New Venture Scouting
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Expert Paper
Austria's Transfer Ecosystem
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About NVS:

New Venture Scouting (NVS) is an established player in the field of innovation support, specializing in the commercialization of research, technologies, and ideas. With over a decade of experience, NVS has supported numerous startups and spin-offs and has delivered acceleration and incubation programs for renowned academic institutions.

A core competency is the end-to-end support of academic spin-offs, where NVS provides deep expertise in developing ventures to market readiness and offers tailored support for company formation. Another focus lies in optimizing knowledge and technology transfer within universities. To this end, NVS developed guidelines on behalf of the Federal Ministry of Education, Science and Research (BMBWF) for more efficient spin-off processes in academic institutions ("Spin-off Framework"). NVS is currently supporting eleven universities and universities of applied sciences in implementing these guidelines and further developing their innovation activities.

With these two focal areas, NVS occupies a distinctive position, as the company has a strong understanding of both the spin-off perspective and university transfer processes. In addition, NVS is well connected within the Austrian and international academic entrepreneurship ecosystem.

Executive Summary

Austria is a country of researchers and developers. We invest heavily in science and rank among Europe's leaders in public and corporate R&D spending. But when it comes to turning this **scientific excellence into market-ready innovations, economic growth, and new jobs, we lag behind.**

While European research institutions are world-class, there is a lack of capability to translate this knowledge into successful companies, especially start-ups and spin-offs. The United States, and increasingly China, are far ahead of the EU. Indicators such as patent applications, high-tech exports, and above all access to venture capital paint a clear picture:

- Funding gap: In 2023, venture capital investment in the U.S. exceeded that in the EU by a factor of four to five.
- Unicorn dominance: Over 60% of all global unicorns (start-ups valued at over USD 1 billion) are headquartered in the U.S., only 8% in the EU.

The EU has recognized this challenge and responded with initiatives such as the **New European Innovation Agenda** and the **European Innovation Council (EIC)**. Yet the need for action remains substantial.

Austria mirrors the European situation, with some particularities. We are the runner-up in Europe for public R&D spending, but in the EU Innovation Scoreboard we recently slipped from 6th to 8th place. The gap between scientific productivity and commercial exploitation is significant.

The greatest need for action lies with **academic spin-offs**, companies founded out of universities, often based on academic research. They are a central transfer mechanism for turning knowledge into prosperity. Austria has ground to make up in the number of spin-offs: only about **90 academic start-ups** are founded per year. Not a single Austrian university ranks among the **top 10** academic institutions in the DACH region by spin-off counts (6 German universities; 4 Swiss universities), only **3 Austrian universities** are among the **top 25**. These figures show that despite excellent research, we too rarely succeed in building companies from it.

The good news is that this topic has high political and strategic priority in Austria. The **RTI Strategy 2030** (Research, Technology and Innovation Strategy) aims to **double** the number of successful spin-offs, and universities have firmly anchored this goal in their performance agreements. Initiatives such as the **aws Spin-off Initiative** specifically promote the creation of professional investment vehicles and venture-capital funds at universities. There are numerous positive examples where universities are currently

making major strides. However, Austria has a decisive disadvantage: only about **10 to 15 years ago** did we begin to systematically promote knowledge and technology transfer. Countries like the **USA, the UK, and Switzerland** have a decades-long head start and established, thriving ecosystems. To catch up, we must not only keep pace but **accelerate** our development. The great opportunity is that we can **learn from the best** and adopt their proven success models.

As a small market, **cooperation is the key to success**. Instead of thinking in isolated initiatives, we need to build regional and thematic focal points and **pool our strengths**. Only by aggregating the venture creation activities of multiple universities and research institutions can we achieve a **critical mass** of promising projects. This, in turn, makes the location attractive for large companies, international research partners, and, above all, **venture capital investors**. Successful ecosystems actively involve companies and investors **from the very beginning**. We must pursue this integrated approach in Austria as well to close the **financing gap**. Austria is **below the EU average** in venture-capital investment, a fatal weakness if we want to turn start-ups and spin-offs into **scale-ups**. At the university level, three elements are crucial:

- **Targeted scouting & incentives:** Rather than waiting for serendipity, universities must actively search for founding potential within their research priorities and create incentives for researchers, and students, to take the step into entrepreneurship.
- **Professional support:** Spin-off teams need commercially experienced guidance, access to networks, and infrastructure to successfully bring highly complex technologies to market.
- **Access to capital:** Universities must act as door-openers to investors, or as investors themselves, and ensure access to (risk) capital.

