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Report on business best practices

D7.4

Nektaria Efthymiou-Charalampopoulou
Hannah Pollak
Anita Susani
Giorgio Coppola
Federica Resta
N. Soledad Ibañez Iralde

LOCALISED

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Authors	Nektaria Efthymiou-Charalampopoulou, ÖGUT; Hannah Pollak, ÖGUT; Anita Susani, ÖGUT; Giorgio Coppola, CMCC; Federica Resta, CMCC; N. Soledad Ibañez Iralde, IREC
Reviewers	Jörg Verstraete, IMP, Tala Ghaddar, FZJ

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Contents

List of Figures

List of Tables

List of Abbreviations

AI	Artificial Intelligence
CO_2	Carbon Dioxide
CSR	Corporate Social Responsibility
DRMKC	Disaster Risk Management Knowledge Centre
DSP	Data-Sharing Platform
EMAS	Eco-Management and Audit Scheme
EPCs	Energy Performance Contracts
ESG	Environmental, Social, and Governance
ETS	Emissions Trading System
EU	European Union
EV	Electric Vehicle
EWS	Early Warning Systems
GHGs	Greenhouse Gas Emissions
IoT	Internet of Things
LSBMC	LOCALISED Sustainable Business Model Canvas
NbS	Nature-based Solutions
NZBC	Net Zero Business Consultant
PPPs	Public-Private Partnerships

PV	Photovoltaic
R&D	Research and Development
RDH	Risk Data Hub
ROI	Return on Investment
SMEs	Small and Medium sized Enterprises
TRI	Transition Risk Index

Executive Summary

Advancing decarbonisation and enhancing climate resilience in businesses remains a key strategic priority across Europe. As part of this effort, the LOCALISED project aims, among others, to support regional businesses in navigating decarbonisation pathways by offering practical examples of best practices. This report serves as a comprehensive guide for regional businesses in the agriculture, manufacturing, and transportation sectors, on their transition to decarbonisation and climate resilience. It offers strategic insights, operational recommendations, and real-world examples to assist business leaders and sustainability professionals in decision-making and implementation. Additionally, it provides valuable input for policymakers in shaping effective regulations and incentives, while also serving as a resource for the research community.

The report outlines several key findings. It identifies the physical risks and transition barriers businesses face in their decarbonisation journey, such as regulatory, financial, technological, and cultural, and provides a range of strategic actions and practices to overcome them. Regional best practices are highlighted across agriculture, manufacturing, and transportation sectors, showcasing successful examples that serve as guidance and inspiration for other companies. The positive environmental impacts and the economic and social synergies of transitioning to decarbonisation are described, such as cost savings, job creation, improved public health, and enhanced community resilience. Finally, potential trade-offs businesses may encounter are addressed, such as balancing regulatory compliance with operational flexibility and managing the costs of sustainable practices against long-term benefits. The local perspective is consistently incorporated in the findings and insights.

Furthermore, the regional transition risk associated with decarbonisation is identified for each business best practice using downscaled outputs from the LOCALISED Net Zero Business Consultant (NZBC) tool. These practices illustrate examples across different risk categories (low, medium, and high) with a particular focus on regions facing medium to high transition risks. The best practices are also integrated in the LOCALISED NZBC tool, providing regional examples that serve as both inspiration and guidance for other companies.

1 Introduction

The European strategy clearly demonstrates a strong commitment to industrial decarbonisation through the recently launched Clean Industrial Deal, aimed at boosting competitiveness and sustainability within the EU. This initiative frames decarbonisation as a key engine for growth in European industries. Additionally, the EU Taxonomy guides investment toward initiatives that support the EU's climate and environmental goals by establishing clear criteria for what qualifies as a green activity. For businesses, alignment with the EU Taxonomy plays a strategic role in lowering their emissions, reducing exposure to climate-related risks, and attracting green financing.

Moreover, the establishment of EU's ETS2, the new emissions trading system operating separately from the existing EU ETS, is designed to regulate CO_2 emissions resulting from fuel combustion in buildings, road transport, and certain other sectors, primarily smaller industries not currently covered by the original EU ETS. Emission reductions in these areas have so far fallen short of what is needed to keep the EU on track toward its 2050 climate neutrality target. By introducing a carbon price, ETS2 aims to create a market-driven incentive for investing in energy-efficient building upgrades and low-emission transport solutions.

Consequently, advancing decarbonisation and strengthening business resilience remain ongoing priorities for the EU. Aiming at empowering businesses in this journey, this report illustrates regional business good practice examples for tackling risks and transition barriers linked to decarbonisation and resilience, including the drivers and motivations, impacts and synergies, as well as trade-offs of implementing adaptation and mitigation actions. Such practice examples serve as a guide for businesses and are linked to the downscaled results of modeling and analysis of the LOCALISED Net Zero Business Consultant (NZBC) tool (Coppola and Shayegh, 2025).

Sharing good practices plays a key role in raising awareness and motivating action among businesses. As reported by Kiraly (2024), many Small and Medium sized Enterprise (SME) associations highlight that exchanging best practices is one of the most effective ways to inspire companies to take initiative. Successful businesses can act as role models, showing that positive outcomes are achievable even within common constraints. Seeing peers benefit from sustainable changes can lower perceived risks and boost confidence in acting. Additionally, learning from others' experiences offers practical proof of what works, helps avoid common pitfalls, saves time and resources, and builds trust in the effectiveness of decarbonisation and resilience measures.

2 Framework and Methodology

This report targets businesses in the agricultural, manufacturing and transportation sectors as a continuation of the work carried out during the previous tasks of WP7. The research was conducted with focus on the NUTS-2 level, particularly for regions in Austria, Spain and Italy, attributable to the relevant partners involved in this task. The study includes information from regional start-ups to SMEs and large companies.

The work resulted from literature review, desk research, business interviews and input from other LOCALISED work streams. The information collected from the interviews have been used exclusively for analytical purposes and is treated anonymously, without reference to names of persons or details that could directly identify the interviewed company.

Figure 1: Methodological Process

The barriers that businesses face on their path to decarbonisation and resilience were identified and harmonized with the transition barriers of LOCALISED Deliverable 7.1 (Coppola and Shayegh, 2024) but are wider in their spectrum to encompass adaptation barriers. The barriers, the strategic actions for combating each barrier and corresponding key-practice examples, as well as main drivers, impacts and co-benefits, and trade-offs have been collected from desk research and enriched with input from best practices and insights from company interviews and reports. Some examples of applicable regional tools and information sources have also been included.

Regional business best practices to become climate neutral and resilient in the manufacturing, agricultural and transportation sectors were identified. The sources trailed for the identification of such best practices include mainly:

- National/regional established awards that include topics on energy transition, climate neutrality, climate resilience, etc.
- Exemplary national/regional initiatives in which businesses are forerunners in decarbonisation and/or energy transition.
- Exemplary national/regional funded business projects that received funding for their industrial transition to decarbonisation.

A total of 60 businesses were identified, mainly across Austria, Spain and Italy, with each business showcasing a distinct set of good practices. For these businesses, the regional level of risk was determined on a NUTS-2 level regarding their transition to decarbonisation. This was undertaken using a) risk maps that present the regional risk for decarbonisation (heat maps) for the manufacturing subsectors, as provided by CMCC and b) the NZBC tool for the agricultural and transportation sectors. We screened the regions in which the identified businesses are located, providing their set of best practice examples on all different risk ranges (low, medium, high), with special focus on medium and high-risk regions when possible. Additionally, the regional adaptation risk, identified by the EU's DRMKC Vulnerability Explorer tool, is included for the NUTS-2 region in each best practice example to present a comprehensive view of regional risk related to decarbonisation and resilience.

Table 1: Overview of identified businesses with best practices

Sector	No of Businesses	Countries
Agriculture	18	Austria, Italy, Spain
Manufacturing	28	Austria, Italy, Spain, Germany, Luxemburg, Czech Republic
Transportation	14	Austria, Italy, Spain, Belgium, Finland

The best practices were linked with the corresponding barriers, providing guidance on how these businesses with their practices managed successfully to face and/or overcome them. An overview of general outcomes regarding the main practices implemented by companies by sector is provided after analysis of the information.

The businesses with the illustrated best practices were informed that they will be showcased in this report and the NZBC web tool and were offered the option of providing some more detailed insights through an interview. The ones that responded to this offer together with a number of companies that have been interviewed during the testing phase of the LOCALISED Sustainable Business Model Canvas (LSBMC) (Ibañez Iralde et al, 2024) - the interview was structured in such a way so that input could be collected for the needs of both LOCALISED Tasks 7.3 and 7.4 - and some companies that have

been researched in more detail through their sustainability and management reports, include our case studies.

Table 2: Overview of case studies

No of Companies	Country	NUTS-2 Region
Manufacturing		
3	Spain	Catalonia
1	Poland	Pomorskie
2	Italy	Lombardy
1	Germany	Cologne
Agriculture		
1	Spain	Andalucia
1	Spain	Catalonia
1	Italy	Sardegna
1	Austria	Carinthia
Transportation		
1	Spain	Catalonia

The input collected from these case studies was analysed and resulted in deeper insights and the enrichment of the material from literature review and desk research. Targeted feedback resulting from this analysis has been incorporated in this report under the respective sections with the title "INSIGHTS 💡". The overview tables in Section 5 are a compilation of various sources (included in the References section), expert assessment and feedback from the case studies.

3 Downscaled decarbonisation pathways

The study by LOCALISED in Task 7.1 examined how the difficulties in achieving the green transition are likely to be distributed unequally across Europe's regions and economic sectors.

Task 7.1 reinterpreted the IPCC AR6 definition of risk, which is normally expressed as the interaction of hazard, exposure, and vulnerability, in a transition setting rather than a physical climate one, in order to construct a Transition Risk Index (TRI). In this context, the 'hazard' is conceptualised as the increasingly stringent EU climate policies (EU ETS reform, Carbon Border Adjustment Mechanism, product carbon standards), which will penalise carbon-intensive production. 'Exposure' (E) is therefore proxied by the current greenhouse gas emissions of each manufacturing subsector in every NUTS-2 region; higher emissions mean a larger policy shock. Vulnerability (V) captures the ability of the local manufacturing system to absorb or deflect that shock, and it is measured through five dimensions: energy, labour, supply chains, technology, and finance. Each dimension is constructed from harmonised Eurostat and LOCALISED data-

sharing platform (DSP) indicators (Patil, Vestraete, & Pflugradt, 2024). A sixth "institutional" dimension is acknowledged in principle but will be addressed once comparable sub-regional data is available.

The essence of the framework is straightforward: regions with high emissions and limited adaptive capacity are at greatest risk of transition; conversely, territories with low emissions or strong adaptive capacity are less vulnerable to economic disruption.

The TRI is developed in three stages. First, exposure and vulnerability information is combined in a data assembly stage. Sub-sectoral emissions at the NUTS-2 level are taken directly from the LOCALISED DSP. Where such disaggregation is unavailable, national totals reported by Eurostat are allocated to regions in proportion to manufacturing employment. For vulnerability, approximately twenty socio-economic variables covering energy use, skill endowment, trade dependence, innovation capacity, and investment are gathered from Eurostat and the LOCALISED DSP. Where a dataset is only available by region or sector, it is replicated across the missing dimension to ensure representation of all 237 regions and ten subsectors, yielding 2,370 observations.

Secondly, all indicators are normalised within their respective subsectors using min-max rescaling to a scale of 0.01–0.99. This preserves cross-regional comparability and prevents the subsequent geometric mean from collapsing due to zeros. Indicators with large raw values that signify lower vulnerability, such as R&D intensity or the share of renewable energy, are inverted after scaling so that higher scores always indicate greater difficulty in coping with decarbonisation pressures. Within each pillar, the constituent variables are averaged with equal weights to avoid length bias. The five pillar means are then averaged equally to yield the composite vulnerability score, V.

Thirdly, exposure and vulnerability are combined multiplicatively. An equal-weight geometric mean ensures that exceptionally high exposure cannot be offset by very low vulnerability (or vice versa), mirroring the logic of multiplication already adopted in Task 7.1. TRI scores are rescaled to the 0–100 interval and grouped into five fixed categories — Very Low, Low, Medium, High, and Very High — for ease of communication.

Regions and subsectors that fall within the 'High' or 'Very High' bands combine significant emissions with limited adaptive capacity. These areas are hotspots where targeted assistance, concessional financing, and skills programmes are most urgently needed. Situations characterised by high exposure but low vulnerability usually correspond to well-capitalised industrial hubs, such as the Ruhr steel industry or the Lombardy chemicals industry. Decarbonisation in these areas is technically feasible, but would still transform business models.

The figures below graphically represent the resulting transition risk of decarbonisation by region for the manufacturing, agricultural and transportation sectors. For the manufacturing sector the analysis was conducted in the level of subsector and therefore the relevant risk is illustrated in more detail for Spain, Austria and Italy.

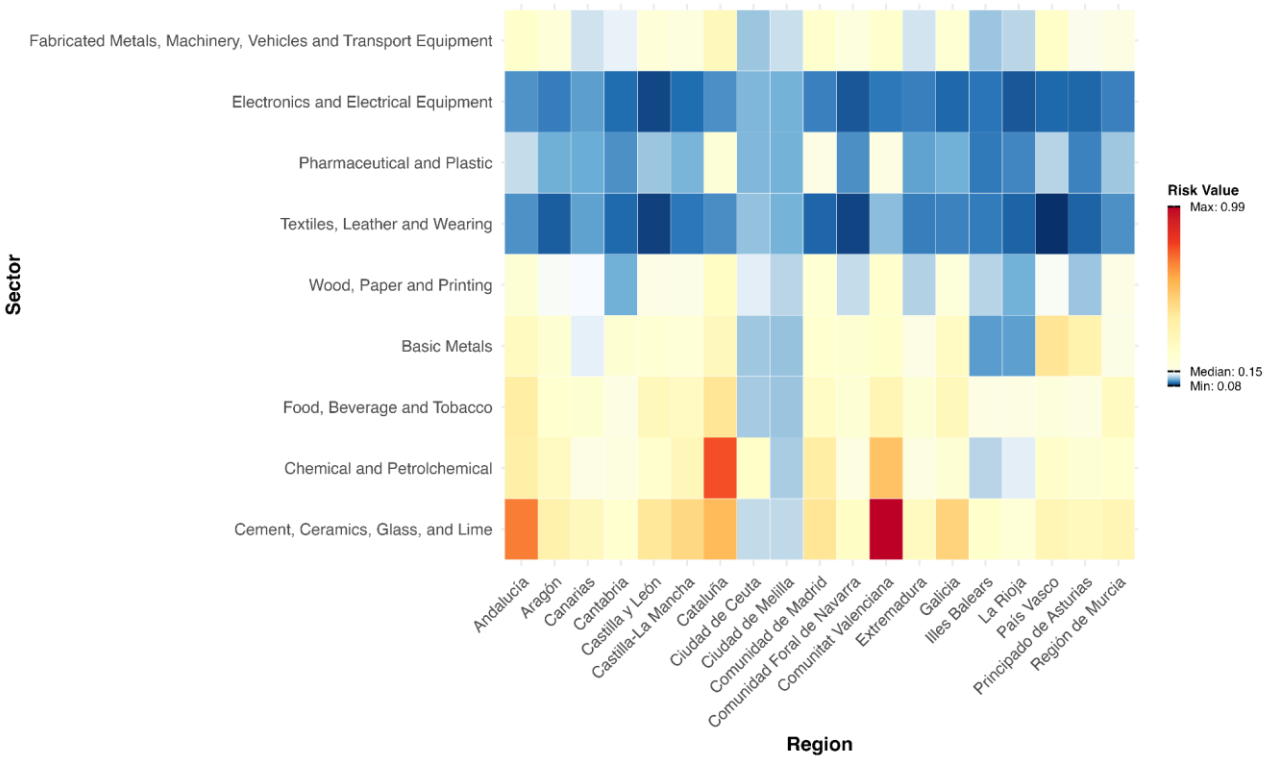

Figure 2: Heat Map of Spain - Decarbonisation risk on a NUTS-2 level for the manufacturing subsectors.

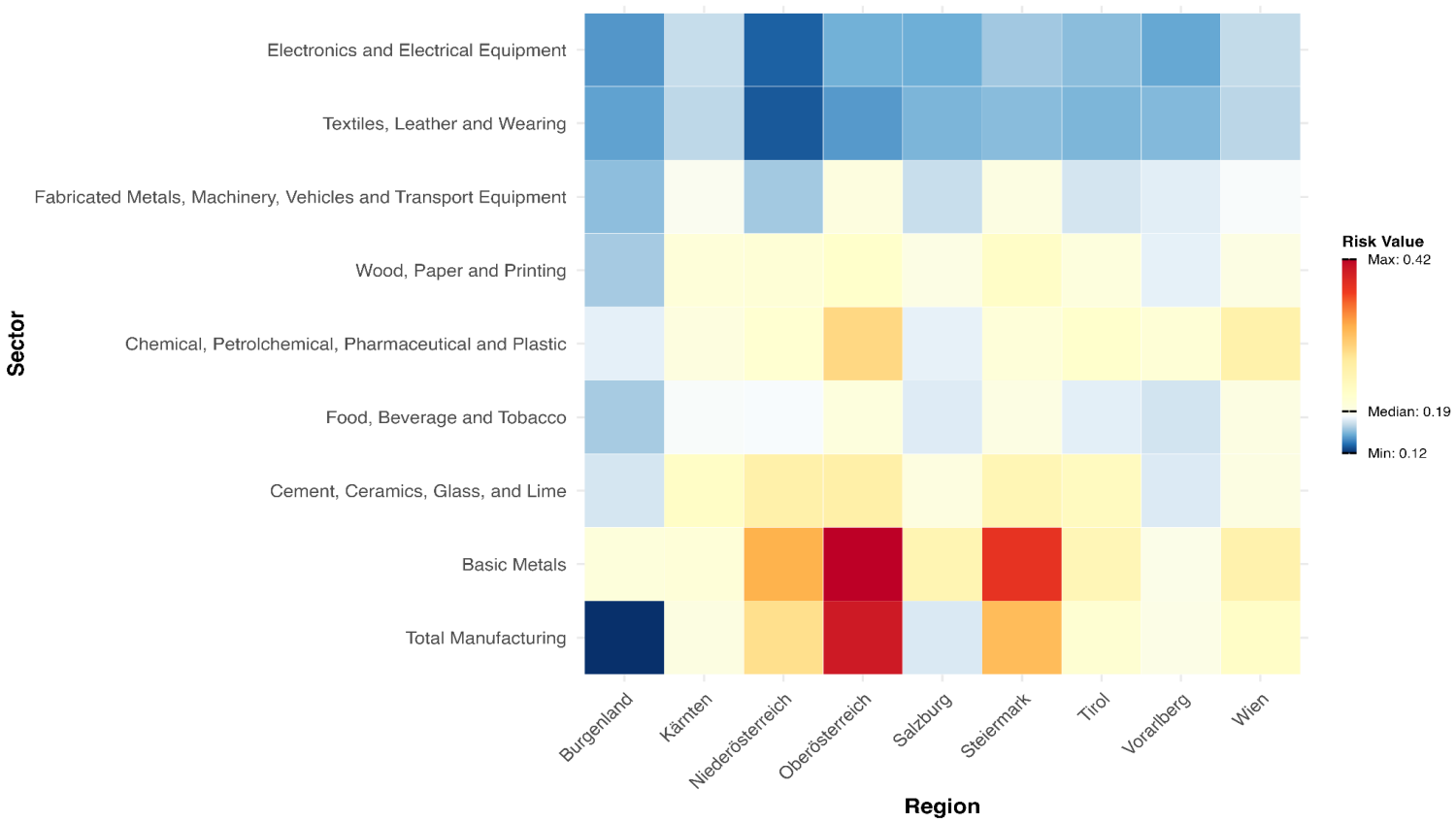

Figure 3: Heat Map of Austria - Decarbonisation risk on a NUTS-2 level for the manufacturing subsectors.

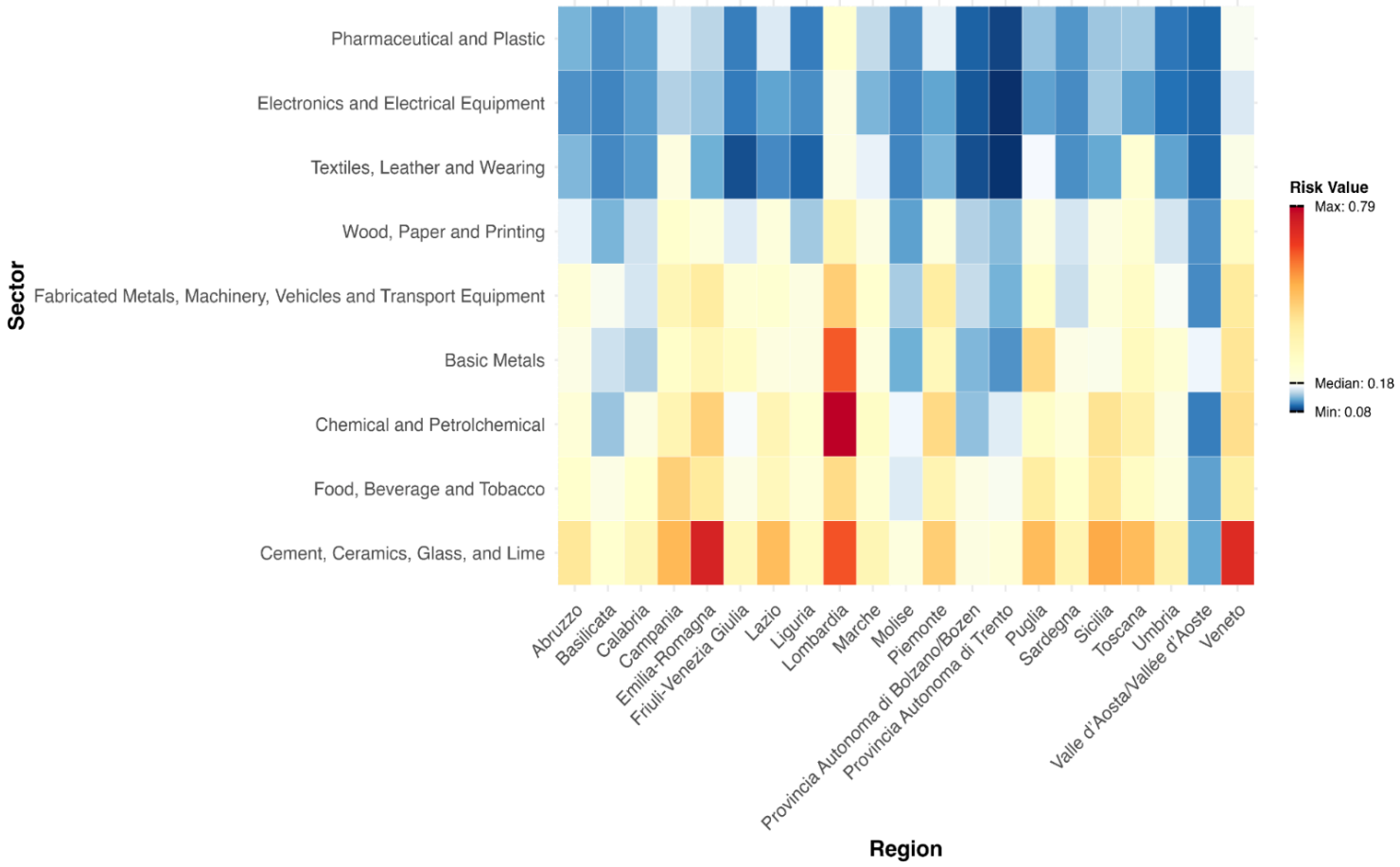

Figure 4: Heat Map of Italy - Decarbonisation risk on a NUTS-2 level for the manufacturing subsectors.

