swiTT**report** 2025

SWISS TECHNOLOGY TRANSFER REPORT

swiTT
swiss technology transfer association

CASE STUDY

LYMPHODRAIN – HANDLING AND RELIEVING LYMPHEDEMA

Problem – Challenge

Lymphedema is a chronic condition resulting in a local swelling, often of one arm or one leg, caused by the build- up of lymph under the skin. The condition, as well as the limb swelling, is permanent. On top of the swelling, it causes pain, recurrent skin infections and impaired movements, in many cases resulting in a state of disability for the patient. As of today, lymphedema cannot be cured. However, a series of therapies are commonly performed, based on the combination of decongestion therapy, massages, lymphatic drainage and compression strategies. These treatments do not remove the cause of the problem but aim only at treating the side effects. Indeed, the disease is not cured and the side effects always come back: the patients must undergo lifelong treatments.

Solution

Lymphatica Medtech SA is further developing an implantable pump system to drain and relieve lymphedema in the arms or in the limbs.

Lymphatica closed successfully a series B in 2024 after the successful award Breakthrough Device Designation from the U.S. Food and Drug Administration (FDA) for its revolutionary product, LymphoDrain. This designation program facilitates an expedited review process for products demonstrating potential to provide more effective treatment for irreversibly debilitating diseases. LymphoDrain's designation underscores its status as a breakthrough technology, offering significant advantages over existing alternatives, and prioritizes patient access to transformative therapies.

Medical fluid drainage system

CONTENTS

CASE STUDIES

SUMMARY

The annual survey "swiTTreport" is the most comprehensive analysis of the technology transfer activities of Swiss public research organisations (PRO). The report covers two main areas, a) research contracts of the participating institutions with private or public partners, and b) the activities for the economic exploitation of research results from these institutions. The Swiss PRO interact actively with partners in the economy. These activities are collectively designated in the report as "technology transfer" (TT) activities.

Data on technology transfer activities from seven cantonal universities, the two Federal Institutes of Technology (collectively Universities) and three research institutions of the ETH domain (RI) were available for this year's report.

Overall, the respondents reported the following indicators on technology transfer activities in 2024:

2918	New Research Projects
585	Invention Disclosures
333	Priority Patent Applications
203	License & Option Agreements
87	Start-Ups founded

ZUSAMMENFASSUNG

Der jährlich publizierte "swiTTreport" ist die umfassendste Analyse der Technologietransferaktivitäten öffentlicher Forschungsinstitutionen (PRO) in der Schweiz. Dieser Bericht umfasst zwei Hauptbereiche: Forschungsverträge mit privaten und öffentlichen Institutionen und die wirtschaftliche Verwertung von Forschungsergebnissen. Diese Aktivitäten werden häufig auch unter dem Begriff „Technologietransfer" zusammengefasst. Der Bericht zeigt, dass die schweizerischen PRO aktiv und erfolgreich mit der Wirtschaft interagieren.

Der Bericht umfasst die Aktivitäten von sieben kantonalen Universitäten, der beiden ETHs (zusammengefasst unter Universitäten) und von drei Forschungsinstitutionen des ETH-Bereichs (RI).
Insgesamt rapportierten die teilnehmenden Institutionen die folgenden Kennzahlen über ihre Technologietransferaktivitäten im Jahr 2024:

2918	Neue Forschungsprojekte
585	Erfindungsmeldungen
333	Patentanmeldungen
203	Lizenz- & Optionsvereinbarungen
87	Start-Ups gegründet

