Region Uppsala

Smart Specialisation Strategy for Uppsala County 2022–2027.

Strategy for sustainable development and growth through challenge and knowledge-based innovation in Uppsala County.

Contents

In Uppsala, we don't just talk about problems. We solve them through challenge and knowledge-based innovation for sustainable development and growth.

Just like the world at large, the Uppsala Region is faced with a number of significant challenges. We have to quickly and dramatically reduce our carbon footprint. Fossil material flows have to be replaced with bio-based solutions. Healthcare has to be made more efficient and adapted to an increasingly aging population. People who feel left behind or detached from societal development have to be seen and given a chance.

You could view these challenges as problems. But you could also choose to see them as steps on our development journey – steps that can lead to unimaginable possibilities.

In the Uppsala Region, that's how we see it. The key to success is inclusive, goal-oriented and a courageous collaboration between the industry, research and public sectors. Through collaboration, we can transform knowledge into innovation and entrepreneurship for the improvement of both humanity and society.

1. Remember: In Uppsala, we don't just talk about problems. We solve them.

Every day, we get a little closer to solving the biggest riddles of our time. Sometimes the solutions are revolutionary. But usually solutions arise gradually when workers, researchers, students, public servants and politicians go to work, collaborate and learn from each other.

At the intersection of industry, research and public organisations, knowledge is transformed into products, services and tangible solutions to society's urgent problems. Like sustainable materials for the manufacturing industry, technology that extracts water from the air, accurate pharmaceuticals that improve patients' lives and medical technology solutions that improve and streamline healthcare.

This is the foundation of challenge and knowledge-based innovation. There are huge development opportunities for Uppsala's industry in markets both inside and outside of Sweden. It benefits our business sector, while enabling us to help make the world a better place.

2. Remember: We are capable of so much in Uppsala, but we can't do everything. We are dependent on dialogue and collaboration from outside our borders.

Our ambition for the region is clear. Uppsala will play an even more important role in strengthening Sweden as a leading nation of innovation for a more sustainable world.

Through challenge and knowledge-based innovation, our region will be important for everyone. The smart specialisation* strategy for challenge and knowledge-based innovation is a tool on that journey.

**The term smart specialisation was launched by the European Commission with the purpose of strengthening and highlighting the innovation and growth capabilities of Europe's regions based on societal challenges, research and innovation.*

The Uppsala Region is one of Europe's most innovative places

There are many indices that measure cities' innovation capabilities. In several of those indices, Uppsala ranks as one of the most innovative places in the world. In the "European Innovation Scoreboard", Sweden is ranked number one.

In Reglab's national innovation index, the Uppsala Region ranks number one or two of the country's 21 regions.

In an international benchmark study of eleven cities in the world, Uppsala ranked highly in a number of important parameters, such as #1 Proportion of highly educated in the population, #2 Real GRP growth per capita, #3 Real GRP growth, #3 Proportion of R&D of GRP and #6 Patents per capita.

In order to take even greater advantage of these conditions, Region Uppsala has put together this strategy for sustainable development and growth through challenge and knowledge-based innovation.

We will be an exciting region that is perfect for researchers, innovators, entrepreneurs, business owners and investors.

