

#upperVISION2030

Strategic Economic & Research Programme for Upper Austria



Executive summary
2020



Upper Austria's #upperVISION2030 business and research strategy

In order to stand out in the face of global competition and make Upper Austria future-proof over the long term, it is necessary to project a uniform image of the future that can be flexibly adapted to new trends and developments. Our business and research strategy #upperVISION2030 opens a new chapter for Up-

per Austria as we veer away from a rigid programme towards a strategy that develops year on year. The new strategy process allows us to act more flexibly. The framework it defines also offers the long-term orientation necessary.

The big picture – or: what is it all about?

"How do you manage to not jump on every trend and still keep ahead?"

A location, a region, needs a shared strategy. #upperVISION2030 is far from being the first strategy for business and research policy in Upper Austria – on the contrary: we launched our first strategic programme more than 20 years ago. The pace of development has increased dramatically over the past two decades. When the term "evolution" is no longer sufficient to describe the force of change, then it is referred to as disruption. How can an entire region with its innumerable protagonists equip itself for an era in which today's boom sectors have already

evaporated by tomorrow? How do you manage to not jump on every bandwagon and still keep ahead?" #upperVISION2030 is the well thought out, shared response. On the one hand it is a stringent process to ensure both long-term orientation and sufficient flexibility. And it is also a clear concept in terms of content designed to meet the great challenges of our time so that the existing strengths of Upper Austria as a location are used in the best possible way. The central focus is on people and their skills with a view to social and technological developments.

Fit for Digital Age

The economic and social benefits of the digital transformation have been successfully implemented in business and industry – our main focus is on people. By 2030 Upper Austria will be a dynamic and cosmopolitan model region for digital humanism – an era that is now emerging as a result of the cooperation between all political, economic and scientific forces.

Fit for Sustainable Solutions

In 2030 Upper Austria will be perceived as an industrial region that acts sustainably and that people want to live in. The responsible use and reuse of resources is an essential element here. Upper Austrian businesses and industries are an essential part of the solution to future challenges and can therefore continue to maintain their position among the top players on a global playing field.

Fit for Human-Centered Technology

Artificial intelligence and robotics will be implemented in all areas of life in 2030 wherever they are needed. The underlying technologies have been made comprehensible to the general public leading to a high level of acceptance in daily use.

Fit for New Mobility

Upper Austria has successfully mastered the structural change in the mobility sector in 2030. Thanks to their expertise, Upper Austrian companies continue to be sought-after partners internationally and successful providers of mobility solutions and components.

Location partners – working together to be a leading innovative region

Taking steps and developing measures that benefit the region as a whole, the Upper Austrian location partners are now involved even more than before in the processes for implementing business and research strategy. #upperVISION2030 is a strategic

framework designed to support location partners in their year on year planning of business action measures. Annual dialogue rooms guarantee coordinated action without restricting each organisation's freedom to act on their own.

Building the process

Developing new methods and future-proofing the existing ones – these are the guiding principles behind the process for the new #upperVISION2030 strategy. Coupled with a new approach focussing on key topics that are important for the future, the Upper Austrian business and research strategy #upperVISION2030 was developed by building on the experience gained from the strategic business and research programme Innovative Upper Austria 2020.

The integration of external experts enriched the internal view of the location partners on Upper Austria during the strategy development process. That is how Fraunhofer ISI was able to integrate international expertise into the process, as well as national expertise through the Industry 4.0 platform and regional

expertise through the Upper Austrian Future Academy. Thanks to their expert knowledge, current trends and drivers were able to be identified and integrated into the process. The corresponding strategies "Upper Austrian Jobs 2030", "Energy Leading Region Upper Austria 2050" and "Tourism Strategy 2022" were also taken into account.

The combination of an external, expert-driven strategy development integrated into the Upper Austrian business and research landscape represented by location partners – the employees chamber (AKOÖ), Business Upper Austria, technical universities (FH OÖ), industry chamber (IV OÖ), JKU university in Linz, Upper Austrian Research and the chamber of commerce (WKOÖ) – made it possible to look beyond the borders of Upper Austria.

