



FUTURE TRANSPORTATION FUELS ROLE OF MOTORSPORT

Richard Karlstetter
Global Technology Manager Race Fuels
Shell Global Solutions (Germany)

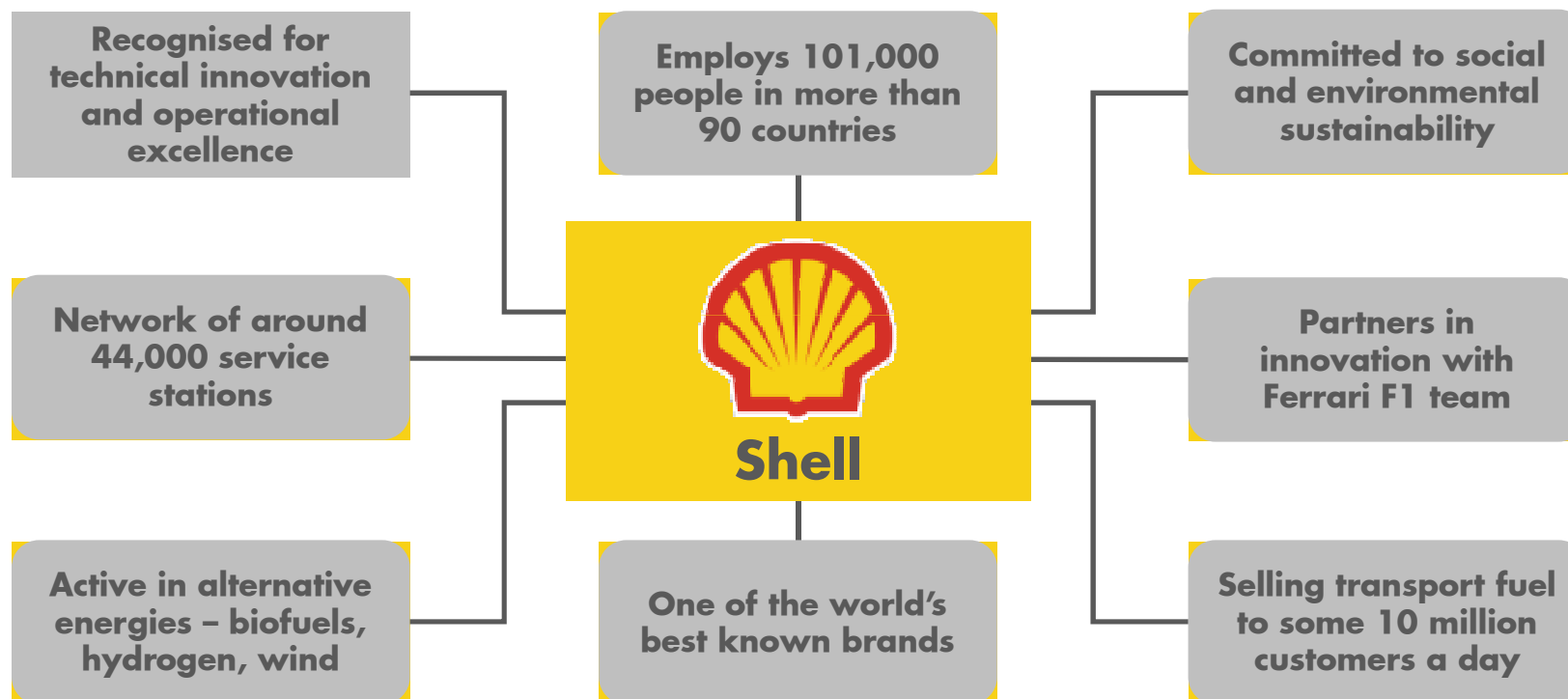
Road Atlanta, 30th September 2010

DISCLAIMER

This presentation contains forward-looking statements concerning the financial condition, results of operations and businesses of Royal Dutch Shell. All statements other than statements of historical fact are, or may be deemed to be, forward-looking statements. Forward-looking statements are statements of future expectations that are based on management's current expectations and assumptions and involve known and unknown risks and uncertainties that could cause actual results, performance or events to differ materially from those expressed or implied in these statements. Forward-looking statements include, among other things, statements concerning the potential exposure of Royal Dutch Shell to market risks and statements expressing management's expectations, beliefs, estimates, forecasts, projections and assumptions. These forward-looking statements are identified by their use of terms and phrases such as "anticipate", "believe", "could", "estimate", "expect", "intend", "may", "plan", "objectives", "outlook", "probably", "project", "will", "seek", "target", "risks", "goals", "should" and similar terms and phrases. There are a number of factors that could affect the future operations of Royal Dutch Shell and could cause those results to differ materially from those expressed in the forward-looking statements included in this Report, including (without limitation): (a) price fluctuations in crude oil and natural gas; (b) changes in demand for the Group's products; (c) currency fluctuations; (d) drilling and production results; (e) reserve estimates; (f) loss of market and industry competition; (g) environmental and physical risks; (h) risks associated with the identification of suitable potential acquisition properties and targets, and successful negotiation and completion of such transactions; (i) the risk of doing business in developing countries and countries subject to international sanctions;

(j) legislative, fiscal and regulatory developments including potential litigation and regulatory effects arising from recategorisation of reserves; (k) economic and financial market conditions in various countries and regions; (l) political risks, project delay or advancement, approvals and cost estimates; and (m) changes in trading conditions. All forward-looking statements contained in this presentation are expressly qualified in their entirety by the cautionary statements contained or referred to in this section. Readers should not place undue reliance on forward-looking statements. Each forward-looking statement speaks only as of the date of this presentation. Neither Royal Dutch Shell nor any of its subsidiaries undertake any obligation to publicly update or revise any forward-looking statement as a result of new information, future events or other information. In light of these risks, results could differ materially from those stated, implied or inferred from the forward-looking statements contained in this document. The United States Securities and Exchange Commission (SEC) permits oil and gas companies, in their filings with the SEC, to disclose only proved reserves that a company has demonstrated by actual production or conclusive formation tests to be economically and legally producible under existing economic and operating conditions. We use certain terms in this presentation, such as "oil in place" that the SEC's guidelines strictly prohibit us from including in filings with the SEC. U.S. Investors are urged to consider closely the disclosure in our Form 20-F, File No 1-32575 and disclosure in our Forms 6-K file No, 1-32575, available on the SEC website www.sec.gov. You can also obtain these forms from the SEC by calling 1-800-SEC-0330.

