Workshop „Promoting local electric mobility“ Aachen, 10 February 2015

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Netzwerk Kraftstoffe und Antriebe der Zukunft

EnergieAgentur.NRW

EUROPÄISCHE UNION

Europäischer Fonds für regionale Entwicklung

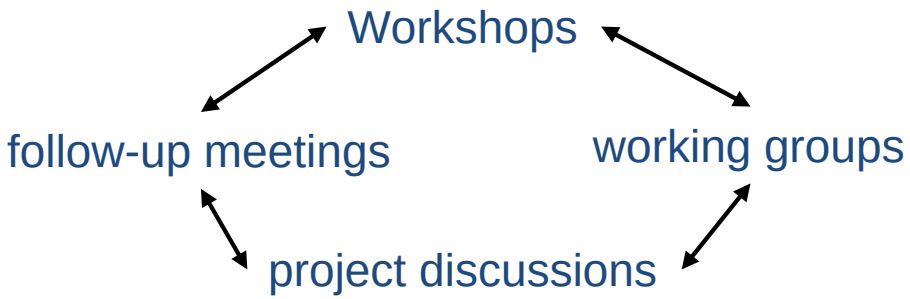
EnergieAgentur.NRW

- **Energy consulting**. Contact for companies, communities and private persons
- Networks (Innovative power plants and grids, biomass, **future fuels and drives**, hydrogen and fuel cells, photovoltaic, energy efficient and solar building)
- Advanced training in energy efficiency and renewable energies, qualification and school projects
- Public relations, information
- Initiation and attendance of demonstration projects and support of market introduction

- **Management of Cluster EnergieRegion.NRW**
- **Management of Cluster EnergieForschung.NRW**

Building competence networks

- **Information and Communication**
  - Webpage
  - Plenum
  - Workshops
  - Interviews
- **Projects**
- **Positioning**
  - Company search
  - Strategic on-one meetings
  - Development value chain



Who can be a member / participant of the network?