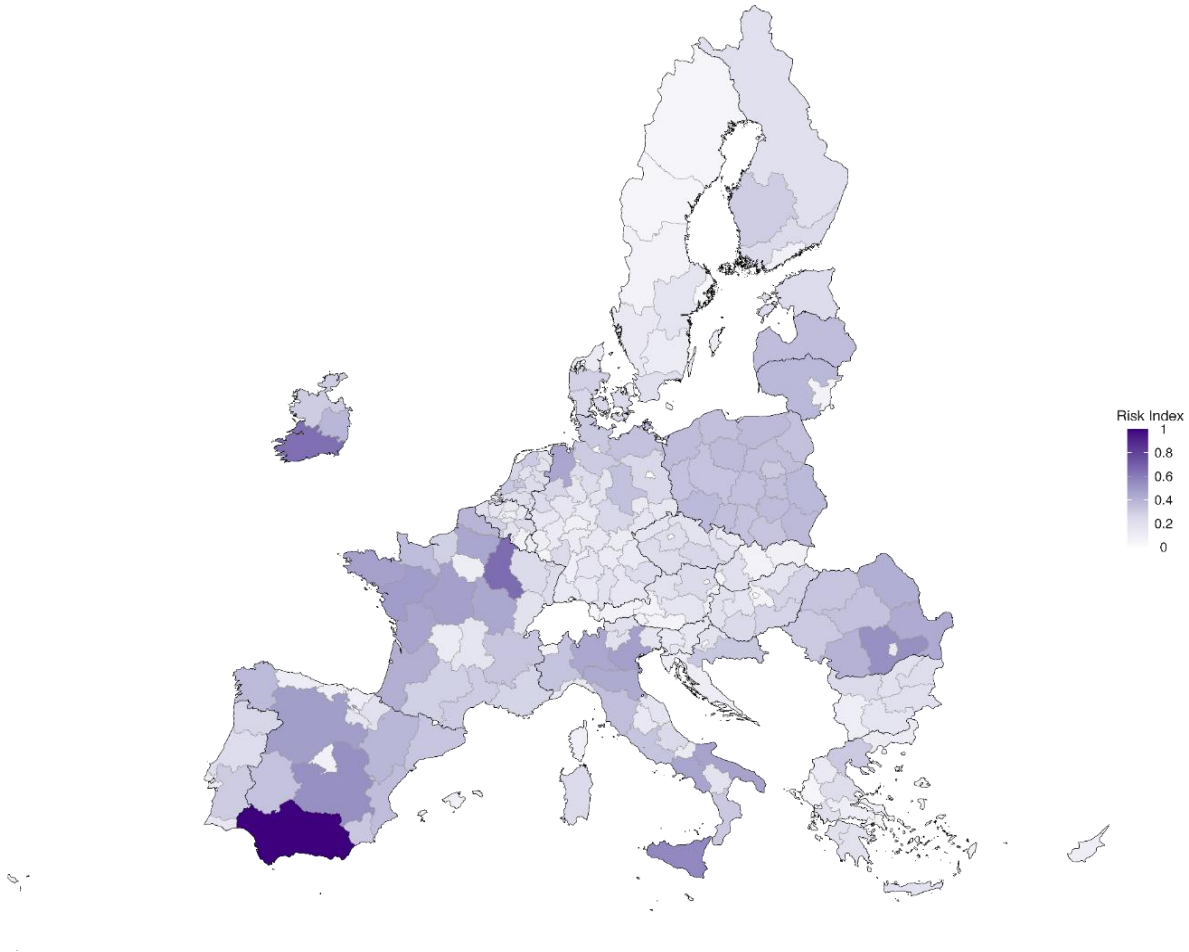

Figure 5: Decarbonisation risk on a NUTS-2 level in the EU for the Agricultural Sector.

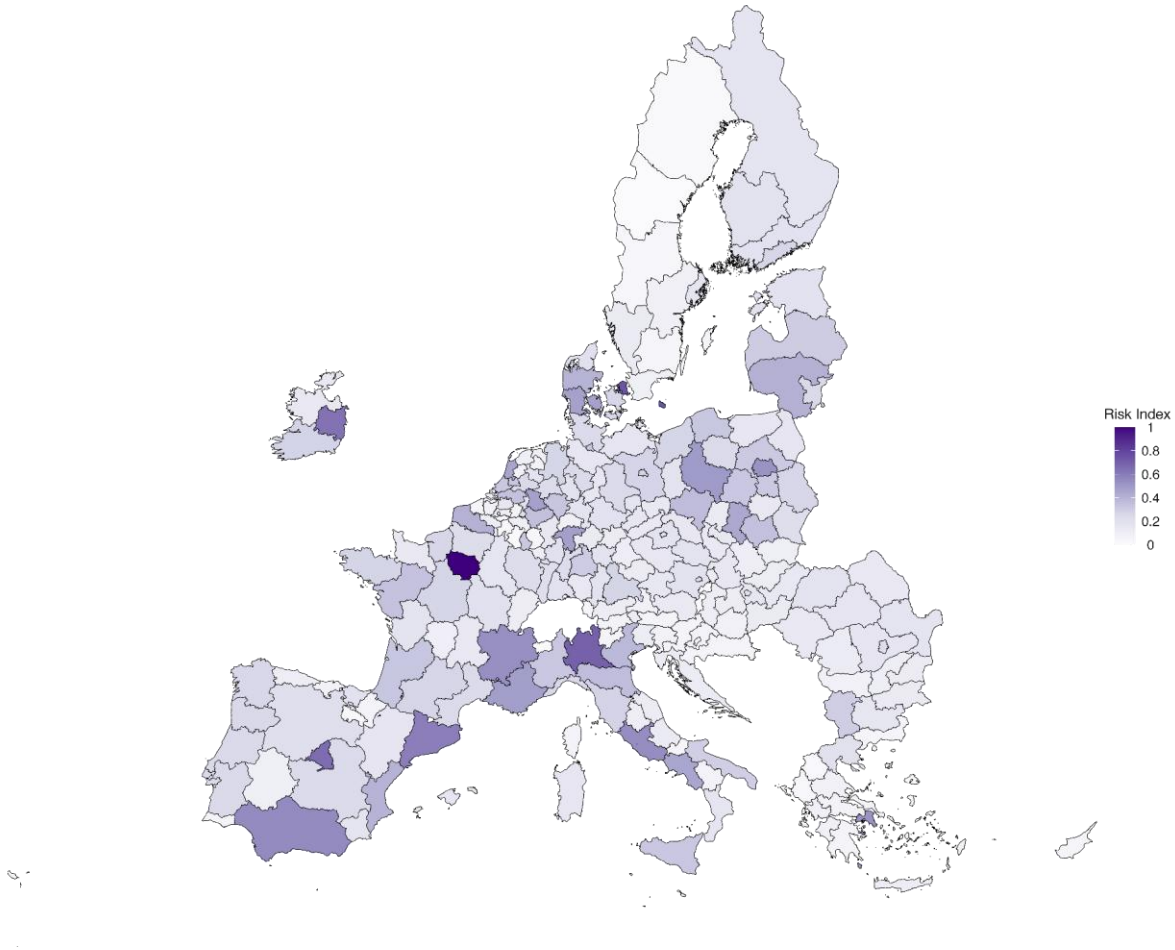

Figure 6: Decarbonisation risk on a NUTS-2 level in the EU for the Transportation Sector.

4 Best Practices

4.1 Identifying regional business best practices

Building on the experiences of other business good practices is a good start for getting ideas on possible measures and actions a business can implement to tackle barriers that may pose challenges during its transition to climate neutrality and resilience.

And how can a business identify such regional best practices? Below one can find some sources that can be trailed for this quest.

- National/regional awards that include topics on energy transition, climate neutrality, climate resilience, etc.: It is worth taking a look at the winners and nominations of relevant national and regional awards. By winning or being nominated, the businesses show outstanding practice.
- National/regional exemplary initiatives: A number of national and regional initiatives have been set up, in which businesses are forerunners in decarbonisation and/or energy transition and adaptation.
- National/regional funded exemplary projects: Funded projects support businesses to climate neutrality and resilience and showcase a high impact in relation to their industrial transition to decarbonisation.

The table in Annex 1 includes a sample of sources for such awards, initiatives and projects.

4.2 Best practice examples

Illustrated in Annex 2 are regional good business practice approaches, intended to guide other businesses in exploring decarbonisation pathways and building climate resilience. These good practices are also connected to the specific risks and barriers they address through the implementation of their strategic actions and key-practice approaches. All information has been collected from online open-access sources. An overview of the selected practices that were implemented by sector is presented below.

The best practices are also integrated in the LOCALISED NZBC tool. The user can select from the drop-down menu of the NZBC tool the business best practices (figure 7) which leads to a list by sector (figure 8). By clicking on each title, the user is directed to the relevant business best practice (figure 10).

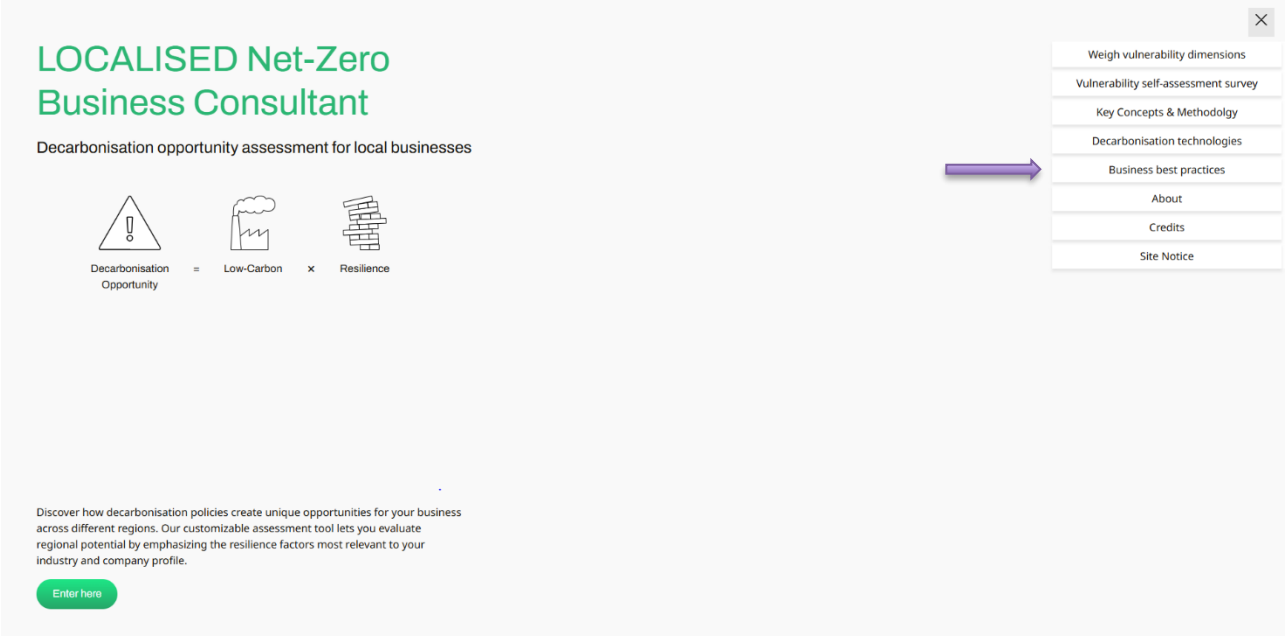

Figure 7: Screenshot of the business best practices at the NZBC tool

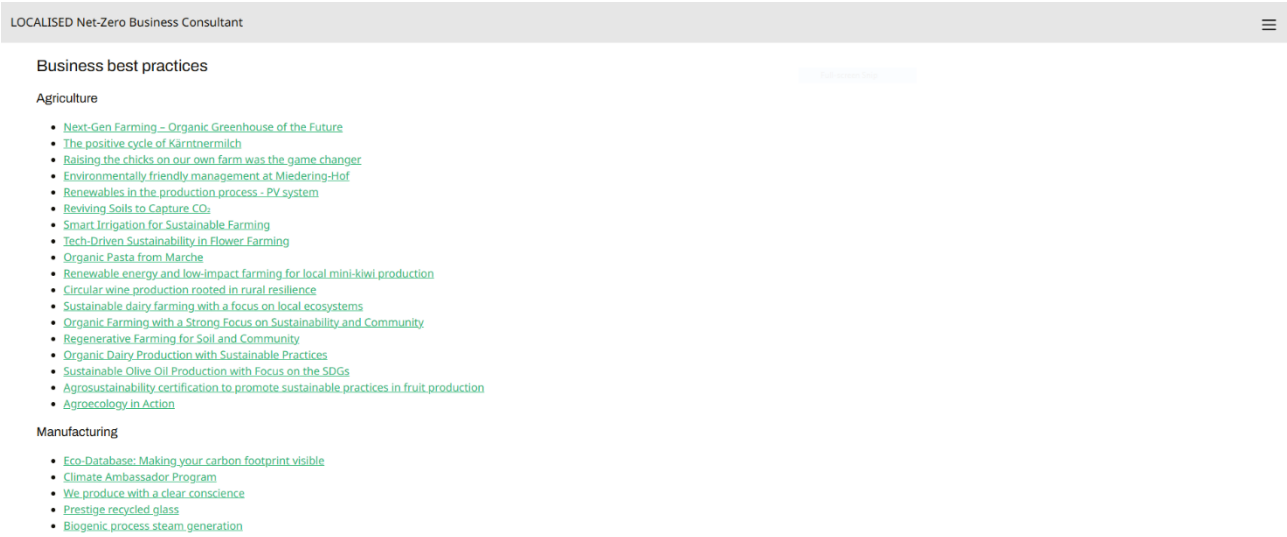

Figure 8: Screenshot of the list of best practices by sector at the NZBC tool

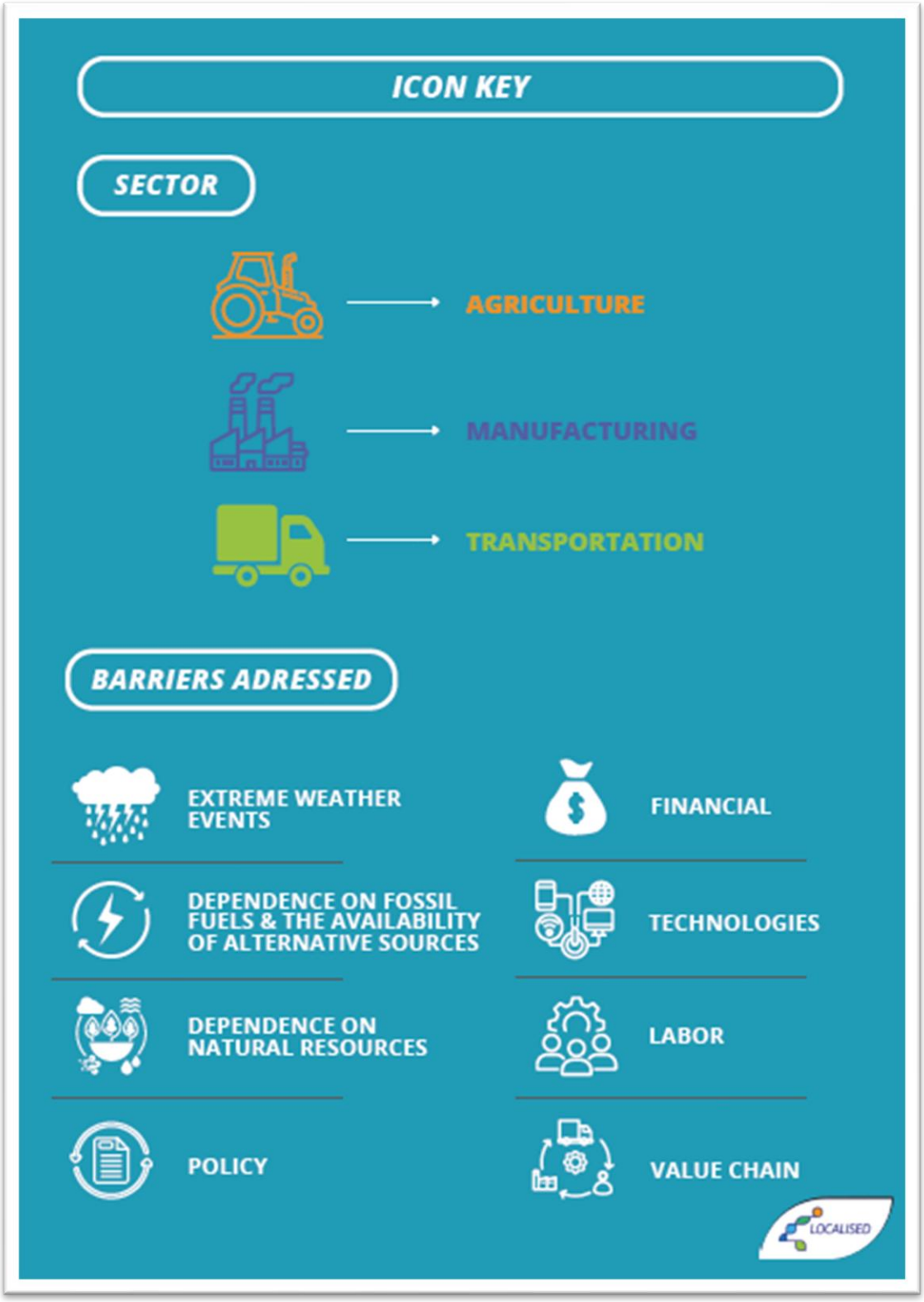

Figure 9: Icon key for the symbols used

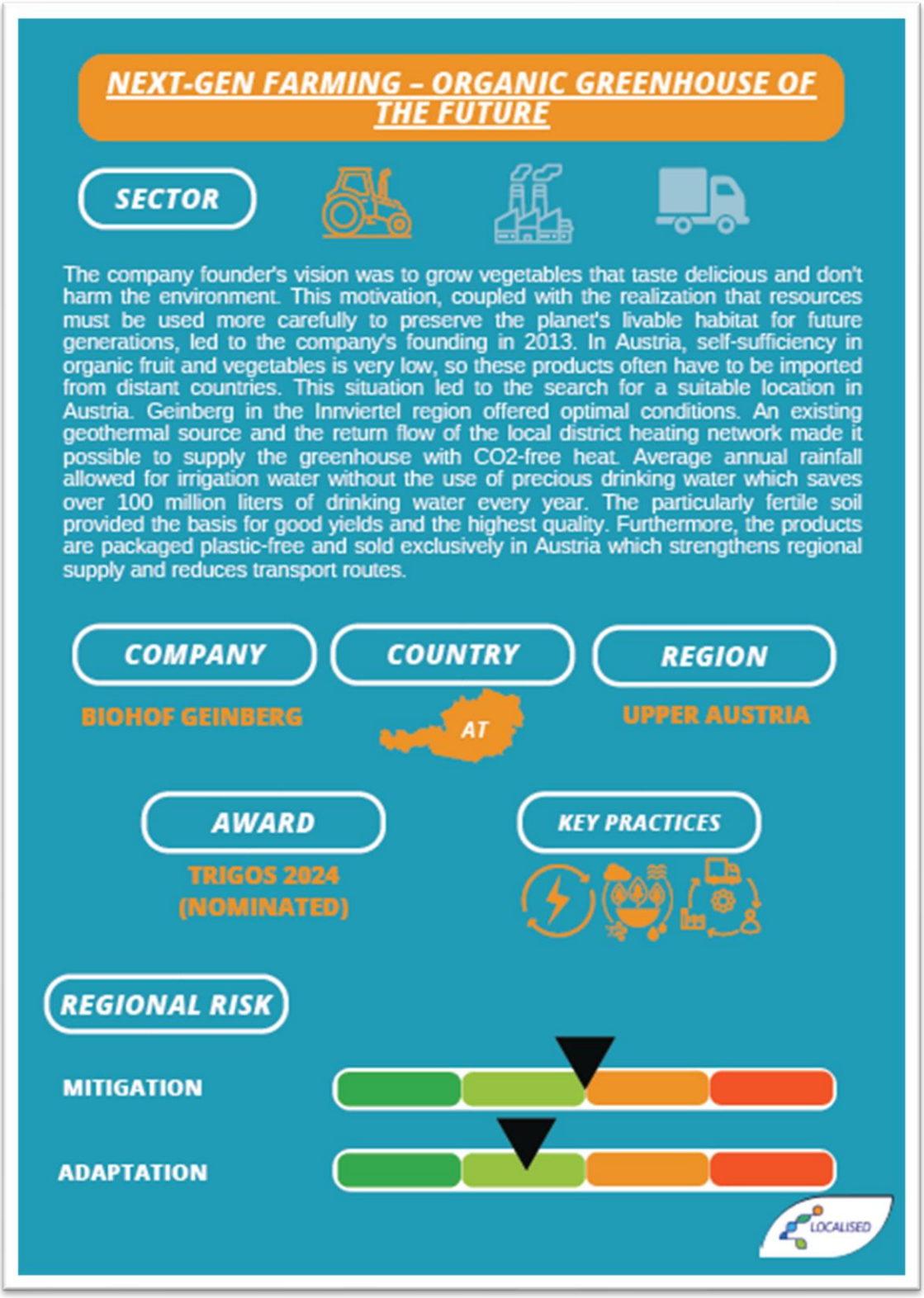

Figure 10: Example of business best practice template

4.2.1 Agriculture

The collected information allows us to identify that companies in the agricultural sector primarily address energy efficiency optimization, shift to renewable sources, reduction of potable water consumption, reduction of waste, adoption of circular models, prioritization of biodiversity and soil health, social sustainability, regional collaboration and sustainable certifications.

More specifically, to decarbonize operations and build climate resilience, several agricultural businesses have turned to **CO_2-free heat sources**, such as geothermal energy and district heating return flows, to power their activities sustainably. Many businesses have achieved **near or full energy self-sufficiency** through a combination of on-site solar PV, wind energy, biomass, biogas, hydroelectric power, and battery storage. These renewable systems not only reduce carbon emissions but often generate surplus energy for the public grid. **Electrification of logistics**, including full electric fleets and on-site EV charging stations, complements this shift by cutting transport emissions. Energy use is further monitored and optimized through certifications like EMAS and integrated energy management systems.

Alongside, innovative **irrigation solutions** using rainwater or automated systems tuned to plants' real-time needs reduce potable water use, optimize energy efficiency, and enhance agricultural resilience under climate stress. In more advanced setups, **soilless indoor and vertical farming techniques** reduce land use, while water recycling and biological pest control further limit environmental impact. **Soil health and biodiversity** are consistently prioritized. Practices include the use of fertile local soils to minimize synthetic inputs, regenerative agriculture techniques to enhance carbon sequestration, and soil biodiversity initiatives that increase long-term productivity. Composting and organic fertilization from farm waste also support circular soil management and reduce reliance on external inputs.

Agricultural businesses also focus on **circular economy models**, turning unsellable products like eggs into value-added goods such as pasta, and recycling waste like cheese whey and manure back into the production system. **Packaging and distribution practices** also reflect environmental responsibility. The elimination of plastic and the use of recyclable, compostable, or minimal packaging are standard across many businesses. **Distribution is often kept local** to reduce emissions, support regional economies, and increase food system resilience. This is especially evident in Austria and Spain, where several companies exclusively distribute within their local or regional areas.

Social resilience is supported through **fair pricing policies**, **especially for local producers**, as well as **stable rural employment**, **training programs**, and **initiatives to combat depopulation** through housing, coworking spaces, and

community development. Businesses often partner with rural development organizations, universities, and other stakeholders to **promote knowledge sharing** and **enhance innovation**.

A shared focus on **climate targets and accountability** is reflected in regular carbon footprint assessments, emissions reduction plans, and offsetting through reforestation projects. Some companies align their work with the **UN Sustainable Development Goals (SDGs)**, integrating sustainability into all aspects of production, from cultivation and energy to packaging and workforce welfare.

Finally, **integrated sustainability certifications and collaborative frameworks** help scale impact. Initiatives such as agro-sustainability certifications, soil fertility audits, and ecological pest control are implemented not only at the business level but are also promoted regionally among producers and processors to create broad environmental and economic benefits.

4.2.2 Manufacturing

The identified best practices indicate that companies in the manufacturing sector primarily address energy efficiency optimization, reduction of transport-related emissions, transition to renewable-sourced transport systems, optimization of logistics, use of digital tools and AI, decarbonisation in product design, adoption of circular models, workforce engagement and localised sourcing and production. Additionally, a number of companies are now engaged in the production of bio-based products and the development of low-carbon material.

Specifically, to **optimize energy efficiency**, manufacturing companies are overhauling production systems by installing photovoltaic systems, implementing heat recovery technologies, and converting to biomass or biogas-based **heating from renewable sources** like wood chips. In some cases, entire buildings and compressed air networks are monitored and upgraded to reduce energy leaks. Others **use digital tools and data analytics** to track insulation efficiency or calculate CO_2 emissions in real time. Passive cooling technologies using nanomaterials and photonics are emerging as **low-impact alternatives** to conventional systems, further enhancing efficiency.

Many businesses have begun to **transition logistics and transport systems** by testing electric trucks, installing e-charging stations powered by solar energy, and switching freight from road to rail to reduce transport-related emissions. Route optimization powered by AI and modular delivery systems help cut unnecessary mileage and improve logistics resilience.