RÉSUMÉ

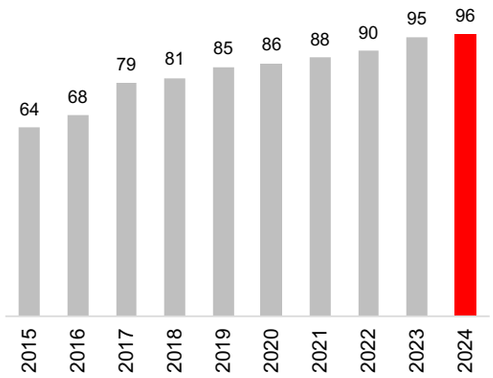
La présente analyse est la plus exhaustive connue sur les activités de transfert de technologies réalisées par les institutions publiques de recherche suisses. Le rapport couvre deux aspects principaux: les contrats de recherche de ces institutions avec des partenaires privés ou publics et les activités liées à la valorisation des résultats de recherche obtenus par ces institutions. Les dernières interagissent activement avec le secteur privé. Ce rapport désigne collectivement ces collaborations et activités de valorisation sous les termes de transfert de technologies (TT).

Ces données proviennent de sept universités cantonales et deux Ecoles Polytechniques fédérales (Universités) et de trois institutions de recherche dans le domaine des Ecoles Polytechniques Fédérales EPF (RI).

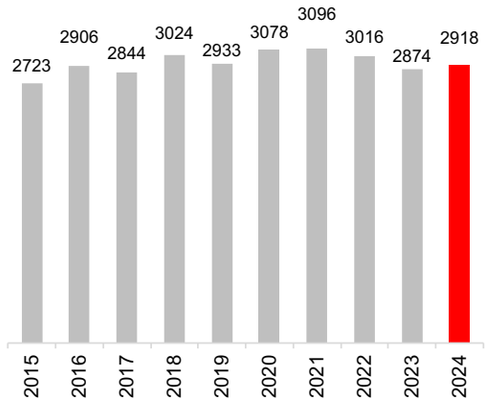
Dans l'ensemble, les personnes interrogées ont communiqué les chiffres clés suivants sur les activités de TT en 2024:

2918	Nouvelles collaborations de recherche
585	Déclarations d'invention
333	Demandes de brevets
203	Contrats de licence et accords d'option
87	Créations de start-ups

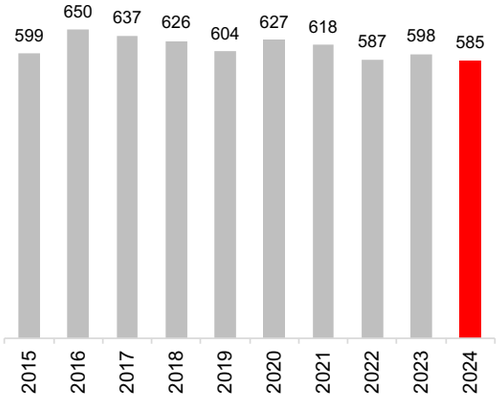
Full Time Equivalents (total)



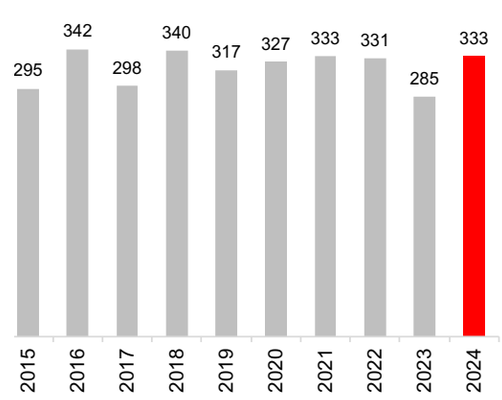
Research Contracts (total)



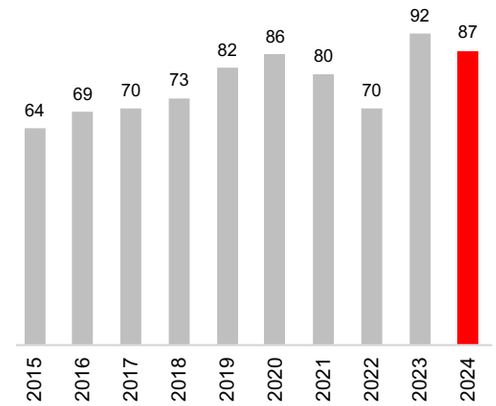
Invention Disclosures (total)