Promoting knowledge and technology transfer is **not merely science policy**; it is one of the most important **economic and social policy** tasks of our time. Every euro invested specifically in supporting spin-offs **generates seven euros in GDP growth**. Successful spin-offs not only create highly qualified jobs and address societal challenges through innovation; they also **strengthen the research base** itself. They attract talent, create new research partnerships, and serve as role models that ignite a **new culture of entrepreneurship and innovation**.

Austria stands at a **decisive turning point**. With courage, strategic foresight, and a concerted effort by all stakeholders, we can **close the gap** and make Austria a leading **innovation hotspot** in Europe.

I. The European Context

The so-called **"European Paradox"** describes the discrepancy between the scientific **excellence of European research institutions, on the one hand, and their comparatively weak ability to translate this into successful market innovations, on the other** (Argyropoulou et al. 2019, p. 1). Assessments of Europe's scientific performance have at times produced contradictory results (Nagar et al. 2024, p. 3). For example, China leads the EU and the US in its global share of researchers and scientific publications as well as in the share of top-10% publications (Directorate-General for Research and Innovation 2024, p. 354). The other side of the paradox, however, is undisputed: compared with the United States, **the EU lacks the entrepreneurial capacity to exploit research excellence and translate it into growth, prosperity, and jobs** (Argyropoulou et al. 2019, pp. 2–3; Rothaermel et al. 2007, p. 2). Indicators of research valorisation include, for example, the global share of patent applications or the share of high-tech exports[1], where the EU lags significantly behind China and the United States.

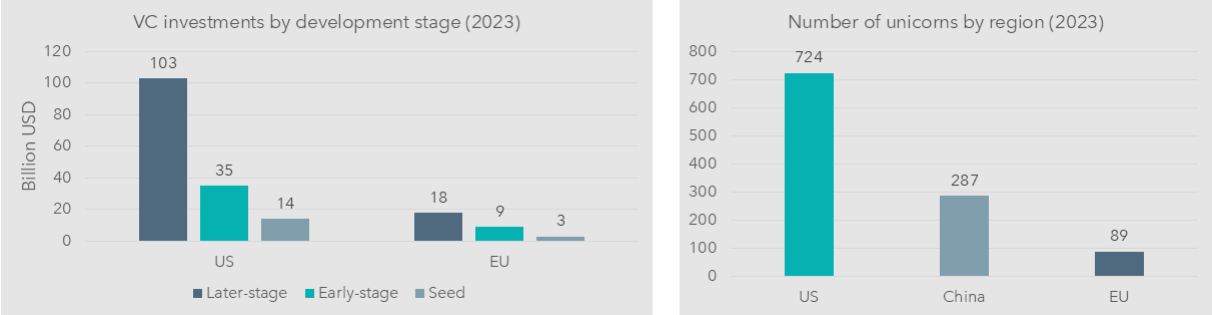
Universities and research institutions play a key role in this context: as central sources of new knowledge, they are engines of innovation and economic growth. They transfer knowledge and technologies into the economy and society. **The economic significance of transfer activities is substantial.** A study of the 24 leading European research universities shows, for example, that their knowledge and technology transfer activities generate annual gross value added of €33 billion and secure around 400,000 jobs (BiGGAR Economics 2017, pp. 23–24). **An essential transfer mechanism is the creation of companies based on university knowledge and research**, so-called academic **spin-offs**. Spin-offs translate research results, through commercialization, into tangible products or services that can have real impact. In doing so, they strengthen **competitiveness,** create **skilled jobs**, and **address societal challenges** through innovation. At the same time, universities and research institutions themselves benefit, for example, through positive reputational effects, financial returns, and increased attractiveness for students and researchers.