Manufacturers are increasingly integrating **decarbonisation into product design and operations** by creating eco-databases to monitor emissions at the product level and

substituting climate-damaging materials with traceable, sustainable alternatives. There is a strong focus on **circular economy strategies**, such as maximizing recycled content, valorising by-products like agricultural or winemaking waste, and developing new biomaterials, ranging from bioplastics to mycelium-based packaging, to reduce reliance on fossil inputs and eliminate waste.

Many manufacturers are now **producing bio-based chemicals and renewable energy onsite**, using feedstocks such as algae, plant waste, or green hydrogen, while others generate compost and biomethane from organic waste. These systems simultaneously close waste loops and displace fossil-based inputs.

Innovation continues across industries through the **development of low-carbon materials** like PFAS-free ropes, bio-circular elastomers, and air-purifying eco-resins. Businesses are collaborating across sectors and even with competitors to share sustainable practices and accelerate industry-wide transitions. The application of AI and lifecycle assessments ensures these solutions remain efficient and scalable.

There's also a strong commitment to **product sustainability** through eco-design principles, low-impact paints and cleaning agents, and long-lasting materials like antibacterial or fireproof wood panels. Innovations in packaging, such as compostable bio bottles, recycled PET yarns, and biodegradable films, are reducing emissions, chemical runoff, and landfill waste while advancing circularity.

Employee involvement is central to many strategies. Companies are engaging their workforce through climate education, ambassador programs, and internal sustainability initiatives, fostering a culture of accountability and climate-conscious behaviour. Training programs specifically tailored to energy savings and safety for drivers or factory staff are helping embed climate knowledge across operations.

Localized sourcing and production have become key pillars. Whether by using regional raw materials like wood, involving local farmers, or revitalizing craftsmanship, businesses are building supply chain resilience and supporting rural economies. Certifications such as ISO 14001, OEKO-TEX, B Corp, and Global Recycled Standard are widely used to validate environmental and social performance.

4.2.3 Transportation

In the transportation sector, the good practices indicate that primary actions that companies undertake include integration of electrified and renewable energy powered transportation modes - including the necessary infrastructure and storage systems, urban clean last-mile logistics, use of digitals tools and AI, rail-based freight solutions, shared mobility and on-demand systems, social resilience of workforce and circular and sustainable practices.

More specifically, to decarbonize and future-proof operations, many businesses in the transportation sector are shifting toward **electrification and renewable energy integration**. This includes the adoption of electric buses, trucks, cargo bikes, and scooters across public and private fleets. Companies are increasingly powering these vehicles with self-produced solar energy or green electricity, supported by fast-charging infrastructure and battery storage systems. Some have gone further, incorporating **hydrogen fuel cell technology** and building their own hydrogen refuelling stations powered by photovoltaic systems. These transitions are not only lowering CO_2 emissions but also improving cost-efficiency and operational independence from fossil fuels.

In urban environments, **clean last-mile logistics** is becoming a priority. Companies are developing and deploying compact electric vehicles and e-cargo bikes designed specifically for pedestrian zones and low-emission areas. Others are offering **CO_2-neutral courier services** using bikes and scooters, often combined with paperless digital systems that streamline operations and reduce waste. These efforts are supported by **proprietary route optimization software and AI tools**, which improve delivery efficiency and minimize environmental impact through real-time monitoring.

A growing number of businesses are turning to **rail-based freight solutions** to reduce truck traffic and associated emissions. Intermodal logistics systems are being designed with rail-compatible containers, enabling efficient transfers to trucks for the last mile. Supporting infrastructure, including loading terminals and connecting stations, further enhances the resilience and reliability of these systems.

Shared mobility and demand-responsive transport services are gaining traction in the corporate sector. Businesses are introducing electric carpooling, ride-sharing options, and intelligent transport systems that adjust routes based on real-time demand. These reduce single-occupancy vehicle use, cut emissions, and ease urban congestion. The development of on-demand systems helps tailor public transport to actual needs, improving efficiency and adaptability.

Some **innovations are even reaching maritime transport**. Modern wind-assisted propulsion systems using rotating cylinders help reduce fuel consumption and emissions by harnessing wind energy, bringing decarbonisation to ocean freight. Meanwhile, **green train operations** powered entirely by wind and solar energy are cutting emissions across passenger rail, with further sustainability measures like waste reduction and chemical-free cleaning onboard.

Beyond emissions reductions, transportation companies are also supporting **social resilience and fair employment**. Salaried courier jobs, partnerships with social inclusion programs, and training initiatives in eco-driving or safety practices are creating positive local impacts. Many firms also prioritize **circular and sustainable practices**,

such as eliminating plastic use, monitoring warehouse emissions, and adopting environmentally safe materials and cleaners.

By promoting technical innovation, decentralization of infrastructure, and integration of green energy, the transport sector is making strong advances in both climate action and long-term resilience. These efforts **align with broader goals such as the UN 2030 Agenda**, helping transform mobility systems into cleaner, fairer, and more future-ready networks.

5 Navigating the transition to climate resilience

5.1 Business barriers and how to overcome them

As reported by the World Economic Forum (2023), risks can be grouped into two main categories: physical and transition. Physical risks refer to damage and disruption caused by extreme weather events and long-term climate changes that impact infrastructure and services. Transition risks arise from shifts in policies, legal frameworks, technological advancements, and evolving consumer preferences, among others, all of which influence supply and demand. Examples include stricter coastal zone regulations that limit economic activities in those areas (regulatory barrier) and mandates to adopt climate-resilient building materials (technology barrier).

The main barriers towards business decarbonisation and climate resilience have been identified and clustered in topic areas (e.g. financial, technological, supply chain, labour, etc.). The strategic actions required by businesses to address each barrier, along with corresponding key-practice examples, intend to serve as a guide for businesses on their journey toward climate resilience and neutrality.

Additionally, the table in Annex 3 provides some examples of tools and information sources that serve to support and guide businesses. Some of the resources have been produced under different work streams of LOCALISED while others were collected during this present research.

Table 3: Risks and barriers, strategic actions and key-practice examples

	Risks and Barriers	Strategic Actions	Key-Practice Examples
	PHYSICAL RISKS		
	Climate and Environment		
	Extreme weather events	Support climate risk-related decision-making and enhance preparedness and resilience. Use of digital tools for modelling climate data, assessing climate risks, vulnerabilities and the effectiveness of adaptation interventions.	• Climate data assessment and systems: – Climate/weather data services for modelling future climate change and impacts. – Software and hardware that helps generate and process climate/weather data. – Early warning systems (EWS) that help prepare for extreme weather events. • Nature-based solutions (NbS): – Businesses operating in areas prone to rising sea levels and cyclones can work on mangrove protection. – Businesses located in areas prone to urban flooding can work on wetland restoration. • Disaster recovery, restoration and crisis management services and related products • Grid modernization reduces the restoration time following power outages during extreme weather events and enhances grid efficiency.

			• Infrastructure: coastal protection and flood management structures, insulation systems, cool roofs
	Dependence on fossil fuels and the availability of alternative sources	Support decarbonisation actions. Enhance the use of tools for measuring and monitoring emissions.	• Decarbonisation action: – Prioritize energy efficiency measures – Reduce energy consumption – Shift to renewable energy – Optimize transportation and logistics (electrify fleet, carbon-efficient logistics, encourage sustainable mobility) • Tools: – Use open access data and tools on emissions and carbon footprint
	Dependence on natural resources	Implement solutions that reduce sectoral and geographic vulnerabilities and risks and enhance resilience.	• Water: smart-metering, water conservation interventions in the upstream value chain or water efficiency measures within operations reduce demand and ensure a steady supply of water even during times of water stress. • Agriculture: new and improved seed varieties, pest and nutrient management. • Energy: battery storage, upgraded energy infrastructure solutions. • Forestry and biodiversity: drones, non-timber forest products.
		Implement Ecosystem Management Approaches.	• Resource efficiency and conservation measures • Nature-based solutions (NbS): – Agri-businesses or businesses dependent on agriculture for raw materials can adopt regenerative agricultural practices. – Afforestation and reforestation can help with soil moisture conservation and improve the groundwater table.

	TRANSITION BARRIERS		
	Policy		
	Lack/change of policies or government-sponsored benefits	Integrate decarbonisation into core business strategy independent of policy support.	• Prioritize projects with strong commercial viability (e.g., cost savings from energy efficiency, customer demand for low-carbon products) regardless of policy incentives. • Actively participate in industry groups, business climate alliances, and policy dialogues to help shape predictable, long-term regulations. • Structure projects to succeed under multiple policy frameworks or incentive types (e.g., blending national tax credits with local grants and private financing). • Build decarbonisation strategies around non-policy dependent benefits like brand value and customer preference.
	Financial		
	Insufficient funding	Pursue a variety of different sources of financial support.	• Combine public funding, concessional finance, and private capital to fund large-scale projects. • Use supplier financing, energy-as-a-service, or shared savings models (e.g., power purchase agreements or lease-to-own equipment). • Break large climate programs into modular or staged components, starting with low-cost, high-impact phases.

			• Use third-party ownership or leasing models for assets like solar panels or building retrofits. • Crowdfunding: citizens jointly finance a project, for example a sustainable energy project.
	Insufficient return on investment (ROI)	Align with broader cost-saving or operational efficiency efforts.	• Focus on quick-win decarbonisation efforts with proven returns—e.g., energy efficiency upgrades, fleet electrification, or waste heat recovery as it improves short-term ROI and helps fund larger transition initiatives internally. • Maximize use of government grants, carbon credits, green tax reliefs, and resilience funding. • Use Energy Performance Contracts (EPCs) or Public-Private Partnerships (PPPs) where vendors are paid based on energy savings or resilience outcomes.
	Increased credit risk	Build lender and investor confidence. Use green financing programs and guarantees.	• Involve public sector financing or risk-sharing through PPPs, to benefit from co-financed investments, reducing the financial burden and risk. • Liability guarantees are a safety net for riskier investments. • Align decarbonisation and resilience efforts with core business strategy and financial forecasts as it improves lender confidence and supports stable or improved credit ratings.
	Increased cost of capital/insurance	Use of green bonds and sustainable investment funds and loans.	• Implement robust climate risk assessment frameworks which demonstrates proactive management of transition and physical climate risks to insurers and investors and can lead to better insurance terms and lower risk premiums.

		Use of bank guarantees and co-financing. Promote sustainability as a competitive advantage for investing in the future. Use climate risk insurance products that offset climate risk and enhance resilience.	• Develop/acquire low-carbon products/services, such as green construction, cleantech, or EV infrastructure as it reduces transition risk, which lowers capital risk premiums. • Partner with insurers to develop climate resilience plans, including physical adaptation of assets as it helps negotiate better terms or limits increases in property and casualty insurance. • Adopt advanced carbon accounting platforms and run climate scenario analyses as it results in better risk-adjusted returns and evidence to insurers/lenders of solid planning. • Collaborate with suppliers and customers to decarbonize the full value chain as it enhances brand value and resilience, reducing insurance liabilities across the supply chain.
	Technologies		
	Lack of technological readiness	Deploy energy-saving digital technologies that increase the efficiency of production processes and the adoption, such as artificial intelligence (AI) and the Internet of Things (IoT). Recalibrate research and development (R&D)	• Use digital technologies such as artificial intelligence (AI) and machine learning to optimize energy use, manufacturing processes, and reduce waste. • Research and invest in sustainable and low-carbon alternatives to materials like steel, cement, and plastics that contribute heavily to emissions. This can include using bio-based materials or developing new technologies for carbon-neutral production. • Build or retrofit facilities to meet green building standards which focus on energy efficiency, renewable energy use, and sustainable materials.

		activities towards innovative measures to reduce emissions.	
	New Technology hurdles -Increased cost of carbon-free technologies -Technologies still under development -Uncertainty about new technologies	Test feasibility, reduce financial risk, and build confidence.	• Leverage grants, low-interest loans, tax credits, or public-private funding to reduce upfront costs. • Engage with green finance initiatives or innovation funds to support technology adoption. • Launch small-scale pilots to test new technologies before full deployment. • Use case studies to build internal confidence and demonstrate feasibility. • Provide hands-on training to staff and decision-makers on how to implement and maintain new technologies.
	Labor		
	Lack of skills, knowledge, capacity or motivation	Engage employees and foster a sustainable culture.	• Enhance employee engagement by raising awareness, informing, educating, building capacity and involving employees in sustainability initiatives. • Encourage energy-saving behaviours, waste reduction, and sustainability innovations at all levels. • Create dedicated teams or sustainability ambassadors within the company to drive internal efforts and raise awareness across the organization. • Implement sustainable work practices such as encouragement of remote work, reducing business travel, and promoting the use of

			virtual meetings to minimize emissions associated with commuting and travel.
	Value chain		
	Suppliers - supply chain dependencies	Adopt sustainable supply chain practices.	• Work with suppliers to encourage them to reduce emissions. Collaborate to set clear sustainability targets, improve logistics efficiency, and prioritize suppliers with low-carbon practices. • Prioritize sourcing raw materials that are sustainably produced, such as low-carbon or recycled materials, to reduce emissions across the value chain.
	Reduced demand or production capacity due to climate impacts	Diversify supply chains and markets. Adapt product and service offerings. Engage in customer and community education.	• Identify alternative suppliers and regions less vulnerable to climate impacts. • Shift to climate-resilient products or services that meet changing consumer needs. • Inform customers about sustainable product options and promote responsible consumption. • Collaborate with local communities to strengthen regional resilience.
	Consumer preferences - change in demand for products/services	Promote sustainable product/service design.	• Offer low-carbon or more resource-efficient alternatives to traditional products or services. This can include energy-efficient appliances, sustainable packaging, or eco-friendly product lines. • Pursue sustainability certifications as consumers may actively seek products with such certifications (e.g., carbon-neutral or eco-friendly labels). This can create a competitive advantage.

	Cultural resistance	Engage stakeholders through clear, consistent communication and shared value alignment.	• Demonstrate the benefits by using data and examples to show co-benefits, such as cost savings, innovation, customer loyalty, or market access. • Offer guidance, tools, and training to help stakeholders understand and adopt new practices confidently.

INSIGHTS 💡

Businesses aiming to build resilience and decarbonize face multiple intertwined barriers across policy, financial, technological, labour, and value chain dimensions. **Policy** challenges include fragmented, sometimes contradictory regulations that cause confusion and inefficiencies, lack of financial incentives from public administrations, and restrictive rules that actively hinder innovation. Lengthy and costly permitting processes, combined with the low financial viability of selling surplus renewable energy to the grid, further slow progress. Additionally, inconsistent market regulations and geopolitical trade tensions complicate efforts to streamline sustainable operations. **Financially**, high upfront investment costs pose significant obstacles, especially for startups and smaller businesses struggling to balance sustainability goals with economic viability. **Technological** barriers arise from immature or inaccessible innovations, high costs, limited time to adopt changes, and resistance due to unfamiliarity and low market awareness, making it hard to scale sustainable solutions.

In terms of the **workforce**, many companies grapple with low employee motivation, lack of technical knowledge, insufficient capacity for strategic planning and implementation, and gaps in understanding new technology ethics and security, factors that hinder workforce engagement in decarbonisation. Across **value chains**, managing sustainability is complicated by limited local availability of key materials, difficulty in assessing suppliers' environmental practices, and resistance from customers and suppliers accustomed to conventional methods. Furthermore, a lack of transparency and comprehensive lifecycle data about products and partners prevents informed decision-making, limiting trust and broader adoption of sustainable practices. Together, these barriers form a complex landscape that businesses must navigate to successfully transition toward resilience and decarbonisation.

5.1.1 Agriculture

Environmental barriers

Companies reported that they struggle with **drought and unpredictable water availability**, which severely limits their ability to diversify crops and maintain stable yields. The local infrastructure compounds this problem, as for example **incomplete water treatment plants** fail to provide sufficient recycled water for irrigation, restricting sustainable water management options.

Policy, regulatory and institutional barriers

Regulations present mixed challenges. Specific rules governing composting require **construction of specialized facilities**, imposing high upfront costs. On the other hand, **regulations around forest product sales and animal control are often unclear or insufficient**, creating uncertainty and hindering sustainable development in these areas. Moreover, **lack of municipal support in waste separation and recycling infrastructure**, such as the absence of dedicated containers near facilities, hinders effective waste management and circular economy practices and makes sustainability efforts more difficult at the local level. Regulatory compliance processes, such as **permits and composting regulations, are often lengthy, complicated, and expensive**.

Economic barriers

Financial constraints represent a major hurdle. Many companies face a **lack of financial resources**, with existing funds often prioritized for other parts of the agricultural process rather than sustainability initiatives. This is worsened by the **complexity and inefficiency of subsidy systems**, where aid is difficult to access, delayed, or has limited real impact. The **high initial capital investment** required for decarbonisation technologies, such as purchasing batteries for energy storage, replacing boilers, and upgrading water management systems, further restricts progress, especially for small or medium-sized enterprises.

Moreover, agricultural producers experience **reduced profit margins imposed by industries they supply** that dominate the value chain, leaving limited financial flexibility for sustainability investments. Sustainable services and suppliers, while environmentally preferable, tend to be **more expensive and less accessible**, limiting companies' ability to engage with greener partners. The **selling of excess electricity back to the grid is often economically unviable**, reducing incentives to invest in renewable energy generation.

Technological barriers

The adoption of suitable technologies remains a significant challenge. Many agricultural processes still rely heavily on **mechanical machinery dependent on fossil fuels**, and there is a lack of accessible, affordable alternatives tailored to the sector's specific needs. The **immaturity and high cost of energy storage solutions**, like batteries, limit their widespread use despite their critical role in renewable energy integration.

Additionally, agricultural companies face difficulties in **accessing appropriate industrial technologies** compatible with their largely mechanical workflows. The

shift to sustainable transport faces similar barriers, with high investment costs and limited availability of green transport technologies in the market. Notably, sustainability assessments often **exclude key parts of the value chain**, such as the distribution of certain products, creating gaps in holistic decarbonisation efforts.

Labor barriers

There is a shortage of **qualified personnel** with expertise in crucial areas such as forest and field management, which limits the capacity to implement and maintain sustainable practices. These positions are often less attractive compared to other sectors, leading to **recruitment challenges**. While collaborations with educational institutions exist, **educational and training initiatives often lack appeal and effectiveness**, failing to adequately prepare the workforce for the transition. Furthermore, agricultural companies frequently face a **lack of dedicated time and staff** to focus on analysing strategies, implementing improvements, and conducting ongoing monitoring, activities essential for a successful transition.

Value chain barriers

Resistance to change remains a significant barrier. Many agricultural companies and suppliers are **deeply rooted in traditional practices**, which slows down adoption of new, more sustainable methods. Some suppliers **resist abandoning conventional approaches** perceived as more reliable or cost-effective, creating friction and limiting broader industry progress. A **lack of transparency in certain operations** also hinders collaboration and informed decision-making, reducing the ability to align sustainability efforts along the supply chain. The **limited diversity of suppliers and alternatives** further restricts options for implementing sustainable changes, consolidating reliance on traditional, less sustainable practices.

5.1.2 Manufacturing

Financial barriers

One of the foremost challenges is the **high initial investment** required, which can be especially **burdensome for startups and smaller enterprises**. For example, adopting sustainable packaging solutions that use recyclable materials often involves higher upfront costs, making it difficult to balance environmental goals with financial viability. **Budget constraints** limit the ability to scale such innovations effectively. Additionally, **economic volatility**, marked by fluctuating commodity prices and political instability, creates uncertainty that makes long-term planning difficult.

Labor and workforce

Staff-related issues pose significant obstacles. Many small companies operate with **limited teams** who **lack the capacity to dedicate sufficient time and resources** to decarbonisation efforts. Moreover, there is often **low motivation** among workers to engage fully with awareness and training programs, which reduces the overall impact of sustainability initiatives. In parallel, **knowledge gaps** exist around advanced technologies such as artificial intelligence, with particular concerns about data security, privacy, and ethics. This lack of understanding hinders adoption and integration of potentially transformative tools that could enhance efficiency and reduce emissions. Additionally, the **urgent need to adopt decarbonisation measures quickly** often clashes with limited internal resources and operational demands, creating a challenging environment for effective change management.

Technological barriers

Such challenges are particularly acute for startups developing innovative and disruptive solutions. For example, companies introducing emerging technologies often face significant **hurdles in market penetration**. This is largely due to **low awareness and understanding** of such technologies among potential customers, who may be **resistant to change** or **sceptical about unproven innovations**.

Value chain barriers

Key raw materials for novel products are **often not locally available**, requiring careful sourcing to minimize carbon footprints without sacrificing quality or reliability. Navigating this delicate balance **adds time and costs to product development and delivery.** Some segments exhibit a low level of technical knowledge about sustainable technologies and demonstrate **strong resistance to moving away from conventional, fossil fuel-dependent practices.** This cultural inertia has at times discouraged manufacturers from investing in scientific outreach, real-world pilot demonstrations, or sharing measurable data that could build trust and facilitate wider adoption of green technologies. Externally, manufacturing firms face **complex geopolitical and economic environments** that affect their sustainability transitions. Trade barriers arising from geopolitical tensions and a rise in national-focused policies **complicate access to markets and sourcing of materials**, which is crucial for sustainable supply chains.

5.1.3 Transportation

Financial barriers

Financial constraints are a primary challenge, as many companies have **limited capacity to invest** in necessary changes or adopt new, often costly, technologies.

Labor and workforce

A general **lack of awareness** about decarbonisation benefits and processes further slows progress, alongside **limited technical capacity** within organizations to analyse and implement effective strategies. To address this, companies need to invest in employee training and development to enable the use of new technologies, but this requires additional resources and time.

Policy and regulatory barriers

Inconsistent policies and charges, such as varying EV charging fees, and fragmented or conflicting regulations across regions complicate operations and slow adoption. Furthermore, **public administrations often fail to provide sufficient financial incentives or recognize international standards or good sustainability practices in public procurement**, reducing motivation for companies to adopt them. Further, **regulatory frameworks sometimes actively impede improvements**, for example bans on drones in urban areas, and force longer travel distances or prevent innovative solutions.

Technological barriers

Many new solutions remain **immature or inefficient**, and their **high costs** deter widespread uptake.

Value chain barriers

There is a significant **lack of transparency and detailed information about supply chain partners** and the full life cycle impacts of key elements, such as EVs, where assessments often overlook crucial factors like battery production, focusing only on emissions during use. This opacity hinders companies' ability to make fully informed sustainability decisions. Further, **managing and verifying the sustainability practices of supply chain partners** is complex and resource-intensive, adding to operational challenges. Finally, **cultural resistance to change,** especially among customers accustomed to traditional practices, further obstructs the shift toward greener transportation models.

5.2 Key drivers and motivations

The decarbonisation and resilience of businesses is driven by a combination of external pressures, internal motivations, and market opportunities. These factors are influencing organizations to take action towards reducing their carbon footprints and aligning with global sustainability goals. Below are the main drivers identified, leading businesses to decarbonisation and become resilient.

Table 4: Main drivers and motivations

Climate change risk management	
Physical risks	Climate change can cause direct damage to infrastructure, production facilities, and supply chains through extreme weather events such as floods, wildfires, or hurricanes. Decarbonizing business operations can help reduce exposure to such risks by improving resilience and adapting to climate change.
Transition risks	As the world transitions to a low-carbon economy, businesses that are slow to decarbonize may face competitive disadvantages or financial losses. Transitioning to more sustainable practices helps companies stay ahead of changing regulations and market demands.
Business continuity	By addressing both physical and transition risks, businesses can ensure long-term stability and continuity. Decarbonisation is part of building a more resilient business model that can thrive in an uncertain, climate-impacted future.
Regulatory and policy	
Commitments to global targets	Commitments from global frameworks like the Paris Agreement set ambitious targets for carbon reduction, motivating businesses to align their strategies with these goals. National governments may also set decarbonisation targets that businesses must meet.
Government regulations	Policies such as carbon pricing, emissions caps, renewable energy mandates, and pollution control laws require companies to act and reduce their carbon emissions to comply and avoid fines or penalties.
Local government incentives	Some local governments offer incentives, grants, or subsidies for businesses that take action on sustainability, including tax

	breaks for adopting renewable energy, energy-efficient systems, or low-carbon technologies.
Investor and financial pressure	
Environmental, Social, and Governance (ESG) investing	Investors are increasingly prioritizing ESG factors when making investment decisions. Companies that do not adopt sustainable practices or show commitment to reducing their carbon footprints may face difficulties in attracting capital, while those leading in sustainability are rewarded with favourable investment.
Shareholder expectations	Shareholders, particularly institutional investors, are placing pressure on companies to adopt climate-friendly practices to mitigate long-term risks and ensure long-term profitability.
Risk management	Investors recognize that businesses failing to address climate change risk being left behind as regulations tighten and the financial impact of climate change intensifies. Businesses that proactively decarbonize reduce their exposure to these risks.
Cost efficiency and operational savings	
Energy cost reduction	By transitioning to renewable energy sources, companies can reduce reliance on fossil fuels and mitigate exposure to energy price fluctuations. Energy efficiency measures can lead to significant cost savings.
Waste reduction and resource efficiency	Decarbonisation often involves implementing circular economy principles, such as reducing waste and reusing materials. These practices improve resource efficiency, reduce operational costs, and lower waste disposal fees.
Innovation and process optimization	Businesses that embrace decarbonisation may discover new technologies or processes that increase efficiency, lower costs, and drive innovation. This leads to competitive advantages and improved profitability in the long term.
Technological advancements	
Availability of low-carbon technologies	Technological advancements in areas such as renewable energy, energy storage, carbon capture, electric vehicles, and energy-efficient technologies have made decarbonisation more feasible and cost-effective for businesses. These technologies provide businesses with practical solutions for reducing their carbon footprint.