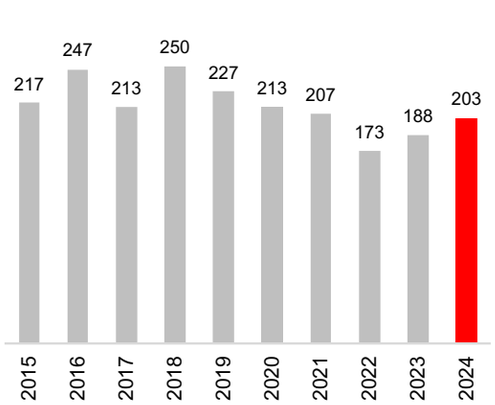
Patent Applications (total)



Start-Ups (total)



License Contracts (total)



Development of key numbers for UNI and RI

Overall data of the last ten years show a solid outcome of the TT activities in Switzerland.

CASE STUDY

AEROBREW – SCALABLE AND SUSTAINABLE FUEL FOR AVIATION

Problem – Challenge

Aviation contributes over 2 percent of global CO_2 emissions, posing a significant challenge for decarbonization. With rising demand for air travel, CO_2-free propulsion systems (such as batteries or hydrogen) can only cover a fraction of the energy needs. There is a massive need for sustainable aviation fuel (SAF). Innovative solutions are required that reduce emissions without needing fundamental changes to existing infrastructure. The aviation industry needs scalable and efficient fuel solutions to achieve substantial emissions reductions. Current technologies for SAF are not yet scalable or economically viable on a global scale.

Solution

The Paul Scherrer Institute (PSI) and climate start-up Metafuels are jointly developing the aerobrew technology, which enables the seamless transition from fossil kerosene to sustainable aviation fuel through a patented process that converts green methanol into SAF. The technology allows production of bio-SAF as well as eSAF depending upon whether bio-methanol or e-methanol is used as feedstock.

For the e-route, green methanol is produced from green hydrogen (H_2) and sustainably sourced CO_2.

Green hydrogen is generated via water electrolysis using renewable electricity, while CO_2 is sourced from biogenic sources or waste biomass (such as wood or plant waste) or directly from the air in the long term.

A key advantage of aerobrew is that when blended with conventional jet fuel, the resulting SAF can be used in conventional engines without modifying existing aircraft fleets or refueling infrastructure, simplifying the transition to climate-friendly aviation. aerobrew Demonstration plant, operational in 2025 at PSI, will demonstrate the industrial-scale conversion of methanol to SAF and lay the groundwork for commercial deployment.

Supported by a 4.4 million Swiss Franc grant from the Swiss Federal Office of Energy's (BFE) Pilot & Demonstration program, the project will unlock scale-up of the technology for global commercial use, marking a major step in decarbonizing aviation.

For the legal framing of this collaboration, PSI's TTO has supported for more than 50 agreements to date.

Climate-friendly aviation made possible by eSAF from green methanol.

Looking into the future of flight: Sustainable fuels like eSAF make climate-friendly mobility possible without losing the fascination of air travel.

1. PARTICIPATING INSTITUTIONS AND DATA COLLECTION

Two Swiss Federal Institutes of Technology (ETH), eight cantonal universities and three research institutes (RI) in the ETH domain were contacted in spring 2025 and asked to provide data on their technology transfer (TT) activities for the year 2024. The expression "technology transfer" used in this report covers the activities of these institutions with regard to research collaborations with partners from the economy and the commercialization of research results for the benefit of the economy and society overall.

The questionnaire was returned by both ETH's, seven cantonal universities and all contacted members of the RI. The data show that the handling of research collaborations with economic partners and other technology transfer activities varies substantially among different institutions. Of note: not all of them were able to provide a comprehensive overview and hence all aggregated data showed in this report represent the lower boundary of the actual situation. Appendix 1 shows the institutions that participated in the survey and comments on the comprehensiveness of the data provided.

The report provides aggregate data for the types UNI and RI of institutions covered in this survey (Appendix 2, see end note). For those institutions that agreed to disclose individual data some key figures are listed in Appendix 3.

