Biofuels
Technology Platform

The European Biofuels Technology Platform:

Strategic Research Agenda & Strategy Deployment

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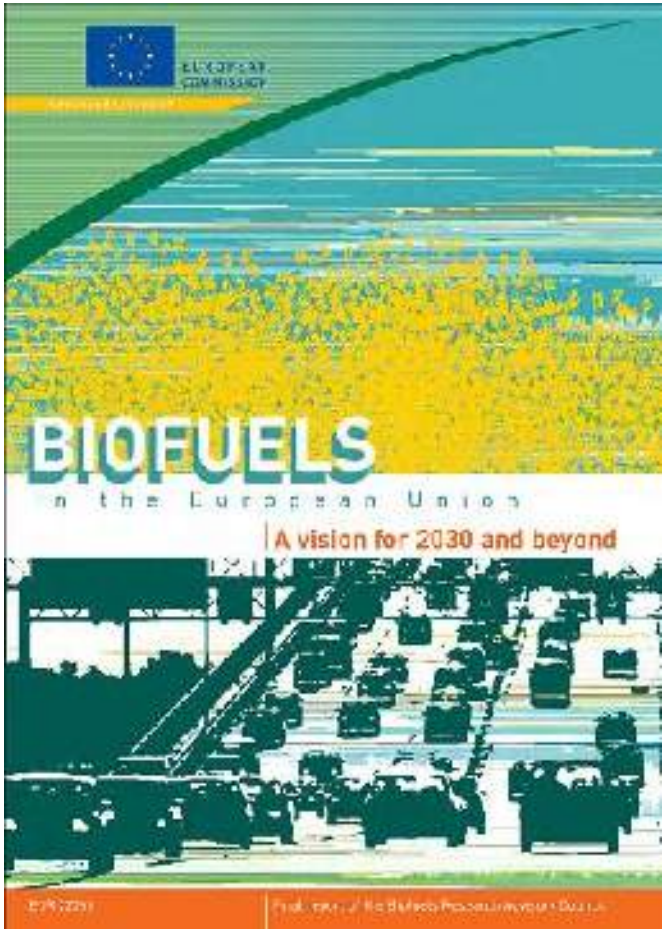
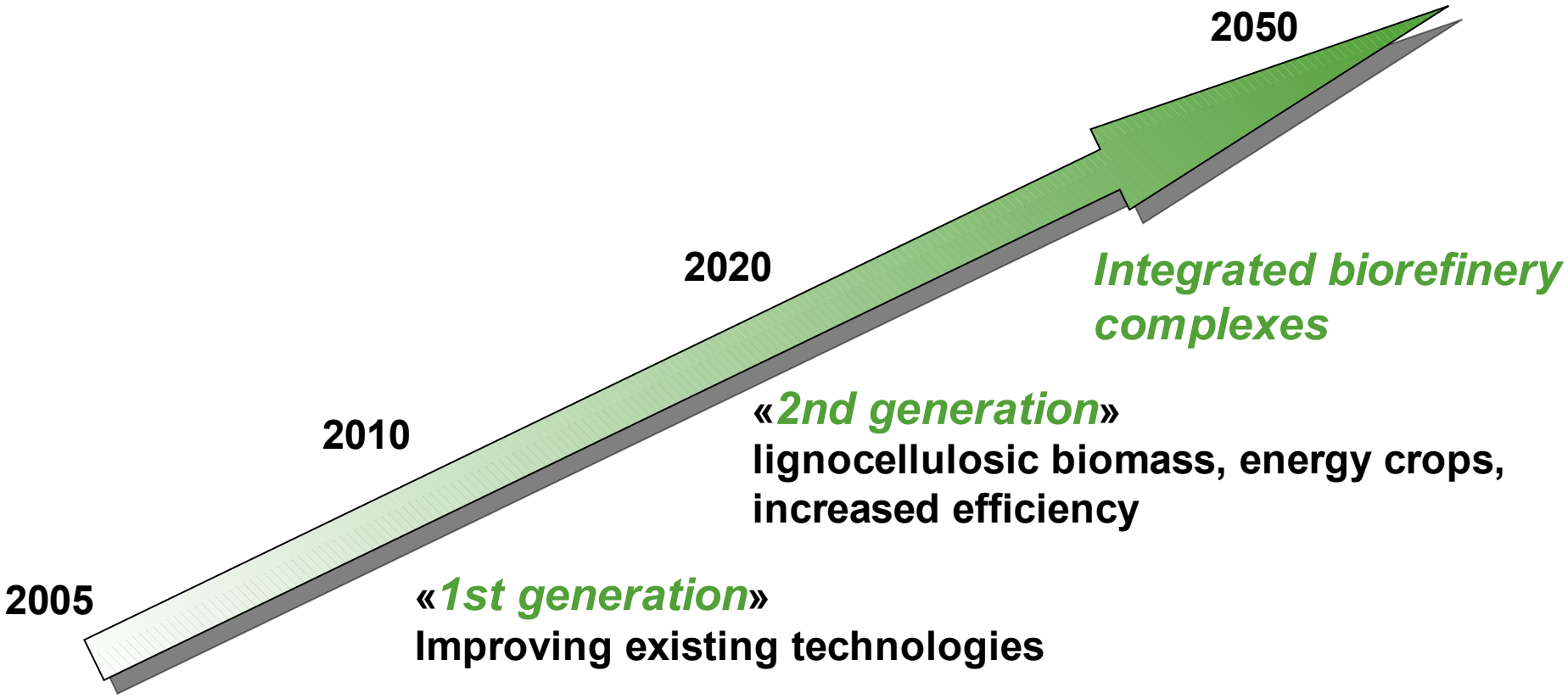
The driving Vision

