
Encouraging Engineers to Learn Cross-cultural Skills

Rasmus Caspersen

*Danfoss Refrigeration and Air Conditioning
DK-6430 Nordborg, Denmark*

If the soft engineering issues are not taken into consideration, then one will not be able to achieve the business goals in a global company - even if one is a well-qualified engineer. The aim of the Human Resource Development Department at Danfoss Refrigeration and Air Conditioning, Nordborg, Denmark, is to develop an organisation where people work smoothly together in teams with team members from the various entities in different countries and regions of Danfoss' business segment. This article describes the cultural challenges for engineers in a global company. Very few engineers have had the opportunity to train their cross-cultural competences during their education at university. Training in cross-cultural competences is necessary for engineers if, for example, they go on assignments to foreign countries.

INTRODUCTION

Fifty years ago, most people lived in the same area they were born and worked in one profession throughout their entire lives. However, the reality of working in a global company is almost the exact opposite. Employees of the Danfoss Group face having to work with colleagues in different time zones, in a foreign language and in global workgroups with members in far off countries.

In order to make cross-cultural global cooperation work, cross-cultural competences must be strengthened. Cultural differences, which can be seen, tasted, felt, smelled or heard, are not the ones that cause difficulties. It is the invisible cultural differences that create misunderstandings - different value systems, attitudes, beliefs and expectations. Danes should not walk out into the world thinking that everything must be done the Danish way. Local employees have a knowledge of their markets that an outsider does not have. It is dangerous to say that the right way to do things is the way that Danfoss in Denmark does them.

DANFOSS REFRIGERATION AND AIR CONDITIONING

Danfoss Refrigeration and Air Conditioning is a world-wide manufacturer that holds a leading position in industrial, commercial and supermarket refrigeration,

as well as air conditioning and climate solutions [1]. The cultural profile of employees of the Refrigeration and Air Conditioning business segment of Danfoss is briefly as follows:

- Less than half of the employees are Danes.
- 250 Chinese in the People's Republic of China.
- 1,300 Mexicans in Mexico.
- 1,600 Germans in Germany.
- 600 French in France.
- 2,000 Slovenians in Slovenia.
- A number of employees spread in and around 100 national states all over the world in the sales organisation.
- An example of the extremities encountered can be found in the average age: in Mexico it is 32 years, while in Denmark it is 43 years.
- Most employees outside England, the USA and the Pacific have English as their second language.
- Many employees stay with Danfoss Refrigeration and Air Conditioning for many years.

CULTURAL DIFFERENCES

Researchers have investigated cultural differences and have documented them in a way that is easy for even engineers to understand and use. Hofstede of the Netherlands is one of these researchers who devised several relevant cultural dimensions [2]. Five out of

more than 15 are shown in Figure 1.

In many cases, the typical culture in the countries mentioned above would be on the opposite side of the scales compared to what is typical for Danish and North European culture, for example. This means that an employee moving to China from Denmark will experience significant difference in collaborative behaviours and habits. Indeed, many of the author's colleagues have experienced this. The same differences are also the case if the expatriate is an American moving to Europe or Asia.

The research makes it possible to conduct training for employees in order to stimulate their awareness of cultural issues and to learn about the practical consequences of cultural differences. In developing the global business of Danfoss Refrigeration and Air Conditioning, there are four situations where cultural issues are taken into consideration:

- Before expatriation of an individual or a family.
- Integration of an acquired company.
- Development of global teams.
- Development of organisations.

Danfoss Refrigeration and Air Conditioning takes these cross-cultural issues seriously and it is felt that people with engineering backgrounds need to learn more about these aspects.

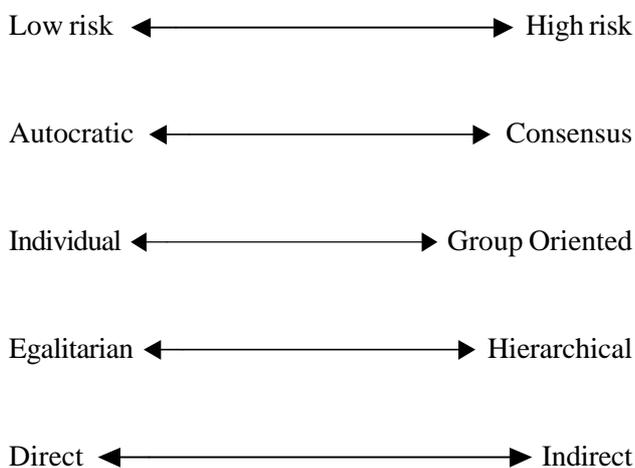


Figure 1: Five of Hofstede's dimensions of cultural differences [2].