What we want to accomplish with this strategy

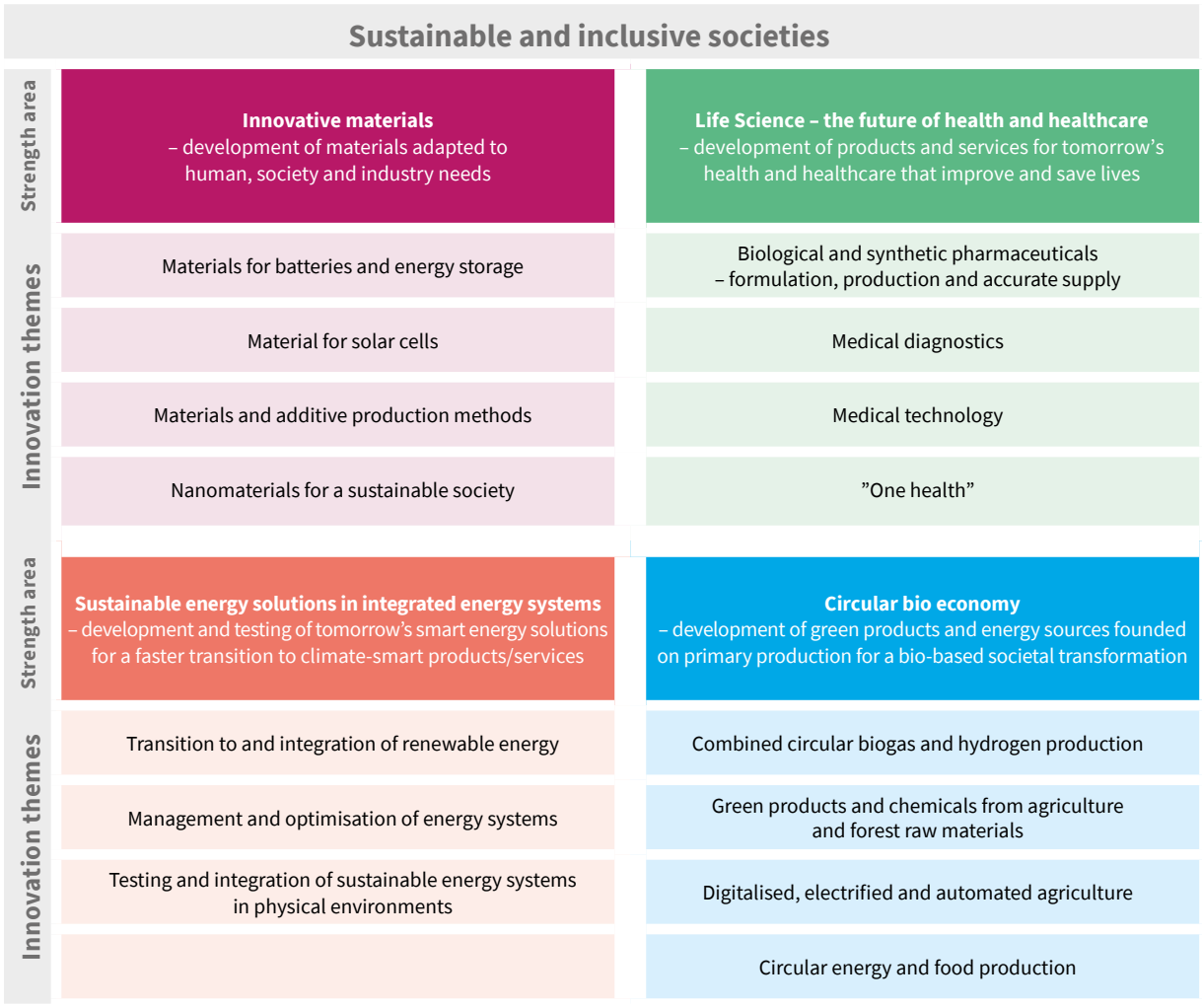
By identifying and presenting the region-specific strength areas where we are particularly well equipped, the goal is:

- to clarify to the outside world what the Uppsala Region is capable of and offers. The clearer we are, the better our ability to attract new businesses, investments and partnerships from around the world.
- to inspire and pave the way for new methods of working and collaborating within our region to add the largest amount of value possible.

Strength areas and innovation themes

The basis of this strategy is to lay the groundwork for a sustainable and inclusive society. We have identified four strength areas and a number of innovation themes.

- A strength area is a collective classification of capabilities, resources and innovation potential within research, education, industry and the public sector.
- An innovation theme transforms these strengths into new ideas, innovation and business in markets inside and outside of Sweden's border.



Summary of selected strength areas and innovation themes

Innovative materials

– Development of new materials, adapted to industrial, human and societal needs.

