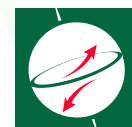




The importance of multimodal transport data warehousing to a sustainable traffic flow

10 April 2012

Dr. Jan Linssen
ARS T&TT CEO



ARS Traffic & Transport Technology

Intelligent Transport Systems: Improve the traditional transport processes through innovation with new technology

Leading international market position with innovative ITS solutions for 15 yrs

Company Characteristics

- Build on expert knowledge in ITS
- Deliver complete ITS solutions
- From consulting to operations
- Service and operations focused
- Turn-key
- Multidisciplinary
- System integration

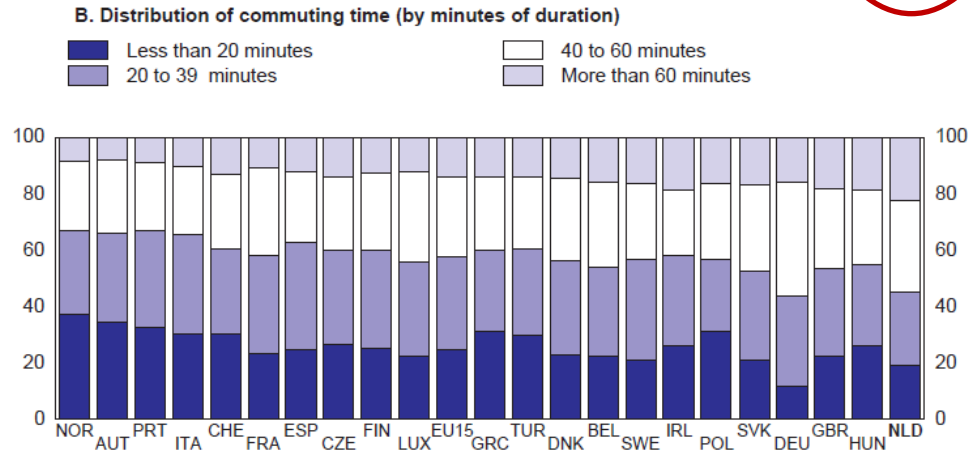
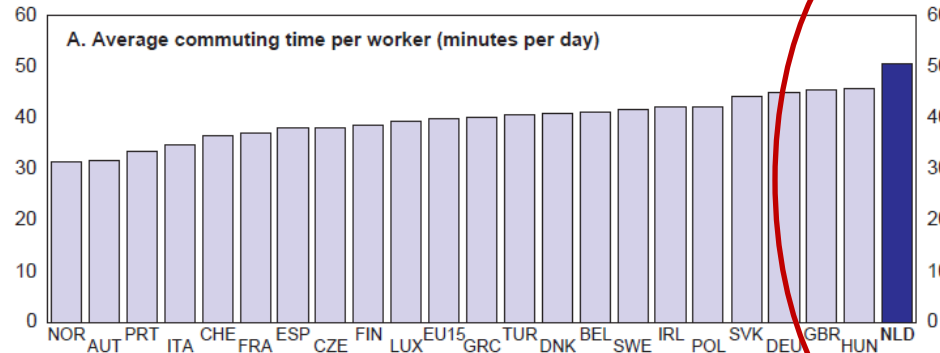
- Tolling, enforcement
- Traffic management
- Public transportation
- Road-side and in-car



