

Measure title: **8.7.O Integration and quality improvements of sustainable modes in Odense**

City: **Odense**

Project: **MOBILIS**

Measure number: **8.7**

A Introduction

Turning the current trend for the growth of car transport in Denmark at the expense of public transport modes is one of the greatest challenges for mobility planning. By removing the barriers against the positive choice of public transport options, it is hoped that Odense can contribute to charting new ways of turning the tide. One way of turning the tide is to focus on the qualities of the public transport in Odense and through advertising and marketing activities.

Objectives

- To increase the quality, attractiveness and accessibility of alternative transport modes in Odense (buses, bicycles, taxis and car sharing) through a bus priority scheme and advanced information services.
- To execute interrelated innovative activities to promote the use of the new integrated service; these will include marketing and media campaigns. In general promotion of public transport supports certain parts of the citizens as buses in Odense most often are utilized by people who do not have access to a car – in many cases the elderly and students.

A2 Description

The 1st objective

a. The SMS ticket was developed and launched in January 2008. By sending a SMS to a specific number, the user pays for a bus ticket via the cell phone and thereby accepts the amount to be drawn from his mobile phone account. When you buy a ticket via your mobile phone the fare is cheaper than regular tickets. This is a very good incentive for the travellers to shift to this type of ticketing.

The SMS-ticket also solves the problem of carrying coins. The bus drivers do not have to carry along so much money which might increase their safety. And for the passengers it is also easy just to jump into a bus without money. They can still travel as long as they have a mobile phone and most people at least in Denmark own mobile phones.

When you receive your SMS ticket it has a code, which is related to the type of trip paid for – the time, date and travel distance. You have to show the bus driver the SMS and he will know the code of the day. This prevents miss-use of the system.

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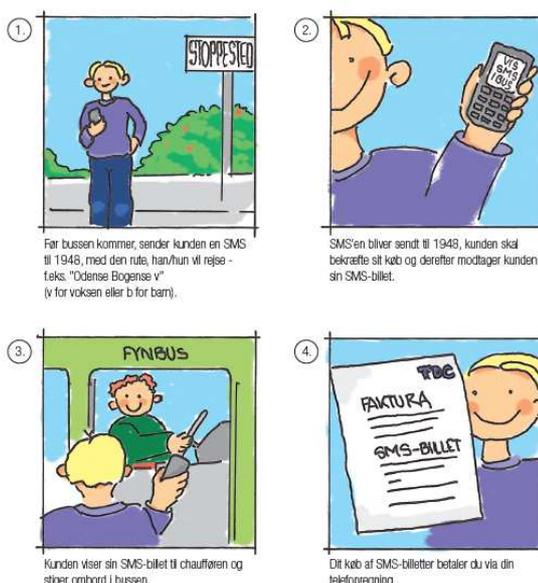


A bus from FynBus was parked at the square in front of the city hall in Copenhagen and broadcasted at the webcam of the national newspaper, Politiken. To the right is the logo of the SMS-ticket.

Promotion of the concept was done on web sites, in brochures and on information screens in the city. FynBus also took a bus to the capital of Denmark, Copenhagen and parked it on the central square in front of the city hall. This square is monitored with webcams so all day you could see the bus at a webcam at the site of a national newspaper, Politiken. The new service was also presented on national television.

Each month 7,000 SMS tickets were sold in the year 2008. The first year it was only possible to buy a ticket if you used the phone company TDC.

The SMS-ticket will be evaluated after one year. FynBus is also looking into using more than one Phone Company when selling tickets to reach a larger group of users. Now it is also possible to buy a ticket to public transport in Copenhagen using your mobile phone.



Explanation of how the system works.

In the busses **information signs** have been installed telling about next stop and giving real time information. This is an advantage for those not hearing very well.

Interactive information points have been installed at the bus station giving real time information and other relevant information to travellers, commuters etc.



Information sign in a bus telling next stop.

b. A bus priority system based on GPS has been implemented in all buses to give way to the busses in junctions. The GPS system also provides the data for the real time information stands in the city centre as well as providing real time send as SMS to passengers (see next bullet).

c. Real time information. "SMS your bus" was another technological way of approaching bus users. The activity is linked with the installation of GPS in all the buses. This gave the possibility to use the exact location of the bus in a new passenger service. Passengers standing at the bus stop can send an SMS and in return receive real time information on when the next bus will be at the bus stop. This can prevent or reduce the irritation of waiting for the bus.