ABOUT SHELL



ORGANISATIONAL STRUCTURE

Upstream International

- Exploration
- Commercial/new business
- LNG
- Venture management
- Stakeholder management
- Sustainable Development

Upstream Americas

- Exploration
- Commercial/new business
- Unconventionals and Oil sands
- Wind
- Venture management
- Stakeholder management
- Sustainable Development

Downstream

- Manufacturing
- Retail
- Lubricants
- Business to business
- Chemicals
- Supply and distribution
- Alternative energies
- Trading
- CO₂

Projects & Technology

- Project execution
- Global technical expertise
- R&D
- 3rd party services
- Safety and environment
- Contracting and procurement
- Technical IT

Finance

- Finance
- IT
- Investor relations
- Strategy
- Planning and appraisal
- Internal audit

HR & Corporate

- HR
- Real Estate
- Communications
- Shell Aircraft
- Health
- Security

Legal

- Legal
- Compliance

Government Relations

SHELL PROJECTS & TECHNOLOGY – SHELL'S R&D UNIT

Combining the operating experience of 10000 staff with proven implementation skills and advanced technologies

- Diverse cultures and nationalities
- Over 50 years of implementing business and engineering solutions
- Continued investment in innovation
- Close industry cooperation

Motorsport Activities

Part of Shell's R&D

- Automotive Fuels Technology Group
- Lubricants Technology Group



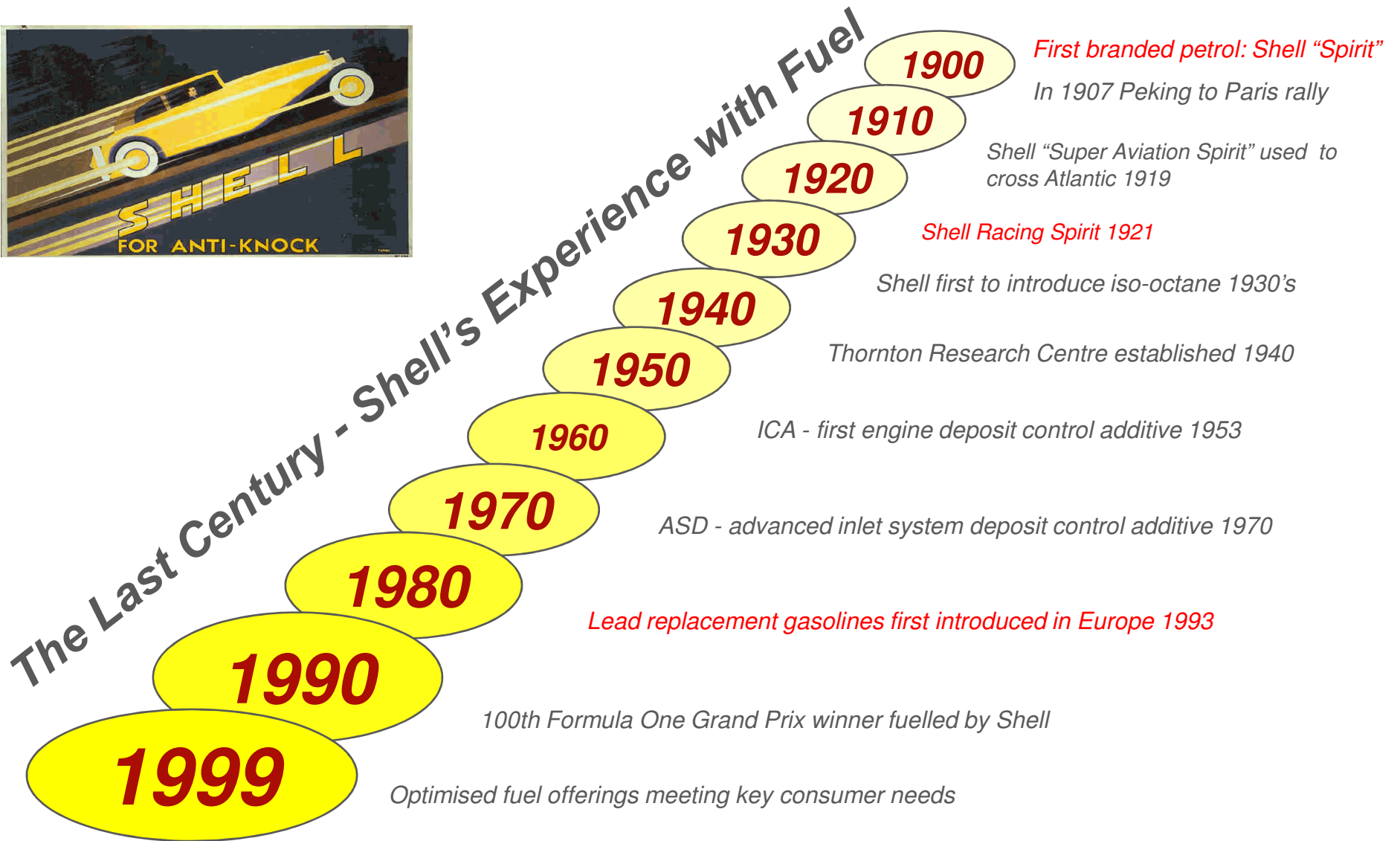
FUNDAMENTAL FUELS EXPERTISE THROUGH CLOSE PARTNERSHIP WITH WORLDS LEADING AUTOMOTIVE INDUSTRY COMPANIES



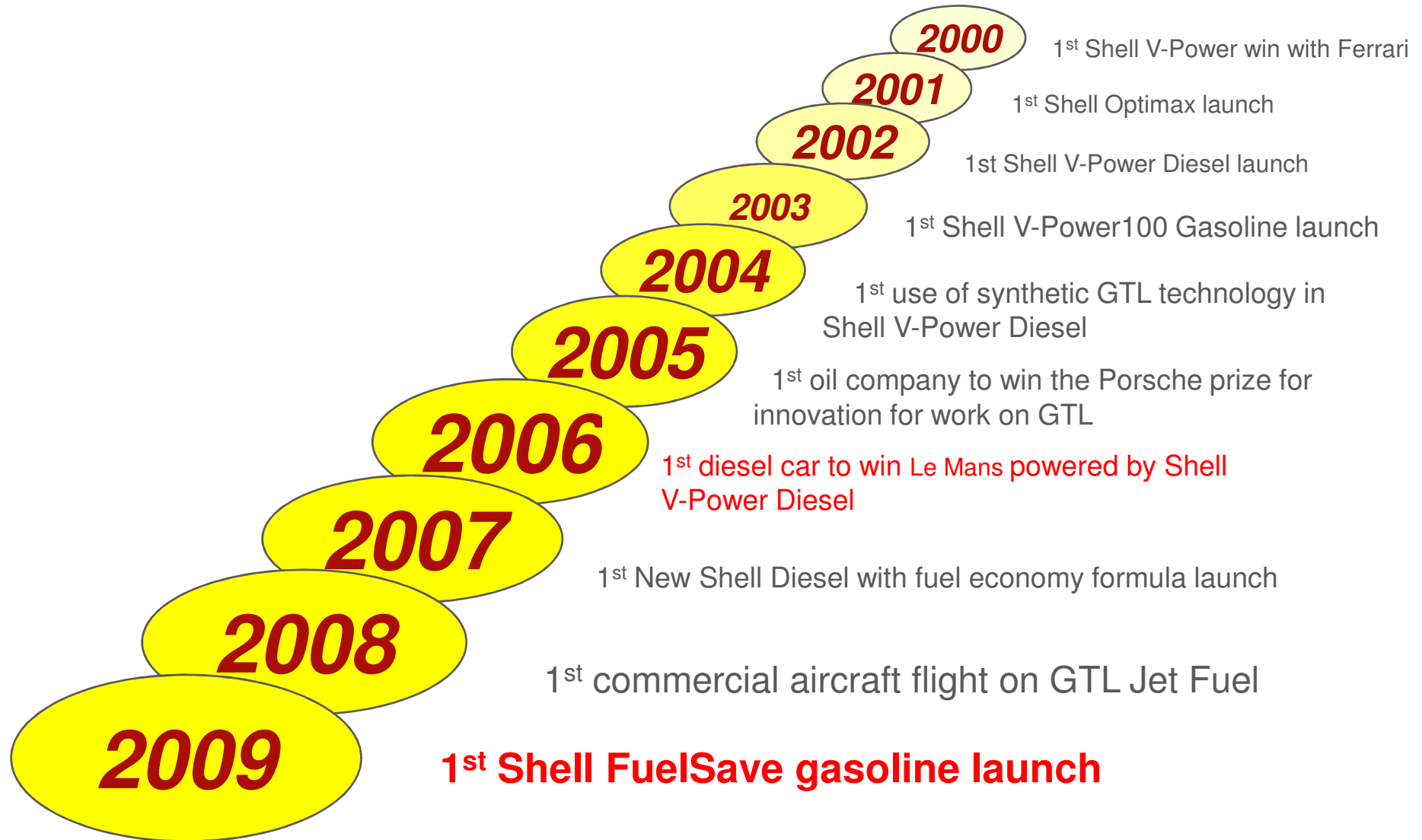
Innovation
Innovation



SHELL FUELS DEVELOPMENT "A DECADE OF FIRSTS"



