For almost two years, Stig Pastwa has been the CFO and part of the Executive Board of one of the most important companies in Denmark. DSB is the backbone of the Danish transportation system, and a company that is vital for providing society with the necessary mobility to enable a dynamic and efficient job market. Mr. Pastwa has experienced a rough period and during the next couple of years, DSB will face one of the most challenging periods of its 130-year-old history. The political demand for passenger growth is extremely ambitious, the customers’ demands are ever increasing, and the reputation of DSB in the Danish population is less than perfect.

From chaos to turnaround
It has been three years since a radical shift occurred in DSB. At that time, DSB was in a deep crisis after economic chaos, which ended with a replacement of almost all of its top management. Fixing the bottom line was the number one priority. Therefore, the focal point was on recovery and re-establishing profitability. The recovery strategy included cost cutting as well as reductions in the number of employees. After two years, DSB achieved profitability again, and posted profits of 483 million DKK in 2013. Therefore, today, with DSB “in balance”, the focus has shifted from turn-around to future profitable growth through improving the customer experience.

Back to basics – the customer as the centre of attention
In 2010, the Ministry of Transportation in Denmark published an ambitious report, which highlighted a political ambition of doubling the use of public transportation by 2030. DSB plays a vital role in reaching this goal, which would entail growth rates of a scale never seen before in a European context. In order to achieve this growth, DSB needs to put the customer experience more in focus. In other words, DSB needs to get back to basics. This is a major challenge as customers have a dreary picture of DSB as a company. A large gap exists between the cold, hard facts of operating trains efficiently, and the expectations of the customers. Moving forward, this discrepancy can lead to increased dissatisfaction among customers, unless the expectations of DSB and its customers are better aligned in the future. Over the next three years, heavy investments will be made in the rail infrastructure in Denmark, which will result in disruptions in scheduled traffic, and this will further increase the importance of managing customer expectations.

Operating a railway in today’s Europe has the unique feature that it is typically, when viewed alone, a bad business case for the actual railway company. However, railway operation has some very significant synergies, which make it very beneficial for society as a whole. An efficient railway system is crucial for a modern European society, and therefore European governments typically subsidize the railway companies heavily. This has resulted in a complex ownership structure for DSB, which means it must navigate within the limitations of a highly political environment, while remaining focused on operational efficiency and customer satisfaction.

With profitability reestablished, Mr Pastwa’s focus has now shifted towards growing the topline instead. Therefore, the challenge that lies ahead is how to take the initial steps towards getting more people to take the train. DSB believes the key to getting more people to take the train is to keep the consumer in focus at all times and continuously improve the customer experience. Stig Pastwa – now acting CEO – therefore wants your help to answer the following question:

How can DSB increase the amount of passenger kilometres in Denmark through focusing on improving the customer experience while remaining profitable?

You are asked to formulate a three-year business plan that will result in a total increase in the amount of passenger kilometres of 7.5% after three years, and serve as the first step on the journey towards supporting the political ambition of doubling passenger kilometres by the year 2030. A successful business plan solution needs to impact DSB and Danish society on a triple bottom line: The economic, the political and the reputational.
Company Background

130 years as a socioeconomic and political important organization

In 1847, the first railway track opened in Denmark between Copenhagen and Roskilde. It was built by the private company “Sjællandske Jernbaneselskab”, and started out as more of an amusement than an important part of the transportation system. Around the same time “Det Jysk-Fynske Jernbaneselskab” started operating railways in Jutland as well. In 1867 the government took over the operations of the railway tracks in Jutland and Funen, and in 1880, it also took over the railway operations on Zealand. Five years later, the government merged the two regional companies, and established what we today know as DSB.

In 1934, the first S-train lines, which operate in the Greater Copenhagen area, and connect the majority of the Copenhagen suburbs with the city center with frequent train departures, were established. The InterCity train that connects cities at different regions in Denmark (for instance from Århus in Jutland to Copenhagen on Zealand) was established in 1974.

In the mid 1990s, a liberalization process occurred in many European countries for their telecommunication, energy and transportation sectors. In 1997, ownership of the infrastructure (rail tracks, signaling systems etc.) was separated into a different and completely independent company, BaneDanmark. Further, in 1999, DSB became an independent state-owned company, which means that the company basically can operate as a private company with its own financials, board and management team, but still has certain public obligations as it is still owned by the Danish state.

As an attempt to grow their customer base, DSB started an internationalization process in 2002 with attempts to enter the English, Swedish and German markets. However, the internationalization strategy did not prove a success and DSB abandoned most of its foreign ventures again in 2011. Therefore moving forward, the focus for DSB is not on internationalization strategy did not prove a success and DSB abandoned most of its foreign ventures again in 2011. Therefore moving forward, the focus for DSB is not on internationalization again. The next step is the difficult part: Execution”.

We now have a viable, long term strategy with the aim being substantial passenger growth while remaining focused on profitability and operational efficiency. The next step is the difficult part: Execution”.

Jesper Andersen - Chief Strategy Officer

Strategy of DSB

Regaining trust among Danes

In 2014, DSB launched its new overall strategy program named “Win Confidence in DSB”. The main goals for the strategy is that DSB will return to focusing on the customer, through enhancing the ability to work while traveling, improving its public reputation, and making transportation as integrated and seamless as possible.