The 2nd objective

A large **image campaign** was launched in 2006 to focus on Public Transport in Odense. The campaign promoted public transport as:

- A way of transport for everybody

- Going to your door
- Going to amusements like the zoo, museums etc.

The image campaign consisted of posters in the streets, postcards, free umbrellas, and free water in the summer and a competition. The campaign both promoted the public transport as an alternative to the car as well as a new website which was created for this measure.

The image campaign and the website were evaluated in 2006.

B Measure implementation

B1 Innovative aspects

The innovative aspects of the measure are:

- **New conceptual approach, innovative use of new technology/ITS and new organisational arrangements** – the development of SMS ticket in cooperation with TDC (telephone operator). For the first time in Denmark it is possible to use your mobile phone to pay for the bus trip with a SMS simply by showing the driver in the bus the SMS. The passengers are charged on the phone bill. It's also an advantage for the drivers not to carry around money in the bus. The system didn't exist in Denmark before this measure.
- **Innovative use of new technology/ITS** – interactive information points with wireless Internet giving real time information to passengers, travellers and commuters.
- **Innovative use of new technology/ITS** – Real time information on SMS

B2 Situation before CIVITAS

The challenge for planning for improvements in public transport modes in Odense should be seen against the backdrop of falling passenger numbers and a declining economic base of PT services. The present public bus plan does not anticipate changes in favour of sustainable modes unless exceptional innovative and non-traditional steps are taken.

Up until the end of 2006 bus services in Odense were provided by a council run bus company (Odense Bybusser) which up until the time of the MOBILIS project application, had little or no tradition for cooperation with the public, bus users or other transport operators. There had been little or no cooperation between motorized public transport modes and cycles. To remove barriers for mobility choice and to improve the match between supply and demand for public transport, cooperative systems for payment, inter modal exchange, information and timetables must be brought into place. Buses were suffering in line with congested car traffic in the peak hours so

public transport needed special advantages. This is why we introduced the GPS based bus priority system in Odense.

B3 Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Developing website and Marketing campaign - image (from January 2006 – to October 2006) a campaign was launched to raise the awareness of PT in Odense and to create a better image. Posters were displayed three times in the city encouraging the citizens to take the bus. Postcards were handed out stating the same.

A website was launched in the beginning of 2006 (www.bybussen.dk) giving information about timetables, prices etc. Before CIVITAS there was no website but only timetables in pdf-files at the city website www.odense.dk. But there was a need for a site gathering all information and a site that indicated that PT also is modern and using technology.

At the website, it also became possible to find your bus trip by using a map. At the map, you could point out starting point and destination and get the description of the trip. The map also showed the bus stops.



Administration

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5100 Odense C

Tlf.: 63 11 22 00
Fax: 66 12 94 78

E-mail: fynbus@fynbus.dk



Information og salg

FynBus Kundecenter
Odense Rutebilstation
Dannebrogsgade 10
5100 Odense C

Tlf.: 63 11 22 00

Åbningstider

Mandag - kl. 9.00 - 17.30
Tirsdag - Fredag: kl. 9.00 - 16.00

Telefontid

Mandag - fredag: kl. 9.00 - 13.00

print side

SØG

Køreplan	Kort og billetter	Kundeservice	Søgetjenester	Generel info
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Køreplan og linieoversigt

[Aktuel køreplan](#)

[Aktuel Liniekort](#)

For at kunne læse pdf-filer skal du have installeret [Adobe Reader](#) - som er gratis

Find din vej...



Find din rejse

[Læs mere >>](#)

Bus til Skibhusene



Linie 80-81-82
Bus til Skibhus-
kvarteret ændrer
kørselsretning fra
25. januar...

[Læs mere >>](#)

Forsinkelse



Linie 61-164-168, 91-92-191
Forventet forsinkelse mod OBC...

[Læs mere >>](#)

Via kort...



Find stoppested
og afgangstid

[Læs mere >>](#)

SMS-billet



Fri for at rode med
kontanter til bussen.
Betalt med din
mobiltelefon...

