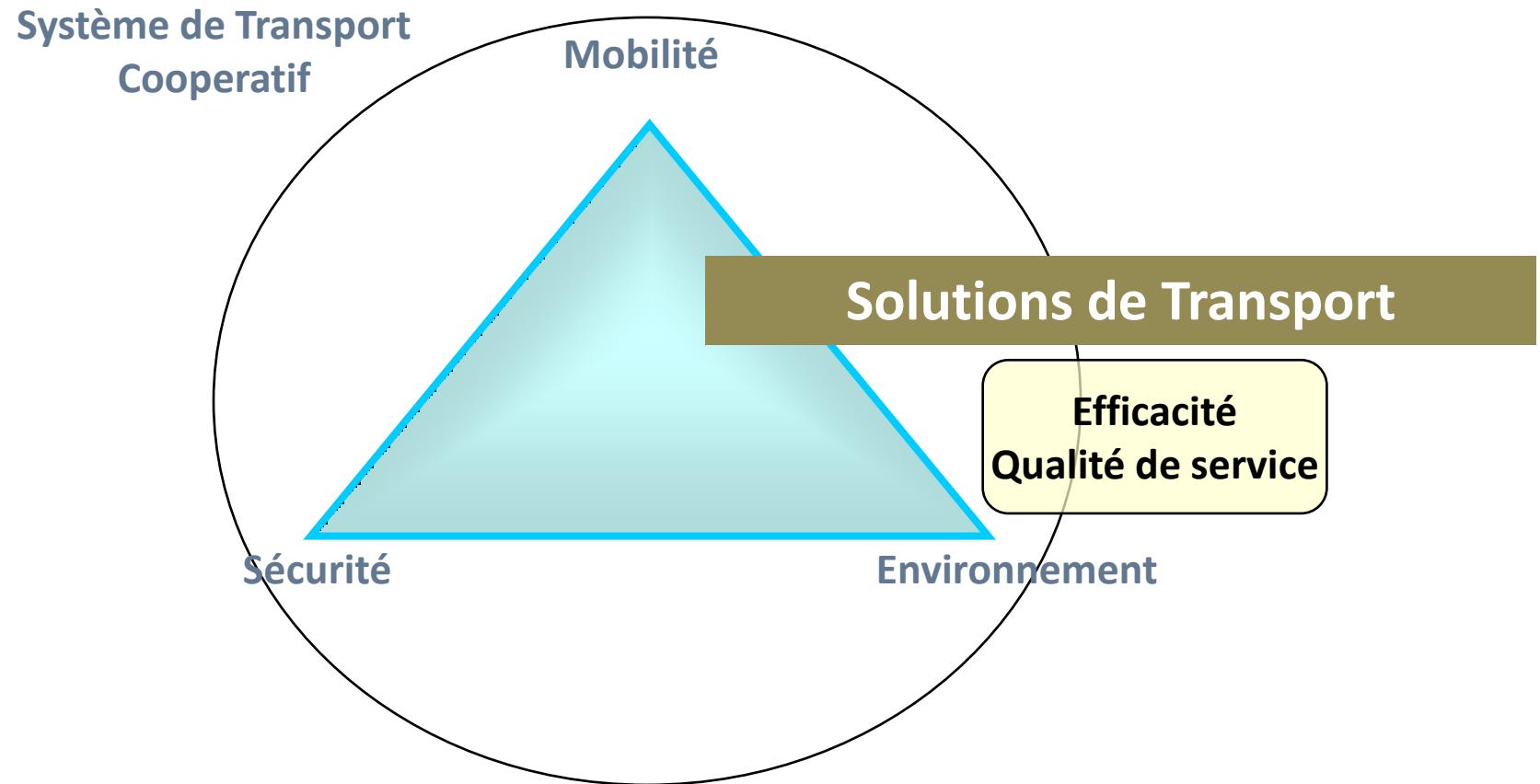


PREDIM
Journée d'Information
31 Mai 2013

