



Statens vegvesen

# *The AutoPASS strategy: Electronic Toll Collection towards 2020*

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## Presentation outline

1. The AutoPASS system
2. Current challenges
3. The AutoPASS strategy
  - a) Areas of application
  - b) Organisation
4. Conclusions





## Electronic toll collection enables efficient road financing and demand management

- Tolls are common throughout the world to either finance new infrastructure or to regulate demand
- Today's level of toll financing would not be possible without an ITS measure such as Electronic Toll Collection (ETC)
- Norway represent an ETC success story with a national OBU take up rate of 60 %
- The AutoPASS system

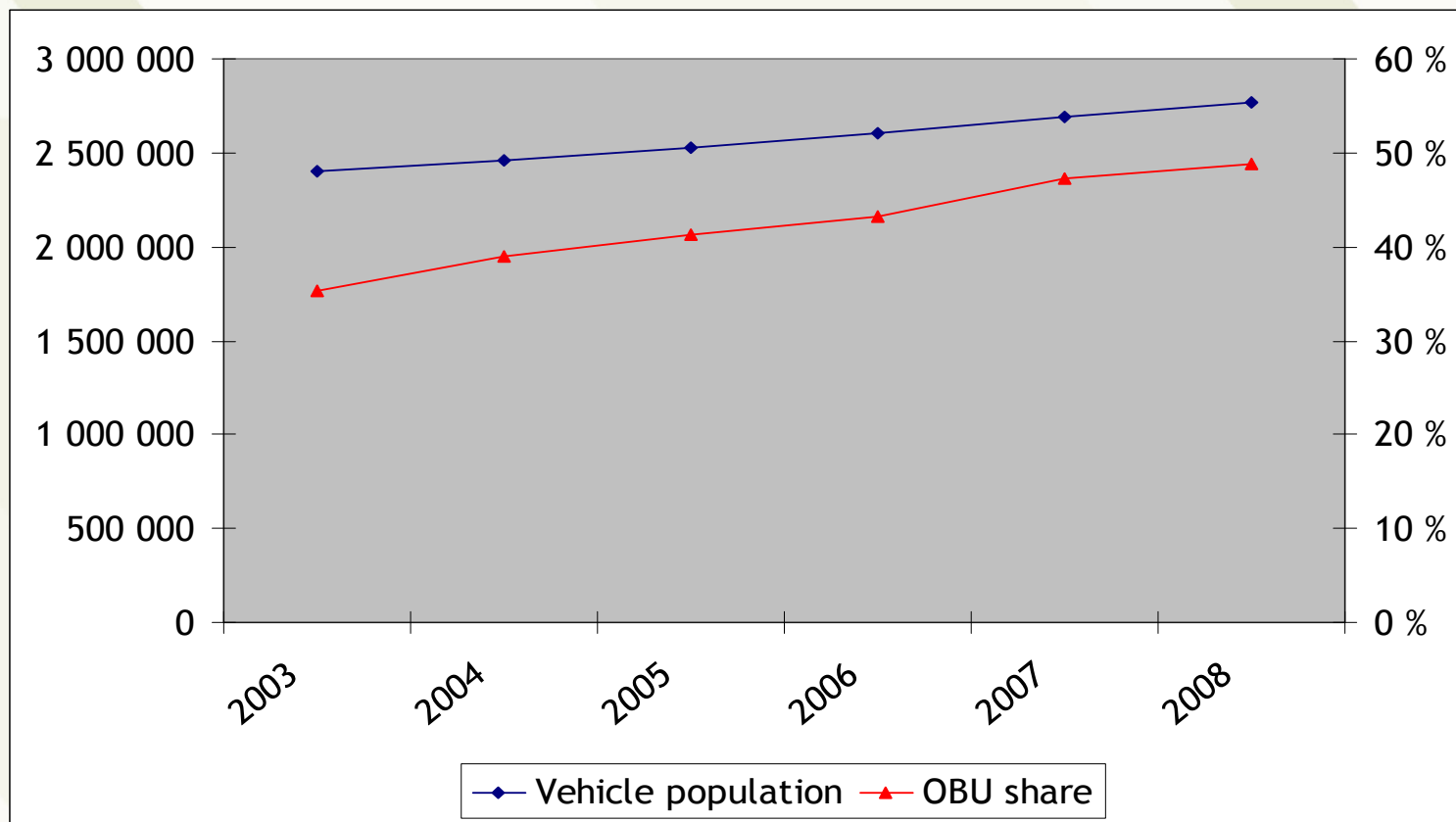


## Norwegian toll financing is based on the AutoPASS system

- A DSRC system based on the European CEN standard
- Open standard owned and managed by the NPRA
- Standardised hardware and software for all projects
- Full national (and Nordic) interoperability allowing motorists to use the same OBU in all Norwegian and Nordic toll projects (*One OBU - One Contract - One Invoice*)
- The AutoPASS system is owned by the NPRA - the specifications, the OBUs and all road side equipment



## One in two Norwegian vehicles are equipped with the AutoPASS OBU





## AutoPASS is the most widely applied ITS measure in Norway

- Tolls make up 45-50 % of total road investments, 90 % of all tolls are collected through the AutoPASS system
