# TRANSITION TOWARDS A SUSTAINABLE ECONOMY: A FOCUS ON GREEN TRANSITION IMPLEMENTATION IN BUSINESSES AND TEAMS IN NORWAY AND BULGARIA

Norway grants

**Authors:**
Prios Kompetanse AS, Norway
Ruse Chamber of Commerce and Industry, Bulgaria

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# I. Introduction

In an era of increasing environmental awareness and evolving economic paradigms, the role of small and medium-sized enterprises (SMEs) has gained significant prominence in driving sustainable practices and embracing circular economy principles. This comprehensive report, developed in collaboration between the Ruse Chamber of Commerce and Industry in Bulgaria and Prios Kompetanse AS from Norway, delves into the multifaceted landscape of sustainable practices and circular economy adoption within SMEs in both Bulgaria and Norway. By examining the challenges, opportunities, and strategies involved, this report aims to shed light on the pivotal role of these businesses in the countries' journeys toward more ecologically balanced and economically resilient futures. Through an exploration of existing policies, sector-specific challenges, regional disparities, and the essential figure of the Green Change Agent, this report offers insights into how Norwegian and Bulgarian SMEs can effectively contribute to a more sustainable and circular economy.

# II. Current State of SMEs

## 1. Analysis of the Current State of SMEs in Bulgaria

SMEs play a very important role in the Bulgarian "non-financial business economy", as they generate two thirds of the total value added and three quarters of the total employment, far exceeding the respective EU averages of 56.4% and 66.6%. SMEs in Bulgaria employ an average of 4.4 people, surpassing the EU average of 3.9. Annual SME productivity, calculated as value added per person employed, is approximately €12,800. In contrast, the EU average is almost 3.5 times higher, at €44,600. As in many EU countries, the most important SME sectors, in terms of both employment and value added, are manufacturing, wholesale, and retail trade. [1]

According to Statista, in 2022, the overall number of SMEs operating in Bulgaria was approximately 338,044. Among these:

- 311 009 are categorised as micro-sized enterprises, employing between 0-9 people;
- 22,930 are categorised as small enterprises, employing between 10-49 people, and;
- 4,105 are categorised as medium-sized enterprises, employing between 50-249 employees.

[1] 2019 SBA Fact Sheet – Bulgaria: https://ec.europa.eu/docsroom/documents/38662/attachments/4/translations/en/renditions/native

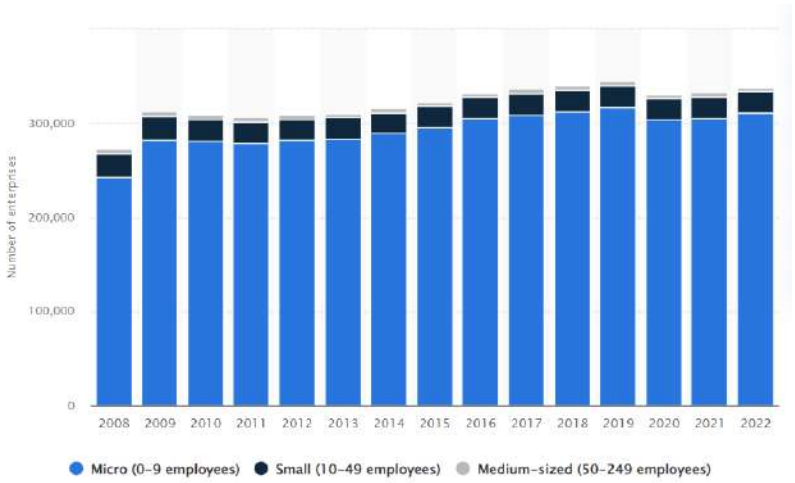


Figure 1. Number of SMEs in Bulgaria in 2022 [2]

## 2. Analysis of the Current State of SMEs in Norway

The current landscape of SMEs in Norway portrays a diverse and dynamic scene, playing a crucial role in the nation's economy. By 2022, there were nearly 600,000 registered businesses in Norway, with less than 1% of them having over 100 employees, signifying the dominance of SMEs. These SMEs contribute to almost half of the yearly value creation in Norway, amounting to nearly 700 billion kroner, which equals half of the state budget. Despite the presence of larger companies, approximately 60% of the private sector's workforce is employed by SMEs, underscoring their significance in job creation.