However, the main purpose of DSB going forward will still be delivering reliable passenger trains and ensuring a high level of integration throughout the entire public transportation system. The future is expected to bring further demands for liberalization from the EU, increased digitalization of all links in the value chain, transfer of maintenance responsibility from operators to producers of trains and finally more standardization of railway operation across borders.

The railway industry is very unique in some ways and is often very dependent on various national socio-economic considerations. The mobility gains that arise from having an efficient railroad result in very large and significant benefits and synergies to society as a whole.

This is especially true in Denmark, which has the third highest rail modal-share in Europe. Therefore, the responsibility of DSB to provide a reliable and efficient railroad service in Denmark is of huge importance for Danish society.
The Political Dimension

Strong political interest and influence on the railway industry
DSB is a state-owned company, and is governed by the Danish Ministry of Transportation. DSB is operating as an independent state-owned company, and the Danish government is subsidizing DSB with more than 4 billion DKK each year to support its operations.

The business of operating a national railway system
The reason for DSB being subsidized by the government is that on its own, operating a national railway system is an unprofitable business. From a pure business perspective, only a few urban routes are attractive, while the majority of the routes operate at a loss. However, the national railway system plays an important role in society as a whole, and is necessary to ensure a functioning and effective infrastructure. An efficient and highly developed public infrastructure system is vital in order to increase mobility in the job force. As a result of this, railway transportation is subsidized all across Europe.

DSB and the ministry of Transportation
The contract between DSB and the government outlines the responsibilities and requirements of DSB. Specifically, it describes what DSB is allowed to do in terms of pricing, which routes it must operate, and the frequency of the routes. This means that DSB cannot adjust its prices based on supply and demand. DSB has the option to give discounts to specific groups or for specific departure times; however, they cannot increase their prices beyond a specific maximum defined in the traffic contract. In terms of frequency, DSB can increase the frequency if demand is high, but they cannot decrease the frequency below a defined threshold if certain routes are unprofitable.

Political agenda - The case of the tip-up seats
Even though DSB is technically run as an independent company, the distance to the politicians is sometimes very short, and it becomes very clear that DSB is still a state-owned company. An example of this is the case of tip-up seats for students. DSB offers very cheap tip-up seats for students, who are traveling across Denmark in off-peak hours. In September 2014, DSB announced that it wanted to terminate this offer in order to increase room for bikes and baggage on longer routes, and also because the cheap tip-up seats only accounted for only 0.1% of travel on regional trains. The next day, the minister of transportation went out publically and told DSB to keep the tip-up seats, as they served an important role for society. DSB then had to keep the seats. This is a good example of how what is best for business and what is best for society do not always align, showing the sometimes conflicting bottom-lines of society and DSB.
Complex infrastructural factors set out constraints

The activities connected to operating a railway system can be divided into a number of different categories, such as building and maintaining the track infrastructure, running train stations, selling tickets, providing traffic information, buying and maintaining trains and, finally, actually operating and driving the trains. In Denmark, DSB is responsible for almost everything except the construction and maintenance of the railway track infrastructure.

This means that it is also DSB’s role to purchase new trains to meet future traffic demand on the Danish railway; however, procuring trains is a long, expensive and highly complicated process, sometimes taking up to as much as 10 years from the beginning of the process to the time the trains are delivered.

All of these infrastructural factors set a number of constraints for railway operation. For example, one constraint is the tracks, which limit where the trains can go and how fast they can go, and another is the number of available trains, which determine the frequency and capacity of the different scheduled train departures. Taken together, all the different infrastructural factors determine the total network capacity. Today, it is difficult to add more frequent departures because the network capacity is limited by a number of traffic bottlenecks, such as bridges, low numbers of passing loops, highly trafficked key stations and outdated signaling systems.

The Danish Parliament has recently agreed to invest more than 100 billion DKK in the Danish rail infrastructure in order to increase the network capacity so that it will be able to accommodate the future growth of rail passenger traffic. However, these investments are scheduled to span over the next 15 years. In addition, DSB and BaneDanmark have scheduled a comprehensive track maintenance and new signaling program over the next three years.

Overall, understanding the limitations set by the infrastructure is important when it comes to evaluating strategic proposals and ideas.

“While we always focus on improving our operations, we are currently at a level of punctuality where the majority of the improvements will come from better coordination with BaneDanmark and technological development in the signaling system”.

Anders Egehus - Executive Vice President, Operations
In order to understand the value proposition of train travel and in order to improve the customer experience, it is also important to understand the main alternatives and competitors that DSB is up against on the passenger transportation market. As can be seen on the graph, the biggest competitor by far is passenger cars. This mode of transportation has become more popular with the introduction of “micro” cars available at very cheap prices of less than 100,000 DKK. These micro cars are small and very fuel efficient, which makes them relatively cheap, compared to other transportation modes. A key advantage for the cars is the flexibility they bring, as the driver decides when to depart. Additionally, the driver can often complete the journey in one leg, rather than having to go through multiple legs such as is often the case with public transportation. However, the cars also have certain drawbacks — for instance, with the increased number of cars on the roads, traffic congestion is increasingly becoming a hassle, and, similarly, parking spots are becoming more difficult to find within cities.

