



Extract from the report to the
Public Accounts Committee on
the electronic travel card project

June
2011

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I. Introduction and conclusion

1. This report is about Rejsekort A/S's planning and management of the development of the Danish electronic travel card. The report is also about the way in which the Ministry of Transport, in its capacity as supervising authority, has monitored the travel card project.

2. The purpose of the IT-based travel card project is to facilitate the use of public transportation for commuters who will no longer be required to buy a paper ticket for a specific journey in Denmark, but can use an electronic travel card instead.

The costs of developing and installing the travel card system are projected to amount to a maximum of DKK 1,068 million (2010 prices including VAT). To this should be added the internal costs of Rejsekort A/S which for the period 2005 – 2010 amounted to a total of DKK 177 million and are estimated at DKK 173 million for the period 2011 – 2014 when the system is rolled out.

3. Rigsrevisionen took the initiative to the study in June 2010 prompted by the delay in the travel card project and the significant co-funding of the project provided by the government, through DSB (Danish state railways) and Metroselskabet I/S (Danish company responsible for running the Copenhagen metro). In October 2010, the Danish Public Accounts Committee asked Rigsrevisionen whether a number of specific issues would be covered in Rigsrevisionen's study. In December 2010, the auditor general submitted a memorandum to the Public Accounts Committee which described the progress of the study and the issues that would be covered in the report.

4. Rejsekort A/S was established on 18 August 2003 by a number of Danish public transport operators. The objective of the company was to develop and run an electronic travel card. On 30 June 2005, Rejsekort A/S signed a contract with a private supplier who was commissioned to develop the travel card. The supplier had experience in developing travel card systems from, for instance, the Netherlands and Hong Kong.

5. Rejsekort A/S has, since the contract was signed in June 2005, entered five addenda to the contract with the supplier. The travel card system should originally have been in operation in February 2009. Now the system is not expected to be in operation till late in 2012, and in a version that does not include all the agreed functions like, for instance, monthly travel cards. The complete system with all functions integrated should be ready late in 2013, i.e. at least four years later than originally planned.

6. The travel card has currently replaced the paper-based multitrip tickets in the western part of Zealand. In the southern part of Zealand, the travel card can be used for travels between all train stations and for travels by bus within the same travel zone. In addition the travel card can be used on the city buses in Roskilde. (city on Zealand). The travel card was tested in and around the city of Aalborg (major city in Jutland) on 1 April 2011.

The travel card is an electronic chip card for travels by train, bus and metro locally, regionally and across the country.

The travel card can be used in the geographical areas where the public transport operators have decided to join the travel card system.

7. The importance of close monitoring of the project progress by the Minister of Transport was emphasized in 2005 when it was decided that the government, through the DSB and Metroselskabet I/S, could participate in the further development and implementation of the travel card.

8. The objective of this study is to assess how Rejsekort A/S has planned and managed the travel card project and how the Ministry of Transport has monitored the project. The report answers the following four questions:

- Did Rejsekort A/S plan the travel card project in a satisfactory manner before the contract with the supplier was signed?
- Has Rejsekort A/S managed the risks of the project in a satisfactory manner?
- Has the economy of the travel card project developed in a satisfactory manner?
- Has the supervision of the travel card project performed by the Ministry of Transport been satisfactory?

MAIN CONCLUSION

The national travel card system is now facing a delay of at least four years.

Rigsrevisionen is of the opinion that Rejsekort A/S did not plan the travel card project in a satisfactory manner, as the company did not ensure that the supplier had fully understood what the requirements to the Danish travel card system were.

The supplier was unable to observe the agreed deadlines for delivery of the individual elements of the travel card solution. Securing its legal position was a priority for Rejsekort A/S and the company did not take appropriate action to manage the risk related to the delivery problems.