Netherlands & India



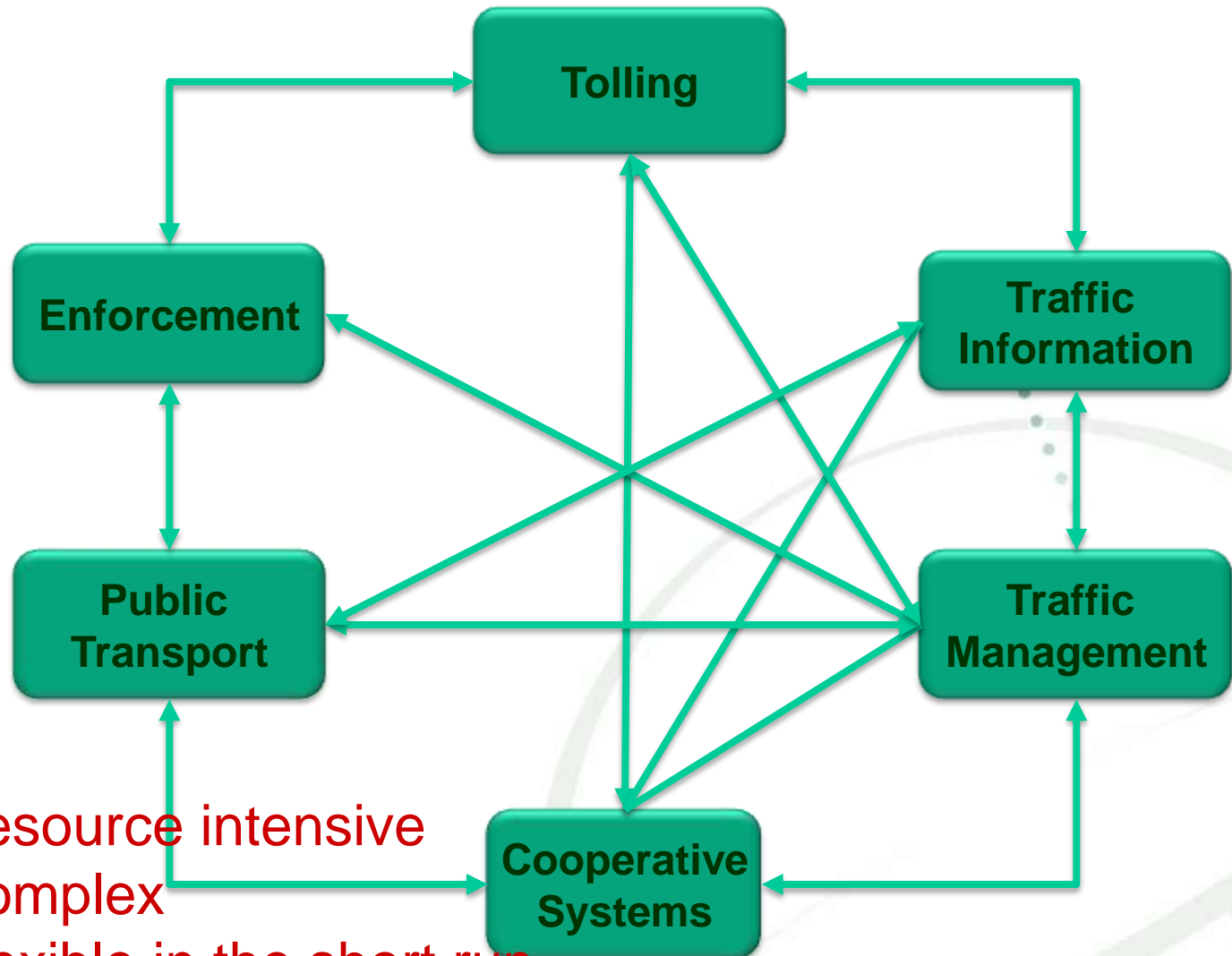
Netherlands : Highest commuting time in EU