Location

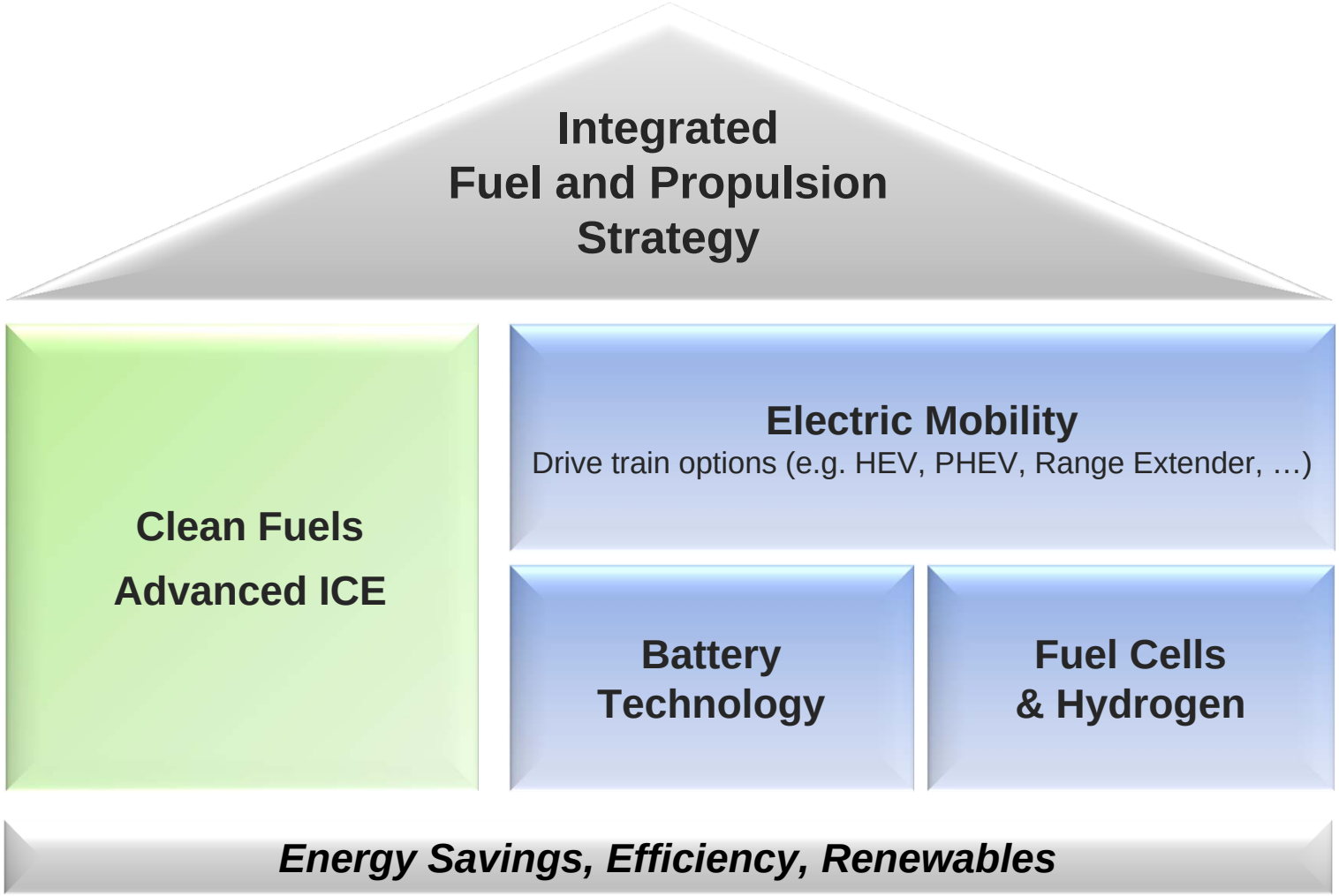
- Size
- Product range

What programs can be used for project financing?

How can studies be financed? e.g.

- Market analyzes
- Market entry products
- Niche markets

Fuel and Propulsion Strategy NRW



Topics of the Network Future Fuels and Drives

- Technical Infrastructure

- **Energy-Efficient Drives**
- **New (Bio-)Fuels**
- **Battery-Powered Electric Mobility**
- **Technical Conditions for New Mobility Concepts**

Applications:

- **Road Transport** (Passenger Cars, light and Heavy Duty Vehicles, Buses, Off Road-Applications e.g. Agriculture)
- **Rail, Aviation, Shipping**
- **International Cooperation**

Master Plan Electric Mobility North Rhine-Westphalia
http://www.elektromobilitaet.nrw.de/

- Establish NRW as leading region for electric mobility in Europe
- A systematic approach to electric mobility
- Development of electric mobility taking climate protection and renewable energies into consideration
- Market launch of 250.000 electric vehicles until 2020
- Increase market share of NRW automotive suppliers and settle new automotive manufacturers in NRW
- Developing competence centers for:
  - ➢ Batteries
  - ➢ Automotive engineering
  - ➢ Grid infrastructure

CPT Resolution – Terms of implementation and the national policy framework until November 2016

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Directive 2014/94/EU of the European Parliament and of the Council of 22 October 2014 on the deployment of alternative fuels infrastructure

- Member States shall ensure, that an appropriate number of recharging points accessible to the public are put in place:
  - recharging infrastructure at urban agglomerations until 2020
  - recharging infrastructure for the TEN-T core network until 2025
  - hydrogen infrastructure until 2025
  - fuelling points for LNG at maritime ports until 2025
  - fuelling points for LNG at inland ports until 2030
  - CNG at urban agglomerations until 2020 (practically fullfilled in GER)
  - CNG for the TEN-T core network until 2025 (practically fullfilled in GER)
- Changes in supply (additional infrastructure capacity) and demand (capacity actually used).

1 Introduction

2 Framework Conditions

3 Examples of Current Activities

4 Conclusions

Mobility
Backgrund and general framework

Status quo:

- In germany 20 % of the CO_2-emmision are created by road transport.