In 2008, three years into the project, it became obvious to Rejsekort A/S that the nature of its cooperation with the supplier needed to be revised, and the company subsequently strengthened its organisation and intensified its monitoring of the work performed by the supplier. The company and the supplier did not commit to a closer cooperation to ensure delivery of the last part of the system till late in 2010, when the two parties entered the most recent addendum to the contract. Rejsekort A/S's prospects of receiving a travel card system that fulfils its expectations have improved with the introduction of a closer cooperation with the supplier, but the project still involves risks.

The main conclusion is based on the following findings:

The planning of the travel card project by Rejsekort A/S

Rejsekort A/S did not plan the travel card project in a satisfactory manner before the contract with the supplier was signed. Rejsekort A/S and the supplier agreed that parts of the system should be developed from scratch for the Danish travel card project. Yet, the company did not establish mutual understanding of the exact scope of the Danish travel card solution. Rejsekort A/S's requirements specification in respect to the technical solution was in compliance with the practice of that time, but had the weakness that the fixed requirements to the system could be fulfilled in many different ways. However, the company was confident that one of the world's leading suppliers of ticket systems could handle the task.

Technical solution

- Rejsekort A/S as well as the supplier expected the travel card system ordered to consist mainly of a standard solution, that reused elements from previously delivered travel card solutions, and which only required development from scratch of a few elements. However, the reality was that the travel card solution chosen involved more development work from scratch than anticipated.
- Rejsekort A/S worked out a requirements specification in compliance with common practice of that time. This has been a key issue throughout the project; the supplier did not fully understand the company's requirements in respect to the functionality of the system, because the requirements specification could be interpreted in different directions. Moreover, the requirements specification did not outline the nature of the concrete functionality that the system should underpin.

Organisation

- The owners established Rejsekort A/S with a lean organisation whose primary task would be to monitor implementation of the contract.
- Rejsekort A/S's assessment of the risks that might affect the timetable and the technical solution lead to the conclusion that these risks would be addressed and resolved in connection with the contract negotiations and during the subsequent process. However, Rejsekort A/S did not work out any concrete plans for handling risk elements.
- The contract entered between Rejsekort A/S and the supplier was a standard contract that was common at that time. The contract placed the entire responsibility for the project on the supplier who thereby accepted full responsibility for the risks of the project. Due to the nature of the contract, Rejsekort A/S was prevented from undertaking any of the tasks accepted by the supplier, but the contract did not prevent the company from active and critical monitoring of the project.

Rejsekort A/S's risk management of the travel card project

Rejsekort A/S has not managed the risk of the travel card project in a satisfactory manner. In the period from mid-2005, when the contract was signed, and to the end of 2007, the efforts made by Rejsekort A/S to counter the risks that had been identified by the company in the planning phase, and which lead to delays and complicated the development of the technical solution, were inadequate. Rejsekort A/S's management of the project was based mainly on the conditions in the contract according to which the supplier had assumed full responsibility for the project. Rejsekort A/S was therefore not adequately active in its monitoring of the work performed by the supplier. However, as from 2008 Rejsekort A/S started to respond to the increasing problems encountered in the project, and since mid-2008, the company has monitored the supplier more closely. The most recent addendum to the contract from late in 2010 implied close cooperation between Rejsekort A/S and the supplier to ensure that the system ordered is delivered to the company in accordance with the current timetable.

Risk management from mid-2005 up to and including 2007

- The supplier was late in delivering all parts of the travel card system like, for instance, the system description, system development, equipment and installation. The supplier therefore asked for an extension of the timetable on several occasions as reflected in the supplementary agreements I, II and III. Yet the new timetable for delivery was passed each time shortly after it had been extended.
- From mid-2005 up to and including 2007, Rejsekort A/S secured its legal position, for instance, by pointing out in writing when the supplier failed to observe the timetable, and by refraining from undertaking the supplier's tasks.
- Rejsekort A/S' internal risk reporting did not from mid-2005 up to and including 2007 provide sufficient insight into the most significant risks associated with the project, and the efforts made by the company to counter the risks that were identified by the company during the planning of the project were inadequate.
- Rejsekort A/S did not take adequate precautions to ensure that the system described by the supplier in the system specification reflected the requirements of Rejsekort A/S and the public transport operators.

