

GREENPACT

Futurepreneurs and SMEs for a sustainable Central Europe

Deliverable D.1.1.1 - The GREENPACT maps on Circular Economy & Impact Entrepreneurship







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Introduction

‘Innovation is the path, impact is the destination.’ (Peter Singer)

Sustainable development cannot be attained without the involvement of enterprises that apply it and not just greenwash. Meanwhile, the generation of Fridays for Future, futurepreneurs and future consumers (Generation F), holds huge potential, whilst feeling unheard with their concerns on climate /societal challenges.

This challenge especially affects SMEs, but also public authorities and the general public in CZ, DE, HR, IT and SK. GREENPACT has found that SMEs from the Creative Industries need and want to better understand the concerns of consumers, but often lack access to data and skills. To reach the tipping point to a more sustainable, fair and green Europe, connecting the industries and Generation F is one of the first steps to take. Due to the diverse set-up of PPs derived from RIS3, regions learn from each other's approaches to Impact Entrepreneurship and Circular Economy.

GREENPACT develops an innovative bottom-up approach where younger and older people work together transnationally. The project develops together with stakeholders, experts, SMEs and the Generation F, action plans, pilot actions and a self-assessment tool, which lead to a certification scheme for Impact and Green CEOs. It links the entrepreneurial spirit with years of expertise SMEs towards an impact driven economy. With comm. activities (e.g. TTT, influencer toolkit), target groups and general public learn to see the global crisis as chance for new ways of business. First, the transnational strategy and action plan will be developed, which leads then to the implementation of collaboration labs, pilot actions and lastly, an accessible toolbox, empowering certification and self- assessment scheme.

GREENPACT paves the way for a more impactful and sustainable Europe through direct collaboration of Generation F and SMEs. In three years of partnership, the certification scheme and a collateral booklet will be available to public.

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Applying the needs-driven approach, each region has implemented this survey of offers/needs/obstacles /players as relevant in the regional Circ. Econ. with the purpose of mapping all the regional drivers&institutions/organisations.

The survey detects the main “targets” in terms of organisational, procedural or product innovations which will then be integrated within the regional structure. The survey contains the analysis of statistics, frameworks, measures & laws on Circular Economy in every region to better shape the common background for the following projects.



The GREENPACT map on Circular Economy & Impact Entrepreneurship in STUTTGART Region (DE)

1.Regional state of the art:

Sources: Statistic Agencies for Germany and Baden-Württemberg, Chamber of Commerce, Company Database "Markus", majority of numbers for Baden-Württemberg, in case numbers are available for the Stuttgart Region it's indicated.

Regional demographic statistics

Total population (2021)	2.783.899
Population per sex	1.384.905 male / 1.398.994 female
Population per age in % [0-14 - 15-64 - >65]	0-14: 397.747 / 15-64: 1.818.274 / >65: 567.878
Average age	43,7
Life expectancy	79,81 m / 84,26 w
Growth rate (expected 2020-2030)	1,2 %
Population density	762 inhabitants per km ²
Total area (land) of the region [km ²]	3.653,57
Immigration rate and origins (%)	133.548
Net migration rate	- 4.680

Regional education and employment

Literacy rate no recent numbers available, according to "Landeszentrale für politische Bildung Baden-Württemberg" ("Center for political education in Baden-Württemberg") there have been app. one million illiterate citizens in B-W (based on a 2011 study)

Education attainment	[% primary / secondary / tertiary]		n/a
% youth NEET (15 to 25 y.o.)	9,2 %		
Employment	1.280.000		
by gender	56,5 % male / 43,5 % female		
Unemployment rate	3,6 %		
by gender	56,8 % male / 43,2 % female		
Youth unemployment rate	2,6 %		
by gender	n/a		



Regional economics and industry

Gross domestic product (GDP) (Stuttgart Region)	146 bn eur
G.D.P. per capita	52.444,43 eur
Poverty rate	5,1 %
Inflation rate (average last year)	6,3 %
Foreign Direct Investments	n/a
Trade balance	n/a
Export by countries (5 most relevant and % of the total)	USA (15 %), Switzerland (7,9 %), China (7,7 %), France (7,1%), Netherlands (6,4 %)
Import by countries (5 most relevant and % of the total)	China, Switzerland, Italy, USA, Netherlands
Number of Businesses Stuttgart Region:	71.315
of which SMEs	55.176 (max. 250 employees) =app. 77%
Average business size	18 employees
Number of local units	n/a - tbd
Industrial sectors in % [primary/secondary/tertiary]	n/a
Employment by Industry [primary/secondary/tertiary]	0,3 % primary / 33 % secondary / 66,6 % tertiary



Businesses by NACE code [1st level in %] / by industry

Companies in Baden-Württemberg in 2021

Economic sector	Enterprises		
	Number	Employees subject to social insurance	Turnover
	1 000		EUR bill.
Manufacturing	39,1	1 509,7	510,6
Construction	49,1	257,2	53,6
Wholesale and retail trade; repair of motor vehicles and motorcycles	78,1	681,0	383,6
Transportation and storage	12,8	161,0	24,2
Accommodation and food service activities	32,4	113,6	8,3
Information and communication	17,2	196,1	38,4
Financial and insurance activities	11,2	116,4	15,4
Real estate activities	27,3	26,2	13,2
Professional, scientific and technical activities	68,2	308,3	53,3
Administrative and support service activities	26,6	239,1	26,2
Human health and social work activities	33,0	627,4	15,0
Arts, entertainment and recreation	11,2	38,1	4,3
Other service activities	31,1	125,5	4,7

Source: https://wm.baden-wuerttemberg.de/fileadmin/redaktion/m-wm/intern/Publikationen/Wirtschaftsstandort/Wirtschaftsdaten2023_english.pdf

Employment by NACE code [1st level in %]	see above
Average salary (national & EU ratio)	50.237 EUR (reg) / 41.716 EUR (nat.)
Businesses demography (birth v/s death in the last year)	+18.716 / -13.772

Regional digital economy and society (2019)

Households with access to the internet at home (%)	90 %
Households with broadband access (%)	87 %
Individuals who have never used a computer (%)	10 %
Individuals who used the internet for interaction with public authorities (%)	15 %



Individuals who ordered goods or services over the internet for private use (%) 87 %

Registered digital enterprises over the total (%) n/a

2. Frameworks, Measures & laws on Circular Economy:

Regional policies and strategies

For decades, Baden-Württemberg has been one of the leading innovation regions in Europe. But the state is in fierce competition for the world's smartest technologies, best ideas and brightest minds. Based on the state's new innovation strategy, which was adopted by the Council of Ministers in February 2020, the course is being set for the future.

<https://wm.baden-wuerttemberg.de/de/innovation/innovationsstrategie-des-landes>

The Baden-Württemberg sustainability strategy was launched in 2007 and sees itself as a platform for the state, business and society to debate and implement issues of sustainable development. The current state government has realigned the sustainability strategy. The goal is to make sustainability a central criterion for political decisions.

<https://www.nachhaltigkeitsstrategie.de/>

The State Parliament exercises legislative power and monitors the State Government's use of its executive powers. The third branch of government, the judiciary, is independent and its powers are exercised by judges who are answerable only to the law. All publications on sustainability and/or the creative industries can be found here.

www.landtag-bw.de/

Regional Labelling and Information Schemes

Incentives for circular/green business models (tax credits, subsidies, etc.)

The WRS, the City of Stuttgart Economic Development Corporation and the Stuttgart Region Chamber of Industry and Commerce support companies from the state capital on their way to a sustainable transformation with the "CSRD Support" funding program. The aim of CSRD Support is to enable companies to successfully implement the EU's Corporate Sustainability Reporting Directive (CSRD). From 2026, they will be obliged to submit an annual sustainability report under certain conditions.

<https://wrs.region-stuttgart.de/angebote/neues-foerderprogramm-fuer-mehr-nachhaltigkeit/>

Together with the central coordination office at Umwelttechnik BW, the state agency for environmental technology and resource efficiency, the regional competence centers form the state-wide Resource Efficiency Network. The central coordination office has the task of supporting the regional competence centers in performing their tasks and coordinating the measures in the network. It also serves



as the central point of contact for the KEFF+ network for the Ministry for the Environment, Climate and Energy Management. <https://www.keffplus-bw.de/de/region-stuttgart>

KfW is an important and active financing partner of German public institutions. For KfW Group, corporate action and social responsibility are inseparable. This is reflected in our human rights declaration and our strategic goal of achieving a top position in ESG ratings. www.kfw.de

Energy policy, protecting the environment and mitigating climate change are challenges on a global scale. This is why we attach such importance to International Cooperation in Europe and worldwide. You will find information here on our work in the European Union (EU), within the framework of the EU's Strategy for the Danube Region, The European Regional Development Fund (ERDF) and our international cooperation in Europe and beyond. <https://um.baden-wuerttemberg.de/de/energie/informieren-beraten-foerdern/foerderprogramme/foerderprogramme-unternehmen>

The Ministry for Economy, Work and Tourism Baden-Württemberg offers more than 80 funding initiatives for SMEs. Many of them are with a focus on energy efficiency and sustainability. <https://wm.baden-wuerttemberg.de/de/service/foerderprogramme>

A list of all funding programs within the Ministry the Environment, Climate Protection and Energy Sector Baden-Württemberg <https://um.baden-wuerttemberg.de/de/energie/informieren-beraten-foerdern/foerderprogramme>

A list of all funding programs for SMEs within the Ministry the Environment, Climate Protection and Energy Sector Baden-Württemberg <https://um.baden-wuerttemberg.de/de/umwelt-natur/umwelt-wirtschaft/angebote-fuer-unternehmen>

An article and guideline by the regional Chamber of Trade (Handwerkskammer) on sustainability in SMEs <https://www.hwk-stuttgart.de/artikel/nachhaltigkeit-starten-sie-die-inventur-in-ihrem-betrieb-67,551,1023.html>

Stuttgarter Klima-Innovationsfonds <https://jetztklimachen.stuttgart.de/klima-innovationsfonds>

3. Relevant regional stakeholders (Institutions/organisations involved in the implementation of regional strategies):

Regional government agencies

Verband Region Stuttgart www.region-stuttgart.org

The political entity for the Stuttgart Region. Every five years at the regional elections, the citizens vote for the delegates in the Regional Assembly (regional parliament). It works towards the forward-looking and sustainable development of the Stuttgart Region. The aim is to ensure diversity, the high quality of life, mobility and economic strength in the long term.



Landeshauptstadt Stuttgart <https://jetztklimachen.stuttgart.de/klimakarte>

Stuttgart wants to be climate neutral by 2035. The climate roadmap shows how this goal can be implemented. Initial measures for more climate protection and climate adaptation are already bundled in the Climate Action Program, which runs until the end of 2023.

Stadt Ludwigsburg www.ludwigsburg.de/

2020, the integrated climate protection and energy concept (overall energy concept) from 2011 has been renewed - it includes many measures and recommendations for action. In 2016, a climate adaptation concept was also developed. It contains implementation measures for coping with the consequences of climate change. To ensure that these are implemented step by step, many different activities and projects are underway in Ludwigsburg in the area of climate protection and energy. The Climate and Energy team is working on the topics of climate protection, climate adaptation and neighborhood concepts - partly within a European framework. The basis for this work is the "Climate and Energy" master plan, in which all of the city's energy activities are bundled. A sustainable approach to energy is achieved by saving energy and using it more efficiently, increasing the use of renewable energies and building up knowledge in this area. Positive effects can be felt in the general climate development and the air quality on site.

The Ministry for Economy, Work and Tourism Baden-Württemberg <https://wm.baden-wuerttemberg.de/de/startseite> - <https://wm.baden-wuerttemberg.de/de/service/auszeichnungen-und-wettbewerbe/mittelstandspreis-fuer-soziale-verantwortung>

The Ministry is committed to sustainable economic policies in line with the 17 SDGs. For this purpose, a sustainability report is published every five years (most recently in 2019). In addition, the ministry promotes corporate social responsibility and awards, for example, the SME Award for Social Responsibility. The event series "globally responsible BW - shaping supply chains sustainably" is also intended to support companies in their implementation. In addition, reference is made to the sustainability strategy of the state of Baden-Württemberg.

Ministry the Environment, Climate Protection and Energy Sector Baden-Württemberg - <https://um.baden-wuerttemberg.de/en/home> <https://www.nachhaltigkeitsstrategie.de>

The state's sustainability strategy has a clear goal: sustainability is to become the hallmark of Baden-Württemberg. To achieve this, goals are being formulated, measurement instruments are being developed for the first time, focal points are being set and the business community and social actors are being actively involved in the processes of sustainable development. The state administration itself has set itself the goal of being largely climate-neutral by 2040.

Ministry of Food, Rural Areas and Consumer Protection Baden-Württemberg - <https://mlr.baden-wuerttemberg.de/de/startseite> <https://mlr.baden-wuerttemberg.de/de/unsere-themen/biooekonomie-und-innovation/landesstrategie>

An initiative of the Ministry of Food, Rural Areas and Consumer Protection and the Ministry of the Environment, Climate and Energy Management is the joint state strategy "Sustainable Bioeconomy for Baden-Württemberg", which was adopted by the state government in mid-2019. With the state strategy, the state government supports the necessary transformation to a raw material-efficient and cycle-oriented economy based on renewable and biological resources. With the amendment of the Nature Conservation Act and the Agriculture and State Culture Act, we have created a basis that offers our farmers in Baden-Württemberg a forward strategy.



Chambers of commerce and industry associations

IHK Region Stuttgart

<https://www.ihk.de/stuttgart/>

The Chamber of Commerce and Industry of the Stuttgart Region (Industrie- und Handelskammer Region Stuttgart/IHK Region Stuttgart) represents the interests of its approximately 160.000 member companies with respect to politics and administration. It also informs and advises on all relevant economic matters, offers professional education, and is a platform for the exchange of experiences.

Handwerkskammer Stuttgart

<https://www.hwk-stuttgart.de/>

The Stuttgart Region Chamber of Skilled Crafts is the service center for almost 30,000 craft enterprises from Stuttgart and the districts of Böblingen, Esslingen, Göppingen, Ludwigsburg and the Rems-Murr district. It represents the interests of its members at regional, state, federal and European level and informs them on all subjects relevant for their (future) businesses.

Baden-Württembergischer Handwerkstag

<https://handwerk-bw.de/>

HANDWERK BW stands for the Baden-Württemberg Association of Skilled Crafts. It is the umbrella organization of the skilled crafts organizations in the southwest. Our members are chambers of crafts, trade associations and other partner organizations. As the representative of 140,000 companies, 805,000 employees and 48,000 trainees, they are the voice for the skilled crafts in BW and responsible for all relevant subjects.

Research centers and universities

Hochschule der Medien Stuttgart

www.hdm-stuttgart.de

Hochschule der Medien is a public university (funded by the state of Baden-Württemberg) which teaches media specialists. Since September 1st, 2001, Hochschule der Medien has brought together the combined know-how of the former Fachhochschule für Druck und Medien (HDM) - a traditional educational institution for printing- and media-technologies - and Hochschule für Bibliotheks- und Informationswesen (HBI).

Hochschule der Medien covers a broad spectrum of media expertise: from printed media to electronic media, from design to business administration, from library science to advertising, from content for media to packaging technology, from computer science to information science to publishing and electronic media. About 30 accredited Bachelor's and Master's degree programmes mirror this diversity.

Universität Stuttgart www.uni-stuttgart.de

The University of Stuttgart is a state university in Stuttgart and maintains an interdisciplinary profile with a focus on engineering, natural sciences, humanities and social sciences. As a guiding principle of networked disciplines, this "Stuttgart Way" shapes the special profile of the University of Stuttgart and has become one of its trademarks. It is divided into ten faculties and 150 institutes.

Universität Hohenheim

<https://www.uni-hohenheim.de/>

Individual and unique: this is how the University of Hohenheim presents itself as a highly specialized and oldest university in Stuttgart. Founded in 1818 after devastating famines, the University of Hohenheim has always felt committed not only to intensive basic research but also to the tradition of developing innovative solutions for pressing social problems. Unlike other universities, the University of Hohenheim has a nationwide unique range of subjects for this purpose.



Hochschule für Technik Stuttgart

<https://www.hft-stuttgart.de/>

The Stuttgart University of Applied Sciences has been educating students for over 190 years, and the original school for building trades has long since become a modern university of applied sciences (HAW). Three faculties offer 35 bachelor's and master's degree programs. inter-faculty projects and contacts with numerous companies in Stuttgart and the region distinguish the university as an attractive business location. Planned: "Gründungsnetzwerk Plan G" in Cooperation with Fraunhofer Morgenwerkstatt, a common initiative incl. an accelerator for sustainable urban development (Elena Schön, elena.schoen@hft-stuttgart.de)

Hohensteiner Institute

<https://www.hohenstein.de/de/>

The Hohenstein Institute is an international research and service center. Over 500 employees work at the headquarters in Bönningheim, Baden-Württemberg, focusing on the development, testing and certification of textile products and new and sustainable ways of developing and implementing eco-friendly innovative textiles. Laboratories, offices, storage and conference rooms are housed in the historic Renaissance Hohenstein Castle and six modern outbuildings. The Hohenstein Institute is represented by foreign offices in all regions of the world relevant to textile production.

Technikum Laubholz GmbH

<https://technikumlaubholz.de/>

The TLH has identified major innovation gaps, particularly in the area of renewable raw materials. For this reason, new areas of application are now being developed for the raw material wood that were hardly imaginable not so long ago.

DITF Deutsche Institute für Textil- und Faserforschung

<https://www.ditf.de/en/>

Under the umbrella of the DITF, work is being carried out on all future textile topics in three research areas - textile chemistry and chemical fibers, textile and process engineering and management research. The affiliated ITV Denkendorf Produktservice GmbH, which as a technology transfer center provides the market with a wide range of services, supports these activities.

University Stuttgart: Institute for Entrepreneurship and Innovation Research & TTI GmbH Technologie Transfer Initiative

- The Technology Transfer Initiative TTI GmbH

<https://www.tti-stuttgart.de> <https://www.eni.uni-stuttgart.de>

The Institute promotes entrepreneurship in theory and practice with an interdisciplinary approach that combines new technologies, innovation and science with the idea of sustainability.

The Technology Transfer Initiative (TTI GmbH) is the central contact point at the University of Stuttgart for strengthening and permanently establishing the culture of entrepreneurial independence. The aim is to transfer scientific results into economic value creation.

University of Hohenheim: Green Sustainable / Bioeconomy Entrepreneurship & Innovation Greenhouse

<https://entrepreneurship.uni-hohenheim.de> <https://inno-greenhouse.uni-hohenheim.de>

Sustainable economic action requires entrepreneurs who establish corresponding business models. Conversely, the trend towards sustainability offers corresponding opportunities for entrepreneurial action. In this research focus, the Department of Business Start-ups and Entrepreneurship deals with the design of framework conditions for more sustainable entrepreneurship as well as the functioning of innovative, sustainable business models and also addresses the questions that follow from an entrepreneurial perspective on the bioeconomy transformation. We strive to develop the University of Hohenheim into one of the strongest start-up universities in Germany. In the next 5 years we want to establish a pulsating ecosystem that is recognized both from outside and within Hohenheim to take a lead function in transferring science into sustainable innovation and fuel solution-oriented thinking of our students and employees.



HdM Stuttgart, Generator Startup Center

<https://www.hdm-stuttgart.de/startup-center/>

The Startup Center Generator offers students, alumni and employees of the HdM support with their start-up projects. The goal is to help you fully exploit your entrepreneurial potential and build your own successful company. In addition, projects to promote sustainability such as Greenpact, UrbanShift or Urniversity Green Digital Hub are carried out.

Macromedia, Virtual Start-up Incubator

<https://www.macromedia-fachhochschule.de/de/hochschule/karriere-entrepreneurship/start-up-incubator/>

The start-up network also has a central role at the private Macromedia University of Applied Sciences. For this reason, the Macromedia Virtual Start-up Incubator was set up to provide competent and nationwide advice. Thanks to the broad expertise of the ten or so professors involved (out of around 120) and easy access to them, the start-up network offers an ideal place for start-up ideas at any stage of development.

International School of Management, EPR@ISM: Entrepreneurship Institute & EaaS

<https://ism.de/forschung/institute/entrepreneurship-institute-ism>

The Entrepreneurship Institute EPR@ISM bundles know-how, research results and current developments and trends from the field of entrepreneurship in a competence centre. The latest findings from research projects are transferred to science and entrepreneurial practice. Current research topics flow into teaching, in particular into the M.A. Entrepreneurship course at ISM.

HfT Stuttgart, KEJ - Start-up support, certificate

<https://www.hft-stuttgart.de/forschung/projekte/aktuell/kej>

The Stuttgart University of Applied Sciences (HfT Stuttgart) has great innovation potential with its research projects and is currently in the process of establishing transfer structures within the university. Both aspects form a good basis for getting start-ups off the ground. With "EXIST Potentials", the Federal Ministry for Economic Affairs and Energy (BMWi) has called on universities to submit concepts to further expand their start-up networks.

Hochschule Esslingen, GRÜNDES - Entrepreneurshipzentrum

<https://www.hs-esslingen.de/forschung/transfer/gruendes/>

GründES!, the Centre for Entrepreneurship at Esslingen University of Applied Sciences, is the central contact point for all questions relating to entrepreneurship and innovation. They promote entrepreneurial spirit and responsible entrepreneurship close to people and technology with international projects, workshops and events and support students, employees, alumni and start-ups in their start-up projects.

Fraunhofer IPA

The Fraunhofer-Gesellschaft specifically supports good ideas as the basis for a competitive industry. Furthermore, it promotes institute-related start-ups. In order to provide these spin-offs with the best possible support, the Fraunhofer IPA offers a range of services with the support of Fraunhofer Venture. These include comprehensive support - from the idea to the exit - by legal and business start-up experts, internal funding opportunities, access to seed capital and a strong network in industry, the start-up and venture capital scene.

Hochschule für Wirtschaft und Umwelt Nürtingen Geislingen

<https://www.hfwu.de/> <https://www.g-inno.de/>

G-INNO is the Startup Centre in the Swabian Alb. It aims to increase the innovative power of the region, act as an attractor for the city and the region and create a link between the already active start-up spots Stuttgart and Ulm. In doing so, they not only benefit from the networking of the two regions, but can also rely on strong cooperation partners from business and local politics. They not only want to bring the best ideas to market, help existing start-ups scale their business models, but also specifically address the needs of the region: For example, they provide support for business succession and organise targeted workshops on real problems faced by our partners.



NGOs and civil society organizations

Kate Stuttgart

<https://www.kate-stuttgart.org/>

A non-profit consulting and educational organisation focusing on sustainable business, corporate social responsibility (CSR), sustainable tourism, sustainable development goals (SDGs), global justice and education for sustainable development.

Heinrich Böll Stiftung

<https://www.boell-bw.de/>

The Heinrich Böll Foundation is the green political foundation focusing on ecology, democracy, gender justice and human rights.

Baden-Württemberg Stiftung

The mission of the Baden-Württemberg Stiftung is to strengthen and secure the future viability of the state. As an operating institution, the Baden-Württemberg Stiftung does not limit itself to providing financial support for existing projects, but initiates its own programs, implements them and ensures the results. The thematic focus areas are diverse, ranging from climate change, life sciences and health to early childhood education and civic and cultural engagement.

Klimaschutz Stiftung Baden-württemberg

<https://www.klimaschutzstiftung-bw.de/de/> A subsidiary of the Baden-Württemberg Stiftung to accompany people in the state on the path to climate neutrality. We see climate change as a challenge for society as a whole, encompassing all areas of life. We respond to this with effective climate protection projects and compensation offers in Baden-Württemberg, Europe and worldwide. In this way, we strengthen Baden-Württemberg's pioneering role in climate protection and positively shape our common future.

Other regional stakeholders

Sustainable Stuttgart Region with Cluster initiative „Cleantech“

<https://wrs.region-stuttgart.de/schwerpunkte-unserer-arbeit/nachhaltige-nutzung-von-ressourcen-vorantreiben/>

The sustainable use of resources offers great growth potential both for conventional industry and for the mobility industry and environmental technology itself - thanks to savings opportunities and resulting market opportunities for new products and processes. Innovative technologies can support a balance between ecology and economy. To achieve this, the Stuttgart Region must drive forward the containment of emissions and face up to the challenge of dealing with resource scarcity. WRS supports this development in a variety of ways. For example, it is driving forward the expansion of a hydrogen infrastructure in the region, which will save large amounts of CO₂. With various other initiatives, WRS is creating incentives for companies to use sustainable management as an opportunity for innovation. In addition to promoting important measures in the field of alternative drive systems, corporate mobility management and environmentally friendly logistics, WRS supports the rapidly growing sector of environmental technologies.

Photovoltaik Network Stuttgart Region



<https://www.photovoltaiik-bw.de/regionale-pv-netzwerke/region-stuttgart/>

The Photovoltaic Network Stuttgart Region aims to further promote the expansion of solar power use. The Photovoltaic Network Stuttgart Region is aimed at citizens, public institutions, companies and other interested parties such as associations and energy cooperatives. We provide them with company-neutral information about the advantages of solar power systems. Our goal: to stimulate the construction of photovoltaic systems in the metropolitan area of the Stuttgart Region and to increase solar power generation.

Modellregion Grüner Wasserstoff

<https://wrs.region-stuttgart.de/wirtschaftsfoerderung-region-stuttgart-gmbh-wrs/modellregion-gruener-wasserstoff/>

The "Green Hydrogen Model Region" funding program of the EU and the state of Baden-Württemberg is coordinated by WRS. The Stuttgart Region's "H₂ GeNeSiS" model region, which is funded with eleven million euros, aims to build a hydrogen pipeline along the Neckar River. Both producers and users will connect to its route, thus developing a far-reaching distribution network. The Green Hydrogen Model Region lays the foundation for the economic implementation of a green hydrogen economy and can test measures in practice while increasing acceptance within society for hydrogen as an energy source. In addition, the hydrogen and fuel cell industry can make an important contribution to the future competitiveness of the Stuttgart region, which is particularly affected by the transformation of the automotive industry.

IBA Stadtregion Stuttgart 27

<https://www.iba27.de/en/home/>

A ten-year journey of shared discovery is under way with the aim of making the Stuttgart urban region a liveable, sustainable place. Ideas around what should be completed, used and exhibited for the presentation year of the International Building Exhibition in 2027 - 100 years after the Weissenhof - raise a whole host of questions. How do we want to live together in the Stuttgart Region in the coming decades? How can we build futureproof homes? How can cities, villages and settlements in Stuttgart's highly industrialised metropolitan region meet the challenges posed by social, technological and ecological change?

Impact Hub Stuttgart

<https://stuttgart.impacthub.net/?lang=en>

The Impact Hub Stuttgart is an ecosystem for sustainable innovations and a community that is entrepreneurial and future-oriented. Together we develop, test and realize visions for a responsible and sustainable future.

Social Impact Lab Stuttgart: Sustainable and Social Entrepreneurship

<https://stuttgart.socialimpactlab.eu>

The Social Impact Hub is a non-profit incubator for sustainable entrepreneurship and social innovation. If you want to found a start-up and create added value for society, this is the place to be. Triggering innovations in welfare with ideas, promoting sustainable consumption or tackling social problems with digital offerings - all this is possible at the Social Impact Hub Together, we lay the foundation for sustainable success in a start-up.



Gründermotor: Innovation Ecosystem

<https://gruendermotor.io/about/>

The start-up engine lays the foundation for the next generation of SMEs in "THE COUNTRY". They create an innovation ecosystem with European appeal. In this way, they support economic, social and sustainable progress in Baden-Württemberg as part of the state's "Start-up BW" campaign.

Startup Region Stuttgart: Supporter for information, events and contact persons

<https://www.startup-region-stuttgart.de>

The Startup Region Stuttgart supports entrepreneurs - whether they are founders, a young company or interested in starting a business, other - in finding the right information, events and contact persons within the startup ecosystem of the Stuttgart region.

Future Industries HUB Stuttgart: Gateway Network

<https://www.code-n.org/future-industries-hub-stuttgart/>

The region surrounding Stuttgart is one of the most important business and economic centers in Germany. It is renowned for its innovative spirit and leadership role across numerous industries. Stuttgart's digital ecosystem connects well-established companies with startups to create innovative solutions surrounding smart products, mobility, and industry 4.0 together.

The Future Industries Hub Stuttgart is both the gateway network to this ecosystem and a way of embedding it in the nationwide context of the hub initiative.

Startup Campus 0711:

<https://startupcampus0711.de>

Association of the University of Stuttgart, Stuttgart Media University, Technologic-Transfer-Initiative GmbH and others The Startup Campus 0711 is an association of the University of Stuttgart, the Stuttgart Media University, the Technologie-Transfer-Initiative GmbH and other university and research partners from the Stuttgart region. Around 35 innovative start-ups emerge from the universities and research institutions at the Stuttgart Campus every year. We advise and support founders with a focus on qualification, market entry and the procurement of follow-up financing.

StartupBB

<https://startup-bb.de>

Startup-BB is the support for entrepreneurs and people interested in starting a business in the district of Böblingen. Among others, the Chamber of Industry and Commerce (IHK), representatives of banks and the senior citizens of the business community provide advice.

StartupGP

- <https://www.startupgp.de>



StartupGP organises events such as the founder barbecue and is an initiative of the city of Göppingen. It brings together start-ups, interested parties and supporters and offers a platform for exchange. At the event, everyone has the opportunity to draw attention to their project or idea with a "pitch". Afterwards, it's all about exchanging ideas, networking and spinning around over barbecue food and cold drinks from Café Campus.

4. RIS3 regional analysis of CCI and Tourism sectors involved in Circular Economy Green/impact entrepreneurship:

S3 priorities

S3 Priorities (2021-2027)

In the future, the state of Baden-Württemberg in Germany will invest in the growth and future areas identified by the Innovation Strategy of the country adopted by the Council of Ministers in February 2020 (<https://wm.baden-wuerttemberg.de/de/innovation/innovationsstrategie-des-landes>).

. These S3 priority areas are:

- **Digitisation, Artificial Intelligence, Industry 4.0**

Artificial Intelligence, Quantum Technologies, Blockchain, technology & knowledge transfer, IT Security, Business models, Future of Work, Lifelong Learning 4.0, Law, Standards

- **Sustainable Mobility**

Electrification, scaling of SDA projects, digitalisation, transformation process, vehicle production/after-sales, mobility data/networking, energy/grids/infrastructure/climate protection

- **Health Economy**

Data & digitization, diagnostics, professionals & professions, health literacy, production, therapy

- **Resource efficiency and energy transition**

Smarter use of scarce raw materials & energy carriers, lightweight construction, sustainable production processes in SMEs, recycling & waste management, qualification of engineers & skilled workers

- **Sustainable bioeconomy**

Ensure food & nutrition security, manage natural resources sustainably, reduce dependence on non-renewable, unsustainable resources, limit & adapt to climate change, strengthen European competitiveness and create jobs

The Innovation Strategy is also a prerequisite for funding from the European Regional Development Fund (ERDF) to flow to Baden-Württemberg. The aim is to further strengthen the strengths of Baden-



Württemberg's core industries, but also to focus on those industries that are already present in the state to a critical mass but are capable of expansion.

Baden-Württemberg is the first state to set up an interdepartmental innovation laboratory, the Innolab_bw, to help innovations in prioritised subject areas achieve a breakthrough quickly and effectively. Innolab_bw observes global innovation trends, networks with innovative actors in the state and brings their needs and ideas to the attention of the state government. In various formats, it brings together people from administration, business, civil society and science to initiate concrete innovation projects and develop prototypes. InnoLab_bw thinks and acts "outside the box" and relies on fast, agile forms of work that overcome departmental and silo thinking. In this way, we want to help innovations "Made in BW" achieve a breakthrough more quickly. (<https://stm.baden-wuerttemberg.de/de/themen/innovationslabor/>)

On the basis of the Innovation Strategy, the innovative capacity of small and medium-sized enterprises, which significantly shape the economic structure of the state, is also to be strengthened. Among other things, EU funds are to be used to further expand the research infrastructure at universities and business-related institutes and to improve the structures of technology transfer from science to SMEs in the state. Small and medium-sized enterprises are currently responsible for 11% of the total innovation expenditures of the Baden-Württemberg economy, although they make up more than 90% of the companies.

S3 Thematic Platforms

Medical Technologies

Medical technology offers new opportunities to address challenges by increasing the efficacy of healthcare and limiting the cost.

European Hydrogen Valleys

The EU sets up an ambitious objective: to be the first climate neutral economy by 2050.

New Nano-Enabled Products

The pilot project focuses on identify existing and missing value chains within nanotechnology across Europe.

Wireless ICT

This partnership aims to help to develop and implement a common strategy enabling investments in the field of fast and energy- and resource-efficient wireless ICT. The focus will be on Health, Sustainable industry, Autonomous vehicles and Smart cities/regions.

AI & Human Machine Interface

The partnership intends to support the adoption of Artificial Intelligence enhanced cyber physical systems (AI driven HMI) to accelerate the innovation process of SMEs.

Advanced materials on batteries

The main objective of the partnership is to develop joint R&D&I projects on topics of advanced materials, their characterisation, durability, suitable for extreme working conditions with the goal to deploy them in the field of batteries.

Photonics



The goal is to identify the European photonic clusters that have unique and valuable propositions, capabilities and capacities in the various supply and value chains.

Efficient & Sustainable Manufacturing

The main objective is to transfer to industry innovative solutions coming from research and exploiting the potential of smart specialisation in order to promote new efficient and high value-added supply chains.

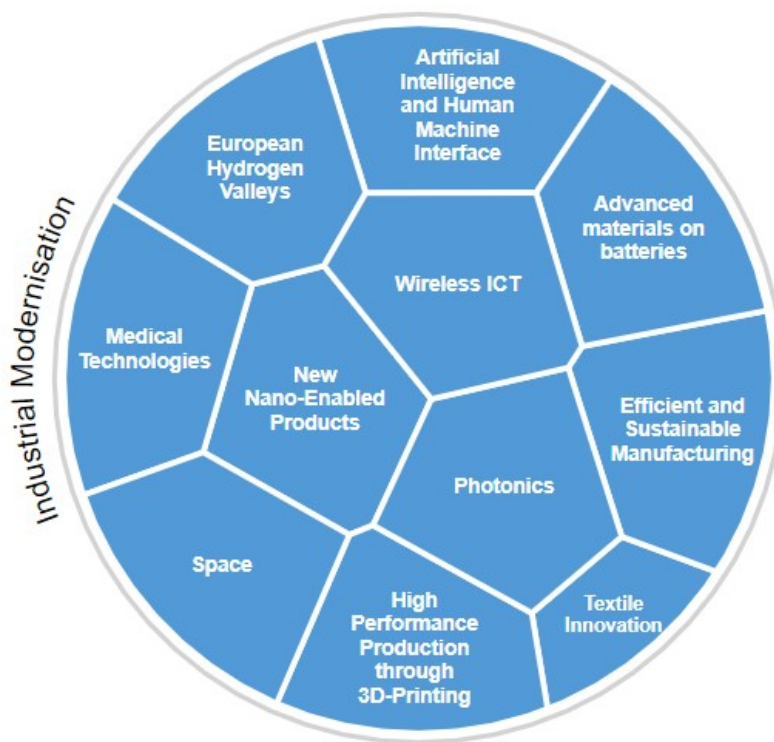
Textile Innovation

The objective is to strengthen regional textile innovation ecosystems across Europe and enable Textile & Clothing SME's to invest more in innovation

High Performance Production through 3D-Printing

The key objective is to identify opportunities for joint-demonstration between regions, based on a solid mapping exercise and the detected complementarities between existing demonstration facilities and company needs. (<https://s3platform.jrc.ec.europa.eu/region-page-test/-/regions/DE1>)

S3 thematic platforms



Digital Innovation Hubs

<https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool>

Location: Baden-Württemberg/ Germany



CCI & tourism sector

Fraunhofer IPA - Robot & Assistive Systems, Stuttgart.