Biofuels Technology Platform

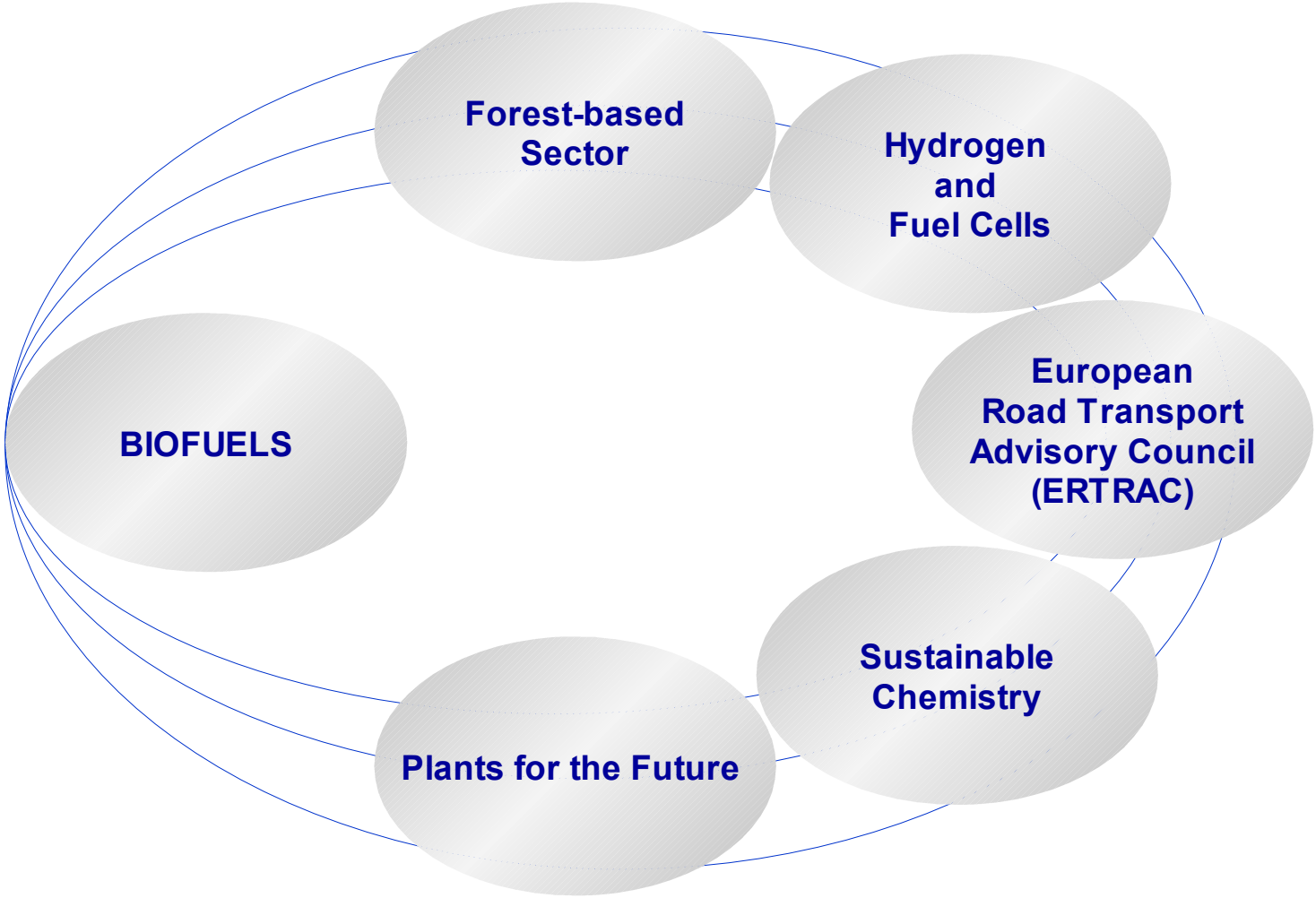
- By 2030, the European Union covers ***one fourth of its road transport fuel needs*** by clean and CO_2-efficient biofuels.
- A ***substantial part is provided by a competitive European industry***. This significantly decreases the EU fossil fuel import dependence.
- Biofuels are produced using ***sustainable and innovative technologies***; these create opportunities for biomass providers, biofuel producers and the automotive industry.