ITS Drivers: Working time, Use of space, Conservation of environment and Energy



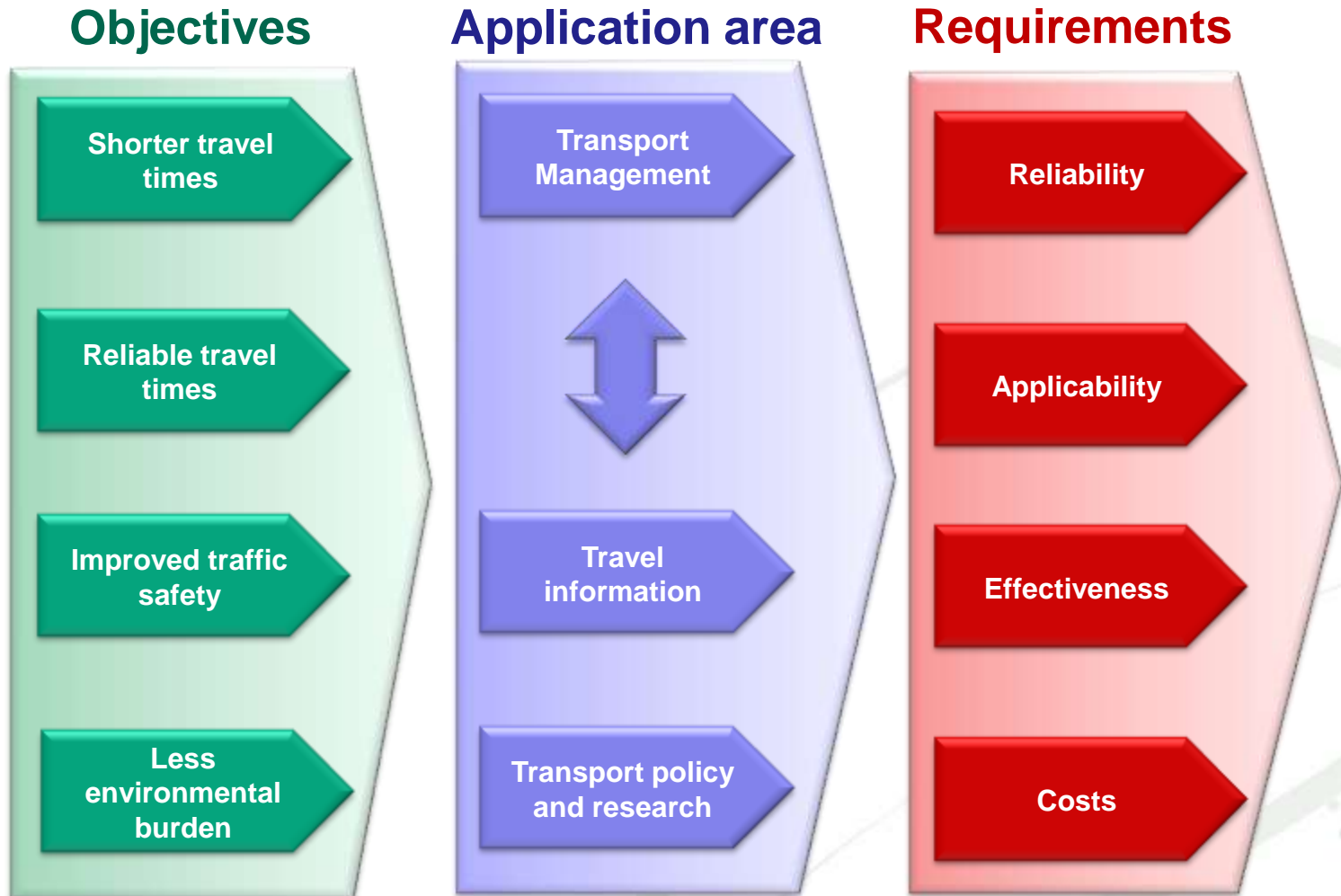
Many ITS services and many more interfaces



- Resource intensive
- Complex
- Flexible in the short run
- Rigid over time
- Proprietary