[Læs mere >>](#)

New website for the city busses www.bybussen.dk

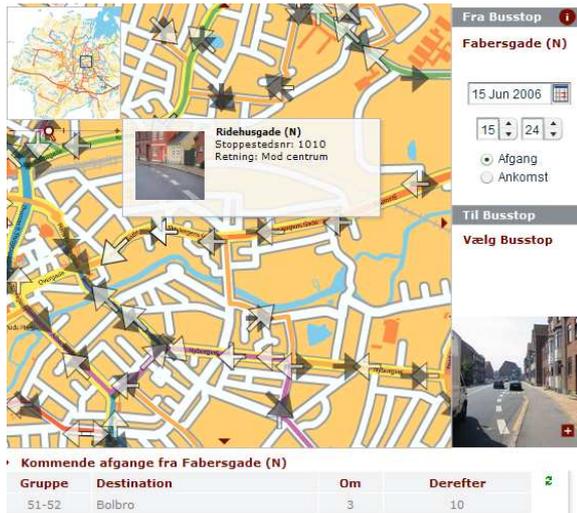
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The screenshot shows a map interface for a bus stop named 'Fabersgade (N)'. It includes a date selector for '15 Jun 2006', time selection options for '15' and '24', and radio buttons for 'Afgang' (Departure) and 'Ankomst' (Arrival). Below the map, there is a table titled 'Kommende afgange fra Fabersgade (N)' with the following data:

Gruppe	Destination	Om	Derefter
51-52	Bolbro	3	10

Screen dump of the map function which has been changed since the implementation.

An event was carried out in the autumn 2006 – 5000 umbrellas were handed out in the city centre to promote the website.



The deputy mayor Anker Boye (left) handing out umbrellas.

The deputy mayor helped handing out umbrellas and luckily, it rained! The umbrellas were a huge success and today you might actually see them in the city. The umbrellas were a great idea because they can be seen as a supplement to the bus like wet weather gear is a supplement to the bicycle. So by handing out umbrellas we said: It might rain and you may not want to bike, but now you can take the bus – we provide the “shelter” for you when walking to and from the bus stop!”



The poster campaign was launched in three tempi.



Free water was handed out in the summer time to promote the website.

The campaign was evaluated in the autumn 2006.

Stage 2: Real time information is offered on an **SMS** and passengers can use **WAP** to download the actual time tables. When you wait for the bus you can send an SMS to the bus by using a number posted at the bus stop. Today this service is provided by FynBus.



The SMS-service was launched 30 October 2006 by Odense Bytrafik and since then the regional bus company has taken over both Odense Bytrafik as well as the service.

Ideally the electronically improvements in stage 2 - 4 should have been in place before the marketing initiatives but due to practical matters this wasn't possible. However, it has not been a disadvantage in any way. The purpose of the image campaign was to tell people not using PT that this is an option. And the campaign promoted the new web site. The electronically improvements were all promoted in single campaigns branding both the new initiatives as well as the image of the PT.

Stage 4: Interactive information points with wireless Internet giving real time information to passengers, travellers and commuters were placed 5 places in the city and 2 electronic signs in the city centre gives bus passengers information on the coming buses.

The information points were developed in cooperation between a private company and the traffic planners in the PT Company and in the Municipality.

The Road Department maintains the service today.

The service was launched 18 December 2007.

Stage 4: Electronic communication - The SMS ticket was introduced 29 January 2008 so that customers can use their mobile phone to pay for the bus trip. The service was set up in cooperation with a local technical provider and mobile telephone companies who agreed to accept this kind of payment. This service is provided by FynBus.

The SMS-ticket can be seen as a development of the image campaign, which promoted the new website. The SMS-ticket is a signal to the users that PT can be modern and use new technology.