Drivers for change
The main drivers for changes in modal shares between trains and cars have historically been availability of cars, development of highways, door-to-door speed of cars vs. trains and the number of train services operated. In the future, the key drivers for growth in the modal share of rail transportation is expected to be investments in railway infrastructure, continuous improvements in business performance and customer experiences, and technological changes that advance door-to-door connectivity.

In order to achieve the passenger growth targets set for DSB, it is imperative to understand the alternative offerings in the market, and to recognize that different modes can be seen both as competitors and as complementary services. Multi-modal journeys and better integration across different means of transportation are ways to improve customer experience, and therefore represent a significant growth opportunity.

An industry dominated by passenger cars and trains
As the biggest railroad company in Denmark with the responsibility to operate passenger trains on most of Denmark’s railways, DSB’s main market is the market for passenger transportation. This market encompasses all passenger transportation in Denmark and includes all different modes of transportation, such as bicycling and driving.

The different modes of transportation have very unique characteristics and each has its advantages and disadvantages. In 2012, trains (all operators) had a share of 10.1% in Denmark in terms of passenger kilometers traveled, while passenger cars constituted more than 80% of total passenger kilometers traveled. This has been fairly stable over the last 10 years; however, trains have managed to gradually increase their share from 9.3% in 2004.

In order to achieve the passenger growth targets set for DSB, it is imperative to understand the customer experience, and therefore represent a significant growth opportunity. Better integration across different means of transportation are ways to improve customer experience, and therefore represent a significant growth opportunity.
Integration across different modes of transportation

DSB as the backbone of the Danish transportation system
DSB has an ambition to be the backbone of the Danish transportation system. This means that they will play an even more important role in further integrating the public with the private transportation system. This goal requires taking responsibility for the customers’ journey from A-Z, and ensuring that the travel experience is as seamless as possible. In order to achieve higher levels of integration, critical factors include improving the traffic information provided to customers, making ticketing easier, and accommodating other transportation modes such as busses, the metro, cars and bikes.

Traffic information between different transportation methods
Informing customers about how to get from point A to Z in an easy, available, fast and reliable way across different transportation forms is a task DSB has undertaken to ensure connectivity for the customer, thereby providing one focal point (one point of touch) to customers and giving them a better travel experience.

Rejseplanen.dk is an example of a digital solution that integrates the different public transportation systems; however, the system still faces challenges in giving fast and reliable updates in case of delays. Generally, improvements are necessary to proactively inform customers about potential delays upfront, and to inform them of alternative ways of reaching their destination.

Rejseplanen.dk
Rejseplanen.dk is a portal that contains all scheduled and current departures and arrivals within the Danish public transportation system. It contains running times for all operators and transport modes, and users can find travel information from/to all addresses in Denmark. Scheduled maintenance and cancellations are also shown on Rejseplanen.dk. Rejseplanen.dk is available both online and as an app.

Facilitating other transportation vehicles:
A way of making the train more attractive is increasing the reachability of the stations. The figure shows that distance to the stations is very important when people choose their mode of transportation. By increasing parking facilities for cars and bikes, the train can become a more attractive alternative.

Easier ticketing across different means of transportation
Purchasing tickets needs to be a one-stop shop, which was attempted with the introduction of “Rejsekortet” in 2010. Originally, the plan was that this card should replace normal tickets and be the only way to purchase tickets, but it is now used as a supplementary product.

With Rejsekortet, the Danish transportation system has taken a big step to integrate the ticketing of different modes of transportation. However, “Rejsekortet” still faces challenges with a highly non-transparent pricing system for customers, a software capacity issue, and a complex ownership structure.
Train systems of DSB

Three key train systems in Denmark
DSB operates three rail systems in Denmark. The S-Trains, which operate in and around greater Copenhagen, the regional and long distance InterCity trains, which serve and connect the different regions in Denmark, and the Øresund Trains, which connect Copenhagen with southern Sweden. The different train systems of DSB also cater to different customer types. Commuters going to and from work primarily use the S-Trains and the regional trains, whereas the long distance InterCity trains in the “East-West” segment are mostly used by leisure travelers visiting friends and family, and business travelers going to meetings.

S-Trains
The S-Train is an urban city-train system operating in the Greater Copenhagen Area. There are 84 stations on the S-Train network, and at several of the stations you are able to change to local and regional trains that serve the rest of Zealand, as well as long distance InterCity trains that connect Copenhagen with Jutland and Funen. At most stations, you are also able to change to the local busses in Copenhagen. The S-Train stations are typically placed fairly close to each other, especially in the city center.

Øresund Trains
The Øresund Trains is a regional train network serving the Øresund region. It runs from Helsingør in Denmark and goes to Malmö in Sweden, from which point trains continue to Karlskrona, Kalmar or Gothenburg.

F&R Trains (Regional and InterCity Trains)
The F&R Trains are DSB's main train system, which connect various cities and regions of Denmark. This system is made up of regional trains and long-distance InterCity trains. It can be segmented into the following three areas: “East”, which covers local and regional travel on Zealand and Lolland-Falster; “West”, which covers local and regional travel in Jutland and Funen; and finally the “East-West” segment, which covers the long distance InterCity trains that run between Copenhagen-Odense-Århus-Ålborg as well as various other locations in Jutland.