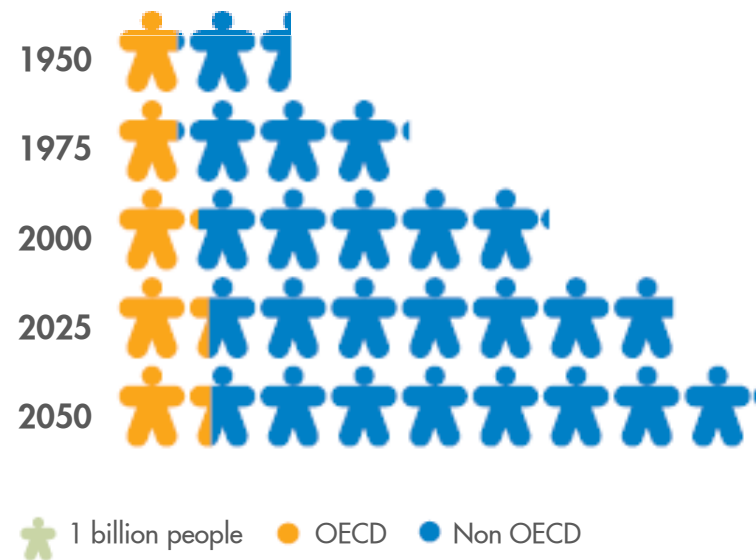
SHELL FUELS DEVELOPMENT "A DECADE OF FIRSTS"



THE ENERGY CHALLENGE

- 1 Step-change in energy demand
- 2 Supply will struggle to keep pace
- 3 Environmental stresses are increasing

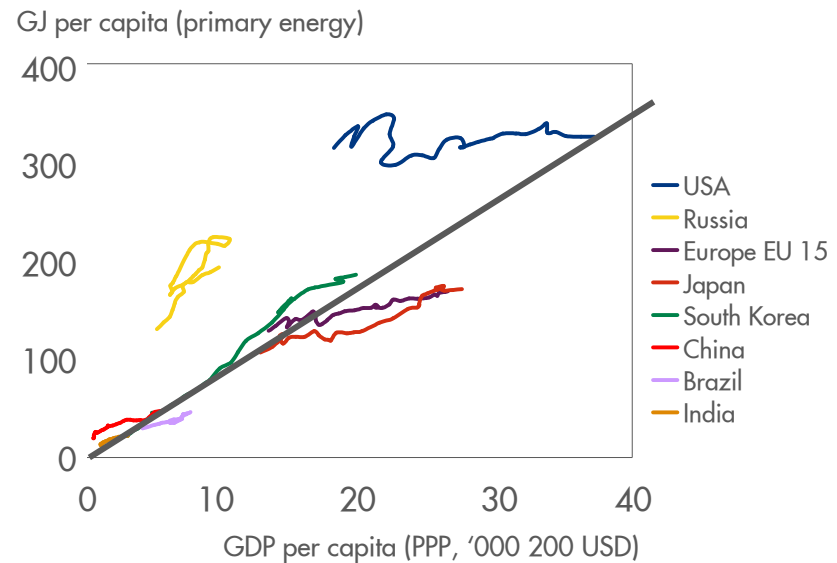
World population



Source: UN Population Division

Copyright of Royal Dutch Shell plc

Climbing the energy ladder



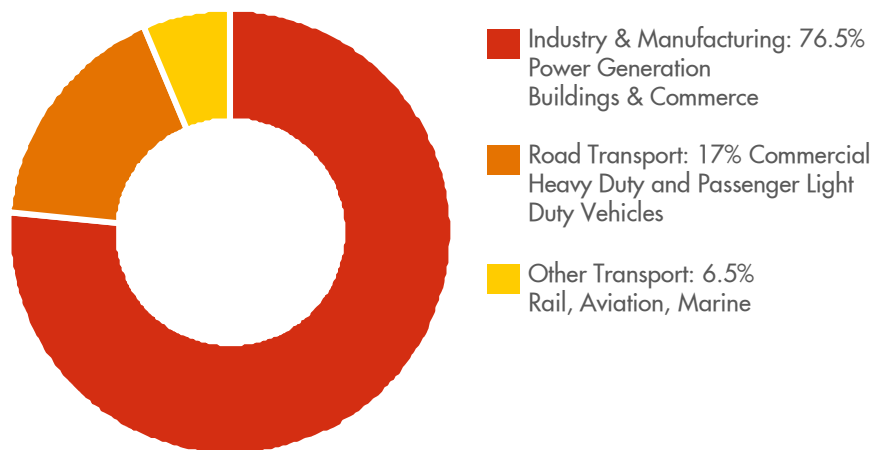
Data shown 1970-2005

Source: Energy Balances of OECD and Non-OECD Countries © OECD / IEA 2006

TRANSPORT ENERGY DEMAND WILL INCREASE RAPIDLY

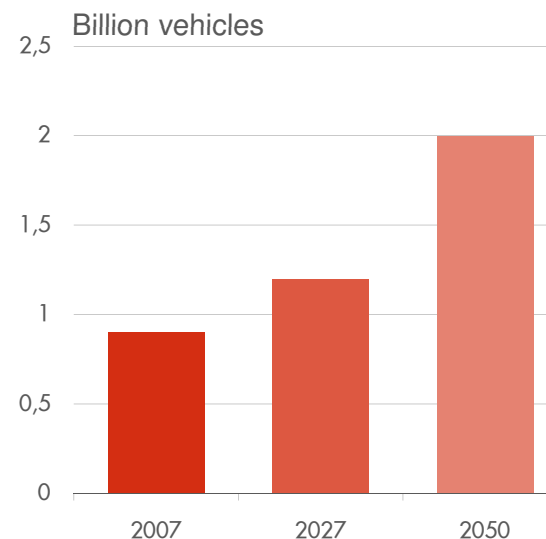
- *Energy-related* CO₂ emissions account for 62% of the global total
- Transport accounts for about 23% of *energy-related* CO₂ emissions. Road transport accounts for 17%
- Global population is growing and demand for mobility is increasing
- The number of vehicles on the road is expected to double to more than two billion by 2050

