



## GREEN STRING CORRIDOR



## Small Changes, Big Impact

### *Driver behavior as means for greener transportation*

JH Transport is a medium-sized firm with offices in Brøndby, Hvidovre, and Albertslund, small municipalities surrounding the capital region of Copenhagen, Denmark. The firm is owned and operated by Jan Hansen, employing 60 people with a fleet of 45 trucks. JH transport is a highly specialized transport company, primarily serving two large customers operating in the convenience goods sector. JH Transport has turned to its team of drivers to realize the ongoing cost saving required to stay competitive. Achieving competitive advantages depends on maintaining a focus on efficiency by sustaining the attention of employees and the marketplace. While a competitive price is valued by the marketplace, additional signaling in the form of external "Green Transport Firm" certification has reinforced visibility and validated the environmental impact.

JH Transport was founded in 1994 and has been operating exclusively in local distribution for the past 10 years. It is a medium-sized firm operating mainly in the Copenhagen region. JH Transport has established local facilities in Brøndby, Hvidovre, and Albertslund, small municipalities surrounding the capital region of Copenhagen, Denmark. The firm is owned and operated by Jan Hansen, employing 60 people with a fleet of 45 trucks. The majority of the goods transported by JH Transport are local transports within the Greater Copenhagen area. JH transport is a highly specialized transport company, serving two large customers operating in the convenience goods sector.

### **Company/organisation:**

JH Transport  
- Provider of transport services

### **Industry or sector:**

Forwarding

### **Company Size:**

60 employees

### **Name of initiative:**

Overall holistic approach to greener transport

### **Type of change:**

Driver behavior, environmental friendly motors

### **Impact:**

Fuel economy/energy reduction

### **Aspect of vision:**

Local Impact, continuous improvement

### **Pillar:**

Solutions, corridors

### **Year of implementation:**

2008

### **Region:**

Zeland



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## Motivation: Economic goals, green outcomes

The short-distance hauling market is competitive. Margins are tight. Competition is very strong. Price is the ultimate consideration. As Hansen explains, “The transport sector is a sector dominated by strong competition. Price is the main factor when choosing hauler.” Indeed, price has always been the single-most dominant factor for competitiveness in the sector and, according to Hansen, this factor has accelerated since the financial crisis began putting pressure on the larger players in the economy. Competition has increased, and everyone in the sector is searching for ways to identify and achieve potential costs reductions. Price can be affected by a number of inputs. Wages for drivers are a large share of expenses, along with the costs of maintaining the fleet. However, the primary determinant of price in the short-distance hauling sector is fuel. Wages in Denmark are higher than in neighbouring countries, and maintenance costs are generally fixed and unavoidable.

The price of fuel is out of the scope of control of operators. Cheaper sources of fuel are generally not available unless large investments are made to convert to alternative fuels. With high prices for conventional fuel types, fuel use is a major factor driving the price of service and is one of the only available costdrivers that can be altered through actions by the operator.

As Hansen explains, “A lot more attention is given to the cost per kilometer because the fuel has become a central parameter for competitiveness and the survival of my business.” The increased emphasis on fuel reduction has meant that JH Transport has initiated a number of initiatives to save fuel. With the relentless focus on ways of saving fuel, a side effect has been that the firm has become greener. As Jan Hansen puts it, “The environment has actually benefitted from the economic crisis, since it has meant an extra focus on the level of expenses. For us, this has led to a reduction of fuel and with it a reduction in CO2 emission.”

Thus, the economic sustainability of JH Transport, like all short-distance haulers, is tied to long-term sustainability of the sector. Hansen believes the business model of his company is tied dependent on identifying efficiencies: “The haulage business is a marginal business. It is the little improvement that makes the difference.”

As fuel savings are one of the few levers of cost reductions, smaller providers of transport services are focused to implement new approaches to identify and generate efficiencies in their operations.

## Cost-saving strategies: Hard and soft approaches

The range of improvements for haulers is limited. Options include investing in a new fleet, conversion to new types of fuel, or retrofitting equipment to improve efficiency. These investments in the ‘hard’ physical aspects can generate immediate savings.

Hansen explains that his decision to the fleet of trucks to newer and fuel saving models which had a two fold perspective. First, and most obviously, the goal was to save fuel costs over the longterm lifecycle of the new trucks. The current truck fleet JH Transport now has an average age of two to three years. The second reason for investing in new trucks is less tangible. Given their market in the distribution of edible products, JH Transport’s two main customers require clean trucks for their deliveries. “Our customer pushed us.” Coop, one of the two main customers, has put emphasis on new and less polluting trucks throughout the fleets of their transport suppliers.



But purchasing new trucks is not the only solution to reducing fuel costs. Beyond new investments in the trucks themselves, additional sources of savings need to be identified to remain competitive. Physical improvements are costly and can only be implemented in stages, depending on the availability of financing. Costs can be prohibitive. Therefore, to gain further cost advantages, short-distance haulers need to focus on ‘soft’ or non-technological improvements.

## Soft Solutions

The company is aggressive in its goal setting. For example, as part of making the firm more fuel efficient, JH Transport has as their goal to reduce the idling time with 10 % through the next year. And then 10 % in the following year, and the one after that. All together, JH Transport will have focus on the following elements as part of their strategic approach to saving fuel and becoming greener:

- Idling time
- Speed when approaching red light
- Tire pressure
- Optimizing routes

### The drivers are the key: altering driving behaviour

As means of obtaining their goals JH Transport will first and foremost have focus on the behavior of the drivers. All drivers at JH Transport thus receive technical driving courses with a special focus on economic and environmentally friendly driving. Lessons are then followed by quarterly driver meetings to review techniques and progress.

