Sweden: Green Cargo

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About

Case study name:
The greening of industries in the EU

Country:
Sweden

Organisation Size:
500+

Sectors:
Transport and storage

Green Cargo is a Swedish company with 2,800 employees, providing railway-based freight transport services nationally and internationally. It has positioned its entire business as the greenest transport service provider in Sweden by promoting its high share of renewable electricity powered trains. Furthermore, it is constantly striving to reduce its remaining use of fossil fuels through a number of efficiency measures. The case study illustrates how a company can exploit and promote its advantage to provide environmentally superior services and make a substantial impact in the market, and what effects this implies for quality of work and employment.

Introduction

Transport is an important contributor to climate change. According to the European Commission's statistics service, Eurostat, transport accounts for 20% of anthropogenic (human-emitted) greenhouse gas emissions in the EU. It is a great challenge to diminish the use of transport in modern societies. However, different transport modes have very different environmental effects.

Green Cargo is a Swedish, government-owned company providing railway-based freight transport services, and employing about 2,800 people. It was founded in 2001, after the break-up of the national railway transport provider into several companies.

Green Cargo uses electric trains to transport 94% of its freight, with diesel trains transporting the rest. Its electric trains are powered exclusively by carbon-free hydro and wind energy. Therefore, it is the only Swedish freight transport company carrying the Good Environmental Choice certificate of the Swedish Society for Nature Conservation.

Since its launch, Green Cargo has positioned its business as the greenest freight transport alternative. The green business practices analysed in this case study are:

- marketing approaches to promote green transport services;
- development of eco-driving practices for diesel locomotives;
- upgrading the diesel engines to reduce fuel use;
- increasing the share of electric trains through logistics planning.

Drivers and motivations

Green Cargo has been able to achieve its position as number one in the transport sector concerning the environment due to two main drivers. Firstly, Green cargo had a very favourable head-start to pursue a green business direction. Over 60% of rail tracks in Sweden are electrified. Moreover, Sweden has an enviably high share of cost-competitive renewable energy. What the company had to do was to convince the owner of rail tracks to purchase exclusively hydro and wind energy. Having achieved that, it could offer advantageously low-carbon transport services. Unlike most cases, the company did not need significant investments to achieve this environmental advantage; however, they needed to recognise and effectively promote it among their stakeholders.

Secondly, Green Cargo encountered considerable customer awareness of climate change, which enabled the company to build upon its

environmental advantage. Many of the company's customers have their own sustainability strategies aimed at decreasing their carbon emissions, of which a considerable share comes from transport. Consequentially, the company's ability to offer low-carbon transport services at a competitive price allowed it to obtain a significant differentiator in the market.

In addition, all Green Cargo efforts to reduce the use of fossil fuels through energy efficiency measures contribute to reducing the risk and cost of resources. The company expects that fossil fuels will be more expensive in the future, and as a result it will be less affected by these price changes.

Green business practices

Promoting green transport services

When Green Cargo was established in 2001, it already had the ability to provide green transport services, hence its name. The focus on carbon emissions has been among the business's top priorities for the last decade, thus emissions have been regularly measured and reported. Furthermore, all the company's employees are thoroughly acquainted with the environmental side of their services, in order to exploit this competitive advantage. However, many important green activities were started in the ancestor company and then developed further by Green Cargo.

In 2000 the ancestor company started to collaborate with the Swedish Society for Nature C onservation and obtained the eco-label certificates, which officially recognised the low environmental impact of their railway services. Simultaneously, Green Cargo joined a steering group of European railway companies, which initiated and developed the Ecological Transport Information Tool (EcoTrans IT). This is an eco-calculator capable of estimating the environmental impact of a given freight journey, comparing different transport modes. The calculator was developed in collaboration with academic institutions and rail management consultants. This tool enables transport companies and customers to assess and objectively discuss the environmental impact of transport alternatives.

Having the eco-label and the eco-calculator, Green Cargo took it a step further by offering their customers a service to calculate their carbon emissions from the purchased transport services. Customers whose transport meets certain emission levels are rewarded with the Climate Change certificate issued by Green Cargo.