Energy Related CO₂ Emissions*



Source: International Energy Agency
* 62% of global CO₂ emissions

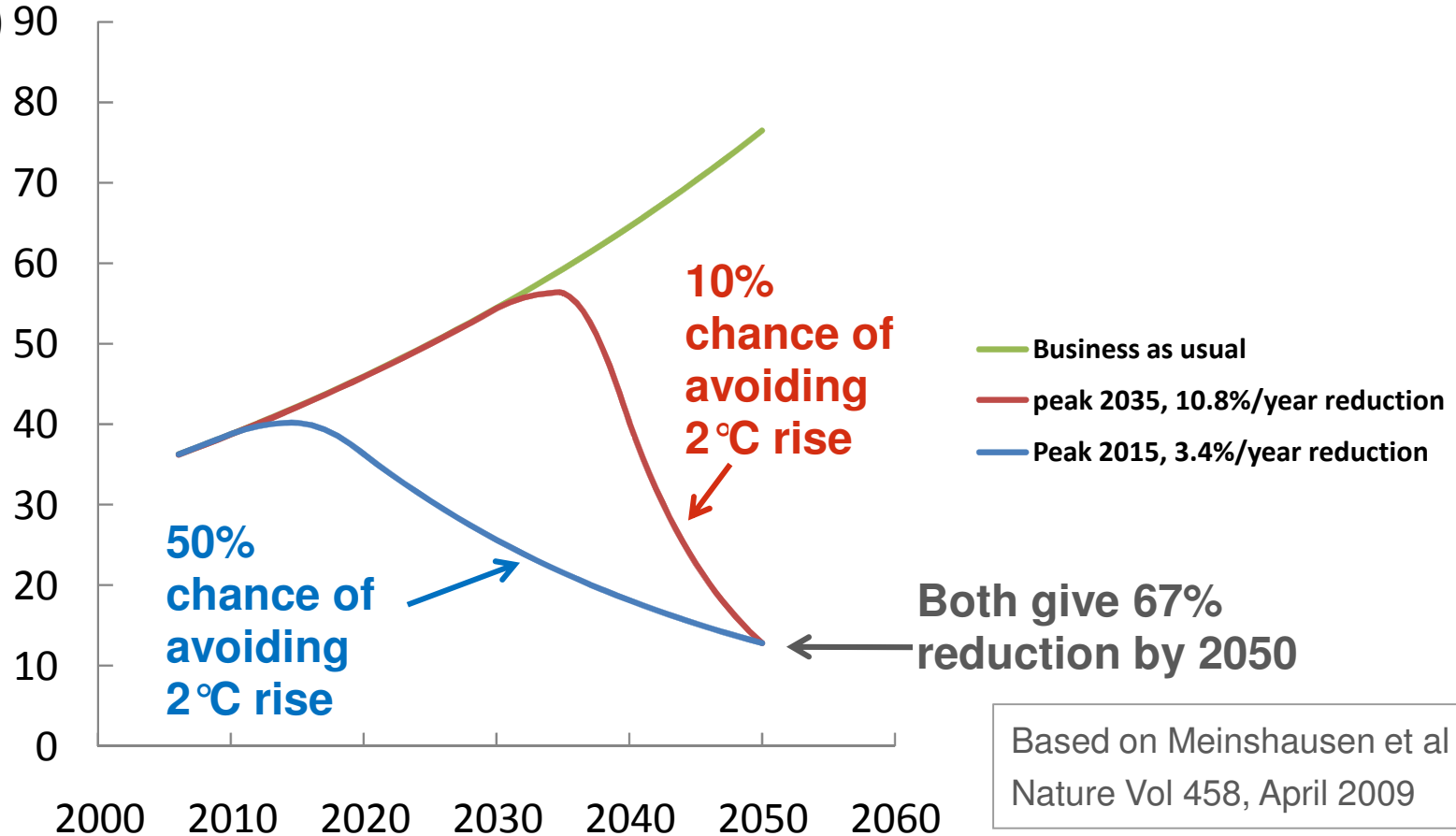
Estimate of worldwide vehicle demand



Source: World Business Council for Sustainable Development 2007

TIMING OF CO2 REDUCTION IS IMPORTANT AS END-POINT

Global emissions (GtCO₂)



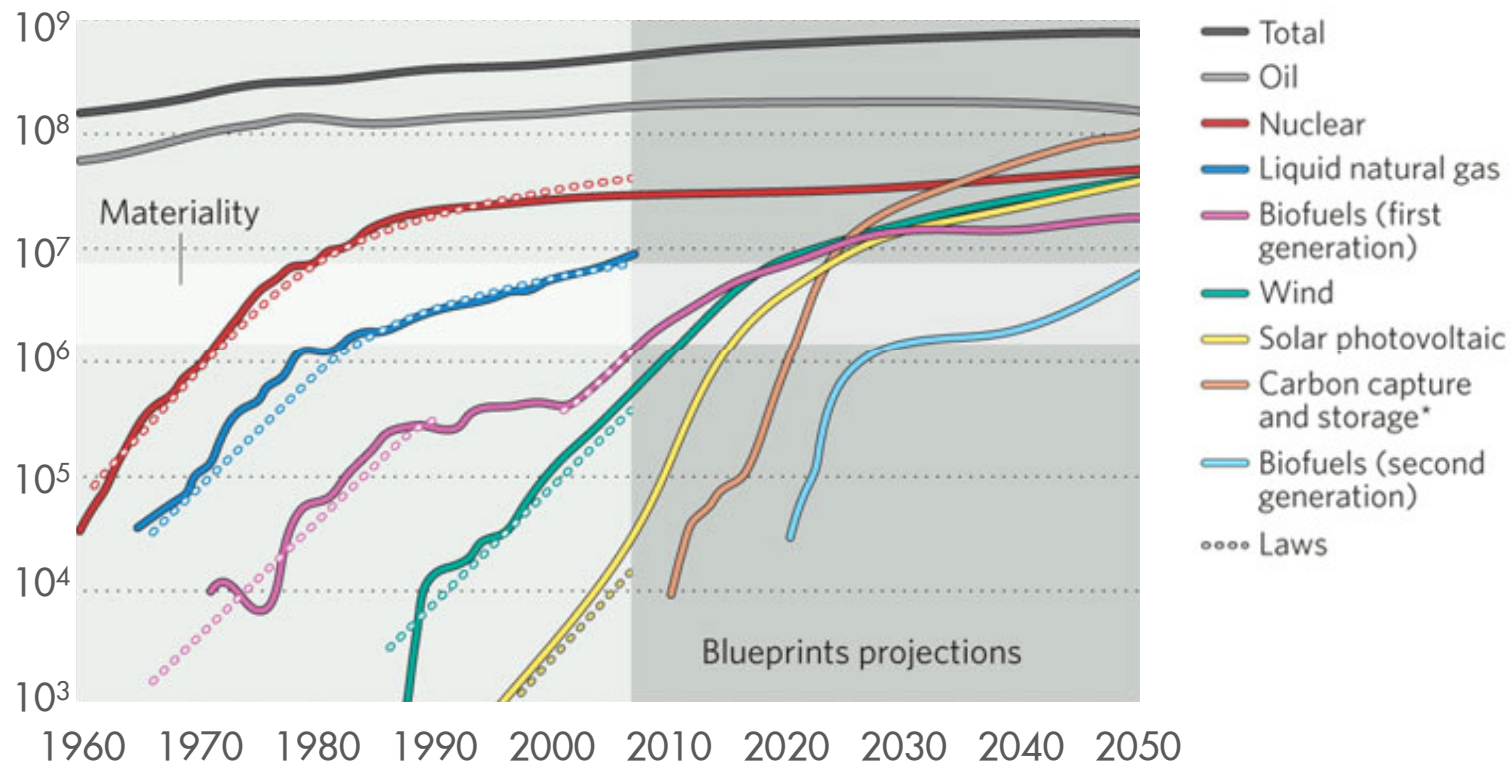
Temperature rise driven by *cumulative* emissions – area under curve

➡ better we start now

ENERGY TECHNOLOGY CHANGE TAKES TIME

Global production of primary energy sources.