A new driving behavioral monitoring system has also been implemented in each of the trucks in the fleet. Monitoring efficiency is not a new strategy, but the new system represents an upgrade from the previous approach. In the previous system, the data collected followed the truck. Under the new system, performance data follows the individual driver, no matter which truck they drive. Data on fuel use, amount of kilometers driven, time of idling, and other key parameters is collected for all 60 drivers across all of the 45 trucks in the fleet.

Hansen believes the investment in soft approaches is worthwhile. As he says, "It is an investment to send the drivers on course, but it is only a few percentages that need to be saved on the fuel before the investment is recouped. The haulage business is a marginal business where it is the little improvement that makes the difference. The drivers know that, but still it is hard to change habits and a constant effort has to be made to maintain and hold on to the new and more efficient way of driving."

## Cost savings: The impact of driver training

The impact of driver training is significant and measurable. In a natural experiment, JH Transport had two identical trucks driven by two different drivers. One had received the driver training, while one had not. By analyzing the data collected through the upgraded driving behavior system, JH Transport found differences in idling time by one of the untrained drivers compared to the other, who had taken the training. The difference over the course of a year amounted to 35,000 Danish Kroner worth of fuel usage. As Hansen explains, "What the new system is able to do is to calculate in Kroner and ører. This makes it very tangible for me – and especially for the drivers – that their behavior has an economic impact." Actively securing drivers' commitment and engagement when implementing a behavioral system is of fundamental importance. JH Transport aims at 10 % reduction on fuel use within the next year. Such a reduction would result in an economic savings of DKK 800,000 per year in the first year. Since the success is heavily dependent on the drivers, Hansen believes that it is important to include drivers in the process and motivate them by different bonus agreements. For example, JH Transport has implemented an internal competition to see who can make the biggest improvement in various categories. Hansen has decided to share the economic gains with those who are responsible for the reduced fuel use. If JH Transport succeeds in saving 10 % on their fuel usage, the drivers will receive a bonus corresponding to DKK 400,000 to share among them. "This keeps the drivers motivated," says Hansen.

### Attention in the marketplace: The role of green certification

These incentives – accountability for individual drivers along with a bonus for success – assists in addressing biggest challenge in becoming greener, which is the need for constant improvement and attention to detail. Keeping the drivers' commitment for driving the trucks in a more fuel efficient way is crucial. However, it remains a challenge to find the right balance between gathering the amount of data necessary to obtain the goal of a 10% reduction in fuel use and avoiding monitoring each driver to such a degree that it becomes a psychological load for the drivers and an administrative burden for JH Transport.

While the monitoring and reward system implemented by JH Transport supports increased internal attention on efficiency, additional tools are used by the public sector to reinforce the efforts and promote external attention to the efforts. External support includes green certification, which has the effect of sending strong signals to the marketplace while validating companies' efforts in limiting environmental impact. As result of the work done by JH Transport in becoming more fuel efficient, and the consequent reduction in CO2 emissions, the firm has been certified as a 'Green Transportation firm' by The Danish Transport Authority.

## Certification – Green Transport Firm

As part of the Danish government's agreement from 2009 on 'A Green Transport Policy', the various political parties agreed to a reduction of the CO2 emission from transport. The parties agreed on implementing a number of concrete initiatives that, in the short run, would reduce the level of CO2 emissions in the transport sector. Among these initiatives is the certification system to identify specific 'Green Transport Firms'. To become certified under the system used by the Danish Transport Authority, a firm needs to map their business in terms of sources of CO2 emission and identify areas of action. The main task is to map the fleet and its fuel use, set goals for the CO2 reduction initiatives, and make a vision for becoming a greener haulage. As part of the certification, firms commit themselves to at least a 2 % reduction in fuel use per year. JH Transport has been through this process and states that it is a good initiative that represents a good add-on in relation to sending positive messages about existing clients and potential clients in the future. However, the certificate remains an add-on; price remains the primary factor in attracting and retaining clients.

Yet the additional marketing is beneficial, but at the same time Hansen believes that the model for certification needs to be developed in the future: "We can easily reduce our fuel use with 2% the first year and maybe also the next three to four years, but afterwards it begins to look like an impossible task. The Danish Transport Authority therefore needs to develop their model so it fits reality by taking 'old' and established certified firms into account." In addition to the benefits to the firms that are certified, the documentation of good practice is meant to assist other companies in the region to take advantage of the new knowledge of environmentally friendly approaches by posting information on the Authority's website.

## Green principles

Ultimately, medium-sized firms operating within a specialized market face a limited range of options, due to a lack of market power and potentially insufficient scale to finance large investments in new equipment or technological solutions. JH Transport sought a combination of approaches, investments in 'hard' assets complemented by a focus on driver behavior, to maintain competitiveness in a tight market dominated by price. Achieving a competitive advantage in the market depends on maintaining a focus on efficiency by sustaining the attention of employees. Efficiencies need to be identified in any way possible, and the new monitoring technology combined with structured incentives has assisted JH Transport in becoming more competitive and environmentally sustainable. External attention in the form of an external "Green Transport Firm" certification has reinforced visibility and validated the environmental impact. Nevertheless, market pressures – price and customer demands – form the underlying driver in the greening of JH Transport.

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