

GREEN TRANSITION



1. MOTIVATION

Characterization

The ecological transition is underway. Given population growth, global warming, climate impact and resource scarcity, clean energy sources, the circular economy, mobility and sustainable construction are key to ensuring a balance between progress and the environment

Navarra has already reached the European 2020 targets for renewable energy, as 20 % of the share of energy consumption is produced from renewable sources since 2009 (1 of 3 EU 2020 targets) and around 81.1 % of electricity consumption is met by renewable energy

The new objectives of decarbonization of the continent (climate neutrality by 2050) included in the Green Deal represent an ambitious strategic agenda that affects and involves all sectors and dimensions of the economy and society

Within Navarra, the strategic framework is included in KLINA, Roadmap of Climate Change of Navarra, and the Agenda for the Development of the Circular Economy in Navarra with a 2030 horizon

The circular economy has the potential to increase EU GDP by an additional 0.5 % and to create more than 700,000 new jobs by 2030

Value chain

Companies:

- Organizations in the technological cycle: Exkal, Plastic Repair System, Lizarte, Traperos De Emaús Navarra, Dvelas Living Sails, Beeplanet, Solteco Madera Plástica, EcoinTEGRA, Kudea Go...
- Organizations in the biological cycle: Salinas de Navarra, Aislanat, Isanatur-nutrition & health, Envirohemp, Trasa, Nutrinsect, Ingredalia, Elkarkide, Oleofat Trader, PVT- Pavimentos de Tudela, Bioinsectis...
- Facilitating organizations: Kunak Technologies, CO2 Revolution, Green Killer Weeds, Fundación Laboral De La Construcción Navarra, Valsay Sistemas De Embalaje...
- Urban design and building: Nasuvinsa, ACR, Madergia...
- Water treatment: Nilsa

Knowledge entities: AIN, INTIA, GAN, UPNA, University of Navarra, CENER...

Cooperation entities: Clusters and platforms, environmental and consumer protection associations

Emerging initiatives

Start-ups: CO2 Revolution, Oleofat, Useful wastes, Inbiot, Kunak Technologies, Bioinsectics, Plag-e, Almotech, MIC Technology

Projects: H2020 – SCREEN; H2020-SustaiNAVility; AIN Circular Platform; LCA4Regions (2019 - 2022)

International collaboration

ERRIN Working Group – Bioeconomy

S3 Partnership Bioeconomy: innovative use of non-food biomass

S3 Partnership Efficient and Sustainable Manufacturing

Bioeconomy Platform (BIC)

Association for Cities and Regions for Sustainable Resources Management (ACR +)

Process4Planet PPP at Horizon Europe

ACR+: Association of Cities and Regions for Recycling and sustainable resource management

VANGUARD Initiative

2. STRATEGIC VISION

Vision 2030



Navarra is an exemplary region in terms of its transition to a sustainable production system and efficient use of resources, reducing its impact on the environment, with new business models based on bioeconomics and circularity

FOCUS



- Implementation of the circular economy in all the links of the industrial value chain
- Emission neutral production processes

Trends

Analysis and assessment of environmental impact: calculation of carbon footprint, life cycle analysis...

More environmentally responsible production processes:

- Clean energy use
- Emission reduction
- Efficient use of the hydric resources
- Manufacturing processes with zero waste

Implantation of the circular economy:

- Eco-design of products and processes
- Prioritisation of regenerative resources
- Collaboration to create joint value
- Longer product life
- Use of shared resources
- Valorisation of by-products as resources

Incorporating sustainability into lifestyle habits

- Promotion of sustainability purchasing criteria
- Integration of CSR in companies
- Changes in mobility thanks to teleworking
- Generation of new models of business (new services of sustainability related to the Smart Cities, Smart Buildings, PassivHouse...)

International Line-up

The Green Deal, the European Commission's new Circular Economy Action Plan and the "Fit for 55 %" Action Plan define targets to achieve a 55 % emissions reduction by 2030. in particular:

- 35 million buildings renewed by 2030
- 160,000 "green" jobs created in the construction sector by 2030

Other Strategies:

- Biodiversity Strategy 2030
- EU Climate Pact
- Sustainable Industry
- Pollution long term vision and Rural Area

Concept of "Industry 5,0" that increases the vision of industry 4,0 with the social and environmental objectives, trying that the industry contributes solutions to the environmental challenges

Related SDGs



3. LINES OF WORK

Common lines of work		BO	GT	DT
VALUE CHAIN				
01	Industrial symbiosis; restructuring of the value chain through connections within each sector and between different sectors in order to take advantage of products, by-products, and waste	●	●	
02	New business models based on servitisation linked to monitoring systems, payment models for availability/use/results, collaborative economics, incorporation of digital technology, IoT	●	●	●
PRODUCT AND PROCESS				
03	Design of products, components, equipment, packaging, and distribution systems that take into account the product life cycle and mitigate the impact on health and the environment	●	●	
04	Decarbonisation and minimisation of environmental impact (reduction of raw materials, water, energy ...) in industrial processes using clean production technologies, applying good production practices	●	●	
05	Remanufacturing, use of circular supplies (renewable, reusable, recyclable, recycled, biodegradable) and substitution of critical raw materials	●	●	
06	Promoting sustainable construction: wood construction, energy refurbishment, nearly zero-energy buildings, positive construction...	●	●	
WASTE				
07	Recovery of waste and use of by-products from the production and distribution process	●	●	

Note: BO: Business Opportunity GT: Green Transition DT: Digital Transition



Specific lines of work		BO	GT	DT
ELECTRIC AND CONNECTED MOBILITY				
01	Remanufacturing and recycling of components	●	●	
02	Renewable energy charging systems and storage systems	●	●	
03	New models for smarter, more sustainable logistics	●	●	●
HEALTHY AND SUSTAINABLE FOOD				
04	Recovery of by-products and waste to produce new products, either end products or ingredients	●	●	
05	Recycled and/or compostable packaging. Packaging	●	●	
06	Promotion of organic production and its industrialisation in agri-food enterprises	●	●	
07	Extend the shelf life of food to avoid food waste	●	●	
GREEN ENERGY INDUSTRY				
08	Development of green energy vectors (biogas, hydrogen, biomass...)	●	●	
09	Circular economy: recycling and reuse of components	●	●	
10	Working on solutions to extend wind and solar power plant life (repowering, extension, or sustainable decommissioning)	●	●	
PERSONALISED MEDICINE				
11	Circular economy in biomedical devices (disinfection and recovery) and drugs, promoting waste reduction	●	●	
12	Sustainable manufacture of drugs and devices, and use of products or ingredients of natural origin	●	●	
13	Health waste management	●	●	
SUSTAINABLE TOURISM				
14	Sustainability mobility: cycling tourism, green routes, and non-motorised itineraries	●	●	
15	Sustainable management of tourist spaces. Regulation of access and flows of visitors	●	●	●
16	Promoting Energy Efficiency in Navarra's tourist sector: energy improvement actions in establishments and energy certifications	●	●	
SUSTAINABLE CONSTRUCTION				
17	Promotion of sustainable construction: wood construction, energy refurbishment, nearly zero-energy buildings, positive construction...	●	●	

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