(link: <https://www.ipa.fraunhofer.de/en/expertise/robot-and-assistive-systems.html>)

Smart Data Solution Center B-W, Stuttgart.

link: <https://www.sdsc-bw.de/>

Software Cluster, Karlsruhe, Organisator: Cyberforum.

link: <https://www.cyberforum.de/mitglieder>

Other related branches

Application Center Industry 4.0, Stuttgart.

link: <https://www.ipa.fraunhofer.de/en/cooperation/industry-on-campus/application-center-industrie-40.html>

Center Digitisation District Böblingen (ZD.BB), Böblingen.

link: <https://www.zd-bb.de/>

Fraunhofer Future Work Lab, Stuttgart.

link: <https://futureworklab.de/>

Reutlingen University Werk150, Reutlingen.

link: <https://www.esb-business-school.de/forschung/wertschoepfungs-und-logistiksysteme/werk150>

Smart Data Innovation Lab, Karlsruhe.

link: <https://www.sdil.de/en/>

Steinbeis Europa Zentrum, Stuttgart+Karlsruhe.

link: <https://www.steinbeis-europa.de/en/home>

CCI, Tourism and Services sector

Culture and Creative Industries - development in B-W and Stuttgart

<https://nacecode.de/>

Relevant NACE codes for national cultural and creative industries:

NACE Code C (manufacturing sector): C13, C14, C15, C16, C17, C18, C20, C22, C23, C24, C25, C26, C30, C31, C32

NACE Code G (wholesale & retail trade; repair of motor vehicles and motorcycles): G47

NACE Code J (information & communication): J58, J59, J60, J62, J63

NACE Code M (professional, scientific & technical service activities): M71, M73, M74



NACE Code R (Art, Entertainment & Recreation): R90, R91, R93

Key facts (based on a regional study from 2021-2022*)

The CCI in Baden-Württemberg are an important economic factor in the state with more than 27,000 companies and a turnover of around EUR 27.0 billion (2021) and around 207,000 employees (2022). With these values, the CCI are ahead of the pharmaceutical industry in terms of turnover, at about the same level as the hotel and restaurant industry and reached around 85 per cent of the vehicle construction. More people are employed in the CCI than in the pharmaceutical industry, the energy supply and the chemical industry together.

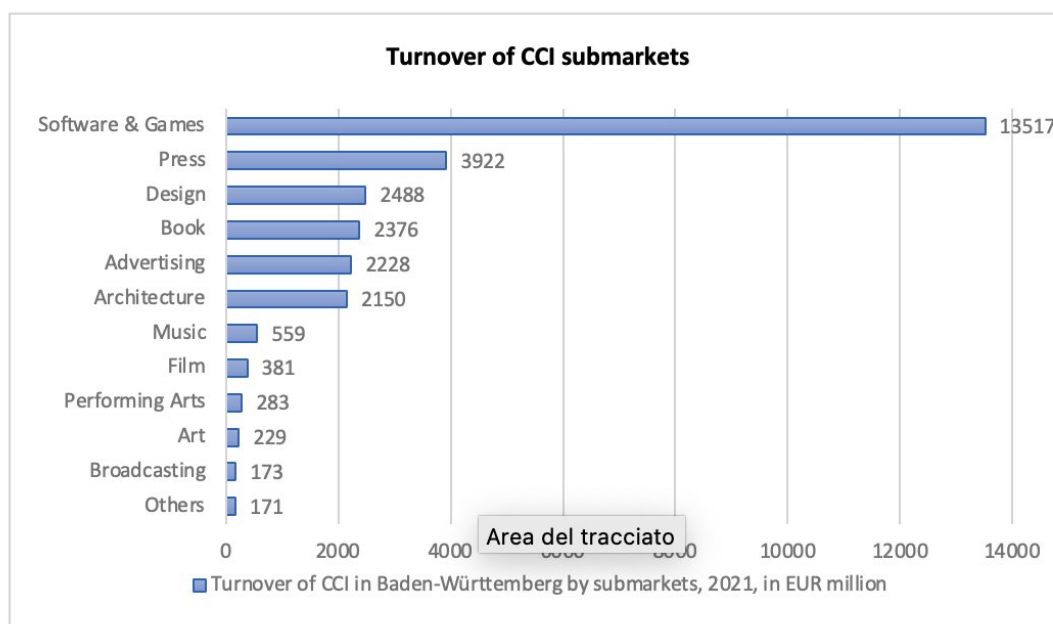
Quick facts:

Turnover company (2021):	27,0 Billion EUR
Turnover small enterprises (2021**):	0,17 Billion EUR
Number of enterprises (2021):	27.083 Billion EUR
Number of small enterprises (2021**):	35.221 Billion EUR
Employees subject to SI (2022***):	161.852 Billion EUR
Marginally employed (2022***):	44.985 Billion EUR

* Source: GOLDMEDIA, STANDORTMONITOR.NET; Editors: Goldmedia GmbH; by order of: MfG Baden-Württemberg ** Small enterprises = enterprises with an annual turnover of less than EUR 22.000 (until 2019: EUR 17,500) ***Reporting date 30.06.2022

Sub markets with the highest turnover

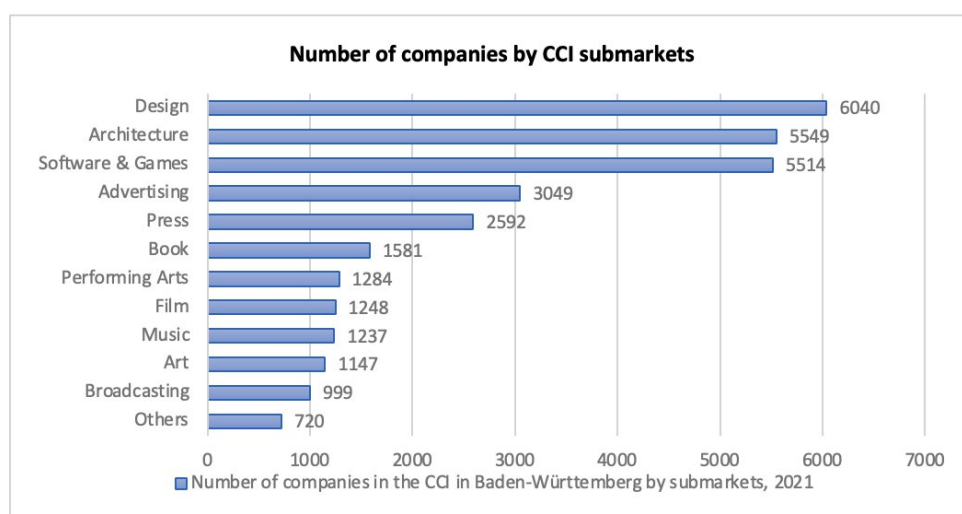
The CCI is a very heterogeneous industry: the shares of the various submarkets differ greatly in Baden-Württemberg. By far the strongest submarket in terms of turnover in 2021 was the software & games industry with around EUR 13.5 billion - here the state benefits, among other things, from Europe's largest software group SAP, which is headquartered in Walldorf. It is followed by the press submarket with a turnover of around 3.9 billion euros and the design, book, advertising and architecture submarkets with turnovers of 2.1-2.5 billion euros each.



Number of companies according to submarkets

In 2021, there were around 27,000 taxable companies with an annual turnover of at least EUR 22,000 in the CCI of Baden-Württemberg. The design industry with 6,040 companies, the architecture market (5,549) and the software & games industry (5,514) represented the submarkets with the most CCI companies in Baden-Württemberg. Thus, more than 60 % of all companies in the CCI in Baden-Württemberg are concentrated in the three largest submarkets.

Overall, the companies in Baden-Württemberg represent a share of about 12.2 % of all companies in the German CCI. This puts Baden-Württemberg in third place in a national comparison.

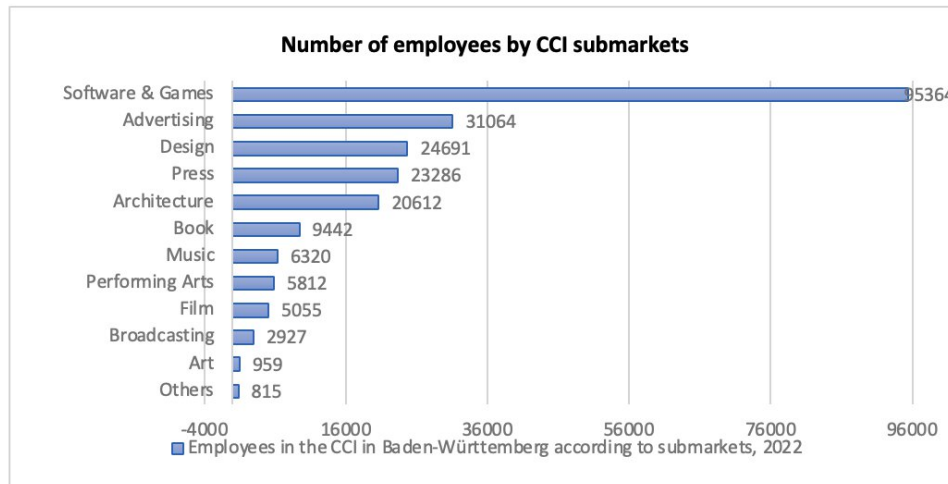


Number of employees according to submarkets

In 2022, a total of 207 thousand people were employed in the CCI in Baden-Württemberg. With a share of around 16 % of all employees in the German CCI, Baden-Württemberg is also in third place in a state comparison. With around 95.000 employees, the software & games industry is by far the largest employer

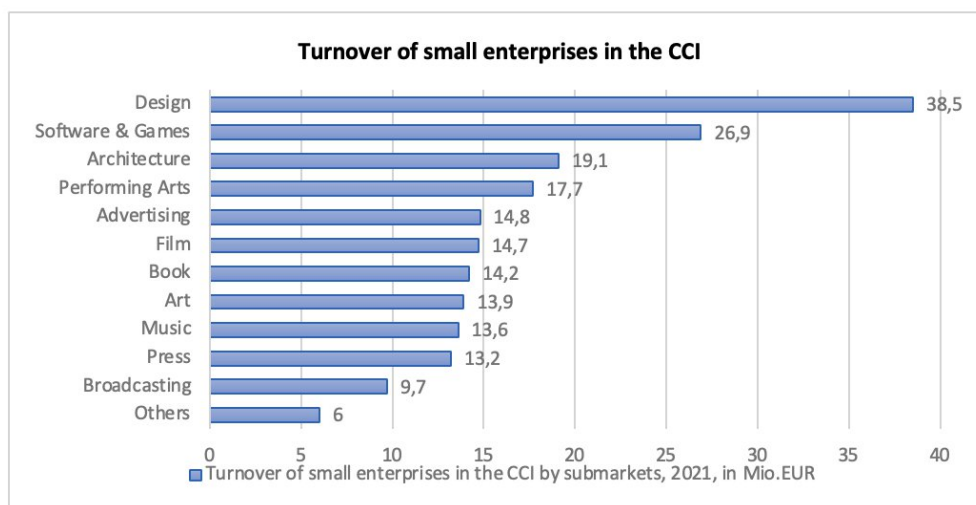


in Baden-Württemberg's CCI. Due to the location of many large software companies in the state, including SAP, one of the world's leading software companies, this submarket has a dominant position in the number of employees in the CCI in the state. With employment figures of around 31.0000 and 25.000 respectively, the advertising market and the design industry follow. The art market and "other" economic sectors have the lowest number of employees among the CCI submarkets in Baden-Württemberg, with less than 1,000 each.



Turnover of small enterprises in the CCI by submarkets

Small businesses or mini-self-employed (with an annual turnover of <22,000 EUR) generated around 169 million EUR in the cCCI in Baden-Württemberg in 2021, which is less than 1% of the total turnover. Here, the design industry generated the largest share of turnover (23%) of the small enterprises in the CCI with EUR 38.5 million, followed by the software & games industry (26.9 million EUR) and the architecture market (19.1 million EUR).

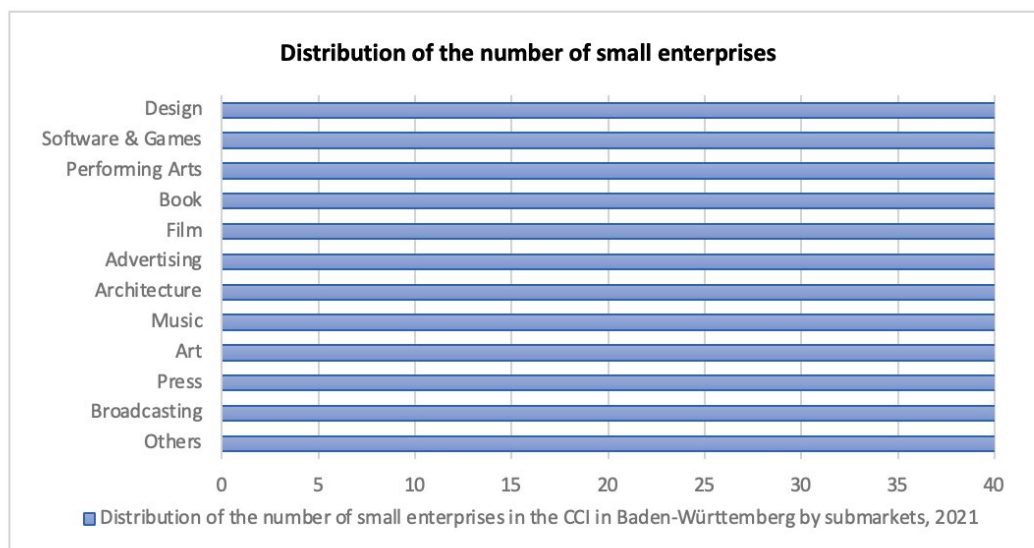


Number of small enterprises in the CCI by submarkets



In 2021, there were around 35,000 small enterprises in the CCI in Baden-Württemberg. Compared to 2016 (just under 31,000 small businesses), this corresponds to a growth of around 14 %. The turnover limit for the small business regulation was increased from 17,500 to 22,000 EUR in 2020. As a result, many previously taxable businesses are now counted as small businesses. Due to pandemic-related turnover losses, there was also a temporary undercutting of the turnover limit by additional businesses. As a result, despite the negative effects of the pandemic, there is a (partly temporary) increase in the number of small enterprises in all submarkets.

According to Goldmedia's calculations, the largest number of small businesses in the CCI in 2021 was in the design industry (7,814), the software & games industry (6,601) and the performing arts industry (3,569).



Overall market analysis Baden-Württemberg: Stuttgart City & Region

In relation to the population, the share of employees in the CCI was particularly high in the university city of Ulm in 2021 at 7.9 %. The state capital Stuttgart and the city of Karlsruhe were ranked second with 5.4 % each. Thus, as expected, creative centres in Baden-Württemberg are located in the metropolitan areas, all of which are home to universities, art and music colleges, universities of applied sciences, theatres and other creative workshops.

The share of total CCI employees per district or independent city in the total number of CCI employees in Baden-Württemberg was highest in the state capital Stuttgart in 2022 at 16.7 %. The Rhine-Neckar District ranked second (12.1%) and third the city of Karlsruhe (8.2 %). Thus, about 37.1 % of the employees are concentrated in the largest three districts, and about half (51.5%) in the largest five districts. CCI employees are, however, distributed beyond this across all regions of the state.

When looking at the level of the regional associations, in 2022 just under one third of the total employees in the CCI were located in the regional association of Stuttgart (31,7%, in addition to the state capital, thus in Böblingen, Esslingen, Göppingen and Ludwigsburg as well as the Rems-Murr district) and in the Rhine-Neckar region (17,6%, Mannheim, Neckar-Odenwald district and Rhine-Neckar district). This means that about half of the employees are concentrated in these two regional associations.

Crisis situation

The CCI is one of the sectors most economically affected by the pandemic: After the significant losses in the first Corona year 2020 amounting to around 5.6 percent, the overall market was already able to increase



significantly in 2021 and almost reached the level of the pre-Corona year 2019 again in the overall total. For 2022, despite the war in Ukraine and the energy crisis, further significant growth in total sales can be assumed, although the developments in the individual submarkets are very different. The overall market development in the country is strongly driven by the resilient and dynamically growing software & games industry. Many smaller submarkets in the cultural sector will remain below pre-Corona level in the medium term. But overall, the cultural and creative industries in Baden-Württemberg can continue to grow in 2023 and 2024 according to Goldmedia forecasts.

Tourism development in the state of Baden-Württemberg (B-W)

After two years dominated by the pandemic, tourism in Germany in general had started the year 2022 with confidence. The war in Ukraine and its repercussions have brought new burdens and challenges such as energy saving and other sustainability requirements have come into sharper focus. Nevertheless, the balance sheet for 2022 is positive overall for the industry and also sets the direction for the coming years: Building on the successes prior to the pandemic with an awareness of what makes the industry strong, namely innovations and investment in quality and sustainability, and what tourism can do for the quality of life and equal living conditions in our country. This is a good starting point for tackling the challenges of the coming years ahead.

Key Facts: Most important facts on the development of tourism in B-W in 2022*: [LINK](#)

- Record figures for the holiday market: with 22.1 million overnight stays by holiday travelers, this segment grew by +2 % compared to 2019
- Business trips by residents to B-W have gained in importance: Although they are not yet back at the level of 2019, the total of 9.7 million business overnight stays in 2022 are significantly higher than the previous year at +53 %
- Alignment with 2019 travel behavior: accommodation types, activities and also seasonality are back to pre-pandemic levels; holidays continue to be booked at short notice - this seems to be stabilising

*source: GfK Destination Monitor Deutschland, enables a comprehensive view of tourism development in Baden-Württemberg across all tourism segments

Business tourism*

https://bw.tourismusnetzwerk.info/wp-content/uploads/2023/02/Newsletter_Bawue_RAB_1_2023.pdf

The overnight business travel market has recovered somewhat and a total of 35 million overnight business trips by Germans were recorded from May 2021 to April 2022, an increase of 25 % on the previous year. Unfortunately, these are still well below the pre-crisis level, with a drop of just over 50 %.

In Baden-Württemberg, 2.8 million overnight business trips were recorded in the period from May 2021 to April 2022. This puts Baden-Württemberg in fifth place in the federal state comparison with a share of around 10 %. Although the volume declined due to the pandemic, the market share has increased since 2019 (8.8%). *source: RA Business 2022



Tourism as an economic factor for Baden-Württemberg 2021*

https://wm.baden-wuerttemberg.de/fileadmin/redaktion/m-wm/intern/Dateien_Downloads/Tourismus/dwif-Wirtschaftsfaktor_Tourismus_Baden-Wu%CC%88rttemberg_2021.pdf

In the current study on "Tourism as an Economic Factor" commissioned by the Ministry of Economy, Labour and Tourism, it becomes clear that the Corona pandemic has a considerable economic impact on the sector.

Key results of this study:

- Decline in gross turnover (sum of services rendered in relation to tourism) in 2021 compared to 2019 by almost 30 %
- The hospitality industry is particularly hard hit (decline in turnover of -39.5 %)
- The smallest decline was recorded by the retail trade (-18.5 %)
- In 2021, the loss of tourism revenue in the country was approximately 145.3 million euros per week
- Decrease in tourism income contribution from 11.8 billion euros in 2019 to 8.2 billion euros in 2021 (-30.5%)
- Decrease in the number of people employed in tourism by -34.4 % from just under 380,000 (2019) to just under 250,000 (2021)

*source: Wirtschaftsfaktor Tourismus für das Bundesland Baden-Württemberg 2021; dwif 2022

Holiday inspiration and information*

https://bw.tourismusnetzwerk.info/wp-content/uploads/2022/11/Newsletter_Bawue_RA_5_2022-V2_.pdf

*source: FUR Forschungsgemeinschaft Urlaub und Reisen e.V.

Digitalisation and the accompanying rapid development of information and communication behaviour have changed tourism permanently in the past decades. Knowing how holidaymakers are inspired, i.e. the ways in which interest in a destination is aroused, and how they inform themselves about specific holiday aspects are elementary components for the target-group-specific preparation of information about Baden-Württemberg as a travel destination.

Current data was collected in the special module "Inspiration & Information" of the FUR Travel Analysis, in which more than 6,000 people were asked about their holiday trips in personal interviews as part of the annual Travel Analysis.

- Baden-Württemberg travelers gain inspiration online and offline.
- Although pure online inspiration accounts for the largest share (19%), switching media between online and offline (17%) as well as the pure offline use of sources of inspiration (16%) play a role that should not be underestimated.
- When it comes to information, it is then usually the more up-to-date online media that have been used for specific information about the trip to Baden-Württemberg: Every fourth holidaymaker only obtains information via online media.



Baden-Württemberg in competition with other destinations*

https://bw.tourismusnetzwerk.info/wp-content/uploads/2022/07/Newsletter_BW_DB_3_2022.pdf

The Destination Brand 21 study, which examined the thematic competence of holiday destinations in the German source market, makes it clear: Germans have a lot of confidence in Baden-Württemberg, regardless of whether they have already visited the state.

First and foremost, the state is considered competent in the holiday themes of hiking, nature, culinary delights and wine. In addition, Baden-Württemberg achieves a good position in the competition among destinations across all strategically important holiday themes.

*source: inspektour (international) GmbH Tourismus- und Regionalentwicklung, Hamburg, 2022

Further relevant sources:

[DTV Zahlen-Daten Fakten 2023.pdf \(tourismusnetzwerk.info\)](#)

https://bw.tourismusnetzwerk.info/wp-content/uploads/2023/04/DTV_Zahlen-Daten_Fakten_2023.pdf

[Tourismus - Statistisches Landesamt Baden-Württemberg \(statistik-bw.de\)](#)

<https://www.statistik-bw.de/TourismGastgew/Tourismus/>

[Tourismusnetzwerk Baden-Württemberg](#)

<https://bw.tourismusnetzwerk.info/>

Service Sector in B-W/ Stuttgart

Key facts from 2022 for Baden-Württemberg*

https://www.baden-wuerttemberg.de/fileadmin/redaktion/m-wm/intern/Publikationen/Wirtschaftsstandort/Wirtschaftsdaten2023_deutsch.pdf

Economic Power - GDP

- in current prices: 572 837 Mill. EUR
- per inhabitant: 50 982 EUR
- share from service sector: 60,9%
- trade, transport & storage, hospitality, information & communication: 20,1 %
- financial, insurance & business activities; real estate, renting & business activities: 22,6 %
- public & other service providers, education & health, private households with domestic staff 18,2 %

Labour market

- Total employed persons: 6384
- share from service sector: 68,6%
- trade, transport & storage, hospitality, information & communication: 24,3 %



- financial, insurance & business activities; real estate, renting & business activities: 15,3 %
- public & other service providers, education & health, private households with domestic staff 28,9 %

Overview Companies in B-W (2021)*

Economic sector	Number	Employees subject to social security	Turnover
	1.000		billion EUR
Manufacturing industry	39,1	1 509,7	510,6
Construction	49,1	257,2	53,6
Wholesale & retail trade; repair of motor vehicles	78,1	681,0	383,6
Transport & storage	12,8	161,0	24,2
Hospitality	32,4	113,6	8,3
Information & communication	17,2	196,1	38,4
Provision of financial & insurance services	11,2	116,4	15,4
Real estate & housing	27,3	26,2	13,2
Professional, scientific & technical services	68,2	308,3	53,3
Provision of other economic services	26,6	239,1	26,2
Health & social care	33,0	627,4	15,0
Art, entertainment & recreation	11,2	38,1	4,3
Other service activities	31,1	125,5	4,7

*Source: Statistisches Landesamt Baden-Württemberg, Stuttgart, 2023



5. GREENPACT SWOT analysis for Circular Economy green/impact entrepreneurship at regional Level

SWOT ANALYSIS

 STRENGTHS	 WEAKNESSES	 OPPORTUNITIES	 THREATS
<ul style="list-style-type: none">- growing consumer demand for sustainable products & services- availability of government funding & support for circular economy initiatives- access to a wide range of eco-friendly technologies and materials- ability to attract environmentally conscious investors & customers- strong network & collaboration opportunities with other circular economy businesses- opportunity to differentiate from competitors by adopting circular economy practices- ability to contribute to the achievement of global sustainability goals	<ul style="list-style-type: none">- limited awareness & understanding of circular economy practices among businesses & consumers- lack of clear regulations & standards for circular economy practices- difficulty in measuring the economic & environmental impacts of circular economy initiatives- lack of scalability of circular economy models in some industries- lack of access to suitable recycling & waste management infrastructure- limited availability of skilled labor & expertise in circular economy practices	<ul style="list-style-type: none">- growing market for sustainable & circular products and services- potential for collaboration & partnership opportunities with government and other organizations- potential for circular economy initiatives to create new job opportunities- potential for increased innovation and development of eco-friendly technologies- opportunity to influence policy and regulations towards circular economy practices- potential for increased market competitiveness through circular economy practices	<ul style="list-style-type: none">- volatility of commodity prices affecting the viability of circular economy models- difficulty in scaling circular economy models to fit the needs of larger industries- limited availability of circular economy certification & labeling programs- high costs associated with transitioning to a circular economy model- potential for negative social & environmental impacts through poorly planned circular economy initiatives- competition from traditional, non-sustainable businesses



The GREENPACT map on Circular Economy & Impact Entrepreneurship in VENETO Region (IT)

1. Regional state of the art:

Regional demographic statistics:

Source: Processing by the Statistics Office of the Veneto Region on Eurostat and Istat data

Total population (2021) 4.847.745

(source Rapporto statistico Regione Veneto 2023). As at 31 December 2021, according to data from the latest permanent census by Istat, the population of Veneto amounted to 4,847,745 inhabitants, essentially stable compared to 10 years earlier, but declining since 2014.

The forecasts on the demographic future of the region produced by Istat confirm the presence of a potential crisis framework. According to the "median" scenario, the population could drop to 4.7 million at the end of 2036 and to 4.6 million in 2050, marking a contraction of 4.1% compared to 2021, less intense than at the national level (-8.7%). At the same time, the average age of the population would rise from 46.4 years in 2021 to 50.6 in 2050, in line with the Italian figure.

Also for the Veneto the prospects are for an increasingly "less young" population, biased towards the older age groups with significant social and economic consequences.

This decline is driven by the natural decrease (no longer compensated by the migratory component). The decrease in the number of births that has been observed in the last decade depends on several factors, one of which is structural: women born during the baby boom have reached the end of their reproductive path and the sharp drop in the birth rate that has characterized the baby bust meant that potential mothers were also lacking in the following years.

The fertility model has also changed over the years: the average number of children a woman brings into the world drops from 1.46 in 2008 to 1.27 in 2022 (1.24 in Italy). In fact, we are witnessing an important change in the reproductive calendar: in Veneto today a woman gives birth on average at the age of 32.5, she has her first child at almost 31, and the share of mothers over forty giving birth is increasing (5.5%) even among primiparous (4.3%). If we follow the cohorts of women born in the same year, the phenomenon is evident: women born immediately after the war had their first child on average between the ages of 24 and 25; women born in 1970 had it after 30.

Population per sex 49,1% Male 50,8% Female

(The gender structure of the resident population is characterized by a greater presence of women, which are 2 million 489 thousand, 51% of the total. source Istat <http://dati.istat.it/Index.aspx?QueryId=42869>)

Population per age in % [0-14 - 15-64 - >65]

% 0-14 years	- 12,6%
% 15-64 years	- 51,3%
% >65 years	- 23,8 %
% >75 years	- 12,3%



In Veneto, life expectancy at birth in 2021 was 83.6 years. There are 1,122,000 people aged 65 or over, equal to 22.9% of the population, in line with the national value. Specifically, 5.8% of Veneto residents are aged between 65 and 69, 10% between 70 and 79, while 7.1% are over 80 (347,165 people). Italy is one of the longest-lived countries in the international context, with a life expectancy at birth of 83, two years higher than the EU28 average (81 years). (Source: RAPPORTO STATISTICO 2023 Regione Veneto)

The population of the region is already well in an accentuated and prolonged phase of ageing, so much so that today people aged 65 and over are 23.8% of the total, when in 2011 they were 20.6%. aged 75 and over are now 12.3% (10% in 2011). By 2030, the over-65s could represent 28.4% of the population and the over-75s 14.3%, gaining further weight in 2050 (35% the former and 22.5% the latter). Also for Italy in 2050 the over 65s will represent 35% of citizens. At the end of 2021 there were 824,556 boys and girls in Veneto, when they exceeded one million twenty years ago. The loss is 245,707 units, or a contraction of 22%. Young people aged 18-34, grappling with the demographic winter, represent two different generations: the Millennials, those born between 1980 and the mid-1990s, and generation Z, i.e. those born after 1995 and up in the early years of the 21st century.

The youngest municipality is Veggiano, in the province of Padua, with an average age of 40.4 years; the oldest one is Zoppé di Cadore, in the province of Belluno, where the average age is 55.2 years.

Average age**45.4**

The average age is 45.4 years, slightly higher than the 45.2 years recorded at national level. The comparison with data from the 2011 census it shows a progressive aging of the population source: https://www.istat.it/it/files//2021/02/Censimento-permanente_Veneto.pdf
https://statistica.regione.veneto.it/Pubblicazioni/bollettino_socio_economico/scenario_economico_congiuntura_gennaio_2023.pdf

Life expectancy**83,6 years (source Eurostat 2021)****Growth rate (expected 2020-2030)****4,1%**

(The forecasts on the demographic future of the region produced by Istat confirm the presence of a potential crisis framework. According to the “median” scenario, the population could drop to 4.7 million at the end of 2036 and to 4.6 million in 2050, marking a contraction of 4.1% compared to 2021, less intense than at the national level (-8.7%). At the same time, the average age of the population would rise from 46.4 years in 2021 to 50.6 in 2050, in line with the Italian figure.)

Population density

The population is concentrated in the main cities. Compared to 2011, residents increased in the provinces of Padua, Treviso, Venice and Verona, while they decrease in the others. More of 90% of residents are concentrated in five provinces, while Rovigo and Belluno are unable to cover 9% of the regional population. In 2019 the most populous municipality is Verona, with 259,000 inhabitants; the smaller one is Laghi, in the province of Vicenza, with 127 inhabitants. The five provinces covering the central area of Veneto (Verona, Vicenza, Padua, Treviso and Venice) have a population between 849,000 inhabitants in Venice and 934,000 in Padua, with an average density of 350 inhabitants per km² (the regional average is 266 inhabitants per km). There are 433,000 residents in the provinces of Belluno and Rovigo, which together cover 29.6% of the regional territory and represent just 8.9% of the Veneto population.

Total area (land) of the region [km²]**18,399.00 km²**



Migrants on rate and origins (%)

Country of	talian citizens	Foreign citizens	Total %	Total
Romania	171	2,857	3,028	1.1%
Morocco	160	2,086	2,246	8.2%
Albania	78	1,602	1,680	6.1%
Moldova	72	1,568	1,640	6.0%
Bangladesh	71	1,278	1,349	4.9%
India	75	1,249	1,324	4.8%
Brazil	413	850	1,263	4.6%
Ukraine	44	828	872	3.2 %

Net migration rate

n.a.

Regional education and employment

Literacy rate 99,3

Source: Processing by the Statistics Office of the Veneto Region on Eurostat and Istat data

Education attainment [% primary / secondary / tertiary]	Education attainment		
	% primary	2021 (10,7%)	2020 (13,6%) (*)
	% secondary	2021 (74,2%)	2020 (70,1%) (*)
	% tertiary	2021 (14,4%)	2020 (14,8%) (*)

Note: for 2020 literacy rate and population education level are calculated for the age group 15 and over, while for 2021 for the age group 15-89) Source: Processing by the Statistics Office of the Veneto Region on Eurostat and Istat data

% youth NEET (15 to 25 y.o.) 2022 (13,1%) 2021 (13,9%)

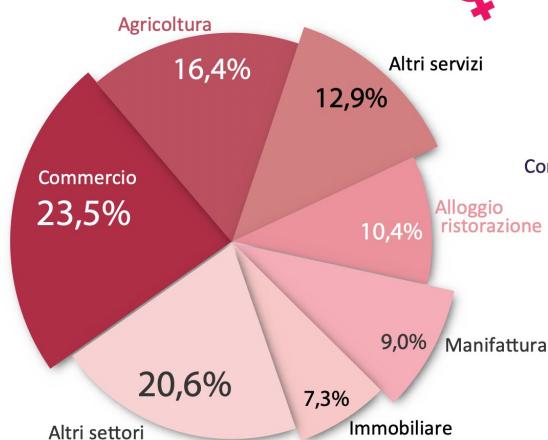
NEET = (Young people aged 15-29 who do not work, study or train / Population aged 15-29) x 100 Source: Processing by the Statistics Office of the Veneto Region on Eurostat and Istat data

Employment rate 2022 (67,8 %) 2021 (65,7%)

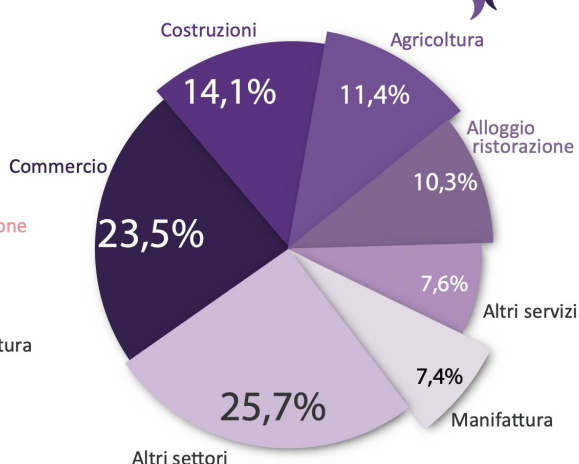
Source: Processing by the Statistics Office of the Veneto Region on Eurostat and Istat data



I settori dell'imprenditoria femminile



I settori dell'imprenditoria giovanile



Fonte: Elaborazione dell'Ufficio di Statistica della Regione del Veneto su dati Ufficio Comunicazione e Statistica CCIAA Venezia Rovigo - Infocamere Stockview

Employment rate by gender

M 2022 (75,7 %) 2021 (73,5%)

F 2022 (59,8%) 2021 (57,7%)

Unemployment rate by gender

2022 (4,3%) 2021 (5,3%)

M 2022 (3,4%) 2021 (4,6%)

F 2022 (5,4%) 2021 (6,2%)

Youth unemployment rate (15-24 y.o.) by gender

2022 (13,4%) 2021 (18,2%)

M 2022 (12,6%) 2021 (15,0%)

F 2022 (14,5%) 2021 (23,2%)

Regional economics and industry

Gross domestic product (GDP)

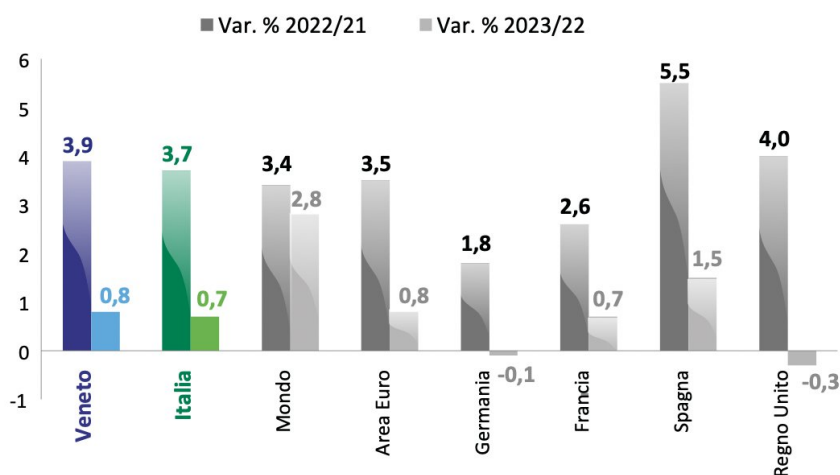
2021 164.392 mln euro

2020 152.683 mln euro

G.D.P. per capita

2021 33.834,00 mln euro

2020 31.323,00 mln euro



Poverty rate

2022 13,0

2021 13,7

Inflation rate (average)

2022 8,5



Foreign Direct Investments	2021	1,9		
	2021	538 mln euro		
Trade balance	2020	693 mln euro		
	2022	9,7 (euro billions)		
Export by countries (5 most relevant and % of the total)	2021	- 17,3 (euro billions)		

(Germany % of the total)	2022	13,7%	- 2021	13,9%
(France % of the total)	2022	11,1%	2021	10,9%
(USA % of the total)	2022	9,8%	- 2021	9,0%
(Spain % of the total)	2022	4,9%	- 2021	4,8%
(UK % of the total)	2022	4,5%	- 2021	4,8%

	Esportazioni			
	Var. % 2022/21	2022 mln. euro	Quota % 2022	Var. % 2021/19
Veneto	16,0	82.141	13,1	8,7
Italia	20,0	624.710	100,0	8,4

	Importazioni			
	Var. % 2022/21	2022 mln. euro	Quota % 2022	Var. % 2021/19
Veneto	35,3	72.397	11,0	11,7
Italia	36,4	655.429	100,0	13,2

	Saldo commerciale	Export/PIL (%)
	2022 mln. euro	2022
Veneto	9.744	46,2
Italia	-30.719	32,7

Estimates on trade for 2022 show a new leap forward in regional trade abroad: the value of Veneto's exports of goods is up by +16.0% compared to the figure recorded the previous year . It should be noted, however, that the substantial increase in terms of value recorded by regional exports partly reflects the increase in prices generated by the increase in the costs of international transport and raw materials. Veneto's exports are driven by the sectors of mechanical equipment, the main regional export sector, metallurgical production and chemical and pharmaceutical products, with increases in foreign turnover on an annual basis exceeding one billion euros. As for the target markets, we note the significant increase in sales to all the main outlet markets, with peaks in the USA, Germany and France. Exports to the United Kingdom are growing again (+8.6%) which, however, is still unable to recover the pre-pandemic values (-2.8% if compared with the 2019 figure).

