

from Systems to Services

Workshop report

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Document Information

Authors

NAME	ORGANISATION
Henk Jansma	Rijkswaterstaat
Hélène van Heijningen	Mobycon
Marjolein Masclee	Rijkswaterstaat
Stephanie Kleine	Ministerium für Wirtschaft, Verkehr, Landwirtschaft und Weinbau, Rheinland-Pfalz

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Preface

This Report summarises the results and conclusions of the UM2 Activity 1 workshop: 'from Systems to Services'. It was organized by the Dutch national coordinating team, with support from the UM2 Moving Group and circulated at the end of 2017.

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1 Introduction

The workshop 'from Systems to Services' was held on the 26th and 27th of September 2017 at the World Port Center of Rotterdam. The workshop was organized by Rijkswaterstaat together with the Traffic Company and the Port of Rotterdam in the context of the European ITS-corridor project URSA MAJOR 2.

URSA MAJOR 2 targets the deployment of Intelligent Transport Systems (ITS) services to improve safety and efficiency of freight traffic on the TEN-T road network mainly along the Rhine-Alpine and the Scandinavian-Mediterranean CEF core corridor, linking North-Sea-Ports, the Rhine and Ruhr area, metropolitan areas in southern Germany and in Italy. The main European added value of URSA MAJOR 2 (UM2) is the improvement of services for international freight traffic.

1.1 from Systems to Services

The workshop focused on the shift in approach regarding how the Dutch now tackle urban traffic problems, as a special situation needs to be considered for the Netherlands. The Netherlands traditionally has a very high traffic density and consequently started early and swiftly in deploying ITS. However, the potential to expand the road network as well as the deployment of traditional ITS are nowadays saturated. Consequently, the focus has shifted towards optimizing the use of existing systems. The Dutch road authority Rijkswaterstaat now tries to improve its systems and content offered by stimulating the private sector to find innovative ways to provide road users with new and additional end user services. Emphasis is put especially on the organizational aspects, stimulating cooperation between public and private sectors and between different transport operators.



2 Content

The aim of the workshop was not only to inform attendants about this new approach, but to also allow for a critical reflection and discussion on this topic in order for all attendants to truly learn and be able to take relevant lessons home with them to possibly implement in the organization or country. The workshop lasted 1.5 days and was attended by 48 participants from the Netherlands, Germany, Italy and Switzerland.

2.1 Plenary presentations

The workshop started with a plenary session with introductions about the Port of Rotterdam by Frank Bus and an introduction of URSA MAJOR by the international coordinator Stephanie Kleine. Then the day continued with a set of three keynote speeches on the strategic, policy and implementation perspective on the new approach to tackling urban traffic problems.

The first keynote speaker was held by the principal advisor for traffic management of Rijkswaterstaat, Serge van Dam, who presented a wide scope of ITS topics related to connectivity and smart mobility. Road safety and the introduction of smart cars were, amongst others, the two

main topics in his presentation. Serge discussed how road safety is under pressure due to the overload of information for car and truck drivers due to all kinds of services available in the vehicles. He also showed that the introduction of smart cars will provide a challenge for road operators with respect to traffic management for decades to come due to a mixed fleet of present cars and the future smart cars.

Roger Demkes then held the second keynote speech on behalf of the Ministry of Infrastructure and Environment with respect to the policy program “Optimising Use”. Roger explained that this program has been developed given the restraints of space and environmental requirements in the Netherlands. It aims towards optimizing the use of already existing infrastructure. This program is in fact the foundation of most of the projects of the workshop. Roger also explained the multiplier effect when dealing with traffic jams. It claims that only a small reduction of the number of cars on the road, allows for a multiplier effect of 10 times on the reduction of traffic jams.



After lunch, Roger Demkes appeared on stage again, but now as the director of the Traffic Company. This is an alliance of Municipality of Rotterdam, the port of Rotterdam and Rijkswaterstaat amongst others, which has been working as the executive agency of the Optimising Use program. In this context, the Traffic Company initiated a lot of projects to facilitate specifically the traffic flows on the main West East corridor in the Netherlands. Roger discussed projects in the field of mobility management, logistics, optimizing infrastructure and driving behavior.

2.2 Project discussions

After the keynote speeches, the workshop continued with several interactive sessions focused on discussing six projects currently being executed by Rijkswaterstaat, Traffic Company and the Port of Rotterdam. The projects were presented in a pitch of three minutes to raise the interest of the attendants, moderated by LEF facilitator Marinda Hall. After the pitches, the participants were given the opportunity to choose a project that they wanted to learn more about during the afternoon. The attendants then divided into three groups, and after a short presentation by the project leader, discussed their chosen projects in more detail. After about an hour, all groups were asked to provide feedback to all attendants about what had been discussed and what lessons could be drawn from the highlighted project. Then, a second round of project discussions was held so that the attendants could focus on a second project. The day was finalized by bringing together all lessons learned and explaining them to one another in a so-called ‘anchoring’ session. This approach regarding the project discussions was executed again on day 2.