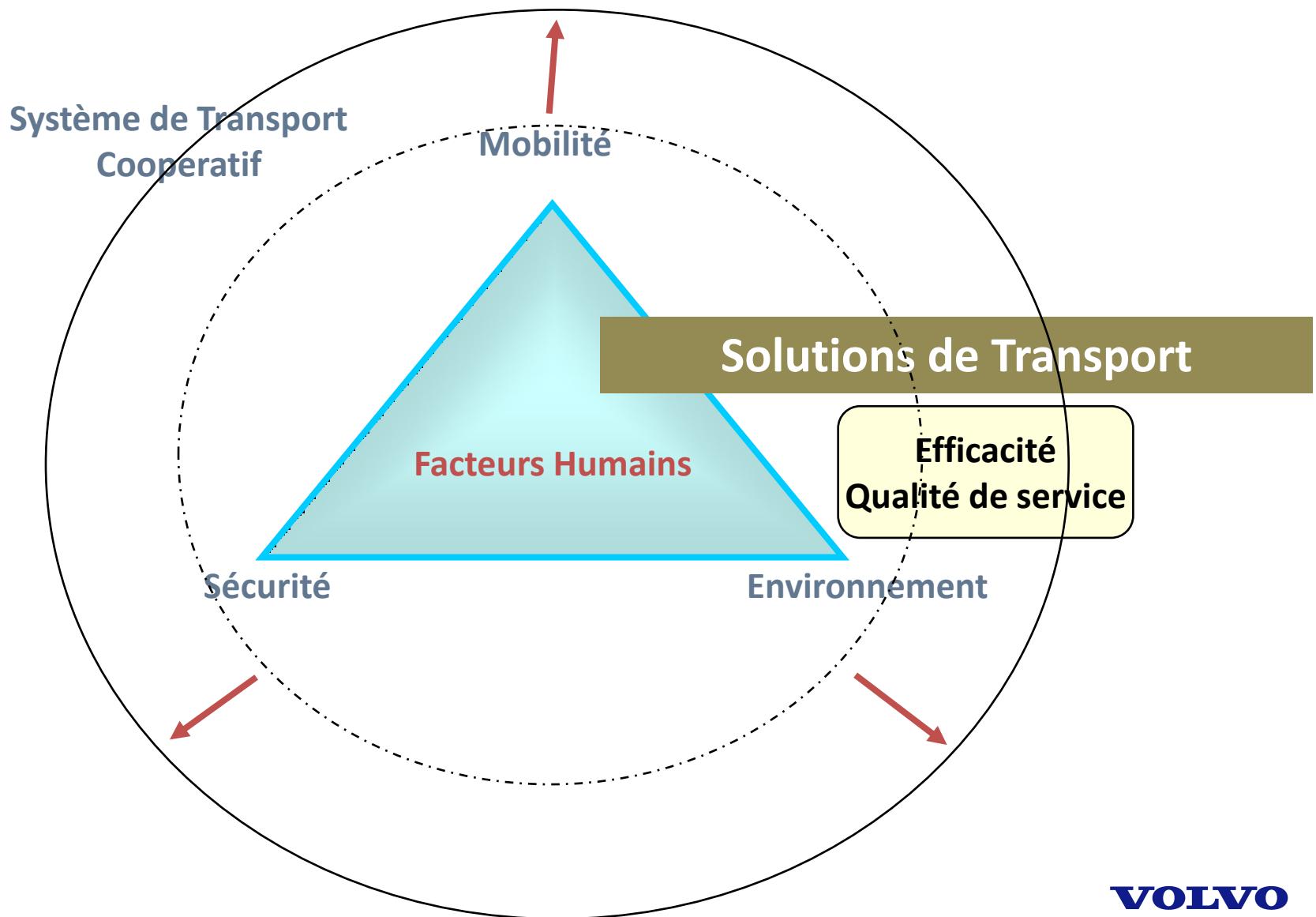
Vers la route automatisée poids lourds?