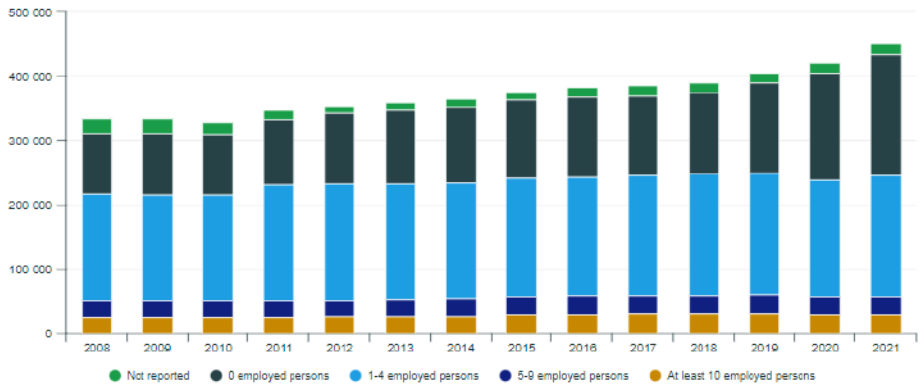


Figure 2. Number of SMEs in Norway in 2021 [3]

[2] Number of SMEs in Bulgaria in 2022: https://www.statista.com/statistics/878740/number-of-smes-in-bulgaria/
[3] Number of SMEs in Norway in 2021, Enterprises (ssb.no)

The SME sector serves as the primary engine for new job creation in Norway, with two out of three new jobs in the private sector being generated by small and medium-sized enterprises. This trend is especially evident in 70% of the country's municipalities, where SMEs constitute the entire business sector, accounting for all private sector jobs in those areas. Annual SME productivity, calculated as value added per person employed in 2021, is approximately €67 000[4]

Norway's SME landscape is also characterised by a strong emphasis on sustainability and transitioning towards a green, circular economy. The government's National Strategy for Circular Economy[5] reflects this focus, aiming to unlock the potential for value creation within the Norwegian business sector through circular economy principles. The strategy identifies key areas, such as the bioeconomy, process industry, construction, and retail and service industries, as having the greatest potential for circular economy practices and green competitiveness in Norway.

# III. Legislative Frameworks and Targets

## 1. Overview of Legislative Frameworks in Bulgaria

Bulgaria has developed a Strategy and Action Plan for the transition to a circular economy in the period 2022-2027, which is defined as a cross-sectoral document, building up on measures set out in different strategies and programs in the field of economy, environmental protection and regional development. The aim of the strategy is to help achieving resource efficiency through the implementation of waste management hierarchy, preventing waste generation, promoting material and reuse through recycling, reducing landfilling, and limiting the harmful impact of waste on the environment and human health. Overall, 3 strategic objectives are set out in the strategy:

- A green and competitive economy;
- Less waste and more resources;
- Economy that benefits consumers.

In order to achieve those strategic objectives, concrete measures are outlined and set out as concrete activities in the Action Plan, focusing on correcting imbalances and overcoming obstacles to achieve the objectives of the circular economy strategy. In addition, circular economy policy elements are also outlined in the following policies:

- National Development Programme Bulgaria 2030;
- Draft Funding Program “Competitiveness and Innovation in Enterprises”.

Moreover, the progress of Bulgaria in transitioning to a circular economy has been analysed by the European Commission. This report states that Bulgaria is “among the Member States lagging

[4] Own estimations based on data from OECD SME and Entrepreneurship Outlook 2021 | READ online (oecd-ilibrary.org) and Business statistics (ssb.no)
[5] National Strategy for Circular Economy of Norway: Nasjonal strategi for ein grøn, sirkulær økonomi

most behind in the implementation of circular economy policies" and that "the Bulgarian economy is among the most resource intensive in the EU and lags behind Member States in the implementation of the circular economy principle and eco-innovation". In addition, the share of the Bulgarian SMEs offering environmentally-friendly products or services is one of the lowest in the EU, due to the low demand for environmentally-friendly products, which tend to be more expensive.

According to the European Green Deal, achieving climate neutrality and the circular economy requires full mobilisation of industry, including SMEs. The transition to a circular economy is an opportunity to introduce sustainable and job-creating activities in SMEs that benefit society and the environment.

The current results achieved by Bulgarian companies in the field of waste management are not optimal and the potential of the circular economy business models is not being realised. Only 10.1 % of SMEs consider recycling to be part of their production process and 12.1 % of SMEs face challenges in meeting the requirements related to the classification, collection, and treatment of waste according to an analysis of SMEs conducted for the National Strategy for SMEs 2021–2027. There is a need for additional support through the provision of information and guidance on the modernisation of waste management. Only a very small proportion of entrepreneurs are aware of the opportunities or are willing to develop circular business models.