On day 1 of the workshop, the following three projects were discussed:

- ★ Incident Management, Eeltje Hoekstra and René van Zutphen (Rijkswaterstaat)
- ★ Influencing driving behaviour, Gerard Eijkelenboom and Danielle Petit (Traffic Company)
- ★ Market place for logistics, Frank Bus (Traffic Company)

On day 2 of the workshop, the three remaining projects were presented:

- ★ Tire pressure at container terminals, Joop Verdoorn (Port of Rotterdam)
- ★ Truck parking, Peter Vorenkamp (Port of Rotterdam)
- ★ Amsterdam Practical Trial, Martie van der Vlist (Rijkswaterstaat)

Further information on these projects, as to not make this summary too large, have been collected in annex 1: Project highlights.



2.3 Networking

After the first day, everyone was invited on a boat tour with explanation about the port sights and activities in the port of Rotterdam by organizer Henk Jansma during a 'floating dinner'. At the end of the boat tour a short presentation was given by Nick Juffermans of Connekt. Connekt is an organization that provides a network and platform for representatives of companies, authorities, consultancies and universities in the field of traffic transport and ITS to exchange knowledge and experiences.

3 Lessons learned

A lot of discussions took place during the interactive sessions. And in addition, a lot of knowledge was gained through the keynote speeches. Taking all that was communicated throughout the workshop together, the main lessons learned listed by the workshop participants are discussed below.

Quoting...

- ★ "It's not about technical solutions, it's about organization"
- ★ "New challenges require new partnerships"
- ★ "Think big, act small"
- ★ "Active swarm benefit"
- ★ "Evaluation is key"
- ★ "Same goals, different approaches"

3.1 New challenges require new partnerships

Part of the 'Optimising Use' program and the projects that have been initiated because of it, is the focus on cooperation. Emphasis is put especially on the organizational aspects of traffic problems, stimulating cooperation between public and private sectors and between different transport operators. Together more knowledge is available and by aligning goals and interests, parties from different backgrounds have been proven to be able to work together well to achieve better results. However, one must not only look at public-private cooperation. In this new approach and way of working, taking into account the client provides for a win-win-win situation.

3.2 Influencing behaviour is simply a new approach to achieve the same goals

The approach taken towards traffic problems in the Netherlands, originating in the Optimising Use program, should simply be seen as a new, innovative method towards achieving the same goals traffic managers and road authorities have done for years. This approach focusses not only on preventive network management, but also public-private partnership and takes into account the opportunities that arise from influencing behavior by using incentives to change company or people behavior in order to achieve goals like improve road safety, decrease environmental impacts and so on.

It is also remarked that such new ideas should be welcomed. However, such ideas are often beyond our horizon and can only develop if organizations are open to innovation and allow mistakes.

3.3 Evaluation allows us to critically reflect on and learn from new approaches

Evaluation is very important not only on a national scale to examine a project, but also to be able to explain a new approach or method and showcase its results. Innovative approaches can often yield sceptic reactions. Evaluation results are then needed to allow for a substantiated discussion. However, even though evaluation reports are often available, the circulation of such documents and exchange of knowledge is just as important. Links need to be established between different parties and countries in order to move forward. As the projects discussed in this workshop are not yet finalized and evaluation reports were not always available, it was decided that all evaluation reports of the Dutch projects discussed in the workshop will be actively circulated to continue discussions on the effectiveness of this new approach.

4 Final Workshop Conclusions

Overall the workshop was a great success with participants from different countries and backgrounds sharing their experiences and discussing new implementations and approaches. The specific format of this workshop combined with the inspiring support of the workshop moderator Miranda Hall resulted in active discussions, plenty of networking opportunities and many important lessons learned for everyone to take back home.

Annex 1: Project highlights

Project name: **Incident Management**

Organisation: Rijkswaterstaat

The Dutch road network has reached the limits of its capacity. Small incidents with HGV (e.g. breakdown) and accidents (i.e. a truck with livestock) can have a severe impact on the traffic flow and traffic safety. Incident Management strives to diminish the disruption caused by HGV incidents and accidents in the Rotterdam region. This means preventing and reducing the number of incidents and accidents as well as clearing the road faster after an incident or accident.