Terajoules/year

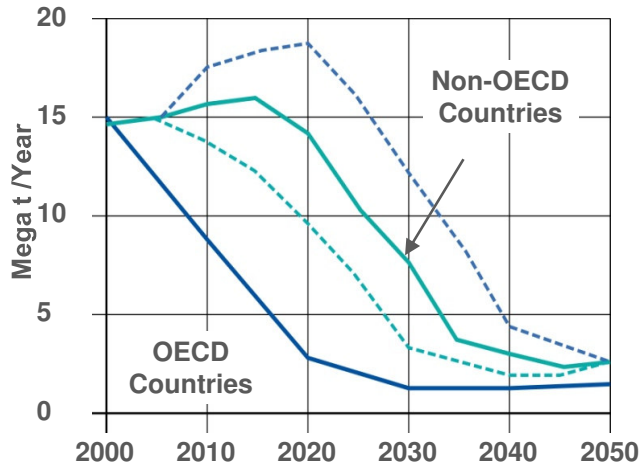


Source: Historic Data: Energy Balances of OECD Countries (IEA, 2009), Energy Balances of Non-OECD Countries (IEA, 2009). Projections: Shell International, from the article: *No quick switch to low-carbon energy* by Gert Jan Kramer & Martin Haigh *Nature* 462, 568-569 (3 December 2009)

*Coal and natural gas used in power generation with carbon capture and storage

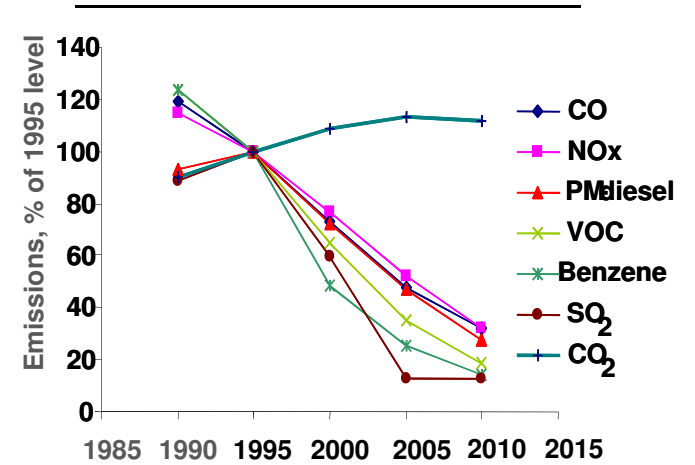
WHAT IS DRIVING A GLOBAL FUEL?

