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#GreenEconomy



NRW – LEADER IN THE GREEN ECONOMY

THE GREEN ECONOMY IS THE ECONOMY OF THE FUTURE – AND NORTH RHINE-WESTPHALIA IS LEADING THE WAY

North Rhine-Westphalia is home to numerous companies providing sustainable – environmentally-friendly and resource-saving – products and services. This includes businesses in farming and forestry and the key large industrial sectors as well as technology services, which all play an important role in North Rhine-Westphalia's economic development. These businesses are already showing the way forward for the green economy in key sectors:

- | Sustainable forest management and wood industry
- | Environmentally friendly farming
- | Pollution monitoring, mitigation and restoration technologies
- | Water and sewage systems and management
- | Materials, material efficiency and resource management
- | Environmentally friendly energy conversion, transportation and storage
- | Green mobility and
- | Energy efficiency and energy conservation

What these have in common is their potential to solve problems by developing more efficient, more sustainable

and more environmentally- and climate-friendly products, processes and services and establishing them on the market. The green economy therefore combines resource and climate protection with prosperity and jobs.

North Rhine-Westphalia was the first federal state to introduce the idea of a green economy as a policy-making approach.

North Rhine-Westphalia was the very first federal state to address this economic potential with a targeted green economy strategy. The benefits of the North Rhine-Westphalia approach result from its technological and social openness, encompassing new environmental innovation and transformation processes. The green economy is not limited to predefined social and technological innovations but can be harnessed as a dynamic development area for North Rhine-Westphalia.

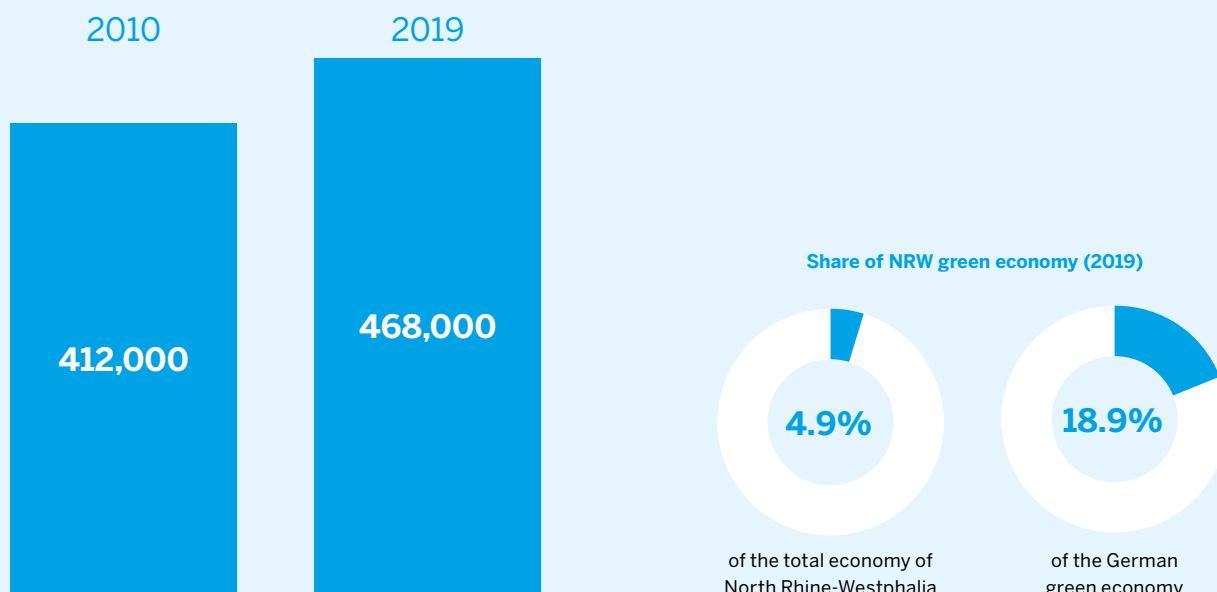


Figure 1: Number of employees in the NRW green economy, 2010 and 2019

Source: Ministerium für Umwelt, Landwirtschaft, Natur- und Verbraucherschutz des Landes Nordrhein-Westfalen (Hrsg.): Umweltwirtschaftsbericht 2020. www.umwelt.nrw.de/mediathek/broschueren