In addition, the share of SMEs offering green products or services is below the EU average. The share of companies offering green products and services is 9.5 %, and almost the same share, 9.0 %, is planning to introduce such services according to the analysis of SMEs conducted for the National SME Strategy 2021–2027. There is a need to raise awareness among entrepreneurs about the opportunities and benefits of developing circular business models and support for starting the production of environmentally friendly products and services.

## 2. Overview of Legislative Frameworks in Norway

Norway has implemented various policies and regulations to promote the transition to a circular economy. These include regulations related to waste management, product design, and resource efficiency. The country's circularity metric is currently at 2.4%, indicating that there is still much room for improvement. The transition to a circular economy is seen as a key strategy for achieving the country's climate goals and for promoting sustainable economic growth 6. A key legislative framework in Norway is the Climate Change Act7, that promotes sustainable practices. The purpose of this Act is to promote the implementation of Norway's climate targets as part of its transformation to a low-emission society by 2050. The Act sets specific targets for greenhouse gas

[6] Source: https://www.sirkulart.com/artikler/om-sirkulaert-prosjektet
[7] Climate Change Act: https://aipdf.app/BYw8r5hbm73V/3yRo.pdf

emissions to be reduced by at least 50-55% by 2030 from the level in the reference year 1990. By 2050, the target is for Norway to become a low-emission society, which means that greenhouse gas emissions have been reduced in order to avert adverse impacts of global warming. The Act also requires the Government to submit updated climate targets to the Storting (Norwegian Parliament) every five years, which should represent a progression from the preceding targets and promote a gradual transformation in the period up to 2050. The Climate Change Act targets as part of its transformation to a low-emission society by 2050. The Act sets specific targets for greenhouse gas emissions to be reduced by at least 50-55% by 2030 from the level in the reference year 1990. By 2050, the target is for Norway to become a low-emission society, which means that greenhouse gas emissions have been reduced in order to avert adverse impacts of global warming.

# IV. Gap Analysis

## 1. Identification of the Gap between Current State and Legislative Targets in Bulgaria

Although there is no overall strategic approach at national level, the National Waste Management Plan 2021-2028 sets three main objectives in the context of the circular economy:

- Reducing waste generation and promoting reuse;
- Increasing the quantities recycled and recovered;
- Reducing the quantity and risk of municipal waste going to landfill;

Another specific document that is aimed at reducing the use of plastic products is the Ordinance on reducing the impact of single-use plastic products.

In addition, the Strategy for the Transition to a Circular Economy in Bulgaria 2022–2027 includes a plan for monitoring the implementation and update of the Strategy and Action Plan. Progress in the implementation of the Strategy will be monitored and reported, and each governmental body will be responsible for monitoring the implementation of the relevant sectoral action identified in the Strategy. The monitoring plan will be based on the indicators set out in the updated 2022 EU CE Monitoring Framework.

Moreover, a set of circular economy targets is available in the National Development Programme Bulgaria 2030 for Priority 4 “Circular and low-carbon economy”.

| Indicators | | | | |
|---|---|---|---|---|
| name | source | current value | target value | EU average |
| Circular material use rate, % | EC | 4.7 | 11.7 | 11.7 |
| Eco-innovation index | EC | 50 | 83 | 100 |
| Generation of waste excluding major mineral wastes per GDP unit, kg per thousand euros | Eurostat | 418 | 205 | 65 |
| Recycling rate of packaging waste, % | Eurostat | 66 (2017) | 70 | 80 (2017) |
| Share of disposed (including landfilled) waste of waste submitted for treatment, % | Eurostat | 65 (2017) | 35 | 46 (2016) |

Figure 3. Circular and low-carbon economy targets [8]

While most of them are related to the waste management targets set in EU legislation, there is also a special target for the Circular material use rate. The target value is 11.7 % with no specified target year, but the time frame for the document is 2030.

To transition to a resource-efficient, circular, and low-carbon economy, Bulgaria plans to expand the use of financial instruments to attract private sector financing. This will support long-term investment solutions, including patient and venture capital, for sustainable development.

In summary, Bulgaria seeks to increase renewable energy, diversify energy sources, extend the lifespan of nuclear power units, and responsibly manage coal power plants. The country also aims to mobilise private sector financing through expanded financial instruments to drive the shift towards a resource-efficient, circular and low-carbon economy.

## 2. Identification of the Gap between Current State and Legislative Targets in Norway

In Norway's journey towards a circular economy, there are noteworthy considerations in relation to the Climate Change Act. While commendable progress has been made in specific facets of the circular economy, the current circularity metric of 2.4% reveals a significant disparity when compared to the ambitious benchmarks outlined in the Climate Change Act. This gap signifies a substantial area for improvement in effectively recycling and repurposing resources to attain the desired emissions reduction objectives.