However, s**pin-offs (and start-ups) in the EU face a number of barriers**, such as financing, shortages of skilled labor, and the need to adapt social norms and values to enable the diffusion of new technologies (Directorate-General for Research and Innovation 2024, p. 357). Access to finance is a particularly critical factor**. In 2023, venture-capital investment in the United States exceeded that in the EU at early stages by a factor of four to five, with the gap even larger in later financing rounds.**

[1] The share of high-tech exports in total trade not only helps measure an economy's technological competitiveness, it also reflects its ability to commercialize and disseminate the results of research and innovation (Directorate-General for Research and Innovation 2024, p. 352).

These differences are reflected in the fact that more than 60% of all global unicorns are based in the U.S., while only 8% are located in the EU.

Figure 1: *Financing and scaling in international comparison*



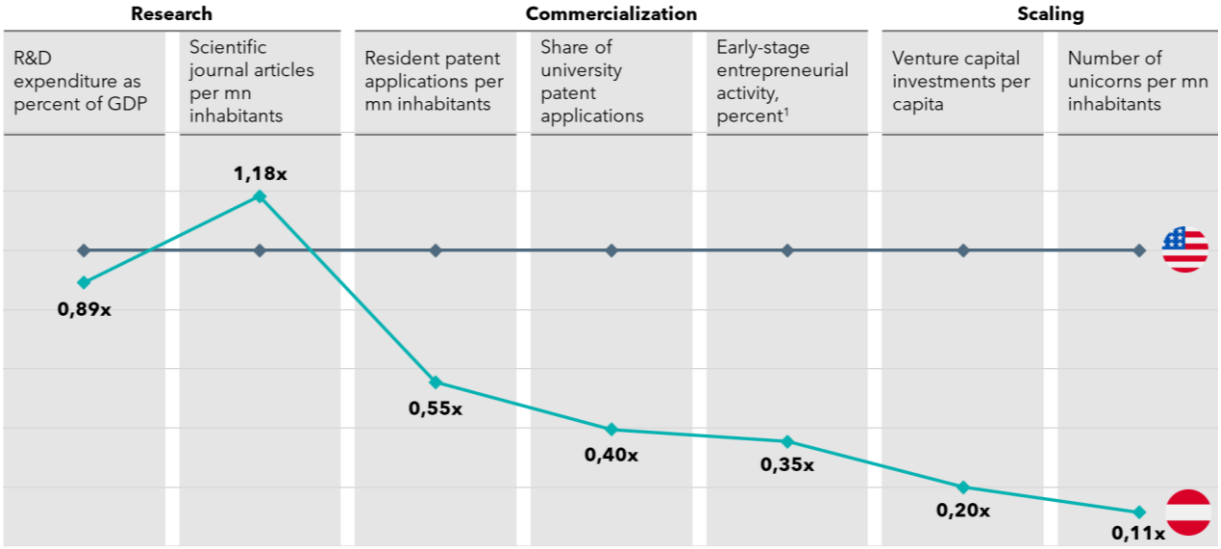
Source: Own illustration based on Directorate-General for Research and Innovation 2024, p. 35

To increase innovation and transfer activities and address the challenges mentioned, various initiatives have been launched at the European level. These include, for example, the New European Innovation Agenda, the European Innovation Council (EIC), and various initiatives grouped under Horizon Europe (Directorate-General for Research and Innovation 2024, pp. 342–364). In addition, the European Commission plans to develop a comprehensive startup and scale-up strategy (European Commission 2025b).

II. Spotlight Austria

A similar picture emerges in Austria: **the promotion of innovation in general, and of transfer and spin-offs in particular, still has room for improvement.** A clear trend can be seen, for example, in comparison with the United States. While Austria is at a similar level on indicators of scientific productivity, the U.S. stands out on indicators of commercialization (patent applications, share of university patent applications, and entrepreneurial activity) and especially in financing and scaling.

Figure 2: *The gap in commercialization and scaling*



[1]Percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business

Sources: World Bank, World Intellectual Property Organization, Global Entrepreneurship Monitor, EY, CB Insights; data from 2022 / 2023

Even in comparison within the EU, there is still ground to make up. While Austria is a leader in spending on research and development (rank 2 for public-sector R&D expenditure[2], 2023–2025; rank 3 for business-sector[3] R&D expenditure, 2023–2025), **it has slipped in the EU countries' innovation ranking from 6th in 2023 to 7th in 2024 and to 8th in 2025** (European Commission 2025a).