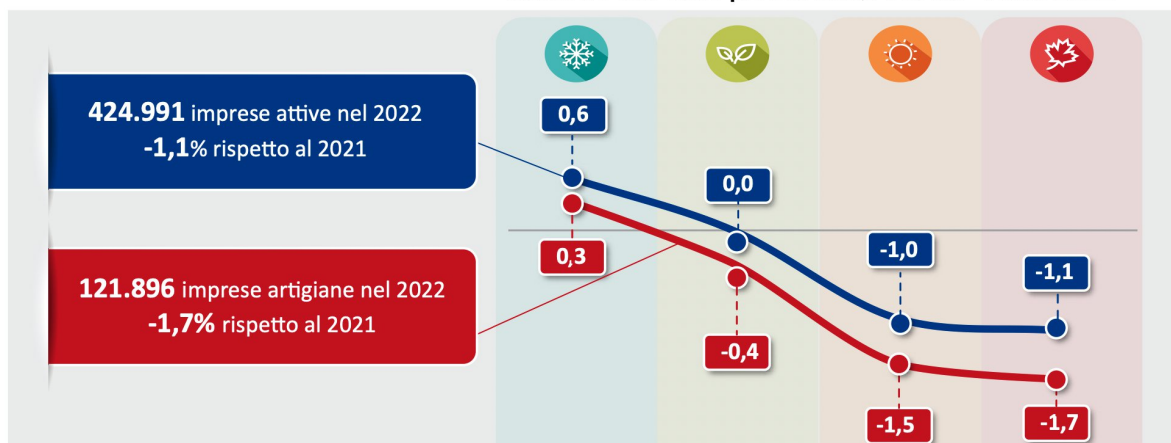
2022 provisional data Source: Processing by the Statistics Office of the Veneto Region on Istat and Prometeia data

Import by countries (5 most relevant and % of the total)				
(Germany % of the total)	2022	17,8%	2021	20,6%
(China % of the total)	2022	9,9%	- 2021	9,8%
(Qatar % of the total)	2022	7,8%	2021	3,4%
(France % of the total)	2022	5,9%	2021	6,2%
(Spain % of the total)	2022	5,4%	2021	6,1%

Number of Businesses	2020	391.514	2019	386.916
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Imprese attive totali e artigiane (var. % rispetto al medesimo trimestre dell'anno precedente). Veneto - Anno 2022



Fonte: Elaborazioni dell'Ufficio di Statistica della Regione del Veneto su dati InfoCamere

The first quarter of 2023 opens with a reduction in the number of Veneto companies: in the period January-March 2023 there is a decrease of -1.3% compared to the same period of the previous year, in line with what came nationally (-1%). On the other hand, the economic trend of the regional entrepreneurial base was almost stable (-0.2% compared to the previous quarter). The reduction of active businesses based in Veneto concerns all macro economic sectors and is less accentuated in the services sector. The regional construction sector seems to pay more intensely for the climate of uncertainty created by the change in the rules on construction bonuses and superbonuses (-1.8% compared to -0.5% at national level), while the dynamics of the other sectors it is quite similar to the national one.

https://statistica.regione.veneto.it/Pubblicazioni/StatisticheFlash/statistiche_flash_aprile_2023.pdf

of which SMEs (%)

2020 99,8%

2019 99,8%

	I Trim. 2023 / I Trim. 2022		I Trim. 2023 / IV Trim. 2022	
	Veneto	Italia	Veneto	Italia
Imprese totali	-1,3	-1,0	-0,2	-0,4
Settori				
Agricoltura	-2,2	-2,4	-0,8	-1,5
Industria	-2,0	-2,4	-0,4	-0,8
Costruzioni	-1,8	-0,5	0,2	-0,1
Servizi	-0,7	-0,6	0,0	-0,3
Le imprese artigiane	-1,9	-1,2	-0,3	-0,4

Gennaio 2023 in Veneto

	Numero	% su start up italiane
Start up innovative	937	6,6

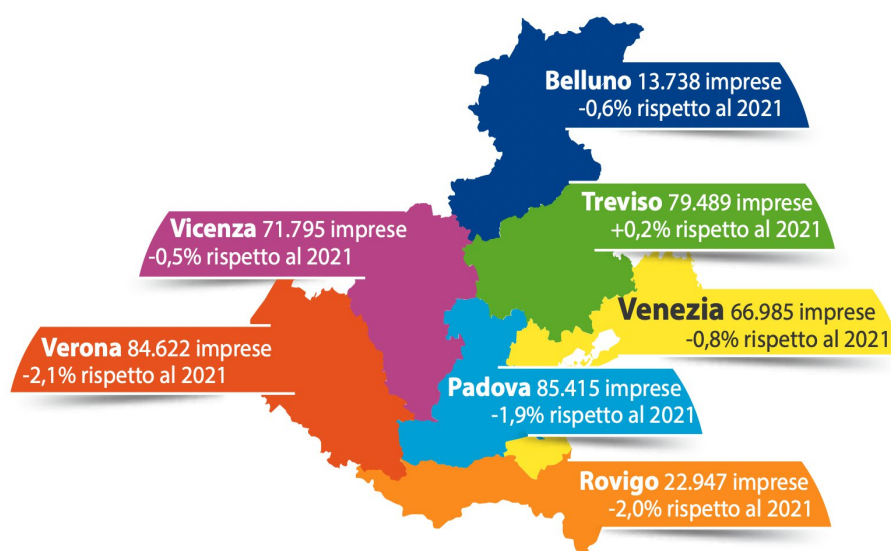


Average business size <n° of business / employed people>

2020	4,3	2019	4,5
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Number of local units

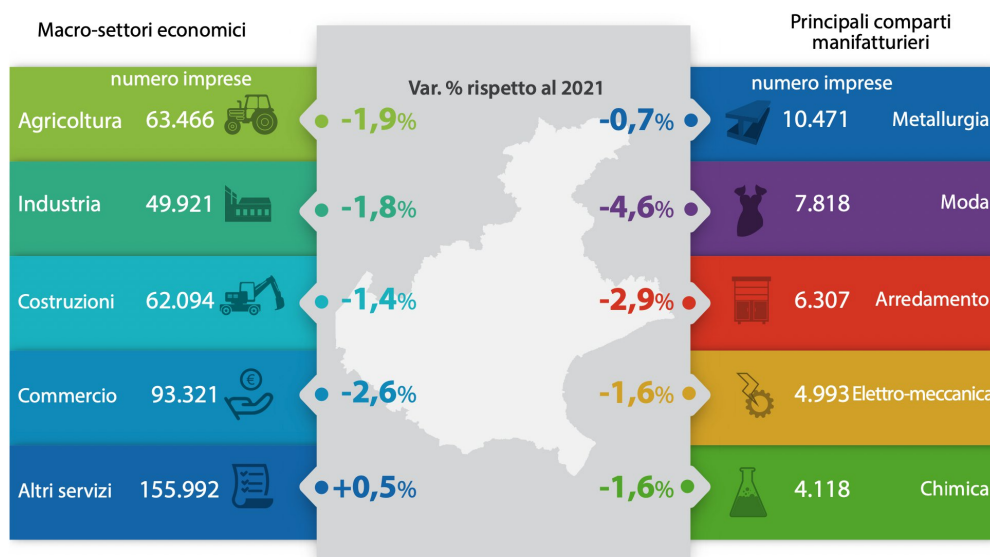
2020	428.641	2019	420.049
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Fonte: Elaborazioni dell'Ufficio di Statistica della Regione del Veneto su dati InfoCamere



Industrial sectors in % [primary / secondary / tertiary] 2020 22,9% 2019 23,3%



Fonte: Elaborazioni dell'Ufficio di Statistica della Regione del Veneto su dati InfoCamere

Employment by Industry [primary / secondary / tertiary] [primary / secondary / tertiary]
2020 682.513 2019 690.268

Businesses by NACE code [1st level in %] *NACE is the acronym used to designate the various statistical classifications of economic activities developed since 1970 in the European Union. NACE provides the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics (e.g. production, employment, national accounts) and in other statistical domains. 2. Statistics produced on the basis of NACE are comparable at European and, in general, at world level. The use of NACE is mandatory within the European Statistical System.*
https://ec.europa.eu/competition/mergers/cases/index/nace_all.html

Businesses by NACE code [A level in %]	2020	n.d.	2019	n.d.
Businesses by NACE code [B level in %]	2020	0,0%	2019	0,1%
Businesses by NACE code [C level in %]	2020	11,0%	2019	11,4%
Businesses by NACE code [D level in %]	2020	0,3%	2019	0,3%
Businesses by NACE code [E level in %]	2020	0,3%	2019	0,3%
Businesses by NACE code [F level in %]	2020	11,3%	2019	11,3%
Businesses by NACE code [G level in %]	2020	22,3%	2019	22,2%
Businesses by NACE code [H level in %]	2020	3,2%	2019	3,4%
Businesses by NACE code [I level in %]	2020	7,2%	2019	7,4%
Businesses by NACE code [J level in %]	2020	2,4%	2019	2,4%
Businesses by NACE code [K level in %]	2020	2,9%	2019	2,9%
Businesses by NACE code [L level in %]	2020	6,8%	2019	6,9%
Businesses by NACE code [M level in %]	2020	15,7%	2019	15,2%
Businesses by NACE code [N level in %]	2020	4,2%	2019	3,3%
Businesses by NACE code [P level in %]	2020	0,8%	2019	0,8%



Businesses by NACE code [Q level in %]	2020	6,0%	2019	5,6%
Businesses by NACE code [R level in %]	2020	1,2%	2019	1,3%
Businesses by NACE code [s level in %]	2020	4,5%	2019	4,5%
Employment by NACE code [B level in %]	2020	0,1%	2019	0,1%
Employment by NACE code [C level in %]	2020	30,7%	2019	30,3%
Employment by NACE code [D level in %]	2020	0,3%	2019	0,3%
Employment by NACE code [E level in %]	2020	1,0%	2019	1,0%
Employment by NACE code [F level in %]	2020	7,5%	2019	7,2%
Employment by NACE code [G level in %]	2020	18,1%	2019	18,2%
Employment by NACE code [H level in %]	2020	5,6%	2019	5,6%
Employment by NACE code [I level in %]	2020	8,0%	2019	8,9%
Employment by NACE code [J level in %]	2020	2,6%	2019	2,5%
Employment by NACE code [K level in %]	2020	2,7%	2019	2,7%
Employment by NACE code [L level in %]	2020	2,1%	2019	2,2%
Employment by NACE code [M level in %]	2020	6,7%	2019	6,3%
Employment by NACE code [N level in %]	2020	6,6%	2019	6,8%
Employment by NACE code [P level in %]	2020	0,5%	2019	0,5%
Employment by NACE code [Q level in %]	2020	4,2%	2019	3,9%
Employment by NACE code [R level in %]	2020	0,8%	2019	1,0%
Employment by NACE code [s level in %]	2020	2,5%	2019	2,6%

Average salary (national & EU ratio)

Regione Veneto 2020 32.941,40 euro 2019 31.725,40 euro

Italy 2020 27.000 euro

Businesses demography (birth v/s death in the last year) -1,1%

2022 closed with a reduction in the number of Veneto businesses: at the end of the year, the regional entrepreneurial base was close to 425,000 and records a loss of 4,788 companies compared to the end of 2021, -1.1%, almost in line with the national trend (-0.7%). . The business system is undergoing important changes, the increase in the number of active businesses is limited only to joint-stock companies, which represent more than a quarter of the businesses present in the region and which have grown by +2 in the last year, 5%. It is a structural process extended to the whole national territory, which tends to increase the organizational quality of the entrepreneurial fabric and to make the more organized companies with greater financial means survive, such as sole proprietorships (-2.3%), which however, they remain the majority of the regional entrepreneurial fabric (54.8% of regional enterprises). (source Rapporto statistico Regione Veneto 2023) The reduction of active businesses based in Veneto concerns almost all the main economic macro-sectors and is more accentuated in the sectors of commerce, agriculture and industry. The manufacturing sectors most affected by the restructuring process of the entrepreneurial base are those linked to the production of the fashion sector (-4.6% compared to 2021), furniture and the wood industry (-2.9%) , electro-mechanical supplies (-1.6%), the “chemical, rubber and plastic” industry (-1.6%) and the food and beverage industry (-0.7%). As regards other types of services, the negative trend in the transport and logistics sector continues (-2.9% compared to 2021), probably accentuated by the rise in the prices of raw materials, and the stock of companies active in the tourist hospitality and catering sector (-1.8% compared to 2021), where the growth of joint-stock companies (+2.9% on an annual basis) is unable to compensate for the closure of sole proprietorships (-2.2%) and partnerships (-4.2%). The reduction of active businesses based in Veneto concerns almost all the main economic macro-sectors and is more accentuated in the sectors of commerce, agriculture and industry. The manufacturing sectors most affected by the restructuring process of the entrepreneurial base are those linked to the production of the fashion sector (-4.6% compared to 2021), furniture and the wood industry (-2.9%) , electro-mechanical supplies (-1.6%), the “chemical, rubber and plastic” industry (-1.6%) and the food and beverage industry (-0.7%). As regards other types of services, the negative trend in the transport and logistics sector continues (-2.9% compared to 2021), probably accentuated by the rise in the prices of raw materials, and the stock of



companies active in the tourist hospitality and catering sector (-1.8% compared to 2021), where the growth of joint-stock companies (+2.9% on an annual basis) is unable to compensate for the closure of sole proprietorships (-2.2%) and partnerships (-4.2%).

Regional digital economy and society

Households with access to the internet at home (%)	2022	93,2%	2021	91,5%
Households with broadband access (%)	2021	89,8%	2020	90,2%
Individuals who have never used a computer (%)	2017	28,7%	2015	27,0%
Individuals who used the internet for interaction with public authorities (%)	2021	36,2%	2020	34,0%
Individuals who ordered goods or services over the internet for private use (%)	2022	52,9%	2021	55,8%
Registered digital enterprises over the total (%)	2022	72,6%	2021	58,1%
(companies that have a basic level of digitization)				

2. Frameworks, Measures & laws on Circular Economy:

Regional policies and strategies

REGIONE VENETO SUSTAINABLE DEVELOPMENT STRATEGY Regional Council Resolution no. 80 of 20 July 2020

In 2020, the Veneto Region adopted a regional strategy for sustainable development, i.e. to encourage the evolution of fundamental elements of economies and societies - such as work, the business system, the environment, schools, health, protection social, infrastructure, finance - for the well-being of a community and of individuals.

The term sustainability underlines that public policies and actions and behaviors in general, also undertaken by private subjects, must be considered not only for the impact they generate in the present, but also for the impact they will have on future generations.

The concept of sustainability revolves around four fundamental components:

- economic: ability to generate income and new and more qualified work;
- social: ability to guarantee conditions of human well-being (safety, health, education, democracy, participation, justice, etc.) distributed fairly;
- environmental: ability to maintain the quality and reproducibility of resources over time natural.

- institutional, i.e. the ability of the various government bodies and civil society actors to create additional value, in order to increase the level of well-being of the communities.

The National Strategy contains strategic choices and objectives divided into:



- 5 thematic areas: People, Planet, Peace, Prosperity, Partnership;
- 5 transversal vectors of sustainability: 1) common knowledge, 2) monitoring and evaluation of policies, 3) participation and partnerships, 4) education-awareness-communication, 5) efficiency of the public administration-management of public resources.



Fonte: Elaborazioni dell'Ufficio di Statistica della Regione del Veneto su dati ASviS.

The involvement of the territory

Institutional agreement between the Veneto Region, ARPAV and the University of Padua

As part of the Agreement between the MATTM and the Veneto Region of 4 December 2018, the latter carried out part of its activity thanks to an agreement with the University of Padua and ARPAV (Regional Agency for Environmental Prevention and Protection of the Veneto). The activities covered by the agreement concerned, in particular, the involvement of civil society and methodological support.

Memorandum of understanding with local authorities and other local players

With resolution no. 1488 of 15 October 2019, the Regional Council approved a draft Memorandum of Understanding for the Sustainable Development of the Veneto to be signed with public and private subjects including institutional subjects (and their associations or networks), the subjects making up the partnership tables economic and social (entrepreneurial, trade union, third sector associations, etc.) and other subjects representing the territory (schools, foundations, research centres, professional bodies, etc.).

The Protocol, intended for the widest audience of subjects, has the aim of fully involving the realities of the territory, both in terms of the exchange and maturation of proposals and in terms of implementation and enhancement of projects that are in line with the purposes of the Agenda 2030, of the National and Regional Strategy. In particular, the Memorandum of Understanding underlines that sustainable development does not limit attention to the achievement of environmental values only but aims to define more inclusive educational and cultural models, to outline a different welfare system, to change the way of understanding the economy and finance and to propose business growth and market development in a new key; therefore, it represents an opportunity for cultural, social and economic change. It is therefore the task of the institutions and society to build together a strategic path of growth and development with a subsidiary, multilevel and territorial approach, in which the Veneto Region has the task of managing governance.

As at 30 April 2020, there were around 230 subscribers, a sign not only of an appreciation of the initiative but also of the active and proactive willingness to participate in the area.



Memorandum of Understanding between the Veneto Region and ASviS

Provincial forums

In the last quarter of 2019, seven provincial forums were activated in which over 300 representatives of institutions, public and private companies, associations, universities/ research bodies and other bodies of various kinds participated. During the forums, proposals, cues and ideas were collected on four important issues, which emerged as central to the Positioning Report:

- circular economy;
- sustainable territories and lifestyles;
- sustainable tourism;
- soil consumption and regeneration.

The participation technique adopted is multilevel production, a particularly stimulating dynamic creativity technique for the production of proposals. At the four working tables, each for the four topics indicated, the participants were divided into four groups and worked in rotation in four distinct phases:

1. the individual formulation of ideas;
2. contamination and sharing of ideas through grouping in clusters;
3. voting for the best idea;
4. The group analysis of the overall production of ideas and the identification of the best proposals.

With resolution no. 358 of 24 March 2020, the Regional Council approved a Memorandum of Understanding with ASviS in order to share in-depth courses on sustainable development issues.

The participatory process had the objective of allowing the territories to express themselves on some of the most relevant aspects of sustainability in Veneto: the four themes initially proposed were reworked and interpreted from the point of view of the participants. The process made it possible to understand how citizens interpret the four

proposed topics. This has contributed to generating solutions to what are perceived as concrete and everyday problems, whose perception can be different. In particular, the will of the territories to actively involve local populations has emerged to favor the modification of individual and collective behavior towards greater sustainability.

At the conclusion of the work, the ideas collected were again grouped into seven clusters:

1. innovation in tourism management;
2. enhancement of tourism based on the characteristics of the territory;
3. raising awareness on recycling, separate waste collection and circular economy;
4. incentives for procedures aimed at reusing products;
5. enhancement of meeting places;
6. redevelopment of green spaces and older real estate assets;
7. innovation in transport.

Youth Forum

The Youth Forum, coordinated by ARPAV, has allowed schools in the region to apply to develop sustainability projects inspired by the 17 SDGs. 18 high schools in all the provinces of Veneto have joined the Forum, for a total of over 800 students involved.



Goal 12 (Responsible consumption and production) attracted the greatest interest among young people, followed by Goal 15 (Life on earth) and Goals 5 (Gender equality) and 13 (Fight against climate change). The workshops, inspired by the Goals and the result of collaboration between teachers and students, produced materials visible on the Region's "VenetoSostenibile" website.

Dedicated website and communication

The Region undertook an intense external communication activity that accompanied the entire process of building the SRSvS, starting from the kick-off meeting of 3 June 2019 with the enlarged partnership table:

- the logo representative of the involvement of the whole territory was created, from the regional one to the provincial and local ones;
- a dedicated website was created (venetosostenibile.regione.veneto.it), which presents several in-depth sections, including:
 - a showcase of regional good practices on sustainability;
 - a periodic press review on the theme of sustainability;
 - a section relating to spatial data;
 - a local radio communication campaign was carried out (December 2019), on the same four sustainability themes that had been chosen to organize the provincial participatory forums.

Figure 2. Guidelines for effective *governance* of sustainable development

Pillars	A. Vision and Leadership	B. Participatory processes	C. Impact
	1. Political commitment and leadership	4. Coordination between levels of government	7. Fiscal policy aligned with the sustainable development goals
	2. Medium-long term strategic vision	5. Proactive involvement of stakeholders	8. Constant adjustment for the effectiveness of actions adaptation and mitigation
	3. Integration of sectoral policies through matrix work	6. Proactive participation of citizens, especially young people	9. Reporting and evaluation the impact of the programmes

JULY 2023 PROTOCOL FOR THE IMPLEMENTATION OF CIRCULAR ECONOMY PRACTICES IN BUILDING SECTOR. In particular: the use of recovered aggregates to replace virgin materials also by promoting a specific industry; identify any critical issues in the current regulatory framework and possible solutions; the promotion of the use of BIM (Building Information Modeling) as a fundamental tool in achieving the circularity objectives; the possibility of creating a finalized web platform on which to share subscribers' activities with sector operators. In order to achieve these objectives, the Table for sustainable and circular building is also set up, coordinated by the Region.



Regional Labelling and Information Schemes



Ecolabel

The Community environmental quality brand of the Ecolabel product represents the result of a certification process which verifies the conformity of a product with the ecological requirements established, by mutual agreement, for the product group to which the product belongs.

In Italy in general and in the Veneto region in particular, the body responsible for Ecolabel matters is the Committee for Ecolabel and Ecoaudit - Ecolabel Section.

Technical support is entrusted to ISPRA (Higher Institute for Environmental Protection and Research) assisted by the Environmental Agencies.

The label can only be obtained for products and services for which the environmental criteria have been defined by decision of the European Commission.

SERVICES: interior cleaning services, accommodation facilities

To obtain the EcoLabel mark: the applicant must send the application to the Ecolabel and Ecoaudit Committee, accompanied by the necessary technical documentation;

the Committee forwards the dossier to ISPRA which carries out the technical-administrative investigation, with possible technical-scientific support from ARPAV;

In the event of a positive outcome of the investigation, the Committee grants the label and informs the European Commission.



THE EUROPEAN CHARTER FOR SUSTAINABLE TOURISM (CETS)

The European Charter for Sustainable Tourism (CETS) is an international certification process coordinated by the Europarc Federation, whose network brings together national and regional protected areas, natural parks and biosphere reserves present in 38 countries. The protected area of the Euganean Hills Regional Park Authority, which extends for almost 35,000 hectares including fifteen Municipalities, has thus seen the convergence of seven local public bodies (Municipalities of Baone, Battaglia Terme, Cinto Euganeo, Galzignano Terme, Monselice, Montegrotto Terme, Teolo), twenty-six tour operators and fifteen associations - coordinated by Agenda 21 and certified by the Europarc certifier (Desk evaluation of Europark) - building a five-year action plan made up of sixty-two actions aimed at the sustainable development and promotion of park.



Incentives for circular/green business models (tax credits, subsidies, etc.)



Regione del Veneto

Il portale della Regione del Veneto

INTERVENTIONS TO REGENERATE ENTERPRISES IN THE TOURISM ACCOMMODATION SECTOR SUPPORTING THEIR GREATER ACCESSIBILITY, TECHNOLOGICAL DEVELOPMENT, DIGITAL AND ECOLOGICAL TRANSITION - PR Veneto FESR 2021-2027

Priority 1: A more competitive and smart Europe by fostering innovative and smart economic transformation and regional ICT connectivity

Specific objective 1.3: Strengthen the sustainable growth and competitiveness of SMEs and job creation in SMEs, including through productive investments

Action 1.3.8: Regeneration and innovation of businesses aimed at supporting the tourist development of the area. DGR n. 406 of 07 April 2023

Call details: Material investments in favor of companies to promote the full accessibility of accommodation facilities, their digital and ecological transition

Products and services for which these criteria have already been issued



Regione del Veneto

Il portale della Regione del Veneto

ACCOMMODATION STRUCTURES: 7 MILLION FOR GREEN, DIGITAL AND ACCESSIBILITY INVESTMENTS

The new Por Fesr 2021-2027 tender issued by the Veneto Region provides for non-repayable contributions of 70%

Seven million euros for the hospitality sector to promote and support investments that favor the regeneration and innovation of companies, supporting their greater accessibility, technological development, digital and ecological transition. This is what the new call for tenders for companies in the tourist accommodation sector provides (action 1.3.8 - Por Fesr 2021-2027) published in recent days by the Veneto Region, the first of the POR Veneto FESR 2021-2027 programming.

Specifically, the 7 million euros of the tender are divided as follows:

- 4.2 million euros for companies based in non-mountain municipalities;
- 2.8 million euros for companies located in the mountain municipalities identified by Regional Law no. 25/2014 "Interventions in favor of mountain territories and conferment of particular forms and conditions of administrative, regulatory and financial autonomy".

The non-repayable contribution envisaged is equal to 70%, with a minimum investment of 50 thousand euros



Veneto Green Cluster <https://www.venetogreencluster.it/>



Veneto Green Cluster is a Regional Innovative Network that brings together the best excellence in the field of waste valorisation, involving industrial sectors oriented towards the supply of environmental goods and services (green business) and companies committed to reducing the environmental impact of their production processes and of its products (green production).

Circular economy and bioeconomy are therefore the watchwords and the dominant themes that pervade all the initiatives.

In addition to supporting and developing research and innovation projects, Veneto Green Cluster promotes the internationalization activities that the partners adhering to the RIR intend to share: studies and market research, participation in international fairs, incoming events, research for production and commercial partners.

3. Relevant regional stakeholders (Institutions/organisations involved in the implementation of regional strategies):

In the Veneto region, various government agencies, chambers of commerce, research centers, universities, NGOs, and other stakeholders play important roles in promoting Circular Economy Green/Impact Entrepreneurship, particularly in the tourism and service sector.

Regional Government Agencies:

"Arpav"

"L'ARPAV, the Regional Agency for Environmental Prevention and Protection of Veneto, works for the protection, monitoring, and recovery of the environment, as well as for the prevention and promotion of public health. It pursues the goal of integrated and coordinated use of resources to achieve maximum effectiveness in identifying and removing risk factors for both humans and the environment."

"Avepa"

"The Veneto Payments Agency (AVEPA) is an instrumental body established by the Veneto Region with Regional Law No. 31 of November 9, 2001. It was initially set up to function as the Regional Paying Agency (OPR) for aid, premiums, and contributions in the agricultural sector."

"Ente Parco Colli Euganei - Ente Parco Dolomiti Bellunesi - Ente Parco Fiume Sile - Ente Parco Regionale Veneto del Delta del Po - Parco Dolomiti d'Ampezzo - Parco Lessinia -

"Regional parks."

"Esu Padova - Esu Venezia - Esu Verona"

"Regional Companies for the Right to University Study."

"Istituto Regionale Ville Venete"

"The Regional Institute for Venetian Villas aims to provide, in cooperation with the owner or by substituting for them, consolidation, restoration, promotion, and improved utilization of Venetian Villas, including through studies and research."



"Veneto Lavoro"

"It is the support body for institutions and other organizations, ensuring qualified services in the planning, management, and evaluation of labor policies."

Chambers of Commerce and Industry Associations:

- **Camera di Commercio di Padova**
<https://www.pd.camcom.it/it>
- **Camera di Commercio di Treviso-Belluno**
<https://www.tb.camcom.gov.it/>
- **Camera di Commercio di Venezia-Rovigo**
<https://www.dl.camcom.it/>
- **Camera di Commercio di Verona**
<https://www.vr.camcom.it/>
- **Camera di Commercio di Vicenza**
<https://www.vc.camcom.it/>

Chambers of Commerce are public institutions that facilitate networking, provide business support services, and promote sustainable business practices among tourism and service enterprises.

ASCOM CONFCOMMERCIO

Confcommercio, abbreviation for Italian General Confederation of Businesses, Professional Activities and Self-employed Work, is an Italian body representing companies involved in trade, tourism and services which brings together over 700,000 companies. <https://www.confcommercio.it/>

CIA

Cia-Agricoltori Italiani is a secular trade association, without political affiliation, operating in Italy, of agricultural entrepreneurs, direct farmers, settlers and sharecroppers, and Italian rented farmers. www.cia.it

CNA - CONFEDERAZIONE NAZIONALE ARTIGIANATO E PICCOLA MEDIA IMPRESA

the CNA, National Confederation of Crafts and Small and Medium Enterprises, has over 620,000 members who employ over 1.2 million people. CNA represents the largest representative association distributed in the territory. www.cna.it



CONFAGRICOLTURA

Confagricoltura is the oldest organization for the protection and representation of agricultural businesses. It is committed to the development of agricultural companies and the primary sector in general www.confagricoltura.it

CONFARTIGIANATO IMPRESE

Confartigianato Imprese is the largest European network representing interests and providing services to crafts and small businesses. <https://www.confartigianato.it/>

CONFINDUSTRIA

Confindustria, short for General Confederation of Italian Industry, is the main representative organization of Italian manufacturing and service companies, bringing together over 150,000 companies on a voluntary basis. www.confindustria.it

Research Centres and Universities:

Ca' Foscari University of Venice:

This university may conduct research on circular economy models, sustainability in the tourism sector, and provide training programs for entrepreneurs. www.unive.it

University of Padua:

The University of Padua could contribute to research, innovation, and training in circular economy practices for the tourism and service sector. www.unipd.it

University of Verona

The University of Verona actively engages in fostering innovative entrepreneurship, tourism, and Creative and Cultural Industries (CCI). It does so through various activities, such as research projects, academic programs, and partnerships. www.univr.it

NGOs and Civil Society Organizations:

Veneto innovazione

the regional innovation system, optimizing the results of scientific research and promoting technology transfer activities. Veneto Innovazione promotes the Veneto economic system in all its aspects, from the primary to the secondary sector, trade, infrastructure and services. Follows the organization of initiatives for the internationalization of the business system, taking care of their dissemination and information and favoring the implementation of synergies. The company manages regional projects and regionally directed actions of strategic or experimental value and participates in the comparison and experimentation of new innovation models on an interregional and European scale. <https://www.venetoinnovazione.it/societa/>



ViaggiMiraggi Onlus- Padova (PD)

ViaggiMiraggi is a non-profit social cooperative founded in 2001 to promote Responsible Tourism, a way of traveling that focuses attention on the economic, social and environmental implications that mobility entails. <https://www.viaggiemiraggi.org/>

Lapis Associazione Parova (PD)

The association deals with the management and use of the three archaeological areas of Montegrotto Terme, the museum and the fortress of Asolo. Management of sites of cultural interest and museums, accompanied visits, teaching, cultural promotion and dissemination, creation of cultural itineraries, organization, staging and management of cultural events, promotion of cultural initiatives with local, provincial, regional and state bodies. https://www.facebook.com/lapisarchoe/?locale=it_IT

Associazione TURISTICA VAL BIOIS Falcade <https://www.falcadedolomiti.it/>

UNPLI Verona

Established in 1995, the Unpli Verona Provincial Committee has the aim of gathering and organizing the pro-loco associations established in the Verona provincial territory, to coordinate their activities and promote their development. www.unpliverona.it

Other Regional Stakeholders:

Local Tourism Boards (Aziende di Promozione Turistica):

These boards can encourage and support tourism businesses to adopt circular economy practices that minimize environmental impact and enhance visitor experiences.

Environmental Protection Agencies (ARPA Veneto): These agencies can provide guidelines and certifications related to eco-friendly practices in tourism and services.

Business Incubators/Accelerators: They can provide mentoring, resources, and funding opportunities to startups and entrepreneurs focusing on circular economy solutions in the service and tourism sectors.

Veneto Green Cluster <https://www.venetogreencluster.it/>

Veneto green Cluster is an important player in promoting Circular Economy Green/Impact Entrepreneurship in the Veneto region, particularly in the tourism and service sector. This cluster plays a significant role in supporting Circular Economy Green/Impact Entrepreneurship by facilitating networking, knowledge exchange, and partnerships among stakeholders. It offers a platform for sharing best practices, organizing events, and promoting initiatives that align with circular economy values. The Veneto Green Cluster contributes to creating a dynamic ecosystem where businesses and entrepreneurs in the tourism and service sector can access resources, expertise, and opportunities to develop sustainable and impactful projects.

Veneto Sostenibile:

Veneto Sostenibile is a regional government initiative in Veneto dedicated to sustainability and environmental protection. It serves as a hub for information, resources, and initiatives related to sustainable development and circular economy practices. The initiative supports the adoption of eco-friendly measures



and encourages businesses, organizations, and communities to engage in environmentally responsible practices.

Innoveneto

The Network wants to accelerate the green transformation by supporting urban regeneration and sustainable building processes, limiting land consumption, configuring new business models connected to the development of smart cities, the transformation of the real estate market, and industry 4.0, with the aim to improve the quality of life in urban areas. <https://www.innoveneto.org/venetian-green-building-cluster/>

4. RIS3 regional analysis of CCI and Tourism sectors involved in Circular Economy Green/impact entrepreneurship:

S3 priorities

The socio-economic ecosystem of the Veneto Region is about to transform and evolve from a traditional productive structure to a more innovation-oriented system. This should be possible thanks to the further integration of the scientific and industrial system and the development of collaborative business networks, focussing more on the demand side that represent the ideal outlet of the innovation outcomes.

Veneto Region Smart Specialization Strategy (RIS3) for the period 2021 -2027 (approved on 20022 by the Regional Council) is composed of 52 trajectories and is structured around 6 areas of specialization as:

- Smart agrifood
- Smart manufacturing
- Smart living & energy
- Smart health
- Culture and creativity
- Smart destination

The introduction of 2 Strategic Missions is aimed at enhancing what is the Vision of the Region in the medium to long term horizon. The Strategic Missions are:

1. Bio-economy (Bio-technology; Bio-energy; Hydrogen)
2. Space economy (Artificial intelligence; Quantum technologies; Space technologies).

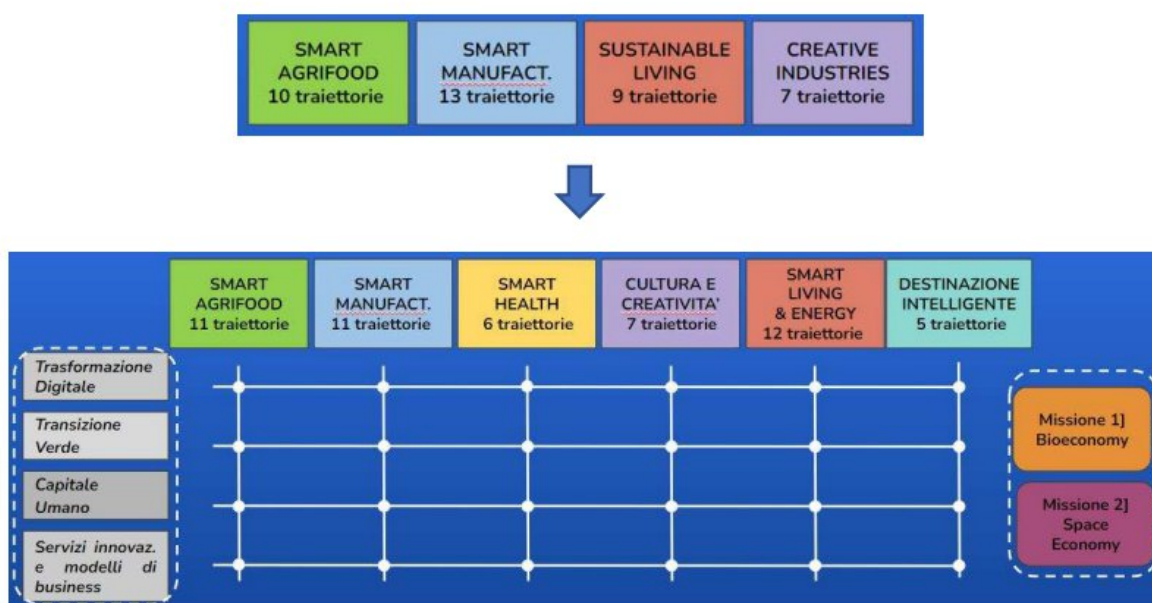


Beside, the provision of 4 cross-cutting drivers is aimed to integrate the effects generated by each specific trajectory and represents a rewarding factor as well.