Our region offers world-class capabilities in material innovation, developed at the intersection of research, industry and society. This area strengthens the competitiveness in existing material-dependent industries and gives rise to new businesses through innovation that can generate activity in international markets and make the world a better place.

Modern manufacturing technology opens the door for brand new materials and applications that are transformed into more sustainable components and solutions, all with the ultimate purpose of benefiting humanity and society.

The strength area, Innovative materials, has four innovation themes:

- Materials for batteries & energy storage
- Materials for solar cells
- Materials for additive production methods
- Nanomaterials for a sustainable society

Desired position & target by 2030:
The Uppsala Region is a solutions-oriented and attractive place in the world where innovative materials, adapted to industry, human and society needs, are developed and used to create solutions for sustainable societal development.

Life Science for the future of health and healthcare

– Development of products and services for tomorrow's health and healthcare that improve and save lives.

Uppsala's life science sector is largely international. Companies operating in pharmaceuticals, biotechnology, medical technology and diagnostics are contributing to the region's development, job market and attractiveness.

Its success is built on world-class research conducted at the region's two universities and within the region's strong business sector. Collaboration with the region's healthcare sector is also important. Most notably, the close relationship with Uppsala University Hospital is essential in enabling the industry to test out and implement therapies, products and services in healthcare.

The strength area, Life Science, has four innovation themes:

- Biological & synthetic pharmaceuticals – formulation, production and accurate supply
- Medical diagnostics
- Medical technology
- "One Health"

Desired position & target by 2030:
The Uppsala Region is a solutions-oriented and attractive place in the world for the development of innovative solutions for tomorrow's health and healthcare that improve and save lives.

Sustainable energy solutions in integrated energy systems

– Testing and development of tomorrow's smart energy solutions for a faster transition to climate-smart products and services.

In Uppsala, we're good at testing out innovative energy solutions at the system level and in physical environments, from a needs and user perspective. This is where the Uppsala Region is well equipped and has strong potential as a catalyst for change in the transition to more sustainable, resilient and stable energy systems.

Uppsala's Climate Protocol and climate goals provide a framework for the continued development of the Uppsala Region as a region, where renewal and innovation emerge between various disciplines and industries.

The strength area, Sustainable energy solutions in integrated energy systems, has three innovation themes:

- Transition to & integration of renewable energy
- Energy system management & optimisation
- Testing & integration of sustainable energy systems in physical environments

Desired position & target by 2030:
The Uppsala Region is a solutions-oriented and globally attractive place for the co-creative and experimental development of sustainable energy solutions.

Circular bio economy

– Development of new products and energy sources founded on primary production for a bio-based societal transformation.

The keys to success in the green transformation include technology, the economy and behaviours. Here, the Uppsala Region plays an important research and knowledge role in Sweden's journey to become a fossil-free welfare state by 2045.

It is a matter of replacing fossil-based resources with renewable ones and transforming linear material flows into efficient cycles, where rubbish and waste streams are turned into resources and new products.

In the bioeconomy, future green industries within primary production can be seen as broad suppliers of bio-based materials for other industries that will be gradually weaning off their fossil dependency.

Our region also conducts world-class research on ecosystem services, bio-based production systems, sustainable materials and renewable energy.

The strength area, Circular bio economy, has four innovation themes:

- Combined circular biogas & hydrogen production
- Green products & chemicals from agriculture and forest raw materials
- Digitalised, electrified & automated agriculture
- Circular energy and food production

Desired position & target by 2030:
The Uppsala Region is a solutions-oriented and globally attractive place for innovation and new businesses that accelerate the replacement of fossil-based resources with renewable ones and enable the transformation of linear material flows into efficient cycles, where waste is turned into resources and new products.