Reduced NO_x Emissions

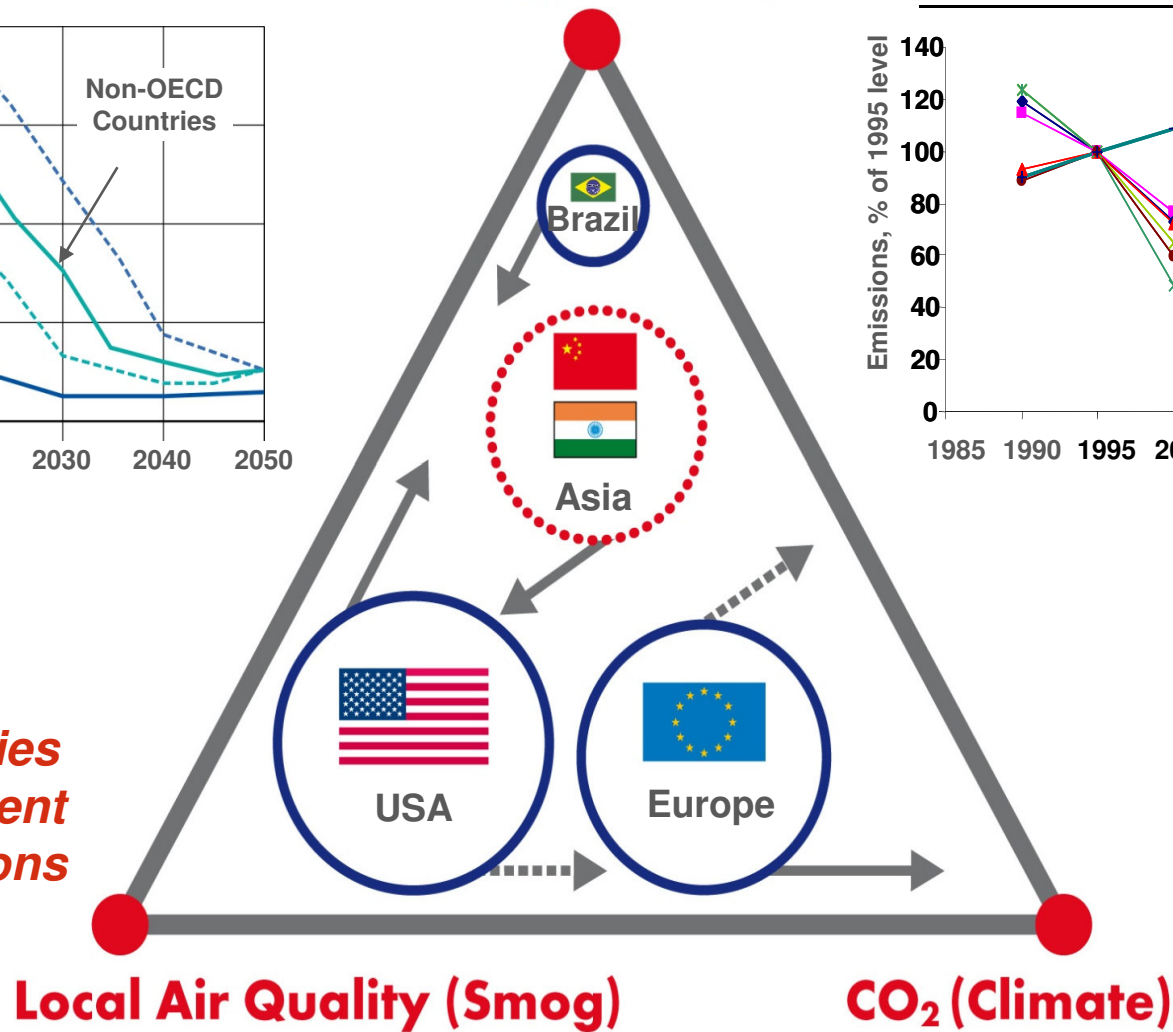


Energy Security

European road transport emissions



Societal Priorities Result in Different Local Regulations

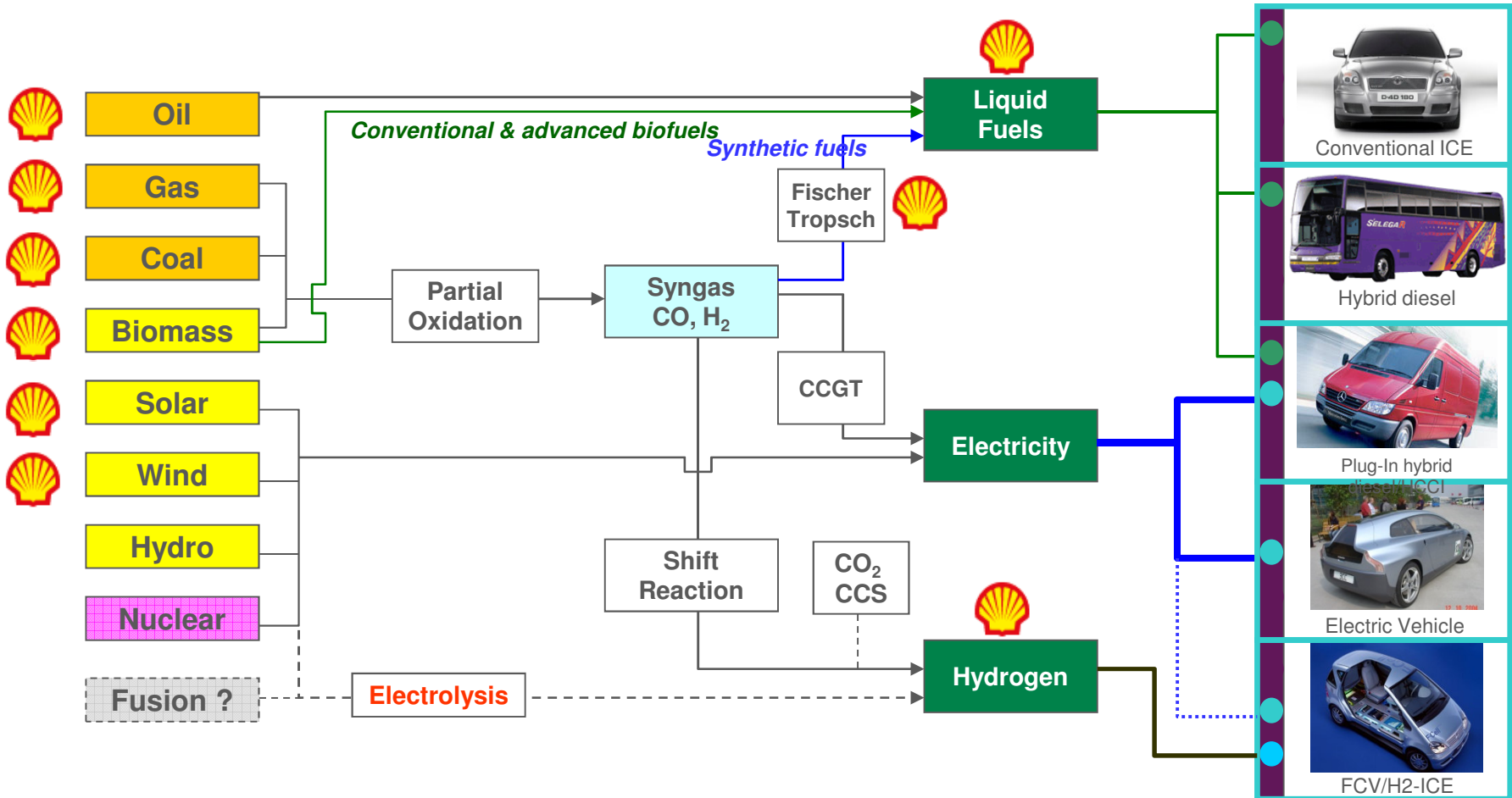


OPTIONS FOR TRANSPORT FUELS

Energy sources

Energy carrier

Drive-train options



CCS: carbon capture & sequestration

SHELL – FUTURE TRANSPORTATION FUELS

Premium Fuels



V-Power fuels:
Best performance in
Latest engine
technology

- in 60 markets since 1998
- VP-Diesel with unique GTL component
- V-Power racing with 100 Octane and FMT- Technology
- V-Power 95 for better performance fit all Engines

GTL Fuel



Pioneer in the
development of Gas
to Liquid technology

Premium diesel containing
GTL Fuel launched in:

Austria, Germany, Greece,
Hungary, Italy, Luxembourg,
Netherlands, Slovakia,
Switzerland, Thailand, UK,
Poland

Biofuels



Leading in current
and future biofuels

- Conventional biofuels
 - 5 billion litres (2007)
 - COSAN joint venture
- Advanced biofuels pathways
 - logen
 - Codexis
 - Cellana
 - Virent

Hydrogen



World's largest
public transport
joint venture (NL)

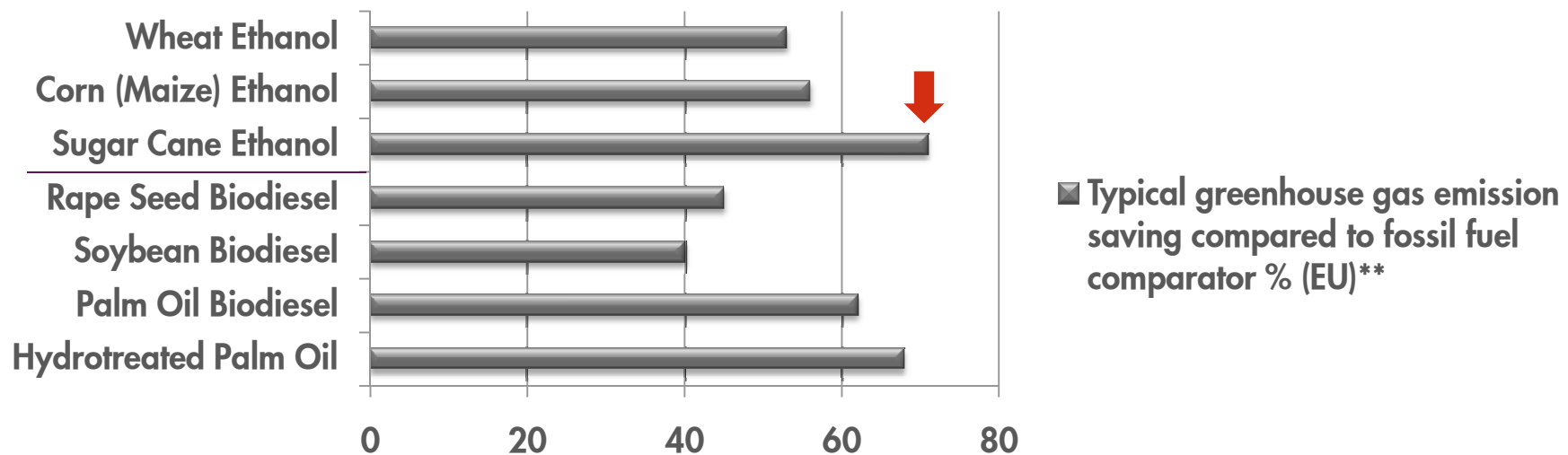
Demonstration projects
in USA, Europe and
China

Performance fuels

... based on CO₂ solutions

BIOFUELS REDUCE CO₂ TODAY AND DIVERSIFY FUEL SUPPLY

- Biofuels are a low 'well-to-wheel'* CO₂ sustainable alternative to gasoline and diesel available today
- But CO₂ emission reductions depend on whole journey to combustion – feedstock production, process used, distribution and use in vehicles
- Biofuels diversify transport fuel pool and offer prospect of improved energy security
- Biofuels can be used in existing liquid transport fuel infrastructure
- For some countries biofuels can offer economic and rural development opportunities



*Well-to-Wheel CO₂ analysis calculates the CO₂ emissions relating to a particular fuel pathway. The calculation divides the pathway into two parts: (i) 'Well-to-Tank' (WtT) CO₂ emissions – from the production and distribution of the fuel feedstock and the actual fuel (ii) 'Tank-to-Wheel' CO₂ emissions – from the use of the fuel in the vehicle

** Directive 2009/28/EC of the European Parliament and of the Council

SHELL COSAN JOINT VENTURE

- Proposed \$12 billion joint venture, binding agreement signed August 25th, 2010*
- Brazilian sugar cane – lowest CO₂, most sustainable and cost competitive of today's biofuels
- 2 billion litres of ethanol production capacity per year – with room to grow
- Robust sustainability principles, standards and operating procedures