The integration of policies and regulations is pivotal in this context. The existing policies concerning circular economy, waste management, and resource efficiency may necessitate a deeper alignment with the overarching goals of the Climate Change Act. There exists a potential

[8] National Development Programme BULGARIA 2030: https://www.minfin.bg/en/1394

gap in harmonising circularity endeavours with broader strategies aimed at reducing emissions on a larger scale.

A pivotal aspect illuminated by the Climate Change Act is the imperative for a new economic model that holistically incorporates principles of circularity and sustainability. The circular economy holds the potential to significantly contribute to achieving climate and sustainability aspirations, although its integration into the existing economic framework might require further exploration and adaptation.

Another central facet underscored by the Act pertains to material flows and consumption patterns. The emphasis on curbing consumption and transitioning to a circular model accentuates the need for explicit strategies targeting material consumption reduction, especially within sectors that wield considerable influence over waste generation and emissions.

Moreover, there is room for enhancing the integration of circular economy principles. The circular economy's role in advancing climate objectives and broader sustainability aims, such as minimising plastic waste or upholding ecological equilibrium, could benefit from more deliberate incorporation into policies and practices.

Lastly, the reporting and assessment mechanisms merit attention. The assessment metric for circularity might warrant alignment with the overarching objectives of the Climate Change Act. Metrics encompassing emissions reduction and circularity should function harmoniously, offering a comprehensive perspective on the trajectory towards sustainable development. [9]

# V. Approaches to Transition

## 1. Sustainable and Circular Economy Transition Approaches in Bulgarian SMEs

Some case studies showcasing successful transition initiatives in Bulgaria are the following:

- ***Glavbolgarstroy*** is Bulgarian civil engineering company which is working on the "Mobiccon-Pro" project - a pan-European consortium of six other organisations and five municipalities from France, Belgium, Denmark, Bulgaria and Serbia. This project will allow developing technical concept, building and commissioning a mobile installation that will promote the circular economy in the construction industry, by introducing ways to manage construction waste and return it to use in industrial processes or for sale on the market. The facility will comprise various equipment, prototypes and installations to carry out crushing, sifting, separating, purifying and washing, in order to assist in the production

[9] Extended Gap analysis for Norway available here: 8853d3_4878d746a9fc40f0a9aacd113e090abc.pdf (filesusr.com)

of high-end secondary products and materials. [10] In 2023, Glavbolgarstroy was awarded the UBB (United Bulgarian Bank) award in the category "Circular Economy" for the project that the company is currently developing in the field of the circular economy in construction. [11]

- ***Remix*** is one of Europe's largest resale clothing platforms operating on 9 markets - Bulgaria, Romania, Greece, Czech Republic, Slovakia, Germany, Austria, Hungary, and Poland. After establishing their first two physical stores in Sofia, Bulgaria, their innovative concept gained traction and the company successfully transitioned to a dedicated online platform, enabling thousands of Bulgarians to minimize their environmental impact while embracing their personal style and savings. It is also worth mentioning that today, Remix stands proudly as an integral part of thredUP - one of the world's largest platforms for reselling clothes, shoes, and accessories.
- ***Nasekomo*** is Bulgarian biotech company that rears Black Soldier Fly (BSF) and create a circular economy that turns organic agro-industry by-products into animal protein. The company develops efficient, sustainable, and fully automated system that converts agro-industry organic by-products into insect biomass, which is in turn processed into an animal protein alternative for aquacultures, pigs, poultry, and pets. Nasekomo prevents the inefficient usage of agro-industrial by products. In this way, they lower not only the GHG emissions, but also the carbon footprint of the feed industry in Europe. In addition, in 2020, in support of its proprietary robotized insect rearing technology, Nasekomo announced it has secured EUR 4 million in funding from Morningside Hill and New Vision 3 – two venture capital funds backed by the Fund of Funds in Bulgaria. [12]

## 2. Sustainable and Circular Economy Transition Approaches in Norwegian SMEs

Some sustainable practices [13], observable in Norwegian SMEs are as follows:

- Material Recycling
  Many Norwegian SMEs have implemented material recycling as a part of their sustainable practices. They are focusing on the reuse and recycling of materials to reduce waste and conserve resources.
- Energy Efficiency

[10] Bulgaria's Glavbolgarstroy to lead 13 mln euro circular economy project: https://seenews.com/news/bulgarias-glavbolgarstroy-to-lead-13-mln-euro-circular-economy-project-807224
[11] Glavbolgarstroy with an award for circular economy: https://gbs-bg.com/news/glavbolgarstroy-with-an-award-for-circular-economy/?cn-reloaded=1
[12] Turning food waste back into food: https://cleantech.bg/en/project/nasekomo-2/
[13] Source: Rapport-tittel (naturvernforbundet.no), pages 7,9,11,13,15,17

SMEs are also focusing on energy efficiency, reducing their energy consumption, and using renewable energy sources. This not only reduces their environmental impact but also saves costs.