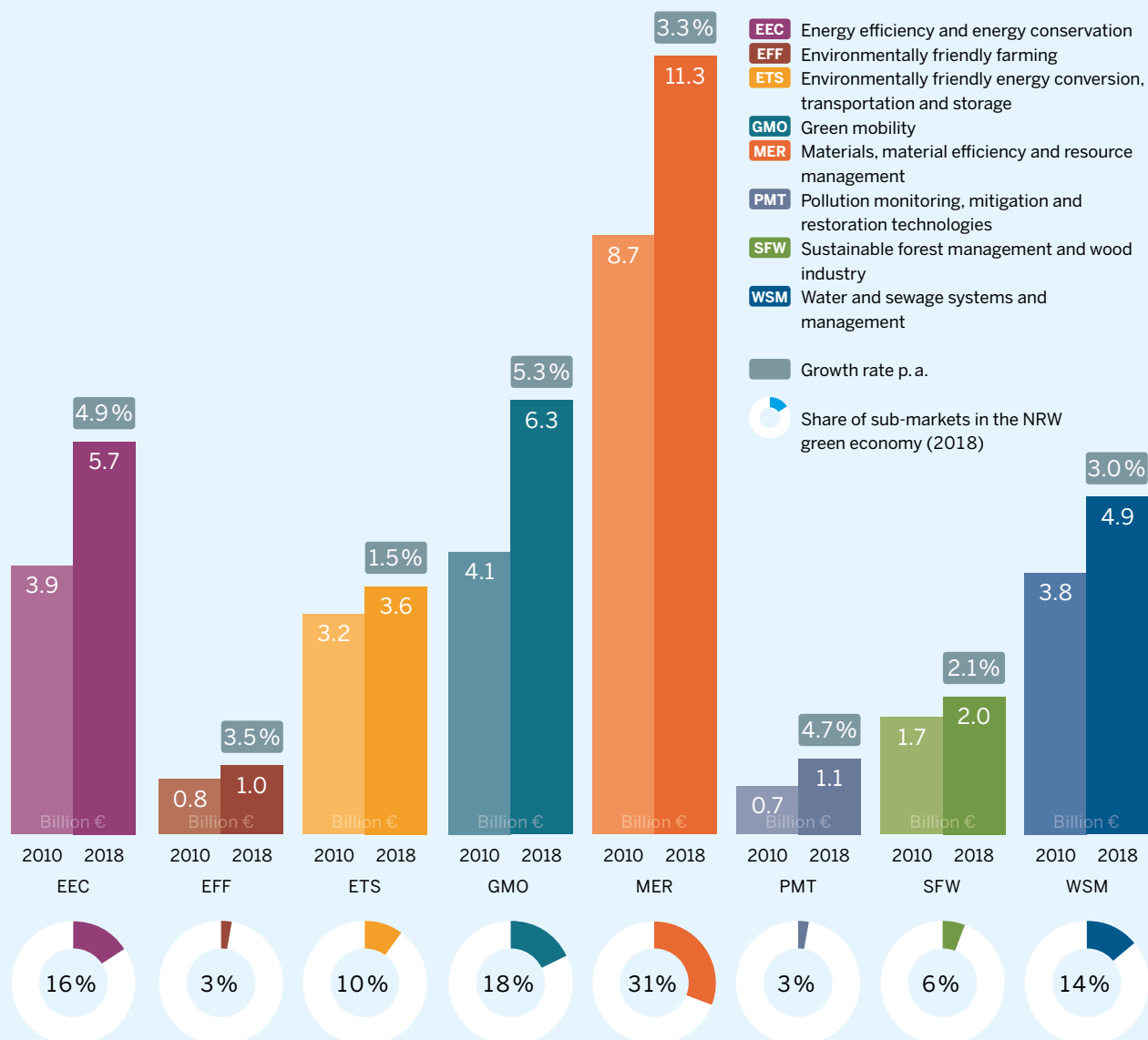


Figure 2: Gross value creation of the NRW green economy 2010 and 2018, by sub-markets (in billions of euros)