These drivers will concern:

- Digital Transformation (Digital Transition, interconnection between supply chains)
- Green and Circular Transition (Circular Economy, environment, society and mobility)
- Human Capital (Training and skills, putting the person at the center)
- Innovation Services and New Business Models (Research, communication, organization, MKT, financial consulting, smart distribution, servitization, etc.)

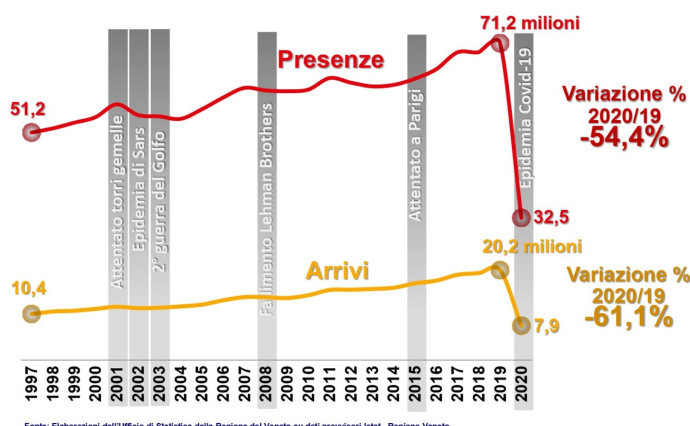
Being one of the 4 cross cutting drivers, Circular economy has an outstanding relevance in the RIS3. Nevertheless, what emerges also from the focus group that featured the RIS 3 design, circular economy is mainly understood as a crosscutting issue for the manufacturing and productive system, rather than CCIs and tourism sector. In any case, it's important to stress the high importance given to the concept of "Smart Destination", that is one of the specialization areas and a pillar of the Tourism Strategy 2022-2024.



CCI, Tourism and Services sector

Tourism sector

Historically, Veneto has been the leading Italian region in terms of tourist attendance precisely because of its international projection. The 2020-2021 biennium characterized by the pandemic shock has heavily impacted the tourism sector. The strong global recovery in tourist flows is also being felt in the Veneto region, where tourist flows never seen in the last period are being recorded.



In 2022, official tourism flow data in the Veneto show that arrivals total tourist arrivals are 18.1 million, +53% to the same period in 2021 (11.85 million) and a difference of 5.1 million (-10.2%) compared to 2019 (20.2 million).

Attendances, which represent overnight stays, follow a similar trend (+30.2% compared to 2021 and -7.5% compared to 2019). Also most recent data shows how the recovery is bringing to unexpected tourism flows increase: the latest provisional data available notes that the first quarter of 2023 closed with a 54.7 % increase in tourist arrivals and a 43.1 % increase in presences compared to the same period of the previous year. The comparison with the last pre-covid year highlights the strong recovery underway, thanks to figures that are very close to the record historical high in 2019 (-1.8 percent arrivals and -3.8 percent presences).

Circular economy sectors in Veneto realized an added value of €2 billion in 2018, equivalent to 1.2% of GDP (1.1% in Italy), and employed almost 48 thousand people, 2.8% of the total (2.1% in Italy, 1.7% in the EU). Between 2015 and 2018, the sector grew by 13.2%, in terms of value added.

Attention to sustainability is alive in Veneto businesses: 65.4% of active Veneto companies with 3 and more employees say they reduce the environmental impact of their activities, compared to a national share of 66.6%.

Of the varied concept of "sustainability" in tourism, the slow but steady process of deseasonalization of tourist flows and relocation in historic villages orange flags for the Touring Club, in the Prosecco hills UNESCO World Heritage Site, and in the Venetian villas, which are experiencing a fast recovery, is analyzed.

Like tourism, the issue of mobility is analyzed from the point of view of environmental impact; among the elements that are emerging in the Veneto region is the increase in bicycle paths and the aging of the bus fleet used for local public transport services.

The Tourism Strategic Plan of Veneto Region

The Veneto Region is provided with a Strategic Tourism Plan for the period 2022-2024 that addresses policies, measures and interventions to support the sector in a programmatic and coherent logic.

In this regard, we highlight the precise stance taken by the regional authorities that are aimed to stimulate the whole tourism ecosystem to undertake paths and models oriented toward a sustainability of supply.

In this sense, the Plan's reference to the principles of economic and environmental sustainability as well as the transition in a green and digital sense should be revealed. Given that the tourism sector will necessarily



have to adapt to and consider these issues, the emphasis on the concept of Smart Tourism Destination is significant.

Taking cues from the initiative "SMARTLAND - Smart Destinations in the Land of Venice, Mission 2026," as a part of the Regional Innovative Networks referred to in Veneto Regional Law n.13/2014, the project aims to aggregate both public and private entities operating in multiple sectors of the economy and tourism. The common goal of all the companies is to update and innovate their strategic business models, driven by technology and digital development of processes and products to improve their offering on the national and international market.

A change of business models and offering is therefore on going. This has led to the identification of destinations defined as "smart" to the extent in which they are strongly addressing sustainability and circularity in their business.

This is particularly clear as far as specific actions foreseen in the Strategic Plan are concerned. More in depth, it should be noted that Action 4.2.6, is devoted to the implementation of Smart Tourism Destination, also through measures supported by Cohesion Policies (ERDF Regional OP) and backboneed by the RIS3 "Ambito 6 - Destinazione Intelligente".

Finally, the Strategic Plan is looking forward towards an official acknowledgement of those skills and competencies reflecting the new trends in tourism sector. Action 1.1.4 of the Plan is expressly supporting the certification of new competencies both traditional and innovative to increase their acknowledgement in the labour market.

The whole picture is clearly showing that the Veneto Region has recognized the change in tourism sector and the will to support the transformation of the traditional productive system toward a more circular oriented economy (better defined as "Green economic transition"). The Tourism Strategic Plan highlights that will be essential to give birth to a generation of new businesses that, while not necessarily classified as tourism, will operate to give and create value around and for tourism, moving across sectors, and building chains of value, imagination, and meaning. Enterprises not only and not so much new as "start-ups," but in terms of products and core business, beyond the current classifications that are often ineffective or, they too, quickly rendered obsolete by the acceleration of the present time standing at 65.9 million.

CCI and Services sector

In Veneto, there are 13,926 (Infocamere data updated to 2019) companies that fall in the broad category of CCIs. Starting from this basin the Veneto Region, since 2016 has decided to squeeze a bit more the classification. By narrowing the Ateco codes, the result is that CCIs "sector" is populated by a significantly smaller number of enterprises (1526; data Infocamere updated to 2019). The resulting picture is as follows, already reclassified using the categories of the concentric circles model:

Nace Codes Related To CcIs In Veneto Region

ART-BASED CCIs

- 90.01.01 Activities in the field of acting
- 90.01.09 Other artistic performances
- 90.02.02 Activities in the field of directing
- 90.03.09 Other artistic and literary creations

CULTURAL INDUSTRIES

- 90.04.00 Operation of theaters, concert halls and other artistic facilities
- 91.01.00 Activities of libraries and archives
- 91.02.00 Activities of museums
- 91.03.00 Operation of historical places and monuments and similar attractions



91.04.00 Activities of botanical gardens, zoos and nature reserves

CREATIVE INDUSTRIES

58.11.00 Book publishing

58.19.00 Other publishing activities

58.21.00 Publishing of computer games

59.12.00 Motion picture, video and television program post-production activities

59.13.00 Motion picture, video and television program distribution activities

59.14.00 Motion picture projection activities

59.20.10 Publishing of sound recordings

59.20.20 Publishing of printed music

59.20.30 Sound recording studios

60.10.00 Radio broadcasting

60.20.00 Television programming and broadcasting

90.03.02 Conservation and restoration activities of works of art

RELATED INDUSTRIES

90.02.09 Other activities in support of artistic performances

90.02.01 Rental with operator of facilities and equipment for events and

In the last years, Veneto Region has increased its effort in supporting the development of CCIs. In particular, this support has been delivered through investment made in the framework of ERDF and ESF Ops. The aim is to create economic conditions so that the cultural and creative approaches typical of CCI may be integrated in the whole economic and social system, ultimately pushing for a strengthening of the role of CCI as a value generator and service provider for the rest of the economy.

The Veneto Region has promoted the “spillover” multiplication of culture and creativity on the rest of the economy by placing at the center of its policies for training and human capital categories, approaches and strategic directions typical of CCI.

The disbursement to CCI of approximately 12 million euros over 4 years aligns Veneto with the best practices (both quantitative and qualitative) implemented in other Italian regions.

By selecting a strongly characterized core of recipients, Veneto has affirmed the centrality of the artistic and cultural core of CCI and supported a notion of “creative industries” strongly linked to the production of cultural and artistic content. The policies implemented through the calls have reached more than 20 % of the potential target audience encouraging cultural entrepreneurship in sectors, such as the arts, that traditionally did not see this as an option.

5. GREENPACT SWOT analysis for Circular Economy green/impact entrepreneurship at regional Level

Target sector: Tourism

The record figures of 2019 have been surpassed: in the period January-May 2023 the number of tourists who stayed in Veneto is significantly higher than in the same pre-pandemic period (+3.4% of arrivals). The same trend for overnight stays, which represent the number of overnight stays made by them (+3.3%).

The number of Italians is far higher than the pre-pandemic situation (+7.2%), but not yet in attendance (-1%), especially for shorter stays in cities and at spas.



Boom of foreign tourists (arrivals +1%, presences +5.7%). The strong attraction exerted on the most loyal customers is underlined by the +35.9% of German presences, again compared to the pre-pandemic period, +11.6% of Austrian ones, +12.1% of Swiss ones, and it is also highlighted an important return of the Americans (+12.2% again compared to 2019). Despite the recent increases, several English and French tourists are still missing, as well as Asians and Russians for the well-known international events.

Lake, mountains, spas and the sea see very important flows (all with arrivals higher than 2019), while the cities of art, thanks to the rapid recovery (+41.1% of arrivals compared to January-May 2022) are getting very close steps to what was recorded before the pandemic (-2.3%).

The main sectors are:

- LAKE (main destinations : Bardolino, Castelnuovo del Garda, Garda, Lazise, Malcesine, Peschiera del Garda)
- MOUNTAIN (main destinations: Asiago, Auronzo di Cadore, Cortina d'Ampezzo)
- SPA (main destinations: Abano Terme, Montegrotto Terme)
- SEA: Bibione, Caorle, Cavallino Treporti, Chioggia, Jesolo)
- ART CITY Padua, Treviso, Venice, Verona, Vicenza

PRIORITY 2 of the Veneto ERDF 2021-2027 regional plan is divided into five different priorities, each of which includes specific objectives that will be implemented through specific lines (actions) of intervention: - A more resilient, green and low-carbon Veneto

Specific goals:

2.1 Promote energy efficiency and reduce greenhouse gas emissions.

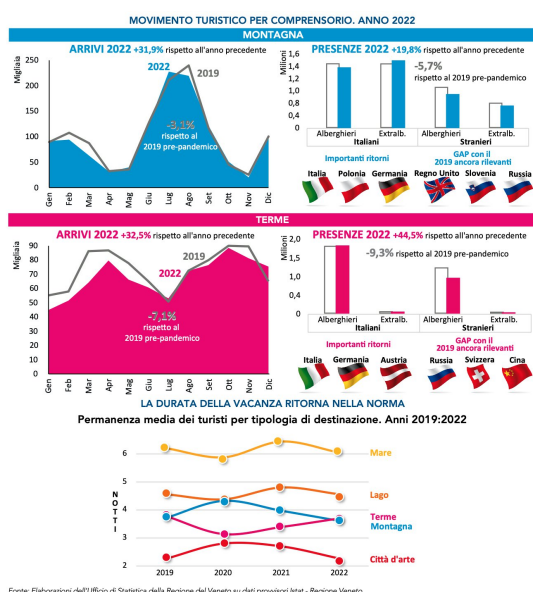
2.2 Promote renewable energies in accordance with Directive (EU) 2018/2001.

on energy from renewable sources, including the sustainability criteria established therein.

2.4 Promote climate change adaptation, disaster risk prevention and resilience, considering ecosystem approaches.

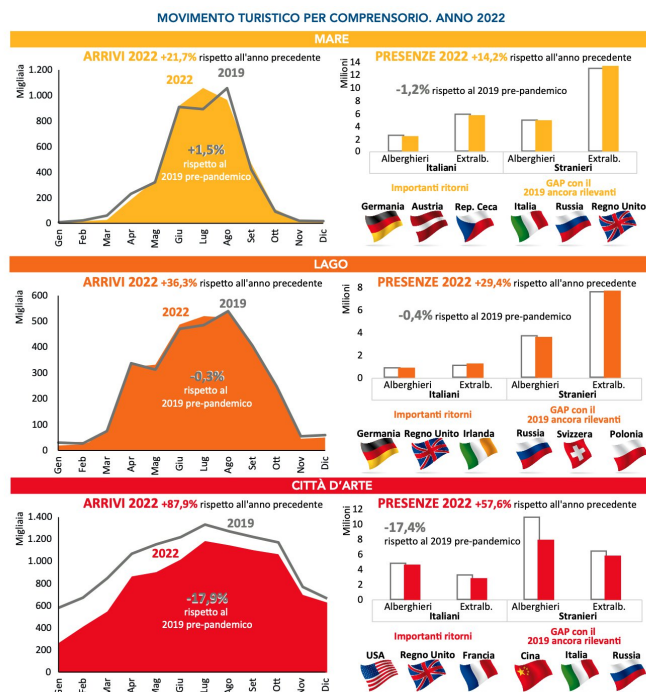
2.6 Promote the transition to a resource-efficient and circular economy.

2.7 Strengthen the protection and preservation of nature, biodiversity and green infrastructure, including in urban areas, and reduce all forms of pollution (objective implemented in urban areas only).





Strengths:



the national average.

- In Veneto the regional social-health system is excellent and this is reflected in the state of health of the citizens of Veneto, which is constantly improving. The risk management system for exposure to extreme natural events is also considered efficient.
- The percentage of households and businesses connected to broadband is higher than the national average. The Veneto housing system is also better than the situation
- As far as environmental sustainability is concerned, Veneto has a high percentage of differentiated collection of urban waste, a high internal consumption of raw materials and a constant increase in public bodies which purchase goods and services by adopting minimum environmental criteria (CAM). Furthermore, overall CO2 emissions are decreasing, albeit with significant differences between the Veneto provinces.
- The chemical status of lakes and rivers is also better than the national average, as is their ecological status. Finally, the illegal building index is among the lowest in Italy, as is the crime index.
- Growing Consumer Demand: The Veneto region benefits from a growing consumer demand for sustainable products and services, driven in part by its diverse tourism offerings. The region's coastal areas, art cities, spas, and mountain destinations have attracted tourists from around the world who increasingly seek eco-friendly and sustainable experiences.
- Government Support: The Veneto region enjoys substantial government funding and support for circular economy initiatives in the tourism sector. Local authorities and institutions have allocated significant resources to promote sustainability in tourism, recognizing its importance in preserving the region's natural and cultural heritage.
- Investor and Customer Appeal: The region has the ability to attract environmentally conscious investors and customers. Its diverse tourism offerings, coupled with a commitment to sustainability, make it an appealing destination for both investors seeking sustainable business opportunities and tourists looking for eco-friendly experiences.

• The functioning of the economic system, the training system and the social health and civil protection system are among the major strengths of the Veneto.

• The Region has recorded one of the highest GDP growth in Italy and active labor policies based on a high quality education system which have strengthened and improved the connection between the production system and the vocational training system.

• The risk of poverty and social exclusion is clearly lower than the Italian and European average, just as the percentage of young people who drop out of the school system is reduced; these are very delicate aspects to pay attention to with active policies. In general, the skills acquired by young people at school improve, above



- **Collaboration Opportunities:** The Veneto region boasts a strong network and collaboration opportunities with other circular economy businesses within the tourism sector. Local organizations and associations dedicated to sustainability facilitate cooperation among businesses aiming to adopt circular practices, creating a supportive ecosystem for sustainable tourism initiatives.

Weaknesses:

From the analysis of the positioning some critical elements emerge, above all in the environmental area, in particular in Goal 15 (Life on land) and in Goal 6 (Clean water and sanitary services). These critical issues are grouped below according to the three dimensions of sustainability, starting with the environmental one.

Environmental sustainability -

- The main criticalities are summarized by a few indicators: air pollution, high rate of sealing and soil consumption, low efficiency of water networks, low percentage of waste water treatment, low percentage of electricity produced with renewable sources and high consumption energetic
- Furthermore, due to the widespread presence of specialized crops, there is a high concentration of fertilizers and phytosanitary products per hectare of surface. Furthermore, the use of agricultural land destined for organic production is much lower than the national average. The number of companies with environmental certification is also low.

Social sustainability - It should be noted that the fertility rate of women is lower than

- mean and the population balance is still negative. There are also critical issues concerning in particular the growth in the incidence of relative individual poverty, the growth of childhood obesity, the high consumption of alcohol in the population over 14 years of age; the data on road accidents is also critical, the rate of decrease of which is in any case higher than the national average.

Economic sustainability -

- There is a worsening of some indicators relating to the rate of unemployment and non-participation in work. The female employment rate is rather lower than the male one. The percentage of young graduates between the ages of 30-34 is still far from the European targets. As far as mobility is concerned, the percentage of the population declaring that they have connection problems with public transport in the area in which they reside is growing. Another critical figure concerns the efficiency of the judicial system, in particular the duration of civil trials, which appears to be getting worse.
- **Limited Awareness and Education:** Many businesses and stakeholders may lack awareness of circular tourism principles and their benefits. There may be a need for educational programs to foster understanding and adoption of sustainable practices.
- **Resistance to Change:** Some businesses and traditional tourism operators may resist transitioning to circular tourism due to concerns about increased costs or unfamiliarity with sustainable practices.
- **Infrastructure Challenges:** Upgrading infrastructure to support circular tourism, such as eco-friendly accommodations and waste recycling facilities, may require significant investments and face regulatory hurdles.
- **Seasonal Variability:** The region's tourism industry is often seasonal, which can pose challenges for year-round implementation of circular tourism practices.



- **Coordination and Collaboration:** Effective collaboration among various stakeholders, including businesses, local government, and NGOs, may be lacking, hindering the development of a unified approach to circular tourism.
- **Economic Dependence on Mass Tourism:** The Veneto region's economy may be heavily dependent on mass tourism, making it difficult to shift toward more sustainable and circular models without potential short-term economic consequences.
- **Cultural Preservation:** Balancing the preservation of cultural heritage with the demands of tourism can be challenging, as overtourism may threaten the authenticity of historical sites and traditions.
- **Access to Funding:** Not all businesses may have access to funding or incentives to support their transition to circular tourism practices, which could impede progress.

Opportunities:

In general, there are at least three areas on which attention will be focused:

1. **technology:** the technological sector driven by scientific research will probably be the main beneficiary of the crisis, also considering the lived experience of social distancing which has represented the largest mass test ever experienced to date. The 2020 pandemic can potentially trigger an even more radical change in our daily use of technology and a redesign of the spaces in which we work, live and inhabit. The remote working experience will accelerate the adoption of more advanced practices such as smart working, e-learning or telemedicine, largely replacing travel and physical meetings.

This requires a growth in broadband and ultra-broadband connections, semiconductors, connectivity, software and social media. On the other hand, the risks of cybercrime will also increase and, consequently, the demand in the fields of information security will also increase. While raising some questions in some contexts, big data, artificial intelligence and geolocation will be able to

become useful tools to cushion the economic impact deriving from catastrophic events such as epidemics;

2. **social-health and civil protection systems:** the pandemic crisis has highlighted the importance of having efficient systems, increasing investments aimed at reducing exposure to risk. In the last twenty years, the scenario of the national health system has been characterized by profound changes, with the aim of optimizing management while promoting cost containment at the same time. The Veneto model is based on a predominantly public system, with a very active territorial medicine and a strong tradition of territorial principals. The constant strengthening of the system, also from a technological point of view, can only continue to improve its response capacity. New sciences and technologies will enable the development of an entirely new set of treatments for various ailments and diseases. The ability to respond to pandemic crises also depends on the efficiency of the territorial civil protection system, which in Veneto, as it has always shown on other occasions, has strong regional governance in conjunction with the national one. The Veneto system, in its excellence, must continue to be considered strategic with adequate investments;

3. **environmental sustainability and renewable energies:** this area should continue to develop, together with the diffusion of more sustainable products and the development of applied research. Investments in companies with a high ESG rating (or sustainability rating) are in fact encouraged, since these tend to be companies attentive to product and process quality for which good performance is expected in the medium term. Companies with good ESG scores also tend to be less leveraged, which is important given the current environment



Expanding Sustainable Tourism Offerings: The Veneto region has the opportunity to diversify and expand its sustainable tourism offerings, including new types of tourism such as agritourism, fish tourism, fishing tourism, rural tourism, educational farm, wine tourism, and oil tourism. These niche tourism experiences allow visitors to engage with local agriculture, fishing, and culinary traditions while promoting sustainable practices.

Leveraging Regional Legislation: The existing regional legislation, L.R. n. 28/2012, and its amendments provide a solid foundation for reorganizing various rural tourism activities. By harnessing this legal framework, the region can facilitate the expansion of sustainable tourism offerings. This includes promoting eco-friendly practices within the mentioned tourism sectors.

Attracting Environmentally Conscious Travelers: By promoting sustainable and circular tourism practices, the region will attract environmentally conscious travelers who prioritize eco-friendly destinations. This will result in a dedicated customer base that appreciates and supports sustainable initiatives.

Enhanced Brand Reputation: Businesses in the Veneto region have the opportunity to enhance their brand reputation by actively participating in sustainable and circular tourism practices. This will lead to increased customer loyalty as tourists are drawn to businesses that align with their sustainability values.

Competitive Differentiation: The adoption of circular economy practices allows businesses to differentiate themselves from competitors in the tourism sector. By offering unique and eco-friendly experiences, businesses can stand out and attract tourists seeking sustainable options.

Incorporating these opportunities into the tourism sector can not only benefit the environment but also enhance the overall attractiveness of the Veneto region as a sustainable and circular tourism destination.

Threats:

Economic Implications: Transitioning to circular practices in the Veneto region may initially require significant financial investments for businesses, such as upgrading to sustainable infrastructure and technologies. These upfront costs could be a barrier, particularly for smaller businesses, impacting their short-term financial stability.





Resistance to Change: Some tourism operators in the Veneto region may resist adopting circular policies due to concerns about changing established practices. This resistance might stem from uncertainties about the complexity of new systems or doubts regarding the return on investment in sustainable initiatives.

Educational Gaps: There may be a lack of awareness and understanding among employees and stakeholders in the Veneto region about circular economy principles and practices. Proper training and education may be necessary to ensure that everyone within an organization can contribute effectively to circular initiatives.

Consumer Expectations: Meeting the varied expectations of tourists in the Veneto region regarding sustainability and circularity can be challenging. Visitors may have differing levels of awareness and expectations related to sustainable tourism. Balancing these expectations while maintaining affordability and high-quality experiences is a complex task.



SWOT ANALYSIS

 STRENGTHS	 WEAKNESSES	 OPPORTUNITIES	 THREATS
<p>Strong economic system and social health services.</p> <p>High GDP growth and quality education system.</p> <p>Low poverty.</p> <p>Good infrastructure, broadband, and eco-friendly practices.</p> <p>High environmental sustainability, including waste collection</p> <p>Growing consumer demand for sustainable tourism.</p> <p>Government support for circular economy initiatives.</p> <p>Attractiveness to environmentally conscious investors and tourists.</p> <p>Collaboration opportunities within the circular tourism sector.</p>	<p>Environmental concerns, including air pollution and low use of renewables.</p> <p>Limited awareness and education on circular tourism.</p> <p>Resistance to change in traditional tourism operators.</p> <p>Infrastructure upgrades and regulatory hurdles.</p> <p>Seasonal variability in the tourism industry.</p> <p>Coordination and collaboration issues.</p> <p>Economic dependence on mass tourism.</p> <p>Balancing cultural preservation with tourism demands.:</p>	<p>Technology sector growth through remote working and technology adoption.</p> <p>Strengthening social-health and civil protection systems.</p> <p>Expansion of environmental sustainability and renewable energies.</p> <p>Diversifying sustainable tourism offerings.</p> <p>Leveraging regional legislation for eco-friendly practices.</p> <p>Attracting environmentally conscious travelers tourists</p> <p>Enhancing brand reputation through sustainability.</p> <p>Competitive differentiation with unique, eco-friendly experiences.</p>	<p>Initial financial costs for transitioning to circular practices.</p> <p>Resistance to change and doubts about return on investment.</p> <p>Educational gaps in circular economy principles.</p> <p>Meeting diverse consumer expectations for sustainability.</p> <p>Regulatory and financial challenges in implementing circular initiatives.</p> <p>.</p>



The GREENPACT map on Circular Economy & Impact Entrepreneurship in Jadranska Hrvatska Region (HR)

1. Regional state of the art:

Regional demographic statistics

Total population (2019)	1,374.000 (2019) (Eurostat)	
Population per sex	Males (%)	48.5
	Females (%)	51.5
Population per age in % [0-14 - 15-64 - >65]	0-14 years:	15.7%
	15-64 years:	65.9%
	65 years and over:	18.4%
Average age	44 years	
Life expectancy	Males:	around 76 years.
	Females:	around 81 years.
Growth rate	13,1%	
Population density	around 73/km2	
Total area (land) of the region [km2]	24,701.54 km2	
Immigration rate and origins (%)	Foreigners (%)	2.7%
Net migration rate	-1.11%	

Regional education and employment

Literacy rate	99.45%
Education attainment	
[% primary / secondary / tertiary]	18.4% of highly educated people
Early leavers from education and training (age 18-24)	3.0%
Tertiary educational attainment (age 30-34)	33.1%

Early childhood education

(from age 4 to starting age of compulsory primary education)

	81.0%
% youth NEET (15 to 25 y.o.)	14%
Employment rate	49%



by gender	F 43%; M 54%
Unemployment rate	6,7%
by gender	F 7,6%; M 6%
Youth unemployment rate	n.a.
by gender	n.a.

Regional economics and industry

Gross domestic product (GDP) 2022	13,1%; 68 955083,28 USD
G.D.P. per capita	17 685,3 USD
Poverty rate	0.3 %
Inflation rate (average last year)	10.8 %
Foreign Direct Investments	4,660,184.37 USD
Trade balance negative trade balance of	-9,104,707.91 in thousands of US\$

Export by countries (5 most relevant and % of the total) exports of goods and services as percentage of GDP is 41.66%

Import by countries (5 most relevant and % of the total) imports of goods and services as percentage of GDP is 48.89%.

Number of Businesses /Economy_of_Croatia	approximately	190,000https://
of which SMEs (%)	99,7 %	
Average business size	n.a	
Number of local units	n.a	

Industrial sectors in % [primary / secondary / tertiary]

- Shipbuilding, construction, petrochemicals, and food processing. Most important of all is the tourism industry.
- Manufacturing: The manufacturing sector is one of the significant contributors to Croatia's economy. It includes industries such as food and beverages, textiles, chemicals, machinery, and more. Manufacturing contributes around 25% to 30% of the GDP.
- Construction: The construction industry plays a crucial role in infrastructure development and real estate. It contributes around 6% to 8% of the GDP.
- Tourism: Tourism is a vital sector in Croatia due to its beautiful coastline and historic cities. It includes hospitality, accommodation, and related services. Tourism contributes around 15% to 20% of the GDP.
- Agriculture: Agriculture is an essential sector, particularly in rural areas. It contributes around 4% to 6% of the GDP.
- Services: The services sector includes a wide range of activities such as retail, finance, education, healthcare, and more. It contributes a significant portion to the GDP, with a share of around 40% to 45%.



Employment by Industry [primary / secondary / tertiary]

- **Services Sector:** The services sector is the largest employer in Croatia, encompassing various industries such as retail, finance, education, healthcare, tourism, and more. It accounts for a significant portion of total employment, with around 60% to 65% of the workforce employed in this sector.
- **Manufacturing Sector:** The manufacturing sector is also a significant employer in Croatia, including industries such as food and beverages, textiles, chemicals, machinery, and more. It employs around 20% to 25% of the workforce.
- **Agriculture Sector:** Agriculture employs a smaller portion of the workforce, with approximately 10% to 15% of the working population engaged in agricultural activities.
- **Construction Sector:** The construction industry provides employment opportunities for around 5% to 10% of the workforce.

Businesses by NACE code [1st level in %] n.a.

Employment by NACE code [1st level in %] n.a.

Average salary (national & EU ratio) (2022) EUR 1.018,00;

The Croatian average salary is lagging that earned on average across the rest of the European Union by 25 percent.

Businesses demography (birth v/s death in the last year)

In 2018, there were 16,667 business births and 12,160 business deaths.

Regional digital economy and society

Households with access to the internet at home (%) 85,5%

Households with broadband access (%) 85,5%

Individuals who have never used a computer (%) n/a

Individuals who used the internet for interaction with public authorities (%)
n/a

Individuals who ordered goods or services over the internet for private use (%)
n/a

Registered digital enterprises over the total (%) n/a

Employment by NACE code [1st level in %] see above

Average salary (national & EU ratio) 50.237 EUR (reg) / 41.716 EUR (nat.)

Businesses demography (birth v/s death in the last year) +18.716 / -13.772



Regional digital economy and society (2019)

Households with access to the internet at home (%)	90 %
Households with broadband access (%)	87 %
Individuals who have never used a computer (%)	10 %
Individuals who used the internet for interaction with public authorities (%)	15 %
Individuals who ordered goods or services over the internet for private use (%)	87 %
Registered digital enterprises over the total (%)	n/a

2. Frameworks, Measures & laws on Circular Economy:

Regional policies and strategies

Circular economy policy elements included in other policies

A wide range of national strategies might have the potential to promote CE approaches in Croatia.

Waste Management Plan of the Republic of Croatia for the period 2017-2022

The Waste Management Plan of the Republic of Croatia (WMP) is a waste management planning document that is reflected at all levels, from national to local, and as a segment within other sectors, such as water management, health, spatial planning and construction. It sets objectives and measures for the establishment of waste management based on CE criteria. The Plan focusses on developing a recycling and recovery system to separate waste streams, reducing the total quantity of mixed municipal waste by applying measures such as establishing reuse centres, home composting, development of quality and categorising criteria for compost and digestate enhancing separate collection of waste, financial incentives for separate waste collection, introducing a fee for landfilling, enhancing recycling, strengthening the market for waste intended for recycling and planning energy recovery. Further specific measures include the improvement of municipal and hazardous waste management systems, remediation of polluted sites, improvement of the waste management information system and supervision and administrative procedures in waste management. Achieving the specific goals for waste prevention contributes to the achievement of general goals for waste management: separating economic growth from the increase in the amount of waste generated, conserving natural resources, reducing the total mass of waste disposed of in landfills, reducing emissions of pollutants into the environment and reducing hazards to human health and the environment.

Circular economy policy element: Waste Management

Included in Policy: (The Waste Prevention Plan 2017-2022, an integral part of the Waste Management Plan)

The Waste Prevention Plan is an integral part of the Waste Management Plan and contains objectives and waste prevention measures that separate the link between economic growth and environmental impacts



related to waste generation, a description of existing waste prevention measures and an assessment of the usefulness of appropriate waste prevention measures.

Waste prevention

- encouraging the reuse of demolition material;
- organisation for information and education campaigns on the prevention of food waste;
- work to improve food waste collection and processing systems;
- promoting sustainable construction;
- establishment of a food donation system;
- organisation of a communication campaign for citizens;
- encouraging prevention of waste plastic carrier bags;
- promotion of home composting;
- promoting green and sustainable public procurement;
- encouraging the exchange and reuse of usable products.

Circular economy policy element: Food Waste Prevention Plan

Included in Food Waste Prevention Plan 2019-2022

The Plan aims to prevent and reduce the generation of food waste. It aims to bring together in one place all measures and activities that contribute to the prevention of food waste in all phases of the food chain, from primary production, through processing, trade, catering and institutional kitchens to households. The plan is the first such comprehensive document on this issue produced in the Republic of Croatia.

The Plan is accompanied by a detailed Programme for the implementation of the Plan. The implementation of this Programme will result in improving the legislative framework, drafting guides, establishing a system for preventing and reducing food waste, redirecting surpluses, and exchanging information that will significantly increase understanding of the negative effects of food loss, non-utilisation and waste among citizens responsible for handling food.

Circular economy policy element: National Development Strategy

Included in policy: National Development Strategy until 2030 (OG 13/2021) (in Croat) Targets are outlined in section of CE monitoring frameworks and their indicators beyond the ones from Eurostat (below)

The National Development Strategy is an umbrella document and a comprehensive act of strategic planning which should guide the development of society and the economy in the long run. It promotes the green and digital transition to cleaner and more accessible energy by encouraging green and blue investments, by decarbonising buildings, and by developing a CE. It states that production sectors that accept the concept of a circular and decarbonised economy will be the basis for sustainable and competitive development. It encourages the development of a CE as one of the priorities in the implementation of public policies that will contribute to the development of a globally competitive, green and digital industry.

Circular economy policy element: Low Carbon Development Strategy



Included in policy: The Low Carbon Development Strategy of the Republic of Croatia to 2030 with a view to 2050.

The Low Carbon Development Strategy outlines the following vision: industry and agriculture will be efficient and connected to all sectors of the economy, reducing the generation of waste materials in an integrated and circular economy. The low carbon strategy therefore wants to create synergies with the concept of developing new green jobs, and generally with a concept of a CE in which resources are used as a whole and waste generation is minimised.

Visions of the low carbon development of some sectors by 2050 are as follows.

- The establishment of a waste management system in line with the principles of a CE will contribute to resource efficiency with a lower negative impact on people and the environment.
- Building design, construction and renovation will be carried out according to the principles of circular management of space and buildings with the use of resources coordinated with the needs and performance of buildings.
- Industry will promote the concept of a CE, including the recycling and recovery of scrap materials in their own processes and from other operators.
- The Low-carbon Development Strategy lists a number of measures, including those that support the implementation of a CE.
- Improving the sustainability of urban environments.

The Circular Governance Development Programme for Buildings:

- Sets up a CE platform;
- establishes of a bioeconomy platform;
- green public procurement;
- prevention and minimisation of solid waste,
- increase in separately collected and recycled solid waste,
- minimisation of landfilled biodegradable waste, and use of biogas for the production of biomethane, electricity and heat.

Further relevant policies

Industrial Strategy of the Republic of Croatia 2014 - 2020 (OG 126/2014)

The purpose of the Strategy is to obtain an overview of the state of industrial activities and sub-activities in Croatia through industry analysis. The concept of a CE is not included in the industrial strategy, but one of the operational measures is to encourage cooperation between industry, education, science and technology and to adapt the educational and science systems to new technologies and the green economy.

Smart Specialisation Strategy 2016-2020 and related Action Plan 2016-2017

The Smart Specialization Strategy of the Republic of Croatia for 2016-2020 is accompanied by the Action Plan for the implementation of the Strategy for 2016-2017. It contains goals and priority activities related to research, development and the commercialisation of innovation. The new Strategy is in process of being drafted.



Strategy for Encouraging Innovation in the Republic of Croatia 2014-2020

The Strategy sees the development and systematic encouragement of innovation as fundamental values of economic participation, but also of society as a whole. It sets the strategic direction for the development of innovation and the innovation system. It emphasises strengthening the innovation potential of the economy, and encourages cooperation and the flow of resources between the businesses, public and scientific-research sectors. Furthermore, the Strategy determines the manner of communication and models of cooperation between the public, business and scientific research sectors for the development of new products, services, business processes and technology, and the manner of applying the results of scientific research in the economy and society as a whole.

Energy Development Strategy of the Republic of Croatia to 2030 with a view to 2050 (OG 25/2020)

The Strategy represents a step towards the realisation of the vision of low-carbon energy and ensures the transition to a new period of energy policy that ensures an affordable, secure and quality energy supply. The Strategy recognises the importance of the CE in waste management as well as the potential for the more intensive use of biomass and biogas in the energy sector. Among other things, it highlights the bioeconomy as a sector, which could generate the production of renewable biological resources and the conversion of those resources, together with waste streams, into value-added products such as food, feed, biological products and bioenergy.