TV
Gomorgen Danmark, 29. januar 2008.....
TV2 Fyn, 29. januar 2008.....
TV2 Nyhederne, 29. januar 2008, kl. 19.00.....
Comon-VWEB-TV, 5. februar 2008.....
RADIO
Drfyn.dk, 29. januar 2008.....
TV2 Radio.dk, 29. januar 2008.....
Radio Silkeborg.....
Radio Limfjorden.....
HJEMMSIDER
Studenterguiden.dk.....
Trafikken.dk.....
It-borger.dk.....
Onlinecity.dk.....
Incaptiva.dk.....
Mobil.nu, 29. januar 2008.....
Mobilsider.dk, 29. januar 2008.....
labconfidential.dk, 30. januar 2008.....
Comon.dk, 29. januar 2008.....
Tv2finans.dk, 29. januar 2008.....
Erhvervsbladet.dk, 29. januar 2008.....
Business.dk, 29. januar 2008.....
Ue.dk (Ugens Erhverv), 29. januar 2008.....
Netnyt.tdconline.dk, 29. januar 2008.....
Epn.dk, 29. januar 2008.....
Odense.dk, 29. januar 2008.....
AVIS-ARTIKLER
Fyens Stiftstidende, 20. februar 2008.....
Fyens Stiftstidende, 7. februar 2008.....
24 Timer Extra, 7. februar 2008.....
Børsen (resumé), 5. februar 2008.....
Fyns Amts Avis, 1. februar 2008.....
Ritzaus bureau, 30. januar 2008.....
Fyns Amts Avis, 30. januar 2008.....
Jyllandsposten, 30. januar 2008.....
Fyns Amts Avis, 29. januar 2008 (Forsiden).....
24Timer Ekstra, 29. januar 2008.....
Nyhedsavisen, 29. januar 2008.....
DEBAT
Mobildebat.dk.....



A list of media in which the new service has been presented.

B4 Deviations from the original plan

- Deviances between the original measure description and the original budget have been corrected.
- The delivery month of the evaluation report has been postponed to match the timescale of the milestones.

B5 Inter-relationships with other measures

1. Connection between space, transport mode and transport users

The table illustrates how sites, transport forms and users fit together to target change at both zone and city level.

	6.10.O	8.7.O	9.5.O	11.10.O	11.11.O	11.12.O
Transport site	X	X				(X)
Transport form	X	X	X	X	X	X
Transport users	X	X	X	X	X	X

(X) County, city and zone level

2. Connection between target groups and measures

In order to create as much public and stakeholder interest in MOBILIS as possible, different demographic and social groups are targeted as follows:

	6.10.O	8.7.O	9.5.O	11.10.O	11.11.O	11.12.O
Target group	Residents	Everyone	Families	Children	Families	Everyone

3. Connection between plan types and measures

Within the fields of transport and traffic planning, many specialised plans often operate independently of each other. Odense's MOBILIS project ensures that all relevant plan types are brought together within the project.

	6.10.O	8.7.O	9.5.O	11.10.O	11.11.O	11.12.O
Plan type	Speed Reduction Plan, Road safety Plan, Town Centre Plan, Traffic and Safety Plan for Odense City Centre	Public Transport Plan, City Design Manual (bus stops)	Public Transport Plan	Road Safety Plan, Plan for Safe Routes to School	Public Transport Plan, Cycle Plan	Regional Plan for Funen, Municipal Plan for Odense, Public Transport Plan, Harbour Development Plan. Plan for Ring Road 3

4. Connection between private and public transport firms and institutions

The success of Odense's MOBILIS project is dependent upon co-operation between firms and institutions responsible for the provision of transport in Odense.

	6.10.O	8.7.O	9.5.O	11.10.O	11.11.O	11.12.O
Firm/institution	Odense City Council, Copenhagen City Council, Haulage firms,	Odense City Council, Funen County Council, Private bus companies, Taxi companies, car sharing companies	Odense City Council, Taxi companies, Car sharing companies, Cycle manufacturers	Odense City Council (Technical Dept. + Schools Dept), MOBILIS partners	Odense City Council, Car sharing companies, Route planning web sites	Odense City Council, Funen County Council, Danish State Railways

C Evaluation – methodology and results

C1 Measurement methodology

C1.1 Impacts and Indicators

Table of Indicators. *Insert own table where available, use landscape layout as necessary*

No.	Impact	Indicator
1	More users of public transport	Higher awareness on public transport
2	Easy information on public transport	High use of new services
3	Easy payment in public transport	High use of the SMS tickets

Detailed description of the indicator methodologies:

- **Indicator 1** (Higher awareness on public transport) – This can be highlighted by results from a user survey.
- **Indicator 2** (High use of new services) – Statistics are generated automatically by the computer backend systems.
- **Indicator 3** (High use of the SMS tickets) – Statistics are generated automatically by the computer backend systems.

Status of SMS-ticket 1 January 2009	
Total number of tickets sold Jan. 08 – Jan. 09	61.533
Average of SMS tickets pr. day	182
Turnover pr. day (average)	4.131,04 DDK

C1.2 Establishing a baseline

The number of passengers in the public transport in Odense is clearly monitored by the user statistics based on ticket sale.