It is expected that the East-West segment will be impacted heavily by track maintenance during the next three years. During the maintenance period, it will be difficult to sustain current levels of punctuality and customer satisfaction. Additionally, it is also the East-West segment that has been affected the most by the increased competition from cheap micro-cars. This is a key challenge for DSB, because the East-West segment is at the same time also DSB’s most popular service, as measured in passenger-kilometers.
Increasing passenger growth through bikes – Case of the S-Train

Denmark is a nation of bicycles; therefore, as an attempt to increase passenger growth, DSB began to offer free bike transportation in the S-Trains. Passengers must still purchase a ticket, but they can now bring their bikes for free, while it used to cost around 10 DKK.

The project started in 2010, and has resulted in significant passenger growth in an otherwise stagnating market. The amount of passengers using the S-Train has boomed since the introduction of the free-bike initiative. Additionally, the majority of the new passengers in the S-Trains are bringing a bike. Before the initiative was started in 2010, 2 million annual travels included a bike, and already in 2012, this figure was up to 9 million.

This is a strong indicator that the option of bringing a bike for free in the S-Train has resulted in more people using the S-Train, and this is an example of how the company can create growth by improving the customer experience. However, these improvements also came at a cost, in terms of modifying existing train cars and other operational difficulties that resulted from the increased number of bike passengers.

Experience of the customer

Drivers for customer satisfaction and customer experience

An important part of reaching the political goal of growth in passenger kilometers is understanding the customers’ needs and priorities when they travel. Some factors carry more importance than others, and it is especially punctuality and frequency, comfort, and traffic information that drive customer satisfaction.

Drivers for customer satisfaction (% of total customer satisfaction)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Safety, Stations &amp; Cleaning</td>
<td>17%</td>
</tr>
<tr>
<td>Punctuality &amp; Frequency</td>
<td>27%</td>
</tr>
<tr>
<td>Product, Price &amp; Service</td>
<td>15%</td>
</tr>
<tr>
<td>Comfort</td>
<td>20%</td>
</tr>
<tr>
<td>Traffic Information</td>
<td>21%</td>
</tr>
<tr>
<td>Overall satisfaction</td>
<td>100%</td>
</tr>
</tbody>
</table>

Source: DSB Internal Data, 2014

Punctuality and Frequency

DSB has improved its level of punctuality during the last four years, and the current level is among the highest compared to its European peers. Often the root cause for delays involves signaling or planning errors, which are out of the hands of DSB as they are BaneDanmark’s responsibility.

However, since DSB is driving the trains, it often gets the blame for the delays.

Punctuality of DSB

<table>
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<tr>
<th>Year</th>
<th>F&amp;R S-Trains</th>
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<tbody>
<tr>
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</tr>
<tr>
<td>2011</td>
<td>94%</td>
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<tr>
<td>2012</td>
<td>91%</td>
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<td>2013</td>
<td>95%</td>
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<td>96%</td>
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<tr>
<td>2016</td>
<td>93%</td>
</tr>
<tr>
<td>2017</td>
<td>97%</td>
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Responsibility of delays

F&R Trains

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<th>Year</th>
<th>DSB</th>
<th>BaneDanmark</th>
<th>External Factors</th>
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S-Train

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<th>BaneDanmark</th>
<th>External Factors</th>
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Source: DSB Internal Data, 2014
Comfort:
The Danes have high levels of expectations regarding their experience with using the train. They expect a high level of service, clean trains and stations, and the ability to sit in the train at all times. A high level of service also means being able to utilize the time spent in the train most efficiently. This could mean the ability to work while sitting in the train, which is a feature that differentiates the train from other modes of transportation. Increasing the ability to work in the train is a way to improve the customer experience significantly. DSB has branded this efficient working time as "+time".

The expectation of always getting a seat has proved to be a challenge, as there are times during peak hours where high demand means that the trains are full and some people have to stand. This is not very different from most European countries, but the difference is that Danes expect to always have a seat, even in rush hours. If more people are going to use the train in the future, this will increase the pressure on capacity, meaning that dealing with customer expectations becomes necessary.

Traffic information
Generally, traffic information is functioning well, with a combination of different methods to inform customers about their travel arrangements that range from updated monitor screens on every station, to speakers on the stations and in the train, to digital solutions such as the DSB app and the rejseplanen.dk app, where people can get information about how to most efficiently get from one destination to another across different modes of transportation.

Traffic information works relatively smoothly when there are no delays in the system; however, once unforeseen delays occur, the quality of traffic information decreases significantly. Due to the complicated and interconnected nature of the railway infrastructure, the delay of one train affects several other trains in the system. In these cases, it becomes a challenge to communicate alternative routes to the passengers, and so when these unforeseen delays occur, the customer satisfaction rate drops significantly.

The upcoming track maintenance projects that are planned for the next three years again underline the importance of being able to provide fast and accurate traffic information in cases where unforeseen delays occur. This communication will provide a way to improve the customer experience when the delays occur, as well as minimize the impact and hassles that track maintenance inflicts on passengers. Providing traffic information is carried out jointly between DSB and BaneDanmark, and therefore cooperation between the two is very important. However, as DSB and BaneDanmark have different success criteria, their goals are not always aligned, and this has in the past created some conflicts of interest.