Integrated National Energy and Climate Plan for the Republic of Croatia, for 2021-2030 (OG 123/17)

The Plan for 2021-2030 builds on existing national strategies and plans. It provides an overview of the current energy system and energy and climate policy. It also provides an overview of the national targets

for each of the five key dimensions of the Energy Union (7) and the appropriate policies and measures to achieve those targets, for which an analytical basis should be established. In the Plan particular attention is paid to the targets to be achieved by 2030, which include the reduction of greenhouse gas emissions, energy from renewable sources, energy efficiency and electricity connection.

Measures listed in the Plan are in line with measures listed in national Low Carbon Development Strategy, including those that support the implementation of CE:

Decision of the Government of the Republic of Croatia on Green Public Procurement in Central Public Procurement Procedures (OG 49/2021)

Sustainable public procurement is encouraged through sectorial legislation and other legal documents such as the Decision of the Government of Croatia on Green Public Procurement in Central Public Procurement Procedures (2021). That Decision obliges the Central State Office for Central Public Procurement to apply green public procurement (GPP) criteria in central public procurement procedures. The Decision also obliges the Ministry of Economy and Sustainable Development to measure and publish details of annual savings in carbon-dioxide emissions from GPP.

The ministry has launched a national web page that is dedicated to GPP, with relevant information, examples, and educational materials.

National Chemical Safety Strategy (OG 143/2008)



The aim of the Strategy is to identify, on the basis of the extensive analysis and assessment of chemical safety, the main strategic lines and measures to establish a rational, dynamic and integrated chemical safety system fully in line with the legislation and practice of the European Union. The aim of the Strategy is to introduce the uniform development of all aspects of protection of health and the environment from the adverse effects of chemicals, with appropriate upgrading of existing protection regimes, through inter-agency cooperation.

National Agriculture Strategy to 2030

The Strategy, adopted by the Croatian Parliament on 25 February 2022, supports the ambition of the European Green Deal to transform the European economy into a zero-greenhouse gas emissions economy.

In the implementation plan of the National Agriculture Strategy, one of the interventions within the framework of new opportunities for growth is the development and implementation of the national bioeconomy strategy in accordance with the Law on Agriculture. The planned Bioeconomy Strategy will contain specific activities, investment and sources of financing, both EU and national, for the development of selected value chains in the bioeconomy. Increased investment for research in agriculture will be focussed on the development of solutions for sustainable food and biomass production in the service of the circular bioeconomy, with continuous support, from research and development to pilot projects.

Sustainable Tourism Development Strategy to 2030 (being drafted)

This will be an umbrella strategic document, which will define the vision of further development of tourism, taking sustainability, development needs and potential into account.

Development Programme of Green infrastructure in Urban Areas for 2021-2030 and Development Programme of Circular Economy of Space and Buildings for 2021-2030

Development Programme of Green infrastructure in Urban Areas for 2021-2030 and Development Programme of Circular Economy of Space and Buildings for 2021-2030, both adopted in 2021, direct stakeholders in the construction sector towards sustainable construction and the principles of the CE in construction, reconstruction and demolition. Furthermore, to ensure greater circularity in the construction sector, a project was launched in 2021 to develop an Action Plan for construction waste in the CE for a period of five years.

Regional Labelling and Information Schemes

An umbrella strategic document, which will define the vision of further development of tourism, taking sustainability, development needs and potential into account will be Sustainable Tourism Development Strategy to 2030 (being drafted).

Examples of private policy initiatives (sectoral)

The Reduce Food Waste, Cook for your Guests project

In 2021, the Environmental Protection and Energy Efficiency Fund, in cooperation with the Ministry of Economy and Sustainable Development, the Ministry of Tourism and Sports and the Faculty of Geotechnics at the University of Zagreb, launched Reduce Food Waste, Cook for your Guests as a pilot project. It was implemented in two hotels - the Park Plaza Histria Hotel in Pula and the Osijek Hotel in Osijek. Workshops



were held for employees in the hotels at which they were introduced into the principles of planned food management, proper food storage and estimating of real meal quantities. In cooperation with the hotel staff at the Osijek Hotel, measurements of the total amount of food wasted in a week, divided into ten categories, were carried out. After implementation of reduction measures and recommendations, another round of measurements was made that showed that waste was reduced by 11 %. The Park Plaza Histria Hotel implemented another measuring method based on an estimate of food waste categories and implemented less reduction measures and recommendation. It, however, acquired a dehydration device for food waste so the hotel still reduced its volume of food waste by 21 %.

At the beginning of 2022, a third hotel, Terme sveti Martin na Muri Hotel, joined the project and carried out the first measurements.

Based on the results of the pilot project, the Environmental Protection and Energy Efficiency Fund continued the project and arranged the initial measurements in several hotels. It also issued a public call for co-financing for the procurement of food waste reduction devices for hotels and student canteens. The project and the public call are still ongoing.

- **Incentives for circular/green business models**

Croatia will receive a total of €9 billion from Cohesion Policy in 2021-2027 in the framework of its Partnership Agreement with the Commission to promote the economic, social and territorial cohesion of its regions and its green and digital transitions. These investments will help reduce regional economic disparities and enhance skills, training, and employment opportunities. The EU funds will also support the development of a competitive, innovative, and export-oriented Croatian economy.

Towards a net zero carbon and resilient economy

Croatia will dedicate nearly 31% of European Regional and Development Fund (ERDF) and 39% of Cohesion Fund resources to climate objectives. In particular, €2.56 billion will help the country improve energy efficiency, increase the share of renewables in energy production up to 60% of electricity in 2030, enhance the circular economy and support climate resilience and biodiversity. More than €650 million will be invested in this later objective.

Moreover, €179 million from the Just Transition Fund (JTF) will mitigate the economic and employment effects of the green transition. This will be done through decarbonising energy-intensive industries, strengthening entrepreneurship, and investing in skills of the workers, diversifying the economy in the most affected regions, enhancing cooperation between business and research, and increasing employment opportunities for the workforce.

Increasing economic competitiveness and digitalisation

€1.7 billion from the ERDF will support Croatia's innovative and smart economic transformation by increasing the competitiveness and internationalisation of small and medium-sized businesses (SMEs) and contributing to improve the skills of employees.



3. Relevant regional stakeholders (Institutions/organisations involved in the implementation of regional strategies):

National level stakeholders:

- Ministry of Economy, Entrepreneurship, and Crafts: The Ministry of Economy plays a key role in formulating policies and strategies related to economic development, including initiatives to support green and circular business models. - Circular Economy Committee
- Ministry of Environmental Protection and Energy: This ministry is responsible for environmental protection and sustainability in Croatia. They are involved in implementing policies and regulations related to circular economy practices and green initiatives.
- Croatian Chamber of Economy (Hrvatska Gospodarska Komora - HGK): The Croatian Chamber of Economy represents the interests of businesses in Croatia. They actively promote sustainable business practices and support green initiatives through various programs and services.
- Croatian Agency for SMEs, Innovation, and Investments (HAMAG-BICRO): This agency supports small and medium-sized enterprises (SMEs) in Croatia by providing financial incentives, grants, and support for innovation and green business development.
- Croatian Agency for Environment and Nature (Hrvatska agencija za okoliš i prirodu - HAZUOP): This agency is responsible for environmental protection and nature conservation in Croatia. They are involved in implementing circular economy and sustainable development strategies.
- Croatian Bank for Reconstruction and Development (Hrvatska banka za obnovu i razvitak - HBOR): HBOR provides financial support, loans, and investment programs to businesses engaged in environmentally friendly projects and green initiatives.
- Croatian Institute for CSR (Hrvatski institut za CSR): This institute promotes corporate social responsibility (CSR) in businesses, encouraging sustainable practices and green business models.
- Croatian Investment and Trade Agency (Hrvatska agencija za investicije i trgovinu - HAMAG-BICRO): This agency supports foreign direct investment and provides information and incentives for businesses engaged in sustainable and green projects.
- Ministry of Tourism and Sports
- Center for Monitoring Business Activities in the Energy Sector and Investments
- Ministry of Construction and Physical Planning
- Croatian Energy Regulatory Agency
- REGEA - Climate KIC HUB Hrvatska (City of Zagreb)



Regional government agencies

- **Primorje-Gorski Kotar County Development Agency:** This agency is responsible for promoting economic development and investment within the county. They may support projects and initiatives related to sustainability and green business practices.
- **Regional Environmental Protection Agency:** The regional environmental protection agency is responsible for enforcing environmental regulations, promoting sustainable practices, and supporting initiatives to protect the environment within the county.
- **Primorje-Gorski Kotar County Chamber of Commerce:** The county's chamber of commerce represents the interests of businesses within the region. They may offer support, information, and programs to promote sustainable and green business practices.
- **Regional Innovation and Technology Transfer Center:** The regional center may support innovation and technology transfer in the county, which can include promoting green technologies and circular economy solutions.
- **Primorje-Gorski Kotar County Tourism Board:** The county's tourism board can play a role in promoting sustainable and eco-friendly tourism practices within the region.
- **Regional Energy Agency Kvarner**

Chambers of commerce and industry associations

- The Croatian Chamber of Economy - section for Tourism, trade, and services
- The Croatian Chamber of Economy - Project European Tourism Going Green (ETGG) 2030,
- The Croatian Chamber of Economy - section for Energy and sustainable development
- Croatian Energy Association
- Croatian Solar Energy Association
- Croatian National Committee CIGRÉ
- Fund for Environmental Protection and Energy Efficiency
- Croatian Association for Consumer Protection Potrošač (Consumer)

Research centers and universities

- **Energy Institute Hrvoje Požar**
- **Institute for Circular Economy (Institut za kružno gospodarstvo):** The Institute for Circular Economy is a research organization focused on promoting circular economy principles and practices in Croatia. They conduct research, provide expert analysis, and advocate for sustainable policies and initiatives.
- **Faculty of Chemical Engineering and Technology, University of Zagreb:** The faculty offers research and education in chemical engineering and technology, including areas related to sustainable processes and circular economy concepts.



- Faculty of Textile Technology, University of Zagreb: This faculty focuses on textile technology and materials, including research on sustainable textiles and circular economy practices in the textile industry.
- Faculty of Economics and Business, University of Zagreb: The faculty offers research and education in economics and business, including areas related to sustainable business models and circular economy strategies.
- Faculty of Mechanical Engineering and Naval Architecture, University of Zagreb: This faculty conducts research and education in mechanical engineering and naval architecture, with a focus on sustainable technologies and circular design.
- Faculty of Agriculture, University of Zagreb: The faculty is involved in research and education in agriculture and related fields, including sustainable agriculture practices and circular economy concepts in the agricultural sector.
- Faculty of Electrical Engineering and Computing, University of Zagreb: The faculty conducts research in electrical engineering and computing, including sustainable energy systems and digital technologies to support circular economy efforts.

NGOs and civil society organizations

- Green Action (Zelena akcija): Green Action is a leading environmental NGO in Croatia, focusing on various environmental issues, including circular economy, waste reduction, and sustainable development.
- Circular Change: Circular Change is an initiative that promotes circular economy practices and supports the transition to a circular economy model in Croatia and beyond.
- Good Economy Institute (Institut za dobro gospodarstvo): This institute advocates for a good economy model based on the principles of sustainability, circularity, and social responsibility.
- Sunce - Association for Nature, Environment, and Sustainable Development (Sunce - Udruga za prirodu, okoliš i održivi razvoj): Sunce works on environmental protection and sustainable development, including circular economy projects.
- Green Istria (Zelena Istra): Green Istria is an environmental organization focused on promoting sustainable practices and circular economy concepts in the Istria region.
- Rijeka's Eco Patrollers (Eko patrole Rijeka): This organization aims to raise awareness about environmental issues, including circular economy, through educational programs and community initiatives.
- Dalmatia Green (Dalmacija Green): Dalmatia Green is an NGO dedicated to promoting sustainable practices and circular economy principles in the Dalmatia region.
- Ecological Association Biom (Ekološka udruga Biom): Biom focuses on biodiversity conservation and sustainable development, including circular economy initiatives.



Other regional stakeholders:

Regional stakeholders play a crucial role in promoting Circular Economy Green/Impact Entrepreneurship in the Tourism Creative and Cultural Industries (CCI) and service sector in Croatia. These stakeholders can include local governments, businesses, NGOs, academia, and the local community. Here are the key roles they play:

1. **Policy and Regulatory Support:** Regional stakeholders, especially local governments, can create an enabling environment by implementing policies and regulations that support Circular Economy initiatives in the tourism and service sector. This can include incentives, funding opportunities, and supportive regulations for circular business models.
2. **Funding and Investment:** Regional stakeholders can provide financial support, grants, or investment opportunities to circular economy startups and businesses in the tourism CCI and service sector. This support can help entrepreneurs develop and scale their innovative circular solutions.
3. **Knowledge Sharing and Capacity Building:** Stakeholders can organize workshops, training programs, and seminars to raise awareness about circular economy principles and build the capacity of entrepreneurs to implement circular business models effectively.
4. **Networking and Collaboration:** Stakeholders can facilitate networking opportunities and collaborations between entrepreneurs, businesses, academia, and other relevant actors. This fosters knowledge exchange, creates synergies, and encourages the adoption of circular practices.
5. **Demonstrating Best Practices:** Regional stakeholders can lead by example and showcase successful circular economy initiatives in the tourism CCI and service sector. This can inspire other businesses to follow suit and implement similar practices.
6. **Sustainable Tourism Promotion:** Stakeholders can promote sustainable and circular tourism practices to visitors and tourists. This can include highlighting eco-friendly accommodations, local circular economy initiatives, and responsible consumption habits.
7. **Waste Management and Recycling:** Regional stakeholders can collaborate with businesses to develop efficient waste management systems and recycling infrastructure, which are essential for closing the loop in circular economy practices.
8. **Fostering Circular Innovation Hubs:** Stakeholders can create innovation hubs or incubators focused on circular economy green/impact entrepreneurship in the tourism CCI and service sector. These hubs can support startups, provide mentorship, and offer resources to accelerate their growth.
9. **Advocacy and Public Awareness:** Stakeholders can engage in advocacy efforts to raise awareness about the benefits of circular economy practices in the tourism CCI and service sector among the public and other stakeholders.

By actively engaging and collaborating, regional stakeholders can create a supportive ecosystem for Circular Economy Green/Impact Entrepreneurship in the tourism CCI and service sector in Croatia. This will lead to more sustainable and resilient businesses and contribute to the conservation of natural resources and the protection of the environment.



4. RIS3 regional analysis of CCI and Tourism sectors involved in Circular Economy Green/impact entrepreneurship:

S3 Priorities

As a relative newcomer to smart specialization policy, Croatia had limited time to accumulate sufficient experience for policy planning and management. The S3, unlike the conventional policy cycle, involves non-governmental stakeholders in policy co-creation through a continuous entrepreneurial discovery process. This complexity of the S3 has been a significant challenge for Croatia. Croatian S3 mainly targets economic part of the three core elements and recognizes several important strategic determinants relative to Croatia. Croatian S3 provides a framework to foster innovation through for instance, developing research and innovation infrastructure and collaboration between business and research institutions. Two important objectives are to foster knowledge and innovation capacities in the areas of greatest potential for competitiveness and socio-economic development and to transform Croatian economy through effective research, development and innovation activities.

To reach these objective, Croatia has taken steps towards a transformation policy approach, which focuses on sustainable development in different dimensions: green transport, sustainable production and processing of food and wood, renewable energies, clean technologies and bio-products, health and quality of life and security. Through the promotion of RDI investment in selected priority areas, with a high innovation and growth potential, as well as large societal impact, Croatia aims at structural changes (transition, modernization, diversification and radical foundation of economic activity) and new directions for future development and growth.

Croatian S3 - Strengths:

Improvement in the knowledge base in terms of science/innovation/research management among practitioners/policy bodies/researchers in the last ten years; • Introduction of ambitious objectives in RIS; • Improvement in the overall S3 policy process is evident in the area of S3 program monitoring; • Strengthening of science - industry linkage within thematic priority areas; This is indeed the largest experiment in the context of innovation policy in Croatia, where more than a hundred people have been participating • Introduction of new topics in the policy agenda (e.g. smart skills)

Croatian S3 - Weaknesses

Socio-economic processes that led Croatia to the position of lagging behind other new member states were neglected in the creation of S3; there is no emphasis on the productivity growth of the economy • The overall S3 process is largely based on a promised increase in R&D/innovation investments. That is parallel with weak evaluation mechanisms within S3; In this way, the opportunity to affect the overall productivity of the economy is reduced. The exception are S3 policy programmes related to the increase of GERD (policy objective one within the Croatian S3 strategy). • Lack of regional approach within S3 • Civil sector engagement within S3 process is limited;

Croatian S3 - Moving Forward

Issues which should be improved within S3 governance in Croatia • Introduction of a regional approach, more bottom-up approaches and initiatives, and introduction of various policy instruments on a regional level (searching for regional leaders); • Better alignment with EC initiatives in the field of Smart Specialisation Strategy • Avoiding the policy practice which could be coined as 'eternal capacity building' • Looking for opportunities for various forms of transformations on a regional level; • Strengthening the links between S3 policy programs and productivity growth in the Republic of Croatia



CCI, Tourism and Services sector

(Please provide a brief overview on tourism, CCI and service sector in general) in the region indicating the NACE sectors present in the region in comparison to the sectors of the project, highlighting their importance in terms of turnover and employment high lightning the Potential for circular innovation in CCI & tourism sectors and service sector in general (Mapping of value chains and stakeholders in these sectors) Include if relevant Regional circular green/impact entrepreneurship practices and opportunities for improvement (value chains or Industrial / Services clusters and networks promoting circular innovation, green/impact entrepreneurship or also Cultural and social values supporting circular practices green/impact entrepreneurship).

Cultural and Creative Industries

Support of culture and CCI is integrated into City development policies for many years. CCI are always represented as one of the key interests Rijeka needs to focus in post-industrial era. The research conducted in 2015 on national level Mapping of creative and cultural industries in republic of Croatia shows that CCI are represented with 2,3% in national GDP. The same study suggests that the share of employees in CCI in relation to the total number of employees in Croatia is 7,7%, and that the rate of self-employed is above average. Almost 99% of CCI entities are operating as micro and small enterprises. Regional online survey within the Rijeka ECoC project Diversity Mixer was carried out in 2019 and involved 108 people actively working in CCI sector in Rijeka and Primorsko-goranska County. The following are the most important findings: (1) 50% of all participants are working in some form of visual arts; (2) 56% changed their field of interest during the years; (3) only 47% are able to live from their incomes earned in CCI; (4) film and photography are the most connected with other CCI fields; (5) one actor in CCI is covering 2,8 CCI fields of interests in average; (6) 63% of respondents are women; (7) Above 40% perceives underpayment and engagement instability as the biggest obstacles.

In 2020 creative and cultural industries suffered a major blow due to the emergence and spread of COVID-19 and accompanying measures of social distancing and closure of economies. Covid crises hit in particular CCI in Croatia. The COVID-19 pandemic has had a large impact on one of the biggest cultural projects in the Republic of Croatia: Rijeka as the European Capital of Culture in 2020. Due to the implications of restrictions connected to the pandemic, the majority of cultural and artistic programmes had to be cancelled or postponed. In the context of significantly reduced public budgets' following the implementation of coronavirus measures, the budgetary resources planned for the implementation of the Rijeka 2020 programme were also reduced. This also had implications for cultural workers involved in the execution of Rijeka 2020 programme; 59 employees of the Rijeka 2020 LLT company were given notice.

Taking into account that Croatia even before Covid-era was below EU average per number of employees and self-employees in the CCI sector in relation to total employment, the conclusion is that policies addressing CCI need to be improved.

The Strategic Goal 2 of the City of Rijeka Plan of Development 2021 - 2027 specifically addresses creative industries and the goal is:

Innovative Rijeka: encouraging research and knowledge-based industries

The specific goal Innovative Rijeka: encouraging research and knowledge-based industries is dedicated to creative industries. It envisages Rijeka in 2030 as "a city of modern industries, creative, technologically innovative and green, which has a large number of highly educated citizens, uses and improves existing resources, encourages the development and introduction of new technologies and interoperability in the development of the city. Development is based on a sustainable economy and the ensuring of quality and stimulating content generated from creative industries."

Tourism

Tourism in Croatia is a major industry of country's economy, accounting for almost 20% of Croatia's gross domestic product (GDP). Primorje-Gorski Kotar County was the third most popular region in Croatia in 2022,



which means that almost 20% of the total national tourist traffic was achieved here. In Primorje-Gorski Kotar County, 15.6 million overnight stays were realized in commercial accommodation in 2022, which is 1% more than the record year of 2019. A total of 18.1 million overnight stays were achieved in commercial and non-commercial accommodation, which is 95% of overnight stays from 2019, and 3 million arrivals, which is 98% of arrivals compared to 2019. Foreign guests accounted for 87% of overnight stays, while domestic guests accounted for 13% of overnight stays.

The Strategic Goal 2 of the City of Rijeka Plan of Development 2021 - 2027 also addresses tourism as a specific goal:

City of sustainable and innovative solutions in tourism

The specific goal City of sustainable and innovative solutions in tourism envisage Rijeka in 2030 as a tourist destination whose tourist performance does not depend on the season and whose offer is based on natural and cultural resources enhanced by innovative solutions and digital technologies. It has moved from a transit destination to a destination that is the tourist's main motive for coming. The dynamic development of tourism has increased the attractiveness and established the reputation of Rijeka as a smart tourist destination that facilitates access to tourist content, services, spaces and experiences through ICT-based tools. Rijeka is a city with a healthy social and cultural environment that applies innovative, intelligent solutions and encourages the development of entrepreneurial business and sector connections. Investments in digital tools, products and services, equal opportunities and access for all, sustainable development of the local area and support for creative industries, local resources and heritage, consequently led to the candidacy for the Smart Tourism Capital EU title. In a period of ten years, the number of overnight stays and the average length of stay of tourists increased by 50%.

5. GREENPACT SWOT analysis for Circular Economy green/impact entrepreneurship at regional Level

Strengths:

1. **Growing Awareness:** There is an increasing awareness of the importance of circular economy and sustainability in Croatia, with more businesses and entrepreneurs embracing green/impact entrepreneurship.
2. **Natural Resources:** Croatia's natural resources, such as its beautiful coastline and diverse landscapes, present opportunities for sustainable tourism and circular economy initiatives.
3. **EU Support:** As an EU member state, Croatia can access funding and support for circular economy projects through EU programs and initiatives.
4. **Strategic Location:** Croatia's strategic location in the Adriatic region can be leveraged for sustainable trade and eco-friendly transportation.

Weaknesses:

1. **Limited Infrastructure:** The circular economy may require significant infrastructure investments, which could be a challenge for a country like Croatia.
2. **Awareness Gaps:** Despite growing awareness, there may still be gaps in understanding circular economy principles and green entrepreneurship among some businesses and entrepreneurs.
3. **Funding Constraints:** Access to funding and investment for circular economy startups and initiatives might be limited in certain regions of Croatia.



4. **Regulatory Barriers:** Existing regulations and policies may not fully support circular economy practices, potentially hindering the growth of green entrepreneurship.

Opportunities:

1. **EU Circular Economy Action Plan:** Croatia can benefit from the opportunities presented by the EU Circular Economy Action Plan, which encourages member states to transition to a circular economy model.
2. **Sustainable Tourism:** Croatia's unique natural assets offer opportunities to develop sustainable tourism practices and circular economy solutions.
3. **Innovation and Technology:** Embracing innovative technologies and solutions can drive sustainable business models and circular economy practices.
4. **Circular Supply Chains:** Croatia can explore the development of circular supply chains and eco-friendly manufacturing processes to boost the circular economy.

Threats:

1. **Economic Challenges:** Economic factors, such as budget constraints and financial instability, could pose challenges to circular economy development.
2. **Global Market Competition:** Croatia may face competition from other countries with established circular economy initiatives.
3. **Resistance to Change:** Resistance from traditional industries or businesses might slow down the adoption of circular economy practices.
4. **Climate Change Impacts:** Climate change effects, such as extreme weather events, could impact the implementation of circular economy practices.



SWOT ANALYSIS



STRENGTHS

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The GREENPACT map on Circular Economy & Impact Entrepreneurship in South Bohemia (Czech Republic)

1.Regional state of the art: (Jihozápad Region and South Bohemian Region and South Bohemia region is part of Jihozápad NUTS II region)

Regional demographic statistics

Total population (2022)	637 047
Jihozápad:	1 213 476
Population per sex	M:315 363 /F: 321 846
Jihozápad	M: 600 568; F: 612 908)
Population per age in % [0-14 - 15-64 - >65]	104 421 (16%)/ 409 223 (63%)/ 138 659 (21 %)
	Jihozápad 16 %/63 %/21 %
Average age	43,2; Jihozápad: 43,15
Life expectancy	M: 75,2/ F: 81,3; Jihozápad: M: 75/F:81,1
Growth rate natural change -	2,6; Jihozápad: -3
Population density	64/km2; Jihozápad: 70,1/km2
Total area (land) of the region [km2]	10 058 km2; Jihozápad: 17 707 km2
Immigration rate and origins (%)	11,3%/
Net migration rate	3,6 %

Regional education and employment

Literacy rate	CZ >99
Education attainment	
[% primary / secondary / tertiary]	23,7 %/66,2 %/ 7,4 %
	Jihozápad [13 % /64 % /15 %]
% youth NEET (15 to 25 y. o.)	6,7 %
Employment rate	CZ 75,7 % (April 2023)
by gender	CZ: M (81,9 %), F (69,1 %)
Unemployment rate	CZ 2,8
by gender	CZ: M (2,3 %), F (3,5 %) (April 2023)
Youth unemployment rate	CZ: 7,9 % (April 2023)
by gender	CZ: M (2,1 %), F: (3,4 %) (April 2023)



Regional economics and industry

Gross domestic product (GDP) <2022>	291 708 CZK mil.; Jihozápad: 589 627 CZK mil.
G.D.P. per capita	453 208 CZK mil.; Jihozápad: 957 562 CZK mil.
Poverty rate	CZ: 10,2 %
Inflation rate (average last year)	CZ: 15,1 %
Foreign Direct Investments (2020)	125 112 CZK mil.; Jihozápad: 228 555 CZK mil.
Trade balance	CZ: 126 120 CZK mil.
Export by countries (5 most relevant and % of the total)	CZ (Germany: 33%; Slovakia: 8,5 %; Poland: 6,9 %; France: 4,7 %; Austria: 4,3 %) (March 2023)
Import by countries (5 most relevant and % of the total)	CZ (Germany: 21,3 %; China: 17,7 %; Poland: 8,2 %; Slovakia: 4,4 %; Italy: 4,1 %) (March 2023)
Number of Businesses	168 648; Jihozápad: 317 786
of which SMEs (%)	41,46 %
Average business size	
n° of business / employed people>	53,86 %
Number of local units	N.A.
Industrial sectors in % [primary / secondary / tertiary]	N.A.
Employment by Industry [primary / secondary / tertiary]	N.A.
Businesses by NACE code [1st level in %]	N.A.
Employment by NACE code [1st level in %]	N.A.
Average salary (national & EU ratio)	N.A.
Businesses demography (birth v/s death in the last year)	
4829/3226= 1,5	

Regional digital economy and society

Households with access to the internet at home (%)	70,6 %
Households with broadband access (%)	68 %
Individuals who have never used a computer (%)	20, 8 %
Individuals who used the internet for interaction with public authorities (%)	13,4 %
Individuals who ordered goods or services over the internet for private use (%)	70,1 %



Registered digital enterprises over the total (%) 82,9 %

2. Frameworks, Measures & laws on Circular Economy:

Regional policies and strategies

The Strategic Framework for the Circular Economy of the Czech Republic 2040 (2021) is a comprehensive plan for promoting the circular economy in all areas of the national economy. Its main objective is to minimise waste and maximise the recovery and recycling of raw materials. The framework is divided into several key areas that are interlinked and require a coordinated and systemic approach.

The first area focuses on products and design. Here it is crucial to promote sustainable product development and design using modern technologies. The aim is to create products that are environmentally friendly and reduce the amount of waste generated.

The second area concerns industry, raw materials, construction and energy. Here it is important to use raw materials efficiently and to implement eco-innovations and digital technologies. The aim is to reduce negative environmental impacts and increase energy efficiency.

The bioeconomy and food are another key area. Here, the aim is to maximise the use of bio-economic potential and reduce food waste. A circular approach to food includes, for example, promoting local and seasonal agriculture, recycling organic waste and minimising food loss.

Consumption and consumers are also an important area. The Framework promotes circular business models and sustainable consumption. The aim is to create an environment where it is common to share, repair and reuse products, thereby reducing the consumption of new raw materials and the generation of waste.

Waste management is another key area of the framework. Here the focus is on reducing waste and recycling and reusing it. The aim is to create closed loops where waste is used as raw material for new products.

Water is a separate area within the strategic plan. Here, water efficiency is key, as is water recycling. The aim is to minimise water loss and ensure sustainable management of this important raw material.

Research, development and innovation is another important part of the framework. Czech companies are supported in international R&D and digitalisation. The aim is to promote innovation that will lead to sustainable development and the introduction of new technologies.

Education and knowledge are also key to the successful implementation of the circular economy. The framework focuses on job creation in this sector and the integration of the circular approach into the education system.

Economic instruments are another important aspect. The framework focuses on creating tools that will support the circular economy. This includes, for example, tax incentives, financial support or regulations that encourage sustainable behaviour and business.

The last key area is circular cities and infrastructure. Here the focus is on promoting circular solutions in urban and municipal environments. The aim is to create cities and infrastructure that minimise waste, use resources efficiently and promote sustainable living.

Overall, the Czech Republic's Circular Economy Strategic Framework 2040 is a comprehensive plan that links different areas and strategies to promote the circular economy. Its successful implementation requires cooperation between different sectors and levels of government, as well as the involvement of businesses, consumers and educational institutions.



The circular economy is increasingly coming to the fore in many sectors, including tourism and the creative industries. This strategic framework recognises the role and contribution of these sectors to the development of the circular economy.

Priority area 1 "Products and design" is another key area where the creative industries play a significant role. Cultural and creative industries contribute added value to other economic sectors and can be a source of technological and non-technological innovation. The development of new value chains, such as clean energy, the emerging bioeconomy, the circular economy and ecotourism, is seen as key to securing rural growth and employment. Tourism, particularly ecotourism, is an important part of this approach, with the aim of linking sustainability with economic value creation.

Aquaculture is supported in tourism as part of Priority Area 3 - "Bioeconomy and Food". The main objective of the Czech fisheries sector by 2030 is to create a competitive, resilient and sustainable aquaculture based on innovation, strengthening competitiveness and resilience, knowledge development and more efficient use of resources. It is important to maintain and develop traditional forms of aquaculture, such as fish farming, while continuing to develop modern and efficient farming systems that minimise negative environmental impacts and ensure year-round supply to the market. In this way, aquaculture is promoted in the context of tourism with an emphasis on sustainability, innovation and the development of traditional and modern forms of fish farming.

In priority area 8 "Education and knowledge", the focus is on consumer education, which can be implemented through sustainable activities such as sustainable tourism. Tourism, especially sustainable tourism, has great potential to inform and educate consumers about the importance and benefits of the circular economy. For example, interactive educational programmes or eco-routes can contribute to this. The strategic framework also highlights the need to promote technical and creative fields of study in the circular economy. Creative industries, which include design, art, music, film, digital technologies and others, have a key role to play in creating innovative solutions for the circular economy.

Strategic Development Plan of the Smart Region of the South Bohemian Region for the period 2019-2023

The South Bohemian Region wants to be a region that uses innovation and modern technologies to:

- Increasing the competitiveness and economic growth of businesses in the region,
- Developing a digital economy based on the principles of sustainable development,
- Protection of the environment and the brand of the cleanest region in the Czech Republic,
- Maintaining the high quality of health and social services,
- Increasing the attractiveness of the region and growing opportunities for young, talented and educated residents.

The long-term vision of the South Bohemian Region for the Smart Region is that the South Bohemian Region will be active in supporting digitalization, technological development and innovation, will achieve improved technological readiness of the region for long-term and sustainable development, will be an attractive region for its current and future inhabitants and will create new employment opportunities for young, talented and educated inhabitants.

The main objectives of the Strategic Development Plan of the Smart Region of the South Bohemia Region are:

- Achieve a higher level of digitalisation and technological readiness in the region.
- Reduce negative impacts on the environment by using innovative approaches and solutions.
- Promote cooperation between key stakeholders in the region.
- Promote innovation in the identified areas.



Regional Labelling and Information Schemes

According to the available sources, it can be summarised that the concept of labelling and information systems plays an important role in the circular economy. These systems allow market actors to differentiate products based on their environmental performance/value, which stimulates the market and innovation towards environmental goals. The source also states that 25% of all labels relate to agricultural and food products, which are the main product category labelled (source: Ministerstvo zemědělství, eAGRI. (2023). "Označování v oběhovém hospodářství a hodnocení FTA - nové publikace OECD". Available on: <https://eagri.cz/public/web/mze/ministerstvo-zemedelstvi/zahranicni-vztahy/mezinarodni-organizace/oznacovani-v-obehovem-hospodarstvi-a.html>)

Information systems can also support better management of supply chains and identification of environmental impacts and risks. In the Czech Republic, one example of such a system is the Information System for Waste Management (ISOH) developed by INISOFT s.r.o. (source INISOFT s.r.o. (2023). "Informační systém odpadového hospodářství v České republice a na Slovensku". Available on: <https://www.inisoft.cz/poradenstvi-a-skoleni/odborne-clanky/casopis-odpadove-forum/informacni-system-odpadoveho-hospodarstvi-v-ceske-republice-a-na-slovensku>).

As far as sustainable businesses are concerned, they often declare their environmental friendliness through various certifications, which may relate to specific products or services. Examples of such labels include 'eco-friendly product/service' or 'ecolabel'. Sustainable businesses often use fewer resources and new technologies or materials, and their solutions have environmental, economic and social benefits as well as environmental (source: BusinessInfo.cz. (2023). "Společensky odpovědná, ekologická, zelená nebo udržitelná firma. Jak se v tom vyznat?". Available on: <https://www.businessinfo.cz/clanky/spolecensky-odpovedna-ekologicka-zelena-nebo-udrzitelna-firma-jak-se-v-tom-vyznat/>).

Incentives for circular/green business models (tax credits, subsidies, etc.)

Among the national and regional programmes focused on the circular economy, we can mention the Operational Programme Environment and the Operational Programme Technologies and Applications for Competitiveness, while the Regional Subsidy Programmes of the South Bohemian Region include the Tourism Support Programme. Relevant activities that could be used for tourism or that are directly targeted at this area were selected:

Operational Programme Environment, Specific Objective SC 1.5 The following supported activities were selected:

- Community composting: introducing composting in tourist facilities, such as hotels or campsites, which can efficiently process bio-waste and thus reduce the amount of waste going to landfill.
- Building RE-USE centres: Promoting the creation of re-use centres in tourist destinations where recycled or repaired products could be offered as souvenirs. This could include workshops on repairing and extending the life of products, which could be an interesting offer for tourists.
- Preventing waste from disposable packaging: An initiative to promote the use of reusable containers and packaging in tourist areas, specifically in restaurants, bars and shops, which would contribute to reducing the amount of waste generated by tourists.
- Separate collection and collection of bio-waste: Implementation of systems for the separate collection and collection of bio-waste in tourist facilities, which would optimise waste management and encourage recycling and composting.

Operational Programme Technologies and Applications for Competitiveness OP TAK (source: Ministerstvo průmyslu a obchodu (2023). Podpora cirkulární ekonomiky v OP TAK. Available on:



<https://www.mpo.cz/cz/podnikani/dotace-a-podpora-podnikani/optak-2021-2027/aktualni-informace/podpora-cirkularni-ekonomiky-v-op-tak--273943/>).

Activities that are suitable for the tourism sector and that are in line with the strategic objectives of the Operational Programme Technology and Applications for Competitiveness (OP TAK) can be as follows:

SC 1.1 Development and strengthening of research and innovation capacities and introduction of advanced technologies:

- **Innovation:** the development and implementation of innovative tourism solutions, such as creating tourism products and services that are easily adaptable to the different needs of tourists and are environmentally friendly.
- **Application:** the application of the results of research and experimental development in practice, for example the development of new technologies and methods for the efficient use of resources in the field of tourism.