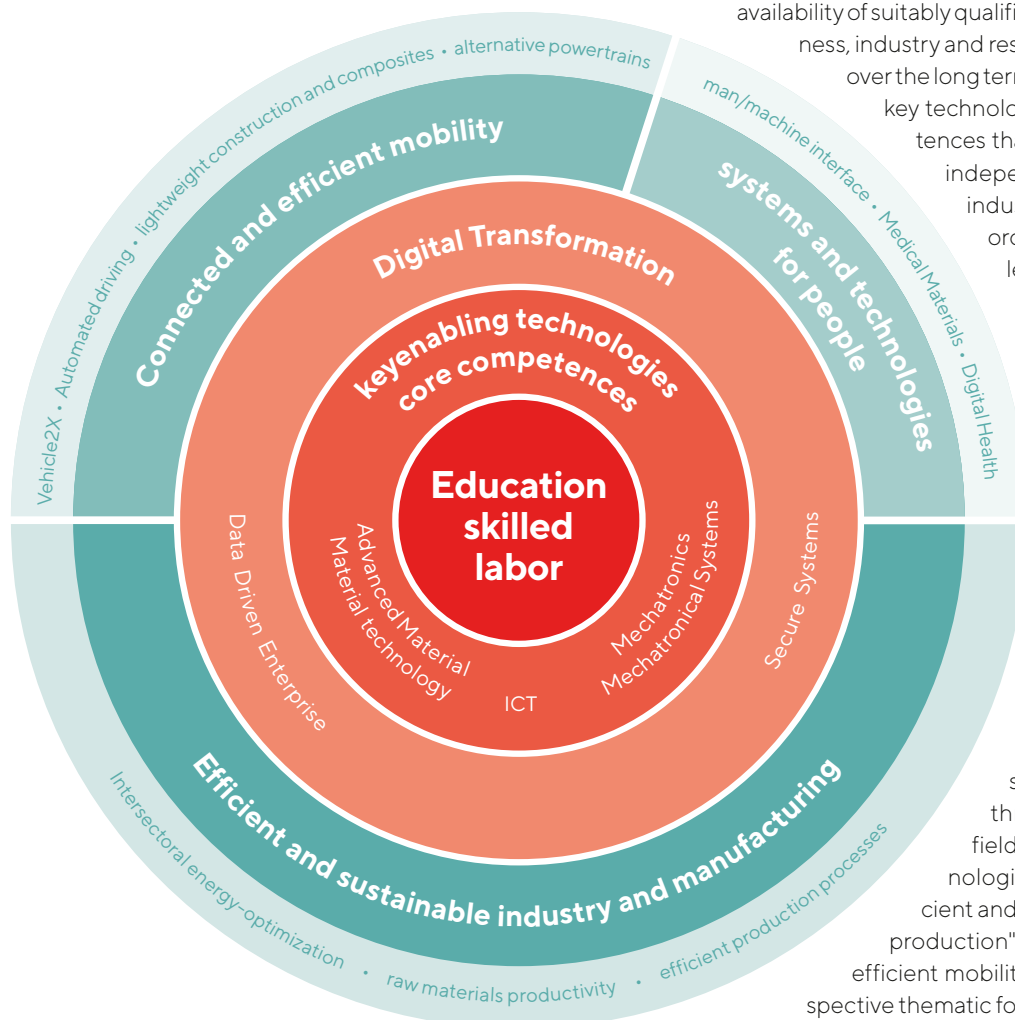


The strategic framework at a glance

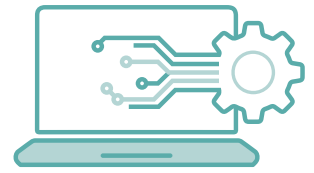
In order for Upper Austria to remain a location for business, industry and research and to maintain its international competitiveness, our objective must be to promote the development of products, services and technologies and to generate more founding, re-searching, technology-oriented and exporting companies in Upper Austria. We focus on smart specialisation and the rapid transfer of research results into business applications in order to place Upper Austria at the forefront of technological developments. In doing so, we build on the existing strengths of our economy and support Upper Austria's leading companies in expanding their technological lead. Through early recognition of disruptive technologies and the rapid identification of areas of application, we can accelerate development of new business models to create future-proof jobs. Positioning Upper Austria as a modern technology location increases its at-