- Sustainable Supply Chain Management
  Norwegian SMEs are integrating sustainability into their supply chains. They are choosing suppliers based on their environmental and social performance, and they are working with these suppliers to improve their practices.
- Product Life Extension
  Some SMEs are extending the life of their products through repair, refurbishment, and remanufacturing. This reduces waste and the need for new resources.
- Sharing Economy
  The sharing economy is another practice that Norwegian SMEs are adopting. This involves sharing access to goods and services, which can reduce waste and resource consumption.
- Eco-design
  Norwegian SMEs are incorporating eco-design into their product development processes. This involves designing products to minimise their environmental impact, including the use of sustainable materials and energy-efficient designs.

As a good example of sustainable innovation, N2 Applied [14] has emerged as a trailblazing force. Their pioneering solution addresses the circularity of agriculture, emissions reduction, and the replacement of artificial fertilisers. At the heart of their ingenuity lies a distinctive approach to locally produced fertiliser. Through the use of a plasma reactor, nitrogen is harnessed from the air and introduced to livestock manure. This ingenious process doubles the nitrogen content within the manure, leading to enhanced yields. The innovation doesn't stop there - it curbs the evaporation of ammonia into the atmosphere and thwarts the conversion of carbon into methane. Instead, these elements are transformed into vital components of the ultimate product, aptly named "super manure." Encased within a self-contained unit, this transformation takes place, rendering each farm self-reliant with organic, high-nitrogen content fertiliser. This not only mitigates emissions but also renders artificial fertilisers obsolete.

In the realm of maritime sustainability, Marine Pro[15] takes the lead with its diverse range of eco-conscious solutions tailored for leisure and working boats. A new chapter in their journey is focused on the extraction of copper from sludge and the recovery of biological materials from washed-off boat residues. Norway witnesses a yearly application of over 400 tons of bottom paint and other anti-fouling measures on leisure boats, with approximately 80 tons comprising biocides. Unfortunately, a significant portion of these environmentally detrimental substances eventually find their way into the oceans. Marine Pro's inventive approach offers eco-friendly hull washing for small and medium-sized boats. For vessels under 25 feet, they provide hull mats made from environmentally friendly materials, effectively cleansing and preventing fouling during mooring.

[14] Home - N2 Applied
[15] Marine Pro - Marine Pro

Boats up to 60 feet in length are catered to with a unique "sail in" hull washing facility, resolving fouling concerns comprehensively without resorting to environmental toxins or emissions.

# VI. Challenges Faced by SMEs

## 1. Challenges Faced by Bulgarian SMEs in Transitioning to Sustainable and Circular Economy

The growing consumption of resources and the environmental consequences it causes require a change in the economic model. One of the biggest challenges in doing so, is how to break away from a model fixed on growth in order to meet the social needs of the society, as well as how to replace the current model of exploitation of natural resources with a new, more efficient, resource-saving and ecologically responsible model. The circular economy provides basic guidelines for what needs to be done to permanently reduce the resource dependence of the economy and move towards overcoming the scarcity of non-renewable natural resources. Circular economy action is closely linked to key EU priorities, including jobs and growth, investment, climate and energy agenda, the social agenda and industrial innovation, as well as global efforts related to sustainable development.

According to a report developed by the Net Zero Foundation, Bulgaria is performing worst among the 27 EU member states in implementing the circular economy and ranks among the top 10 member states with the biggest carbon footprint from food. [16] In a nutshell, some of the identified challenges that the Bulgarian SMEs face in transitioning to sustainable and circular economy are the following:

- The complexity of reporting the results and the lack of synthetic aggregates for this;
- The insufficient information and data at macro level, as well as the lack of wide publicity of good practices and the opportunities that new business models have;
- The already established almost vertical structure of the Bulgarian industrial system, where intersectoral connections are missing or are poorly developed;
- The lack of management skills;
- The financial constraints, especially for SMEs, as the implementation of the circular economy inevitably goes with serious investments in new resource-saving technologies.