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In many cases, the train is not the only mode of transportation the passengers are using to reach their destination. Solutions such as rejseplanen.dk help passengers get a more seamless travel experience across different transportation modes. However, the customer experience can still be improved by better integration between using the train and a car, bike, bus or other forms of transportation.
In addition, DSB has also divided the entire Danish population even further into eight segments. Six of these segments contain DSB customers, while the last two segments contain non-users. The segments are based upon the frequency of usage (ranging from heavy users to non-users) and on their motivation for taking the train (motivated and unmotivated users). The motivation of users is determined by their predisposition towards public transportation with train, as well as how they experience traveling with public transportation.

The figure shows that motivated heavy users and unmotivated heavy users have 79% of the total travels, and constitute 72% of the revenue. This shows that the heavy users are using the train considerably more often than the other groups, and it also shows that heavy users pay a lower average price per travel than medium and light users. Further, motivated users are using the train more frequently than unmotivated users across the different groups, and the travel purpose varies across groups as well. Possible solutions to increase passenger growth can therefore be to: 1) Motivate the unmotivated users to increase their frequency, 2) Get medium and light users to use the train more frequently, and 3) Get non-users to start using the train.
Product portfolio

**A large and complicated product portfolio is non-transparent and inefficient**

DSB solves an important task in society by providing frequent and reliable transportation in all regions of Denmark. DSB is required to ensure a certain number of departures at all stations, even the small and unprofitable ones, and for this service they are compensated from the government with an annual traffic contract payment. This again shows that several bottom lines exist in railway transportation. It might not be profitable for DSB to stop at a certain station, but when seen from the perspective of society as a whole, it can still be beneficial, and therefore DSB is subsidized through traffic contract payments. The biggest contributors to DSB’s revenue are passenger revenue and traffic contract payments from the government.

DSB has a large product portfolio, and offers everything from regular tickets, to a youth card, to a “65 ticket” for people over the age of 65. In total, DSB has had around 200 different products, which created a rather non-transparent ticketing system for customers. It carries high administrative costs to maintain a large number of products, and DSB has therefore initiated a process of limiting the number of product types. They removed 90 product types from 2012 to 2014, and expect to continue to reduce the number of products by removing additional products within the next couple of years.

The figure shows that 92% of the revenue comes from nine product types, which indicates that DSB has a lot of products that don’t generate significant sales. Therefore, moving forward, DSB needs to figure out which products are necessary to foster future passenger growth, and how they can simplify their product portfolio without compromising important target groups such as the elderly or students. Additionally, this is an area in which the political influence is sometimes high. An example of this is the case of the tip-up seats.

Digitalization of Sales Channels

DSB has traditionally sold tickets mainly through manned ticket booths at the stations. DSB has since 2008 focused both on improving the user experience and reducing costs through increasing the degree of self-service. Today, passengers can pay for their tickets online or through a ticket machine, a manned ticket booth, the DSB app, text-messages, or by Rejsekortet. While mobile purchases account for most of the transactions today, manned ticket booth sales still constitute a significant amount of the transactions.

DSB expects that the degree of self-serving customers will increase drastically in the future. This will happen through increased sales through digital solutions, and result in a gradual closing of manned ticket stores.

**Revenue split on sales channel transactions, 1H 2014**

- Mobile: 27%
- Online: 13%
- Vending Machine: 25%
- Ticket store: 25%

**DSB Revenue Breakdown (2013)**

- Passenger revenues: 44%
- Traffic contract payments: 44%
- Repair and Maintenance of Trains: 8%
- Sales from shop: 7%
- Leasing of trains: 2%

**Source:** DSB Annual Report 2013
Rush hour capacity limitations

Large demand fluctuations throughout the day
In addition to being subject to infrastructural constraints, DSB also has a difficult challenge in handling the peak capacity demand that occurs during the morning and afternoon rush hours. The morning rush hour is the point during the day with the highest demand; therefore, it is this peak demand that defines the total capacity requirements of trains that DSB needs to own and operate.

In addition to this, the marginal capacity used during peak hours can only be utilized during those peak hours, and is therefore excess capacity during the rest of the day. This results in extremely high marginal costs for operating additional trains during rush hours, as they can only generate revenue during a small portion of the day. Therefore, the solution to reduce overcrowding during rush hour is not to schedule more trains.

Another issue that is connected to the peak demand spikes is the revenue per passenger generated during this time. The majority of passengers using the trains during rush hours are commuters on their way to and from work; these commuters typically pay a very low price per train ride through a monthly commuter card, and, additionally, they receive tax deductions for commuting. Therefore, contrary to what you should expect, the lowest average price per passenger is actually during periods with the highest demand.

Consequently, the cheapest tickets are sold to the trains that are the most costly to operate (the ones with the highest marginal costs). This is illogical and completely opposite to what can be seen in the airline industry, for instance, where tickets are much more expensive for peak departure times. This is because it has been politically decided not to price-differentiate on different departures during the day, and therefore this is a factor that DSB just has to accept for now.

Possible solutions to reduce capacity issues
Two overall solutions have been identified to mitigate the rush hour capacity issue, and they are as follows. The first thing is doing nothing and staying with status quo; this will result in an increasing number of passengers having to stand up in the trains. The big challenge here is that passengers in Danish trains expect to be seated, even though they are traveling in the peak periods, and therefore this solution entails a large gap between the level of service customers expect and the level they receive.

