

**EasyWay**

Annual Forum 2010



**Shortcut to the future.**

Lisbon • November 16<sup>th</sup>-18<sup>th</sup>



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FOT Integrated network  
management Amsterdam

Henk Jan de Haan



## What is integrated network management?

INM = Coordinated use of traffic management measures in order to improve network utilization in line with (policy) objectives, both for recurrent and non-recurrent conditions.

Coordination of measures on different coordination levels on several networks:

- Local / isolated
- Within strings / corridors
- Within sub-networks
- Between sub-networks

Many theoretical studies (e.g. DACCORD, AMICI, etc.) show potential impact



## Introduction FOT INM

Previous related projects:

- ZSM (hard shoulder running)
- No Regret (implementation of DRIPs, ramp metering)
- A10 Ring integrated traffic management (coordination of ramp metering and traffic signals on one trajectory)

Planned project: FOT in Amsterdam region

Main goals:

- To develop and implement INM for the Amsterdam regional network (motorways, rural and urban roads) to gain experience with INM
- To evaluate impact on throughput (+ reliability, safety, environment)
- To use the results for other networks (Rotterdam, Shanghai, etc.)

First step: Proof of concept



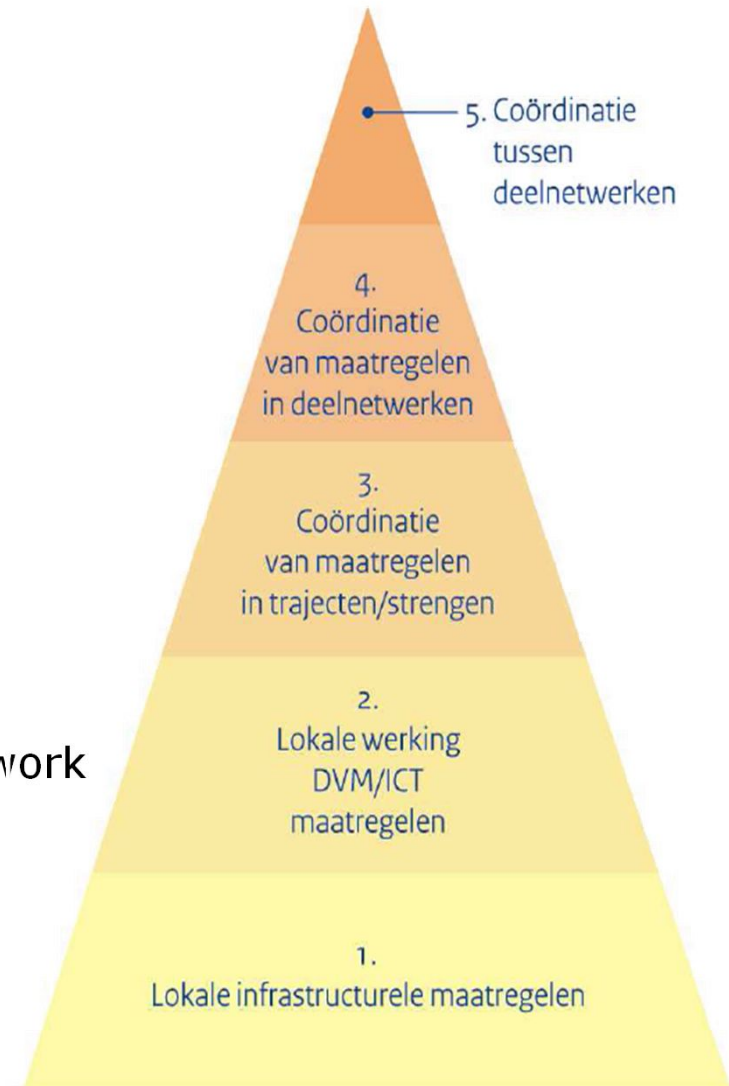


## Approach

Deal with traffic problems on a local level where possible, include other parts of the network, only when necessary.