- The only ETC system used for Norwegian toll financing
- Average operating costs  $\approx$  10-15 % of gross revenues
- User friendly and an ITS success story
- But a huge potential for improvements



## The current organisational framework of the AutoPASS service represents major challenges

- AutoPASS is a national payment service but the day to day responsibility lies with 27 different toll road operators which also issues AutoPASS contracts (no separation of operator/issuer)
- The fragmented organisational framework results in big challenges associated with customer service and information and public administration and -responsibility



## Customer service and information

- Different service level between toll companies
- Lack of a common customer service
- No national distributor network for OBUs
- High costs for the transport industry





## Public administration and -responsibility

- A national service, yet information is provided by 27 different operators
- Who is responsible when service is inadequate? (clarification of responsibilities)
- Expansion of the service will increase the costs and risk of the toll companies as these also are issuers (increased number of transactions, increased number of invoices, higher cash flow, higher credit risk)



## The AutoPASS strategy: main objectives

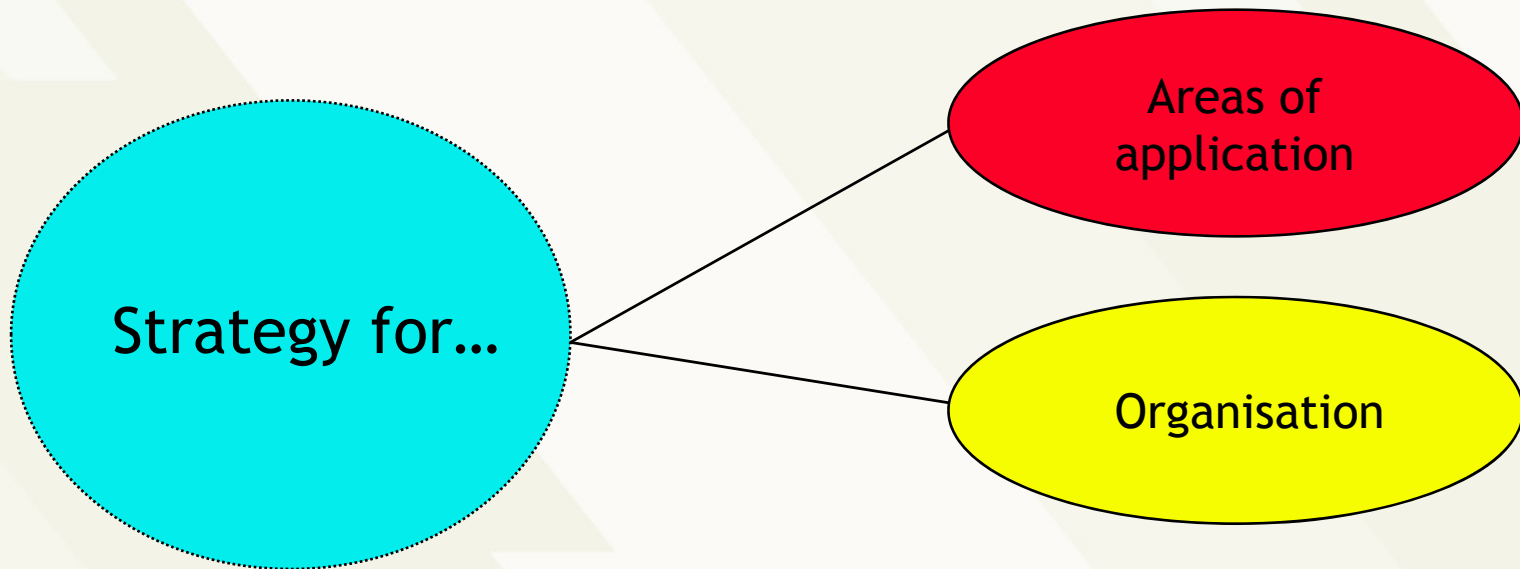
**Main objective:** By 2020 AutoPASS shall be a safe, efficient and user friendly system for services between public authorities and all Norwegian vehicles.