SC 2.1 Strengthening sustainable growth and competitiveness of SMEs and job creation in SMEs, including through productive investments:

- **Expansion:** expansion of business activities, development of tourism products and services such as expansion of accommodation facilities, development of new tourist attractions or creation of new travel packages. This may include the acquisition of new equipment, technologies, programmes and software that lead to increased competitiveness and an expanded range of sustainable and environmentally friendly products and services in the hotel and tourism sector. This support enables businesses to invest in innovation and development of their business activities with an emphasis on green and sustainable principles.
- **Venture capital:** Support for start-ups and SMEs with high potential. Providing equity investment in innovative tourism business projects with high growth potential. This supports the creation and development of new businesses that deliver innovative and sustainable solutions in the circular economy and green tourism. Venture capital can provide funding and technical support for the development of new technologies, products and services that help reduce negative environmental impact, increase energy efficiency and promote sustainable practices in tourism and hospitality.
- **Marketing:** Developing the internationalisation of SMEs in the tourism sector, such as participation in foreign fairs and exhibitions, creation and distribution of marketing promotional materials to attract foreign tourists.

SC 5.2 Support the transition to a resource-efficient circular economy:

- **Circular economy:** promoting a circular and "green" economy in the tourism sector, such as the use of advanced technologies for recycling waste in tourist facilities, improving water management in hotels or reducing waste production in restaurants and tourist attractions.

Regional subsidies, such as the "Promotion Tourism" programme, can support the development of tourism and sustainable business within the circular economy. Some specific measures may include:

- **Promoting SMART technologies in tourism:** Using SMART technologies to monitor and optimize energy and water consumption, waste management and enhance the sustainability of tourism in general. This may include technologies for monitoring energy consumption, waste management and other areas.
- **Promoting sustainable forms of tourism, rural tourism, food tourism:** Promoting and developing sustainable forms of tourism that minimise environmental impacts, such as rural tourism or food tourism. This may include promoting local sustainable agriculture, visiting farms and markets with local and organic products and promoting environmentally friendly activities.



3. Relevant regional stakeholders (Institutions/organisations involved in the implementation of regional strategies):

Regional government agencies

Regional Innovation Platforms (CIPs) for the bioeconomy and circular economy: they play a key role as stakeholders in promoting green and environmentally impactful entrepreneurship, including in the tourism and services sectors.

- **Supporting innovation:** CIPs can support innovation in green business by providing financial support, mentoring and training programmes for start-ups and existing businesses seeking to innovate in the circular economy. This can include everything from developing new technologies for recycling and resource efficiency to supporting new tourism services that reduce environmental impact.
- **Networking:** CIPs can create networks between businesses, research institutions and public authorities to encourage collaboration and sharing of best practices in the circular economy. This networking of different actors can accelerate the diffusion of innovative solutions and help businesses overcome barriers to greener business.
- **Education and training:** CIPs can also play a key role in educating and training people on circular economy and green business. This can include organising workshops, seminars and other training programmes that provide the necessary skills and knowledge for circular economy entrepreneurship.
- **Influencing policy:** CIPs can also influence public policies by advising governments and public authorities on best practices and strategies to promote circular economy and green business. This can help create an enabling environment for businesses seeking to reduce their environmental impact.

The city of České Budějovice: plays a key role as a stakeholder in the circular economy and green business in the tourism and services sector. Here are some important aspects of this role:

- **Regulation and policy:** the city of České Budějovice can develop and implement regulatory frameworks and policies that support green business and the circular economy in the tourism and services sector. This can include setting environmental standards and regulations, promoting sustainable public service practices and creating conditions for environmentally friendly tourism.
- **Infrastructure:** the city can invest in infrastructure that supports green business in the tourism and service sectors. This may include the construction of bike lanes, public transportation, electric vehicle charging stations, and other facilities and infrastructure that support sustainable and low-carbon mobility.
- **Support and funding:** the city can provide support and funding for green businesses in the tourism and service sectors. This can include subsidies, grants, training programs, and consulting for businesses that want to transition to sustainable and circular business models.
- **Partnerships and Collaboration:** the city can partner and collaborate with local businesses, organizations, and communities to promote sustainable tourism and service businesses. This may include joint projects, campaigns and initiatives that promote environmentally friendly and responsible behavior in the sector.
- **Outreach and Education:** the city can play a role in educating and educating the public about the importance of green business and circular economy in tourism and services. This may include organizing seminars, workshops, campaigns and educational programs for local residents, tourists, businesspeople and other stakeholders.



Umbrella organization

South Bohemian Bioeconomy Association: plays an important role in the circular economy and green entrepreneurship in the tourism and service sectors as an umbrella body for addressing the bioeconomy and circular economy within RIS 3 (Regional Innovation Strategy).

Here are some important aspects that the South Bohemia Bioeconomy Association can fulfil:

- **Coordination and cooperation:** the Society can serve as a coordination and cooperation platform between different actors in the tourism and service sector, including businesses, research institutions, public administration and non-profit organisations. In this way, it promotes cooperation and exchange of information between the different stakeholders and enables the sharing of knowledge and best practices.
- **Promoting innovation:** The association can promote innovation in the bio-economy and circular economy in tourism and services. It can support research and development of new technologies, products and services with a lower environmental impact, and promote the implementation of these innovations in practice.
- **Dissemination of information:** The association can serve as a vehicle for the dissemination of information on green business and circular economy in the tourism and service sectors. It can organise conferences, seminars and workshops that present the latest trends, best practices and examples of successful cases in sustainable business.
- **Lobbying and political influence:** The association can also play a role in lobbying and exerting political influence to promote green business and the circular economy in the tourism and service sectors. It can engage in the process of policy, regulation and strategy development at regional, national and international levels and advocate for environmentally friendly measures.
- **Advice and support:** the Society can provide advice and support to businesses in the tourism and service sectors that want to move towards more sustainable and circular business models. This can include technical assistance, expertise, funding and contacts with other partners and stakeholders.

Chambers of commerce and industry associations

The South Bohemian Chamber of Commerce: plays an important role as a key stakeholder in the circular economy and green business in the tourism and services sector. Here are some important aspects of this role:

- **Supporting entrepreneurship:** the South Bohemian Chamber of Commerce can support green and environmentally impactful entrepreneurship in the tourism and services sector. It provides information, advice and technical assistance to businesses on sustainable development, green technologies and practices, and assists them in implementing and certifying environmental standards.
- **Lobbying and representation:** the Chamber of Commerce represents the interests of businesses in the tourism and service sectors in the development of policies and regulations related to circular economy and environmental protection. It can actively participate in negotiations with public administrations and other stakeholders to promote measures and conditions that support sustainable and circular business.
- **Education and information:** the Chamber of Commerce can provide educational programmes, training and workshops on green business and circular economy for entrepreneurs in the tourism and service



sectors. This helps to increase awareness and knowledge of sustainable practices, eco-innovations and green business opportunities.

- **Networking and collaboration:** the Chamber of Commerce can serve as a platform for networking and fostering collaboration between businesses, research institutions, non-profit organisations and public administrations. This enables the exchange of information, sharing of experiences and the creation of partnerships for joint projects and initiatives in the field of circular economy and green business.

South Bohemian Science and Technology Park, corp. (JVTP): plays an important role as a key stakeholder in the circular economy and green entrepreneurship in the tourism and services sector. Here are some important aspects of this role:

- **Incubation and support for start-ups:** the JVTP provides an incubation environment and support for start-ups in the green entrepreneurship and circular economy in the tourism and services sector. It offers startups access to offices, laboratories, infrastructure and expert advice, enabling them to grow and develop their innovative and sustainable business models.
- **Research and development:** the JVTP works with research institutions, universities and other professional bodies to promote research and development in the field of green entrepreneurship and circular economy in the tourism and services sector. This promotes innovation, new technologies and practices that have a lower environmental impact.
- **Linking and networking:** The JVTP serves as a platform for linking and networking the different actors in the field of green entrepreneurship in the tourism and service sectors. This includes businesses, researchers, investors, public administrations and other stakeholders. This creates synergies and strengthens cooperation for joint innovations and projects.
- **Technology transfer:** the JVTP helps to transfer technology and know-how from research to practice. It works with tourism and service enterprises to identify their needs and transfer new technologies and innovations that can contribute to sustainable development and reduce negative environmental impacts.

The National Cluster Association (NCA): plays an important role as a key stakeholder in the circular economy and green business in the tourism and service sectors. Here are some important aspects of this role:

- **Linking and collaboration:** the NCA Cluster Association serves as a platform for linking and fostering collaboration between different actors in the tourism and services sector. Businesses, research institutions, public administrations and other stakeholders can come together and collaborate on projects, innovations and sharing of best practices in green business.
- **Promoting innovation:** the NCA can support innovation in tourism and services that has a positive impact on the environment. This can include identifying and promoting environmentally friendly technologies, products and services, as well as supporting businesses that are transitioning to sustainable and circular farming models.
- **Lobbying and representation:** the NCA can represent the interests of tourism and service businesses in the development of policies and regulations that relate to green business and the circular economy. It can engage in negotiations with public administrations, organisations and other stakeholders to advocate for measures and conditions that promote sustainable and environmentally friendly business.
- **Outreach and education:** the NCA can play a role in disseminating information and educating the public about the importance of green business and circular economy in tourism and services. This



may include organizing seminars, conferences, educational programs and campaigns on sustainability and environmental protection in these sectors.

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Research centres and universities

University of South Bohemia: Faculty of Economics in České Budějovice: plays an important role as a key stakeholder in the circular economy and green entrepreneurship in the tourism and services sector. Here are some important aspects of this role:

- Research and education: the University of South Bohemia, especially the Faculty of Economics, contributes to the development of green business and the circular economy in the tourism and service sectors through research and education. The faculty can conduct research on sustainability, innovation and green technologies in these areas. This provides relevant information and knowledge for entrepreneurs, professionals and students interested in green entrepreneurship.
- Educational programmes and courses: the Faculty of Economics can offer training programmes and courses focused on green business and circular economy in the tourism and service sectors. These programmes can provide students and professionals with the necessary knowledge and skills in sustainability, environmental protection, circular economy and business with a positive impact on the environment.
- Collaboration with the sector: the University of South Bohemia can collaborate with businesses, organisations and institutions in the tourism and service sector on research projects, consultancy services and internships. This creates synergies between academia and the practical application of green innovation and sustainable business practices.
- Expert consultancy: the Faculty of Economics can provide expert advice and consultancy to businesses in the tourism and service sectors on green business and the circular economy. This may include sustainability analysis, strategic advice, environmental impact assessment and the design of specific measures to improve business sustainability.

The University of Technology and Economics (VŠTE) in České Budějovice: plays an important role as a key stakeholder in the circular economy and green business in the tourism and services sector. Here are some important aspects of this role:

- Research and education: the VŠTE contributes to the development of green business and the circular economy in the tourism and service sectors through research and education. The faculty can conduct research on sustainable development, eco-innovation, circular economy and green technologies in these areas. This provides relevant information, knowledge and professional expertise for entrepreneurs, students and the professional public.
- Academic programmes: the VŠTE can offer academic programmes focused on green entrepreneurship and circular economy in tourism and services. These programs may include bachelor, master and doctoral degree programs that focus on sustainability, environmental protection, circular economy and green business. Students gain the necessary knowledge and skills to effectively manage and develop environmentally friendly business initiatives.
- Collaboration with the sector: the VŠTE collaborates with businesses, organizations and institutions in the tourism and service sectors on research projects, consultancy services and internships. This promotes the link between academia and the sector and enables the application of green innovations and sustainable business practices in practice.
- Expert consultancy: the VŠTE can provide expert advice and consultancy to tourism and service sector businesses on green business and circular economy issues. This includes providing expertise,



sustainability analysis and assessment, strategic advice and recommendations for improving green and circular management.

NGOs and civil society organizations

Czech Biogas Association (CzBA): plays a significant role and focuses on promoting and supporting the development and utilization of biogas as a renewable energy source and an essential component of the circular economy. Here are some important aspects of CzBA:

- **Advocacy and Policy Influence:** The association actively engages in advocacy efforts to promote favorable policies, regulations, and financial incentives for the biogas industry. They work with government agencies, policymakers, and other stakeholders to ensure a supportive legal and regulatory framework for the circular economy and sustainable entrepreneurship.
- **Knowledge Sharing and Education:** CzBA plays a vital role in disseminating knowledge and raising awareness about biogas production and its benefits within the circular economy. They organize seminars, conferences, and training programs to educate entrepreneurs, farmers, and the general public about the technical aspects, economic viability, and environmental advantages of biogas as a renewable energy source.
- **Networking and Collaboration:** The association serves as a platform for networking and collaboration among different stakeholders in the biogas sector. They bring together industry professionals, researchers, investors, policymakers, and entrepreneurs to foster partnerships, exchange ideas, and create business opportunities that contribute to the circular economy.
- **Research and Development:** CzBa actively supports research and development activities related to biogas production, utilization, and technology innovation. They collaborate with universities, research institutions, and technology providers to promote advancements in biogas production efficiency, waste management, and the development of new applications for biogas.
- **Project Development and Financing:** The association assists entrepreneurs and project developers in the planning, implementation, and financing of biogas projects. They provide guidance on project feasibility, financing options, and accessing subsidies or grants for sustainable entrepreneurship initiatives in the circular economy.
- **Environmental Impact Assessment:** CzBA contributes to the assessment of environmental impacts and sustainability aspects of biogas projects. They work towards ensuring that biogas production and utilization processes adhere to environmental standards, waste management regulations, and contribute to reducing greenhouse gas emissions.

South Bohemia Agency for Innovation Support (JAIP) - is an organization that plays an important role and as an agency for innovation support, JAIP focuses on fostering sustainable and innovative business practices. Here are their key roles and important aspects:

- **Support for Green and Impact Entrepreneurs:** JAIP provides comprehensive support to green and impact entrepreneurs in the region. They offer guidance and resources to help entrepreneurs develop their business ideas, refine their business models, and access funding opportunities for sustainable entrepreneurship initiatives.
- **Incubation and Acceleration Programs:** JAIP operates incubation and acceleration programs that specifically target green and impact startups. These programs offer mentorship, training, and infrastructure support to help entrepreneurs turn their innovative ideas into viable businesses within the circular economy. The programs also facilitate networking and collaboration among entrepreneurs and provide access to industry experts and potential investors.



- **Access to Funding:** JAIP assists green and impact entrepreneurs in accessing funding sources that align with the principles of circular economy and sustainability. They provide information and guidance on available grants, subsidies, and other financial instruments to support entrepreneurs in securing the necessary capital for their ventures.
- **Networking and Collaboration:** The agency plays a vital role in building networks and fostering collaboration among green and impact entrepreneurs, researchers, policymakers, and other stakeholders. JAIP organizes events, workshops, and conferences where entrepreneurs can connect, share knowledge, and explore potential partnerships. These networking opportunities help entrepreneurs access expertise, expand their professional networks, and learn from successful circular economy initiatives.
- **Advocacy and Policy Engagement:** JAIP actively engages in advocating for policies and regulations that support circular economy and sustainable entrepreneurship. They collaborate with regional and national authorities to promote favorable conditions for green and impact startups, including regulatory frameworks, incentives, and tax benefits. JAIP also contributes to shaping policies that encourage the adoption of sustainable practices by businesses and industries.
- **Training and Capacity Building:** The organization offers training programs and capacity-building initiatives for green and impact entrepreneurs. These programs provide entrepreneurs with the necessary knowledge and skills to integrate circular economy principles into their business models, develop sustainable products and services, and manage resources efficiently. JAIP also organizes workshops and seminars on emerging trends, technologies, and best practices in sustainable entrepreneurship.
- **Research and Innovation Support:** JAIP facilitates research and innovation activities related to the circular economy. They collaborate with universities, research institutions, and technology providers to support the development and implementation of innovative solutions that address environmental challenges and promote sustainable entrepreneurship. JAIP also helps entrepreneurs access research funding and forge partnerships with academic and research organizations.

Business subjects

Schwan Cosmetics s.r.o.: is a company that can potentially play an important role, especially in the cosmetics industry. Some general aspects of their potential role in this context:

- **Sustainable Product Development:** As a cosmetics company, Schwan Cosmetics can prioritize sustainable product development by focusing on eco-friendly ingredients, packaging materials, and manufacturing processes. They can explore renewable and biodegradable alternatives to conventional cosmetic ingredients, reduce waste generation, and implement sustainable packaging solutions.
- **Resource Efficiency:** Schwan Cosmetics can contribute to the circular economy by optimizing resource efficiency throughout their production processes. This can involve measures like minimizing energy consumption, reducing water usage, and implementing recycling or upcycling initiatives to minimize waste and maximize resource utilization.
- **Collaboration and Supply Chain Engagement:** Engaging with suppliers, partners, and stakeholders throughout the supply chain is crucial for promoting circular economy practices. Schwan Cosmetics can work closely with suppliers to source sustainable and ethically produced ingredients. They can also encourage suppliers to adopt circular economy principles and collaborate on waste reduction and recycling initiatives.



- **Packaging Innovation:** The cosmetics industry generates significant packaging waste, and addressing this issue is vital for circular economy practices. Schwan Cosmetics can invest in packaging innovation to reduce the environmental impact of their products. This can include using recyclable or compostable materials, implementing refillable packaging options, and exploring packaging designs that minimize waste.
- **Consumer Education and Engagement:** Schwan Cosmetics can play a role in educating consumers about the importance of sustainable and circular economy practices. They can provide information on how to make environmentally conscious choices, such as recycling empty product containers properly and opting for sustainable beauty alternatives. By engaging and empowering consumers, the company can drive demand for greener products and support the circular economy.
- **Stakeholder Collaboration and Industry Influence:** Schwan Cosmetics can collaborate with industry associations, sustainability initiatives, and regulatory bodies to drive collective action towards circular economy practices in the cosmetics industry. By actively participating in relevant forums and platforms, they can contribute to shaping industry standards, regulations, and best practices that promote sustainability and circularity.

AB Agricultural and Forestry, Ltd.: plays an important role within the agricultural and forestry sectors. Some general aspects of their potential role in this context:

- **Sustainable Agriculture and Forestry Practices:** AB Agricultural and Forestry can prioritize sustainable practices in agriculture and forestry by implementing techniques that reduce the environmental impact. This can include adopting organic farming methods, promoting biodiversity, conserving soil and water resources, and minimizing the use of synthetic fertilizers and pesticides.
- **Efficient Resource Management:** Efficient resource management is crucial in the circular economy. The company can focus on optimizing resource utilization, such as efficient water management, using renewable energy sources, and implementing precision farming techniques to minimize waste and improve overall resource efficiency.
- **Waste Management and Recycling:** AB Agricultural and Forestry can actively engage in waste management and recycling initiatives within their operations. They can explore opportunities to recycle or repurpose agricultural and forestry waste materials, such as crop residues, wood waste, or animal by-products, to create value-added products or generate renewable energy through biomass conversion.
- **Reforestation and Afforestation:** If the company is involved in forestry activities, they can contribute to the circular economy and environmental sustainability by prioritizing reforestation and afforestation efforts. This includes planting and managing trees to sequester carbon, promote biodiversity, and provide sustainable timber resources.
- **Sustainable Supply Chain Management:** AB Agricultural and Forestry can actively engage with suppliers, partners, and stakeholders along the supply chain to promote sustainable and circular practices. This can involve sourcing materials from responsible and environmentally conscious suppliers, ensuring fair trade practices, and collaborating on initiatives to reduce the environmental footprint throughout the supply chain.
- **Environmental Impact Assessment:** Conducting regular environmental impact assessments is essential to understand and mitigate the company's environmental footprint. AB Agricultural and Forestry can assess the environmental impacts of their activities, identify areas for improvement, and implement measures to minimize negative effects on ecosystems, soil, water, and biodiversity.
- **Education and Community Engagement:** The company can play a role in educating and engaging the local community, farmers, and stakeholders about sustainable agriculture and forestry practices.



This can involve organizing training programs, workshops, or knowledge-sharing initiatives to raise awareness, promote best practices, and encourage the adoption of sustainable approaches within the industry.

4. RIS3 regional analysis of CCI and Tourism sectors involved in Circular Economy Green/impact entrepreneurship:

The main areas of intelligent specialization (RIS3) of the South Bohemia Region for the period 2021-2027 are mechanical engineering and mechatronics, electronics, electrical engineering and IT, biotechnology for sustainable development of society, automotive industry and textile industry.

Mechanical engineering and mechatronics: mechanical engineering represents a key segment of the South Bohemian Region's industry with a history dating back to the times before the establishment of independent Czechoslovakia. Important subsectors include the manufacture of machinery and equipment, metallurgical structures and metal products, as well as the manufacture of motor vehicles. These areas are closely linked to the automotive industry, metallurgy and electrical engineering. In terms of business investment in research and development, this segment is the second most important in the region. More than half of the university graduates in the South Bohemia Region are oriented towards fields of study related to engineering and mechanical engineering.

Electronics, electrical engineering and IT: The electrical engineering industry in the South Bohemia Region has strong roots and includes a number of small enterprises that have managed to take a competitive position on the market thanks to their innovative potential. ICT technologies and consumer electronics play a dominant role. This sector is closely linked to concepts such as Industry 4.0, digitisation, robotics and IoT, and finds applications in a wider context, including the automotive, textile and engineering industries.

The sector also benefits from the geographical proximity of Austria and Germany. However, business investment in R&D is significantly lower in this sector than in the machinery and transport equipment industry.

Biotechnology for sustainable development of society: The document highlights the role of biotechnology in moving towards sustainable development. It specifies three main areas of specialisation - biotechnology and pharmaceuticals, sustainable agriculture, forestry and natural resource management, and sustainable food production. These areas are supported by a number of public research organisations in the region. The text suggests that this specialisation can contribute to the socio-economic development of the region through healthy food, talent attraction and tourism development.

Automotive: The section highlights the key role of the automotive industry in the economic development of the region. The text notes that the industry is a major employer and contributor to investment in research and development. It also stresses the importance of cooperation between businesses and educational and research institutions for the future development of the sector and highlights the need to respond to the trend towards electromobility.

Textile and clothing industry: The section focuses on the importance of the textile and clothing industry for the Czech economy.

Based on the areas analysed, it can be concluded that these industries are strongly involved in the circular economy - an economic system aimed at minimising waste and maximising the use of resources. These sectors contribute significantly to sustainability and environmental responsibility in the context of green business.

By analysing the main areas of smart specialisation (RIS3) of the South Bohemia Region, we can draw some implications for tourism and creative industries.



Tourism: sustainable development and biotechnology can contribute to the development of ecotourism and agro-tourism in the region. Biotechnology can create new opportunities for agri-tourism and education, while sustainable agriculture and food production can enhance the local gastronomy and tourist attraction of the region. In addition, advances in electrical engineering and IT can improve digital infrastructure and support the development of smart tourism.

Creative industries: The textile industry can contribute to the development of fashion and design industries in the region. At the same time, developments in IT and digital technologies can open up new opportunities for creative industries such as digital design, video games, animation and new media. At the same time, advances in the automotive industry can support the development of creative industries linked to vehicle design and manufacturing.

S3 priorities

The South Bohemia Region is an active part of the European S3 platform. This platform assists EU member states and regions in the development, implementation and revision of their Research and Innovation Strategies for Smart Specialisation (RIS3). The key role of the S3 platform is to provide information, methodologies, expertise and advice in the development of regional strategies, while promoting international cooperation.

The S3 Platform also includes thematic platforms that focus on specific sectors and contribute to building specific inter-regional partnerships. In relation to the areas of specialisation and the profile of the innovation system of the South Bohemia Region, the following thematic S3 platforms have been identified for further development of cooperation. In addition, communication with the leaders of these initiatives was established in early 2020:

- Agrifood - Sustainable development of field crop production
- Energy - Bioenergy
- Industrial Modernisation - Bioeconomy, smart regional investment in textile innovation, integration of SMEs into Industry 4.0, social economy.

In the context of the cultural and creative industries and tourism, the link with biotechnology for sustainable development, a green region attractive for healthy living linked to tourism and the development of specific forms of tourism are mentioned.

Overall, the document provides an overview of the specific areas of specialisation of the South Bohemian Region and the potential for development within RIS3. By analysing this information, opportunities for cooperation between different sectors and opportunities for the development of cultural and creative industries and tourism in the context of the circular economy can be identified.

CCI, Tourism and Services sector

Section, division CZ-NACE	Number of subjects
H Transportation and storage	4 034
49 Land transport and transport via pipelines	3 597
50 Water transport	10
51 Air transport	3
52 Warehousing and support activities for transportation	413
53 Postal and courier activities	11
I Accommodation and food service activities	12 471
55 Accommodation	3 178



56 Food and beverage service activities	9 293
J Information and communication	2 276
58 Publishing activities	219
59 Motion picture, video and television programme production, sound recording and music publishing activities	111
60 Programming and broadcasting activities	7
61 Telecommunications	76
62 Computer programming, consultancy and related activities	1 614
63 Information service activities	249
R Arts, entertainment and recreation	5 088
90 Creative, arts and entertainment activities	842
91 Libraries, archives, museums and other cultural activities	47
92 Gambling and betting activities	11
93 Sports activities and amusement and recreation activities	4 188

The data presented in the table provide an interesting overview of the distribution of economic entities within the South Bohemia Region according to their predominant activities. It shows that certain sectors are more represented in the region than others.

The accommodation, catering and hospitality sector is very strong in the region, which is probably due to the tourist potential of the region. Overall, there are 12 471 entities in this sector, of which 3 178 are in accommodation and 9 293 in catering and hospitality. This indicates that the South Bohemia Region is an attractive destination for tourists seeking both accommodation facilities and catering and hospitality services.

The cultural, entertainment and recreational activities sector also forms a significant part of the region's economy with a total of 5 088 entities. This sector is then further subdivided into several subsectors, of which sport, entertainment and recreational activities have the largest representation with 4 188 entities.

This shows the interest of the population and visitors to the region in these activities. On the other hand, gambling, casino and betting activities are the least represented with only 11 entities. This may be influenced by legislation, public opinion or the preferences of residents and visitors.

From the above, it can be concluded that the South Bohemia Region has a strong accommodation and catering sector and also focuses on offering cultural, entertainment and sports activities. This data can be useful for the development of strategic plans and objectives within the region, as well as for businesses seeking to identify opportunities and trends in the region.

The analysis of data on gross value added of tourism by region in the Czech Republic in 2021 can be summarized as follows, with emphasis on the South Bohemia Region:

In 2021, the gross value added of tourism in the South Bohemia Region reached CZK 4,841 million. This region therefore contributed approximately 5.7% to the total gross value added of tourism in the Czech Republic.

Compared to the largest tourism centre, the Capital City of Prague, which contributed CZK 25 133 million, the value of the South Bohemian Region represented approximately 19.3% of the value of Prague.

South Bohemia ranked fourth in absolute value of gross value added of tourism among all regions of the Czech Republic, behind Prague, Central Bohemia and South Moravia.

In terms of the share of gross value added of tourism in the total gross value added of the region, tourism accounted for 1.8% in the South Bohemian Region. This was higher than the national average (1.5%) and shows that tourism plays a more significant role in South Bohemia than in some other regions.

Only in the Karlovy Vary Region was the share of tourism in total gross value added higher than in the South Bohemia Region (3.0%).



This information suggests that the South Bohemia Region is an important region for tourism in the Czech Republic. Although it does not reach the level of such centres as Prague or the Central Bohemian Region, its contribution to the total gross value added of tourism is still significant.

The analysis of data on the number of persons employed in tourism by region in the Czech Republic in 2021 can be summarized in the following points with a specification for the South Bohemia Region:

In 2021, a total of 12 547 people were employed in tourism in the South Bohemia Region.

If we compare this number with the total number of persons employed in tourism in the Czech Republic (215,233 persons), the South Bohemian Region provided employment for about 5.8% of the total number of employees in this sector.

If we look at the Capital City of Prague, which had the largest number of persons employed in tourism (54,363 persons), the number of employees in the South Bohemian Region is about 23.1% of the number of employees in Prague.

Within all regions, the South Bohemian Region ranked 5th in the number of persons employed in tourism, behind Prague, the Central Bohemian Region, the South Moravian Region and the Moravian-Silesian Region.

At the other end of the spectrum are the regions with the lowest number of employees in tourism, such as Vysočina Region (7 363 persons) and Liberec Region (7 383 persons). Compared to these regions, the South Bohemia Region has a significantly higher number of employees in this sector.

These data show that the South Bohemia Region plays a significant role in tourism employment in the Czech Republic. Although it does not reach the level of such tourism centres as Prague or South Moravia, its contribution to employment in this sector is still significant.

The potential of the circular economy in the South Bohemia Region: a case study of tourism, cultural and creative industries and entrepreneurship

Tourism and the service sector

As the data show, tourism in the South Bohemia Region has a significant share in the total gross value added of the Region (1.8%), which is higher than the national average (1.5%). This fact represents an important potential for the circular economy in this sector. The transition to a circular economy can provide opportunities for innovation such as reducing waste, improving resource recovery and creating new business models based on sharing, reuse and recycling.

The main NACE sectors in South Bohemia related to tourism include accommodation and food services (NACE I). These sectors are directly related to tourism and have great potential for innovation in the circular economy.

The key actors in the value chain of these sectors are hotels, restaurants, transporters and travel agencies. These actors can, for example, innovate by reducing the amount of waste they generate or creating new business models based on resource sharing.

Cultural and Creative Industries

The cultural and creative industry (CCI) plays an important role in the economy of the South Bohemian Region. The most relevant NACE sectors in this case include arts, entertainment and recreation activities (NACE R) and information and communication activities (NACE I). These sectors also have great potential for innovation in the circular economy.

Within the value chains in these sectors, key players include museums, galleries, theatres, publishers and software companies. These actors can innovate by, for example, reducing the amount of waste they generate or creating new business models based on digital technologies and the circular economy.



Circular economy and business

The analysis also shows that there is potential for the development of the circular economy and entrepreneurship in the South Bohemia Region. Businesses in the region are already investing in innovation, although their innovation intensity is low compared to other regions. The main barriers are high innovation costs, lack of finance and lack of skilled workers.

In this context, it is important to promote the creation of networks and clusters to foster circular innovation and entrepreneurship. These networks and clusters could provide businesses with access to new technologies, expertise and finance to enable them to make the transition to a circular economy.

In terms of the culture and social values that support the circular economy and entrepreneurship, it is important to promote the creation of a culture that values sustainability, innovation and collaboration. This could include, for example, education and training on circular economy and entrepreneurship, as well as the promotion of corporate social responsibility.

5. GREENPACT SWOT analysis for Circular Economy green/impact entrepreneurship at regional Level

Strengths:

- **Diversified and stable industry:** Traditional sectors such as agriculture, forestry and fisheries provide a solid base for further development and innovation in the circular economy.
- **Strong agri-food complex:** The existing agri-food sector serves as a good starting point for implementing green and circular solutions.
- **Advantageous geographical location and environmental quality:** This combination of factors is conducive to the development of green and impactful businesses that use natural resources and contribute to improving the quality of the environment in the region.
- **Research institutions and universities:** The high level of research and education in the fields of biology, ecology and agriculture supports innovation and the development of new technologies for the circular economy and green business.
- **Technology research and development centres:** The presence of these centres demonstrates the strong innovation capacity of the region and offers opportunities for the development and implementation of technologies supporting the circular economy.
- **Innovation infrastructure and support schemes:** The existence of infrastructure and support schemes contributes to the development of green and impact entrepreneurship and the circular economy in the region.
- **Competitive workforce at competitive prices:** A skilled workforce contributes to the development and expansion of green and impact businesses.
- **Higher education and the adaptability of the education system:** Quality education in technology and science fields and flexibility in the education system prepare a workforce with the necessary skills and knowledge to succeed in the circular economy and green business.

Weaknesses:

- **Economic factors:** lower GDP per capita and slow economic growth compared to other regions may indicate lower investment capital for green and impact business.



- **Infrastructure:** Underdeveloped transportation and logistics infrastructure may constrain the development of a circular economy in the region, particularly in terms of distribution and recycling of materials.
- **Innovation capacity:** The low number of firms undertaking higher forms of technical innovation, the lack of use of alternative sources of finance and the weaker marketing of their activities suggests difficulties in supporting and promoting innovation in the circular economy.
- **Availability of development sites:** The general lack of capacity in industrial zones and development sites limits the possibilities for setting up new green businesses.
- **Education and skills:** Low wages for scientific and technical specialists can lead to a lack of motivation for skilled professionals to engage in innovative circular economy projects. The shortage of R&D and innovation staff and the lack of support for talented students indicate a lack of skills needed to support the circular economy.
- **Digitalisation and smart solutions:** The varying degrees of preparedness of the business and public sectors for digital transformation and the lack of infrastructure and services for digital transformation may mean that the region is less prepared to exploit technological innovation in the circular economy.
- **Cooperation and partnerships:** lack of cooperation and low levels of collaboration with foreign actors in know-how transfer and project implementation may hinder the effective use of international resources and partners to promote green and impactful entrepreneurship.

Opportunities:

- **Investment support:** increased support for corporate investment in higher value-added products and services can increase efficiency and productivity in the circular economy and green business.
- **Establishment of a Welcome Office:** Establishing a "welcome office" can encourage the inflow and integration of skilled workers from abroad who could contribute to the development of the circular economy.
- **Communication and addressing societal challenges:** Improved communication and focus on issues such as the European Green Deal and the circular economy can help build wider support for green and impact business.
- **Improving cutting-edge research:** Engagement with the European Research Area and Horizon Europe can boost research and innovation in the circular economy.
- **Motivating research capacity transfer:** Motivating foreign firms to transfer their research capabilities to the region can bring new technologies and knowledge.
- **Use of brownfields and development sites:** Transforming brownfields and development sites for innovative firms can encourage the creation of new businesses in the circular economy.
- **Encouraging the inflow of skilled foreigners:** Targeted migration policies can attract skilled labour, which is key to the development of the circular economy and green business.
- **Digitalisation and innovation:** The use of digital tools and innovation in Industry 4.0 can increase the competitiveness of companies in the circular economy.

Threats:





- **Possible resistance and persistence in traditional linear economic practices** by businesses and stakeholders in the region.



- Lack of demand or market awareness of circular economy products and services among consumers in the South Bohemia region.
- Regulatory barriers and challenges in implementing circular economy practices such as waste management regulations or product standards.
- Delays in the passage of important legislative measures: Delays in the passage of key legislative measures can hamper growth and innovation in the circular economy. Legislation can affect the speed of adoption of the circular economy and limit the ability of companies to adapt to new trends and technologies.
- Inconsistent interpretation of laws and other legislation: Unclear and inconsistent regulation creates uncertainty for businesses trying to innovate in the circular economy and can slow down the implementation of new technologies and practices.
- Skills shortages: Lack of skills and expertise hinders growth and innovation in the circular economy.
- Outflow of talent and top professionals from the region: If a region cannot retain talent and experts in the circular economy, it can hinder growth and innovation.
- Slow response to globalisation and lack of new technologies: The lack of ability of firms to adapt and adopt new technologies is a risk. The circular economy is strongly linked to innovation and technology, and if firms fail to respond, they may be at a disadvantage.
- Critical dependence on component imports: Dependence on imports of key components can make supply chains vulnerable, which is key to the circular economy. Disruptions to these chains can limit the ability of firms to operate efficiently.
- Cyber threat risk: In today's digital economy, cyber security is essential. Companies in the circular economy must protect their data and systems from potential attacks that can be costly and disruptive.