Digital transformation	The rise of digital technologies, such as AI, machine learning, and IoT, enables businesses to optimize their energy use, reduce waste, and improve supply chain efficiency, making decarbonisation easier and more effective.
Innovative materials	New sustainable materials and products, such as low-carbon cement, biodegradable packaging, and plant-based alternatives, offer businesses the opportunity to reduce their carbon footprint without sacrificing performance.
Labor and social aspects	
Attracting top talent	A company's commitment to sustainability can be a key factor in attracting and retaining talent, especially among younger generations who place high value on working for organizations that align with their environmental values.
Employee morale and productivity	Employees are often more motivated and engaged when they work for companies with a strong commitment to sustainability. A focus on decarbonisation can boost morale, increase productivity, and create a positive workplace culture.
Green jobs creation	The move towards decarbonisation often leads to the creation of new green jobs, driving employment opportunities in renewable energy, energy efficiency, waste management, and sustainable manufacturing.
Reputation and brand value	
Corporate Social Responsibility (CSR)	Companies are increasingly focusing on CSR initiatives to demonstrate their commitment to sustainability. Reducing carbon emissions is a key part of this, as businesses seek to be seen as responsible and environmentally conscious.
Brand differentiation	In a competitive market, a company's commitment to sustainability and decarbonisation can differentiate it from competitors, enhancing its reputation and appeal to customers, employees, and investors.
Public perception	As climate change becomes a growing concern, businesses that are seen as leaders in environmental stewardship can attract media attention and public recognition, leading to positive brand associations.
Supply chain pressure	

Sustainability Expectations from Suppliers	Companies are increasingly being asked by their suppliers, customers, or partners to adopt decarbonisation strategies. Large corporations are requiring their suppliers to meet sustainability criteria, creating pressure throughout supply chains to reduce emissions.
Collaborative partnerships	Companies are working together to decarbonize supply chains through shared goals, technologies, and best practices. For example, several companies are collaborating to push for renewable energy across their suppliers' operations.
Supplier risk management	Companies recognize that suppliers that are not prepared for future environmental regulations or climate-related risks can affect their own operations. By driving decarbonisation throughout the supply chain, businesses can mitigate risks and ensure resilience.
Consumer demand for sustainable products	
Ethical and green consumption	Consumers are becoming more aware of the environmental impact of the products and services they purchase and increasingly prefer sustainable brands, low-carbon products and strong environmental credentials. Businesses are therefore adopting sustainable practices to meet these expectations, attract environmentally conscious consumers and improve brand loyalty. Further, consumers may actively seek products with certifications such as carbon-neutral, organic, Fair Trade, or eco-friendly labels, creating a competitive advantage for businesses that pursue decarbonisation.

INSIGHTS 💡

Businesses today are increasingly motivated to decarbonize and enhance resilience by a mix of ethical values, environmental responsibility, and strategic economic goals. They aim to embed sustainability deeply into their operations, driven by commitments to science, innovation, transparency, and collaboration. This approach helps align purpose with performance by addressing environmental challenges—like reducing heat impacts without raising emissions—and supports better decision-making. In sectors such as logistics and agriculture, companies are shifting away from emission-heavy traditional practices toward low-carbon alternatives that improve supply chain efficiency and

product accessibility, while also adapting to climate impacts with less energy-intensive methods.

Regulatory compliance also plays a crucial role, as companies respond to evolving environmental policies aligned with national and international climate targets. **Economically**, decarbonisation is viewed as a strategic opportunity to optimize operations, cut costs, and improve competitiveness, securing long-term financial stability. **Technological** innovation is embraced not only as a climate imperative but also as a means to maintain market leadership in a low-carbon, resilient economy. **Socially**, companies focus on raising awareness, fostering sustainable workplace practices, promoting equity, and engaging communities to build a culture of sustainability that supports inclusive growth.

Reputation and brand value are enhanced by aligning with environmental, social, and governance (ESG) principles and offering sustainable, chemical-free products, which resonates with conscious consumers and strengthens market positioning. Lastly, businesses are increasingly committed to developing sustainable **value chains**, from sourcing raw materials to delivering final products. Consumer demand for environmentally friendly, natural, and fair-trade options drives this shift, making decarbonisation a vital response to market expectations and a core element of long-term business strategy. Overall, companies seek to lead by example, demonstrating that sustainability and resilience are key to future success and positive global impact.

5.2.1 Agriculture

Agricultural companies are driven to decarbonize and build resilience by a blend of environmental, economic, and ethical motivations. A key driver is the recognition of the significant environmental impact caused by traditional logistics that emit large amounts of GHGs, raising costs and reducing competitiveness and product accessibility. In response, companies **aim to develop low-carbon products that not only cut emissions but also enhance sector-wide resilience and efficiency, benefiting all supply chain players and consumers**. They seek to evolve practices that support soil health, for example, while optimizing services and reducing costs. Central to their strategy is a **strong commitment to sustainability and responsible innovation**, rooted in values like environmental protection and energy efficiency, and driven by a sense of responsibility toward future generations. Additionally, companies focus on **raising awareness among stakeholders to promote greener practices**, aiming to stand out as sustainable leaders. The growing consumer demand for environmentally respectful, fair, and low-impact products further reinforces this transition, as **sustainability becomes a crucial market differentiator.** The shift to renewable energy is also seen as **economically advantageous**, especially amid rising fossil fuel prices.

5.2.2 Manufacturing

Manufacturing companies are increasingly driven to decarbonize and enhance resilience by a combination of external demands and internal values. Externally, there is a **growing need across industries to address climate challenges**, such as rising temperatures, without resorting to energy-intensive solutions. These companies **aim to improve resilience, adapt to volatile economic and environmental conditions, promote circular economy principles, reduce losses, optimize operations, and remain competitive in an evolving global market**.

Internally, many are guided by a **strong commitment to scientific innovation, environmental ethics, and long-term sustainability**. This includes a **focus on developing low-carbon products that align with ethical standards and rising market expectations,** particularly from international partners and environmentally conscious consumers. Strategic goals such as **achieving excellence, enhancing corporate governance, fostering innovation, and maintaining financial stability are central motivators**. Additionally, companies seek to **build inclusive work environments, promote social equity, and comply with environmental regulations**.

They want with their broader social and sustainability commitments to **position them as leaders in their sectors, reinforcing their brand reputation**. By staying ahead of technological advancements and responding to increasing ESG-driven market demands, these manufacturers **aim to future-proof their operations and contribute to sustainable supply chains across industries**.

5.2.3 Transportation

Transportation companies are increasingly motivated to decarbonize and build resilience **in response to growing climate challenges and the need for long-term business sustainability.** A key driver is the opportunity to evolve and adapt their operations to reduce environmental impact while optimizing services and cutting costs. By committing to sustainability, these companies **aim to strengthen their brand image, stand out as innovative leaders, and access new revenue streams and markets**. Additionally, there is **strong emphasis on raising awareness among stakeholders to foster systemic change,** positioning themselves not only as service providers but as active contributors to a more sustainable and resilient transport sector.

5.3 Main impacts and co-benefits

The transition of businesses toward decarbonisation and climate resilience can be seen as both a necessity and an opportunity. As companies adapt to a low-carbon, climate-resilient path, they generate positive impacts on the environment, and wide-ranging financial and social co-benefits. This shift supports global climate goals but also

strengthens long-term business viability in the face of increasing environmental and market pressures. Main impacts and synergies are described in the following table.

Table 5: Main impacts and co-benefits

Environmental	
Reduced carbon footprint	The primary benefit of decarbonisation is a reduction in greenhouse gas emissions (GHGs). By adopting energy-efficient technologies, shifting to renewable energy, and optimizing supply chains, businesses contribute to mitigating climate change and reducing global warming potential.
Decreased resource consumption	Practices such as energy efficiency, circular economy adoption, and sustainable sourcing help reduce the extraction and consumption of raw materials. This reduces deforestation, mining, and other environmentally destructive practices.
Waste reduction	Circular economy practices, such as designing for product longevity, repairability, and recycling, reduce waste, diverting materials from landfills and incinerators. Businesses that adopt these practices help conserve resources and reduce the environmental impact associated with waste management.
Biodiversity protection	By opting for sustainable sourcing and reducing emissions, businesses help protect ecosystems and biodiversity. For example, responsibly sourced materials (such as certified wood or sustainable agriculture products) help reduce habitat destruction and pollution.
Regulatory and policy	
Compliance with regulations	Many countries and regions are introducing stricter environmental regulations and carbon pricing mechanisms. Businesses that proactively adopt decarbonisation strategies are better positioned to comply with evolving regulations, avoiding penalties, and benefiting from incentives such as tax breaks or subsidies for green initiatives.
Positive influence on policy	Businesses that lead in decarbonisation often play an important role in shaping environmental policies, contributing to the development of industry standards and regulations. By engaging in policy advocacy and collaborating with stakeholders, companies can help drive the broader adoption of sustainable practices across industries.
Economic	
Cost savings and operational efficiency	Many decarbonisation practices lead to cost savings, especially through energy efficiency. Switching to renewable energy, optimizing energy consumption, and improving resource

	efficiency can reduce operational costs in the long run. Energy savings and reduced waste also mean lower utility bills and waste disposal costs.
Increased competitiveness and innovation	Businesses that adopt sustainable practices often become market leaders, benefiting from innovation in green technologies, products, and services. This can open new revenue streams through sustainable products, services, and offerings like electric vehicles, renewable energy, or sustainable packaging solutions.
Risk management	Decarbonizing helps businesses hedge against potential financial risks related to climate change, such as carbon pricing, stricter environmental regulations, or volatile energy prices. By future-proofing their operations, businesses reduce their exposure to regulatory and market risks tied to climate change.
Attracting investment	Investors are increasingly prioritizing sustainability and decarbonisation in their decision-making processes. Businesses that lead in decarbonisation can attract more investment, as investors are now looking at environmental, social, and governance (ESG) factors when determining where to allocate capital.
Labor and social	
Job creation and workforce development	Transitioning to a green economy creates new job opportunities, particularly in renewable energy, energy efficiency, waste management, and green construction. Decarbonisation efforts also require new skills, driving investments in workforce development and training programs.
Improved public health	Reducing emissions from energy production and transportation leads to better air quality, which can improve public health outcomes by reducing respiratory diseases, cardiovascular issues, and other health conditions caused by air pollution.
Increased employee engagement	Businesses that take climate action often see greater employee satisfaction and engagement. Many employees, particularly younger generations, prefer to work for companies with strong sustainability commitments. Companies with decarbonisation strategies often attract and retain top talent.
Community impact	Businesses that reduce emissions and waste contribute to cleaner, healthier communities. By adopting decarbonisation and resilience practices or supporting local sustainable initiatives, companies can have a positive social impact by fostering community resilience and encouraging sustainability at the local level.

Addressing inequalities	Decarbonisation practices can support environmental justice by reducing pollution and its disproportionate impacts on vulnerable communities. For example, renewable energy installations in underserved areas can reduce reliance on polluting energy sources, improving health and quality of life.
Inclusive growth	By prioritizing inclusivity in decarbonisation strategies (e.g., training for marginalized communities in green jobs, supporting sustainable small businesses), companies can contribute to more equitable economic growth while addressing the social dimensions of climate change.
Reputation and brand value	
Public recognition, reputation and trust	Businesses that demonstrate a clear commitment to decarbonisation often gain recognition and trust of their stakeholders, including governments, investors, customers and their employees. This can translate into positive branding, media coverage, and consumer loyalty, enhancing the company's reputation as a responsible corporate entity. Customers increasingly demand transparency and accountability in environmental practices, and businesses that meet these expectations build stronger relationships with their stakeholders.
Sustainability as a core business value	Decarbonisation aligns a business with the values of sustainability and environmental stewardship. This transformation can lead to a more resilient and adaptable business model, creating long-term value while addressing the existential risks posed by climate change.
Market access and growth	As consumers and businesses alike are increasingly prioritizing sustainability, companies that decarbonize are better positioned to capture emerging market opportunities in green sectors. This includes sectors like clean energy, electric vehicles, sustainable products, and eco-tourism, which are growing as consumers seek low-carbon alternatives.
Consumer demand for sustainable products	
Shift in consumer preferences	Decarbonisation strategies that include offering sustainable, low-carbon alternatives can tap into growing consumer demand for eco-friendly products, such as sustainable packaging, organic food, or electric vehicles. Companies that decarbonize their products and services often attract a larger, more conscientious customer base. Sustainability certifications can help build consumer trust.

INSIGHTS 💡

Companies implementing decarbonisation and resilience measures achieve comprehensive benefits across environmental, economic, and social dimensions. **Environmentally**, they reduce energy and fuel consumption in vehicles, offices, and buildings, employ passive cooling to lower electricity demand, and shift to cleaner processes that minimize industrial waste, harmful chemicals, and reliance on high-carbon and disposable materials. These efforts improve resource efficiency, water management, and biodiversity protection while promoting circular economy practices, recycled content use, and climate adaptation.

Economically, businesses benefit from cost savings, enhanced operational efficiency, reduced maintenance, and optimized processes, resulting in more resilient service delivery and long-term financial sustainability. **Socially**, companies foster fair labor conditions, equity, and inclusion, invest in green skills development through education and training, and create green jobs in innovative sectors. They also promote awareness of sustainability, strengthen community resilience, and enhance social cohesion. Additional co-benefits include flexible work and travel options for employees, reduced urban pollution and noise, and stronger local economies through synergies with other businesses and support for local supply chains, particularly in agriculture.

5.3.1 Agriculture

Agricultural companies implementing decarbonisation and resilience measures not only experience a broad set of environmental benefits but also generate multiple economic and social co-benefits.

Environmental Benefits

The companies make substantial progress in **reducing their carbon footprint** by shifting to **renewable energy sources**, promoting **short supply chains**, and **minimizing transportation emissions**. By reducing **waste and the use of non-renewable resources**, companies support a **circular economy**, incorporating recycled materials and promoting second-use strategies. The reduction of high-carbon inputs, coupled with efficient building energy use and waste minimization, significantly lowers greenhouse gas emissions.

The move to **organic, minimally invasive cultivation methods** avoids harmful pesticides and fertilizers, preserving **soil health** and preventing water and air contamination. This improves the **overall resilience of ecosystems** and contributes to **land restoration**, supporting long-term agricultural productivity. Indoor agriculture, hydroponics, and other controlled-environment farming systems use **less water**, making them ideal for addressing water scarcity and climate variability. These

approaches also help **preserve biodiversity**, improve **land conditions**, and support the **adaptation to climate change** through more resilient agricultural practices.

Economic and operational co-benefits

Decarbonisation and resilience strategies lead to significant **cost savings and operational efficiencies** in agricultural operations. By adopting **indoor farming, hydroponics, and vertical farming**, companies eliminate the need for long-distance transport, cutting logistics costs and reducing spoilage. These methods ensure consistent, high-quality yields year-round, even during off-season periods and extreme weather, improving the reliability of supply and minimizing risk. Additionally, low-maintenance systems and resilient infrastructure reduce the need for frequent repairs or replacements, **lowering capital and maintenance expenditures**.

Energy use is optimized through measures like the **installation of solar panels**, which power a significant share of facilities, and the adoption of **electric vehicles**, which help reduce fuel consumption. **Efficient water management,** such as rainwater harvesting and replacing high-consumption vegetation, further cuts utility costs and enhances long-term sustainability. These efficiencies result in **greater productivity, streamlined processes**, and improved value chain performance.

Social and community co-benefits

On the social front, these companies are **transforming the role of agriculture within local economies and communities**. Certain initiatives empower small growers to adopt sustainable technologies and improve the resilience and sustainability of their own operations. This fosters **knowledge sharing, autonomy**, and a culture of innovation at the local level.

Through **educational programmes**, companies are training the **next generation of green professionals**, partnering with technical institutes to improve skills and awareness and provide hands-on education in sustainable agriculture, new technologies, and environmental stewardship. These efforts help **build a skilled workforce** prepared to address future climate and agricultural challenges.

Agricultural companies also actively implement **fair labor practices**, ensuring good working conditions, inclusivity, and ethical management. They also **enhance social well-being** by offering employees greater **flexibility in work** arrangements, fostering a **better work-life balance**. Employees are encouraged to participate in decision-making and benefit from continuous professional development, creating a more **equitable** and **motivated** workforce.

By collaborating with local suppliers, businesses contribute to **regional economic development** and encourage collaborative efforts, promoting the use of locally sourced products. This reduces transport emissions and **boosts local economies**, particularly in rural areas. Cultural and community-building initiatives, such as book clubs, wine tastings, and artistic events, further **enrich rural life** and **foster the decentralization of cultural opportunities**, helping reverse rural depopulation and promoting sustainable tourism.

Performance and value chain co-benefits

Continuous improvement is embedded in these companies' models. With ongoing **monitoring of processes, energy consumption, and environmental footprints**, they **ensure transparency and optimize performance**. There's a focus on **avoiding overproduction**, **improving traceability,** and **enhancing supply chain accountability**.

5.3.2 Manufacturing

Overall, manufacturing companies that invest in decarbonisation and resilience measures not only reduce their environmental impact but also enhance business efficiency, foster a skilled and engaged workforce, ensure ethical sourcing, and support local and global sustainability goals. These actions reinforce their competitiveness and leadership in a rapidly evolving industrial landscape.

Environmental benefits

The shift toward **low-impact extraction processes**, which produce no industrial waste, drastically **reduces carbon footprints** compared to traditional methods. Companies also implement strategies to **reduce fuel consumption, minimize the use of high-carbon materials**, and **eliminate harmful chemicals**, fostering cleaner, safer production environments. There is also a strong commitment to **better water management**, including efficient use and reuse, and the **valorisation of recycled content**, aligning with **circular economy principles**. This includes reducing waste disposal, encouraging the second life of materials, and protecting natural resources. Further environmental responsibility is demonstrated through rigorous supply chain oversight, for example through the Responsible Minerals Initiative's third-party audits, **ensuring ethically and sustainably sourced materials**.

Economic and operational co-benefits

Companies report **significant cost savings and operational efficiency** through energy reduction and process optimization. Notably, energy consumption has been reduced and there is an increase of energy coming from **renewable sources**, lowering

reliance on fossil fuels. **Innovative cooling solutions**, such as materials that reduce surface temperatures without electricity, cut the demand for energy-intensive cooling systems, protect sensitive equipment from overheating, and extend the lifespan of critical infrastructure. These improvements **reduce service interruptions and maintenance needs**, especially important as climate-related heat waves become more frequent.

Social and workforce-related co-benefits

On the social front, companies are fostering the growth of **green jobs**, especially in science, engineering, and technical fields. These roles support innovation and strengthen internal capacity for sustainability-led transformation. Companies promote **collaborative management models**, ensuring employees are involved in decision-making, skill development, and innovation. This includes structured efforts to **guarantee fair labor conditions, promote equity among employees, improve working environments**, and **raise awareness** about sustainability across all levels of the organization.

By promoting **local supply chains and organic farming for their raw materials**, manufacturers also **support rural economies** and help make agricultural regions more resilient to global disruptions. This approach reduces transportation emissions while reinforcing local economic structures.

Process and value chain optimization

A major outcome of these initiatives is the **continuous improvement of production processes**, achieved through **enhanced monitoring**, **traceability**, and **transparency**. Companies are optimizing internal operations with **real-time data tracking**, reducing overproduction, shortening process times, and ensuring better management of energy, materials, and labour. These efforts directly contribute to **improved productivity** and enable faster adaptation to new regulations or market demands. Collaboration with **public and private sectors** to test real-world sustainability solutions also positions these companies as active contributors to **smarter, more efficient cities** and industry-wide innovation.

5.3.3 Transportation

Transportation companies are achieving multiple impacts and co-benefits by adopting environmentally friendly and efficient practices. Apart from the positive environmental impacts, these companies benefit from cost savings, greater efficiency, and improved transparency and they support local economies by creating green jobs, enhancing employee well-being, promoting safer driving, and fostering a culture of environmental awareness among staff and partners.

Environmental benefits

Transportation companies **lower their carbon footprint** by reducing fossil fuel use, minimizing unnecessary transfers, cutting down on raw material consumption, and adopting new, cleaner technologies. **Energy consumption decreases** not only in vehicle operations but also in office environments. The reduction in transfers also **lessens pollution and noise disturbances in urban areas**, improving local quality of life. Additionally, **waste and disposable component usage are minimized**.

Economic and operational co-benefits

Transportation companies achieve **cost savings** and **operational efficiency** through continuous optimization of internal and external processes, leading to reduced maintenance costs and better resource management. Transparency and traceability are improved, enabling continuous value chain enhancements and data-driven microservices development, all contributing to a more sustainable, resilient transportation sector.

Social and workforce-related co-benefits

Companies foster **synergies with local businesses**, **boosting the regional economy** and **creating new jobs** linked to green transport services. **Employee flexibility** is enhanced through more adaptable work and travel options, promoting a **better work-life balance**. Responsible driving practices reduce accidents, further supporting **safety and efficiency**. Ongoing efforts are made to **raise awareness among employees and service actors** about greener practices.

5.4 Trade-offs in business transformation

While the benefits of decarbonisation are clear, businesses may face certain potential compromises when implementing decarbonisation and resilience measures. These can be operational, financial, technological and social. It is important for businesses to carefully weigh these trade-offs to ensure that decarbonisation efforts are both effective and sustainable in the long run. The main trade-offs identified are presented below and apply for all researched sectors.

Regulatory compliance vs. operational flexibility

Decarbonisation is often driven by government regulations and targets. However, complying with new regulations (such as carbon pricing, carbon cap-and-trade systems, or emissions limits) can increase operational complexity, requiring significant changes to business models, processes, and supply chains. These regulatory compliance efforts

may come with additional costs or operational constraints. Additionally, businesses may face challenges in maintaining flexibility during the decarbonisation process. For example, energy-efficient systems or renewable energy infrastructures may require more careful planning, making some businesses less agile in the short term.

Quotes from company interviews:

"Limited access to financing, with almost no funding available. Lack of instruments that help during the transition and not only to perform drastic changes."

"In some cases, we have slowed down the time-to-market to ensure that new product launches align with our ethical and environmental standards."

"Speed of innovation vs. compliance with sustainable standards: Rather than rushing development at any cost, we've chosen to move forward responsibly, validating each step in the lab and in real-world pilots. This has slowed down specific processes but has allowed us to ensure that the environmental impact of our solutions is truly positive."

Financial costs vs. long-term savings and sustainability

Decarbonisation often requires businesses to focus on long-term sustainability and savings over immediate financial gains. Decarbonisation process changes and measures, such as upgrading to energy-efficient equipment, transitioning to renewable energy sources, or investing in carbon capture technology, often require significant upfront capital. These initial investments can be a challenge, especially for smaller businesses or those with limited financial resources. While the long-term operational savings (e.g., energy bills, waste disposal costs) can be substantial, the payback period for some decarbonisation investments can be long, potentially making it harder for companies to realize short-term financial returns.

Furthermore, the ability to access capital for green initiatives may be limited depending on market conditions or the company's creditworthiness, especially in the absence of clear financial incentives or subsidies. Shareholders or investors who focus on short-term financial performance might push businesses to prioritize profitability over long-term environmental sustainability, creating a tension between sustainable practices and the expectation of immediate returns.

Quote from company interview:

"Higher initial costs vs. long-term returns: We are opting for materials and processes that meet low environmental footprint criteria, even though this entails higher manufacturing costs in the early stages. This decision reflects

our conviction that sustainability is non-negotiable and that, in the long term, it will generate added value for our customers and society."

"We have accepted higher initial costs to ensure a fully sustainable and near-zero impact supply chain."