tractiveness and visibility for skilled and talented employees in the face of international competition. We build on our existing regional and national networks and continue to drive internationalisation forward. In order to overcome system and sector boundaries, we need to build bridges between disciplines that have so far been separate. Our objective is to think more in interdisciplinary approaches in order to make maximum use of the competences and expertise available in Upper Austria. Using the latest digital technologies we redesign value chains and ensure regional value chains by encouraging cross-sector cooperation. We set development priorities in areas where we can make promising use of our strengths.

At the centre of #upperVISION2030 are people who are skilled and educated and represent a key location factor for Upper Austria. They form the basis for stable growth. For this reason we must ensure the availability of suitably qualified employees for business, industry and research in Upper Austria over the long term. In addition, there are key technologies and core competences that make Upper Austria independent of a particular industry or subject area. In order to meet future challenges, the existing core competencies and key technologies - especially in the fields of mechatronics, materials, and information and communication technology - are being continuously developed and expanded. In the third circle, the digital transformation stands as an enabler for all business sectors. Finally, the three content-related fields of "Systems & technologies for people", "Efficient and sustainable industry & production" and "Connected and efficient mobility" follow with their respective thematic focuses.



Digital transformation



Digital transformation has had an influence on virtually every area of life. It represents the basis for the further development of the latest technologies and sets the course for Upper Austrian business and industry. Digitisation prompts the rethinking of existing value chains and can change entire business models. Companies are finding that data-based decisions and servitisation are becoming more and more important

and the use of new technologies in data-driven companies also has an impact on existing organisational structures. A basic prerequisite for the networking of machines and processes is that users accept the new technologies. Issues such as data security and having control of one's own data are therefore becoming increasingly relevant.



Objectives

- Use data to generate knowledge and create value by raising the innovation potential of new technologies, such as Big Data, Artificial Intelligence etc. in priority areas of action and transferring new technologies into applications
- Achieve a pioneering position in the field of human-centred AI and set quality standards in the classification of AI systems in terms of security and reliability in the way they are used

What leading Upper Austria strengthened by the digital transformation means for us

- We make businesses aware of the necessity for digital transformation.
- We rethink existing business models and make decisions based on trusted data using new tools and technologies.
- We focus on creating and using secure and correct software and hardware systems.

Efficient and sustainable industry and manufacturing



As the leader in the Austrian ranking, Upper Austria is responsible for a quarter of the total industrial production in our country. Industry and manufacturing in Upper Austria are characterised by a strong business base with many companies that are active internationally. The key to further strengthening the industry and maintaining its high level of value creation lies in the ongoing development of regional production through the use of new technologies. By promoting circular economies we can reduce material consumption and further increase the productivity of raw materials. Because Upper Austria is dependent on importing up to two thirds of its energy, innovations in systems for the storage and distribution of energy will be a decisive success factor for a competitive industry.



Objectives

- Maintain and expand the technological lead of companies in the region in order to continue to successfully place innovative products and services on national and international markets
- Increase the efficiency of Upper Austrian business and industry and position Upper Austria as a region for "Responsible Technologies & Management"

What efficient and sustainable industry and manufacturing in Upper Austria mean for us:

- We develop technological processes that increase flexibility in terms of the use of raw materials, enable the cascading or coupled use of raw and residual materials and generate additional added value as a result.
- We increase the efficiency and sustainability of processes and production methods by implementing new technologies, such as Big Data, Artificial Intelligence, Data Driven Modelling & Simulation etc. with respect to Responsible Technologies and bring these new technologies to practical applications.
- We take into consideration the reuse of components or their recyclability in terms of a holistic product life cycle by promoting recycling-compatible product design.
- We focus on the issues of storage, distribution and efficient consumption of energy and on coupling power, heat, transport and industry by using new technologies and system innovations.
- We see reliable supply, affordability and environmental compatibility as key factors for a competitive reduction in the consumption of fossil fuels.