Rijkswaterstaat implements an Incident Management Plan as an addition and improvement to the existing national incident management with a focus on HGV traffic including five concrete actions. Three actions of the plan are defined to prevent incidents and two to reduce the clearing time after an incident has happened.

- Action 1: Perform safety scans on HGV companies
- Action 2: Monitor and enforce height, weight and tire temperature of HGV on the A15.
- Action 3: Monitor and map unsafe situations and unsafe areas for HGV.
- Action 4: Include incident management in a TMP on Urban Flow Management.
- Action 5: Install black boxes in cars of road inspectors and link this to service providers.

Due to good cooperation between all parties involved, Incident Management in the Netherlands has become a great success on the national network of Rijkswaterstaat. The parties involved in the Incident Management process are police, fire brigade, medical rescue services, towing companies, insurance companies, transport branch organizations, Rijkswaterstaat.

This success is primarily based on the fact that due to good appointments, and short and direct communication lines, all parties stay working in their own field and mandates. A substantial decrease in delays has been achieved on the highways because of this approach. Also, the Dutch IM-approach differentiates between private cars and trucks as the impact of incidents involving trucks are far bigger than when the incident involves a (single) car.

Website link	https://www.incidentmanagement.nl/default.aspx
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Contact person(s)

<p>Eeltje Hoekstra Programmamanager Incident Management Rijkswaterstaat Eeltje.hoekstra@rws.nl> +31 6 51 21 61 46</p>	<p>René van Zutphen Incident Management Specialist Macaro info@macaro.nl +31 6 40 52 66 96</p>
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Project name: **Driving Behaviour**

Organisation: Verkeersonderneming (Traffic Company)

“Good driving is good for flow”.

Sometimes congestion appears on locations where on other days with similar conditions in weather and traffic no congestion appears. The Traffic Company decided to get a better grip on the driving behavior of motorists in the development of such congestion together with market players. Until December 2017, SD Insights, ULU and Flitsmeister investigate how to influence drivers’ driving behavior and how it contributes to better flow.

In February of 2017, the Traffic Company made a call for tender with the aim to make Rotterdam a pilot area when it comes to driving behavior. The questions posed in this pilot are: Is good driving measurable? How and what do you need for this? Can driving behavior of motorists be influenced with mobile apps? What works or what doesn’t? Can you influence driving behavior in such a way that someone becomes a ‘better’ driver? And does that affect flow (read: fewer congestions)?

Website link	http://driveulu.co.uk/
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Contact person(s)	
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Gerard Eijkelenboom	Danielle Petit
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Program manager Driving Behaviour & Traffic Flow	Project leader Influencing Driving Behaviour
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Traffic Company	Traffic Company
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gerard.eijkelenboom@verkeersonderneming.nl	danielle.petit@verkeersonderneming.nl
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+31(0)6-30629848	
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Project name: **Market place for Logistics**

Organisation: Verkeersonderneming (Traffic Company)

The aim of the project is to reduce freight traffic on bottlenecks around Rotterdam during peak hours. This project has implemented a “market place for logistics”. This market place enables especially the large group of smaller logistic partners to improve efficiency of their transport, leading to less traffic movements and thus reducing the pressure on the network, in particular reducing the number of trucks during peak hours. To establish the market place, Rijkswaterstaat/the Traffic Company will cooperate with the Province of South-Holland, the municipality of Rotterdam, The Metropolitan Rotterdam/The Hague-area, the Port of Rotterdam, Deltalinqs, TLN (Dutch Association for Transport and Logistics) and EVO (representing the interests of some 15,000 freight transport stakeholders).

There is a large diversity of companies and actors on the Ring Road of Rotterdam, leading to a broad range of logistic needs. The market place accommodates these needs by bringing together demand and supply, being logistic chains (shippers, transport companies and clients) on the one hand and companies that offer solutions to make the logistic chains more efficient on the other side. Rijkswaterstaat/The Traffic Company implements, operates and manages the market place, including expert support services for actors on the market place. The deployment of the market place was accompanied by outreach actions to stimulate participation of relevant actors in the logistics domain. The project will be completed by the end of 2017.

Website link	http://www.marktplaatsvoorlogistiek.nl
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Contact person(s)

Frank Bus

Project leader Logistics / Program manager Accessibility

Traffic Company / Port of Rotterdam

FMQ.Bus@portofrotterdam.com

+31(0)6-20001930

Project name: **Truck Parking**

Organisation: Port of Rotterdam

Various economic and political trends and developments have dramatically changed truck parking behaviour in the last 20 years. Business parks, airports, ports and corridors are generally not designed to include large scale truckparking facilities. Therefor truck parking behaviour has become a widespread problem in economic hot spots and transportation corridors all over Europe. The shortage of secure truckparking facilities needs to be addressed by all relevant public- and private sector entities.