Horizontal priorities that reinforce all strength areas

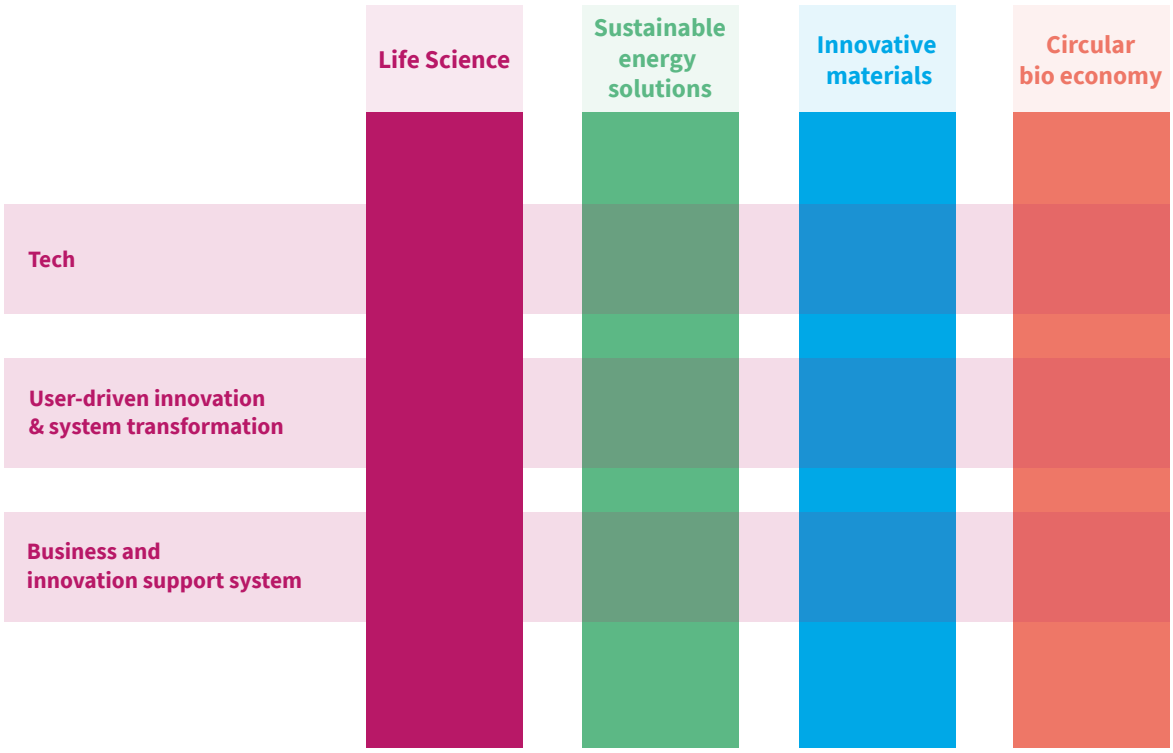
All of the strength areas are reinforced by capabilities and resources within three thematic priorities.

Tech

The region's capabilities within tech support individuals and companies wanting to digitalise, automate and/or develop production, products and services based on software. The Uppsala Region has a wide range of capabilities within, for example, artificial intelligence, machine learning, data technology, systems, visualisation and simulation.

User-driven innovation & system transformation

Renewal and innovation are often equated with technological and medical innovation. In order to ensure innovation is fully utilised, human needs, behaviours and conditions must interact with technical achievements. The Uppsala Region is well equipped in terms of a holistic view of development and value-creating innovation.



The business and innovation support system

Both innovation and business development need support, funding and open collaboration that cross traditional industry lines. The Uppsala Region has a comprehensive and well-functioning business and innovation support system that drives the development of innovation and growth.

Target groups of the strategy

The strategy's ambition is to promote sustainable development and growth within the following business categories:

- Companies that transform societal challenges into solutions for national and international markets.
- Companies that, either wholly or partially, build their innovation and business on academic knowledge.
- Companies – existing companies and spin-offs, big and small – that need help with research and knowledge on their development journey.

This should be achieved through continuously challenging and improving collaboration between research, education, industry and the public sector.