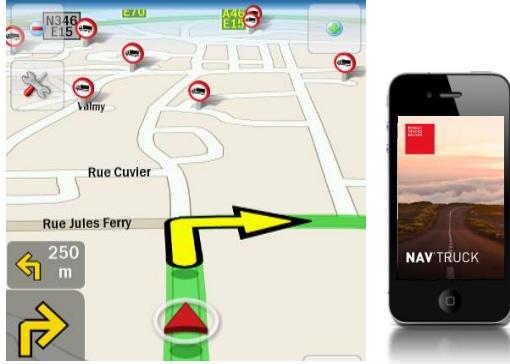
Bernard Favre
Advanced Technology & Research – VOLVO Group Trucks Technology

Fondamentaux du transport routier



Fondamentaux du transport routier





Intelligence

Supervision



Services sur smartphones



Véhicule - véhicule



Expertise du Groupe Volvo

- Télématique et gestion de flotte (Dynafleet)
- Systèmes d'assistance à la conduite et de sécurité
- Des projets de recherche multipartenaires (F, S, Europe, USA) sur le véhicule interactif
 - CHAUFFEUR 2
 - CVIS, SafeSpot
 - VIF
 - SARTRE, HAVEit
 - FREILOT
 - ...



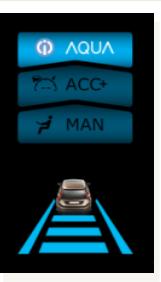
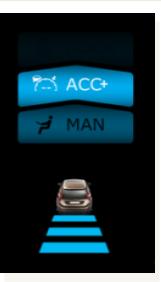
Projet
CHAUFFEUR2
(2001)

VOLVO

Projet HAVEit

Automated Queue Assistance

- Offer highly automated driving in low speed congested traffic
- Increase safety in driver underload situations
- Implement semi- to highly automated functionality and transition strategies
- Common HMI and automation scheme
- Adaptation of automation level to driver state



HAVEit

VOLVO

Projets CVIS et SafeSpot

Cooperative Systems

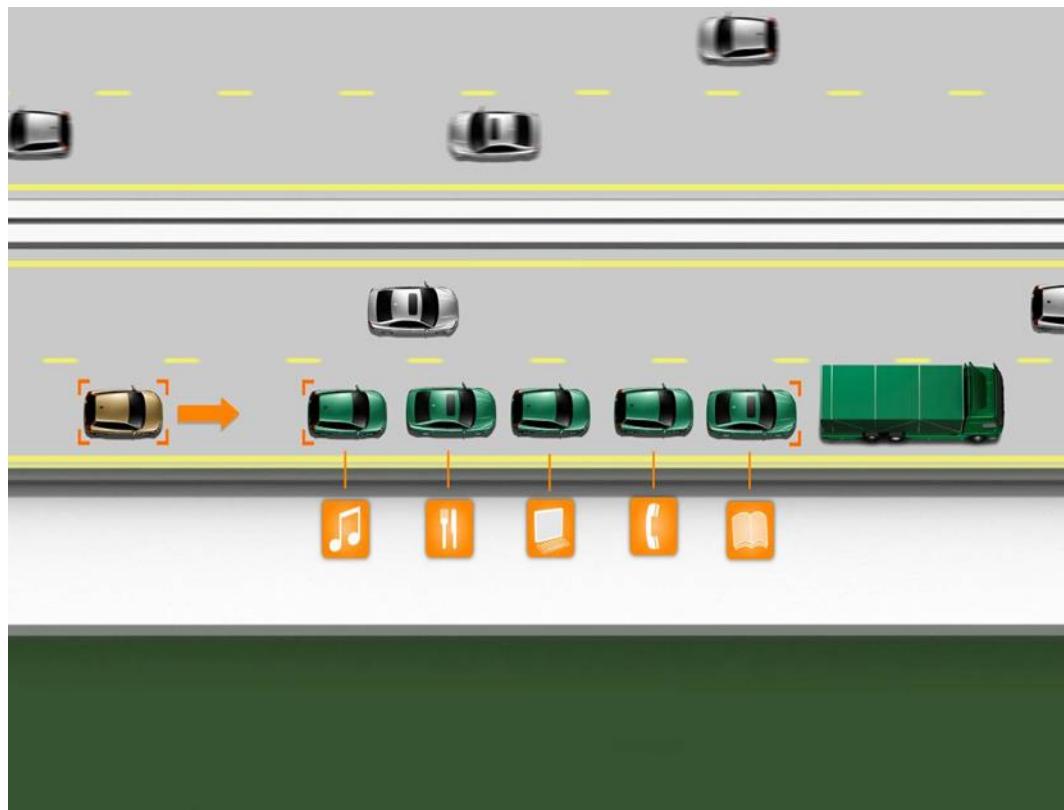
- CVIS: develop a **universal cooperative platform** based on open architecture and supporting technologies (communication, application deployment and management,...)
 - SafeSpot: **active safety** solutions based on communicating vehicles and infrastructure and advanced mapping solutions