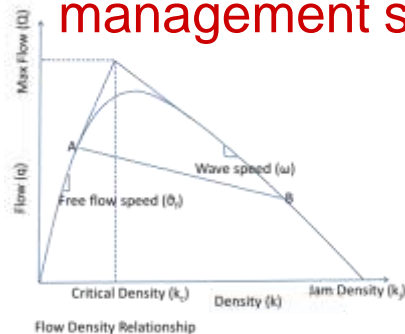
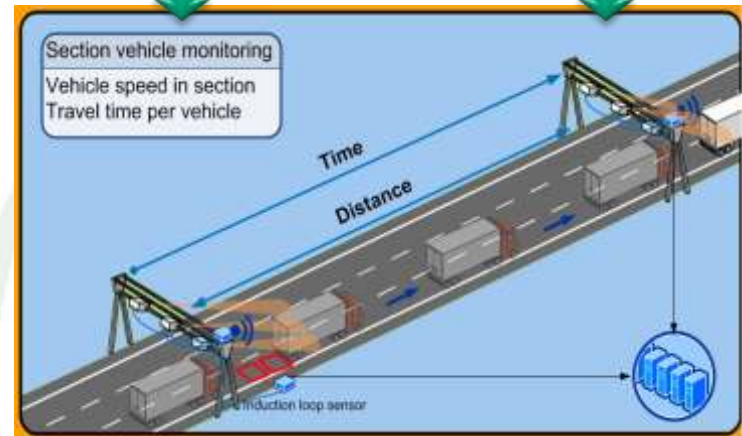
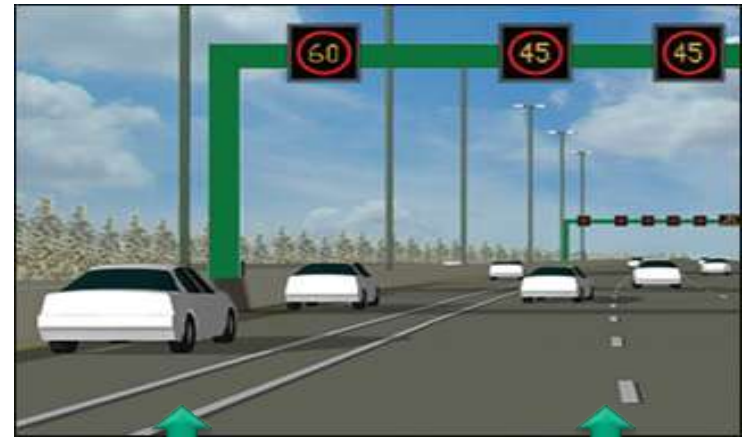


Analytical approach to solutions



Case: Variable speed limits & enforcement

- Variable speed limits optimize road utilization by 5%-10% (higher demand – lower maximum speed).
- With enforcement of variable speed limits, road utilization is increased to 10%-20%, with limited costs.
- However, implementation requires integration of enforcement and traffic management systems.



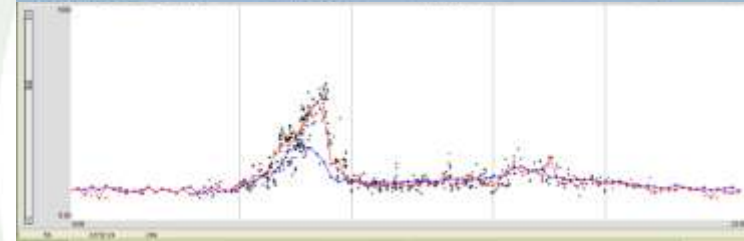
Case: Travel info & Transport management

- In-car systems increasingly used.
- Traffic management enforces regulatory measures as applicable.
- In-car systems delivering multi modal information in sync with management strategy homogenizes traffic flow and reduce delays by 5%-15%
- However, requires traffic management and traffic information to be synchronized at data level