Technology availability vs. implementation time

While many green technologies are already proven, others are still in development or may not be fully scalable or affordable. The adoption of cutting-edge technologies can come with risks such as operational disruption, unexpected costs, and unproven results.

Quote from company interview:

"The technology is still in the early stages and at a high cost, and sometimes the alternatives are not efficient."

Product performance vs. sustainability

Some sustainable materials or low-carbon technologies may not yet match the performance or efficiency of their conventional counterparts. For example, electric vehicle batteries may not offer the same driving range or charging speed as gasoline-powered cars, or sustainable packaging may be more expensive or less durable than traditional packaging.

Cultural resistance vs. transformation

Employees may resist changes to their work environment, particularly if decarbonisation efforts result in altered job roles, new technologies, or changes in work practices. For example, workers in carbon-intensive sectors (e.g., coal mining, oil, and gas) may resist the transition to greener practices due to job insecurity, skill mismatches, or a lack of understanding of the benefits. The transition to a low-carbon economy requires significant investment in training employees to handle new technologies or business models. While this investment is valuable in the long run, it can result in short-term operational disruptions and costs associated with reskilling or upskilling employees.

Additionally, limited technical knowledge and a strong resistance to change often arise when introducing new, greener technologies, along with a reluctance from both customers and suppliers to move away from conventional and unsustainable practices.

Quotes from company interviews:

"Resistance from some suppliers to abandon unsustainable conventional approaches".

"Resistance to change current practices (cultural resistance) specially from customers".

"Training and capacitation is a key central aspect of the company, not only by facilitating these changes within the company but promoting these strategies in customers and other professionals".

Supply chain complexity vs. sustainability

Moving toward a more sustainable supply chain, such as sourcing raw materials from sustainable or local suppliers, may initially result in higher costs or disruptions in the supply chain. For example, the availability of raw materials, new supplier relationships, or transportation logistics could be affected. Additionally, sustainable materials may cost more than traditional, less environmentally friendly options. These increased costs may be passed down the supply chain or to consumers, affecting overall product pricing and market competitiveness.

Moreover, ensuring that suppliers adhere to decarbonisation standards may require significant oversight and resources. Small suppliers may struggle to meet these standards, creating potential conflicts in the supply chain.

Quotes from company interview:

"Conscious business decisions: We have also foregone specific collaboration opportunities with companies whose goals were not aligned with sustainability, prioritising long-term relationships with customers and partners who share our vision."

"Supply chain complexity: As this is an innovative product, key materials are not always available locally. We have had to carefully evaluate our supply chain to minimize our carbon footprint while ensuring quality and reliability."

Customer expectations vs. cost implications

Decarbonizing products may increase production costs. The demand for low-carbon products is growing, but the willingness of consumers to pay a premium for sustainable options can vary. There may be segments of the market that still value performance, price, or convenience over sustainability. Decarbonisation measures may therefore not lead to immediate customer acceptance or increased sales, especially if the market is not fully educated about the benefits. This can create a trade-off between offering more sustainable products and meeting the demands of certain customer groups. Businesses may struggle to balance higher production costs with market prices, potentially affecting profitability.

Quote from company interview:

"High investment costs are needed to implement meaningful changes, and in most cases, this additional cost cannot be translated to the customer."

Challenges for SMEs vs. large corporations

Some decarbonisation measures, such as switching to renewable energy or adopting new sustainable manufacturing processes, may be easier for large corporations with significant resources but more challenging for SMEs. This can lead to a discrepancy between large businesses that can afford substantial upfront investments and smaller ones that face greater financial or operational barriers.

Quote from company interview:

"Initial costs and budget constraints: As with many tech startups, balancing sustainability with economic viability has been a significant challenge. Some sustainable measures, such as the use of recyclable packaging, entail higher initial costs."

6 Conclusions

This task operated in synergy with the other WP7 tasks, enhancing and supporting the achievement of the work package objectives, particularly by offering guidance to businesses on strengthening their adaptation capacity and resilience through best practices that facilitate the transition along the decarbonisation pathways.

More specifically, this report offers businesses valuable guidance for managing their transition toward decarbonisation and climate resilience. It begins by outlining key risks and transition barriers businesses commonly encounter, followed by strategic responses and practical measures to address them. Sixty regional businesses, each one with a distinct set of best practices, from the sectors of agriculture, manufacturing and transportation, showcase effective mitigation and adaptation options, serving as examples to inform, motivate, and inspire broader action across the business community. The report also provides insights on the underlying drivers, impacts and co-benefits of such practices, as well as the trade-offs involved, providing a comprehensive overview and a strong foundation to support companies through the regional transition process. Local perspectives are consistently integrated throughout the process.

Further, the good practices are linked to the downscaled results from the LOCALISED NZBC tool's modeling and analysis, illustrating their regional transition risk to

decarbonisation. These best practices offer examples across varying risk levels (low, medium, high) with particular emphasis placed on medium and high-risk regions where applicable. The best practices are also integrated in the LOCALISED NZBC tool, demonstrating regional examples to be used as inspiration and guidance for other companies.

This report serves as a valuable resource for businesses seeking to navigate the complexities of decarbonisation and climate resilience, providing insights and examples that can inspire action across the business community.

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Annex 1: Sample sources for awards, initiatives and projects

Source	Region	Information
Net-zero Industries Award	Australia, Austria, Canada, China, Finland, Germany, the Republic of Korea, the United Kingdom and the United States.	The Net-Zero Industries Award recognises and celebrates outstanding innovations in industrial decarbonisation. It shines a light on the people and projects that are revolutionising energy-intensive industries and driving substantial reductions in greenhouse gas emissions. To celebrate the trailblazers spearheading this transformation, Mission Innovation's Net-Zero Industries Mission established the Net-Zero Industries Award as the first global competition for outstanding work on industrial decarbonisation. The best project submission from each Net-Zero Industries Mission core mission member country is awarded.
PSI Sustainability Award	All regions in Germany International participants	The awards are organized by the Promotional Product Service Institute (PSI), a division of Reed Exhibitions Deutschland GmbH, based in Düsseldorf, Germany. PSI is a leading European network and trade platform for the promotional products industry. The PSI Sustainability Awards were created to promote transparency, measurable progress, and comparability in CSR and sustainability efforts across the sector. They aim to enhance the industry's competitiveness and visibility in the realm of sustainable business practices. The PSI Sustainability Awards are open to companies in the promotional products industry regardless of their size or location. Although the event is organized by the PSI in Germany, there are no stated geographical restrictions, allowing international participation from manufacturers, importers, and distributors worldwide, provided they are part of the promotional products supply chain. The awards are structured around the three pillars of sustainability: economy, environment, and social impact/ethics. Participants can submit

		documentation in nine categories, grouped under three areas: company, product, and campaign. • Categories 1–3: Based on certifications (e.g., ISO 9001, EMAS, SA 8000) assessing economic, environmental, and social excellence. • Categories 4–5: Evaluate documented in-house environmental and social initiatives. • Category 6: Recognizes sustainable products or product lines. • Category 7: Rewards sustainable marketing campaigns involving eco-social promotional products. • Category 8: "Innovator of the Year" highlights a sustainable product with a documented, ethical value chain. • Category 9: "Sustainable Company of the Year" is awarded to the company with the highest cumulative score across all categories. A scoring system, supported by an algorithm, rates submitted certificates by transparency, relevance, and independence. A jury evaluates non-certifiable initiatives and campaign submissions.
Factories of the Future Awards	All regions in Spain International participants	The Factories of the Future Awards are organized by Advanced Factories, a leading annual event in Spain that focuses on industrial automation, robotics, and digital manufacturing. The event brings together professionals, companies, and experts from the industrial sector to showcase the latest innovations and discuss the future of manufacturing. While the awards primarily focus on recognizing innovation within the Spanish industrial sector, they are open to international participants. Companies, research centres, and professionals from various countries can submit their projects, provided they contribute to the advancement of Industry 4.0 and smart manufacturing. The Factories of the Future Awards 2024 aim to recognize the most innovative projects and professionals in the industrial sector.

		The awards are divided into several categories, including: • Leadership in the Digital Transformation of the Industrial Plant: Honours companies that have successfully implemented digital technologies to transform their manufacturing processes. • Best Research and Development Project: Recognises outstanding R&D initiatives that contribute to the advancement of Industry 4.0. • Best Start-up in the Industrial Sector: Highlights emerging companies that offer innovative solutions for the industrial market. • Best Equipment for the Industrial Plant: Awards the most innovative machinery or equipment that enhances manufacturing efficiency. • Best Industrial Sustainability Project: Acknowledges projects that promote environmental sustainability within the industrial sector. • Best Talent Management Strategy: Recognises initiatives that effectively attract, retain, and develop talent in the industry. The evaluation criteria focus on the innovation level, applicability, scalability, and impact of the projects on the industrial sector. A panel of experts from the industry and academia assesses the submissions to determine the winners.
Premios internacionales de movilidad (International mobility prizes)	All regions in Spain International participants	The Premios Internacionales de Movilidad are organized by Empresas por la Movilidad Sostenible, a Spanish platform dedicated to promoting sustainable mobility practices. The organization brings together companies, institutions, and professionals committed to improving mobility and implementing sustainable practices. While the awards primarily focus on initiatives within Spain, they are open to international participants. Organizations, companies, and institutions from various countries can submit their projects, provided they contribute to the advancement of sustainable mobility. The awards aim to recognise outstanding contributions to sustainable mobility. The awards are divided into several categories:

		• Product Award: This award recognises innovations in products that enhance sustainable mobility, such as secure and convenient infrastructure for bicycles and scooters, with features like electric charging options and helmet storage. • Service Award: Granted to initiatives that provide digital, secure, and sustainable solutions for sectors facing mobility challenges, such as addressing the shortage of parking spaces for large vehicles in logistics. • Public Company Award: Presented to public companies that have developed comprehensive strategies for promoting sustainable mobility. This includes efforts that align with international environmental commitments and contribute to achieving the Sustainable Development Goals (SDGs). • Private Company – SME Award: Bestowed upon small and medium-sized enterprises (SMEs) that revolutionise traditional sectors by introducing digital and flexible solutions, transforming mobility services with innovative business models. NGO, Foundation, Association, Other Award: Given to non-profit organizations or associations that play a key role in promoting sustainable mobility within specific communities, regions, or sectors. The evaluation criteria focus on the innovation level, applicability, scalability, and impact of the projects on sustainable mobility. Projects that can serve as models for others and have an effect on other entities are particularly valued.
Energy globe award	Worldwide	The Energy Globe Award – World Award for Sustainability is one of the most prestigious environmental prizes worldwide, according to a survey by the American agency Arthur D. Little. Each year, projects from over 180 countries participate (e.g., in 2019). The award is organized by the independent Energy Globe Foundation, based in Austria. What is awarded: Implemented environmental protection projects can be submitted by individuals, companies, or NGOs.

		Participation is free of charge. Categories: Earth, Fire, Water, Air, Youth (future-oriented), Annual special category. Award Ceremonies: • Regional level in Austria (all federal states) • National level in over 90 countries (other country winners presented online) • Large TV galas in some countries (e.g., Prague, Budapest, Bucharest) • End-of-year: Energy Globe World Award
Science Based Targets Initiative 2025	Worldwide	Science-based targets (SBTs) provide companies with a clear and actionable pathway to reduce emissions in line with the goals of the Paris Agreement, aiming to limit global warming to 1.5 °C. More than 10,000 companies worldwide have already joined the initiative. Key points: • Targets are considered "science-based" if they align with the latest climate science. • Companies of all sizes and sectors, including financial institutions, are encouraged to participate. • There are sector-specific guidelines to address the unique challenges of different industries – with more guidance being developed continuously. • The SBTi especially encourages high-emitting companies to join, as they play a critical role in the transition to a zero-carbon economy.
Best practices for SMEs in the energy transition	Europe	SMEunited is the voice of crafts and SMEs in Europe with around 70 member organisations from over 30 European countries. SMEunited is a recognised employers' organisation and European Social Partner and acts on behalf of crafts and SMEs in the European Social Dialogue and in discussions with the EU institutions. This report explores national support measures for the energy transition of SMEs, actions by SMEunited member organisations to help companies in this pursuit and stories of successful SME decarbonisation journeys. It has been developed as part of the "Covenant of Companies for Climate and Energy", a

		pilot project from the European Commission which aims to support companies in their efforts to decarbonise.
TRIGOS awards	All regions in Austria Regional awards: Lower Austria, Carinthia, Tyrol and Styria	For around 20 years, the TRIGOS has been the most prestigious award for responsible business practices in Austria. It is presented for projects in the field of Corporate Social Responsibility (CSR) in six categories: Climate Protection, Social Innovation & Future Challenges, Regional Value Creation, International Engagement, Employee Initiatives, and Exemplary Projects. The award is sponsored by the Austrian Federal Economic Chamber (WKÖ), the Federation of Austrian Industries (IV), the Red Cross, Caritas, the Austrian Environmental Association, and respACT. In addition to the nationwide award, the TRIGOS is also presented in Lower Austria, Carinthia, Tyrol, and Styria. TRIGOS sees itself as a driver for corporate responsibility and sustainable innovation in the Austrian economy and provides a platform for those companies that are actively helping to shape a sustainable society. The award is given to companies that take on a leadership role and act as role models for responsible business and sustainability and that contribute to the future viability of the Austrian economy, society and environment.
VCÖ-Mobilitätspreis	All regions in Austria	Improving mobility sustainably, transporting goods in an environmentally friendly way, reducing traffic problems: the VCÖ Mobility Award 2025 is looking for projects and concepts that make mobility and freight transport in cities and regions fit for the future. How can we succeed in making our mobility more environmentally friendly, healthier, more energy-efficient and space-saving? What projects and concepts are there for freight transportation that is gentle on the environment and the population? How can we prepare our transportation system in advance for developments such as climate change or the increasing number of older people? The mobility of the future must meet the challenges in urban centers and rural areas alike.
Energy Globe Österreich	All regions in Austria	The ENERGY GLOBE Award was founded in 1999 by Austrian energy pioneer Wolfgang Neumann and is now the world's most prestigious environmental award. Each year, the Energy Globe Award recognizes outstanding, sustainable projects focusing on resource

		conservation, energy efficiency, and the use of renewable energies. The aim of the award is to present innovative and sustainable projects to a broad public, as there are already good, feasible solutions to many of our environmental problems. This raises awareness of these projects and creates a multiplier effect. All projects that use our resources sparingly and carefully, or that utilize renewable energies, are eligible to participate. The regional winning projects are recognized in the federal states and nationally in Austria in the five award categories: Earth, Fire, Water, Air, Youth, and one special category. The international winning projects in the five award categories: Earth, Fire, Water, Air, and Youth are subsequently honoured at a globally broadcast TV gala.
Austrian SDG Awards	All regions in Austria	The goals of the Austrian SDG award: • Austria's most important sustainability award • Recognition of the commitment of companies | Initiatives by and for children and young people | Media and journalism | Municipalities, municipal associations and cities • Free ESG evaluation for companies • Award ceremony in the Austrian National Council
OÖ Agrarpreis	Austria - Upper Austria	The Upper Austria Agricultural Prize 2025 is the next milestone in the sustainable transformation of Upper Austrian agriculture. This award recognizes innovative projects that combine economic efficiency and ecological responsibility, thus ensuring the future viability of the agricultural sector. The award is part of a comprehensive strategy that focuses on the circular economy, innovation, and resilience.
Innovation and Research Award of the State of Carinthia	Austria - Carinthia	The Innovation and Research Award is the highest honour awarded annually by the Carinthian Business Development Fund (KWF) on behalf of the State of Carinthia in the field of innovation and research. It is endowed with a total of 58,000 euros and is presented annually in the categories of large companies, small and medium-sized enterprises (SMEs), micro-enterprises and as a special award (innovation culture).

Tyrolean Climate Protection Prize	Austria - Tyrol	The Tyrolean Climate Protection Award, initiated by ORF Tirol and TIWAG, aims to honour and promote innovative and sustainable climate protection initiatives in Tyrol. It recognizes the efforts of individuals, companies, communities, and organizations that make a positive contribution to climate protection in the region. The Leopold Franzens University of Innsbruck supports the award with its expertise. Regional initiatives and projects make an important contribution to achieving the common goal. The Tyrolean Climate Protection Award aims to bring these positive examples from Tyrol to the forefront and thus actively promote the issue among the population. The projects benefit from publicity and thus find supporters and imitators. Because only together can we overcome the climate crisis. Business: We are looking for projects in the corporate environment that stand out for their efficient and sustainable use of resources and energy, high levels of innovation, and improved carbon footprint. Integration into the company's overall strategy is important. Likewise, we are looking for projects and companies that actively contribute to climate protection through their products or corporate purpose. We are particularly interested in SMEs that implement climate projects of their own volition and not due to legal requirements.
KPC (UFI Projekte)	All regions in Austria	Environmental funding for companies: the domestic environmental funding (UFI) offers companies an incentive to implement measures to save energy and increase efficiency. The UFI is the central funding instrument of the Federal Ministry for Climate Protection (BMK) when it comes to protecting the environment. Support is provided for measures by companies that have positive environmental effects, in particular CO2 reductions and energy savings, such as the use of renewable energy sources, increasing energy efficiency or air pollution control and noise protection measures.
Klimaaktiv Good Practices Unternehmen	All regions in Austria	klimaaktiv communicates and disseminates the “how-to” on the topics of energy saving, climate-friendly buildings, renewable energy sources and environmentally friendly mobility in Austria. Together with other federal initiatives such as the Climate and Energy Fund and

		the funding agencies, research programs and users from the field, the klimaaktiv experts develop a wide range of information and support services for companies, municipalities and private individuals. klimaaktiv is effective in many areas. For example, klimaaktiv standards and guidelines are incorporated into the further training courses of many education providers, but also consultations on the mobility sector motivate and enable companies to implement environmentally friendly mobility. An overview of the klimaaktiv goals, activities and successes can be found below. All activities are reviewed and evaluated at regular intervals by external experts.
Energy transition leaders (OÖ Initiative)	Austria - Upper Austria	Companies on their way to climate neutrality: The "Energy Transition Leaders Initiative" is developed and coordinated by the regional energy agency of Upper Austria (OÖ Energiesparverband). The initiative is based on the cooperation between 15 pioneering companies that are implementing the energy transition in a holistic manner and prioritising the phase-out of fossil fuels. These 15 Energy Leaders employ over 25,000 staff and generate more than 7 billion Euro in annual turnover.
Sustainability Award	All regions in Italy	The Sustainability Award is an important recognition reserved for those Italian entrepreneurs who have best expressed the ability of Italian business to innovate, renew and activate the best energies of the country for such a noble cause. It offers candidate companies the opportunity to receive important recognition for the ability they have demonstrated to carry forward sustainable, inclusive and stable growth, creating added value for the community as well. The award honours those who have made sustainable development an integral part of their corporate DNA, preparing processes, systems and resources in order to reduce their environmental and social impact. The Sustainability Award is an important recognition reserved for those Italian companies that have distinguished themselves in addressing the challenges of the climate emergency, transforming it into an opportunity to express innovation and activate the best energies in the country. Sustainability is a topic of enormous importance, to which Italian companies are responding with concrete investments linked to the green economy and the concept of

		circular economy, supported by institutions, the economic world and technological progress. Over 300,000 companies in Italian industry and services have invested in sustainability and efficiency - paying particular attention to the energy efficiency sector and renewable sources - marking a true record of eco-investments.
Responsible Innovators Award 2024 - Ecological Transition	Italy - Emilia Romagna	The Responsible Innovators Award 2024, now in its tenth edition, is an initiative promoted by the Emilia-Romagna Region to valorise projects that combine innovation and social responsibility, contributing to the objectives of the 2030 Agenda and regional policies for sustainable development. This year, four distinct projects were awarded for each of the four strategic objectives of the Jobs and Climate Pact
Green Chemistry Lombardy for a Sustainable Future 2024	Italy - Lombardy	"The "Green Chemistry Lombardy for a Sustainable Future 2024" programme is an initiative promoted by the Lombardy Region in cooperation with Federated Innovation Network and Cariplo Factory. This programme aims to stimulate innovation in the sustainable chemistry sector, involving start-ups, university spin-offs and innovative SMEs. Applications were collected through an expression of interest, which identified the main challenges and opportunities in the field of green chemistry. Subsequently, a call was launched to gather innovative solutions in response to these needs. On 29 October 2024, during the Matching Day in Milan, prizes were awarded to the six finalist projects, each with a non-repayable contribution of €25,000, for a total of €150,000. These prizes were intended to support the development of innovative solutions in the fields of green chemistry, such as greentech, logistics, mobility, energy, smart materials, health, pharmaceuticals and housing. In addition, the winners had the opportunity to take advantage of mentoring services and to consider developing a Proof of Concept (PoC) in collaboration with companies in the Federated Innovation @MIND network.
Sicily Innovation Award	Italy - Sicily	The award aims to reduce energy consumption, promote sustainability and revitalise the local manufacturing heritage, contributing to the fight against climate change and enhancing local forest resources.

Tuscan Innovation Award	Italy - Tuscany	The objective of the award, now in its seventh edition, is to support and enhance the research and technological, digital and sustainable innovation of Tuscan companies, promoting youth initiative and the innovative potential of the territory. Fourteen Tuscan companies, out of 43 participants, winners of the 2024 "Amerigo Vespucci" Toscana Innovation Award, established by Regional Law 46/2015, promoted by the Regional Council, Confindustria Toscana and organised by Digital Innovation Hub Toscana (DIH).
SMAU 2025 Innovation Award - Confindustria Valle D'Aosta	Italy - Valle D'Aosta	The SMAU Roadshow, the reference circuit of the national and international innovation ecosystem, made a stop in Valle d'Aosta for the first time on Tuesday 25 February 2025, with an event dedicated to the innovation of Italian companies. This initiative was an opportunity to connect, in an innovative way, companies, start-ups, intermediate actors and public administration players, to share innovation experiences and foster the creation of new partnerships.
Start Cup Sardinia 2023	Italy - Sardinia	Start Cup Sardegna 2023 is the 17th edition of the regional competition dedicated to the best innovative business ideas developed in Sardinia. Organised by the Universities of Sassari and Cagliari, in cooperation with INNOIS and with the support of entities such as Banco di Sardegna, Fondazione di Sardegna and Sardegna Ricerche, the competition aims at enhancing research and stimulating the emergence of companies with high innovation and growth potential in the region.
EU Organic Awards 2024 - Best Organic Food Processing SME	All regions in Italy	The awards are organised by the European Commission, the European Economic and Social Committee, the European Committee of the Regions, COPA-COGECA and IFOAM Organics Europe, with the support of the European Parliament and the Council. On the occasion of EU Organic Day, the European Commission announced the winners of the EU Organic Awards. This edition included 7 categories and or awards, which went to innovative, sustainable and inspiring projects that add significant value to the production and consumption of organic products. There were almost one hundred nominations and 24 finalists from 11 Member States. The winners follow the high standards set by their predecessors and present sustainable and inspiring projects along the entire European organic value chain. The winning projects, and the people behind them, demonstrate how

		organic farming and production can create innovative value chains and generate new job opportunities in rural areas.
South Tyrol Mobility Award 2024	Italy - South Tyrol	The South Tyrol Mobility Award 2024 is an award established by the Parliament of the Province of Bolzano to encourage the development of innovative solutions in the field of sustainable mobility.
Urban Award	All regions in Italy	The Urban Award 2024 is a competition that rewards the most virtuous Italian municipalities in promoting sustainable mobility. The award ceremony took place in Turin from 20 to 22 November 2024, during which the best smart mobility and intermodal transport projects were recognised. The municipality of Padua received the top award for its efforts to integrate different sustainable transport modes, such as bicycles, public transport and car sharing, into a cohesive and accessible urban system. Other award-winning municipalities include Bologna, for its innovative system of bicycle lanes and bike sharing services, and Florence, for its shared electric mobility project involving both citizens and tourists.
BBVA awards	All regions in Spain	BBVA awards the ten best sustainable producers in Spain in 2024. For the fifth consecutive year, BBVA and El Celler de Can Roca have recognized the ten best sustainable producers in Spain. The winners have stood out for applying environmental sustainability in their production models, as well as for promoting the rural environment, generational change and social impact. A total of 200 producers from all autonomous communities have applied for this edition of the awards, which represents a 35% increase in applications compared to 2023. The winners will be part of a dissemination plan to make their stories known throughout the country, and their products will be included in a recipe prepared by the Roca brothers. In addition, and to mark the fifth anniversary of these awards, the best producer of the five editions will be awarded 5,000 euros.
BBVA Sustainable enterprise award	Spain - Catalonia	This award, aimed at entrepreneurs, freelancers and entrepreneurs, encourages the development of projects, business models, changes in production processes or new products and services that are committed to sustainability. To participate, the company must have its registered office in Catalonia and meet the requirements indicated in the

		bases (Environmental benefits, social benefits, innovation and technical feasibility are some of the criteria taken into consideration) The 2 winning nominations receive 15,000 and 7,000 respectively for an advertising campaign for their project.
Barcelona 2030 Awards	Spain - Barcelona	Barcelona City Council created the Agenda 2030 BCN Awards, with the aim of both recognising and raising awareness of innovative initiatives with a measurable impact on meeting Sustainable Development Goals (SDGs) in Barcelona. In addition to recognising and rewarding the most outstanding projects and initiatives, the Agenda 2030 BCN Awards aim to create an annual space for meeting, reflection and mutual recognition for citizens and all those who are part of the political, business, academic and social fabric involved with the objectives of the 2030 Agenda. By generating awareness of the applications received for the awards, and showcasing the winners, they contribute to raising profiles and implementing innovative actions. An independent jury made up of representatives from institutions of proven prestige in matters of sustainability is responsible for the judging.
Corresponsables awards	Spain Latin America	The XV Corresponsables Awards are organized by the Fundación Corresponsables, a non-profit association. The foundation aims to promote a culture of Corporate Social Responsibility (CSR) across various organizations, including public and private sectors, NGOs, and civil society, with a particular focus on supporting entities with limited resources to communicate their responsible actions. These awards recognize and honour best practices in CSR, sustainability, and responsible communication. They are open to a wide range of participants, including companies, non-profits, public institutions, and educational entities from Spain and Latin America. The awards cover various categories such as environmental initiatives, social projects, and good governance practices. The primary objective is to highlight and disseminate exemplary actions that contribute to sustainable development and social responsibility
Impact Business Award	All regions in Spain	The Ship2B Foundation is a Spanish organization dedicated to accelerating and financing impact startups, promoting innovation strategies for large companies, and driving impact investment. Its mission is to boost the impact economy by fostering an economic model where the primary goal for startups, businesses, investors, and organizations is not only to

		maximize profitability but also to enhance their social and environmental impact. The foundation works with startups, businesses, social organizations, and investors to achieve these objectives. The awards aim to recognize and promote key agents in the impact economy who contribute significantly to society and the environment. The Ship2B Impact Awards 2022 encompass three categories: • Impact Champion: Honors individuals with a distinguished track record in social or environmental impact. • Impact Startup: Recognizes a technology-based company notable for its innovative, sustainable project with the potential to scale its social or environmental impact. • Impact Evolution: Introduced in 2022, this category acknowledges a project or initiative driven by a company aiming to address a social or environmental issue. The evaluation criteria focus on the innovation, sustainability, and scalability of the initiatives, as well as their potential for significant social or environmental impact.
Innovative SME Awards	All regions in Spain	The awards are organized by the Ministry of Science, Innovation, and Universities of Spain. This governmental body is responsible for the development and implementation of policies related to scientific research, technological development, and innovation in Spain. The awards are divided into two main categories: Innovation and Design, each with several subcategories: Innovation Categories • Innovative Trajectory: Recognizes individuals with a long-standing career in innovation. • Innovative Small and Medium-Sized Enterprise (SME): Acknowledges SMEs that have incorporated innovation into their business strategy. • Innovative Large Company: Honors large companies demonstrating significant innovation.

