

nieuwe **HTAS** projectinitiatieven

- HTAS doelen
- roadmap Efficient Powertrain
- innovatie gebieden, focus
- criteria
- mogelijkheden



Henk van IJendoorn

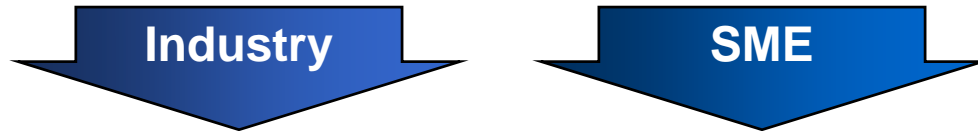
HTAS programmabureau



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 **HTAS**
AUTOMOTIVE
INNOVATION

HTAS Theme = Cluster



Programma	Focus area	Theme	Goal (2015)
R&D	Driving Guidance	Connected Car	25% reduction in travel time
		Vehicle Dynamics Control	
		Integrated HMI	
Enabling	Vehicle Efficiency	Efficient Powertrain	20% increase in fuel efficiency
		Light Contructions	
Enabling	Transfer & Education	Education	A - business platform & 100% increase A - students
		Knowledge Transfer	
		Business Support	

Invest
5 yr Plan
€158 M

Result
€4000M turnover
+
10.000 FTE's
+
Key Technology

cluster



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focus

Programme	Focus area	Theme	Goal
R&D	Driving Guidance	Connected Car	25% reduction in travel time
		Vehicle Dynamics Control	
		Integrated HMI	
	Vehicle Efficiency	Efficient PowerTrain	20% increase in fuel efficiency
Light Contructions			
Enabling	Transfer & Education	Education	A - business platform & 100% increase A - students
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R&D Programme

- Technology Roadmap
- Projects in progress
- **New innovation projects**

Enabling programme

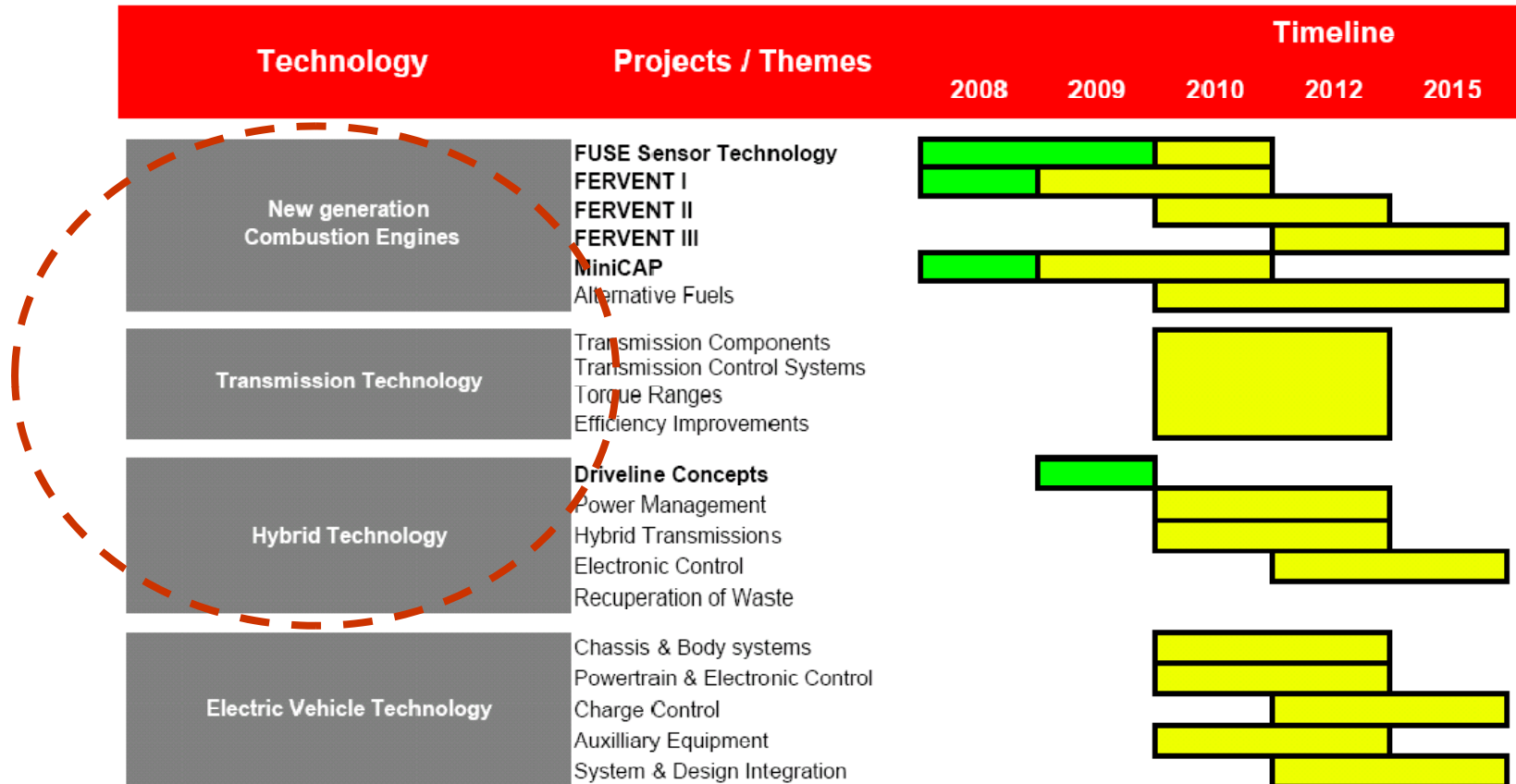
- **Workshops**
- Training
- Education
- Involvement SME (MKB)
- Internationalisation (EU)