Source: Ministerium für Umwelt, Landwirtschaft, Natur- und Verbraucherschutz des Landes Nordrhein-Westfalen (Hrsg.): Umweltwirtschaftsbericht 2020. www.umwelt.nrw.de/mediathek/broschueren

North Rhine-Westphalia is Germany's green economy state no. 1

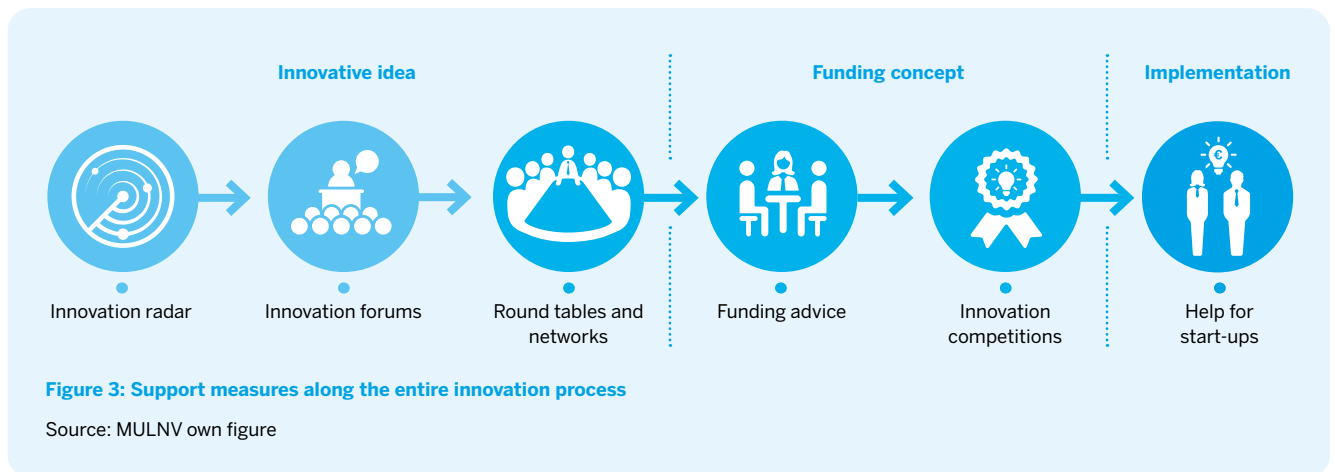
In 2018 the green economy accounted for 5.8 % or 35.8 billion euros of the federal state's gross value creation. Between 2010 and 2018 the green economy grew by 3.6 % annually.

North Rhine-Westphalia – with a labour force of 468,000 in 2019 – is Germany's largest provider of products and services in the green economy. This sector employs one in

twenty of the federal state's working population. And the number of people employed in the green economy has risen by 1.4 % per year compared to 2010, amounting to 52,800 new jobs.

Between 2010 and 2019, the annual export volume achieved by North Rhine-Westphalian companies in the green economy rose from 10.2 to 11.6 billion euros.

Based on these figures, North Rhine-Westphalia has occupied the top position in Germany as a provider of eco-, resource- and climate-friendly products, services and technologies for the last ten years.



North Rhine-Westphalia is adopting an active approach to the challenges of the European Green Deal and making use of the resulting opportunities.

The overriding purpose of an EU-wide climate neutral circular economy means that all companies and sectors throughout Europe have to aim for sustainability criteria and the goal of climate neutrality by means of a broad-based transformation process. In support of this, the European Structural Funds, particularly the European Regional Development Fund (ERDF), play a key role in supporting the goal of decarbonisation and the transformation of the economy. Companies in the North Rhine-Westphalia green economy are supplying suitable ideas and solutions in this area.

The 2021–2027 ERDF funding period should be used to promote innovation in the green economy.

Over the next few years, the competitive position of the North Rhine-Westphalia green economy needs a further boost with new products, services and technologies. This means identifying innovative needs, supporting links between companies and with scientists both across disciplines and along value chains, and making greater use of the strengths and potentials of R&D funding for the green economy. Particular attention is directed at small and medium-sized companies.

