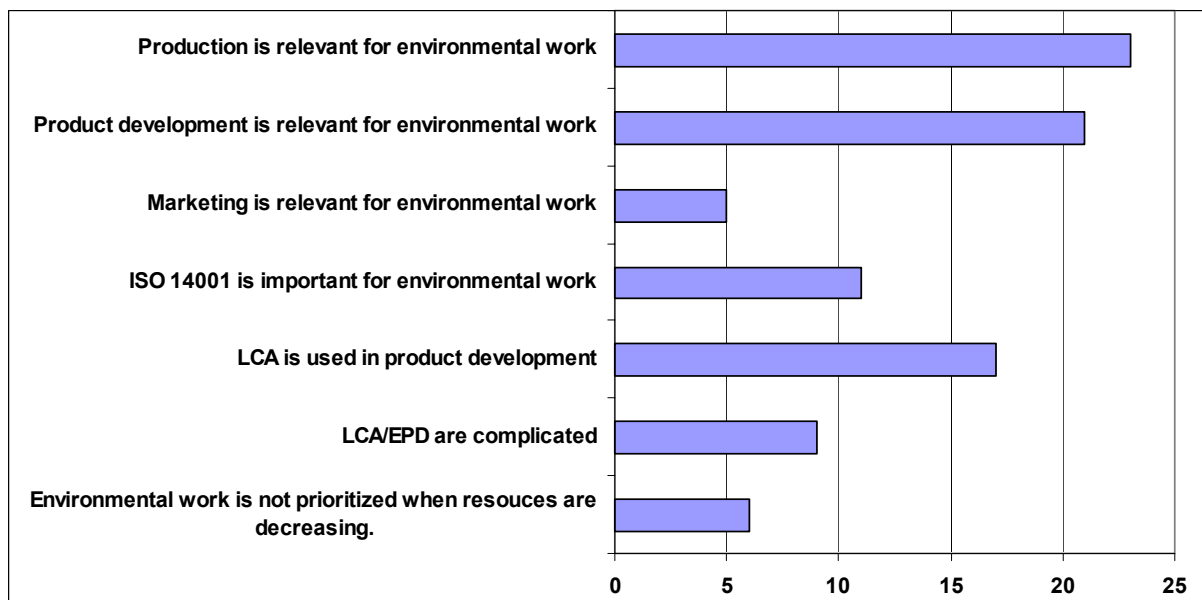


Figure 6.

The graph shows:

- parts of the organization that the interviewees consider to be relevant for environmental work.
- the number of interviewees that mentioned ISO 14001 and LCA as tools used in their own organization and how many of them that regarded LCA/EPD as complicated

- *the number of interviewees that mentioned environmental work as not prioritized in product development.*

### **3.4 Communication to customers**

*“How do you communicate environmental issues to customers or to the market?”*

The interpretation of the answers is illustrated with a graph in Figure 7. A few interviewees claimed that the interest for environmental issues is lower today than some years ago. On the other hand, others answered that there is a slow increase in questions and interest from customers regarding environmental performance. It is also worth noting that the interest for environmental issues is no longer limited to Europe and North America. Customers in Latin-America and Asia are now more aware of environmental issues than some years ago. Investments in e.g. power plants require emission control to be founded by the World Bank and global companies handle environmental issues the same way all over the world.

ISO 14001 certifying is regarded as basic information to the customers showing that ABB carry on the environmental work in a structured way. When customers evaluate environmental information it is probably ISO 14001, hazardous material etc. that is of concern. In fact very few large customers use environmental performance for grading contractors even if they ask for such information. There is a large interest in increasing the use of environmental performance and sustainability in the market. This will require more education of marketing and sales staff and also of the customers. There are only a few larger customers that work with LCA themselves and an EPD is complicated to communicate. (At the request of PTHV a number of customers have been interviewed concerning evaluation of environmental performance. The result is reported in SECRC/CS/TR 2003-202.)

Environmental work is important on long term although the results maybe not be possible to measure. ABB is, at the moment, on the same level or perhaps a little bit ahead of our customers. Alstom and Schneider are two competitors that use environmental information in the marketing in a very energetic way.