SWOT ANALYSIS

 STRENGTHS	 WEAKNESSES	 OPPORTUNITIES	 THREATS
<p>1. Diversified and stable industry:</p> <ul style="list-style-type: none">• Strong agri-food complex:• Advantageous geographical location and environmental quality:• Research institutions and universities:• Technology research and development centres:• Innovation infrastructure and support schemes:• Competitive workforce at competitive prices:• Higher education and the adaptability of the education system:	<p>- • Economic factors: lower GDP per capita</p> <ul style="list-style-type: none">• Infrastructure: Underdeveloped transportation and logistics infrastructure• Innovation capacity:• Availability of development <u>sites</u>:• Education and <u>skills</u>:• Infrastructure Digitalisation and smart <u>solutions</u>:• Cooperation and partnerships:	<p>- • Investment support:</p> <ul style="list-style-type: none">• Establishment of a Welcome Office:• Communication and addressing societal challenges:• Improving cutting-edge research:• Motivating research capacity transfer:• Use of brownfields and development sites:• Encouraging the inflow of skilled foreigners:• Digitalisation and innovation:	<ul style="list-style-type: none">• Possible resistance and persistence in traditional linear economic practices by businesses and stakeholders in the region.• Lack of demand or market awareness of circular economy products and services among consumers in the South Bohemia region.• Regulatory barriers.• Delays in the passage of important legislative measures:• Inconsistent interpretation of laws and other legislation:• Skills shortages.• Outflow of talent and top professionals from the region.• Slow response to globalization and lack of new technologies:• Critical dependence on component imports:• Cyber threat risk:



The GREENPACT maps on Circular Economy & Impact Entrepreneurship in the Bratislavsky Kraj Region

1.Regional state of the art

Regional demographic statistics

Total population (2022)	728.640 inhabitants		
Population per sex	48,13% : 51,87% (male : female)		
Population per age in % [0-14 - 15-64 - >65]	124.528 (0-14) = 17,09%		
	472.214 (15-64) = 64,81%		
	131.898 (>65) = 18,10%		
Average age	54,25		
Life expectancy	75,05 (male) / 81,35 (female)		
Growth rate	5,60% (2021)		
Population density	329,77 p/km ²		
Total area (land) of the region [km ²]	2 053 km ²		
Immigration rate and origins (%)	6,185%		
Net migration rate (%)	1,398%		
Regional education and employment			
Literacy rate	99,6%		
Education attainment [% primary / secondary / tertiary]	6,84% / 38,87% / 31,76%		
% youth NEET (15 to 25 y.o.)	0,50%		
Employment rate	57,9% (Slovakia)		
By gender	63,4% (male) / 52,8% (female)		



	(Slovakia)
Unemployment rate	8,8%
By gender	4,0% (male) / 4,8% (female)
Youth unemployment rate	0,5%
By gender	0,15% (male) / 0,35% (female)
Regional economics and industry	
Gross domestic product (GDP) <2021>	27.963,150 mil. €
G.D.P. per capita	38.761,16 €
Poverty rate	16,5% (Slovakia)
Inflation rate (2022)	12,8% (Slovakia)
Foreign Direct Investments	53,792 mil. € (Slovakia)
Trade balance	-4 308,2 mil. € (Slovakia)
Export by countries (5 most relevant and % of the total)	Germany (21%), Czechia (11,9%), Hungary (8,71%), Poland (7,76%), France (5,86%) - Slovakia (2022)
Import by countries (5 most relevant and % of the total)	Germany (13,9%); Czechia (8,97%); China (7,51%); Russia (7,48%); Korea (5,67%) - Slovakia (2022)
Number of Businesses	162 052 (96.794 legal persons + 65 258 natural persons)
of which SMEs (%)	54,84%
Average business size	2,63 employees
Number of local units	n. a.
Industrial sectors in % [primary / secondary / tertiary]	n. a.
Employment by Industry [primary / secondary / tertiary]	n. a.
Businesses by NACE code [1 st level in %]	n. a.
Employment by NACE	n. a.



code [1 st level in %]	
Average salary (national & EU ratio)	1.878 € / 64,04%
Businesses demography (birth v/s death in 2022)	7 145 / 1 771
Regional digital economy and society	
Households with access to the internet at home (%)	95,7% (Bratislava Region)
Households with broadband access (%)	59% (Slovakia)
Individuals who have never used a computer (%)	Less than 5 % (Slovakia)
Individuals who used the internet for interaction with public authorities (%)	10% (Slovakia)
Individuals who ordered goods or services over the internet for private use (%)	72,3% (in the last 3 months) - (Slovakia)
Registered digital enterprises over the total (%)	more than 90 % (Slovakia)

2. Frameworks, Measures & laws on Circular Economy

Regional policies and strategies

In Bratislava region we have these policies and strategies with impact on “Circular Economy” (the thematic focus of the documents is on the environment, waste management, tourism):

- ♦ “Adaptačný plan Bratislavského samosprávneho kraja na zmenu klímy” (“Adaptation Plan of the Bratislava Region to Climate Change”) - The vision, objectives and measures of the strategic part as well as the implementation mechanism of the document are set in such a way that in 2030 the Bratislava Region will have prepared and already implemented



planning decision-making and implementation processes in such a way that the resilience of the region to the impacts and consequences of climate change will be increased in a systematic way. A significant part of this document is an assessment of spatial vulnerability to the four impacts of climate change - heat waves, surface flooding, river flooding and long-term droughts.

- ♦ “Bratislava Smart-Region” - The aim of the strategy is to realise an efficient regional self-government (Bratislava-Region). At the same time, the objective is to optimise policies in selected sectors in order to achieve sustainable development in the sense of SMART principles and includes the following key areas: sustainable mobility; environment; human resources; social inclusion; governance.

Sustainable mobility within the SMART Strategy addresses the issue of providing essential movements in a way that eliminates the negative environmental impacts of mobility. It addresses measures to respond positively to the negative impacts of climate change, both adaptation and mitigation solutions. The implementation of the proposed measures will lead to a decrease in CO₂ emissions into the air, thus improving the quality of life in the Bratislava Region.

- ♦ “Stratégia rozvoja elektromobility v Slovenskej republike” (“Strategy for the development of electromobility in the Slovak Republic”) - proposed measures to ensure that low carbon mobility is perceived by consumers as seamless, including the aspect of accelerating the deployment of the relevant infrastructure.
- ♦ “Národná vodíková stratégia” (“National Hydrogen Strategy”) - the strategy defines the conditions for the deployment of hydrogen technologies in accordance with the long-term strategic plan for the development of the Slovak Republic until 2030 or 2050. A 55% reduction in EU greenhouse gas emissions is expected by 2030. It also recommends the implementation of hydrogen activities in cooperation with other EU countries as well as other countries in the world.

In June 2023, an action plan for the implementation of the National Hydrogen Strategy was approved, detailing the different areas of support for the companies involved in the whole process (e.g. Action 10 Support for start-up and spinoff companies).

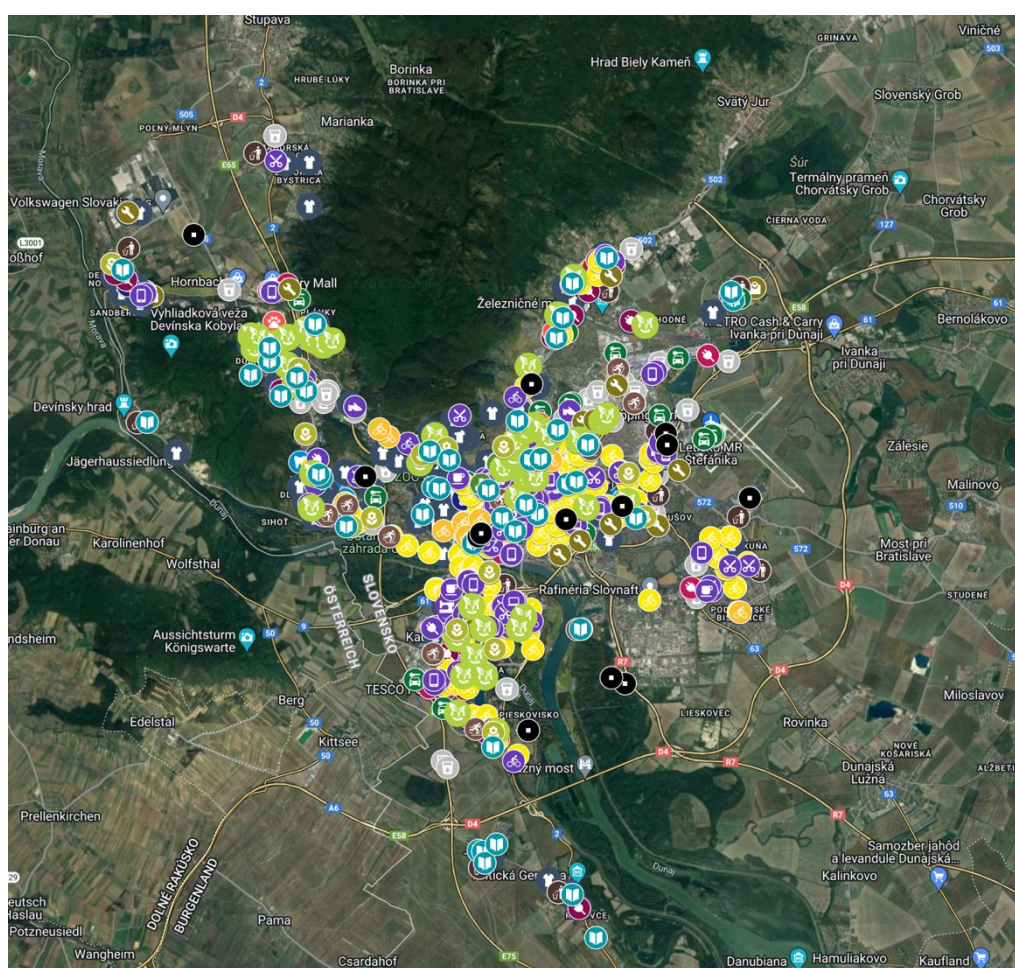
- ♦ “Program hospodárskeho rozvoja a sociálneho rozvoja Bratislavského samosprávneho kraja na roky 2021 - 2027 (s výhľadom do roku 2030)” (“Programme of Economic Development and Social Development of the Bratislava-Region for the years 2021 - 2027 (with an outlook to 2030)”) - the Bratislava-Region Economic and Social Development Programme is a medium-term development document, which is drawn up in accordance with the objectives and priorities set out in the National Strategy. For the purposes of our project, the sections on waste, the environment and tourism are of interest.
- ♦ “Konceptia rozvoja inštitucionálnej spolupráce v oblasti ochrany prírody a biodiverzity v prihraničnom regióne” (“Concept for the development of institutional cooperation in the field of nature conservation and biodiversity in the border region”) - the concept identifies several drivers of institutionalisation in the border region of Bratislava-Region and the federal states of Lower Austria (NÖ) and Burgenland (BGL). It shows that the importance of transboundary cooperation for nature conservation, biodiversity promotion, ecotourism and environmental education is embedded in most relevant strategic documents at regional, national, European and international level. The conclusion of the concept paper presents the steps needed for the development of such a coordinated cooperation model.
- ♦ “Stratégia nakladania s komunálnymi odpadmi v meste Bratislava s cieľom prechodu na obehové hospodárstvo pre roky 2021-2026” (“Strategy for municipal waste management in the city of Bratislava with the aim of transition to a circular economy for the years 2021-2026”) - the aim of the city is not to contribute to climate change in waste management but, on the contrary, to reduce the impact of climate change through its



measures. Decisions and measures need to be taken in the next few years if we want to get closer to carbon neutrality by 2050.

The main features of this model are the use of renewable energy sources, renting, sharing, support for local trade, eco-innovation and eco-design. Priority in the circular system is given to products with a long lifetime and which are used in the long term. They are seen and designed as repositories of raw materials. Easy disassembly is key, allowing individual components or materials to be separated and then recovery. The result is the elimination of waste that can no longer be used.

Figure 1: Components for the Circular Map of Bratislava



Source: <https://bratislava.sk/zivotne-prostredie-a-vystavba/zivotne-prostredie/odpady>

Regional Labelling and Information Schemes

Environmental management is a set of voluntary environmental policy instruments that enable the introduction of a systematic approach to environmental problem solving and the continuous improvement of an organisation's behaviour. In the field of industrial production and services, it is one of the most effective tools for achieving the priority objective of minimising the



negative impacts of production activities on the individual components of the environment. The introduction of environmental management at the level of small and medium-sized enterprises is a voluntary matter. Environmental management tools make it possible to increase the economic efficiency of the business entity, to gain new profit potential and to improve the environmental profile of the enterprise. Businesses striving for success in the marketplace are increasingly faced with the requirement to certify the environmental quality of products, production and services.

At the same time, the introduction of tools such as management systems, eco-labelling of products and verification of environmental technologies plays an important role in the gradual transition to a green economy based on resource efficiency, low-carbon technologies and eco-innovation.

Green Economy Information Platform (<https://zelene-hospodarstvo.enviroportal.sk/environmentalne-manazerstvo>) promote the above labelling options for products and services:

- ♦ EMAS (<https://www.sazp.sk/zivotne-prostredie/environmentalne-manazerstvo/schema-pre-environmentalne-manazerstvo-a-audit-emas/co-je-emas.html>) - the Community Eco-Management and Audit Scheme (EMAS) is a voluntary environmental management tool for organisations that want to assess and improve their environmental performance. EMAS is a reliable and effective management tool on the market for organisations wishing to improve their environmental performance by adding value to the requirements of environmental management systems according to the international standard EN ISO 14001.
- ♦ "Environmentally friendly product" (<https://www.sazp.sk/zivotne-prostredie/environmentalne-manazerstvo/environmentalne-oznacovanie-produktov/>) - It is a voluntary environmental policy instrument aimed at mitigating the negative impact of consumption and production on the environment, health, climate and natural resources by promoting and favouring products and services with a lower negative impact on the environment.
- ♦ "National label - Environmentally Suitable Product (EVP)" (<https://www.sazp.sk/zivotne-prostredie/environmentalne-manazerstvo/environmentalne-oznacovanie-produktov/narodna-znacka-environmentalne-vhodny-produkt-evp.html>) - the national eco-label "Environmentally Suitable Product" is awarded by the Ministry of the Environment to products or services that meet the specific conditions set out in the Ministry of the Environment's Notification for the relevant product group.





Incentives for circular/green business models (tax credits, subsidies, etc.)

- ♦ Subsidies - Developing waste and circular economy - (<https://envirofond.sk/oblast-c-rozvoj-odpadoveho-a-obehoveho-hospodarstva/>):

Activity 1 - Sorted collection of municipal waste - the support is intended for activities related to the sorted collection of municipal waste at municipal level, which does not fall under extended producer responsibility, as one of the important steps in the completion of the technical infrastructure.

Activity 2 - Prevention of biodegradable municipal waste production and recovery of biodegradable municipal waste - the support is intended to prevent the production of biodegradable municipal waste. The support is also intended for the recovery of biodegradable municipal waste.

Activity 3 - Introducing and improving separate collection in municipalities, building collection yards, re-use preparation areas and re-use centers - the support is intended for waste prevention (except biodegradable municipal waste) and preparation for re-use, for the introduction of a system of separate collection at municipal level, for the construction of collection yards, including space for the preparation for re-use and for the re-use of a product or part of a product which is not waste for the same purpose for which it was intended, or for the completion of such space in an existing collection yard.

Activity 4 - Separate collection of municipal waste - the support is intended for activities related to the separate collection of municipal waste at municipal level, which is not covered by extended producer responsibility, as one of the important steps in the completion of the technical infrastructure.

Activity 5 - Introducing and improving separate collection in municipalities, building collection yards, re-use preparation areas and re-use centers.

- ♦ Loans - (<https://envirofond.sk/uvery/>) - the applicant has to be a municipality or a region;
- ♦ Modernisation fund (<https://envirofond.sk/modernizacny-fond/>) - to support investments to modernise energy systems, including energy storage and energy efficiency improvements;
- ♦ Programme Slovakia 2021-2027 (<https://www.eurofondy.gov.sk/operacny-program-slovensko/index.html>):
 - Specific objective RSO1.1 - Development and extension of research and innovation capacities and the use of advanced technologies - the aim of the interventions will be to develop an economy and society based on R&D&I, with an emphasis on green and circular transformation in line with the objectives of the EGD.
 - Specific objective RSO1.3 - Strengthening sustainable growth SME competitiveness and job creation in SMEs, including through productive investment - the main objective of the intervention will be to increase the competitiveness of Slovak SMEs, also as a result of higher intensity of product, process, organisational and marketing innovations,



more frequent and wider use of ICT and increased digital skills. The transition to a green and circular economy will be supported.

- Specific objective RSO2.1 - Resisting energy efficiency and reducing greenhouse gas.
- Specific objective RSO2.2 - Promoting renewable energy.
- Specific objective RSO2.3 - Developing smart energy systems, networks and storage outside the TEN-E network.
- Specific objective RSO2.6, Action 2.6.1 - Promote the transition to a resource-efficient and circular economy (ERDF) - the activity supports packaging technologies that reduce the production of packaging (and consequently packaging waste), which include technologies that produce reusable, recycled, recyclable or biodegradable packaging and packaging technologies that reduce the packaging used. Waste prevention will also be promoted in selected sectors of the economy, which will be defined on the basis of the priorities of the Roadmap for a Circular Economy in the Slovak Republic.
- Specific objective RSO2.6, Action 2.6.2 - Support for the collection and completion, intensification and extension of sorted municipal waste collection systems.
- Specific objective RSO2.6, Action 2.6.3 - Promotion of waste preparation for re-use, waste recycling, including anaerobic and aerobic treatment of biodegradable waste.
- Specific objective RSO2.6, Action 2.6.4 - Promoting environmental awareness and information on the circular economy for consumers and the general public and supporting conceptual activities in the field of the circular economy.
- Specific objective RSO2.6, Action 2.6.5 - Support for electronic data collection in waste management.
- Specific objective RSO2.8 - Promoting sustainable multimodal urban mobility as part of the transition to a zero-carbon economy.
- Specific objective RSO4.6 - Strengthening the role of culture and sustainable tourism in economic development, social inclusion and social innovation - Measure 5.2.5 Investment in cultural and natural heritage, local and regional culture, management, services and infrastructure supporting community development and sustainable tourism (The measure will contribute to improving the quality of life in the regions by supporting the preservation, protection and sustainable development of the potential of the cultural, natural and other assets of the regions, directly linked to the active building of cohesive communities, the development of creative industries or tourism and cooperation in the regions).
-

3.Relevant regional stakeholders (Institutions/organisations involved in the implementation of regional strategies)

The search for appropriate stakeholders was based on three categories of keywords - circular (circular) economy, sustainable business, green business. The websites visited contain a clear identification and place of the institution in the circular economy. We did not consider only on the target group "creative industries" or "tourism". For better orientation in the Slovak space, we also provide the Slovak name of the institution.



Regional government agencies

- a) **Slovenská agentúra životného prostredia** (“Slovak Environment Agency”- SEA) - the aim of caring for the environment is to maintain or improve its quality with respect to all organisms, including humans, while respecting the principles of sustainable development. Caring for the environment is implemented as the development and protection of environment which is the basic mission of the Directorate for Environment Science and Project Management of SEA. We fulfil this mission by applying the tools and by performing environmental services, performed under our statute and contract with the SR Ministry of Environment, as well as by the implementation of special programs and projects. Contact: <https://www.sazp.sk/en/the-environment/>.
- b) **Environmentálny fond** (“The Environmental Fund”) - was established by Act No. 587/2004 Coll. on the Environmental Fund and on Amendments and Supplements to Certain Acts, as amended, with effect from 1.1.2005. The Environmental Fund is an independent legal entity with its registered office in Bratislava. The administration of the Fund is carried out by the Ministry of the Environment of the Slovak Republic. The status of the Fund and its basic mission are defined by the Act on the Fund and the Decree of the Ministry of the Environment of the Slovak Republic No. 157/2005 Coll. of 31 March 2005 implementing the Act on the Fund. The Environmental Fund is primarily established for the purpose of implementing state support for environmental care and environmental creation based on the principles of sustainable development. The main mission of the Fund is to provide financial resources to applicants in the form of grants or loans to support projects within the framework of activities aimed at achieving the objectives of the State environmental policy at national, regional or local level. In addition, the Fund also provides funding for other activities and activities listed in Section 4(1) of the Fund Act. Contact: <https://envirofond.sk>.
- c) **Slovenská inovačná a energetická agentúra** (“Slovak Innovation and Energy Agency” SIEA) - Contact: <https://www.siea.sk>. Slovak Innovation and Energy Agency (SIEA) is a contributory organization established by the Ministry of Economy of the Slovak Republic. List of activities:
- ♦ Raising awareness about energy efficiency, renewable energy sources and innovations in all fields of economy and provide expert consulting in those areas.
 - ♦ Educating specialists in the area of energy efficiency and renewable energy sources.
 - ♦ Operating the monitoring system of energy efficiency and preparing background materials for annual evaluation of progress towards national targets and action plans for energy efficiency.
 - ♦ Agency has been implementing measures supported by EU funds and state resources for 14 years, which are focused on energy demand decrease, introduction of low carbon technologies, competitiveness growth, innovative solutions and smart specialization of economy.
- d) **Slovak Business Agency** (SBA) - Slovak Business Agency is crucial and is the oldest specialized non-profit organization for the support of small and medium-sized enterprises (SMEs). Slovak Business Agency was founded in 1993 by a common initiative of the EU and the Government of the Slovak Republic. It is the unique platform of public and private sectors.
- From their objectives: To increase the survival rate of enterprises; To increase the employment rate in private sector; To increase the innovation performance of Slovak enterprises; To stimulate entrepreneurship spirit; To avoid marginalization of enterprises; To increase the competitiveness of Slovak business environment and Slovak enterprises.
- SBA was involved in project Interreg DANUBE - MOVECO (Mobilising Institutional Learning



for Better Exploitation of Research and Innovation for the Circular Economy) as an ERDF-Partner. Contact: <https://www.sbagency.sk/en/slovak-business-agency>.

Chambers of commerce and industry associations

- a) **Slovenská obchodná a priemyselná komora** (“Slovak Chamber of Commerce and Industry”) - The Slovak Chamber of Commerce and Industry is a public institution established on the basis of Act No. 9/1992 Coll. on Chambers of Commerce and Industry with compulsory membership. It operates throughout Slovakia (a regional SOPK chamber is established in each regional town) and is aimed at protecting and promoting business and coordinating the common interests of its members in business activities at home and abroad. Contact: <https://www.sopk.sk>.
- b) **Národná recyklačná agentúra Slovensko** (“National Recycling Agency Slovakia”) - the NARA-SK strategy is to create balanced and healthy relationships in manufacturing and trade. The different tools and methods of the circular economy that they apply are related to the motivation in reducing the environmental burden. By successive steps, the agency ensures that production flows are closed off perfectly so that no waste is generated or entered as raw material in the production and in the trade chain, and the waste does not end up in landfills, incinerators or contaminate the air, water and soil. Contact: <https://www.narask.sk>.
- c) **Slovenské združenie pre značkové výrobky** (“Slovak Associations for Branded Products”) - as one of the oldest associations in Slovakia, the Slovak Association for Branded Products has been active since 1996, representing the most important companies in the fast-moving consumer goods sector with more than 8,000 employees and a turnover of more than one and a half billion euros. The association includes several companies with production in Slovakia and its members are leaders in responsible business, in which environmental care is an important area. Part of the membership is also proactive at the European level and has therefore joined the European Plastics Pact and committed itself to voluntary environmental commitments. The association is a member of several international associations, such as the European Alliance for Packaging and the Environment European, and fully supports the objectives adopted in the framework of the European Green Deal and the Green Recovery of the European Economy. Contact: <https://www.szzv.sk>.
- d) **Asociácia výrobcov nealkoholických nápojov a minerálnych vôd na Slovensku** (“Association of producers of soft drinks and mineral waters in Slovakia”) - is a non-profit interest association, which was established in 1995 to cooperate in the advocacy of common interests and the development of the non-alcoholic industry in Slovakia. It represents leading Slovak and foreign producers and distributors of soft drinks, natural mineral waters and fruit juices. The aim of the company is to cooperate in the creation of a legislative environment favourable for business and investment activities in the soft drinks industry. The company is committed to meaningful solutions that will contribute to the transition to a circular economy and is ready to contribute to the achievement of carbon neutrality, 100% recyclability of beverage packaging, increased collection, recycling and reuse of recycled material in new packaging. Contact: <https://www.nealkonapoje.sk>.
- e) **Združenie podnikateľov Slovenska** (Entrepreneurs Association of Slovakia EAS) - is an association, whose main mission is to improve the business environment in our country. Association represents companies, that create value in Slovakia and make a significant contribution to the growth of Slovak economy. EAS mainly focuses on fighting for free and simple business environment. They comment



on legislative process and care for the future of our country in areas like pension system, education or health care. They also focus on improving the image of business and entrepreneurs in Slovakia e.g. by showing off inspiring business role models. Contact: <https://www.zps.sk/en/>.

Research centers and universities

- a) 3E - Inštitút environmentálneho výskumu a vzdelávania (3E - Institute for Environmental Research and Education). 3E is a transdisciplinary scientific research institute whose priority is to support the environmental goals of sustainable development. At present, the 3E Institute is mainly involved in projects related to intelligent and innovative approaches in the field of sustainable development and management of natural resources, behavioural and experimental economics, with a special focus on payment mechanisms for ecosystem services, the circular economy and innovative approaches in education. 3E is also active in community projects that use the environment and the circular economy as a tool for education, and community expression of citizens. Contact: <http://3e-institut.sk>.
- b) Department at Slovak Universities (with thematical research in partial fields of circular economy) - Comenius University in Bratislava, Matej Bel University in Banská Bystrica, Slovak Academy of Sciences, Slovak University of Agriculture in Nitra, Slovak University of Technology in Bratislava, Technical University in Zvolen, University of Economics in Bratislava, University of Ss. Cyril and Methodius in Trnava, University of Žilina.

NGOs and civil society organizations

- a) **Circular Slovakia - Platforma pre obehové hospodárstvo** ("Circular Slovakia - Platform for Circular Economy") - Circular Slovakia is a public-private platform to promote the circular economy. We bring together business companies, government and knowledge institutions, associations and NGOs with the ambition to accelerate the transition to a greener and circular Slovakia. Contact: <https://circular-slovakia.sk>.
- b) **Nadácia Cvernovka** ("The Cvernovka Foundation") - The Cvernovka Foundation was established in 2015 for the purpose of improving the cultural, social and material value of the former industrial area of the Cvernovka factory in Bratislava. During the seven years of its operation, Cvernovka has become a significant cultural and social point on the map of Bratislava. After the developer YIT Slovakia did not share their plan to build a creative centre in Pradiarna, the plan had to change. The foundation wants to transfer the idea and potential of Cvernovka to another district and building where they can continue to create a creative space for the general public. Contact: <https://novacvernovka.eu/>.
- c) **Za udržateľné Podunajsko, o. z.** ("For a Sustainable Danube Region, civil association") - For a Sustainable Danube Region is a civic association bringing together committed actors in the territory, with the aim of achieving sustainable development of the rural area of the Danube Region. The aim of the civic association is to realise and implement a community-led regional and local development strategy and to promote the sustainable development of the Danube region in all its aspects. Contact: <https://zelene-hospodarstvo.enviroportal.sk/profil/3721>.
- d) **Inštitút pre pasívne domy** ("The Institute for Passive Houses") - is a non-political, voluntary, interest-based non-governmental organisation. iEPD was founded in 2005. Since 2006 it has been organising international conferences, participating in various building



fairs and exhibitions. Since 2009 it has been organizing 10-day seminars on Designing Passive Houses, now the School of Sustainable Architecture. Since 2017, in cooperation with the Slovak Chamber of Architects, he has been organising the conferences Buildings A0, a conference a little differently..., which have an attractive discussion format and have a very good response in the professional audience. Every year, in autumn, it organises Passive House Days, when dozens of willing owners open their homes to share their experiences of living in a passive house with visitors - more here: dpd.iepd.sk. iEPD has published several publications on passive house issues. It has participated in various international projects dealing with energy efficiency in buildings, climate change. iEPD brings together companies from the ranks of manufacturers of building materials and components, construction companies, design and architectural offices, implementation companies, etc. Contact: <https://iepd.sk>.

- e) **Klimatický klub / Národný trust n. o.** ("Climate Club/National Trust, NGO") - The Climate Club is a professional platform for domestic and international, interdisciplinary and intersectoral collaboration of actors, experts and concerned publics in the field of research, analysis and provision of sustainable water cycle in the landscape, flows and transformation of solar energy in the troposphere with the aim of revitalizing the landscape and climate remediation. The achievement of the above objectives is supported by integrated water and soil resource management (IWRM), nature-based solutions (NBS), nature-based water conservation measures (NWRM), or the application of green infrastructure and organic architecture. The Climate Club analyses the causal links between water cycle, climate change, carbon footprint reduction and bioclimatic regulation on a holistic basis. The Climate Club expert platform operates under the non-profit organisation National Trust. Contact: <https://www.nt.sk/sk>.
- f) **Občianske združenie Sauvedom** ("Sauvedom civic association") - The civic association in the area of Batekárka in Trnava successfully promotes and introduces the principles of the circular economy to people and through its events and projects functionally and efficiently returns many unwanted goods or clothes into circulation. At the same time, it educates on this issue, gives residents the tools to adopt the principles of sustainability and, last but not least, spreads awareness of the circular economy. Contact: <https://sauvedom.sk>.
- g) **Inštitút cirkulárnej ekonomiky, o. z.** ("Institute for Circular Economy, civil association") - is a non-profit organization that focuses on innovative environmental solutions in the field of waste prevention, environmental management. INCIEN collaborates with its partners on projects that represent the transition from a linear to a circular economic system. Within the framework of its projects, it introduces and implements circular economy in practice in the conditions of the Slovak Republic. INCIEN is composed of a team of experts who focus on waste management and circular economy issues. The basic effort is to create cooperation with research, but also governmental institutions, non-profit sector and experts in various fields. INCIEN is looking for a sustainable path from an environmental but especially economic perspective. Contact: <https://www.incien.sk>.

Other regional stakeholders

- a) **Komunikačná platforma Zelené hospodárstvo** ("Green Economy Communication Platform")
- Contact: <https://zelene-hospodarstvo.enviroportal.sk/riesenia?env=test&search=y&filter%5Bcategory%5D%5B%5D=2&filter%5Bkeyword%5D=>.



- b) Komunikačná platforma Enviroportál ("Communication Platform Enviroportál") - Contact: <https://www.enviroportal.sk/indicator/321?langversion=sk>.

4. RIS3 regional analysis of CCI and Tourism sectors involved in Circular Economy Green/impact entrepreneurship

Research and Innovation Strategy for Smart Specialisation of the Slovak Republic 2021-2027 (hereinafter only as "SK RIS3 2021+") is a strategic document defining the objectives, policy system and measures in the field of research, innovation and human resources that will support the structural change of the Slovak economy towards growth based on increasing research and innovation capacity and excellence in the segments with the highest competitive potential.

The domains of smart specialisation 2021-2027 are:

- ♦ Domain 1: Innovative Industry for the 21st century - the goal is to support innovations for transformation of industrial production in Slovakia to a higher level so that they could lead to a significant reduction of negative effects on the environment, increase of energy efficiency, increase of the competitiveness connected to the growth of exports.
- ♦ Domain 2: Mobility for the 21st century - the goal is to transform connected and autonomous mobility, smart mobility services, logistics and smart transportation system and decarbonisation of mobility.
- ♦ Domain 3: Digital Transformation of Slovakia - the goal is to support digital transformation of all sectors of the society in order to increase the quality of lives of citizens, increase competitiveness of the industry and the entire economy and ensure effective performance of public administration.
- ♦ Domain 4: Healthy Society - the goal is to build a system capable of effective response to current and future requirements in prevention, diagnostics, treatment and aftercare of serious diseases in relation to life expectancy.
- ♦ Domain 5: Healthy Food and Environment - the goal is to set up sustainable and resistant systems of production in Slovakia that will use soil in a modest manner and provide resources and services for the society and the environment.

Bratislava region has the most advanced innovation system in Slovakia. Strengths include a high share of the population with higher education, a high share of employment in mid- and high- tech industries, high public sector spending on R&D, and an above-average number of joint public-private sector publications. Weaknesses include a low number of patents or high-quality scientific publications.

From this point of view, we can define these four opportunities and one threat:

- ♦ Opportunity 1: A more innovative use of land and strategic natural resources and the introduction of innovative solutions in agriculture and water management.



- ♦ Opportunity 2: Promoting the transition to a green economy and adopting legislative changes to support the green transition.
- ♦ Opportunity 3: A more extensive use and application of SR expertise in carbon-free energy.
- ♦ Opportunity 4: Developing social innovation and creative industries.
- ♦ Threat 1: Demand for graduates in education and training fields and study programmes relevant to the domains of smart specialisation to reflect the needs of the business environment.

S3 priorities

The RIS3 from the national perspective includes these national strategies with impact on our research field:

- ♦ Low-Carbon Development Strategy of the Slovak Republic until 2030 with a View to 2050 (<https://www.minzp.sk/files/oblasti/politika-zmeny-klimy/nus-sr-do-roku-2030-finalna-verzia.pdf>).
- ♦ Nation Hydrogen Strategy “Ready for the Future” (<https://rokovania.gov.sk/RVL/Resolution/19331/1>).
- ♦ Greener Slovakia-Environment Policy Strategy Until 2030 (<https://www.slov-lex.sk/legislativne-procesy/SK/LP/2018/638>).
- ♦ Integrated National Energy and Climate Plan of Slovakia for 2021- 2030 (<https://www.economy.gov.sk/energetika/navrh-integrovaneho-narodneho-energetickeho-a-klimatickeho-planu>).
- ♦ Vision and Strategy of Development of Slovakia Until 2030 (<https://www.mirri.gov.sk/sekcie/vizia-a-strategia-rozvoja-slovenska-do-roku-2030/index.html>).
- ♦ Farm to Fork (<https://eur-lex.europa.eu/legal-content/SK/TXT/?qid=1590404602495&%20uri=CELEX%3A52020DC0381>).

Based on the findings of the Bruegel think-tank, a major challenge for labour policy in the transition to a low-carbon economy is the so-called polarisation of jobs. The EC 2019 Annual Survey on Employment and Social Developments in Europe points to a fundamental gap between the skills requirements for the "green" jobs of the new, low-carbon economy and the jobs of the current economy. The survey also points to possible solutions, e.g. in the form of retraining and training of employees in sectors with a green transformation focus.

The focus on training future employees and equipping them with green economy skills for better adaptability and employability is also indispensable.

It is also important to support and stimulate training in creative activities with a focus on entrepreneurial skills in order to increase the potential of human resources in the creation, dissemination and economic valorisation of creative activities. There is also a lack of research and development jobs in the Slovak automotive sector.



Priorities of Domain 1: Innovative industry for the 21st century

In this domain, the following six priority areas have been identified: (1) Automation and robotisation of industrial production, Industry 4.0, ensuring resilience to external influences; (2) Processing of raw materials and semi-finished products into products with higher added value; (3) Progressive technologies and materials; (4) Increasing energy efficiency in the economy; (5) Efficient waste management; (6) Energy security of the Slovak Republic.

Priority area 1-4: Increasing energy efficiency in the economy

The objective of this priority area is to achieve a substantial increase in energy efficiency by promoting the deployment of innovative solutions and, in case of waste energy, by researching, developing and deploying systems for its efficient storage, transmission and use, as well as the reduction of the total amount of waste energy produced.

Innovations in this priority area are essential for Slovakia, as Slovakia as a country with high energy intensity of industry has a great potential in the field of energy efficiency. Industry has the highest share of total energy consumption among all sectors.

Moreover, as an industrial country, the Slovak Republic produces a lot of surplus energy in various forms, which is not further used and is unnecessarily released into the environment. It is therefore necessary to promote solutions that either contribute to reducing the production of surplus energy or enable its further efficient use. It is estimated that the amount of unused energy in the form of waste heat is approximately twice as high as the heat needed to heat all buildings. Local installations of RES may result in overall electricity surpluses, but also in increased instability of the transmission grid. Although the surpluses can be effectively used for increased production of energy-intensive products, the instability of the transmission system needs to be addressed by temporarily storing part of the surplus electricity and then using it in case of shortages, including matching it with the use of alternative energy carriers together with hydrogen in the decarbonisation of industry.

Priority area 1-5: Efficient waste management

The achievement of the transformation objectives in this priority area will lead to a substantial reduction in the production of waste, waste products and pollutants from industrial activities. This will also create the technological capacity to, for example, remove existing environmental burdens and reduce the amount of municipal waste landfilled.

Transformation in this area is necessary because the high share of industry in the Slovak economy means a potentially increased share of related negative environmental impacts. At the same time, there are still gaps in environmental care in all areas of the socio-economic sphere. There is also insufficient integration of environmental aspects in social, economic and individual decisions. Emissions of pollutants into the air, water, soil and lithosphere, the consequences of accidents, the increasing production of waste, the consumption of natural resources and increased land occupation are factors which have a significant negative impact on the state of the country's environment.