The second solution is price differentiation, where tickets for the trains in the rush hour are more expensive. This leads to price-sensitive passengers moving away from these departures, which again reduces demand and leads to less crowded trains. Price differentiation is already used heavily in Sweden and UK and to some extent in Germany as well. The difficulty in Denmark, however, is that the government so far has restricted the amount of price differentiation that DSB is allowed to do, with the exception of the DSB 1st class tickets, which can be sold at a 60% higher price. In the future, though, it is expected that DSB will be given more leniency in using price differentiation to influence passengers’ choice of trains. This will be done through requiring that passengers not only have a ticket, but also a seat reservation in order to board specific trains during rush hour.

Source: DSB Internal Data, 2012
**+Time**

**Travel time as efficient working time**

A key advantage that train travel has over other forms of transportation is the fact that travelers can work comfortably and efficiently. In a train, travelers have a table, Wi-Fi access, plenty of legroom and access to power outlets for charging laptops. This is a huge advantage over for instance cars and even airplanes.

In a train, work can occur from the moment a traveler sits down in the train until the train arrives at the destination, while in a plane, because of restrictions during travel, waiting time and boarding procedures, it is not possible to get as much efficient working time out of the same amount of travel time. Train transportation has this very unique competitive advantage, and it is one that DSB is actively trying to promote to its customers. However, plenty more work can be done in this matter.

Today, the Internet connection in the trains is still not good enough to ensure a seamless and trouble-free connection throughout the entire duration of the travel, and this is especially true in lesser-populated areas. This is an area that DSB has focused on; however, this factor is dependent on the underlying telecommunications infrastructure being developed, and it will cost up to 400 million DKK, depending on the degree of investment. This process will require significant negotiation with the telecommunication companies regarding how much they must invest in access networks, and would take at least two years to implement. Therefore, other initiatives to increase the quality of “+time” onboard the trains should be thought out as well.

This “+time” advantage is very unique for trains, and there is a large potential to use this further in the positioning of train transportation.

Previously, DSB had a sales cart that went through the trains, where customers were able to purchase snacks and drinks. However, this ended up being a very unprofitable service, as it was too costly to operate compared to what DSB earned in revenues, and therefore it was abandoned in 2014. DSB still serves breakfast to its first class customers.

“Basically you have to ask yourself the following question — what would make you take the train more often?”

Susanne Mørch Koch - Executive Vice President, Commercial and HR
The stations

The stations as focal points

It is not just the trains and the tracks that are an integral part of the railway infrastructure; the train stations also play a huge role in serving the customers, even though this role has changed in recent years.

Traditionally, train stations served as waiting rooms, cargo storage and ticketing venues; however, this stems from a time when train schedules were unreliable and trains were frequently delayed. Today, passengers expect the train to arrive according to the schedule, and thus plan to arrive at the train station just a couple of minutes before scheduled departure times. Furthermore, tickets are currently purchased online or through apps and ticket machines. This has reduced the demand for waiting space and manned ticketing booths at most stations throughout Denmark, and therefore it has also rendered the station buildings largely empty and without any role to fill.

However, the stations are still part of the overall travel experience when traveling with trains, and therefore the train stations also remain a heavy factor in determining customer satisfaction. DSB’s stations vary a lot in terms of design and maintenance and there is a high degree of local adaption and customized solutions on the stations. This makes it more difficult to operate them in an efficient manner and to use a one-size-fits-all solution in developing the stations.

Currently, DSB has 298 stations located throughout Denmark, and they differ a lot in terms of size and urban location. The 20 biggest stations, for instance, account for more than 50% of the total number of passenger departures, and the two largest — Copenhagen Central Station and Nørreport — alone account for 18% of all boardings.

Commercialization of stations

Another key question to answer is how DSB can commercialize the now empty space in unused station buildings. Previously, DSB has tried to commercialize some of the areas in the buildings by renting space out to shops such as 7-Eleven and other convenience stores; however, this has only proved feasible in the largest of DSB’s many stations. Elsewhere in Europe, commercialization is a lot further than it is in Denmark. For example, the Dutch national train operator, NS, has created an independent company solely to operate and maintain the train stations in the country; this has led to a higher degree of commercialization.

Therefore, DSB has much to learn from comparing themselves to other European rail operators. Commercializing the stations is complicated by the fact that 101 of DSB’s stations have preservation status, and cannot easily be modified or torn down. Another complicating factor is that ownership of the stations is shared with BaneDanmark and local municipalities. This complicated ownership structure inhibits development of the stations, as no one has the clear overall responsibility.

It is important to consider how to continuously increase the customer satisfaction of the stations; for instance, through increased safety, improved traffic information systems, access to wireless internet and other comfort measures that increase the ability to work at the stations.
Reputation as an obstacle in a world with constant dilemmas

Every year, more than 18,000 articles about DSB are published in the Danish media, making DSB one of the most discussed and talked about companies in Denmark. Additionally, a lot of attention comes from politicians and other participants in the public debate actively commenting on the management and the operation of DSB. Combined with the fact that almost everyone uses DSB from time to time, this has the result that everyone in Denmark knows and has an opinion about DSB.