TRAINING EXPATRIATES

Ideally, an expatriate and his/her family are trained before expatriation. This training can be both an improvement in the understanding of *the home culture* and an understanding of the cultural background of the people in the country they are moving to.

In order to conduct the training, qualified teachers with working knowledge of the specific countries are enlisted. Often, a consultant is asked to help if Danfoss does not have the necessary expertise. The training programme encompasses training both before the expatriation and during the stay abroad with regard to organisational development in the company in question.

Integration of Acquired Companies

When an acquired company has to become part of a new corporate network, the cross-cultural issues manifested can be differences in both national state culture and company culture. One model, used at Danfoss Refrigeration and Air Conditioning, that can actually strengthen the integration process is as follows:

- Top management has to define common mission, goals and strategies and create a process that builds up ownership and common understanding.
- The employees in the different entities, to which the acquired company is connected, have to be aware of potential cultural issues and become knowledgeable about the typical cultural profiles in the network of new partners. Training has to be conducted for employees so that they can develop understanding and initiate the integration process.
- The partners in the network have to build up a new culture, often called the third culture, which is generated when a number of new partners have to work together and create a common set of values and guidelines in the entity they are a part of. Typically, a third culture seminar should be held and a consultant is usually on hand for assistance. The outcomes include guidelines on cooperation, communication and teamwork.
- The third culture has to be implemented in departments and teams. This is achieved through seminars involving people in discussions about what the guidelines should mean for their daily work.

Danfoss Refrigeration and Air Condition has conducted various such developmental processes in cooperation with the Eaton Consulting Group, Boston, USA [3].

Global Teams

In a global company people have to cooperate, for example, in R&D teams. The highest technical

expertise may be found in the headquarters, but employees in the factories around the world have to be involved in projects in order to run the business when the project period has come to an end. A global R&D team has to be trained according to the same principles as mentioned above.

Organisational Development

In a global organisation it is even more important that managers and employees alike are aware of the direction of the total business. Consider if it is at all possible to practice one corporate company culture when the company has entities in the Pacific, East Asia, Central Asia, Europe, Africa and North and South America.

Some of the most significant differences encountered include:

- Different national states.
- Social and economic relations.
- Religions and traditions.
- Climate.

And there may be different company cultures too.

Typically, Danfoss Refrigeration and Air Conditioning conducts a top down process that involves people vision, goals and strategies. In this way, a common background can be developed. This process involves the following:

- A common understanding of strategies and critical success factors.
- Clear messages from the top level of management.
- Clear goals as to how the local organisation should develop.

However, most likely, the local entity will have to develop its own policies for Human Resource Management with respect to local traditions and legislation.

THE DEMANDS ON EMPLOYEES IN A GLOBAL COMPANY

Danfoss is a multinational corporation that is based on skilled employees who can supply the customers with services and products that are of a high technological standard. Among other highly skilled employees, engineers are needed to master a variety of engineering disciplines. However, on the whole, technological competences are not sufficient.

The experienced engineer should ideally meet the following requirements:

- Creativity;
- The ability to find solutions in collaboration with others;
- The ability to use the necessary technical tools;
- The ability to keep his/her head cool in a chaotic environment, eg from supplier to customer;
- The ability to cooperate in teams and build up a collective feeling of responsibility for decisions;
- The ability to cooperate in a multicultural environment.

Newly graduated engineers should realise that learning and improving cross-cultural competences are necessary skills in the world today.

CONCLUSION

The experiences of Danfoss Refrigeration and Air Conditioning (with regard to organisational development, team building and integration processes after acquisitions) have shown that training cross-cultural skills makes a significant difference. All of the staff, including engineers, have to learn about the cultural aspects and what it means in the daily work life.

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BIOGRAPHY



Rasmus Caspersen is the Head of the Human Resource Development department of the Danfoss Refrigeration and Air Conditioning business segment. He has worked in the Danfoss Group since 1968 and has had responsibility for quality control systems, strategy development, marketing and finance. Since 1996, he has been responsible for the organisation development globally in the Danfoss Refrigeration and Air Conditioning business segment. This includes organisation development projects in Europe, the Asia Pacific region and the USA.

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