Moving away from fossil fuels

Although already providing low-carbon carbon services, Green Cargo is striving to minimise further its use of fossil fuels. The company has pioneered the development of eco-driving practices for diesel locomotives in 2006: no one had tried to do it before for diesel trains. It was a simple, low-cost, yet effective method based on trial and observation. In cooperation with the Swedish national organisation for driving schools, there were plenty of test drives performed with the company's diesel locomotives in order to measure fuel consumption in different driving manners. The eco-driving practice which was chosen was estimated to be about 20% more efficient. Green Cargo has invested about EUR 100 million in new engines for the diesel locomotives, which are about 20% more efficient than the old ones. This greening change was possible due to a public subsidy aimed at minimising carbon emissions in transport. The firm also puts great efforts into increasing its share of electric train use, which stands at 94%. It is both more cost-efficient and environmentally-friendly to transport a tonne of freight via an electric rather than diesel train. The issue is addressed by logistic planners engaged in a complex optimisation problem: to balance an available set of trains and staff against given customer orders, while minimising the use of fossil fuels.

Success factor

Green Cargo perceives that its green business strategy is among major factors for its business success:

The combination of our name and the things that we have done puts us in position to play the leading role in the business, as the green transporter. Customers buying transport in Sweden are aware of all their options, but they know that Green Cargo would be the best option for the environment.

Anticipation and management of the impact of green change on quantity and quality of jobs

Of all green business practices described, two will be analysed in terms of their effects on employment: the promotion of green transport services and the eco-driving practice in diesel trains. As for the rest, upgrading of diesel engines did not have any significant effects on workers since the mechanical work was outsourced, and the driving manner of the new engines has not changed. Activities to increase the share of electric trains also do not pose any unique effects on the logistic planners: it simply adds an additional criterion to their optimisation task, which is done with standard skills and tools.

Impact on quantity of jobs

The green business practices analysed by and large create transformed green jobs. There were no jobs substituted or eliminated as a result of the green business practices adopted.

The promotion of the green aspects of transport services mainly concerns the 45 people in the sales and marketing team (1.6% of all employees). They need to obtain a general understanding of the environmental impact of transport in order to position their services in the market. These jobs are on the whole transformed by adding general environmental skills.

The eco-driving practice concerns drivers of diesel locomotives. The company has 470 locomotives, of which 206 are powered by diesel; meanwhile, there are about 900 drivers capable of driving both types of trains. Therefore, given the share of diesel trains, approximately 44% of drivers or 14% of all jobs were, or will be, transformed by providing additional skills for the eco-driving of diesel trains;

Since the launch of the company Green Cargo has had one person looking after the issue of internal sustainability, which comprises all the

green business practices. As a result, this can be regarded as a purely green job. All other employees are affected only in a general way through a shift towards greener working culture. However, their main job tasks are not significantly altered.

Skills development

All Green Cargo employees go through an intranet-based training focusing on transport in relation to climate change and relating the environmental issues to their daily work. It was developed by the internal sustainability expert and a hired external consultant, specialising in freight transport and railway.

To promote green transport services, the sales and marketing teams have to obtain a sufficient level of generic environmental skills so that they could communicate the advantages of their services in the market. They should be knowledgeable about the environmental effects of different transport modes in order to engage customers in a discussion on the topic. In response, sales and marketing receive informational packages on environmental impact on different transport modes. Furthermore, they are trained to use the EcoTransIT calculator and to be able to explain it to customers. Occasionally, the sustainability department organises a meeting to introduce them to the latest relevant environmental news and to find out what additional information they might need.

The implementation of the eco-driving practice in diesel trains requires the drivers to learn certain behaviours which lead to lower fuel use. To disseminate the green practice, internal instructor drivers were trained and the topic was incorporated into their training package along with other work and safety issues. For a while the eco-driving practice was actively promoted among the drivers. However, due to the economic crisis and lack of resources, the process has slowed and currently only around 40 drivers are formally trained. The other drivers are aware of eco-driving guidelines and may share these skills informally. Currently, the eco-driving guidelines are being developed in a computer-based mode, and are expected to be re-launched soon.