The production – consumption – waste model as a linear model is already getting old. However, the transition to the circular economy model is taking place slowly, and the transformation is still in its beginning. Among the main obstacles can be also mentioned:

[16] Bulgaria Is EU's Worst Performing Member in Implementing Circular Economy, NGO Says: https://www.bta.bg/en/news/economy/335528-bulgaria-is-eu-s-worst-performing-member-in-implementing-circular-economy-ngo-s

- Insufficient awareness of managers and entrepreneurs;
- Fear of new, the unknown, the desire to always position yourself on the safe side;
- The lack of desire of radical changes;
- Insufficient resource for technological renewal and application of new environmentally friendly and resource saving technologies;
- Insufficient motivation;
- Lack of dedicated personnel;
- Mistrust in data security;
- Underdeveloped infrastructure;
- Lack of preparation for systems integration, etc.

## 2. Challenges Faced by Norwegian SMEs in Transitioning to Sustainable and Circular Economy [17]

A range of factors contribute to the challenges faced by SMEs in embracing sustainable and circular practices. Foremost among these is a lack of awareness and familiarity with the potential benefits of such a transition. Many SMEs lack the necessary insights and know-how required to effectively integrate sustainable approaches into their operational frameworks. This knowledge gap extends to unfamiliarity with available financing avenues designed to support circular economy initiatives.

The financial aspect is a significant hurdle on the path to sustainability. Shifting towards a circular economy often demands substantial investments, a burden that many SMEs, particularly the smaller ones, find challenging to bear. This financial constraint is exacerbated by difficulties in accessing alternative funding sources that could facilitate this transition

Cultural and attitudinal factors also exert influence. Prevailing attitudes within SMEs can impede their engagement with green initiatives. Scepticism towards emerging market opportunities and a propensity for short-term business planning can hinder the integration of sustainable practices.

Furthermore, the support SMEs receive from supply and demand networks can be pivotal. However, they often encounter difficulties in selling green products and services, as customers might harbour doubts about the circular economy's long-term viability or harbour misconceptions about the quality of environmentally friendly products when compared to conventional offerings.

Navigating regulatory landscapes presents another challenge. SMEs frequently grapple with the complexities of compliance with reporting systems stipulated by entities like the EU. In this regard,

[17] Source: https://www.dinbedrift.no/wp-content/uploads/2021/04/SMB-enes-rolle-i-det-gronne-skiftet-endelig-versjon-mars-2021.pdf , pages 5,16,57,61

they advocate for streamlined action plans and reduced administrative burdens to encourage their participation in sustainable endeavours.

The sustainability landscape in Norway encompasses a range of sectors, each grappling with distinct challenges on their journey towards a greener future. The energy sector, notably the oil and gas industry, confronts a significant hurdle in its transition to more sustainable energy sources. This is predominantly due to the country's heavy reliance on fossil fuels, necessitating both substantial investments in renewable energy infrastructure and technologies, and policy shifts that incentivize the move away from traditional fossil fuels1.

Similarly, the transport sector is on its own path towards sustainability. While notable progress has been made in popularising electric vehicles, there remains room for enhancing public transportation and reducing dependence on private cars. Moreover, addressing the environmental impact of aviation and shipping is imperative. Encouragingly, strides have been taken, with numerous public buses running on biogas and national ferries gradually transitioning to electric models, a process that had seen 86 electric ferries introduced by July 2023 (link). A significant development is also underway with the introduction of the first electric plane.[18]

Within the agricultural sphere, multifaceted challenges emerge, including the reduction of greenhouse gas emissions, promotion of organic farming, and responsible management of livestock farming's environmental repercussions. Striking a balance between meeting local food demands and safeguarding natural ecosystems remains paramount.

Contextual differences further influence these challenges across different regions of Norway. Urban centres like Oslo, Bergen, and Trondheim grapple with issues stemming from urbanisation, such as waste management, air quality, and energy consumption. Conversely, rural areas face distinct concerns, including land use, biodiversity preservation, and equitable access to sustainable infrastructure and services.

Geographical variances also play a role. Coastal regions, due to their proximity to the sea, grapple with marine pollution, overfishing, and the impending rise in sea levels. Inland areas, conversely, are more attuned to freshwater management, forest conservation, and the promotion of sustainable agricultural practices.

Further nuances manifest between the northern and southern parts of Norway. The Arctic Circle's northern expanse contends with unique sustainability challenges resulting from climate change, including melting glaciers, permafrost thawing, and the reverberating impacts on indigenous communities and wildlife. In contrast, the more densely populated and industrialised southern

[18] Sources: https://www.nrk.no/nordland/wideroe-satser-pa-elfly-fra-rolls-royce-_-kan-vaere-i-lufta-pa-norske-flyplasser-i-2026-1.15413067

https://www.tilnull.no/ferger

regions face industrial pollution, waste management intricacies, and the intricacies of urban sustainability.

Regions with oil and gas production, such as the North Sea territory, encounter their distinct set of sustainability dilemmas. Challenges pertaining to fossil fuel extraction, like oil spills, gas flaring, and the pivot towards renewable energy, characterise their sustainability landscape.