Risk management from 2008 up to and including 2010

- It was not till the end of 2008, i.e. approximately three years after the contract was entered, that Rejsekort A/S discovered that the travel card solution developed by the supplier did not fulfil the requirements of the company and the public transport operators. Subsequently, it became an issue of disagreement between Rejsekort A/S and the supplier which requirements the supplier could and should fulfil in accordance with the contract.
- From mid-2008, Rejsekort A/S strengthened its organisation and monitored more closely the deliveries, the work performed by the supplier and the risk elements that could affect the project. With Addendum IV to the contract the test procedures were tightened up and requirements were imposed on the supplier in respect to project and risk management.

- Towards the end of 2010, Rejsekort A/S revised its approach to the supplier and entered into a close cooperation in order to determine the contents of the final deliveries. In Addendum V to the contract from December 2010, the company committed to continuing its close cooperation with the supplier, and at the same time Rejsekort A/S initiated a revision of its risk management to ensure that the project could be monitored more closely.
- With the latest timetable, the travel card system will be at least four years delayed compared to the original contract.

The economy of the travel card system

The economy of the project has developed in a satisfactory manner as the total contract price has largely been maintained. However, the internal costs of Rejsekort A/S are significantly higher than estimated due to the delay of the project.

- The total costs of the travel card system was in the contract stated at between DKK 1,030 million and DKK 1,067 million; it is now between DKK 1,055 million and DKK 1,068 million (all amounts are in 2010 prices and inclusive of VAT).
- Rejsekort A/S's annual internal costs amounted to DKK 13 million in 2005 and increased to DKK 50 million in 2010 (both amounts in 2010 prices). As from the beginning of 2009 and up until receipt of the system late in 2013, the company expected the annual internal costs to amount to approximately DKK 40 million, which is approximately DKK 20 million more per year than originally estimated. After receipt of the system, annual costs will amount to DKK 34 million.
- It appeared from Document 105 5/5 2011 that Rejsekort A/S needed a capital injection of up to DKK 667.5 million to ensure that the company had adequate liquidity in the period 2011 to 2014. DSB was meant to contribute up to DKK 334.4 million and Metroselskabet I/S should contribute up to DKK 53.2 million. The owners of Rejsekort A/S had previously made a capital injection of in total DKK 592.2 million, of which DSB and Metroselskabet I/S contributed DKK 291 million and DKK 48 million, respectively. Total capital injected into Rejsekort A/S thereby amounts to close to DKK 13 billion.
- Due to the price structure of the travel card system, some commuters may end up paying more and some less than now for their travels. As each individual travel will be registered, the travel card system will facilitate the public transport operators' allocation of the income. This means that some public transport operators may lose income and others may gain income, but overall the change is expected to be marginal.

The supervision of the travel card project by the Ministry of Transport

The supervision of the travel card project conducted by the Ministry of Transport has been satisfactory. The supervision implemented by the ministry was from the outset tighter than what is generally required and the ministry intensified its supervision further as the project grew increasingly complicated.

- The Ministry of Transport implemented tighter supervision of the travel card project than what is generally required in relation to limited liability companies in which the government has a shareholding. The travel card project has since 2005 been a fixed item on the agenda of the quarterly meetings between the Minister of Transport and DSB and Metroselskabet I/S, respectively. Information from these meetings did not reflect problems relating to the project before mid-2008.
- As from 2006 and until the beginning of 2008, the supervision conducted by the Ministry of Transport was supported by the Danish Transport Authority, which tried to procure more detailed information on the travel card project. However, the Danish Transport Authority had difficulties obtaining the necessary information from Rejsekort A/S.
- Since mid-2008, the Ministry of Transport has had separate meetings with Rejsekort A/S. The ministry has also commissioned three consultants' reports on the travel card project in 2010.