In summary, the evidence suggests that the green business practices analysed mostly create the need for some generic skills to understand and address the environmental issues. This general understanding is internally acquired by the sustainability expert, who engages with external parties to collect relevant information.

Other dimensions of job quality

According to the respondents, the promotion of green transport services did not have significant effects on other dimensions of job quality of sales and marketing employees. The eco-driving practice has had some effects on the quality of work of train drivers.

It has improved their health and working conditions through reduction of noise, stress and local particle pollution. The eco-driving manner is expected to put less stress on the driver due to less variations in speed. Consequently, the brakes are also used less, which results in less noise in the shunting yard. Finally, since eco-driven trains use about 20% less diesel, they emit less particles to which the drivers are constantly exposed.

Unfortunately, Green Cargo was unable to introduce a bonus scheme for the drivers for efficient fuel use. The main obstacle to this is that different drivers may use the same locomotive during the same day, which makes it difficult to track individual fuel use.

Arguably, train drivers are also affected by Green Cargo's ambition to minimise the use of diesel trains, which plays an important role in route planning. The drivers are assigned to a particular route and schedule according to their competence to drive a particular type of locomotive. Therefore, there is a need for more flexibility from the drivers to accommodate the most efficient use of locomotives. The work organisation issue is in constant dialogue between the company, drivers and trade unions in order to balance staff working time, preferences and business needs.

Finally, the green business approach certainly has increased employees' motivation and pride, which improves their well-being at work.

Collaboration on the green change

Green Cargo relies mainly on their internal sustainability expert to anticipate and manage the green business side. The sustainability expert represents the company in many formal and informal ways, collaborating with external parties.

Collaboration with a group of European railway companies, in addition to the eco-calculator development, yields plenty of opportunities to share best practices on sector specific sustainability topics internationally.

Green Cargo is a member of one of working groups at the Network for Transport and Environment, which addresses environmental issues in the transport sector;

The company is a member of the Swedish Association for Environmental Management, which organises discussions, trainings, seminars and conferences, opening up ample opportunities for networking and anticipation of new green business concepts.

There are also many events on green business topics, where Green Cargo takes the opportunity to participate and learn new ideas.

The evidence suggests that the company mostly exploits collaboration and networking activities to anticipate possible green business directions and learn from other companies. When it comes to its own management of green change, it mainly relies on the internal sustainability expert, who shares the expertise with other business functions. Needs for specific tasks, like the development of eco-driving guidelines or the eco-calculator, are typically addressed by hiring external consultants.

Green Cargo employees are represented by a number of trade unions. However, both trade unions and the company's representatives agree that the green changes are extremely positive and beneficial for employees. There are no trade-offs between green business and the quality of employment, thus these issues seldom appear on the social dialogue agenda.

Conclusions and recommendations

The main drivers of green business change are closely linked to business opportunities, in this case, facilitated by high customer awareness of sustainability and favourable external factors.

The case study portrays how national infrastructure, and especially an energy mix, can create opportunities for sustainability-oriented businesses to obtain the competitive advantage both nationally and internationally.

Many green business practices in the transport sector can be related to the technological upgrading of vehicles or logistics planning, which, as the case study suggests, has little, if any, new effects on employees;

The company has minimised the effects of the green business change on employment by creating a small specialised sustainability department, and relying on gradually transformed green jobs within sales and marketing as well as train drivers teams.

Green business practices related to different marketing approaches mostly create the need for some generic skills to understand and address the environmental issues, while the eco-driving practice relates job-specific behavioural changes among drivers. However, both practices are simple and are enabled through internal trainings.

There were few findings on how green change influences other job quality dimensions. Where a general understanding of environmental issues exists, white-collar employees seem to be unaffected. For blue-collar employees some positive health-related effects were observed.

The evidence suggests that green business practices contribute to employee engagement and pride in working at a green company.

Bibliography

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Trade union for traffic and railway, 'Saco-förbundet Trafik och Järnväg': http://tj.nu/

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