Therefore, the image and the branding of DSB is also hugely important, as this has been an area in which DSB has been facing some tough challenges. There is very little understanding in the general public about DSB and how the company operates, and what it actually takes to operate a national railroad system. People tend to blame DSB every time something goes wrong with the trains, though 65–70% of delays are caused by either unforeseen events or by errors on the tracks or the signaling systems, which are managed by BaneDanmark.

A top-of-mind survey of the Danish population reveals that many people associate DSB with delays and other things that negatively impact reputation. However, data also shows that the image of DSB is better among the customers who regularly use DSB than among the people who only use DSB occasionally.

Reputation Score (RepTrak) of selected companies

DSB is also in the paradox that they are among the top three operators in Europe when it comes to accuracy and timeliness, and DSB’s customer satisfaction, contrary to its image, is high compared with DSB’s European counterparts. However, more than 75% of Danes still want more liberalization of the Danish railway system, which is higher than in countries where customer satisfaction of the national railway company is lower.

As if this was not enough, DSB also has a set of built-in dilemmas in its operations, which often result in bad publicity situations and a worsening of its image. For example, if DSB has to wait for passengers who are arriving late for a train, delays for the next 10 trains in the chain can occur; however, if DSB does not wait and instead leaves right in front of a person who is on the platform, it is perceived as indifferent and inconsiderate.

Therefore, ways in which DSB can improve its image among the Danes are important to consider, because an improved image would likely also result in higher passenger growth.
Closing statement

On track towards the future
At the moment, DSB is emerging from a successful turn-around, and the focus now has to be on growing the top line. DSB is the national railway operator of Denmark, and as such it carries a huge responsibility of always providing reliable and efficient rail transportation. DSB launched a new strategy in 2014. The core of this new strategy was getting back to basics, putting the customer experience in the center of priorities, as well as rebuilding DSB’s image.

However, this challenge is complicated by a series of factors that characterize the environment in which DSB has to navigate. The infrastructure sets out certain limitations of operation, and the political ownership also plays a large role in determining the possibilities of DSB. With the strategy in place, it is now time for execution, and Mr. Pastwa is now focused on how to achieve the political goals for passenger growth in the future.

“I see DSB as the main pillar of the Danish public transportation system, now and in the future.

In order to reach the political growth ambitions, DSB needs to continue to grow its passenger base in the future, while still navigating within the political and operational constraints.

I believe the key to this growth is focusing on continuously improving the customer experience”.

Stig Pastwa - Acting CEO

It is in this context that you are asked to develop a three-year business plan for how DSB should increase its passenger growth and, in a higher extent, become the backbone of the Danish public transportation system. This goal could be achieved by either focusing on a few key elements within the case, or by encompassing several elements and connecting them in a large and holistic business plan. Just remember that it has to fit in with the overall strategy of DSB and the context of the Danish market.

Good Luck!
Appendix 1: Glossary

**Passenger kilometer:** Unit of transportation measure. Calculated by multiplying the number of travels by the average distance traveled.

**DSB Youth Ticket:** Discount ticket for people aged 16-25 and students

**65+ ticket:** Discount ticket for people aged 65+

**DSB 1’ ticket:** Tickets for people who want extra service, complementary access to the internet, and access to a designated area. Up to 60% higher price than regular tickets.

**Orange tickets:** Discounted tickets for people traveling the East-West route at non-peak hours, and excluding Fridays and Sundays. Must be reserved in advance, and has up to 60% discount compared to regular tickets.

**Modal share of transportation:** Percentage of travelers using a particular mode of transportation.

**BaneDanmark:** Independent company responsible for the Danish railway infrastructure and partly responsible for the stations.

**Arriva:** Denmark’s largest bus operator with city and regional busses throughout Denmark. Also operates local trains in the western part of Jutland. Owned by Deutsche Bahn.

**Copenhagen Metro:** Operates Copenhagen’s metro in the central Copenhagen Area.

**Movia:** One of Denmark’s largest traffic companies and operates busses and local trains in the Greater Copenhagen Area.

**Midttrafik, Sydtrafik, NT:** Local traffic companies.

**Nordjyske Jembaner, Lokalbanen, Midtjyske jembaner:** Local train operators.

Appendix 2: Company overview

A complex organization

DSB is divided into the following nine divisions: Strategy, Safety & Environment, Corporate Secretary and Legal Affairs, Communication and Branding, Finance, Commercial, Human Resources, Operations, and Maintenance.

**Strategy:** This division works as a cross-sectional unit, and deals with the corporate strategy and business development of the company. The key challenge for this unit is to figure out what strategy DSB should follow to reach the goal of passenger growth in 2030, and how the different divisions should interact to reach that goal.

**Safety & Environment:** Potential train accidents can cause tremendous damage due to the speed of the trains, and the many people they carry. Ensuring that the trains are as safe as possible and potential safety mechanisms are in place in case of an accident are therefore very important. The main challenge for this division is to ensure that safety is not compromised when the number of passengers is growing towards the 2030 goal.

**Corporate Secretary and Legal Affairs:** The political interests still play an important role for DSB, and this division discusses and negotiates the traffic contract between DSB and the government. The traffic contract determines the role of DSB, what they can legally do, and what obligations they must follow. This division must manage the relationship with the government, and ensure DSB can operate as effectively as possible given their ownership situation.