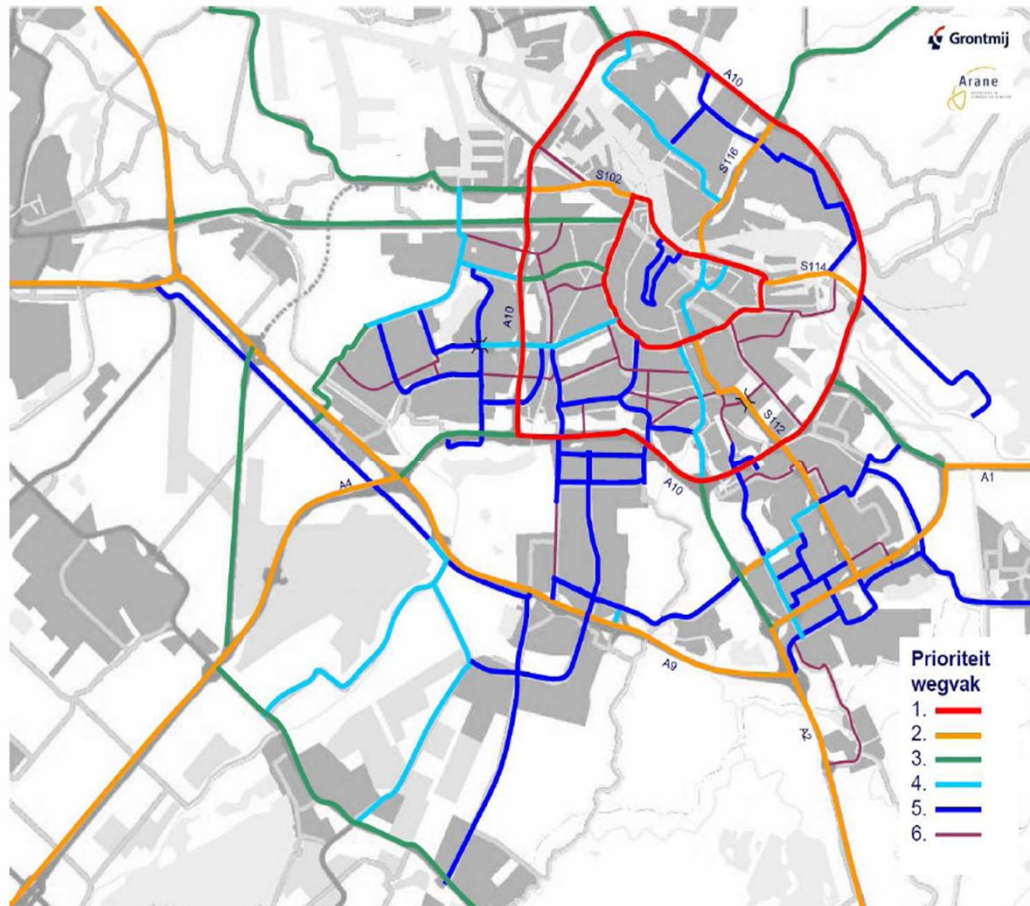
5 layers:

- Local infrastructure measures
- Local effects TM measures
- Coordination of measures per trajectory
- Coordination of measures segments of the network
- Coordination between segments of the network





## Priorities per road(segment)



Highest priority:

- Ring Road A10
- City ring S100

Secondary priority:

- Motorways
- Main city entrance roads



## Many road authorities involved



- The Pilot INM Amsterdam is commissioned by the Ministry of Transport, Public Works and Water Management, but it is also a regional project
- There is a close cooperation between municipality of Amsterdam, province of North-Holland and Amsterdam region and Directorate-General for Public Works and Water Management
- The transportation objectives, boundary conditions, principles and choices of the regional partners are leading



## Evaluation FOT Amsterdam

Phased evaluation: Elaborate evaluation in several phases, with iterative character.

- Separate Field Test for each measure (over
- Evaluation study per measure
- Combined effects of measures?
- Added benefit of coordination compared to local control?.

Ex ante evaluation method/tools:

- Regionale Benuttingsverkenner – predictive model for TM
- International literature (DACCORD, AMICI)
- Expert assessments



## Expected benefits EVENING peak

Model studies / expert opinions show expected benefits:

- Cost Benefit Analysis based on simulations and expert judgment
- Payback period: 4 times faster than infrastructure projects
- Expected benefits outweigh costs by € 50 million
- 100% return on investment

	A10	Urban	Total
Baseyear	100	100	100
Local measures	89.3	97.3	97.1
Trajectory coordination	82.2	97.5	96.2
Network coordination			95.8



## Questions for the audience

- Who has carried out or will carry out similar projects?
- Monitoring coverage is very important for the success of coordinated network management. The ring road is fully equipped, but the city and secondary road network is not. Are there examples of projects in your country, working on the same problem?

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Thank you!

For more information contact:  
[suerd.polderdijk@rws.nl](mailto:suerd.polderdijk@rws.nl)



## Ex ante evaluation results

	Ochtendspits				Avondspits			
	A10	Overig HWN	Stedelijk	Totaal	A10	Overig HWN	Stedelijk	Totaal
Basisjaar 2007	100	100	100	100	100	100	100	100
FileProof	94,6	104,5	99,0	99,6	96,9	99,4	99,4	99,0
PPA Lokaal	90,5	100,1	98,5	98,0	89,3	100,1	98,4	97,6
PPA Traject/streng	90,0	93,7	99	97,1	82,2	100,6	98	96,5
PPA Coördinatie	89,0	93,7	99	97,0	80,4	100,6	98	96,2

	Meeteenheid	PPA Lokaal	PPA Traject coördinatie	PPA netwerk coördinatie
Baten	Miljoen euro	<b>36,4</b>	<b>75,7</b>	<b>100,6</b>
<b>Kosten</b>				
Investerings	Miljoen euro	-15,4	-24,7	-27,2
Beheer en Onderhoud	Miljoen euro	-11,1	-17,1	-18,8
Totaal kosten	Miljoen euro	-26,5	-41,8	-46,0
<b>Saldo</b>	<b>Miljoen euro</b>	<b>+9,9</b>	<b>+33,9</b>	<b>+54,6</b>