		Design Categories: • Professional Career: Awards individuals with a significant career in design. Company: Recognizes companies that have integrated design into their business strategy. • Young Design Talent: Highlights emerging designers under a certain age (typically under 35). The evaluation criteria focus on the impact of innovation or design on the entity's growth, the originality and applicability of the work, and the contribution to the prestige of Spanish innovation and design. The total monetary endowment for the awards is €160,000, with specific amounts allocated to certain categories.
Los Premios Sostenibilidad 2024 de Multinacionales con España	All regions in Spain	The awards are organized by Multinacionales con España, an association that brings together multinational companies operating in Spain. The association aims to highlight the positive impact of these companies on the Spanish economy and society. The Fundación Aon España, a private non-profit organization established in 2015, collaborates in the awards, particularly sponsoring the category for the third sector. The foundation focuses on disaster response, social action, and culture, aiming to contribute to a better society through various initiatives. The awards encompass several categories: • Mejor Trayectoria (Best Career): Recognizes individuals with a distinguished track record in sustainability. • Mejor Proyecto Empresarial (Best Business Project): Acknowledges business projects that demonstrate significant contributions to sustainability. • Mejor Iniciativa Empresarial en Ecodiseño (Best Business Initiative in Ecodesign): Honors business initiatives that incorporate ecodesign principles. • Mejor Iniciativa del Tercer Sector (Best Third Sector Initiative): Recognizes non-profit organizations for their impactful sustainability initiatives.

		The evaluation criteria focus on the impact, innovation, and sustainability of the initiatives, as well as their contribution to the development of sustainability in Spain.
Premios ESG Industria 2024	Spain - Murcia	The awards are granted by the Colegio Oficial de Ingenieros Industriales de la Región de Murcia (COIIRM), a professional body representing industrial engineers in the Region of Murcia, Spain. The awards acknowledge outstanding contributions to sustainability and innovation in the industrial sector, emphasising ESG values. The awards are divided into several categories: • Honourable prize: Awarded to companies that significantly contribute to the advancement and sustainability of the Murcian industry. • Legacy ESG-Industry: Granted to award the trajectory of companies. • Industry ESG of the year: Presented to companies that have a pioneering role • Future ESG-Industry: Bestowed to companies that have outstanding innovative approaches. The evaluation criteria centre on the impact of the initiatives on sustainability, innovation, and adherence to ESG principles within the industrial sector.
Commitment to Energy Efficiency and Sustainability awards	All regions in Spain	The Asociación de Empresas de Eficiencia Energética (A3E) is a Spanish organization dedicated to promoting energy efficiency and sustainability. A3E brings together companies and professionals committed to improving energy use and implementing sustainable practices. The awards recognize outstanding contributions to energy efficiency and sustainability. The awards are divided into the following categories: • Category A: Commitment to Energy Efficiency and Sustainability – Recognises companies that have demonstrated a strong commitment to improving energy efficiency and environmental sustainability through investments and implementation of energy-saving measures.

		• Category B: Best Energy Efficiency and Sustainability Action – Acknowledges specific projects that have achieved significant energy savings or substantial improvements in energy use. • Category C: Best Energy Efficiency Project – Final Degree/Master's Project – Highlights academic projects that propose innovative solutions for energy efficiency. • Category D: Best Start-Up – Awards start-up companies that offer novel technological solutions leading to relevant energy savings or improvements in energy use. • Category E: Financial Entities and ESG Investments – Recognises financial institutions that support energy efficiency and sustainability initiatives through ESG investments. The evaluation criteria focus on the innovation level, applicability, scalability, and impact of the projects on energy efficiency and sustainability. Projects that can serve as models for others and have a "tractor effect" on other entities are particularly valued.
Environmental Sustainability Innovation Award for SMEs and self-employed people	All regions in Spain	The award is organised by the Fundació Antigues Caixes Catalanes (FACC) and BBVA. Fundació Antigues Caixes Catalanes (FACC) is a non-profit organisation dedicated to social development and cultural preservation, with a strong focus on innovation and sustainability. It supports initiatives that align with social responsibility and environmental impact. BBVA is a global financial institution committed to sustainable business practices. The award evaluates projects based on their environmental impact and alignment with the SDGs. Specific criteria include: • Reduction of environmental footprint. • Promotion of sustainable practices. • Social impact and community engagement. The emphasis is on recognising and fostering innovation and sustainability in business practices.

German Sustainability Award for companies	All regions in Germany	General: With six competitions, more than 1,000 applicants and 3,000 guests at the award's gala, the German Sustainability Award is the most comprehensive of its kind in Europe. The award is based on the goals of the 2030 Agenda and thus on the key areas of transformation such as climate, biodiversity, resources, supply chain and society. The GSA is awarded on German Sustainability Day, which has evolved into the leading international convention on sustainability since 2008. The event, with more than 150 speakers, connects relevant stakeholders, allowing them to exchange and benefit from each other's experiences. Throughout the year, all GSA activities are comprehensively aligned with the principles of sustainability. The GSA is a climate-neutral project. For companies: The GSA awards the pioneers in 100 industries based on their sustainability profiles. The methodology combines application and research. Special awards go to the sustainable lighthouses in the five most important transformation fields. Transformation is industry specific. Every company and every business model is covered and assigned to a sector and an industry. The categorisation is based on core business and sales focus. The categorisation is derived from the ISIC, WZ and NACE classifications.
Umweltpreis für Unternehmen Baden-Württemberg	Germany - Baden-Württemberg	The Environmental Award of Baden-Württemberg honours companies and self-employed individuals who pursue innovative approaches to sustainable business practices and corporate environmental protection. Eligible to apply are businesses based in Baden-Württemberg from the industry, trade, craft, and service sectors. Evaluation criteria include: • Environmentally oriented corporate management • Resource efficiency • Waste prevention • Environmentally friendly technologies • Employee involvement

	Award: €10,000 per winner, earmarked for environmental protection measures. Jury: Representatives from business, environmental organizations, and government ministries.

Annex 2: Best practice examples

Symbols, color coding and abbreviations

SYMBOL	PHYSICAL RISKS
	Dependence on fossil fuels and the availability of alternative sources
	Dependence on natural resources
SYMBOL	TRANSITION BARRIERS
	Policy
	Financial
	Technologies
/	Labor
	Value chain

SECTORS
Agriculture
Manufacturing
Transportation

Regional Mitigation Risk	RMR
Regional Adaptation Risk	RAR

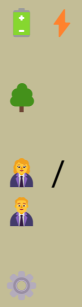
Country - Region	RMR	RAR (Scale 0-10)	Company	Award	Link with Barrier	Best Practice
ES - Andalusia	high	5.8	Bodegas Robles	BBVA awards (Spain's top ten sustainable producers in 2024)	🔋⚡ 🌳 ⚙️	**Circular wine production rooted in rural resilience** Bodegas Robles is a family-owned winery in Montilla, Córdoba, with a long tradition in organic viticulture. The company integrates sustainability across its production process and circular economy by actively reducing packaging, promoting environmentally responsible farming methods, and running on renewable energy sources. Their operations include closed-loop practices such as recycling and composting, aiming to reduce waste and lower overall environmental impact. Beyond environmental strategies, Bodegas Robles plays an important socio-economic role in the rural community by providing stable employment and contributing to the local economy.
ES - Andalusia	high	5.8	Biolitoral	BBVA awards (Spain's top ten sustainable producers in 2022)	🔋⚡ 🌳 👩‍💼 / 👨‍💼 ⚙️	**Organic Farming with a Strong Focus on Sustainability and Community** Since 2008, Biolitoral has been producing organic food, primarily zucchini, and working alongside over 200 local farmers. The company places a strong emphasis on biodiversity protection, as well as reducing its environmental impact by optimising water and energy use and tackling climate change. Biolitoral calculates its carbon footprint annually and has devised a reduction plan to achieve carbon neutrality by 2050. While striving to reduce emissions, the company also offsets the emissions it cannot eliminate by supporting reforestation projects in the Sierra de Gredos. Additionally, Biolitoral has installed

						photovoltaic panels on its facility rooftops, which meet 80% of its energy demand, and has incorporated energy-saving measures such as LED lighting, renewable energy procurement, and the use of electric vehicles. In its efforts to minimise waste, Biolitoral uses recycled bottles and has implemented waste management practices to reduce food waste, donating surpluses to food banks and partnering with local companies for product canning. The company also conducts landscape audits for its producers and carries out conservation and soil health improvement plans. Biolitoral is dedicated to supporting vulnerable communities through job creation, providing training budgets to enhance workers' skills, and contributing to various local associations.
ES - Andalusia	high	5.8	Almendrehesa	BBVA awards (Spain's top ten sustainable producers in 2021)	🔋⚡ 🌳 👩‍💼 / 👨‍💼 ⚙️	**Regenerative Farming for Soil and Community** Almendrehesa is a cooperative of 21 farmers focused on producing organic almonds through regenerative agriculture since 2016. The company aims to restore the soil and landscape while promoting sustainable farming practices in an area characterised by aridity and high erosion. Their approach combines the cultivation of rain-fed almond trees with other crops such as olives, vines, cereals, and aromatic herbs. The company has implemented several sustainability and decarbonisation strategies, including ecological and regenerative farming practices that enhance soil health and biodiversity. Almendrehesa uses hedges, vegetation cover, mulching, beekeeping, and sustainable grazing among other strategies to improve the environmental balance of the area and mitigate the effects of climate change. In terms of social impact, Almendrehesa supports fair working

						conditions for its employees and fosters social cohesion. They also contribute to cultural and educational development in the local community, aiming to improve the quality of life and combat rural depopulation.
ES - Asturias	low	4.5	Terramor farm	BBVA awards (Spain's top ten sustainable producers in 2024)		**Renewable energy and low-impact farming for local mini-kiwi production** Terramor is a small-scale agricultural venture based in Sisiello, Gijón, and the only farm in Spain dedicated to the commercial production of mini-kiwis, or "kiwinos", since 2016. The farm runs on solar power and features a windmill constructed with reused materials, incorporating a 'furling' mechanism that powers an irrigation pump. This system enables an estimated 50% reduction in water consumption. Pollination is carried out naturally through hives from local beekeepers, reinforcing ecological farming practices and supporting local biodiversity. Packaging is entirely plastic-free, and sales are prioritised through short distribution channels to minimise emissions. Terramor is also involved in several rural development initiatives and belongs to the Association of Women Farmers of Asturias. Their commitment to sustainable agriculture and rural resilience was recognised with an award in the 2024 BBVA Sustainable Producers programme.
AT - Carinthia	low	2.9	Kärntnermilch	TRIGOS (winner TRIGOS 2024 - Regional Value Creation, nominated TRIGOS		**The positive cycle of Kärntnermilch** Kärntnermilch focuses on modern technologies and energy efficiency. For example, in 2023 the company, together with Kelag, installed a photovoltaic system with a total of 2,986 modules on its premises which now generates over 1,300,000 kWh of electricity annually, corresponding to the needs of around 370 households and covers approximately 13 percent of the company's electricity requirements. To

				Carinthia 2024)		completely replace the gas demand, work is currently underway on a biomass power plant. The dairy is supplied with fresh milk everyday from 980 farmers from across Carinthia. Milk suppliers are treated with solidarity as they receive the same milk price, regardless of the delivery volume and distance from the dairy that strengthens regional supply and reduction of transportation routes.
AT - Carinthia	medium	2.9	Franz Dorner & Partner	klimaaktiv Good Practice (Award-winning measures 2022)		**Renewables in the production process - PV system** Due to its remote location, the Dorner family farm has always relied on local energy and raw material supplies, and energy and resource self-sufficiency is a declared goal. Through EMAS certification, the company has an integrated energy management system. The transition to renewable energies began in 2001 with the construction of a 400-kW wood chip system and continued with the continuous expansion of the photovoltaic system to its current output of 1,100 kWp. In addition, work has been underway on the construction of a wind farm since 2010. The company is energy self-sufficient and feeds the surplus produced into the public grid, supplying 580 households with solar power. However, due to the current lack of storage, electricity had to be purchased at night and in winter. The award-winning measures include a new photovoltaic system with an output of 557 kWp that produces an additional 641,000 kWh of electricity per year. All of this is fed into the public energy grid and will be used in a renewable energy community in the future. The ground-mounted system was erected on an unusable site with a slope of more than 30°. Anchoring it to the ground was a considerable challenge in order to generate PV electricity on a permanent basis in

						the strong winds and snow loads on the slope. The PV system was supplemented by a storage system with a capacity of 525 kWh and a maximum charging/discharging capacity of 206 kW.
ES - Castile and La Mancha	medium - high	5.3	Cantero de Letur	BBVA awards (Spain's top ten sustainable producers in 2022)	🔋⚡ 🌳 👩‍💼 / 👨‍💼 ⚙️	**Organic Dairy Production with Sustainable Practices** Cantero de Letur is an organic dairy company based in Albacete that has integrated ecological farming and livestock practices since its establishment. The company prioritises animal welfare, soil health, and the reduction of environmental impacts throughout its production processes. The company avoids the use of chemical fertilisers, pesticides, and GMOs, focusing instead on ecological animal feed, which contains at least 50% forage. The farming practices aim to promote sustainability while maintaining animal welfare standards. Cantero de Letur also integrates renewable energy into its operations, with around 30% of its energy needs met through on-site solar photovoltaic installations. Water management is another key aspect of the company's sustainability efforts. Cantero de Letur uses rainwater harvesting systems, ecolagoons for wastewater treatment, and reuses water extensively in its production processes. The company also utilises recyclable glass bottles and FSC-certified recycled cardboard for packaging, contributing to waste reduction and circular economy practices. In terms of social responsibility, the company implements policies that promote gender equality, work-life balance, and permanent employment. Additionally, Cantero de Letur participates in initiatives aimed at combating rural depopulation, such as the Letur Repuebla project, which provides affordable housing and coworking spaces. Furthermore, the company allocates a

						portion of its profits to international development cooperation projects.
ES - Castile and La Mancha	medium - high	5.3	Aceites Garcia de la Cruz	BBVA awards (Spain's top ten sustainable producers in 2021)		**Sustainable Olive Oil Production with Focus on the SDGs** Aceites García de la Cruz, with over 150 years of tradition in olive oil production, has aligned its operational strategy with the United Nations' Sustainable Development Goals (SDGs). The company has expanded its organic farming practices, eliminating chemical fertilisers and pesticides, and using environmentally respectful techniques to improve soil health. The company has also invested in a composting plant that transforms organic waste into nutrient-rich fertiliser, which not only enhances soil quality but also reduces dependency on external inputs. In terms of water management, Aceites García de la Cruz has implemented drip irrigation systems, optimising water usage and minimising waste. For energy sustainability, the company has focused on renewable energy procurement, including solar panels and biomass, alongside the introduction of energy-efficient equipment and processes to reduce consumption and minimise its carbon footprint. Packaging is another area where the company promotes sustainability, using recyclable materials to reduce waste. Additionally, Aceites García de la Cruz has established partnerships with universities and research institutes, promoting collaboration and fostering innovation in sustainability and agricultural practices. Through these efforts, the company aims to integrate sustainability into all aspects of its operations while contributing to broader environmental and social goals.

ES - Castile and León	medium - high	5.1	At Beato de Tábara	BBVA awards (Spain's top ten sustainable producers in 2024)		**Sustainable dairy farming with a focus on local ecosystems** Beato de Tábara is a family-run farm producing organic dairy products, specialising in cheese made from the milk of their own goats. The farm follows traditional farming practices, where the animals graze on natural pastures, including grasses, legumes, and shrubs, as well as organic forage and cereals from nearby local farmers. Sustainability is embedded in their operations, with the farm employing passive cooling systems and natural watering troughs to optimise water use. Additionally, they recycle manure as fertiliser for their crops, contributing to a circular farming model. The whey from their cheese production is used as supplementary feed for the animals, reducing waste and closing the nutrient loop. Beato de Tábara also prioritises supporting the rural community by sourcing locally and promoting local markets for their products.
IT- Emilia Romagna	medium - high	4.2	Cà colonna Società agricola	Responsible Innovators Award 2024 - Ecological Transition		**Reviving Soils to Capture CO_2** Life Carbon Farming Scheme project, Cà Colonna is the pilot farm for the study of carbon capture in agricultural soils. Carbon farming concerns practices or processes carried out over an activity period of at least five years. The starting context is quite critical: for more than 15 years there has been an average loss of 1% of total productivity in Italy caused by the combination of increasing pressure from extreme climatic factors and the availability of increasingly less fertile soils due to a lack of organic matter. Organic carbon and soil biodiversity therefore play a crucial role in producing ecosystem services by efÏciently capturing carbon dioxide (CO2) and

						releasing oxygen (O2): in order to do agricultural work, soil must be 'alive'.
IT - Marche	low	5.3	Gino Girolomoni Cooperativa Agricola	EU Organic Awards 2024 - Best Organic Food Processing SME		**Organic Pasta from Marche** Located in the Marche region of Italy, this cooperative specialises in the production of organic pasta, carrying out the mission of its founder, Gino Girolomoni. With 80 hectares of organic farmland and plants powered by renewable energy, it produces 9 million tonnes of pasta per year, supporting over 300 farmers and 60 local workers.
AT - Salzburg	low	2.7	Miedering-Hof	klimaaktiv Good Practice (Sustainable agriculture)		**Environmentally friendly management at Miedering-Hof** A central focus of the Miedering farm is on reducing environmental pollution. Instead of the previously very complex feeding process, which was associated with high tractor use and the associated emissions, the farm now relies on modern technologies. A stationary feed mixer discharges the shredded feed through a discharge chute in the barn ceiling directly onto an electrically operated conveyor belt, which allows the feeding of the cattle to be optimized. The resulting reduction in tractor use leads to savings of up to 1,600 liters of fuel per feeding period and helps to significantly reduce CO2, nitrogen and particulate emissions. The Miedering farm also invested in renewable energy sources to supply these facilities and the entire farm. A small hydroelectric power plant, which uses the old mill right on the Fischach, supplies the farm with electrical energy, with the surplus being fed into the public grid. The integration of PV modules on the roofs of the existing buildings with an output of up to 140 kilowatts and a charging station for electric vehicles will further optimize the use of clean, self-generated electricity. By using the

						conveyor belt and the e-charging station alone, the Miedering-Hof can save over 19 tons of CO2 every year. The Miedering-Hof also demonstrates exemplary commitment to the ecological diversity of watercourses. By installing a fish ladder and converting the diversion power plant into a weir power plant, significant improvements to the water ecology have been achieved without compromising electricity generation. To promote animal welfare, the farm also relies on breeding genetically hornless Limousin cattle to spare the animals from subsequent dehorning. The Miedering farm exemplifies the link between agriculture and environmental protection and shows how sustainable practices can help to reduce environmental impact while increasing the farm's profitability.
IT - Sardegna	low	5.7	Bloom Labs	Start Cup Sardinia 2023		**Tech-Driven Sustainability in Flower Farming** With increasing water scarcity and the overuse of pesticides and chemical fertilisers, it is becoming increasingly necessary to adopt more sustainable methods of growing flowers. Indoor growing, water recycling and biological pest control are just some of the methods that can help reduce the industry's ecological footprint. It is in this context of challenges that Bloom LABS, a start-up whose mission is to transform the flower market through the use of innovative technologies involving the creation of real (fully autonomous) laboratories for the cultivation of flowers by means of indoor farming and vertical farming techniques, is situated.
IT - Sicilia	high	5.9	Lisygrow	Innovation Award Sicily 2024		**Smart Irrigation for Sustainable Farming** Lisygrow by Simone La Malfa/Clevergrow is the winner for the 'Agribusiness' field of the Innovation Award Sicily 2024.