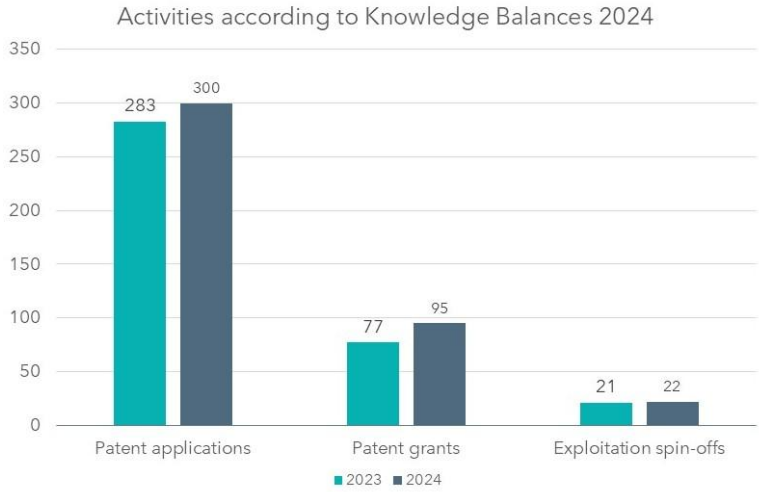
In particular, Austria still has catching up to do in academic spin-offs by international comparison (Ecker et al. 2024, p. 9). According to an extrapolation by the Austrian Startup Monitor, **around 90 academic start-ups per year are currently created in Austria** (Leitner et al. 2025, p. 16). The RTI Monitor shows a slightly rising trend in the number of academic start-ups over the past years (Council for Research, Science, Innovation and Technology Development 2024). This framework records all start-ups that originate at universities, universities of applied sciences, and research institutions and are founded either in the course of an academic education (15% of all start-ups) or an academic employment relationship (8.1% of all start-ups) (Leitner et al. 2025, p. 16).

[2] Public-sector R&D expenditure (as a percentage of GDP): R&D spending is one of the most important drivers of economic growth in a knowledge-based economy. Expenditure on research and development is essential for the transition to a knowledge-based economy, for improving production technologies, and for stimulating growth. This indicator is calculated by dividing the total R&D expenditure of the government sector (GOVERD) and the higher education sector (HERD) by gross domestic product (GDP).

[3] Business-sector R&D expenditure (as a percentage of GDP): This indicator captures the formal creation of new knowledge within firms. It is particularly important in science-intensive sectors (pharmaceuticals, chemicals, and certain areas of electronics), where most new knowledge is generated in or near R&D laboratories. The indicator is calculated by dividing total R&D expenditure of the business enterprise sector (BERD) by gross domestic product (GDP).

Beyond extrapolations, spin-off figures are unfortunately difficult to obtain, for Austria itself as well as for international comparison. The annual knowledge balance sheets of the public universities are one source, though universities of applied sciences and extra-university research institutions are not included. These balance sheets capture so-called commercialization spin-offs, i.e., spin-offs based on intellectual property owned by the university, and therefore use a narrower definition than the Austrian Startup Monitor. **According to the knowledge balance sheets, a total of 22 commercialization spin-offs were created at the public universities in 2024.** Individual leading universities in Europe (e.g., University of Cambridge, ETH Zurich, TU Munich) thus generate more commercialization spin-offs than all Austrian universities combined.