Ethanol fuel in Shell's retail network



Automated sugarcane harvesting



* Regulatory approval required

LEADING DEVELOPMENT OF ADVANCED BIOFUELS

- Advanced biofuels, using feedstocks such as crop wastes or inedible crops and new conversion processes
- Offer the potential for improved CO₂ reductions and improved fuel characteristics.
- Accelerating research, development and demonstration of advanced biofuels
- Research agreements with experts in leading academic institutions across the world



- Technical partnership with leading biotechnology companies



- Our aim: to narrow down technology options to a feasible set of commercial solutions

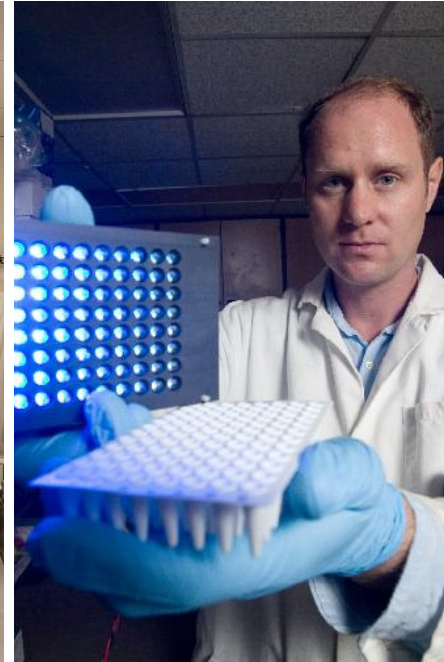
SHELL ADVANCED BIOFUELS PATHWAYS



logen
(Cellulosic Ethanol)



Codexis
(Optimized Enzymes)



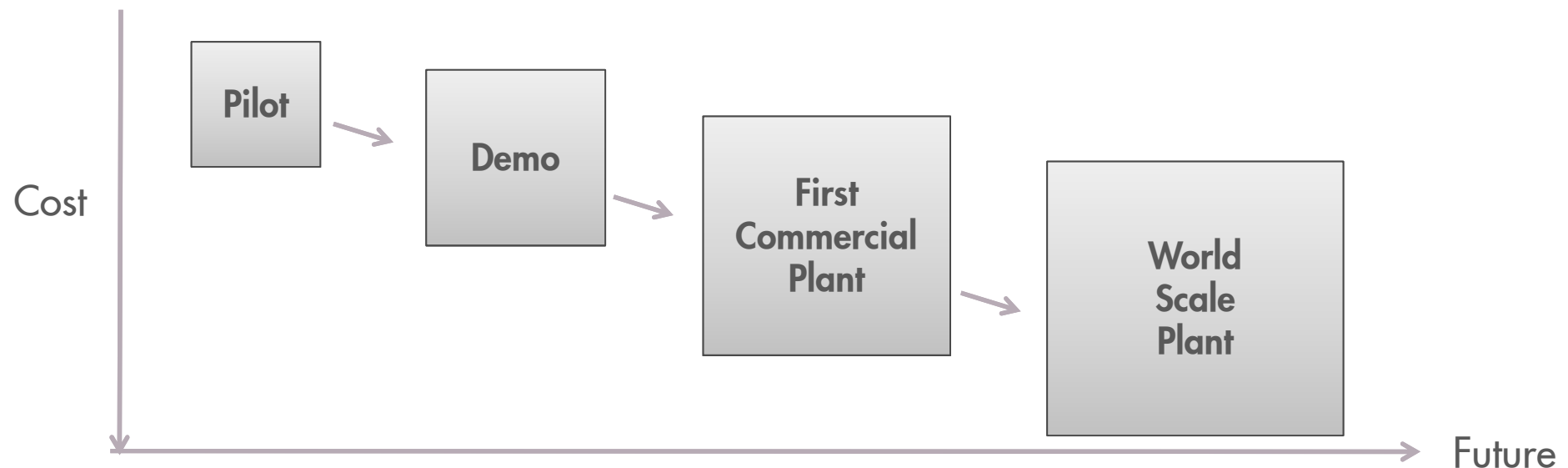
Cellana
(Marine Algae)



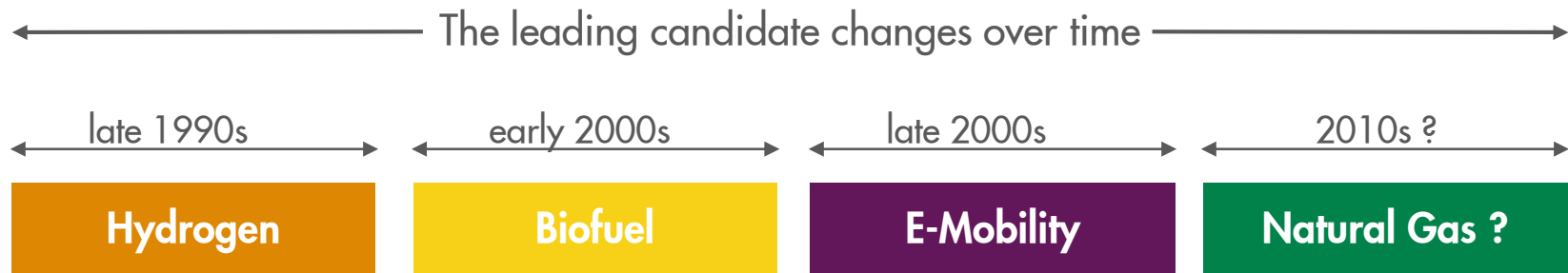
Virent
(Catalysts)

ADVANCED BIOFUELS: COMMERCIALISATION AND ECONOMICS

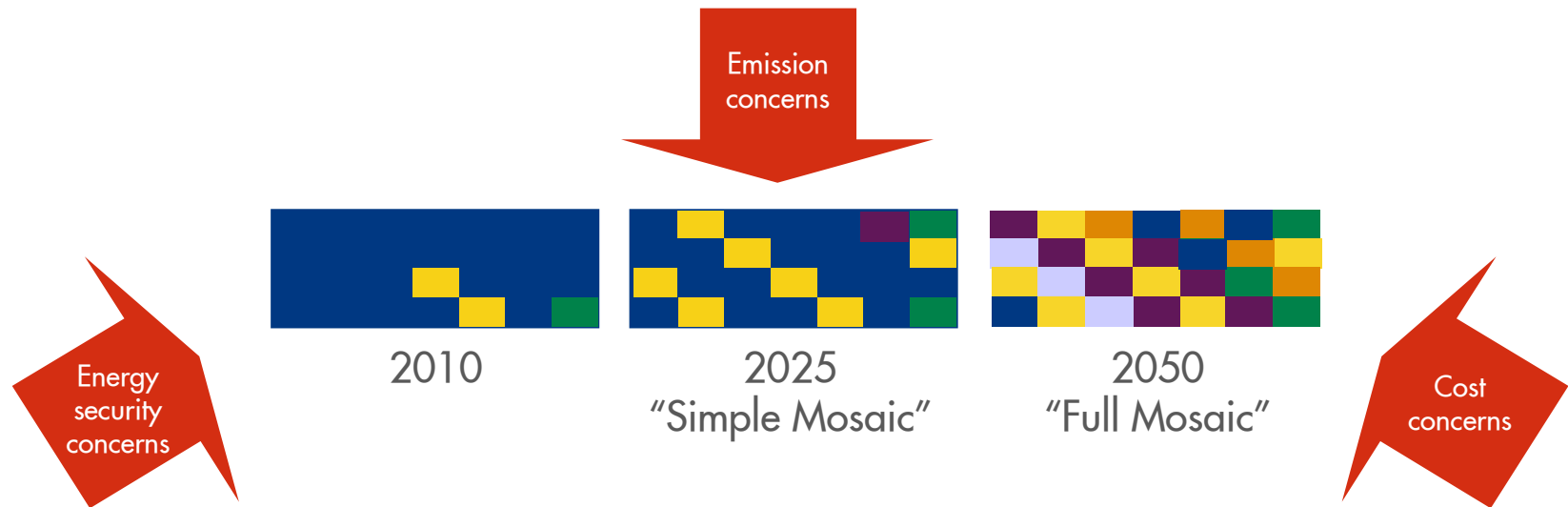
- Shell is successfully progressing new technologies from lab-based process to demonstration phase and towards commercial scale-up
- Shell aims to narrow down advanced biofuels technology options to a feasible set of commercial solutions
- In the long term all biofuels will need to be cost competitive with all road transport fuels
- In the short term, government policies, incentives and financial support accelerate development from lab to commercial deployment