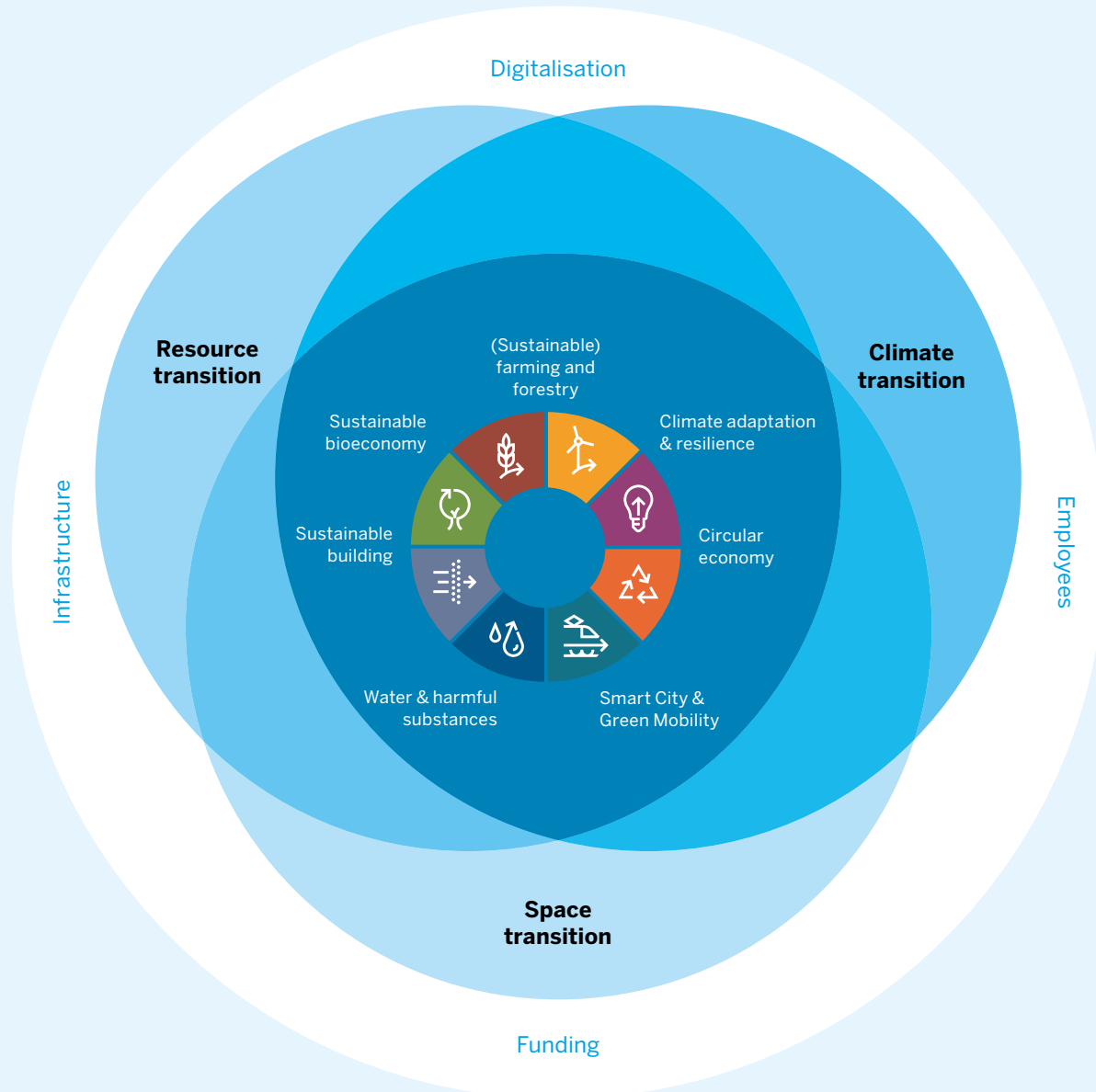


Figure 4: Kompetenznetzwerk Umweltwirtschaft.NRW: focus on three transition topics