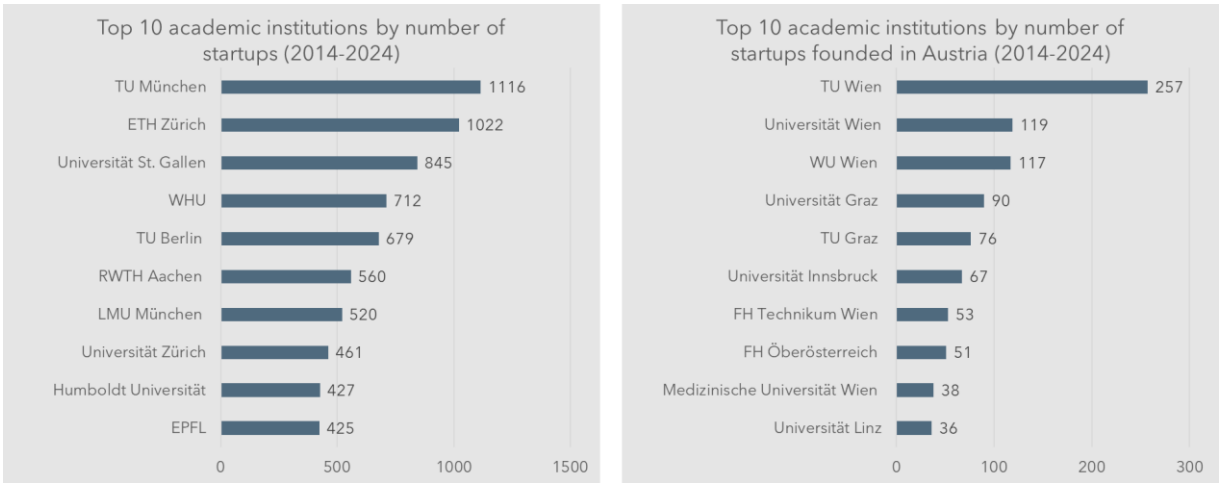
Figure 3: *Commercialization activities of public Austrian universities*



Source: Knowledge balance sheets 2024

A detailed international comparison is unfortunately not possible due to limited data availability. However, a recently published study compares start-ups from academic institutions in the DACH region (Lemanczyk et al. 2025). The study uses a very broad definition: start-ups are assigned to academic institutions if the founders studied or worked at the respective institution, or if the start-up's website indicates a connection to the university. **In terms of the number of start-ups, universities from Germany and Switzerland dominate the top ranks of the ranking** (period 2014 to 2024). **No Austrian university is among the top 10; only three universities** (TU Wien, WU Wien, University of Vienna) are in the top 25. If only start-ups that have received funding are included, only one Austrian university is **among the top 25** (TU Wien).

Figure 4: *Entrepreneurial impact of universities in the DACH region*



Source: Lemanczyk et al. 2025

III. Looking ahead – further development of the ecosystem

The topic of transfer and spin-offs currently carries high importance in Austria. A study on the effects of knowledge and technology transfer found, for example, that **one euro of targeted support for spin-offs leads to a GDP increase of seven euros** (Keuschnigg et al. 2022, p. 55). **Accordingly, numerous initiatives have been launched to promote transfer activities, and spin-offs in particular.** The **RTI Strategy** envisages 100% more economically successful academic spin-offs by 2030 (Federal Government of the Republic of Austria 2020, p. 7). The **Government Programme 2025–2029** likewise provides for safeguarding knowledge and technology transfer (Federal Chancellery 2025, p. 194). The topic is also prioritized at university level. The Austrian University Development Plan 2025–2030 includes, among other things, strengthening university TTOs, fostering an entrepreneurial mindset, and further developing IP and commercialization strategies (Federal Ministry of Education, Science and Research 2022, p. 37). In addition, since the 2016–2018 performance-agreement period, numerous Third Mission priorities have been set in the performance agreements with universities (Federal Ministry for Women, Science and Research n.d.). The 2025–2027 performance agreements aim to further expand knowledge transfer through targeted support of academic spin-offs. They foresee the creation of 89 new commercialization spin-offs and the **implementation of the uniform spin-off framework** (Federal Ministry of Education, Science and Research 2025, p. 39).

Alongside integrating spin-offs into overall university strategy, establishing clear and transparent spin-off guidelines, defining a standardized spin-off process, and developing a differentiated commercialization and participation strategy, the spin-off framework also recommends developing suitable, individualized commercialization and participation structures, for example, in the form of an external company (Wutscher et al. 2024, pp. 7–

9). This refers to the creation of a subsidiary by the university specifically to invest in and support spin-offs. The establishment of such investment companies by Austrian universities is currently being financially supported by the **aws Spin-off Initiative**, under which several new entities are now being created and existing ones expanded (Austria Wirtschaftsservice 2024). In addition, the Spin-off Initiative supports the creation of university-adjacent venture-capital funds to finance spin-offs.