						It is an automated irrigation system for soilless crops, designed to optimise the consumption of water and energy resources and improve agricultural productivity. It uses the plant itself as an intelligent sensor, adjusting irrigation in real time according to actual water needs, without the need for manual intervention. The solution aims to reduce resource wastage and increase yields, contributing to the sustainability of agriculture. CleverGrow's Lisygrow represents a major innovation in precision farming, with a fully automated irrigation system that promises efficiency and environmental sustainability. The project is well designed and structured to have a positive impact on the agricultural sector, but will require continued investment to fully achieve the potential for global scalability and maintain a competitive advantage in the market.
AT - Upper Austria	medium	2.7	BIOhof Geinberg	TRIGOS (nominated TRIGOS 2024 - Climate Protection)		**Next-Gen Farming – Organic Greenhouse of the Future** The company founder's vision was to grow vegetables that taste delicious and don't harm the environment. This motivation, coupled with the realization that resources must be used more carefully to preserve the planet's livable habitat for future generations, led to the company's founding in 2013. In Austria, self-sufficiency in organic fruit and vegetables is very low, so these products often have to be imported from distant countries. This situation led to the search for a suitable location in Austria. Geinberg in the Innviertel region offered optimal conditions. An existing geothermal source and the return flow of the local district heating network made it possible to supply the greenhouse with CO2-free heat. Average annual rainfall allowed for irrigation water without the use of precious drinking water

						which saves over 100 million liters of drinking water every year. The particularly fertile soil provided the basis for good yields and the highest quality. Furthermore, the products are packaged plastic-free and sold exclusively in Austria which strengthens regional supply and reduces transport routes.
AT Upper Austria	medium high	2.7	Holzmann Teigwaren	OÖ Agrarpreis 2025		**Raising the chicks on our own farm was the game changer** Located in Königswiesen, the farm produces 40,000 free-range and barn eggs daily with a small team and is Austria's only producer of AMA-certified pasta. This family-run agricultural operation follows a fully integrated circular system—from chick to laying hen, from egg production to on-site processing. Eggs that are too small, too large, or have thin shells and therefore aren't suitable for sale are turned into pasta directly on the farm. Nearly all production steps take place on the energy self-sufficient farm. Only chicken feed, spelt flour, and durum semolina for the pasta and the chicks are sourced externally. The farm covers its considerable energy needs—particularly for raising hens and drying pasta—using its own photovoltaic systems and a biogas plant. The farm is currently also electrifying its entire vehicle fleet. An electric truck with a trailer will be in use, covering all feed and product deliveries completely emission-free. This includes up to three truckloads per week, carrying 50 to 60 tons of feed, and all deliveries to both large central food warehouses and small retailers. A publicly accessible fast-charging station has also been installed on-site and is already seeing regular use. Looking ahead, the farm plans to modernize its biogas plant, which dates back to the 1990s and is now

						outdated and undersized. If all goes well, a new, state-of-the-art facility will be operational next year, further strengthening the farm's sustainable production model.
ES - Valencia	medium	4.7	Organic Citrus	BBVA awards (Spain's top ten sustainable producers in 2022)	🔋⚡ 🌳 👩‍💼/👨‍💼 ⚙️	**Agrosustainability certification to promote sustainable practices in fruit production** Organic Citrus, a Spanish company specialising in organic fruit production and distribution, has made significant strides in sustainability. In collaboration with AENOR, the company developed an agrosustainability certification to establish environmentally responsible cultivation standards, promoting soil fertility and biodiversity. The company also employs circular economy strategies, such as reusing by-products, efficient waste management, and sustainable packaging solutions, while also working to reduce food loss. In terms of farming practices, Organic Citrus enriches the soil to enhance its biological richness and uses biological pest control, such as the application of pheromones in citrus crops, developed with the University of Valencia. Organic Citrus calculates its carbon footprint and has set a goal to reduce its emissions by 40% by 2030. On the water management front, the company uses self-compensating and anti-drainage intelligent irrigation systems, reducing water consumption by 30%. In addition to its environmental efforts, Organic Citrus is committed to promoting well-being and quality employment while maintaining an active role in community outreach, reflecting its broader overall impact in the local community.
IT - Toscana	medium	5.1	Il DRAGO APS	Sustainable Development Award 2023	🌳	**Agroecology in Action** In the Tuscan Metalliferous Hills district, a project was implemented to associate production, processing and

					💰 👩‍💼 / 👨‍💼 ⚙️	marketing companies of agricultural products, also involving the world of research, training, to promote, support and disseminate organic farming and agro-ecology, quality local production, short supply chain consumption, the protection of biodiversity, and the sustainable enhancement of the territory. Involving in particular 35 farmers and 8 processors, this project, thanks to an innovative integrated territorial action, has achieved significant environmental good economic results and the dissemination of good practices.
ES - Andalusia, Catalonia, Castilla and Leon, La Rioja, Castilla La Mancha, Murcia, Valencia	medium - low	5.8	Garcia-Carrión	Factories of the Future Awards (2024 Fracttal Award for Excellence in sustainability, eco-development and circular economy)	🔋⚡ 🌳 ⚙️	**From Juice to Zero Waste** García-Carrión is a family-owned company dedicated to the production and distribution of wines, juices, and other beverages. In recent years, it has adopted several operational strategies to reduce its environmental footprint across its supply chain. The company has invested in photovoltaic systems at multiple facilities, reducing its dependence on conventional energy sources. It has also prioritised water efficiency and implemented circular economy practices, particularly through the valorisation of organic waste. By-products such as orange peels are repurposed into essential oils, fragrances, or animal feed pellets, enhancing the sustainability of its operations. In terms of product innovation, García-Carrión has applied eco-design principles to reduce the environmental impact of its packaging. This includes lighter glass bottles and the introduction of the first aseptic brick container without aluminium. The company has also transitioned to juice bottles made entirely from post-consumer rPET, with fully recyclable caps and labels. These design changes have contributed to a measurable decrease in carbon emissions.

						García-Carrión also maintains long-term collaborations with over 40,000 local farmers, promoting rural development alongside its environmental initiatives.
GER - Baden-Württemberg	low	3.9	EDELRID	Umweltpreis für Unternehmen Baden-Württemberg	🔋⚡ 🌳 ⚙️	**Responsible energy supply and product innovations** EDELRID, founded in 1863, is a German manufacturer of climbing, outdoor, and industrial safety equipment. Its core product is the kernmantle rope. At its headquarters in Isny, EDELRID produces a wide range of ropes made from various materials. The product portfolio also includes harnesses, helmets, crampons, and backpacks. The company's in-depth expertise enables responsible product innovation, supported by extensive in-house research, including a four-story climbing wall used for testing and development. Examples of sustainable innovations include PFAS-free ropes, ropes made from bio-based plastics (e.g. castor oil), ropes made from yarn remnants and recyclates, and carabiners with steel inserts for increased durability. EDELRID conducts exceptionally detailed life cycle assessments of its product portfolio and actively promotes collaboration and knowledge sharing to support competitors in adopting sustainable practices. For responsible energy use, the company relies on photovoltaics and waste heat. Heat from production is used to warm the office buildings, and cooling is provided via two wells.
ES - Catalonia	medium	4.5	Cooling Photonics	BBVA Sustainable enterprise award (2024)	🔋⚡ 🌳 🤖	**Operational Sustainability through Innovative Cooling Solutions** Cooling Photonics is a company founded in 2020 that specialises in passive cooling solutions. The company is committed to operational sustainability through its focus on energy-efficient solutions and strategic partnerships. By

						developing an operational model centred around passive cooling technologies, they eliminate the need for energy-intensive systems. Using photonics and nanotechnology, they can cool surfaces without energy consumption, reducing the overall carbon footprint of operations. In addition, their products are designed with longevity and reliability in mind, ensuring that the equipment they protect lasts longer, which in turn reduces maintenance costs and the need for replacement parts. This approach aligns with the company's sustainability goals by reducing resource consumption and waste. The innovative passive cooling solutions, such as CoolPly and Solar Film, are designed to extract and reflect heat, therefore enabling surfaces to cool up to 10ºC without the use of active systems, therefore contributing to reducing carbon emissions and increasing efficiency.
ES - Catalonia	low	4.5	ARPE	PSI Sustainability Award 2021, 2019 and 2016 among others		**Sustainable Textile Transformation. From Thread to Footprint.** Textile manufacturing company based in Catalonia. The company has implemented a range of environmental initiatives, including the procurement of certified renewable energy, the installation of solar panels at its facilities, and the integration of ISO 14001 environmental management standards. Additionally, all products are made on demand using eco-design principles and recycled materials—specifically, 30% of polyester yarn from post-consumer rPET bottles. Their production process is entirely local, encompassing everything from design to packaging, which supports the local economy and minimises transportation emissions. Their fabrication saves 58% in electricity, 55% in water and 40% in soap compared with a traditional

						cotton towel. The carbon footprint is 2,70 kg Co2eq/towel, which is 76% less emissions than a conventional cotton towel. On the social and innovation front, ARPE holds a B Corp certification with a high score of 94, reflecting its strong performance in governance, labor practices, community impact, environmental stewardship, and customer care. The company fosters collaborative management, ensures fair working conditions, and actively contributes to local job creation. ARPE is also certified by "Real Sustainable Fashion" and the "Global Recycled Standard," and uses OEKO-TEX-certified inks to avoid harmful substances.
ES - Catalonia	low	4.5	DAN*NA	Impact Business Award by the SHIP2B Foundation (ranked among the top 5 global startups in sustainable plastics development and recognised as an Innovative SME by the Spanish Minister of Science and Innovation)	🔋⚡ 🌳 🤖	**From Biomass to Bioplastics. Innovation in Sustainable Materials** Bioengineering company founded in 2017 in Barcelona, specialised in high-tech biomaterials and bioplastics with a focus on sustainability and innovation. The company has established a pilot production plant at the Barcelona Science Park, enabling the industrial-scale manufacture of its bioplastics. This facility supports the company's mission to assist other businesses in reducing CO_2 emissions and integrating sustainable materials and processes into their production models. DANNA's operations are grounded in green chemistry, molecular technology, and artificial intelligence, focusing on transforming organic waste into bioplastics and biomaterials. In 2023, the company received a global patent for PLH, a biobased copolyester that serves as an eco-friendly alternative to traditional plastics. PLH is derived from renewable sources and offers controlled biodegradation, reducing CO_2 emissions by 75% compared to conventional plastics and preventing

						microplastic pollution by enriching soil microbiota. DANNA employs a multidisciplinary approach, integrating molecular engineering, green chemistry, and digital tools to create tailored biomaterials for various sectors, including agriculture, health, and electronics. Their biomaterials, such as biodegradable mulching films and controlled-release fertiliser systems, promote sustainable practices.
ES - Catalonia & Navarra	low	4.5	DOW	Los Premios Sostenibilidad 2024 de Multinacionales con España (Sustainability awards of multinational with Spain, best business initiative 2024)	🔋 ⚡ 🌳 ⚙️	**From Frying Pan to Footwear: Dow's Biobased Elastomers Reinvent Shoe Soles** Dow Iberica is a Spanish subsidiary of Dow Inc., specialised in advanced materials, particularly in the development and production of polyolefin elastomers and other high-performance materials. The company focuses on integrating renewable raw materials into its production processes, exemplified by the development of ENGAGE™ REN Polyolefin Elastomers. These elastomers are produced using a biocircular process that utilizes renewable resources such as used cooking oil and corn pomace. This approach not only reduces the carbon footprint of the production process but also aligns with Dow's broader commitment to sustainability and circular economy principles. ENGAGE™ REN elastomers are designed to offer high flexibility, durability, and performance for various applications. These materials are useful in sectors like automotive, packaging, and footwear. In the footwear industry, ENGAGE™ REN has been integrated into the production of sustainable shoes, where it is used in the soles and other parts of the shoe, replacing traditional synthetic rubber with a low-carbon biobased alternative. This product innovation reflects Dow Ibérica's dedication to reducing environmental impact while maintaining high-performance standards in its materials.
IT - Emilia Romagna	medium - high	5.1	Ecomat - Rimini	Responsible Innovators Award 2024 -	🔋 ⚡ 🌳	**From Plant Waste to Eco-Friendly Design Solutions** The project focuses on transforming plant and flower waste from industrial processes into 100% plant-based pigments

				Ecological Transition	⚙️	with a low environmental impact, promoting circular economy practices. These pigments are combined with Ecopur, an eco-resin that purifies the air and neutralizes harmful substances like VOCs, bacteria, and viruses, as certified by international standards. The aim is to create sustainable colour solutions for design and architecture, while fostering circular supply chains and generating employment opportunities at the regional and national level. Future developments include researching new types of plant waste to expand the colour palette and exploring applications beyond construction, such as in the nautical and 3D printing sectors.
IT - Emilia Romagna	medium - high	5.1	Caviro Extra	Sustainable Development Award 2022	🔋⚡ 🌳 ⚙️	**Circular Energy from Winemaking Waste** For the realisation of the "Lègami di Vite" project, which brought together important winemaking companies in Emilia Romagna for the circular management and valorisation of by-products and waste from winemaking to produce renewable electricity, biomethane and composted soil improvers. The bio-LNG produced will power the vehicles used to transport the wine and by-products. The initiative achieves resource and energy efficiency and savings, CO2 reduction, renewable energy production, good agricultural and soil management practices. The main innovation is supply chain integration, between companies, in the integrated and circular management of by-products and waste.
IT - Lombardia	high	5.3	EXO LAB ITALIA	Green Chemistry Lombardy for a Sustainable Future 2024	🔋⚡ 🌳 🤖	**Production of chemicals from bio-feedstock and other biomaterials** The production of chemicals from bio-feedstock involves converting renewable biological materials, such as agricultural waste, algae, or plant residues into valuable

						chemical compounds. Through processes like fermentation or thermochemical conversion, these materials are transformed into bio-based chemicals that can replace those traditionally derived from fossil fuels, reducing environmental impact and supporting a circular economy.
IT - Lombardia	high	5.3	BI-REX	Green Chemistry Lombardy for a Sustainable Future 2024		**Traceability for Circular Plastics and Chemicals** The circulation of plastics and other chemical substances can be significantly improved through a holistic approach that prioritizes waste reduction, enhances the recyclability of materials, and supports the redesign of products and packaging with sustainability in mind. This involves rethinking how materials are produced, used, and disposed of, with a focus on minimizing environmental harm and promoting circular economy principles. One key element of this process is the integration of material and product traceability solutions throughout the entire supply chain. These systems enable stakeholders to monitor the origin, composition, and environmental footprint of materials at each stage of the product lifecycle from raw material extraction and manufacturing to distribution, consumption, and end-of-life management. Such traceability not only facilitates more efficient recycling and reuse but also improves compliance with environmental standards, supports innovation in material design, and fosters greater corporate accountability. By embedding these strategies into production and consumption systems, industries can reduce reliance on virgin resources, mitigate pollution, and contribute to the transition toward more resilient, resource-efficient, and sustainable economies.

AT – Lower Austria	medium	3.1	Bergland milch	klimaaktiv Good Practices, Ausgezeichneter Meilenstein		**Biogenic process steam generation** For Berglandmilch, the resource-saving use of energy is an important concern. In addition to economic aspects, the careful and economical use of all energy sources is part of the corporate culture. This applies to the entire value chain and is practiced above all in the plants. They are therefore constantly working on optimization measures in the area of process systems and media supply. To increase energy efficiency, heat recovery systems have been installed in recent years in particular, which are constantly monitored and improved. Before the biogenic process steam generation measure was introduced, steam was generated entirely using two natural gas-fired steam boilers and the amount of gas consumed depended on production. The operating hours were 8,760 hours, as production takes place all year round. The investment comprised the installation of a wood chip heating system with a nominal output of 3,800 kW, which is located in a new plant building constructed at the existing dairy site. The plant building houses a raw material storage for the required wood chips. The biomass plant needs to be integrated into the existing process steam system. The fuel requirement will be covered predominantly (at least 80 percent) by wood chips of regional origin. The measure serves to promote energy sources from renewable raw materials and is to be implemented in the interests of climate-friendly production.
AT - Lower Austria	medium	3.1	INTERSPAR-Bäckerei	Klimaaktiv Best Practices		**Sustainability with INTERSPAR bakeries** INTERSPAR bakeries have been continuously improving the efficiency of their logistics for many years. The company is constantly analyzing, testing and evaluating existing work

			Kottingbrunn		/	processes. There is also a particular focus on reducing fossil fuels and the associated reduction in emissions. At the Kottingbrunn site, the INTERSPAR bakery has decided to test the use of a Volvo e-truck: six days a week, the bakery delivers to four INTERSPAR hypermarkets in the center of Vienna once a day. To date, the switch has saved around 2,440 liters of fuel and significantly reduced CO2, nitrogen and particulate emissions. In order to supply the e-truck with renewable energy produced in-house, the INTERSPAR bakery in Kottingbrunn opted for a tried-and-tested concept that has already been successfully implemented at numerous locations: the use of roof surfaces for the installation of photovoltaic systems. In future, the PV modules will supply the business in Kottingbrunn with around 177,000 kilowatts of electrical energy per year, which will also be used to charge the e-truck. The integration of an e-charging station for the e-truck at the company's own site in Kottingbrunn will further optimize the process structures for employees.Other improvement measures include continuous training and further education programs that the company makes available to its employees. For example, INTERSPAR has been offering its drivers energy-saving and safety training for many years. AI-supported route planning also ensures more energy-efficient and environmentally friendly delivery of goods to the stores.
LUX - Luxemburg area	low	3.1	Gilles Tooling	Best practices for SMEs in the energy transition		**Ultrasonic camera use for identifying suspected leaks** The Gilles Tooling company produces various attachments for the motorcycle industry at the highest level such as chain tensioners, footrest systems, brake and clutch levers

						or protectors. Due to the ongoing fluctuations in energy prices, manufacturing companies are naturally striving to control the costs as much as possible and to optimise energy savings. To this end, the company has examined its compressed air supply and concluded that there is considerable potential for energy savings. The analysis showed that the continuous expansion of the production has led to a very complex compressed air network, which regularly incurs losses through leaks. Following research, a conclusion was reached that an ultrasonic camera would be the appropriate solution. The device is easy to operate and allows the compressed air network to be inspected while the machines are running. The ultrasonic camera is used for both suspected leaks as well as regular maintenance of the compressed air supply. For the acquisition of the device, which amounted to a four-digit sum, they were able to draw on the financial support of the "SME Package – Sustainability" programme. According to the company's internal calculations, the cost of one cubic metre (1 m3) of compressed air is about 3.38 cents. At a network pressure of 8 bar, approximately 4.5 m3/h (15.21 cents) would leak from a breach of 1 mm in diameter. Based on the company's experience and on the leaks that have already been detected and repaired, this results in an estimated loss of 100 m3/h. This leads to losses of 3.38 €/h and a total of around 30,000 € over an entire year, all of which will be saved once all leaks are detected and repaired.
CZ – Moravia	low	3.5	Myco	Energy globe award		**Environmentally friendly alternative to single-use packaging** Single-use packaging is almost always made of plastic, very often polystyrene, and is a major contributor to

						microplastics that severely damage our environment. The Czech company Myco has developed an environmentally friendly alternative. Myco uses natural materials consisting of fungal mycelium combined with agricultural and wood-processing waste. The production material, mycelium, naturally decomposes after use under the influence of moisture, leaving behind no harmful substances in nature. The material used is also highly suitable as fertilizer. Due to its similar structure, moldability, elasticity, and strength compared to expanded polystyrene, Myco's material is an ideal substitute. It can also be used to manufacture boxes and packaging containers.
ES - Murcia	low	4.7	AMC Global	Premios ESG Industria 2025 (Industry ESG awards, category Best ESG Industry of the year), National Innovation Award awarded by the Ministry of Economy and Competitiveness, 1st Prize for Commitment to Energy Efficiency and		**Circular Innovation in Beverage Packaging** AMC Global is a company specialised in the production, distribution, and marketing of natural beverages, including refrigerated fruit juices, smoothies, gazpachos, and bioactive shots. The company has implemented a comprehensive sustainability strategy that encompasses various operational initiatives aimed at reducing its environmental footprint. Operationally, AMC Global has invested in renewable energy sources, such as wind and hydroelectric power, to power its facilities. The company has also implemented anaerobic digestion processes to generate biogas from organic waste, contributing to a projected 30–40% reduction in CO_2 emissions in the coming years. In terms of packaging, AMC Global has integrated eco-design principles to ensure 100% recyclability and the incorporation of up to 52% recycled plastic in its bottles. The company was also part of the EU-funded LIFE CITRUSPACK research project, which aimed to create packaging from orange peels, resulting in a 100%

				Sustainability by the Association of Energy Efficiency Companies (A3E) among others.		compostable biobottle made from orange peel, corn starch, and potato starch.
ES - Murcia and Madrid	low	4.2-4.7	SOLTEC	Premios ESG Industria 2024 (Industry ESG awards, category Best ESG Industry of the year)	  	**Tracking Sustainability** Soltec is a Spanish company fundedn in 2004 specialising in the development and supply of photovoltaic tracking systems. The company is committed to achieving carbon neutrality by 2050, focusing on emission reduction, circular economy principles, and responsible resource management. Operational strategies include the exclusive use of 100% renewable energy in its Spanish offices and the implementation of energy efficiency measures, such as transitioning to electric forklifts and reducing propane consumption, leading to a decrease in greenhouse gas emissions. Soltec's sustainability efforts extend to its supply chain through the Solhub solution, which delivers tracker components directly to project sites, minimising intermediary transport and associated emissions. The company also prioritises local hiring and sourcing, supporting socio-economic development in the communities where it operates. In terms of products the company has developed solar tracking technologies and optimisation systems for solar plants, with significant investment in R&D projects to lead the transition toward cleaner energy sources. Additionally, the company supports the socio-economic development of local

						communities where it operates by prioritising local hiring and suppliers and promoting educational and cultural initiatives through its foundation.
IT - Sardegna	low	5.7	ENERGY DOME	Sustainable Development Award 2024		**Innovative Storage for Renewable Energy** For the development of the CO2 Battery project: a technology for storing electricity, generated from discontinuous renewable sources, which exploits the properties of CO2 with an innovative thermodynamic process, which, in the demonstration plant set up in Sardinia, has achieved good levels of efficiency at low costs. The CO2 Battery technology would, if its industrialisation confirms its performance, also make it possible to differentiate and facilitate the supply and reduce the costs of raw materials used in storage batteries.
GER - Saxony	medium	4.4	Innenbau & Design	Best practices for SMEs in the energy transition		**Reduction in energy consumption** Compressed air systems, wood chip extraction, workshop heating - there are many aspects to carpentry that consume energy. The best way to save costs is to be independent in energy supply. Georg Brückner has created a wood residue recycling system that allows his company to have independent heating, which is virtually cost-free. The electricity for the automation of the recycling system comes from photovoltaics on the roof of his garage. To supply his business with heat throughout the year, he only needs about 40 percent of his waste wood. He has so much waste wood that he will soon be supplying his neighbour - a bicycle repair shop - as well. Today, Georg Brückner's Innenbau & Design GmbH earns money both with the future heat cooperation and with the residual wood. The wood is sent on to a chipboard factory for material recycling.