Vision report:
Outline of technology roadmap



Interaction with other Technology Platforms



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Strategic Research Agenda and Deployment Strategy

Main conclusions

Overview

- **Three main areas of technology development are critical to ensure successful development of biofuels in the EU:**
  - **Feedstock:**
    - ✓ managing competition for land resources (food&fodder vs bioenergy) and for different biomass applications (transportation fuels, heat, power, industrial raw materials)
    - ✓ Increasing yield per hectare and developing efficient supply logistics both for dedicated crops and residues
  - **Conversion technologies:**
    - ✓ developing energy efficient and reliable biomass-to-fuel conversion processes with feedstock flexibility and high quality product
  - **End-use technologies:**
    - ✓ optimisation of fuel-engine environmental and energetic performance ensuring compatibility with existing and future infrastructure and vehicles
- **The winning options (combination of land, feedstock, conversion and end product) will be those best addressing strategic and sustainability targets:**
  - **high level of GHG reduction with sound management of other key environmental issues (biodiversity, water use, local emissions …)**
  - **security and diversification of energy supply for road transport**
  - **economic competitiveness and social acceptance**

Key R&D&D-Priorities I

Biofuels Technology Platform

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  - ✓ Develop new high-yield agricultural and forest systems with breeding of crops and trees optimised for biofuel production
  - ✓ Develop efficient biomass logistic systems (harvesting/collection/storage) for different conversion concepts at different scales
- **Conversion processes:**
  - ✓ Improve current conversion processes to their full potential (biodiesel, bioethanol from starch-sugar) for higher GHG reduction, increased flexibility for different raw materials and lower cost
  - ✓ Develop thermochemical and biological conversion processes with feedstock flexibility for different lignocellulosic biomass (BtL, L-C bioethanol)
  - ✓ Develop integrated biorefinery concepts making full use of a variety of biomass feedstocks to obtain diverse high-value bioproducts
  - ✓ Demonstrate at pilot and industrial scale reliability and performance of new technologies

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- **Fuel/engine optimisation:**
  - ✓ Establish conditions for compatibility of biofuels and biofuel blends with existing logistics, as well as existing and new powertrains; develop vehicle modifications for neat biofuels and high blends for specific market needs
  - ✓ Generate engine-fleet test data and set sound quality standards for biofuels
  - ✓ Develop in-depth understanding of relationship between biofuel quality and engine performance for future fuel/powertrain systems in order to deliver superior combined performance.

- **✓Overall system sustainability:**
  - ✓ Further develop indicators and coherent methodology to assess and monitor the three dimensions of sustainability: economic, environmental, social.
  - ✓ Generate and collect data required and carry out sustainability assessment of existing and potential promising production chains (land, feedstock, process, fuel use).

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- A coherent, long term and harmonised political and open market framework to secure confidence of investors in capital-intensive innovative technologies

- Biofuel quality standards which are based on sound science while not creating unnecessary barriers for biofuel deployment
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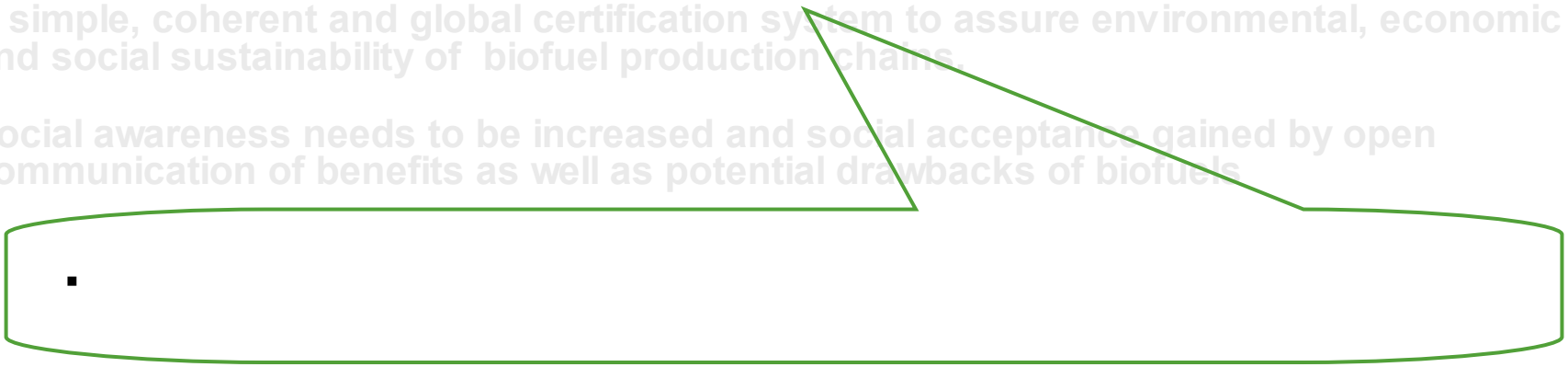

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Contact us

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