Systems and technologies for people



Demographic change is shifting the age structure of the Upper Austrian population. While the proportion of younger people is falling, the number of older people is increasing. The lack of skilled workers caused by this development is a strongly limiting factor for the further development of the region. Systems and technologies that allow people to remain actively involved in familiar surroundings for longer can counteract this effect. The interdisciplinary research and work field of medical technology has undergone strong development in Upper Austria over recent years. The human/machine interface, especially in the area of production and manufacturing, and related topics such as the level of acceptance of supporting systems and new technologies by potential users will become even more important in the future.



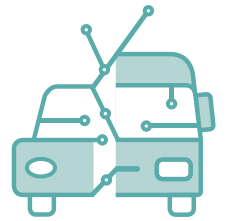
Objectives

- Position Upper Austria as an international competence region for applications at the human/machine interface, especially in the fields of automation and robotics
- Transfer key Upper Austrian technologies and core competences from production to medical technology, especially in the areas of digital health and medical materials

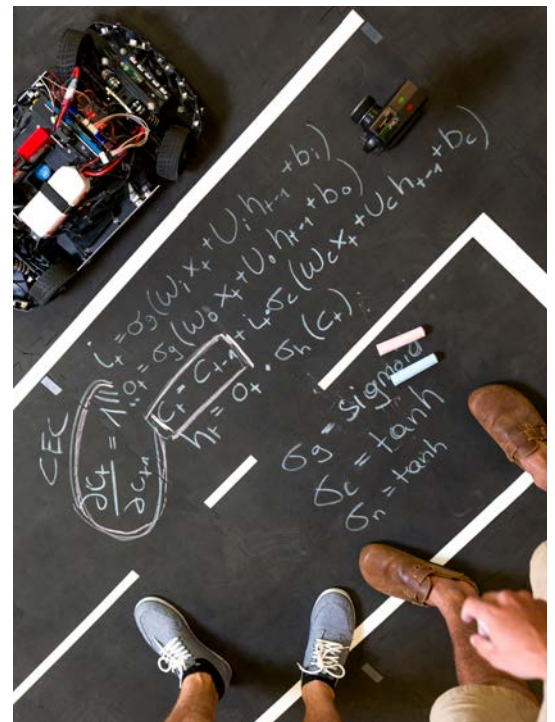
What systems and technologies for people in Upper Austria mean for us:

- We focus our activities on the human/machine interface and create networked, semi-autonomous as well as autonomous systems that enable people to remain actively involved in familiar surroundings for longer.
- We increasingly think in terms of interdisciplinary and holistic approaches in order to benefit from existing competencies and technologies.

Connected and efficient mobility



At the moment around 43 percent of all employees in the Austrian automotive industry are currently working in Upper Austria. The export quota in this industry is 82 percent. The current structural evolution in the mobility sector has a significant impact on Upper Austrian business and the region as a location. For a province that is so strong on exports like Upper Austria, ongoing developments in the automotive industry are essential for maintaining economic stability and securing many jobs in the region. Structural evolution is driving a number of new technologies and system innovations. Developments in the powertrain industry towards alternative drive systems will lead to severe shifts in the value creation chains. New and innovative mobility services as well as digitised vehicle systems will continue to gain in importance in the future.



Objectives

- Make positive use of the structural evolution in the Upper Austrian supplier industry and maintain assertive position in existing and new areas of business
- Position Upper Austria as an attractive location for practical mobility and logistics solutions by using the latest technologies and system innovations derived from business and research

What connected and efficient mobility for Upper Austria mean for us:

- We see the structural evolution in the mobility sector as an opportunity and are handling new demands on Upper Austrian suppliers proactively.
- We focus on the development of new mobility services and network different transport providers to promote the transfer of knowledge and technologies from many different areas.