### Milestone objectives:

Milestone	Objective
<b>2010</b>	<ul style="list-style-type: none"><li>• New organisational framework. Toll companies no longer combined issuers/operators: issuing of tags/contracts and charging of tolls is managed by different actors.</li><li>• New areas of application</li><li>• Improved service level to all users of Norwegian toll road systems</li></ul>
<b>2013</b>	<ul style="list-style-type: none"><li>• OBUs mandatory for all heavy vehicles</li><li>• The AutoPASS service expanded to also include ferry crossings on the trunk road network</li></ul>
<b>2019</b>	<ul style="list-style-type: none"><li>• OBUs mandatory for all Norwegian vehicles</li></ul>



How do we achieve these objectives...?





## Strategy: areas of application

- AutoPASS provides a technological framework which could be used to meet other transport objectives such as:
  - Congestion charging
  - Low emission zones
  - Annual vehicle duty and other car taxes
  - Tunnel safety
  - Ferry connections
  - Public transport
  - Access control
  - Real time traffic information
  - Commercial services (petrol, car wash, food etc.)



## Strategy: areas of application (2)

- Using AutoPASS to meet other objectives than road tolling requires an organisational framework that shields the non-profit toll companies from risk
- In the next decade, the NPRRA should focus on and plan for the use of the AutoPASS OBU for purposes within its own administrative responsibility
- Using AutoPASS for tax/insurance payment and enforcement requires mandatory OBUs in all vehicles