As a result, much is in motion, and **there are numerous positive developments and initiatives to promote transfer.** Positive examples include the **Medical University of Innsbruck**, the **Vienna University of Economics and Business (WU)**, and **TU Wien**:

- Medical University of Innsbruck succeeded, within just one year, in setting up an external company to support and invest in spin-offs – MedLifeLab – and in defining a standardized, holistic innovation process. (https://medlifelab.at/)
- WU Vienna, having built a comprehensive portfolio of support programs for start-ups in recent years, is now establishing a company specifically for financing start-ups and spin-offs. (https://www.wu.ac.at/presse/presseaussendungen/presseaussendung-details/detail/wu-ignite-ventures-neue-initiative-foerdert-universitaere-spin-offs)
- TU Wien, in cooperation with Speedinvest, founded Noctua Science Ventures – a venture-capital fund specifically for financing academic spin-offs. This makes an important contribution to improving access to finance for spin-offs in Austria. (https://noctua.vc/)

At the same time, Austria's starting conditions are challenging. **In many other countries**, such as the USA, the UK, Switzerland, and the Nordic countries, knowledge and technology transfer has been **systematically promoted for several decades**. As a result, flourishing spin-off and transfer ecosystems have already emerged there. **Austria only began intensifying its activities in this direction about 10 to 15 years ago. To catch up** with leading locations internationally and in Europe, it is not enough to merely replicate their development; **we must accelerate our own.** At the same time, this presents a major opportunity: Austria does not have to start from scratch but can **use the best practices of the most successful international ecosystems as guidance and replicate them** to increase transfer in a targeted manner.

From our perspective, this yields the following needs for action at both the regional level and the university level.

A. The Regional Level – Ecosystem Lens

As a relatively small location, cooperation is indispensable and **should be significantly expanded along regional or thematic focal points.** Only in this way can we compete with international flagships. In addition, it makes sense to set research priorities jointly with cooperation partners in order to invest in infrastructure in a targeted way and to generate sufficient innovation projects and spin-offs within the chosen focal areas. A positive example of ecosystem building are the emerging EXIST Startup Factories in Germany (https://startup-factories.de/en/), which not only bundle the start-up activities of various universities and research institutions in a region (in some cases with specific thematic focuses such as life sciences), but also actively involve companies and investors from the outset.

Only through cooperation can a **critical mass of projects (spin-offs), and thus visibility, be achieved. Only then does an ecosystem become attractive to actors** such as companies, investors, and research partners. If it is possible to attract the right partners, a pull effect emerges for future projects. Particularly noteworthy here is the increasing attractiveness for venture-capital providers, for whom an ecosystem only becomes interesting once there is a critical mass of promising investment cases. Austria ranks 16th in venture-capital investment relative to GDP compared with other EU countries and is therefore below the EU average (European Commission 2025a). **Access to financing is, however, one of the critical success factors for spin-offs,** which often require substantial capital to commercialize highly complex technologies.

B. The University Level

To establish a holistic, professional, and durable transfer model at the university level, three essential, mutually reinforcing elements are required:

First, **targeted scouting and incentives for venture creation**, aligned with research priorities, to increase the number of spin-offs and innovation projects overall; **second, professional support** for emerging projects by a commercially experienced team, plus the provision of **infrastructure** to ensure their positive development; third, **access to (risk) capital** to support the growth of spin-offs, either provided by the university itself or through a network of investors.

If such a model is implemented consistently and pursued sustainably, it not only fulfills the university's Third Mission, but also generates benefits for research and teaching as well as for the institution as a whole:

- **Positive reputational effects** of successful innovation activities attract and retain talent (students and researchers). They open doors to hands-on experience, valuable exchange, and new career paths.

- Potential research partnerships with spin-offs emerge, along with expanded opportunities for **third-party funding**. Successful spin-offs can also **generate financial returns**, ideally reinvested in expanding transfer activities.
- Successful spin-offs serve as role models and thereby **strengthen the university's start-up and innovation culture**. The creation of new companies revitalizes the regional ecosystem, enhances the location's attractiveness, and attracts additional investors, corporate partners, and human capital.

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