**Communication and Branding:** DSB has a less-than-perfect reputation and it suffers from a series of widespread misperceptions among the general public — an example of this is the myth that DSB is “always late”. Factually, DSB has a punctuality that is well in line with contractual obligations, and is on par with European peers. The main challenge for this division is therefore to improve the image of DSB.
**Finance:** DSB returned to profitability in 2013, and it is important to ensure that while new initiatives must be put in place to gain passenger growth, the company still stays profitable to satisfy the owners. It is also Finance that handles the large property portfolio (e.g., maintaining stations), and IT/digitalization.

**Commercial:** The commercial division must figure out how to get more people to use the train, and more specifically which segments to focus on, how to reach them, and with which tools. The challenge is to find out what services people find valuable, and how much they are willing to pay for these. It is also the role of Commercial to continuously find ways to improve the customer experience. In addition, Commercial has the responsibility of developing the stations of tomorrow.

**Human Resources:** Gearing the organization for the new strategy is important, and the Human Resource division’s main challenge is to ensure that the organization is suited for implementing the new strategic initiatives.

**Operations:** Managing a railway system is a complex task. This is further complicated by the fact that it is not DSB who owns the tracks, because the ownership of the infrastructure was separated into a different company, BaneDanmark, in 1997. Coordinating with BaneDanmark is therefore important moving forward, especially because the expected passenger growth will require even better integration. Today, DSB’s operations are basically split into three different train types: the S-Trains (S-Tog), a suburban train in the Greater Copenhagen Area, and the regional trains (F&R Tog), which are trains that connect different cities in Denmark, and the Øresund Trains. This division is also responsible for purchasing new trains. The process of purchasing trains is complex, and takes up to 10 years from the time the need is identified to the time the trains are ready and have passed all safety checks.

**Maintenance:** Maintenance is important to ensure the longevity of the trains, and therefore a key task is to ensure that all trains, both new and old, are kept in good condition at all times. A main challenge is to ensure the new IC4 trains are up and running, and ready to take on the expected passenger growth, as it is not possible to purchase new trains in the next couple of years.

## Appendix 3: Price examples

<table>
<thead>
<tr>
<th>Distance</th>
<th>Travel Time</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copenhagen - Århus</td>
<td>2h49m</td>
<td>DKK 382</td>
</tr>
<tr>
<td>Copenhagen - Odense</td>
<td>1h15m</td>
<td>DKK 376</td>
</tr>
<tr>
<td>Copenhagen - Aalborg</td>
<td>4h15m</td>
<td>DKK 431</td>
</tr>
<tr>
<td>Copenhagen - Roskilde</td>
<td>25m</td>
<td>DKK 96</td>
</tr>
<tr>
<td>Copenhagen - Nykøbing Falster</td>
<td>1h43m</td>
<td>DKK 171</td>
</tr>
<tr>
<td>Copenhagen 2-Zone Ticket (1-hour)</td>
<td>N/A</td>
<td>DKK 24</td>
</tr>
<tr>
<td>Copenhagen 2-Zone Monthly Card</td>
<td>N/A</td>
<td>DKK 365</td>
</tr>
<tr>
<td>Copenhagen - Roskilde Monthly Card</td>
<td>N/A</td>
<td>DKK 1,195</td>
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Source: rejseplanen.dk

## Appendix 4: Financial Highlights

<table>
<thead>
<tr>
<th>Financial highlights</th>
<th>2019</th>
<th>2018</th>
<th>2017</th>
<th>2016</th>
<th>2015 (Change)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue turnover</td>
<td>4,237</td>
<td>4,173</td>
<td>4,164</td>
<td>4,171</td>
<td>4,215 (+2.4%)</td>
</tr>
<tr>
<td>Transport contracts</td>
<td>3,400</td>
<td>3,382</td>
<td>3,347</td>
<td>3,381</td>
<td>3,372 (+0.3%)</td>
</tr>
<tr>
<td>Steam services</td>
<td>990</td>
<td>953</td>
<td>926</td>
<td>884</td>
<td>897 (+2.7%)</td>
</tr>
<tr>
<td>Steam/LPG services, incl. Øresund</td>
<td>912</td>
<td>912</td>
<td>912</td>
<td>912</td>
<td>912 (+0.0%)</td>
</tr>
<tr>
<td>Sales from trade etc.</td>
<td>947</td>
<td>898</td>
<td>846</td>
<td>881</td>
<td>853 (-1.1%)</td>
</tr>
<tr>
<td>Net and maintenance of rolling stock etc.</td>
<td>121</td>
<td>127</td>
<td>139</td>
<td>159</td>
<td>191 (+29.8%)</td>
</tr>
<tr>
<td>Leasing of rolling stock</td>
<td>174</td>
<td>207</td>
<td>215</td>
<td>238</td>
<td>256 (-8.0%)</td>
</tr>
<tr>
<td>Net profit</td>
<td>919</td>
<td>870</td>
<td>921</td>
<td>1,154</td>
<td>1,385 (+22.5%)</td>
</tr>
<tr>
<td>Earnings per Share</td>
<td>0.91</td>
<td>0.88</td>
<td>0.96</td>
<td>1.16</td>
<td>1.30 (+21.3%)</td>
</tr>
</tbody>
</table>

## Appendix 4: Financial Highlights

| Source: DSB Annual Report 2015, p. 20 |
Case Writers
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