# VII. Regional insights

## 1. Insights about Ruse Region, Bulgaria

Ruse is a dynamic and thriving city with well-developed industry and rich history. Situated at a cross-road, the city and its region are a convenient place to start a business and gives an advantage to the companies which invest there. It combines modes of transport like river, railway and road and it has a close proximity to two international airports - Bucharest (OTP) - 85 km and Varna (VAR) - 190 km. In addition, Ruse is the biggest economic centre in the Bulgarian section of the Danube River. Its strategic location on the largest water highway of Europe, as well as its close proximity to the Romanian market and its capital – Bucharest, makes Ruse attraction center for investment and business development.

Despite the economic slowdown caused by the COVID crisis, there was sustainable upward development with a gross domestic product growth (GDP) of over 7% for the period of 2019-2021. In addition, the GDP of the Ruse region for 2021 was € 1625.39 mln, which was 2.3% of the total country's GDP for 2021. Moreover, the services and the industrial sectors have the largest share of the gross added value which is generated in the region.

The Ruse region is traditionally among the municipalities with a strong industrial profile. However, according to the latest data, the trade sector takes a slight advantage, generating about 38% of the total sales revenue volume for 2021. The wholesale trade sector is leading the way, with a significant growth of 30.8% during the Covid-19 pandemic. The largest share is in the trade of solid, liquid, and gaseous fuels and trade in chemicals. Immediately after that, the industry ranks with 36.5% of the total sales revenue volume, with the leading position being taken by the machinery and equipment sector, while the production of parts and accessories for automobiles becomes structurally defining for the economy of the city. The chemical industry, clothing manufacturing and metallurgy also have a significant share in the production sector of Ruse. The sector of transport, warehouse and storage occupies a significant share in the structure of the local economy due to the strategic location of the region and its good connectivity. Logistics in Ruse is also a sector with high potential for development. The strong position of the telecommunications and courier industry is thanks to the courier companies, which successfully expand their business activities. The highly diversified profile is completed by the agriculture, construction, hotels and

restaurants, as well as companies providing professional services (accounting, architectural, project, legal, consulting, real estate, advertising services etc).

For 2021, the investments in Ruse municipality are over € 355 million, and their growth compared to 2017 is nearly 21%. 80% of all foreign investments in the municipality of Ruse are concentrated in the industry sector. In recent years, there has also been significant increase in investments in the Trade, transport, hotel and restaurant sector – with 118,1%, as well as in the sector of Creation and dissemination of information and creative products, telecommunications - 76,6%. In recent years Ruse has become an attractive spot for companies producing components for the largest international automotive corporations. The expansion of the existing automotive manufacturing cluster and establishing new related productions are among the priority opportunities for attracting foreign investments in the region. [19]

### 2. Insights about Trøndelag Region, Norway

Located in the Trøndelag region, Trondheim stands as Norway's technological heart, earning its renown as the nation's technological capital. Reverberating with innovation, it boasts a thriving startup ecosystem, where the spirit of invention thrives. Here, research and development reign supreme, with two prominent catalysts of progress, the Norwegian University of Science and Technology (NTNU) and SINTEF, a leading independent research entity in Europe, spearheading the drive for innovation. Notably, a constellation of small and medium-sized enterprises (SMEs) burgeons in the technology sector, encompassing domains like IT, biotechnology, and marine technology. Not to be overlooked is Trondheim's robust footprint in the energy sector, as exemplified by the substantial presence of Equinor, a paramount energy production company, within the city's bounds.

In alignment with its technological capacities, Trondheim distinguishes itself as a vanguard of sustainable and circular economy practices in Norway. A pulsating epicentre of sustainability, the city witnesses the flourishing of initiatives designed to propel the circular economy into the forefront. Illustratively, Trondheim's waste management system undergoes a metamorphosis, ingeniously transforming refuse into biofuel to power city buses. Fueled by a commitment to renewable energy, the region hosts numerous wind farms across its landscape.

## VIII. Role of Green Change Agents

The Green Change Agent acts as a catalyst for change within the SME, driving the sustainability agenda and helping to embed sustainable practices into the day-to-day operations of the business.

[19] INVESTMENT PROFILE OF RUSE MUNICIPALITY: https://investinruse.com/en

Their role requires a combination of technical knowledge about sustainability, strong leadership and communication skills, and the ability to influence and inspire others.

In order to analyse and define the needs and opportunities of the Green Change Agents in Bulgarian SMEs, Ruse Chamber of Commerce and Industry (RCCI) has conducted research in the form of a survey, which was distributed among various companies operating in the Ruse region.