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EP Road Map



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 maart 2010



Road Map 2009-2015 Efficient Powertrain

Technology	Projects / Themes	Timeline						Content	
		2008	2009	2010	2012	2015	2020		
New generation combustion engines	FUSE, FERVENT, CAP,...(TBE)	█		█				penvoorders: Sensata / DAF / MTT	
Transmission Technology	(TBE)								
Hybrid Technology	(TBE)								
Electric Vehicle Technology	(TBE)								
New generation Combustion Engines	FUSE Sensor Technology	█		█				New sensor technology	
	FERVENT I	█		█				Combustion, cooling, aftertreatment fundamentals	
	FERVENT II			█		█		System Control	
	FERVENT III				█		█		Testing & Improvements
	CAP	█		█				Efficient Power & Heat generation	
	Alternative Fuels			█		█		new chemicals	
Transmission Technology	Transmission Components			█		█		Electric Drives, AT, AMT, CVT	
	Transmission Control Systems			█		█		AT, AMT, CVT	
	Torque Ranges			█		█		CVT	
				█		█			
	Efficiency Improvements			█		█		CVT	
Hybrid Technology	Driveline Concepts		█					HTAS report: Hybrid & Electric Powertrains JUN09	
	Power Management			█		█		Control of electrical & mechanical power currents	
	Hybrid Transmissions			█		█		Hybrid driveline selection & optimisation toolbox	
	Electronic Control				█		█		ECU's including software
	Recuperation of Waste					█		█	
Electric Vehicle Technology	Chassis & Body systems			█		█		E-Driving safety and comfort, low energy consumpt	
	Powertrain & Electronic Control			█		█		Weight optimisation, E-motor, batteries, power cont	
	Charge Control				█		█		Trip & range monitoring, infrastructure, range exten
	Auxilliary Equipment			█		█		ABS, Heating, ventilation, airco, powersteer, lighting	
	System & Design Integration				█		█		E-Vehicle concept, HMI for operation and charging