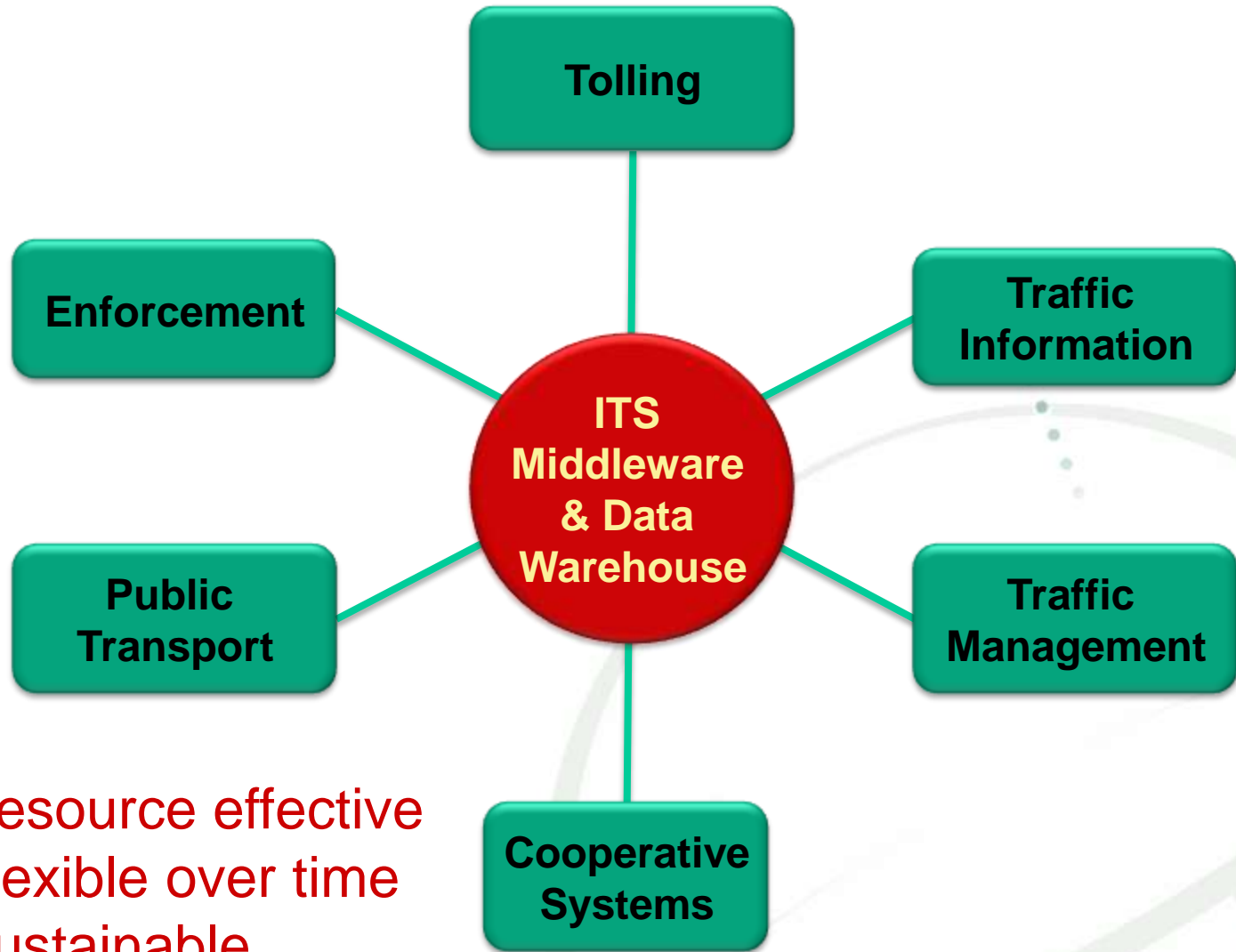


Case: Tolling & Traffic Management

- Tolling is most effective if the fees are based on actual demand for road and public transport infrastructure.
- Analytics on past/present traffic monitoring data provides short/long term estimates on demand/fee ratio's.
- However, only after integration of tolling and traffic and transport monitoring the yield of the transport system can be improved.



Simpler structures and less interfaces



- Resource effective
- Flexible over time
- Sustainable
- Suitable for change management