By participating in the questionnaire, 63,6% of the respondents share that in their company, a dedicated person who is responsible for sustainability matters (e.g. implementing the transition to a circular economy/corporate social responsibility/green practices) does not exist. Therefore, only 36.4% of the interviewed companies say that they have such a role at the workplace.

However, in order to understand more about the qualities that the Green Change Agent should possess, RCCI asked the companies which already have a worker responsible for sustainability, how did they choose this person and which are the qualities that are extremely important to fulfil their job. Most of the answers included regenerative thinking in innovative sequential supply and competent enough in sustainability matters.

The participants in the survey were also asked which are the main responsibilities of this person in their company. Among the received answers were the following:

- To reduce paper usage by making it possible and convenient with their cross-platform application PDF Extra;
- Development and management of projects in the field of Environment, Green Deal, Cultural and Historical Heritage;
- Legislation in this area is fully monitored, as well as good practices from already mature companies serving as examples in the industry;
- Research and develop all new requirements, as well as their implementation in the Company's Management System.

However, most of the respondents (75%) argue that the person implementing the role of the Green Change Agent in their company needs to improve their skills and knowledge in order to do their job better. In addition, according to them, some of the skills that should be acquired are the following:

- Broad communication and implementation of good practices in and with State, Municipal and European Union bodies;
- Reporting the results of the Sustainability Policy;
- Sustainability professionals must constantly maintain and upgrade their qualifications. Legislation is very dynamic and must be monitored daily, considering trends in the given industry. Some of the most important skills are working with a database, knowing sustainability standards and frameworks, and quickly processing large volumes of information related to "green policies".

In addition to the previous questions, the respondents were also asked to share some training topics which they consider useful and would enhance the competencies of the persons in their companies, occupying such positions. Among the received answers, the following are worth mentioning: Leadership, Environmental protection, Good practices from countries proven in the field, Ecology, Regenerative agriculture, Regenerative tourism, ability to create corporate strategies, ability to work with non-governmental organisations, knowledge on legislation and its correct application, knowledge on how to reduce CO2 - the carbon footprint, etc.

More than 70% of the interviewed companies admit that they need support in order to make the transition to more sustainable development. Therefore, through the survey it becomes clear that such a position as the Green Change Agent has high potential to be implemented in most of the companies of the Ruse region, but with the necessary adaptation and the provision of support in the form of training and/or guidance, in order to ease the process for the companies.

In Norway, based on the previously identified challenges for Norwegian SMEs, the Green Change Agents can act as drivers for the achievement of the indicators, stated in the relevant Norwegian legislation. More specifically, GCAs can help by:

- Aiding the challenges that SMEs face in adopting sustainable practices,
- Advocating for green investments to be made
- Taking mitigation actions toward resistance due to cultural factors
- Seeking support from supply and demand networks, to realise sustainable products on the market;
- Navigating regulations and seeking relevant support for understanding and applying the regulations as necessary;
- Advocating for reduction of the usage of oil and gas and moving towards cleaner energy sources;
- Advocating for transition to cleaner transport methods and providing assistance in the process;
- Assisting the reduction of greenhouse gases and mitigation of livestock's effects in agriculture;

In the various regions in Norway tailored approaches will be required by the GCAs when addressing the specific issues of the SMEs they operate in.

Based on the above findings and conclusions, for the GCAs to be able to tackle sustainability issues in the SMEs, they will need to adapt their approach to the specific needs of the SME they operate in. Therefore, a comprehensive, insightful, and wide-scoped assessment tool will allow these professionals to make an adequate needs assessment and tailor their approach to the identified needs.

# IX. Conclusion

The desk research leads to the evident conclusion that the Green Change Agents (GCAs) can play a pivotal role in driving sustainability and circular economy initiatives within SMEs in both Norway and Bulgaria. The challenges and opportunities identified in various sectors and regions underscore the need for a nuanced and adaptive approach by these change agents. Recognizing the diverse hurdles faced by SMEs, GCAs must tailor their strategies to align with the specific needs of each business. Hence, the development of a comprehensive, insightful, and versatile assessment tool is of key importance to the outcome of GCA's effort. This tool will serve as a guiding compass, enabling GCAs to conduct thorough needs assessments and craft tailored approaches that resonate with the identified challenges and aspirations of individual SMEs. By recognizing the heterogeneity of SMEs' circumstances and aspirations, this adaptive approach holds the key to catalysing effective and lasting change. Ultimately, the success of sustainability and circular economy integration within SMEs rests upon the commitment, expertise, and adaptability of these Green Change Agents in shaping a greener and more prosperous future.

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