C1.3 Building the business-as-usual scenario

Passenger countings have been quite stable and the business-as-usual scenario is in this case that the number of passengers wouldn't grow in the following years.

C2 Measure results

The results are presented under sub headings corresponding to the areas used for indicators – economy, energy, environment, society and transport.

C2.1 Economy

Public transport in Denmark is usually supported by approximately 50 % by the local municipalities. In Odense this is equivalent to more than € 10 million each year. If just a little more of the existing capacity in the busses was used by new customers, the economy would be much better. A higher share of citizens using public transport would give the opportunity to put fewer investments into building new high capacity roads.

It is expected that the new SMS service will be quite attractive to new customers and that especially young people will find it easy and convenient to use. This can be one of the best ways to break the ice towards new user groups and higher incomes.

Each month 7,000 SMS tickets were sold in year 2008.

C2.2 Energy

Energy will be saved by every car trip which is replaced by higher use of the existing busses and the existing frequency. Short trips in the urban area cost much more fuel than the average use for a car. As we don't know what kind of transport new customers in the buses would have used it's not possible to quantify the energy savings.

C2.3 Environment

Every trip converted from car into a local bus reduces the CO₂ emission by 51 % in average – if the bus is there already and still has free capacity the reduction would naturally be 100 %.

It takes several years to find the total effect of the measure according to the expected change in modal shift.

C2.4 Transport

The WAP application for downloads of time tables concerning local busses has been in function for 2 years and 10,052 users have been registered, equivalent to 419 monthly users.

The SMS information system has been running 2 months longer and each month it's used 3,379 times in average.

5,001 SMS tickets have been sold in average per month during the first year. The system has now been overtaken by the regional transport company FynBus and the latest figures show a daily sale of 178 tickets. The weekly growth of SMS tickets is now at 4 %.

Tickets sold by SMS now cover 5 % of the total sale.

The 4 information screens at the bus terminal are used in average 5,588 times/month each (internet back office data)

The bus priority system has increased the travel speed by 3 % in the evening and 1 % during the day due to traffic congestion. This was measured due to the GPS data from the system it selves.

C2.5 Society

A survey from 2006 involving 402 citizens showed that 87 % of the users of the web site were happy about the accessibility. Key results can be seen in C6. The full survey is shown in appendix and can be translated to other languishes by using www.google.dk

17 % are regularly users of the local busses (at least one a week) while 27 % never use them, among those most of them are men and middle aged.

55 % of the population were not aware of the marketing initiatives for the local public transport.

To get a hold on the younger generations it was mainly the street posters and the free drinking water bottles which were most effective. In general the most frequent users were more aware of the marketing initiatives than the rest of the citizens.

C3 Achievement of quantifiable targets

No.	Target	Rating
1	Higher awareness on public transport	**
2	High use of new services	**
3	High use of the SMS tickets	**
NA = Not Assessed 0 = Not achieved * = Substantially achieved (at least 50%) ** = Achieved in full *** = Exceeded		

C4 Up-scaling of results

All parts of the measure are suitable for up-scaling. During the project period some parts of the initiatives have been transformed from the local bus company, Odense Bytrafik, to the regional body, FynBus.

All mobile phone services, the campaigns and the bus priority scheme were full scaled for Odense Municipality in this measure.

The SMS ticket service will in the Spring 2009 be up-scaled to include all of the island of Funen. This means all bus companies on Funen. The pilot project hereby moves from pilot to being part of the regular operations. Negotiations will take place with other phone companies in order to get as many companies running on the system as possible.

The SMS service has attracted national interest and is expected to be used by other public transport providers across the country.

C5 Appraisal of evaluation approach

Much basic information was provided by the electronic systems themselves. It is difficult to see from the numbers of passengers how many of these relate to the measure. Because the activities from the local bus company were converted into a regional body it hasn't been possible to provide solid data concerning passenger changes.

C6 Summary of evaluation results

The key results are as follows:

- **Key result 1** – Higher awareness on public transport
During 2006 the image campaign aimed at changing the image of the public transport in Odense. The methods were large posters in the street, free postcards, a new and improved website, SMS-service and different events or happenings involving direct contact with citizens.