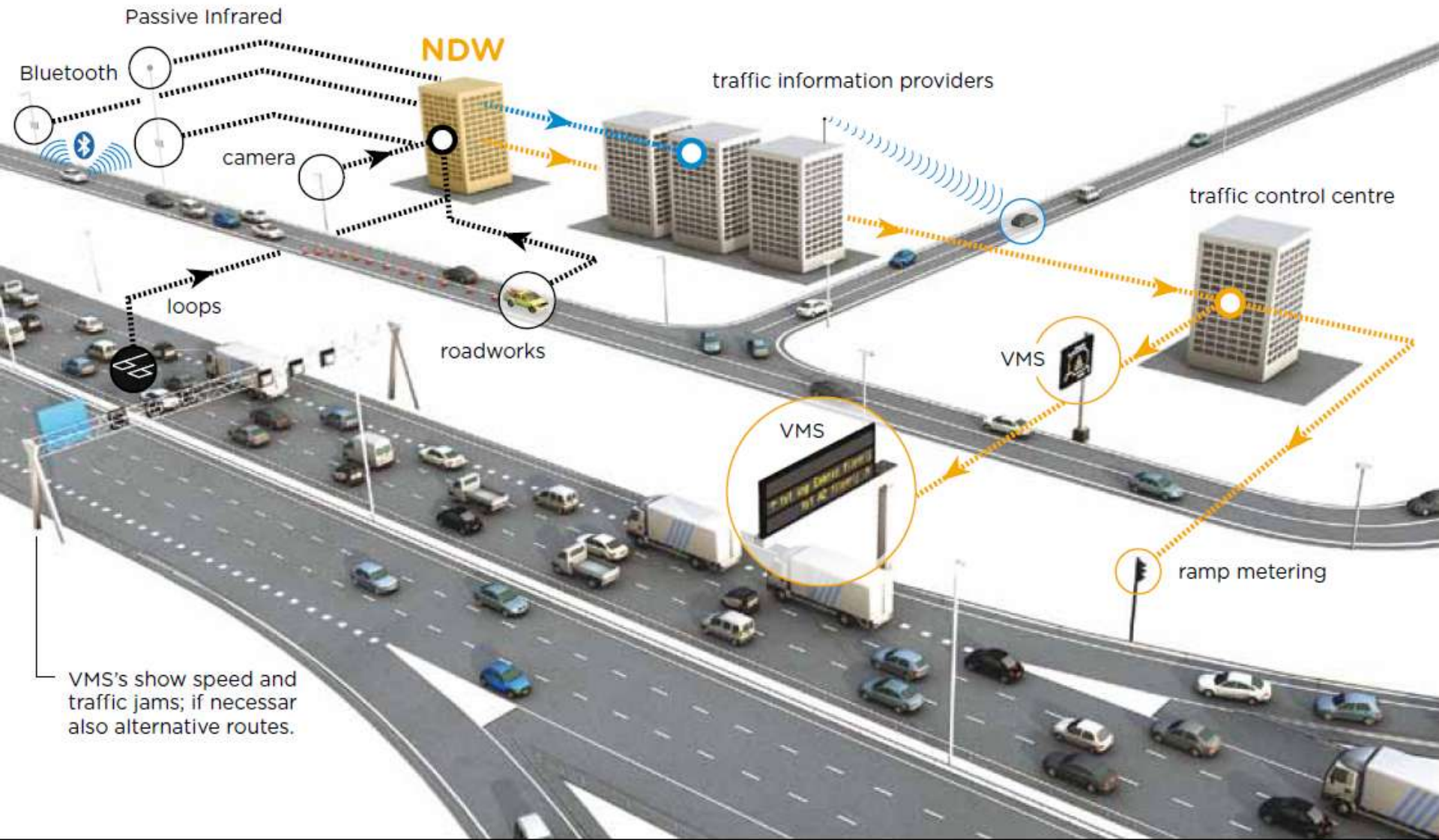


National Traffic Data Warehouse in NL

- Traffic management, traffic information and door-to-door travel planning requires detailed and dynamic traffic data on national level
- National road operators have agreed to cooperate on the collection and distribution of high quality traffic data over 6.000 km



Successful implementation data warehouse



Collection and dissemination of travel info



Reistijd van deur tot deur

van Postcode of Straat nr, plaats
Kies een adres uit uw voorkeurslijst

naar Postcode of Straat nr, plaats
Kies een adres uit uw voorkeurslijst

Vertrek 09 30 Morgen

Aankomst

bereken reistijd

Reistijd van deur tot deur

Reistijdverwachting

van Vlietweg 14, Leidschendam
naar Oranjestraat 7, Den Haag
op 9 januari 2008

	1:20	1:30	1:40	1:20	1:10
Vertrektijd	7:40	7:45	7:50	8:25	8:50
Aankomsttijd	9:00	9:15	9:30	9:45	10:00

bereken opnieuw printen



Multi modal Data warehousing

- **Maximizes use of ITS investments**
- **Integrates :**
 - Traffic management, Traffic Information
 - Public transportation
 - Tolling, Enforcement
- **Efficiency gains: +10-20% compared to non-integration ITS**
- **Real (environment friendly) alternative to building roads**
- **First steps:**
 - Structure and apply available info
 - Disseminate data to service providers





Obrigado!

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