Implementing Upper Austria's #upperVISION2030 business and research strategy

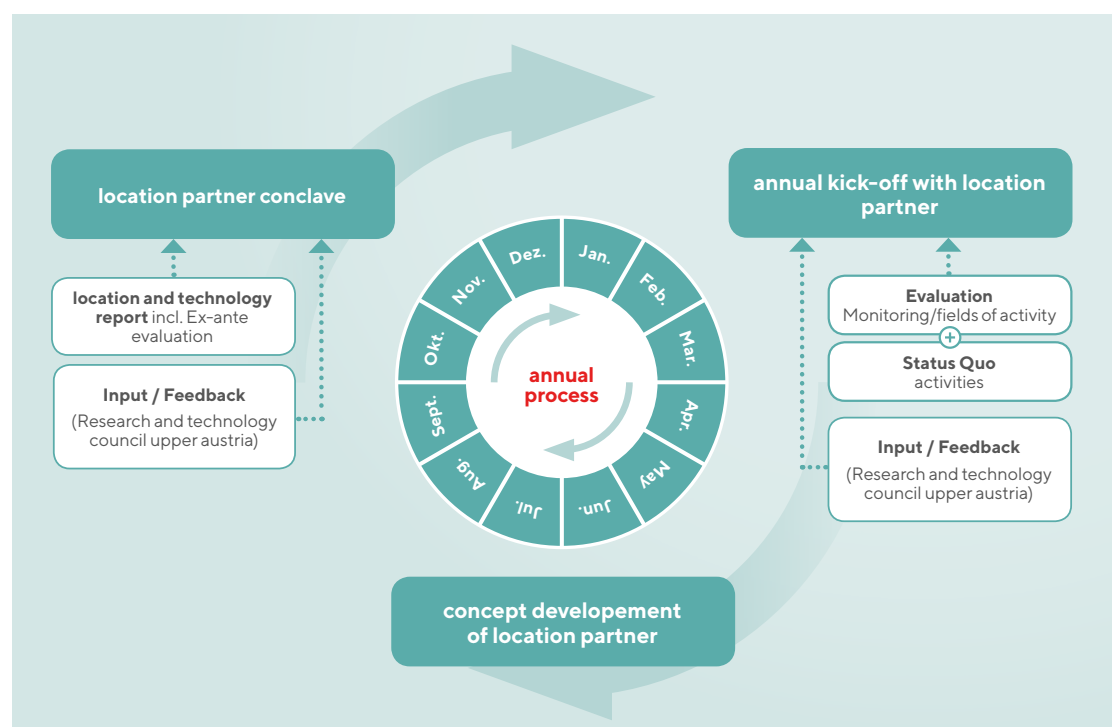
Upper Austria's #upperVISION2030 business and research strategy is integrated into the location partners' objectives system. The interaction of the individual protagonists ensures close coordination with corresponding strategies. A major contribution of the location partners is to see the region as a whole and actively shape the strategy process. Each location

partner needs the freedom to act on its own. Nevertheless, transparency, coordinated measures and the use of synergies in the central fields of action are essential for the successful implementation of the business and research strategy. Within the framework of the control model, the interaction of all the protagonists involved is to be ensured.

Monitoring

Strategic control of the programme is carried out during an annual review. To this end, the implementation and impact of the measures are evaluated on the basis of each objective in each field of action using

defined indicators. The key figures obtained provide information about development in each field of action and show if controlling interventions are needed in milestone planning.



The photos on pages 6, 8, 9 and 10 were taken during "FOTO CHALLENGE 2019 – OÖ Forschung im Bild", a photography competition run by Upper Austrian Research GmbH (UAR), the lead company for research of the province of Upper Austria, with the aim of presenting research in Upper Austria imaginatively and vividly. Three photographers took up the challenge: Elisabeth Mandl focused on research projects in the field of digitalization. Maria Kirchner explored areas of industrial production. Daniela Köppl captured innovations in various areas of mobility and logistics. The photos were taken at more than 15 scientific and industrial research centres all over Upper Austria. Our thanks go to the photographers and Upper Austrian Research GmbH as the competition organizer for their collaboration. Full details on "FOTO CHALLENGE 2019 – OÖ Forschung im Bild" and all the photos from the competition are available at www.foto-challenge.at.



www.uppervision.at