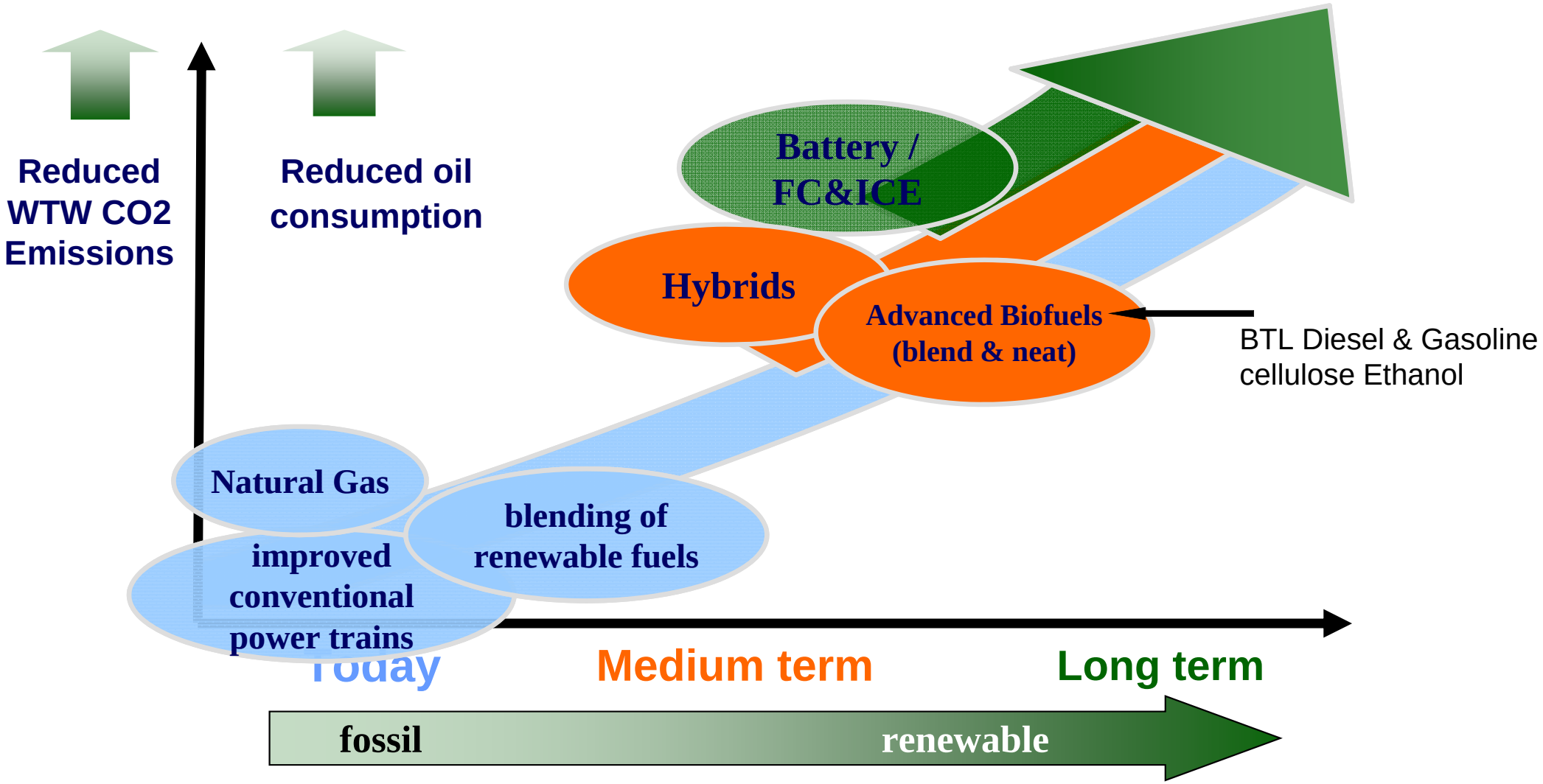
Energy efficiency:

- CO_2-reduction goal: 95 g/km for new cars until 2021, furthermore Supercredits for E-mobiles 7,5 g/km from 2020 to 2022 (proposal of the Council Presidency / EP, Nov. 2013)
- Private transport will increase about 20% to 2025; road transport about 70%.
- The reduction of air pollution, primarily nitrous gases and noise pollution is necessary.

Part of renewable energies:

- On a Proposal of the European Committee the 10%-target of the Renewable Energies Directive will be kept but a share of the „first generation“ biofuel will be limited to 5,5%. Another 2%-part should be produced synthetically, for example residues and wastes.