Source: VDITZ, Prognos, INZIN (2020)

EEC Energy efficiency and energy conservation **EFF** Environmentally friendly farming **ETS** Environmentally friendly energy conversion, transportation and storage **GMO** Green mobility **MER** Materials, material efficiency and resource management **PMT** Pollution monitoring, mitigation and restoration technologies **SFW** Sustainable forest management and wood industry **WSM** Water and sewage systems and management

The Kompetenznetzwerk Umweltwirtschaft.NRW (KNUW) is a state-wide network for knowledge and technology transfer in the area of environmental innovation. Its main purpose is to identify and improve the use of national and international market opportunities. The KNUW opens up international contacts and partnerships

through information events in NRW, national and international travel for entrepreneurs and trade fairs.
www.knuw.nrw/en/about-us/who-we-are.html



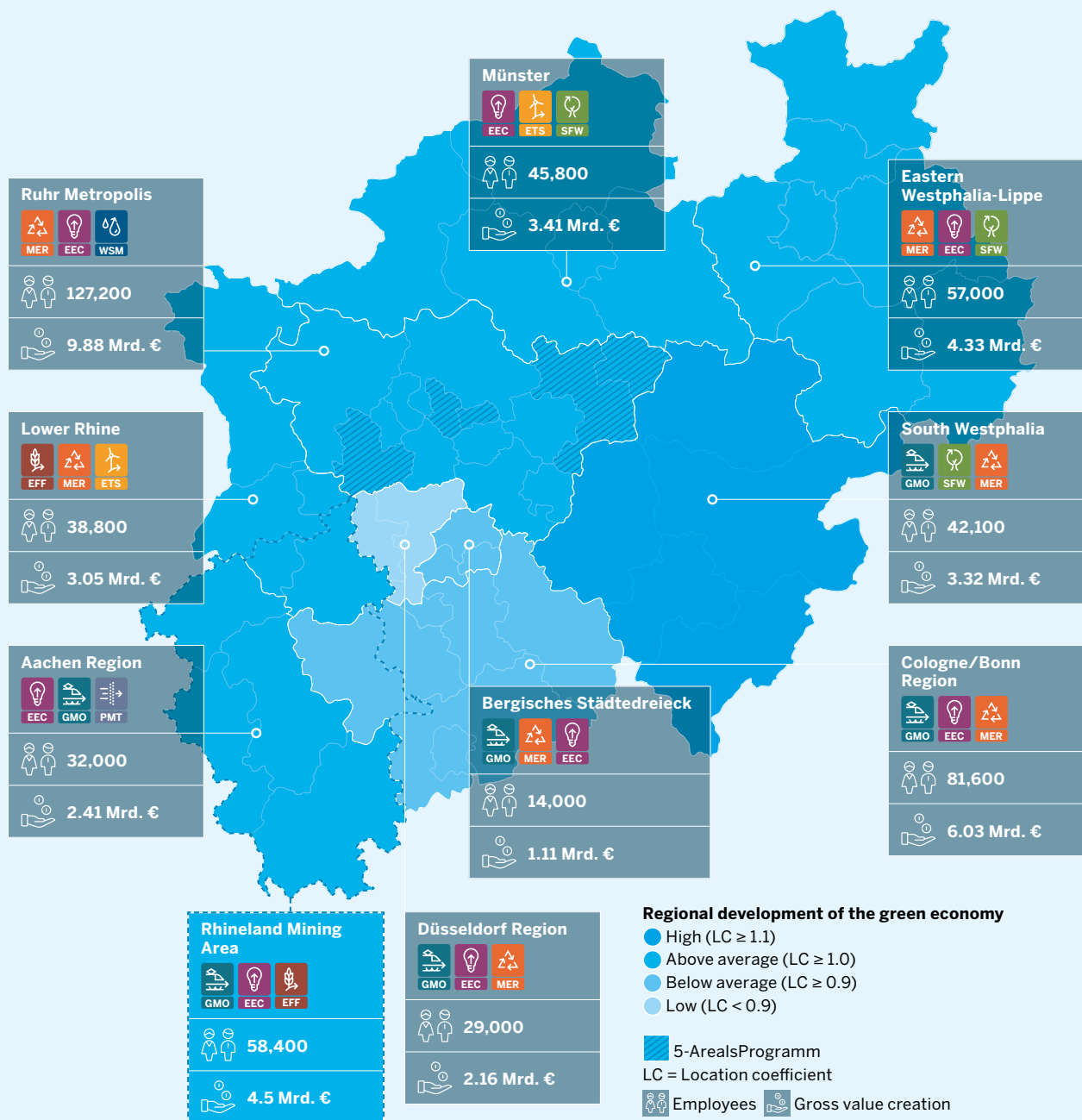


Figure 5: Key data and priority areas of the green economy regions

Source: Ministerium für Umwelt, Landwirtschaft, Natur- und Verbraucherschutz des Landes Nordrhein-Westfalen (Hrsg.): Umweltwirtschaftsbericht 2020. www.umwelt.nrw.de/mediathek/broschueren

EEC Energy efficiency and energy conservation EFF Environmentally friendly farming ETS Environmentally friendly energy conversion, transportation and storage GMO Green mobility MER Materials, material efficiency and resource management PMT Pollution monitoring, mitigation and restoration technologies SFW Sustainable forest management and wood industry WSM Water and sewage systems and management

Submarket	Market segment	Technology field
 Environmentally friendly energy conversion, transportation and storage	Renewable energies	Consultancy and research Bioenergy Geothermics Solar power Hydropower Wind energy
	Intelligent energy systems and grids	ICT for energy systems Grid expansion and operation Grid technology
	Storage technology	Electrochemical energy storage Mechanical energy storage Thermal energy storage
 Energy efficiency and energy conservation	Energy-efficient buildings	Construction and installation services Insulation materials Building systems engineering
	Energy-efficient production processes and technologies	Waste heat utilisation Compressed air and pump systems Installation and consultancy services Process control engineering and ICA technology
 Materials, material efficiency and resource management	Waste treatment and recovery	Waste disposal Energy recovery Material recycling