The campaign has been evaluated to reveal the knowledge about the campaign. A representative group of 402 persons over 15 years were interviewed. They were also interviewed about the website to find out about the common knowledge and if they are satisfied with the new site.

52% of the respondents remember the campaign. The large posters and the launching of the website as well as the handing out of water and umbrellas are best known among the respondents. Those going by bus on a regularly basis are also more familiar with the campaign than the rest of the respondents.

1/5 of the respondents have visited www.bybussen.dk. Especially the young people and those going by bus use the website. Both men and women use the website to look up information about arrivals and departures of the busses. 87% thinks that the website is "very easy and accessible/accessible" and almost all respondents found the information they were looking for.

All in all we consider the campaign being a success. The purpose of the posters was partly to give the busses a new image partly to promote the new website. The website has been well received and every month there is on average 28.000 visits.

- **Key result 2** – High use of new services

The service that provides real time information on a SMS is a success.

2008	Sum	Januar	Februar	Marts	April	Maj	Juni	Juli	August	September	Oktober	November	Dec.
Messages send	61.533	2.560	4.952	4.943	6.021	5.313	5.401	4.000	4.732	1.134	1.473	1.671	2.373

Below is the numbers for 2008.

- **Key result 3** – High use of the SMS tickets

The use of SMS-tickets has been a success. In average 182 persons buy a ticket pr. dag. The Bus Company FynBus has decided to make the project permanent and will launch the ticket in all busses on Funen.

Status of SMS-ticket 1 January 2009	
Total number of tickets sold Jan. 08 – Jan. 09	61.533
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D Lessons learned

D1 Barriers and drivers

D1.1 Barriers

- **Barrier 1** – Bus priority systems are not enough without giving special lanes to busses at selected points. Otherwise buses are stuck behind the waiting cars.
- **Barrier 2** – Campaigns need to be repeated ongoing even though the budgets don't allow so. Budgets don't allow FynBus to invest specially in one year to get a higher income in the following years. Still the information level is relatively high. FynBus constantly communicate their services mostly at their website www.fynbus.dk.
- **Barrier 3** – The biggest challenge in creating the SMS-ticket was to convince the phone company TDC. It took 5 months before they agreed to join and had the necessary approvals internally. But when they said "Go!" they were very engaged and positive all the way through the project process.
- **Barrier 4** – It was a demand from the phone company that they were the only provider of SMS-tickets during the first year of the project. This has of course been a barrier for mobile phone users who did not use this specific company. But now FynBus is looking into getting more phone companies engaged in the service. The negotiations have begun and many are interested because this new use of the mobile phone is interesting in many aspects involving payment of services.
- **Barrier 5** – Putting up the electronic info points was also a challenge. It was a large project with many people involved and all had their sayings about design, whether they were user friendly, where to put them and so on.

D1.2 Drivers

- **Driver 1** – The creative use of mobile phones for ticket sales and to provide relevant information very much fits into the image of the younger generation. Furthermore it's a very cost efficient way of using peoples existing equipment in new dimensions.
- **Driver 2** – Gimmicks like handing out umbrellas and bottles with drinking water is a very good way to motivate the users of public transport.
- **Driver 3** - Odense Municipality and FynBus has a common interest in promoting public transport in new creative ways.

D2 Participation of stakeholders

- **Stakeholder 1** – Politicians from the city council and from the FynBus board have largely supported the initiatives in relation to the press.
- **Stakeholder 2** - Telephone companies are very positive and eager to participate as this created a new market incentive for them.

D3 Recommendations

- **Recommendation 1** – Public transport and busses especially need much better promotion, not only to attract new customers but also to higher the perceived image for the present users.
- **Recommendation 2** – Private cars get all kinds of new technologies – to catch up with this trend, electronics can be used in many new services for public transport to heighten the impression of being a modern public transport user.
- **Recommendation 3** - Telephone companies are searching for new markets and the might be very active partners in new services for mobile phones.

D4 Future activities relating to the measure

This measure has inspired FynBus to implement further new passenger options to attract new customers. Busses get equipped with onboard electronic screens and free WiFi internet access. This gives people better use of the time they're spending in the bus and create a much better image for public transport.

Odense has decided to start investigations on how to design a new light rail system for the city. By that there's a whole new political willingness to invest in larger improvements for users of public transport.