Road Map Future Fuels and Drives

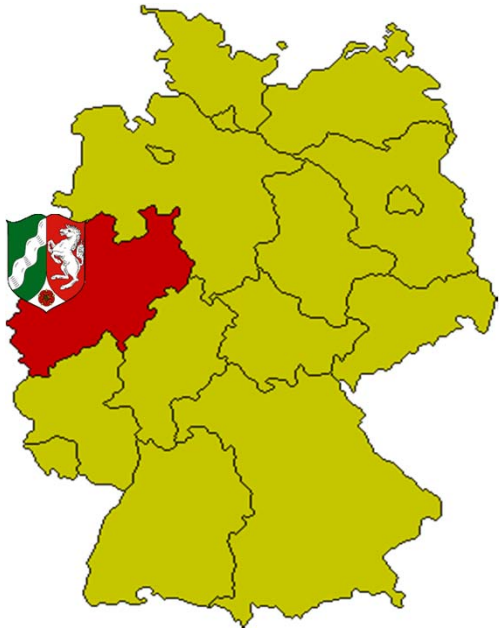


Source: Federal Ministry of Transport and Digital Infrastructure

Specific features of NRW

Land of energy NRW

- Produces 33% of the electricity in Germany
- Consumes 40% of the electricity in Germany
- 90% of coal and 50% of lignite mining in Germany



Megacities and mega-urban areas of the future

- 18 million inhabitants
- Conurbation Rhine-Ruhr at 10 Mill. Inhabitants part. Of the 30 largest metropolitan region in the world
- Population Richest and seals populated state
- High private traffic volume (44 million cars) and freight

Research & Development

- Major research institutions such as Jülich one of Europe's largest institutions
- Applied research
- Interface Research Industry
- Seat of many industrial research units
- 5 of the 10 largest universities in Germany

Ressources and material flows

- Great fit of secondary raw materials from private households, industry and agriculture

Cluster and initiatives

16 Official cluster (for example Energieregion.NRW)Model Region Rhine-Ruhr

NRW - Land of new mobilities
Strengths and Characteristics

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Research:
Highly developed research landscape.

- 5 of the 10 largest universities in germany
- Major research facilities
- Variety of industrial research service managers

Industry:
Economically powerful state.

- Strong position in the automotive component suppliers industry
- Production- and developement sites of the big OEMs
- Strong number of municipal energy companies are located
- Offices of major energy companies

User:
Characteristic for mega-cities und urban future regions.

- Most popoulos state in germany
- Most urbanised region in germany: above-average traffic volume and the densest transport network (individual and PT)