In addition to minimising the environmental impact of industrial production, it is equally important to look for opportunities for development and technological solutions in the



industrial sector, e.g. solutions aimed at the treatment, recycling or alternative use of different types of waste and secondary raw materials. Compared to developed European countries, the Slovak Republic lags behind in the quality of sorting and the use of secondary raw materials from waste processing. Support for the introduction of new, innovative technologies of waste separation, recycling of secondary raw materials, or new alternative use of products will bring, in addition to reducing the negative environmental impacts caused by non-organic landfilling of waste, an opportunity in the form of a relevant export commodity of products with high added value, which has the potential of growing demand in countries transforming to a circular economy. Recently, the long-known issue of plastic materials with an emphasis on their ecological processing and biodegradability has come to the fore, which may provide an opportunity for research activities that are already being carried out in this area in Slovakia.

Priority Area 1-6: Energy Security of the Slovak Republic

The objective of the priority area is to transform the energy system of the Slovak Republic to increase energy security, competitiveness and environmental sustainability of the Slovak economy and to support research, development and implementation of innovative solutions in the field of energy security in industrial, local distribution systems.

The power system (hereafter referred to as the “PS”) requires ensuring stability, quality of control and security at the level of the national PS in accordance with the new PS regulations (power system rules and regulations). With the required increase in the share of renewables and the creation of a single pan- European market, the demands on system management and maintaining a sufficient level of security of electricity supply are significantly higher. Under these conditions, it is essential to carry out research activities leading to new knowledge, optimal procedures and state-of-the-art IT tools enabling the analysis of steady-state and transient processes in the PS, the testing and implementation of new management approaches, new quality standards, as well as prototype equipment to ensure a balanced balance of generation and off-take in the PS.

Nuclear energy forms the basis of the energy system of the Slovak Republic. In the context of the EU energy system and the gradual increase in the share of renewable sources, research is required in the field of increasing the power flexibility of currently operated nuclear facilities. Furthermore, research is required on the possibilities for the use of spent nuclear fuel, the safe storage of spent nuclear fuel and the analysis of advanced nuclear fuel types. Involvement of Slovak organisations in the development of new types of nuclear facilities with hydrogen production potential is essential.

The implementation of smart grids, i.e., systems for efficient management of both energy consumption and supply in changing conditions of operation of energy systems, with the integration of RES into distribution systems and the involvement of active customers (active customers or prosumers) help to achieve this strategic goal in line with European energy policy and the strategic objectives of the Slovak Republic in the EU.

Priorities of Domain 2: Mobility for the 21st century

Within the domain, three priority areas have been agreed: (1) connected and autonomous mobility; (2) smart mobility services and intelligent transport systems; and (3) decarbonisation and sustainability of mobility.



Priority area 2-3: Decarbonisation and sustainable mobility

The aim of the transformation of this priority area is to prepare the territory of the Slovak Republic for the large-scale deployment of alternatively-fuelled and energy-carrying means of transport in normal operation.

The production of transport vehicles contributes significantly to the wealth of the Slovak Republic GDP growth and involves an extensive network of subcontractors. The automotive industry accounts for the greatest part of Slovak exports. Slovakia needs to transform the production of transport equipment through the value chain to a higher level and to respond to current developments with its own innovations. This is important in order to maintain the competitiveness of a key sector. Innovation activities need to be directed towards the required alternatives for propulsion and energy carriers for propulsion, or the creation and development of an efficient distribution and filling infrastructure, as well as research and development of materials for products and technologies applied in modern transport vehicles and systems.

In this context, it is important to accelerate the transformation of manufacturing enterprises in this domain into production-development enterprises and development-delivery enterprises. In addition, it is essential to prepare the domain ecosystem for the emergence of new mobility business models for sustainable development. To achieve the objective of this priority, it is necessary to strengthen RDI capacities focusing on alternative propulsion, decarbonisation of infrastructure, means of transport and material technology research. Innovation in this priority area is essential for achieving reductions in transport emissions through alternative propulsion.

Priorities of Domain 5: Healthy food and environment

This domain focuses on four main priority areas: (1) resilient and healthy local food systems; (2) biomass- based circular production systems; (3) society within the environment; (4) and sustainable natural resources (soil, water, air, biodiversity, ecosystems).

Priority area 5-2: Circular production systems based on biomass

The objective of the priority area Biomass-based Circular Production Systems is to promote innovation and ensure the long-term sustainability of biomass-based production systems.

Biomass-based circulating solutions have the potential to reduce Slovakia's dependence on non- renewable resources. Sustainable biomass-based production systems are a key factor in the implementation of a sustainable bioeconomy. In addition, innovations in biomass-processing systems and biomass-based solutions have the potential to support the local economy and improve the quality of life in rural areas.

An important aspect is to improve the position of primary producers in the value chain by enabling the sustainable production of products with higher added value. Innovation by the Slovak Republic in the field of circular and sustainable use of biomass is currently insufficient. Quite a substantial part of biomass in the form of primary production such as logs or feed is exported to other countries.



The sustainability of biomass for energy production is a major challenge for the future. Major processing technologies are imported as off-the-shelf systems, leaving the potential of the Slovak research and innovation ecosystem untapped.

Priority area 5-3: Society in the environment

The objective of the priority area Society in the environment is to promote innovative, knowledge-based land management and a transformation towards agro-ecological land management.

The increasing pressure of human lifestyles on the environment and intensified land-use calls for innovative solutions to ensure the long-term sustainable provision of ecosystem services. New technologies enable us to make better decisions based on large amounts of environmental information and data. The green economy is a response to the various crises the world has faced in recent years, with an alternative paradigm offering the promise of economic growth while protecting the Earth's ecosystems.

The transformation to knowledge-based land-use management should enable the creation of added value based on the huge amount of data generated from environmental observations by the use of new technologies. The transformation process should ensure the emergence of innovative products and services that capitalise on the added value created.

Facilitating the adoption of innovative solutions that ensure the long-term sustainability of land-use is an essential step towards a successful transformation. This can include the creation of living laboratories where collaborative research and innovation take place directly in the production environment. Given the geographical heterogeneity of the Slovak Republic, any sustainable innovation in the primary production system must reflect specific local conditions. Building green infrastructures, implementing agroecology principles or managing forests in a way that is close to nature may require exploring innovations in living labs before they can be deployed on a larger scale. Various research infrastructures for long-term research on ecosystems and production systems have operated in different geographical locations in the country for decades and represent an excellent basis for building future living laboratories.

Priority area 5-4: Sustainable use of natural resources (soil, water, air, biodiversity, ecosystem)

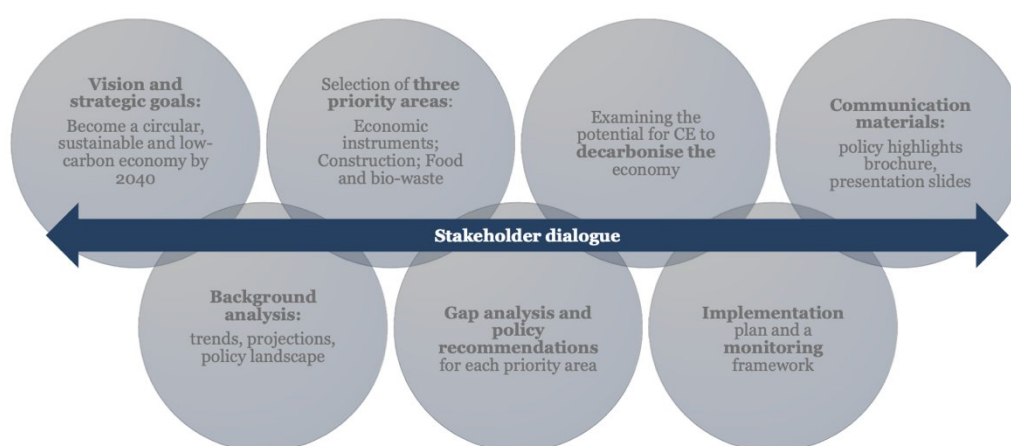
Ensuring the quality, safety and sustainability of natural resources, including biodiversity and ecosystems, is the transformation objective of this priority. Increasing human lifestyle pressures and intensified land-use require innovations to mitigate and adapt to climate change and reverse the deterioration of natural resources. On the other hand, human activity is often confronted with natural phenomena that have a significant impact on, for example, infrastructure. Our daily lives are confronted with the need to secure a range of quality water resources, which are crucial for the sustainability of human activities and the environment.

It is vital to develop a range of complementary innovations to improve the resilience of human societies as well as ecosystems to the impacts of climate change and the different types of risks that arise from human interaction with nature and from the unsustainable use of natural resources. The Slovak Republic does not currently adequately support the creation of new risk-mitigation instruments. We lack innovative solutions to protect, restore and manage biodiversity within the context of climate change impacts. This also applies to



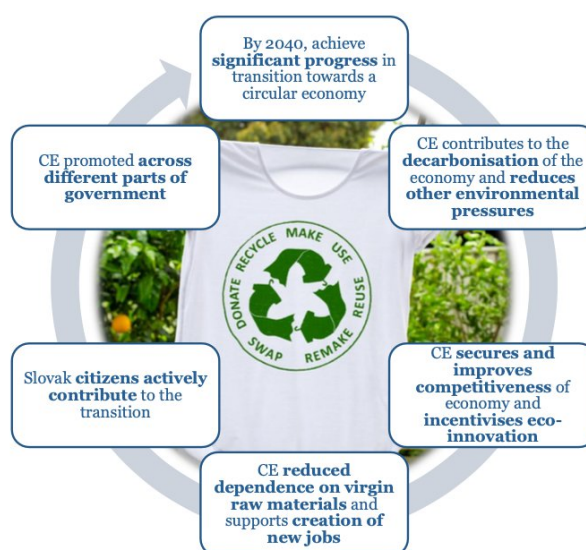
the sustainability of genetic resources within production systems, where we are confronted with invasive non-native species and the resilience of the genetic resources used is questionable. Solutions based on local genetic resources and complemented by the biologisation of the production process can offer a sustainable solution adapted to local conditions in the future. During the transformation process, stakeholders can develop new products using innovative methods for pollution detection, prevention and remediation or innovative soil management methods.

Figure 2: Circular economy roadmap



Source: <https://www.minzp.sk/obehove-hospodarstvo/cestovna-mapu/> or
<https://www.oecd.org/environment/waste/circular-economy-country-studies.htm>

Figure 3: Vision and strategic goals for a circular economy roadmap



Source: <https://www.minzp.sk/obehove-hospodarstvo/cestovna-mapu/> or
<https://www.oecd.org/environment/waste/circular-economy-country-studies.htm>



CCI, Tourism and Services sector

Some specific information about CCI (creative industry) - Slovakia
(https://www.opvai.sk/media/99313/digit_creativ_domena_final_22032018_pp.pdf or
<https://www.mirri.gov.sk/wp-content/uploads/2022/06/Suhrnna-sprava-z-procesu-EDP.pdf>)

The creative industries represent a highly promising segment of the economy for a country with a scarcity of raw material inputs, which generates economic value on the basis of individual creative input or artistic talent, i.e. at a higher level of added value of labour and knowledge. This is a sector built on the valorisation of intellectual property, which can include areas of creative activity such as architecture, design, film, music, but also the creation of computer games and advertising. The creative industries encompass the entire exploitation chain, from the creation of the conditions for creative activity, through production to the restoration (re-design) of its results. The importance of the potential of this sector lies in the fact that the space in the areas of creative activities and innovation in them strongly supports the possibilities of developing one's own business, as well as a way of promoting mechanisms that help young people to find employment.

The Digital Slovakia and Creative Industries domain is linked to the following sets of policies of the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic (SK RIS3 2021+):

Measures of the Research and Innovation Strategy for Smart Specialisation of the Slovak Republic

- ♦ Measure 1.3 - Progressive technologies and materials - Goal: Increase the number of technology startup and spinoff companies (creating space for creative young people who will not have to go abroad to find interesting and intellectually satisfying work).

In the previous programming period, the issue of creative industries was more elaborated, many parts have already been dropped from the update (SK RIS3 2021+).

In terms of NACE codes, the following are relevant to the issue of creative industries:

- ♦ C26 (Manufacture of computer, electronic and optical products) - subgroups C22, C27, C28, C29, C30, J59, J62, J63, M72.
- ♦ J62 (Computer programming, consultancy and related services) - subgroups M69, M70, M72.
- ♦ J63 (Information services) - subgroups M72, M73.
- ♦ M74 (Other professional, scientific and technical activities) - subgroups C13, C14, C15, C17, C18, C20, C22, C23, C24, C25, C31, C32, J59, J62, J63, M71, M72, M73, M74, M75.

More detailed information on the creative industries is available at <https://www.culture.gov.sk/posobnost-ministerstva/umenie-a-kreativita/kulturny-a-kreativny-priemysel/platforma-pre-kulturny-a-kreativny-priemysel/> - Platform for Cultural and Creative



Industries (<https://pkkp.sk>). Since 9th of March 2023 an inter-ministerial comment procedure on the Strategy for Culture and Creative Industry of the Slovak Republic 2030 is underway - the working version of the material is available at <https://www.slov-lex.sk/legislativne-procesy/-/SK/dokumenty/LP-2023-52>.

From a regional perspective, the issue of creative industries is mentioned in the document "Bratislava 2030" (https://bratislava2030.sk/wp-content/uploads/2023/03/A-C-Strategicka-cast-Bratislava-2030_032023.pdf) - pages 183-188 - indicator 43 is devoted to the ranking in the list of cities - indicator of the environment for entrepreneurship in the CCI (The indicator reflects how friendly Bratislava's environment is towards entrepreneurial activities in the field of cultural-creative industries).

Some specific information about tourism - Slovakia

(<http://slovak.statistics.sk>; <https://bratislavsky-kraj.webnode.sk/cestovny-ruch/>;
<https://bratislavaregion.travel>; <https://www.visitbratislava.com>;
<https://bratislavskykraj.sk/regionalny-rozvoj/strategie/koncepcia-rozvoja-cr-do-roku-2030/>)

Accommodation establishments in Slovakia were 14% short of the tourist record highs of 2019 in May 2023. By standard, the Bratislava, Žilina and Prešov regions attracted the most domestic and foreign guests. The total number of visitors to tourism accommodation facilities in Slovakia in May 2023 reached just under 500 thousand people. In the year-on-year comparison, hotels, guesthouses and other accommodation establishments had 20.5% more guests. It was still 77 thousand visitors less than in the same month before the pandemic (May 2019). Visitors spent almost 1.2 million nights in tourism establishments, which was 19% more than a year ago. The average length of stay was 2.4 nights. Domestic visitors accounted for almost two-thirds of the staying guests, i.e. 303 thousand people. Their number grew by more than a tenth year-on-year, with just under 8% of domestic visitors missing compared to the pre-May 2019 period. The only region to receive more domestic visitors than before the pandemic was the Bratislava region. The highest domestic visitor arrivals were, by default, recorded in the Žilina, Prešov and Bratislava regions. Together, these three regions accounted for almost two-thirds of domestic arrivals.

At the same time, 173 thousand foreign visitors used accommodation services in Slovakia during May 2023, a 38% year-on-year increase in visitor arrivals. The number increased year-on-year in all regions. The highest increase, by more than half of the visitors, was recorded in the Prešov region. Foreign guests registered more significant drops during the pandemic and we are slowly returning to normal. In the fifth month, the number of foreigners was comparable to 2019 only in the Trnava region. The largest number of foreigners visited the Bratislava (80 thousand), Žilina (23 thousand) and Prešov regions (18 thousand). Together, these three regions accounted for 70% of the total foreign visitors.

The Bratislava region has no ski resorts, no spas, and no sea. Nevertheless, it is visited by thousands of tourists from Slovakia and abroad. Their main attraction is the capital of the Slovak Republic - Bratislava. They come here for relaxation, culture and entertainment, but also for shopping. The main attractions are historical buildings and monuments (Bratislava Castle, St.



Martin's Cathedral, the historical city center, Slavín), the Slovak National Theatre. Young people prefer entertainment. Other attractions are the Sun Lakes and the thermal aquapark in Senec, hiking in the Carpathians, cycling. One of the most famous cycling routes, the “Donauradweg”, runs along the Danube.

Figure 4: The “Donauradweg”



Source: <https://bratislavsky-kraj.webnode.sk/cestovny-ruch/#donauradweg1-jpg>

Concept of tourism development in the Bratislava Region until 2030 presents a fundamental strategic document for the tourism sector, which defines the main problems, challenges, and priorities of the territory. The document is based on the analysis of the territory and other conceptual documents of the Bratislava Region, primarily the Economic and Social Development Programme of the Bratislava Region for the years 2021- 2027 (PHRSR BSK).

The main forms of tourism defined in the concept are:

- ♦ Cognitive tourism includes cultural-historical tourism, ecotourism and geotourism, culinary tourism - gastronomic and wine tourism.
- ♦ Recreational tourism includes nature and rural tourism, agrotourism, and urban tourism.
- ♦ Active tourism includes cyclo-tourism, water tourism, hiking, and sports tourism.
- ♦ MICE tourism includes all events - local, congresses, incentives, etc.
- ♦ Other - medical and film tourism.

The main stakeholders in tourism in the Bratislava region:

- ♦ Regional Tourism Organization - Bratislava Region Tourism (KOCR BRT).



- ♦ Territorial Tourism Organizations (OOCR) - OOCR Záhorie, OOCR Malé Karpaty, OOCR Senec, Bratislava Tourist Board (BTB).
- ♦ Local Action Groups (LAG) - LAG Podhoran, LAG Malokarpatský region, LAG Dolné Záhorie Municipalities, cities, city districts.
- ♦ Service providers.

Along with the post-pandemic transformation of tourism, the goal is that all tourism products in the Bratislava region are to be based on the principles of sustainability, cooperation, self-sufficiency, innovation and uniqueness:

- ♦ *Environmental sustainability* in tourism points to the need for continuous reduction of the environmental burden and carbon footprint in the creation and development of tourism infrastructure and products.
- ♦ *Social sustainability* contributes to the development of a society that is inclusive, fair, diverse, interconnected and democratic. Regional policies must reflect the principle of social sustainability through an inclusive approach to all groups of the population and respect the socio-cultural authenticity of local communities.
- ♦ *Economic sustainability* in tourism guarantees well-thought-out and long-term activities that are beneficial for diverse stakeholders, including local communities.

From this point of view are all activities in following priority areas:

- ♦ Sustainable tourism - specific goal - to improve the conditions for the development and enhancement of a sustainable tourism offer through development of basic and complementary infrastructure with an emphasis on considerate treatment of natural and cultural heritage.
- ♦ Destination management - specific goal - to improve coordination between organizations involved in the development of tourism in the Bratislava region in order to increase the efficiency of activities and guarantee the continuous development of the Bratislava Region as an attractive destination.
- ♦ Destination marketing - specific goal - to facilitate targeted marketing support for tourism products that are essential for the regional development.
- ♦ Synergy of regional development policies - to create a synergy of regional development and tourism, which complement each other and thus create suitable conditions for further development.

As part of the preparation of the concept of tourism development in the Bratislava region, a SWOT-analysis of the region was prepared with the following results:

STRENGTHS

- ♦ Location of the metropolitan region on the HU-AT-CR border area.
- ♦ Highest representation of foreign visitors in Slovakia.
- ♦ Cultural-historical richness.
- ♦ National cultural institutions.
- ♦ Protected natural areas.
- ♦ Small Carpathian wine-growing region with tradition of winemaking.
- ♦ Wide offer of local gastronomy.
- ♦ Watercourses with development potential.



- ♦ Wide representation of water areas behind recreation.
- ♦ Network of cycling routes including international cycling routes.
- ♦ Network of walking routes.
- ♦ Geopark Malé Karpaty as part of the Network.
- ♦ Geoparks of Slovakia.
- ♦ Location of the international airport.
- ♦ Thematic routes (also with European importance) as key development lines.
- ♦ Significant representation of events of different of different types.
- ♦ Quality health services adapted for foreign tourists.
- ♦ Specific product lines of development on micro-region level.
- ♦ Sufficient accommodation capacity and ratio price/quality of accommodation services.
- ♦ Developed tourist network network of tourist information offices.
- ♦ Strong representation of organisations developing tourism.
- ♦ Active form of cross-border cooperation SK-AT.

WEAKNESSES

- ♦ Significant differences in the attractiveness of micro-regions.
- ♦ Predominance of overnight and short-term tourism.
- ♦ Insufficiently developed transport infrastructure for tourism.
- ♦ Predominance of individual transport over public transport.
- ♦ Poorly developed destination brand Bratislava region.
- ♦ Inconsistent promotion of the destination
- ♦ Insufficient capacities for MICE tourism - absence of large capacity congress centre.
- ♦ Insufficient quality of services and language.
- ♦ Amenities in tourism services.
- ♦ Low interest in the tourism sector tourism and dual education.
- ♦ Inconsistent record keeping and data processing tourism at regional level.
- ♦ Non-existent distribution system of promotional materials in the territory.
- ♦ Poor communication and cooperation between organisations developing tourism.
- ♦ Untapped cross-border potential cooperation - insufficient capacity on the part of destination development organisations.
- ♦ Tourism satellite account does not sufficiently reflect the impact of tourism on the development of the region.
- ♦ Uneven quality of tourist information offices.
- ♦ Unused regional product labelling.
- ♦ Lack of a regional system for assessing the quality of tourism services.
- ♦ Lack of a bicycle rental system at regional level.

OPPORTUNITIES

- ♦ Increasing average length of overnight stays.
- ♦ Growing demand from domestic visitors.
- ♦ Growing interest in active tourism in nature - cycling tourism and walking tourism.
- ♦ Opportunities for cross-border cooperation.
- ♦ Potential of the capital city for MICE tourism.
- ♦ Development of water tourism - potential of the Danube, Little Danube watercourses and Morava.
- ♦ Linking cycling and water tourism cycling tourism.



- ♦ Increasing the accessibility of tourist destinations (shuttle buses, ...).
- ♦ Potential of the Small Carpathians Geopark and reviving the tradition of huntsmen.
- ♦ Potential for the development of thematic routes.
- ♦ Potential for the development of ecotourism - Regional Eco-center Čunovo and others protected natural areas.
- ♦ Potential for rural tourism and agrotourism mainly outside the territory of the city of Bratislava.
- ♦ Development of local traditional art.
- ♦ Development of a regional quality label for promotion of tourism and local producers.
- ♦ Increase in demand from target groups - GenZers, Millennials and Generation 60+.
- ♦ TIK Vienna as a gateway to the foreign market.
- ♦ Potential for the development of health tourism.
- ♦ Potential for the development of film tourism.

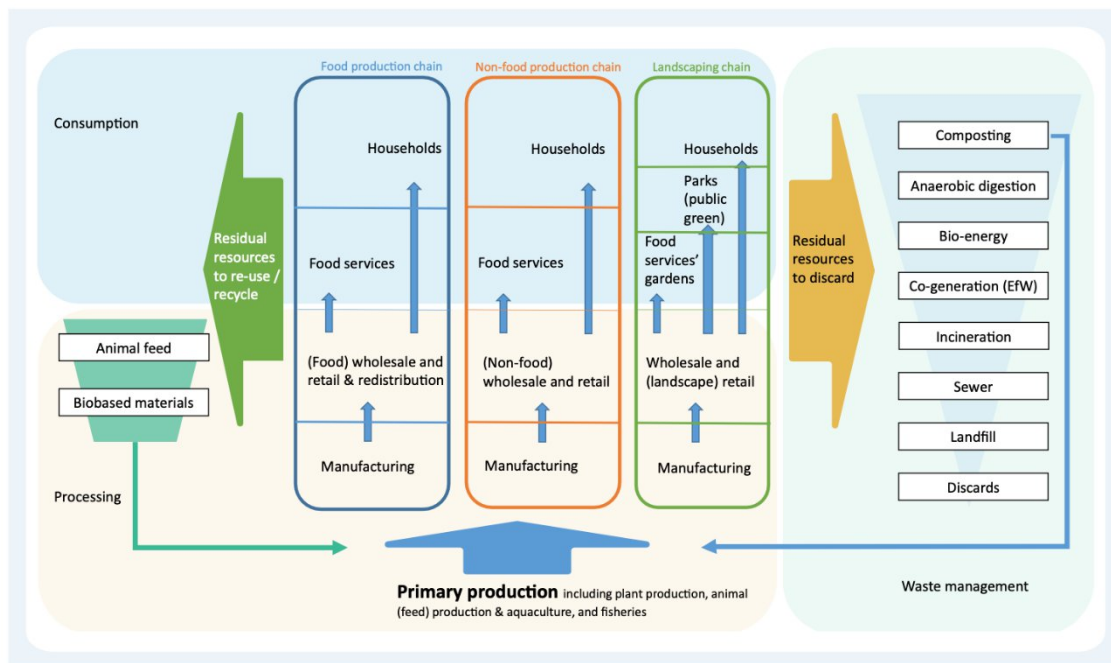
THREATS

- ♦ Strong competitive environment from neighbouring countries.
- ♦ Long-term predominance of day visitors.
- ♦ Excessive number of visitors in the capital Bratislava.
- ♦ Low visitor numbers in other micro-regions (Malocarpattia, Záhorie, Podunajsko).
- ♦ Turistification.
- ♦ Poor recognition of Bratislava and the region as a destination.
- ♦ Neglect of water infrastructure tourism.
- ♦ Conflict between walking and cycling tourism.
- ♦ Pandemic impacts (COVID-19).
- ♦ Negative impact of tourism on the environment.
- ♦ Environment.
- ♦ Increasing demands on the quality of services and safety
- ♦ Loss of vineyards and wine-growing sites in relation to the built-up area.
- ♦ Limited possibilities of external resources financing of the segment.
- ♦ Poor prioritisation of tourism.
- ♦ Dependence on the foreign market.
- ♦ Impairment of cultural monuments.
- ♦ Weak synergy of tourism in relation to environment, mobility, and education.

The circular economy is addressed only very marginally in the materials cited, through the concepts of sustainability and ecology. There is a lack of a framework for dealing with the problems of circularity.



Figure 5: Actors, processes and flows of resources for food and other bio-waste value chain in the Slovak Republic



Source: <https://www.minzp.sk/obehove-hospodarstvo/cestovna-mapa/>
<https://www.oecd.org/environment/waste/circular-economy-country-studies.htm>

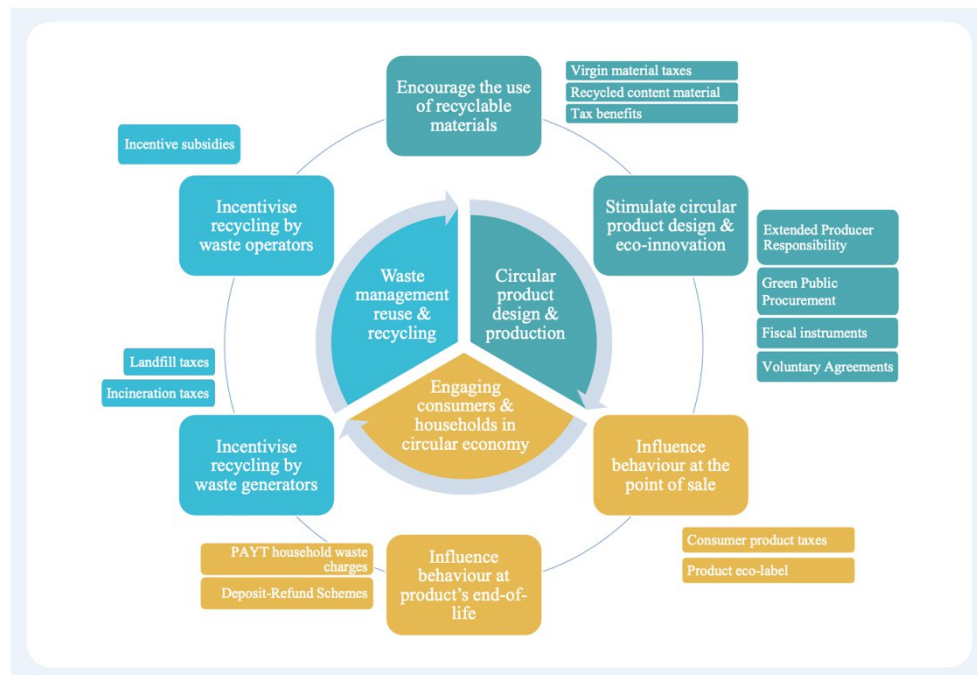
or

5. GREENPACT SWOT analysis for Circular Economy green/impact entrepreneurship at regional Level

The SWOT analysis of the circular economy in the Slovak Republic indicates that the strengths include the growing interest in the topic of circular economy and the gradual gaining of political support. This is also due to the fact that the circular economy has become one of our strategic priorities and that the legislative framework in the field of environmental protection is being strengthened.

Conversely, the weaknesses are the indicators on the re-use of materials, the still high rate of landfilling and the still relatively low rate of recycling. Opportunities that we should take advantage of as a country to contribute to improving the circular economy in our country include, for example, education, digitalisation in waste management, investing in eco-innovation and increasing the recovery rate of industrial and commercial waste. The low level of cooperation between ministries, as well as insufficient organisational, staff and financial capacities are risks that may jeopardise Slovakia's transition to a circular economy. Our priority areas for the near future, as defined in Slovakia's Roadmap for a Circular Economy, should be solutions in the areas of food and bio-waste, construction, economic instruments and sustainable production and consumption.

Figure 6: Overview of economic instruments for the circular economy



Source: <https://www.minzp.sk/obehove-hospodarstvo/cestovna-mapa/> or
<https://www.oecd.org/environment/waste/circular-economy-country-studies.htm>

In Slovakia's transition to a circular economy, we perceive as positive in particular the introduction of a backup system, the amendment to the Waste Act for construction waste, the elaboration of a background study on the introduction of a system for the collection and recovery of textiles, and last but not least, the publication of the aforementioned Circular Economy Roadmap for Slovakia (<https://www.minzp.sk/obehove-hospodarstvo/cestovna-mapa/>).

Based on the analysed documents, it can be concluded that in the Bratislava region there is a relatively intense perception of the issues of ecology and sustainability, which results from the geographical proximity to Austria (which is considered by the inhabitants as the cradle of ecology in the regional environment). However, one thing is the perception of the problem and another is the acceptance of change and its financing - here there are many deficits.

STRENGTHS

- Access to a wide range of eco-friendly technologies and materials.
- Potential for cost savings through resource efficiency and waste reduction.
- Ability to attract environmentally conscious investors and customers.
- Opportunity to differentiate from competitors by adopting circular economy practices.
- Ability to contribute to the achievement of global sustainability goals.

WEAKNESSES

- Limited awareness and understanding of circular economy practices among businesses and consumers.



- High upfront costs associated with implementing circular economy strategies.
- Lack of clear regulations and standards for circular economy practices.
- Limited availability of skilled labor and expertise in circular economy practices.
- Difficulty in measuring the economic and environmental impacts of circular economy initiatives.
- Lack of scalability of circular economy models in some industries.
- Limited availability of circular economy financing options for SMEs.

OPPORTUNITIES

- Potential for increased customer loyalty and market share through sustainability efforts.
- Potential for increased profitability through resource efficiency and waste reduction.
- Potential for collaboration and partnership opportunities with government and other organizations.
- Potential for circular economy initiatives to create new job opportunities.
- Potential for increased innovation and development of eco-friendly technologies.
- Potential for increased brand reputation and positive public relations through sustainability efforts.

THREATS

- Economic and political instability affecting demand for sustainable products and services.
- Volatility of commodity prices affecting the viability of circular economy models.
- Lack of understanding or support from policymakers and regulatory bodies.
- Difficulty in scaling circular economy models to fit the needs of larger industries.
- High costs associated with transitioning to a circular economy model.
- Lack of consumer awareness and education on the importance of circular economy practices
- Potential for negative social and environmental impacts through poorly planned circular economy initiatives.

Further options

In the case of the strengths/weaknesses, opportunities and threats listed below, these are statements which, in terms of future developments, may bring about a shift in the views of market participants or will require significant education/persuasion.

STRENGTHS

- Growing consumer demand for sustainable products and services.
- Availability of government funding and support for circular economy initiatives.
- Strong network and collaboration opportunities with other circular economy businesses.
- Potential for increased customer loyalty and brand reputation through sustainability efforts.
- Potential for increased employee satisfaction and motivation through sustainable values.

WEAKNESSES



- Lack of access to suitable recycling and waste management infrastructure.
- Resistance from traditional business models and industries.
- Need for a cultural shift towards a more sustainable and circular economy mindset.

OPPORTUNITIES

- Growing market for sustainable and circular products and services.
- Opportunity to influence policy and regulations towards circular economy practices.
- Potential for increased market competitiveness through circular economy practices.
- Potential for increased investor interest in sustainable and circular businesses.

THREATS

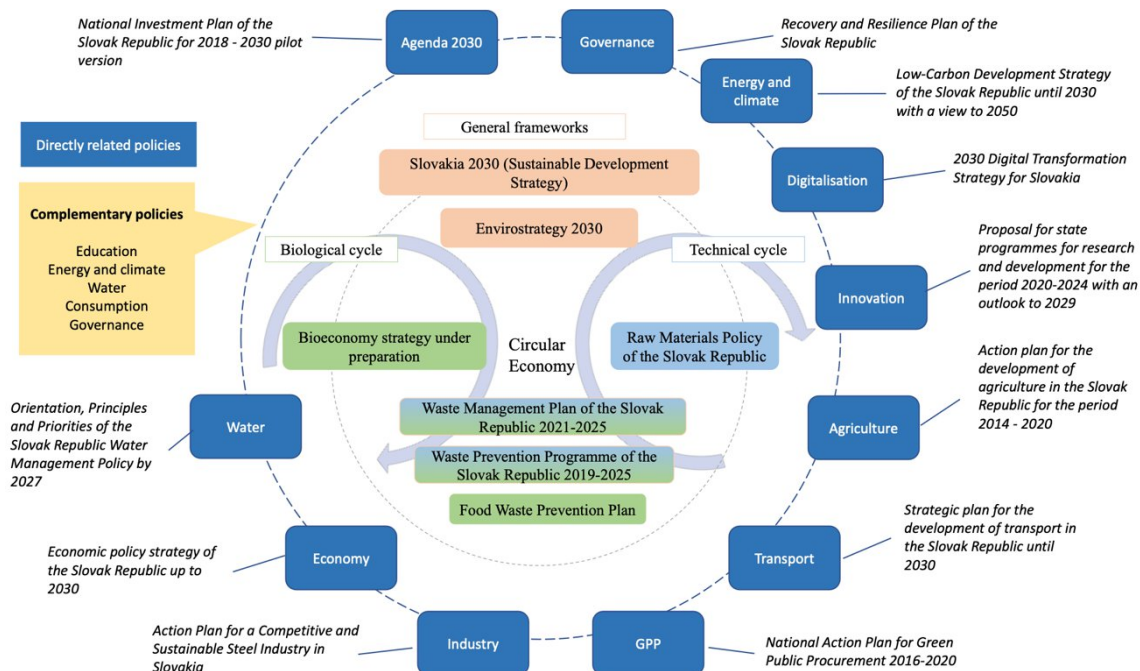
- Competition from traditional, non-sustainable businesses.
- Limited availability of circular economy certification and labeling programs.
- Risk of reputational damage due to greenwashing or false circular economy claims.

Conclusion

“By 2040, the Slovak Republic has achieved significant progress in its transition towards a circular economy and has become a sustainable and low-carbon economy. The Slovak Republic establishes itself as one of the circular economy actors in Central Europe by focusing on the construction sector, the food and bio- waste value chain, and its use of economic instruments for the circular economy and for sustainable consumption and production. Different levels of the government widely promote such circular economy practices, and businesses and citizens adopt them. The Slovak Republic improves its legislative and regulatory framework and effectively uses the economic instruments at its disposal.” (Closing the Loop in the Slovak Republic - A Roadmap towards Circularity for Competitiveness, Eco-Innovation and Sustainability, p. 28)

“Circularity plays an essential role in securing and improving the competitiveness of the Slovak economy and in incentivising the application of new technologies, eco-innovation and circular business models. The Slovak Republic promotes sustainable production, namely, eco-design and the use of secondary raw materials. Being a small open economy, the Slovak Republic draws particular benefits from the implementation of resource efficiency and circular business models across its value chains, which help to lessen companies’ dependence on virgin raw materials, reduce their costs, and increase their competitiveness further. This in turn leads to the workforce acquiring new skills and the creation of new, high-quality jobs. The SMEs, which currently represent around 60% of business turnover and 70% of jobs in the Slovak Republic, are a driving force behind this transition.” (Closing the Loop in the Slovak Republic - A Roadmap towards Circularity for Competitiveness, Eco-Innovation and Sustainability, p. 28)

Figure 7: Overview of the Slovak policy landscape relevant to a circular economy



Source: <https://www.oecd.org/environment/waste/circular-economy-country-studies.htm>

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