DIVERSIFICATION OF DRIVETRAINS & FUELS



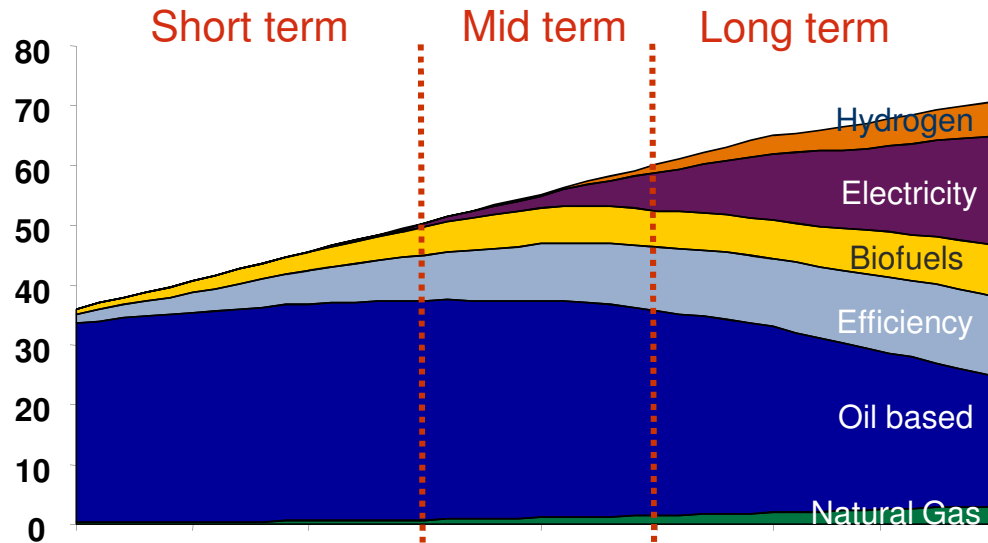
The real answer?



BIOFUELS ARE THE ONLY NEAR-TERM MATERIAL LOW CO₂ FUEL OPTION

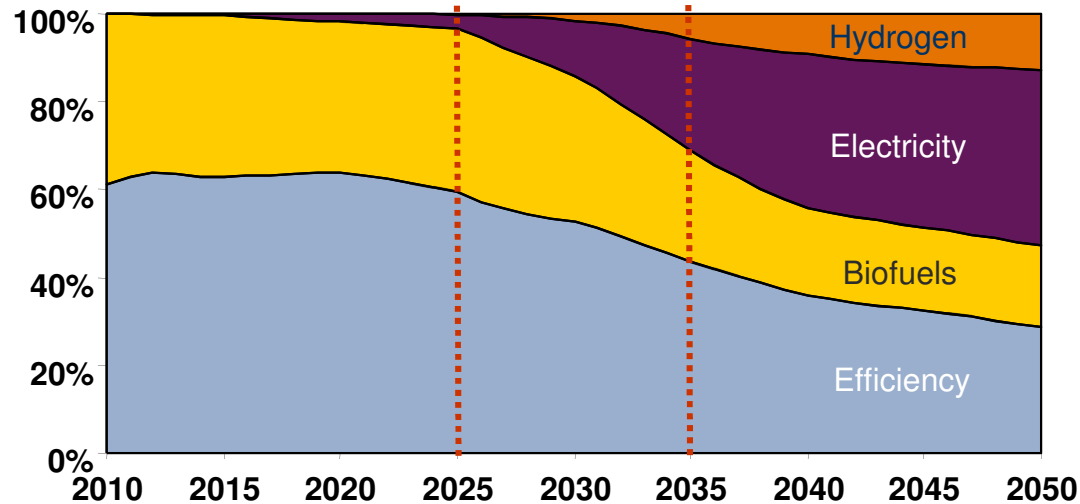
Road Transport Fuels (2010 to 2050)

Displaced mileage expressed as Million boe per day



Displacement of Oil (2010 to 2050)

Percentage of displaced boe



Source: Shell Energy Scenarios 2008

Copyright of Royal Dutch Shell plc

SUMMARY

- The **global demand** for energy and mobility will continue to grow until 2050. All fuel options will be needed.
- Development of **new energy technology** takes time; however climate change requires short term actions.
- Shell is providing **short term options to improve efficiency** in transport already today. These options work in the current infrastructure.
- Today's **biofuels** are the most realistic **commercial solution** to take CO₂ out of the transport fuels sector and diversify supply over the next twenty years
- Shell is building **capacity in biofuels** that provide best combinations of performance and low 'well-to-wheel' CO₂ performance from more sustainable feedstocks
- **Electric and hydrogen** will play an important role if technical and infrastructure challenges can be overcome



SHELL MOTORSPORT TECHNOLOGY – TRACK TO ROAD CONCEPT

- Technology transfer between the track and the road and vice versa
 - an integrated part of our product development
- The desire to gain performance / efficiency advantages for the track over competitor
 - through new and innovative technologies
- ❑ Multi-year Motorsport technical co-operations are in place with
 - Ferrari in Formula 1 (Fuels & Lubricants)
 - Audi Sport in Le Mans/Endurance Racing (Fuels & Lubricants) until 2009
 - Ducati in MotoGP (Fuels & Lubricants)
 - Richard Childress Racing in NASCAR (Lubricants)



SHELL MOTORSPORT TECHNOLOGY – TRACK TO ROAD CONCEPT

- Motorsport product development drivers and targets for these programmes are identical to our road fuels and lubricants



- Power output
- Fuel efficiency
- Reliability / Durability
- Clean emissions
- 'Affordability'
(acceptance on market)



- Motorsport can be a show case and an early proving ground supporting the technology message.
- Racing fuel and lubricant specifications are sometimes ahead of road car specifications.

FROM ENERGY CHALLENGE TO FUTURE RACE FUELS ...

- **Conventional fuels** from crude oil will further dominate over the **next 20 years**.
- **CO2 reduction, emissions, sustainability and energy efficiency**, are the core drivers for future fuels, also for racing fuels.
- **Diesel racing** will further grow, as providing a significant contribution to **energy efficient** ("low CO₂") racing.
- Shell is supporting the **Global Race Engine Development**
 - Motorsport Diesel Fuels will contain synthetic (**as GTL**) - acting as a **bridge to advanced bio components**.
 - Motorsport Gasoline Fuels: **Higher Ethanol blends** – RON/MON spec. to be watched to understand knock issue. Increased use of **cellulosic Ethanol**.
- Shell is investing in technologies and partnerships and is a **Leader in future fuel technology**, backed up by our technical cooperation in Motorsport.
- What we learn on the track is used **to improve and create new fuels for the road** to the benefit of the 20 mln+ drivers every day who fill up at Shell.