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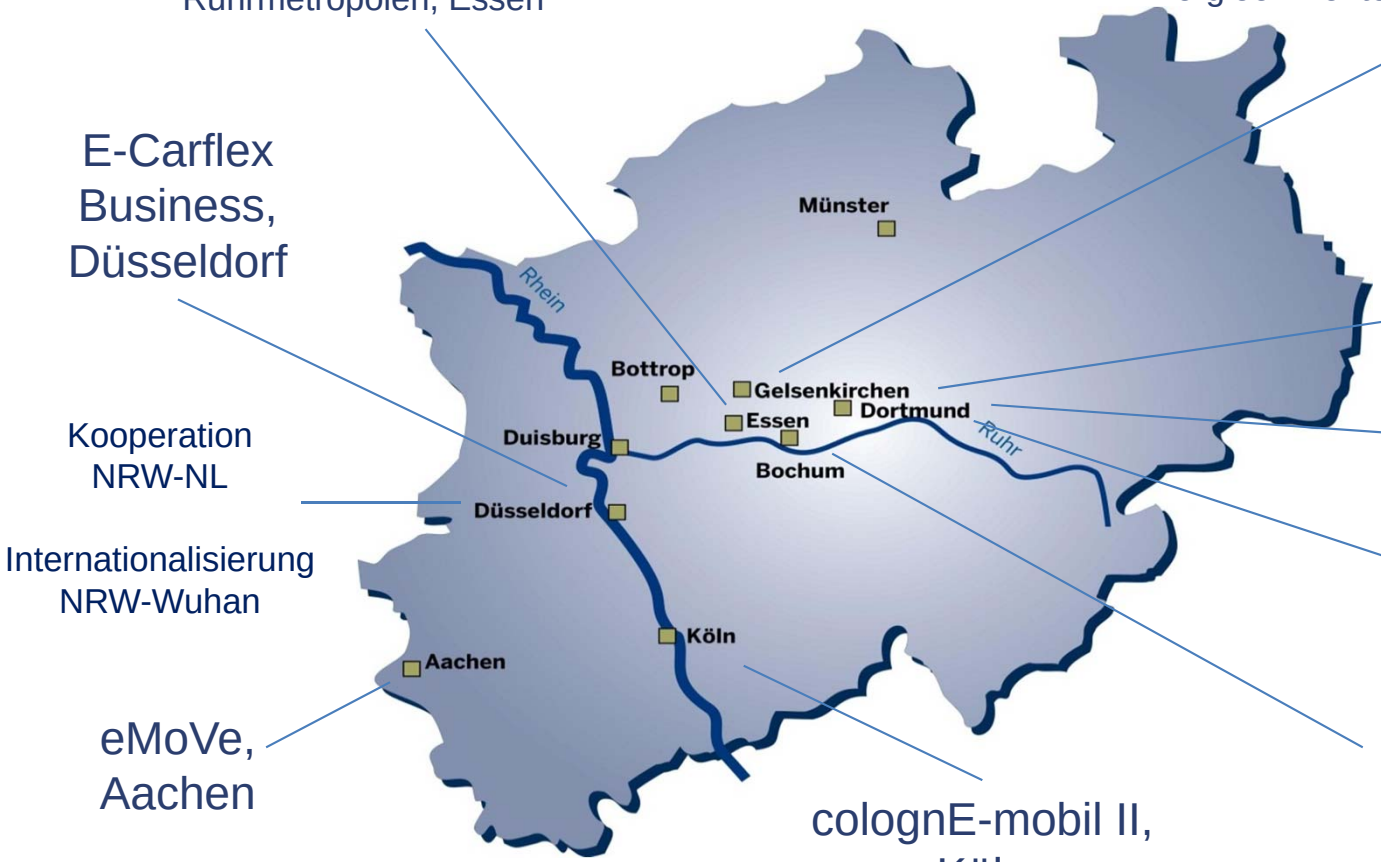
Model Region Program Phase II

Project Overview Model Region Rhine-Ruhr (Phase II)



E-Mobility Ruhrmetropolen, Essen

Erweiterte Forschungsbegleitung: Energieeffiziente Linienbusse (EFBEL VRR)

E-Carflex Business, Düsseldorf

Elektromobile urbane Wirtschaftsverkehre (ELMO), Dortmund

Kooperation NRW-NL

metropol-E, Dortmund

Internationalisierung NRW-Wuhan

eMERGE, Ruhrgebiet

eMoVe, Aachen

Langstrecken-Elektro-mobilität, Bochum

colognE-mobil II, Köln

Model Region Program Phase II

- A total of 11 projects, thereof 1 project accomplished
- Further projects in preparation
- A total of 450 vehicles planned, about 350 on the road
- A total of 400 charging points planned, about 290 installed
- Kilometers traveled: about 3,25 million km (July 2014)
- More than 50 project partners
- Key aspects:
  - Commercial and municipal fleets
  - Local public transport
  - Housing and mobility (intermodality)
  - International cooperations

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Conclusions

- In the Future a Broader Range of Fuels and Drives will be Found on the Market.
- Carbon Footprint, Efficiency, Availability and Technical Requirements (Infrastructure) are Important Evaluation Criteria of Future Projects.
- NRW Perceives Electric Mobility as a Cross Innovation Subject Connecting Several Players: Vehicle Manufactures, Suppliers, System Developers, Energy Provider, Network Provider, Universities, Research Institutes.
- Cities and Municipalities are Ready for Implementation of a Green Mobility and Climate Protection Strategy.
- Networks, Funding, Best Practice Examples and Discussion Platforms are an Important Driver of Innovation in NRW.

Kontakt

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