Projet SARTRE

Safe Road Trains for the Environment

- 2009-2012 / FP7
- Develop strategies and technologies to allow vehicle platoons to operate on normal public highways with significant environmental, safety and comfort benefits.



VOLVO

Facteurs Humains !!!



Corridors urbains et routiers



Gestion des convois

Gestion des priorités

Route électrifiée?



Aujourd'hui



« Demain » (2050)?



Feuille de Route ERTRAC 2012

- Self-Operating & Resilient Trucks:
 - Safe & Efficient self-operating trucks based on reality sensing, preview & loading, reducing or eliminating the driver impact of the vehicle performance.
- Traffic & Infrastructures (fully) Integrated Trucks:
 - Safe & efficient cooperative driving
 - Dedicated corridors with adapted trucks & semi-automatic driving
 - Energy/Information interface

Etapes possibles (ERTRAC 2012)

Traffic & Infrastructure Integrated Truck	Milestone 1 Milestone 1: 2015 Market 2018-2020	Milestone 2 Milestone 2: 2020 Market 2023-2025	Milestone 3 Milestone 3: 2025 Market 2028-2030
Safe & efficient cooperative driving Trucks in Corridors Energy/Information interface	<p>Green light optimisation & Cooperative ACC</p> <p>Vehicle optimized length, weights and design for key corridors</p> <p>Large scale pilots running with liquefied natural gas</p> <p>Adaptive on-board/in-plug charging devices</p> <p>Open standards and protocols for V2G communication</p>	<p>Vehicle driveline adopts to traffic management system optimizing</p> <p>Advanced Platooning</p> <p>Truck and load are fully integratable into smart transport network in dedicated urban areas</p> <p>Expanded LNG/SNG/DME infrastructure in Europe</p> <p>Truck technically adapted to performance based standards within the corridor</p> <p>Quick charging</p>	<p>Vehicle operation adopts to traffic management system optimizing</p> <p>Mass market corridor</p> <p>Truck and load are fully integratable into key transport corridors</p> <p>Fully developed infrastructure for liquid & gaseous energies</p> <p>Electrified driveline with continuous power supply</p>

Volvo - Renault Trucks :

Etapes futures 2013-2018 -- 2030

- Poursuite du travail sur l'énergie
- Véhicules compatibles avec des infrastructures (partiellement) électrifiées
- Véhicules connectés
- Exploitation en « lots » ou convois intelligents
- Aides au chauffeur, Copilote, Cockpit du futur
- Evolution des silhouettes

Conclusions et Orientations

- La technologie est (à peu près) disponible, pas la solution
 - Aspects légaux
 - Acceptabilité & comportements
 - Standardisation
 - Réglementation
- Site banalisé / Site dédié
- Interurbain / Urbain
- Coût / Prestation
- L'homme au cœur du système
- Introduction progressive
 - Prestations: des aides à la conduite aux véhicules automatisés
 - Véhicules: nouveaux véhicules dans les trafics existants

Merci de votre attention

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