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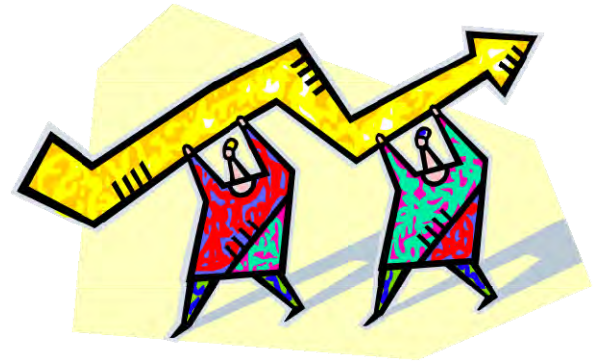


HTAS automotive innovation

energy saving and emission reduction

“GREENING” of cars and trucks

- energy saving
- CO2 & emission reduction
- new business & employment



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HTAS EP potentials 2010 (1/2)

HTAS-EMS (lange transportvoertuigen, van 18 naar 25 m)

- 30% efficiency & CO2 reduction
- **“GREENING”**: logistieke efficiency, modules, maat, EU toelating
- **HTAS driver:**
 - **“SAFETY”**: randvoorwaarden m.b.t. veiligheid (Veh.Dynamics)

Verbrandingsmotoren

- FERVENT II (dieselmotor concept)
- PFAMEN (poreuze injector)
- GOMECSYS (specifieke applicatie)
- NONOX (loopt al buiten HTAS)
- Vialle ideeën: fuel mix, fuel efficiency



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HTAS EP potentials 2010 (2/2)

Aandrijvingen

- DTI start-stop mechanisme
- cost efficient CVT (Bosch Transmission Technology)
- truck aggregaat voor emerging markets (diesel + CVT)
- E-powertrain voor aandrijving city vuilniswagen
- E-powertrain voor demo passenger car
- E-wielmotor
- plug-in range extender

Alternatieve brandstoffen

- H2 voor containervervoer



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gezocht:

combustion engine innovations

fuel saving and emission reduction

- new generation engine components
- new combustion engine concepts for automotive applications
- alternative power supply for accessories & auxiliaries (heating, cooling and electric energy)
- alternative, sustainable fuels



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gezocht: transmission innovations

energy saving and emission reduction

- alternative transmission systems (AT, CVT)
- alternative transmission components
- alternative transmission control systems
- up- or downsizeing of current systems (torque & power range)



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gezocht:

hybrid powertrain innovations

energy saving and (local) emission reduction

- **car and truck, electric powertrain system integration**
- electric motors, motor components
- gear systems for electric cars
- hybrid (combustion and electric) drivetrains
- E-power management, *E-safety management*
- recuperation of brake (waste) energy
- plug-in solutions for electric powertrains, *range extender*
- battery technology and charge control



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HTAS criteria voor een goed project

- **automotive innovation**
- **consortium (MKB)**
- **business case**
- **national: break-through technology**
- **international: EU (Eureka)**



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HTAS automotive innovation

Efficient Powertrain

“GREENING” of cars and trucks



- energy saving
 - CO2 & emission reduction
 - new business & employment
-
- **nieuwe initiatieven ?**
 - **participeren ? info@htas.nl**



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agenda

17:00	HTAS & Theme : Efficient Powertrain	Anton Wolthuis HTAS Program Office
17:10	Trends and Developments	Christoph Bollig FEV Motorentechnik
17:50	HTAS Project : FUSE	Arjan Kölling Sensata Technologies
18:30	Pauze	
19:30	New Engine Technology	Bert de Gooijer Gomecsys
20:00	New Transmission Technology	Jacques van Rooij Gear Chain Industrial
20:30	New HTAS Project Initiatives	Henk van Ijzendoorn HTAS Program Office
21:00	Netwerkborrel	22:00 einde 



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Napraten ?

Contact met de sprekers

Christoph Bollig	(FEV Motorentechnik GmbH)
Arjan Kölling	(Sensata Technologies)
Bert de Gooijer	(Gomecsys)
Jacques van Rooij	(Gear Chain Industrial)
Henk van Ijzendoorn	(HTAS Automotive Innovation)



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