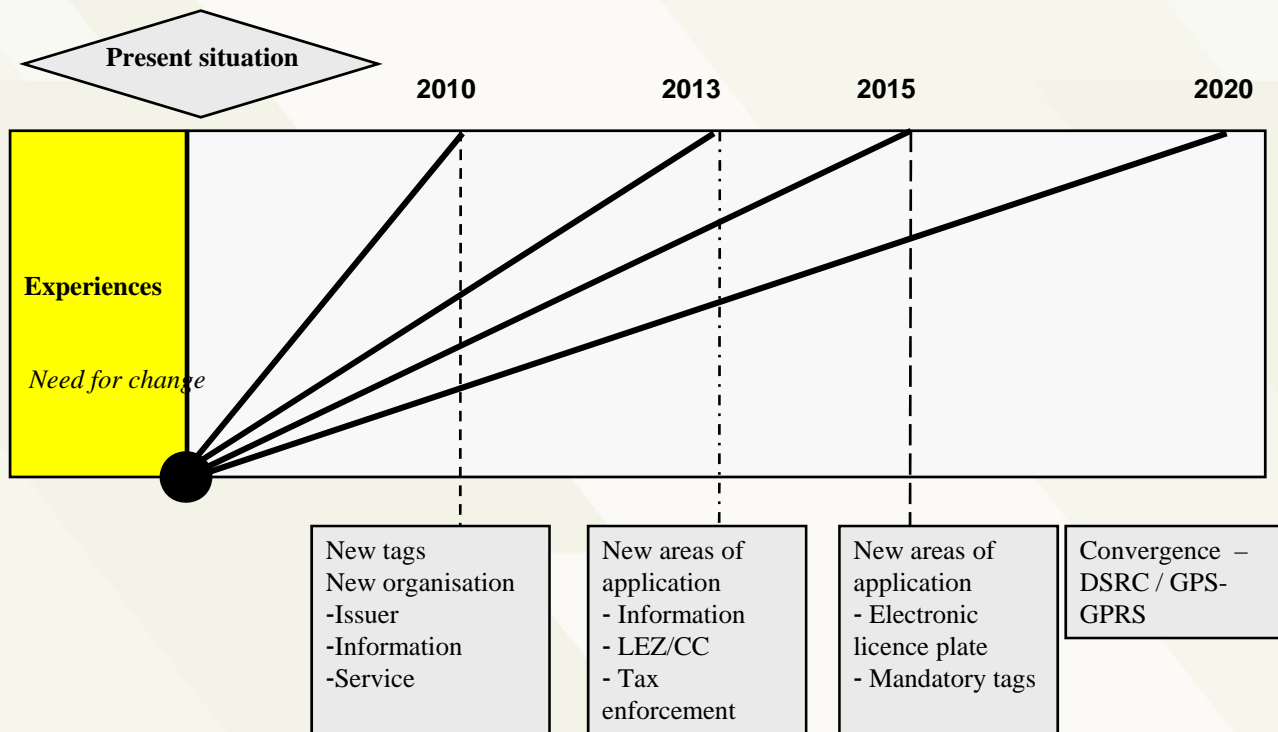
## AutoPASS should be used to achieve transport policy objectives

AutoPASS should be used for	AutoPASS could be used for
<ul style="list-style-type: none"><li>- Road tolling</li><li>- Congestion charging</li><li>- Low Emission Zones</li><li>- Vehicle taxes</li><li>- Hazardous goods/traffic surveillance</li><li>- Real time traffic information</li></ul>	<ul style="list-style-type: none"><li>- Ferry connections</li><li>- Parking</li><li>- Public transport</li><li>- Access control</li></ul>

AutoPASS should <u>not</u> be used for
<ul style="list-style-type: none"><li>- Commercial services (petrol, car wash, food etc.)</li></ul>



## Scenario towards 2020





## Strategy: organisation

- The organisation of the AutoPASS service should be formalised
- AutoPASS is a national payment system, a trade mark owned by the NPRA, which could be used for a number of different services
- Example: VISA could be used in hotels throughout the world, but it is not the hotels that are responsible for the payment infrastructure
- Issuer- and customer service activities should be centralised to one organisation
- Local toll companies, car parks etc. use the payment system provided by a national service provider





## AutoPASS service provider

- All activities relating to issuing of contracts, customer service and information, cash flow/central system and interfaces with other national and foreign service providers is organised as one unit
- Road side equipment is part of the road infrastructure and remains with the NPRA
- Using AutoPASS for toll collection, parking public transport etc. is done by various local operators but the payment infrastructure is centralised
- The *AutoPASS service provider* could be a public or a private company
- Improves the service to the users and allows for new areas of application without increasing the risk of the operators



## Conclusions

- AutoPASS is a very successful ETC scheme and provides a technological framework which could be used to achieve a range of transport policy objectives
- To improve the service level to the users the responsibility for the payment infrastructure should be separated from the operators
- Towards 2020, OBU should become mandatory in all Norwegian vehicles



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Thank you!

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