The primary question is: "Who feels responsible for creating and maintaining secure truckparkings: companies, road authorities, municipalities or all together?". The Port of Rotterdam took the initiative to create 5 secure truck parking facilities (see: truckparkinglabel.eu for standards) and regulate parking in the port area. Within a short period of time the (paid) parkings have accrued a very high occupancy rate.

For more information on truck parking in Europe, there is a draft CEDR position paper currently being circulated amongst national road operators, to elaborate a CEDR standpoint and bring it to the attention of EU DG Move in Brussels.

Website link	http://truckparkingrotterdam.com/EN/Page/Home
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Contact person(s)

Peter Vorenkamp

Project manager

Port of Rotterdam Authority

Pjh.vorenkamp@portofrotterdam.com

06-51552455

Project name: **Amsterdam Practical Trial**

Organisation: Rijkswaterstaat

The Amsterdam Practical Trial (APT) is a large-scale test of the latest innovations in road transport. Nowhere in the world is intelligent traffic management technology being tested on such a large scale on public roads, involving real cars and real drivers in the Amsterdam region. The goal of APT is to move ever closer, step by step, to a future in which cars, traffic lights and information signs are interconnected and able to cooperate with each other seamlessly. In this way, the trial aims to contribute to improving traffic flow, reducing congestion and realising a safer and cleaner city.

APT is a joint initiative of the Ministry of Infrastructure and the Environment, Rijkswaterstaat, the Municipality of Amsterdam, the Province of North Holland, the Transport Authority Amsterdam, The National Data Warehouse for Traffic Information, private companies and academia. The Amsterdam Practical Trial is a large-scale trial designed to reduce traffic jams in the Amsterdam region through the innovative use of technologies in cars and on the road. The trial involves three elements: the development and testing of in-car systems, the development and testing of roadside systems and finally the integration of these two systems. By the end of the trial, 'smart' traffic lights should work in conjunction with navigation equipment in the car. This combination should have the result that persons using the road will reach their destinations faster and can depend on an expected travelling time. Also, EMAAS (Event Management as a Service) has been tested, in which public road authorities and event management organisations worked together and private parties offered services to end users in order to influence the traffic flows before and during a large scale public event.

In the last and third phase of the the Amsterdam Practical Trial two major projects will be executed. The first is Socrates^{2.0} in which six road authorities from four countries, five international traffic information and service providers, one car manufacturer and two companies for Intelligent Transport Systems have agreed to cooperate. In 2017 and 2018 they will develop new services for traffic management and traffic information. In 2019 and 2020 they will deploy and test these new services. The testing will be done with a test fleet of more than 6,000 road users in the region of Amsterdam and with more than 1,000 road users in the regions of Antwerp, Copenhagen and Munich. In the Concorda project in which all the big European Telecom operators, the European OEM's and many government and cities participate for testing of new hybrid communications technology (5G, 4G-LTE, WifiP) and will set steps in the introduction of the autonomous cars by testing in a real life high way and urban roads.

Further information, including evaluation reports, can be found on the APT website.

Website link	https://www.praktijkproefamsterdam.nl/en
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Contact person(s)

Hans Kramer

Stakeholder manager

Amsterdam Practical Trial

Hans.kramer@rws.nl

+31 6 52 35 41 73

Project name: **Tire pressure at container terminals**

Organisation: Port of Rotterdam

Research in advance has proven that the bursting of tires of trucks (blowouts) appeared to have an enormous impact on the flow-through on highways. Not only fatal accidents occurred, but it also caused a tremendous damage and debris on the roads. Not only the management of the incident itself causes a lot of delay but also the clearing and cleaning of the road requires a lot of effort.

A simple but very effective measure can prevent these incidents, which are caused by neglecting the condition of the tires. Low pressured tires are the best indicator that a problem with a tire is imminent. However due to several different reasons, truck drivers often don't check the pressure of the tires. On average 20% of the vehicles has one or more tires with a pressure that is too low. A facility installed in front of the exit of a container terminal can prevent most of such blowout incidents. If used regularly, it enables the truck driver to discover unexpected low-pressure level of one of the tires. The truck driver then is able to take appropriate action to let the tire be checked and prevent being broken down later on or a destructive blow-out.

Truck drivers can receive a printout with the current pressures, but are also able to register themselves with their vehicles on a website. Truck drivers and/or fleet managers can then always log in and view the latest measurements and its history.

Website link	http://www.freetirecheck.nl/
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Contact person(s)

Joop Verdoorn
Program manager roads
Port of Rotterdam
j.verdoorn@portofrotterdam.com
+31623234229