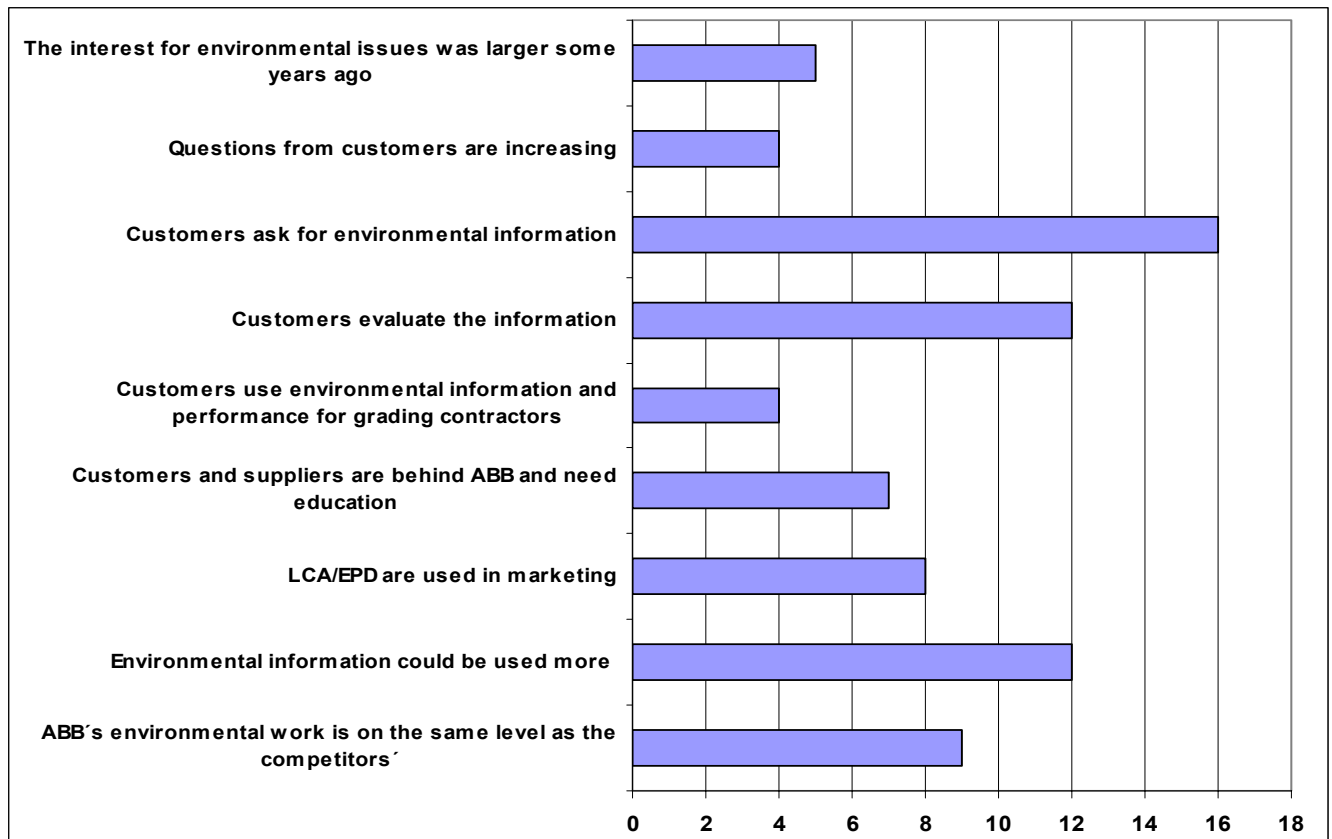


Figure 7. A summary of the interpretation of the answers to the question “How do you communicate environmental issues to customers or the market?” shown as some opinions and the number of interviewees expressing these opinions.

### 3.5 Communication to suppliers

*“What environmental information do you require from suppliers?”*

ISO 14001 is the main information that is requested. Hazardous material is another. ABB require in principal ISO 14001 or an equal environmental management system but these systems demand resources and smaller suppliers are not able to introduce them.