IT - Sicilia	medium	5.9	Escooh Legnovivo	Sicily Innovation Award		**Sustainable Wood** It is a patented, innovative and sustainable product made of solid wood treated with natural sterilisation and drying techniques. The project aims to produce wood panels with high mechanical and biological properties (antibacterial, stain-resistant, fireproof) that can be used in furniture and construction. Escooh aims to reduce energy consumption, promote sustainability and revitalise the local manufacturing heritage. The Legnovivo project stands out for its commitment to environmental sustainability and the revitalisation of local manufacturing skills. Its ability to respond to the challenges of responsible consumption of natural resources and the enhancement of Sicilian craftsmanship makes it a solid and innovative initiative. However, implementation and self-financing could be improved to ensure greater scalability of the project.
AT - Styria	low	2.6	LEGERO Schuhfabrik	TRIGOS (winner TRIGOS 2024 - Climate Protection)		**Eco-Database: Making your carbon footprint visible** A way was sought to precisely calculate the "hidden" product emissions to determine where the greatest levers for reducing emissions lie. The core of the project involves programming a database (eco-database) that makes it possible to calculate the ecological footprint (eco-backpack) of each shoe. The basis for this calculation is the production parts lists, which contain all materials and quantities used (over 10,000 data records), as well as the associated suppliers. In the next step, the exact composition and origin of the materials were scrutinized for each material and also entered into the database. This information made it possible to establish a link to common environmental indicators, which makes it possible to calculate the environmental impact of the materials,

						including GHG emissions, water, and resource consumption and, in the next step, of the entire shoe. The Eco-Database enables LEGERO to specifically identify climate-damaging materials and replace them with more environmentally friendly alternatives.This calculation also takes into account the transport routes within the supply chain and attributable production overheads such as electricity consumption and waste generation.
AT - Styria	medium	2.6	Stölzle Oberglas	TRIGOS (winner TRIGOS Styria 2021 - Climate Protection)	🔋⚡ 🌳 🤖 👩‍💼 / 👨‍💼	**Prestige recycled glass** Stoelzle is Austria's largest glass producer and, in addition to internal recycling, already uses 20% recycled glass cullet for its so-called Extra White Flint glass, i.e., high-quality white glass. This makes the company a pioneer in high-quality white glass. The company aims to increase the recycled content to 35% by 2025. This will enable the company to reduce CO2 emissions and maximize the use of raw material substitutes. Furthermore, Stoelzle is working to improve the quality of the recycled glass cullet available on the market so that it can also be increasingly used in the specific application of high-quality white glass. The jury welcomes the ambitious company's ongoing research work and highlights its strategically conceived and implemented contribution to the circular economy. Furthermore, the jury welcomes the cross-company awareness-raising measures in the industry.
IT - Toscana	medium	5.1	BAQTA FERMENTED SUPERFOODS di	Tuscan Innovation Award	🌳 ⚙️	**Nutraceutical Powders from Cereal By-Products** The FERVERE project develops fermented powders with high nutraceutical-nutritional value by optimising and enhancing the by-products of the Tuscan cereal sector. Selected yeasts and lactic acid bacteria, used in the fermentation of wheat and millet bran, are used to obtain

			Prato – FERVERE			powders rich in phenolic compounds, minerals and vitamins that have beneficial effects on the intestinal microbiota.
AT - Tyrol	medium	2.9	Pohl Metall	TRIGOS (nominated TRIGOS Tirol 2020 - Climate Protection)		**We produce with a clear conscience** Pohl Metall GmbH manufactures and surfaces sheet metal and wire parts. It primarily produces stamped parts for automotive headlights. In an industry far removed from sustainability and characterized by fierce competition, the company impresses with its systematic approach to implementing greater sustainability in production and processing. By creating a CSR team, improving processes, and streamlining and improving working methods, this exemplary company is making a significant contribution to energy conservation, workplace design, and indoor climate. Measures include the use of surfactant-free cleaning agents, the installation of a PV system, heat recovery, paints with low solvent content, recyclable packaging and reduction of packaging volume, use of preheated supply and exhaust air in the painting area.
AT - Tyrol	medium	2.9	ADLER-Werk Lackfabrik Johann Berghofer	klimaaktiv Good Practices, Ausgezeichnete Maßnahmen		**Optimization measures as part of the energy management system** Adler implements the following award winning optimization measures within the energy management system: The compressed air systems in the portfolio are continuously checked, maintained and replaced. As a large compressed air network at ADLER is constantly kept at just under 6 bar via two compressors, reducing leaks and renewing valves, pipes and connections has an impact on energy consumption. By controlling the compressed air supply to reduce leaks in Production 1 and at the solvent tank farm, around 45,000 kWh/a could be saved. The

						existing heating/ventilation/air conditioning systems are being progressively integrated into the modern building management system. High air exchange rates are sometimes prescribed in production, laboratories and spray booths. By optimizing regulation/control and, in particular, heat recovery in the ventilation systems, it has been possible to achieve major efficiency increases, which have resulted in savings of 65,000 kWh/a. The lighting is continuously being converted to energy-saving LED lighting. In addition to energy, the longer service life of the light sources means that further costs and time can be saved, as the replacement of most light sources requires the use of access platforms/lifting platforms and technician hours. Another measure is to switch off the parking lot lighting at night. In total, the lighting measures have led to savings of 6,300 kWh/a.
AT - Tyrol	medium	2.9	Arge Baustahl Eisen Blasy-Neptun	Klimaaktiv Best Practices		**Transport by rail** Reinforcing steel for concrete and reinforced concrete is the specialty of Arge Baustahl Eisen Blasy-Neptun GmbH, which began its success story in 1949 as Austria's first iron bending company. Numerous projects have been implemented in recent years to shift additional transport volumes from road to rail. Rail deliveries via the general loading track in Feldkirch to the company site in Frastanz only began in 2021. Reinforcing steel is handled there in coils. In 2022, a logistics concept for the Frastanz company location was developed together with a partner terminal in Feldkirch. The aim is to also shift deliveries of other products such as reinforcing steel mesh and reinforcing steel in bars to rail. The first trial shipments have already been carried out. In addition, rail deliveries via the Stams

						Regional Terminal were started in 2022 to supply the company site in Ötztal-Bahnhof. Transport volumes are also increasing from year to year via the Arge Baustahl connecting railroad in Innsbruck (Westbahnhof). In total, an average of around 22,600 tons per year were transported in the past three years between 2021 and 2023, meaning that around 6,350,000 tonne-kilometres were transported by rail instead of by road. The rail modal shift saved 686 tons of CO2 emissions!
AT - Upper Austria	medium	2.7	Greiner	TRIGOS (nominatedTRIGOS 2024 - Employee initiatives)	👩‍💼 / 👨‍💼	**Climate Ambassador Program** The global Greiner Climate Ambassador Program was launched to raise awareness and understanding of sustainability and to work together on solutions for greater climate protection. The program's target group is Greiner employees. Through the Climate Ambassador Program, they acquire knowledge in the field of climate protection, which they can then share within the company as climate ambassadors. They act as multipliers to promote awareness of sustainable action.
AT - Upper Austria	medium - high	2.7	Bilfinger Life Science	klimaaktiv Good Practices, Ausgezeichnete Maßnahmen	🔋 ⚡ 🤖	**Renewables in the production process** The company´s focus is on increasing efficiency, reducing emissions, and improving the effectiveness of plants in the process industry, as well as the careful use of resources. Bilfinger Life Science GmbH has installed a photovoltaic system at the Puch site near Hallein, which was commissioned in March 2023. The installed capacity of 210 kWp is used for 65% of the company's own consumption, with the surplus being fed into the grid and purchased by Salzburg AG. In addition to the PV system, the company places particular emphasis on energy-efficient operation. The introduction of the WeSustain energy monitoring

						system facilitates the recording of consumption data and the evaluation of key energy figures. In addition, CO2 emissions (Scope 1 and 2) are calculated automatically. As Bilfinger Life Science strives to exploit all potential energy savings, a tool was developed that uses data mining to analyze the insulation thicknesses and insulation types used in pipelines. As a result, category consumption (electricity) has already been reduced by 31 percent.
IT - Valle D'Aosta	low	4.7	La Cogne Acciai Speciali	SMAU 2025 Innovation Award - Confindustria Valle D'Aosta	🔋⚡ 🌳 🤖 ⚙️	**Green Hydrogen and Steel Innovation** This innovation improves steel quality, reduces waste and increases productivity, setting a new standard for the steel industry. Green hydrogen' technology is based on the use of hydrogen produced through electrolysis powered by renewable sources, thus eliminating the CO_2 emissions associated with conventional processes. A significant example is the use of a 1 MW AEM (Anion Exchange Membrane) electrolyser by a manufacturing company to power one of its heat treatment furnaces. Thanks to this innovation, green hydrogen replaces traditional fossil fuels in the production process, allowing CO_2 emissions from the furnace to be eliminated and contributing to the decarbonisation of the steel industry. This solution represents a concrete step towards more sustainable industrial production, integrating energy efficiency and reduced environmental impact.
BE - Brussels	low	4.3	Thalys	Science Based Targets Initiative 2025	🔋⚡ 🌳 ⚙️	**Trains entirely on green energy** Thalys is an international high-speed train operator running services between Paris, Brussels, Amsterdam, and Cologne, also serving cities like Lille, Rotterdam, Düsseldorf, Essen, and Dortmund. Based in Brussels, the company was founded by the Belgian National Railway

						Company (SNCB), and Deutsche Bahn. Thalys places great importance on sustainability and operates its trains entirely on green energy sourced from European wind and solar power plants. This has significantly reduced their CO_2 emissions per passenger kilometer. In addition to using renewable energy, Thalys implements other measures such as reducing single-use plastics onboard, using eco-friendly toilet cleaners, and encouraging the use of public transport before and after train journeys to improve the overall carbon footprint of travel. Thalys is also committed to transparency and customer engagement, with its carbon footprint independently verified for the first time and thousands of customers involved in the renovation of trains. Looking ahead, Thalys is collaborating with Eurostar on the "Green Speed" project to build a sustainable high-speed rail network and increase the annual number of passengers. These comprehensive efforts have earned Thalys recognitions including the EcoVadis Gold status and other awards.
ES - Catalonia	medium-high	4.5	CargoBici	BBVA and FACC Environmental Sustainability Innovation Award for SMEs and self-employed people (2021 second price)	🔋⚡ 👩‍💼 / 👨‍💼 🤖 ⚙️	**Redefining Urban Logistics with Sustainable Last-Mile Solutions** Cargobic is a Barcelona-based company specialised in sustainable last-mile logistics through the deployment of self-manufactured electric cargo bikes. These modular vehicles, capable of transporting between 100 and 250 kg, facilitate efficient deliveries within urban environments, particularly in Low Emission Zones (LEZs). Cargobici offers services including cross-docking, fulfilment, and reverse logistics, thereby optimising urban distribution networks. Beyond its core services, Cargobici has implemented operational strategies to further its commitment to

						sustainability. The company has developed proprietary software that enables real-time tracking of deliveries, optimisation of delivery routes, and reduction of human error. This system allows for the consolidation of deliveries, improving efficiency and reducing the environmental impact of logistics operations. The company's approach has yielded measurable environmental benefits. For instance, its collaboration with Pascual has led to a reduction of 60 tonnes of CO_2 emissions, following the delivery of over 235,200 kilometres using Cargobici's electric fleet. Beyond environmental considerations, Cargobici is committed to social sustainability. The company actively collaborates with organisations such as Can Cet, a special employment centre, to facilitate the social integration of individuals at risk of labor exclusion.
ES - Catalonia	medium-high	4.5	Transports Generals de Olesa	Barcelona 2030 Awards (Award to the best contribution to SDG by a SME 2022)	🔋⚡ 👩‍💼 / 👨‍💼 🤖 ⚙️	**Advancing Sustainable Mobility through Operational Innovation** Transports Generals d'Olesa (TGO) is a transport operator based in Catalonia that has adopted several operational strategies to further its commitment to sustainability. The company has initiated the electrification of its fleet, introducing electric buses on one of its lines. This transition includes the installation of overnight charging stations at their depots, aiming to reduce reliance on fossil fuels and lower greenhouse gas emissions. Additionally, they have implemented strategies to reduce plastic usage, implement recycling programmes, and promote energy efficiency. In terms of its service, TGO developed Bus4me, a technological solution facilitating the implementation and

						management of on-demand transportation services. The system enables the creation of bus lines with predefined routes and schedules that operate only with prior reservations, adapting the service to actual mobility needs. This model helps reduce peak-hour congestion and emissions by offering more flexible, efficient transport options for operators, public administrations, companies, and industrial parks.
FI - Helsinki	low	1.2	Norsepower	Energy globe award	🔋⚡	**Radically modernised sail** Norsepower is the first company in the world to transform century-old sail principles into a commercially viable and modern product. Norsepower Rotor Sail™ uses wind and rotating cylinders to create thrust. Just like a traditional sail, but on a bigger scale – and in a radically modernized way. The use of wind energy significantly reduces the conventional emissions of maritime shipping. Norsepower Rotor Sails can already reduce emissions, and thus fuel costs, by up to 25%. In 2018, extensive tests were carried out with Rotor Sails on a crude oil tanker, confirming the efficiency of the project. The company is now installing its system on numerous ships, making a substantial contribution to emission reduction.
ES - Madrid	medium-high	4.2	BusUp	International Mobility prices EMS (III Edition)	🔋⚡ 🤖 ⚙️	**Optimising Corporate Mobility for Environmental Impact** BusUp, founded in 2016 in Spain, is a technology-driven company specialising in corporate mobility solutions. It offers shared, demand-responsive transport services tailored for businesses, aiming to reduce operational costs and environmental impact. Utilising advanced algorithms, BusUp optimises routes and vehicle usage, enhancing accessibility while minimising carbon emissions.

						The company's innovative approach has led to significant environmental benefits. In the first half of 2024, BusUp's services contributed to an 8.6-million-kilogram reduction in CO_2 emissions, marking a 10% increase compared to the same period in the previous year. Beyond its core services, BusUp has implemented several operational strategies to further its commitment to sustainability. In 2024, the company introduced "Brainer," an artificial intelligence tool designed to analyse, monitor, and optimise mobility operations in real-time. Brainer enables BusUp to predict service quality with a 92% accuracy rate, allowing for proactive adjustments and improved efficiency in daily operations. BusUp also promotes the use of electric vehicles (EVs) within corporate fleets, recognising their role in reducing emissions and operational costs. By facilitating the transition to EVs, the company supports clients in achieving their sustainability goals. Furthermore, BusUp encourages shared mobility initiatives, such as carpooling and ride-sharing, to decrease the number of single-occupancy vehicles on the road. By integrating services like Hoop Carpool into its platform, BusUp offers comprehensive mobility solutions that cater to diverse employee needs
ES - Madrid	medium-high	4.2	MOOEVO Green	International Mobility prices EMS (IV Edition, product award)	🔋⚡ 🤷 / 🤷 🤖	**Operational Sustainability in Urban Electric Mobility** MOOEVO Green is committed to operational sustainability across its business operations. The company focuses on continuous improvement in quality and environmental management systems, aiming to reduce the environmental impact of its activities. MOOEVO Green adheres to the "Pacto por la Movilidad Sostenible," a commitment to

						sustainable mobility principles, ensuring that its processes align with broader environmental and social goals. These strategies reflect the company's ongoing efforts to maintain operational control while prioritising eco-friendly practices. In terms of services MOOEVO Green develops, industrialises, and commercialises electric vehicles designed for urban cleaning and last-mile delivery. Their product line includes 100% electric vehicles that are specifically suited for urban environments, offering versatile solutions for tasks such as goods delivery and waste collection. The vehicles are designed to easily access pedestrian areas, making them ideal for urban settings where space is limited. By providing these sustainable alternatives, MOOEVO Green promotes cleaner urban transportation and supports more efficient and eco-friendly services for cities.
ES - Madrid	medium-high	4.2	Empresa Municipal de Transportes de Madrid	International Mobility prices EMS (IV Edition and II Edition under the public company category)		**Operational Sustainability and Innovative Urban Mobility Solutions** EMT is a public transport company in Madrid that has implemented a comprehensive strategy to enhance operational sustainability across its operations. The company has electrified its fleet, with 244 fully electric buses currently in service, representing 11.4% of its total fleet. Additionally, EMT has constructed a hydrogen refueling station, known as a 'hydrogenera,' to supply a fleet of ten fuel cell buses. The project also includes the installation of photovoltaic panels capable of generating all the renewable energy required for hydrogen production. In terms of infrastructure, the Carabanchel Operations Centre has been electrified to accommodate electric buses, featuring charging systems and a photovoltaic installation

						for self-consumption. A new operations centre in Las Tablas is being developed to serve both gas and electric buses, while the La Elipa centre is being adapted to manage a 100% electric fleet. These initiatives are part of the broader Madrid 360 Sustainability Strategy, which aims to position Madrid at the forefront of European transport operators pursuing a 100% clean bus fleet. Moreover, EMT has launched the first Bus Rapid Transit (BRT) line connecting the city with Hospital Ramón y Cajal. This line operates on dedicated lanes separated from regular traffic and benefits from traffic signal priority at intersections, enabling a faster and more efficient journey, completing the route in about 40 minutes. The line is serviced by a fleet of 12 fully electric tram buses, each capable of carrying nearly 100 passengers. The BRT system is projected to save over 700,000 kilometers annually in trips typically made by private cars, leading to a reduction of approximately 125 tons of CO_2 and nearly 200 tons of NOx emissions.
AT - Salzburg	medium	2.7	DieBoten.at	VCÖ-Mobilitätspreis (2020)		**DieBoten.at local CO2 neutral logistics in Salzburg** DieBoten.at is a local and CO2-neutral courier service in Salzburg City and the surrounding area. They bring things up to 250 kg from A to B in an environmentally friendly way. The aim is to replace delivery cars and trucks in the city by using bicycle messengers and cargo bikes. Ordering, scheduling and delivery processes are all paperless and digital. All employees are salaried and shine with enthusiasm for their profession and common sense. Since 2015, they have been implementing projects and spontaneous orders such as the delivery of groceries for a supermarket chain, shopping logistics for Kinderstadt

						Salzburg, last mile delivery for DB Schenker, and hanging banners on bridges for Salzburg City Council in a CO2-neutral way. We see that more and more large companies appreciate the added value of a small alternative local logistics company once they have tried it out.
AT - Tyrol	medium	2.9	Christophorus Busbetriebs	TRIGOS (winner TRIGOS Tyrol 2024 - Climate Protection)		**E-buses in the Zillertal Glacier Region / Zillertal Alps High Mountain Nature Park** As a bus company operating in public transport, among other things, it was decided to drive forward decarbonization and maximize the reduction of traffic-related CO2 emissions in mobility as quickly as possible, thus launching this pioneering project. The region's mountainous routes pose a particular challenge, which is why diesel buses were previously the only suitable option; an environmentally friendly alternative was unthinkable. The latest and innovative technology from their vehicle supplier MAN ultimately won us over, and after an extensive testing phase, they were proud to put four electric buses into operation in March 2023. The emission-free, battery-electric buses have been used in local public transport ever since. This pioneering investment saves approximately 122,500 liters of diesel and 324,190 kg of CO2 annually. Charging is done exclusively with green electricity at the company's site. They have since made further significant investments and put three more electric buses into service to provide sustainable, emission-free public transport for the entire region as quickly as possible.
AT - Tyrol	medium	2.9	eMobility consult	VCÖ-Mobilitätspreis (2019)		**Electric delivery service, electrified company fleet** The solution is to be able to carry out all urban B2B transport (both as a service and in delivery, care, etc.) with electrically powered vehicles. The aim is to show that

						the implementation is both technically and financially feasible for small companies. The biggest obstacle proved to be the search for suitable scooters, firstly because there were very few scooters on the market at the time and secondly because there was no dealer and therefore no service in Innsbruck. After a lot of research, searching and many visits to trade fairs, a dealer was found in Innsbruck in March 2012 who sold the products of a German manufacturer. The first series in 2012 consisted of nine electric scooters with converted luggage carriers with special superstructures for deliveries, at a cost of €50,000. This was followed by a second series of five electric scooters with the same conversions. According to calculations by Henry Consult, the electric delivery service can save around 100 tons of CO2, nitrous oxides and particulate matter within seven years. Economic advantages include the elimination of all service costs and the elimination of fuel costs, as electricity costs are significantly lower. The disadvantage as a pioneer is the ongoing investment in new batteries, which has so far amounted to around € 5000. The scooters used so far are from a German manufacturer with Chinese technology. In the meantime, efforts are being made together with partners to produce suitable B2B delivery scooters or sharing scooters that meet the minimum European technical standards in terms of norms, driving safety and battery technology. The repair costs incurred due to the long running times of the electric scooters are disproportionate to the repair costs of scooters with a fossil drive with such a mileage. The use of many years of experience in single-track electric mobility should improve

						the prospects and possibilities of bringing a B2B-capable delivery and sharing scooter to the European market.
AT - Upper Austria	medium	2.7	Schlager Transport Logistik	VCÖ-Mobilitätspreis (2024)	🔋⚡ 👩 / 👨	**Logistics Mobility Revolution Electricity Hits** The project addresses key challenges of electromobility in truck transportation. Firstly, the limited range of electric trucks and the associated uncertainty in the transport industry. By implementing an advanced fast-charging infrastructure and using powerful battery technologies, the company is expanding the daily charging capacity of its trucks. Secondly, the inadequate charging infrastructure for the commercial vehicle sector, combined with excessively high roaming costs for charging infrastructure providers, which is hindering the rapid adaptation of electromobility. they are expanding their own charging capacities, which not only support their vehicle fleet, but also relieve the burden on the public grid. Thirdly, by using self-produced solar energy and operating an efficient storage solution, they are minimizing operating costs and demonstrating the economic viability of electric trucks in commercial use. In just two and a half months of using their first four electric trucks, they have already covered 80,000 km and thus made a significant contribution to reducing CO2 emissions. This corresponds to a saving of approximately 48.8 tons of CO2. In seven years, these four electric trucks will have saved 2,116 tons of CO2, based on average emission values of conventional diesel trucks. In addition, the company implemented a training program that trains its drivers in eco-efficient driving, which minimizes energy consumption and further reduces the environmental impact. Their drivers are enthusiastic about the driving behavior of the electric trucks, which further

						motivates them to adopt an eco-driving style. These measures demonstrate not only the practicality and reliability of electric trucks in heavy goods transport, but also the company's commitment to sustainable practices and raising awareness of environmentally friendly behavior among their employees.
AT - Upper Austria	medium	2.7	Bernegger	VCÖ-Mobilitätspreis (2022)		**Rail logistics Bernegger** The primary goal of Bahnlogistik Bernegger is to reduce truck traffic by shifting it to rail. At the same time, the plannability and availability of raw material transports should be improved. A special container system was developed that can be attached to standard rail container wagons. These containers can be filled via a loading terminal and transferred to articulated trucks for onward carriage at the destination in just a few minutes. This provides a flexible complete solution for long-distance rail transport and short on-carriage transports by truck. In 2017 alone, more than 200,000 tons of raw materials were transported by rail from Spital am Pyhrn to Linz and Enns, which corresponds to a saving of around one million truck kilometers. In the first half of 2018, 270,000 tons of raw materials and excavated materials were already handled via the system. The connecting stations at the Enns and Linz plants were also completed in 2021. Since the rail transport system, including the connecting railroad in Spital/Pyhrn, went into operation in 2016, raw material transports have increasingly been shifted from road to rail. In 2017, Bernegger GmbH transported more than 200,000 tons of raw materials by rail on the route from Spital am Pyhrn to Linz and Enns alone. This volume of raw materials transported by rail corresponds to a saving of around 1

						million truck kilometers or around 16,000 truck journeys in the Linz city area per year. In the first half of 2018, 270,000 tons of raw materials and excavated materials were already handled via the system. The connecting stations at the Enns and Linz plants were also completed in 2021.
IT - Emilia Romagna	medium	5.1	Bieffe project - Modena	Responsible Innovators Award 2024 - Ecological Transition		**Micro Hydrogen Mobility** The Mimì project is a cutting-edge initiative in the field of sustainable and innovative mobility. Designed as a compact, zero-emission vehicle for urban environments, Mimì is powered entirely by hydrogen and features a unique propulsion system that integrates electric power, supercapacitors, and fuel cells. The project aims to provide an efficient and eco-friendly solution for transporting both goods and people within city settings. By promoting clean energy and reducing urban emissions, Mimì contributes to broader goals of sustainability and decarbonization, fully aligned with the objectives of the 2030 Agenda.
IT - Veneto	medium	4.6	Logistica Uno	Sustainability Award 2024		**Logigreen** The company won the sustainability award for its concrete commitment to reducing environmental impact in the logistics sector. The company has increased the use of LNG- and bio-LNG-powered vehicles, opened new intermodal connections to reduce road transport in favour of rail, and continuously monitored CO_2 emissions in its warehouses through dedicated instruments, with the aim of measuring and offsetting harmful emissions. These tangible actions demonstrate an integrated and results-oriented sustainability strategy.

Annex 3: Examples of tools and information sources

Climate data assessment and systems:	• As part of a European Commission initiative, Destination Earth, a digital twin of the planet, is using data from real-time observations and simulations to determine the effects of climate change–related extreme weather events and assist users in designing accurate and actionable adaptation strategies and mitigation measures. • The Risk Data Hub (RDH) of the Disaster Risk Management Knowledge Centre (DRMKC) is a pioneering platform designed to centralize and standardize risk, damage and loss data at a pan-European level. Particularly the Vulnerability Explorer tool provides information on the vulnerability risk on a country, NUTS-2 and NUTS-3 levels. • An example on the regional level is the interactive web application CLAIRISA that allows the user to query climate and air quality data as well as climate scenarios for any location in Upper Austria. This provides important baseline data – not only for planning climate change adaptation measures.
Tools for measuring carbon footprints:	Free-to-use carbon footprint calculators available in local languages, e.g. • the Danish government's Climate Compass • at the Austrian Climate portal: free services for SMEs for calculating the carbon footprint and climate indicators for climate neutrality Free-to-use carbon footprint calculators in English, e.g. • the Carbon Trust's SME Carbon Footprint Calculator • the SME Climate Hub's Business Carbon Calculator
Supporting tools for business decarbonisation and resilience:	• The LOCALISED Net-Zero Business Consultant (NZBC) for local and regional businesses and business organisations is an interactive online tool designed to communicate with end-users from the business sector and provide them with insights into effective mitigation and adaptation options. • The LOCALISED Sustainable Business Models Canvas (SBMC) helps organisations identify key parts of their business model (such as supplies & outsourcing, production, functional value, materials, end of life, distribution, etc). It also shares best practices as well as case studies that illustrate useful measures, financial incentives, and programs for investing in decarbonisation.

National and regional public initiatives:	Information and infographics on existing national and regional programmes, including duration of the programme, funding scheme involved and target groups (including industries), as well as their linkage to mitigation actions have been elaborated in LOCALISED and is open access (LOCALISED Deliverable 5.4).
Climate risk insurance:	The Austrian Hail Insurance is a specialist insurer for agriculture in Austria and has its own branches in five other European countries. In addition to hail, agricultural crops are also insured against drought, flooding, storms, frost, and ten other risks. It is Austria's largest livestock insurer. By using satellite data, they have a very fast and modern claims assessment system. They create comprehensive risk protection for farmers and prevent their impoverishment due to crop failures during extreme weather events.
Emerging technologies:	Technology factsheets with concrete examples of available emerging practices in the main business sectors have been developed under the LOCALISED project and are open access (LOCALISED Deliverable 7.3)

www.localised-project.eu