	Waste collection and transportation	Waste collection and transport Street cleaning
	Material-efficient production processes and technologies	Installation, repair and consultancy services Material-efficient process technologies Measuring, regulating and controlling technologies
	Renewable primary products and environmentally friendly materials	Cosmetics and detergents from renewable resources Materials from renewable sources
	Technology for waste management	Systems engineering Vehicle technology Collection and transportation containers Other
 Green mobility	Intelligent traffic management systems and infrastructure	Environmentally friendly transport infrastructure Traffic management
	Environmentally friendly logistics and mobility services	Public passenger transport and sharing systems Environmentally friendly logistics
	Green mobility and propulsion technologies	Alternative vehicles Propulsion technologies Automotive technologies
 Water and sewage systems and management	Monitoring and analysis procedures, water and sewage management	Water 4.0 (Measurement, analysis, control, regulation)
	Water and sewage infrastructure	Water and sewage network
	Water extraction and preparation, sewage treatment	Sewage treatment Water extraction and preparation
 Pollution monitoring, mitigation and restoration technologies	Soil protection technologies and remediation	Soil remediation Soil protection technologies
	Noise mitigation and air cleaning technologies	Exhaust gas recirculation systems Filter technology and catalytic converters Noise mitigation in buildings Measurement technology and services Traffic noise mitigation
 Sustainable forest management and wood industry	Timber processing and wood-based materials	Wood materials Sawmill industry
	Sustainable forest management	Forest management
	Renewable wood materials	Wood materials
 Environmentally friendly farming	Environmentally friendly technologies for farming	Green farming technologies New types of farming Environmentally friendly livestock technologies
	Organic and regional farming	Organic and regional farming
	Agri-environmental schemes	Agri-environmental schemes

Source: Ministerium für Umwelt, Landwirtschaft, Natur- und Verbraucherschutz des Landes Nordrhein-Westfalen (Hrsg.): Umweltwirtschaftsbericht 2020. www.umwelt.nrw.de/mediathek/broschueren



Further information on the green economy, current events, news and media information is available at:
www.umweltwirtschaft.nrw.de



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