### 3.6 Requirements

In comparison with production and product development the supply chain management and marketing have to-date not been too concerned with environmental issues, with a few exceptions.

It will probably take time and a lot of work before environmental concern is fully implemented into these fields. Both customers and especially suppliers have to be better informed and educated to be able to evaluate environmental information and performance and structure their environmental work. Some examples of some of those needs that were discussed during the interviews are as follows:

- A standard or an easy tool for customers to use to evaluate environmental performance and information and for grading contractors.
- Knowledge of how environmental information is handled by customers and if it affects the decisions taken.
- EPD - light, easy and understandable information

- Education of marketing & sales staff
- Light version of “Environmental management system” for small suppliers to structure their environmental work in a way that is accepted by ABB.

#### 4. DISCUSSION

The interviews show that there is, in general, a good awareness and positive attitude towards environmental and sustainability issues in the company. The need for support and tools in production and product development seem to be relatively well fulfilled. However *marketing and supply management* are two fields found to be weak points that need to be addressed more actively in the future. Better education with regards to environmental issues is needed in these fields.

Another important conclusion is that the requested tools must be easy to use and understand; they must however also be reliable and based on scientific knowledge.

The request for sustainability information has not increased as was expected some years ago. On the other hand a slow but steady increase has been identified also outside Europe and North America driven by e.g. the World Bank and other global institutions as well as public opinion. This is a very interesting trend and the conclusion must be that the work on implementation of sustainability issues will be higher on the agenda for companies than today.

#### 5. CONCLUSIONS

The results from the interviews have provided a lot of input that will be useful in the realization of ABB’s sustainability strategy.

Communication of environmental performance to customers gives a possibility to strengthen the competitive edge. The large amount of environmental studies (e.g. LCA, EPD) conducted in ABB should therefore be used more in marketing & sales.

The results from the environmental studies have mainly been used in product development but are mostly too complex to be useful in market communication. It is therefore necessary to adapt these studies to be suitable also for ABB’s marketing functions.

- To conduct an environmental study demands special competence that is hard to maintain in ABB’s local organization. Easy accessible specialist competence could increase the number of performed studies and make the conducting process more cost efficient. This is in line with ABB’s new sustainability organization with a small group of environmental specialists at Corporate Research, managed by GF-SA and available to globally support all BAs.
- There is a demand for easy to use software tools and environmental knowledge that can be used by all users. The [Sustainability Toolbox](#) established on inside.com in the beginning of 2003 is a useful platform that fulfills these demands.
- The knowledge about the Sustainability Tool Site should be spread not only to product management & development but also to marketing & sales and supply management functions in all BAs through information campaigns.

- The demands and requirements from the interviewees are an important input to the EU founded DANTES project. The DANTES project will therefore contribute to accomplish the work outlined in the conclusions above.

## **APPENDIX 1 ABB CHECKLIST**

### **GENERAL ISSUES**

- Explain *your* role and responsibility at the company.
- What do *you* associate with the words 'environment' and 'sustainability'?
- What is your consideration about environmental aspects in relation to business?

### **DRIVING FORCES**

- What are the main driving forces for working with environmental issues (e.g. legal, customers, management, public opinion, society etc)?

### **STRATEGIC ISSUES**

- How do you come in contact with ABB's environmental policy and strategy?
- Which are the environmental actions taken as a consequence of the strategy? (E.g. minimize transportations, energy use, waste etc.) What has been done and what is planned to improve the environmental performance in your department?
- What results have been achieved from these actions? Have you identified any business benefits/success stories from conducted environmental activities? If so, were there results?
- Do you know anything about your company's resources/support for improving the organizations impact of the environment?
- What parts of your organization is relevant in relation to environmental issues (e.g. production, product development or marketing)?

### **COMMUNICATION OF ENVIRONMENTAL PERFORMANCE TO CUSTOMER**

- How do you communicate environmental issues to
  - The market in general?
  - Specific customers?
- What type of tools and methods is needed to facilitate use and communication of environmental information?
- Are there any difficulties in *your* work connected to environmental issues today? Explain.

### **REQUEST OF ENVIRONMENTAL PERFORMANCE FROM SUPPLIER**

- What environmental information do you require from suppliers?