Universities

At several universities, only contracts for collaborative research projects with economic partners above a certain threshold need to be signed by university management. Therefore, not all collaborative projects can be reported by such institutions. Activities in research and technology transfer at university hospitals are usually closely linked to the respective university, hence the services of these TTOs are also available to researchers at the hospitals.

RI

The research institutions that participated in the survey have centralized support functions providing technology transfer services for the researchers.

2. INSTITUTIONAL RESOURCES FOR TECHNOLOGY TRANSFER

2.1 Services Provided

All UNI TTO are handling contracts for research collaborations. However, at several Institutions the finalization of research agreements with the support of a centralised administrative department (e.g. TTO) is not mandatory, or not all contracts are covered (e.g. contracts for EU project or contracts <50 kCHF not included). All UNI TTO deal with the handling and commercialization of intellectual property (IP), which includes the evaluation of the commercialization potential of products or services based on research results, the protection and management of IP, and the licensing or sale of IP to industrial partners. Two of nine TTO at UNI also provided support for the coaching of start-up projects.

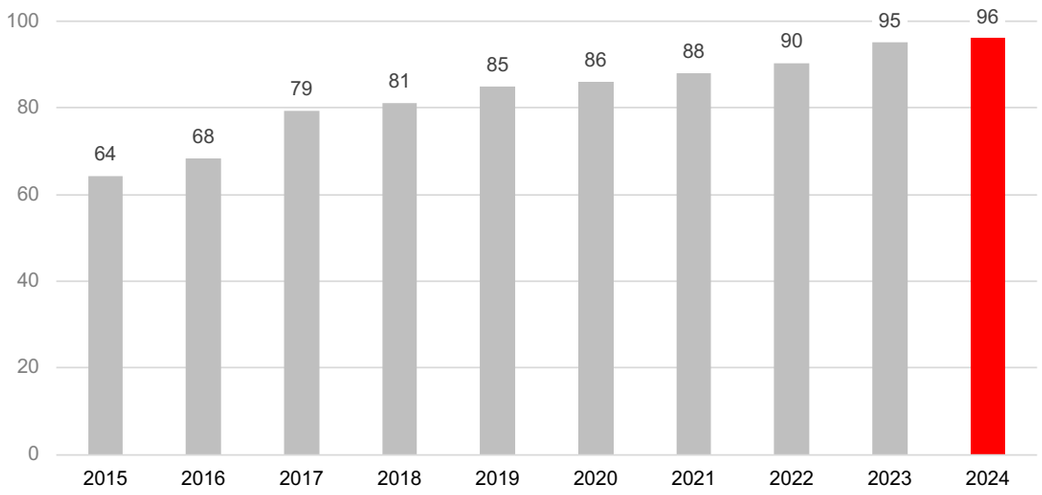
All RI TTO offer support for research collaborations, deal with the management of IP and support the commercialization of IP (licensing, marketing). Coaching of start-up projects is offered by one RI TTO.

2.2 Staffing

Staffing refers to the number of full-time equivalents (FTE) employed for TT activities at an institution. These are professionals such as licensing, intellectual property, technology or research contract managers and administrational staff, whose main occupation is in the area of technology transfer. Their activities cover the drafting and negotiating of research and cooperation agreements, intellectual property management, patent portfolio management, patent, technology licensing and other technology transfer activities. Part of the staff may also be involved in the support of start-up projects (Fig. 1).

TTO typically collaborate with external patent firms for the drafting, filing and prosecution of patent applications and may address specific legal issues to external attorneys. Several TTO outsource legal issues to external attorneys. At some institutions, start-up projects are handled by dedicated organizations such as business incubators.

Fig.1: Development of Staffing Level / Full Time Equivalents



3. RESEARCH CONTRACTS WITH PARTNERS

3.1 Research Contracts Handled by the TTO

In 2024, the UNI and RI TTO handled a total of 2918 research contracts with economic and public partners. Research contracts handled by UNI increased by 3.7 % and research contracts handled by RI decreased by 7.9 %.

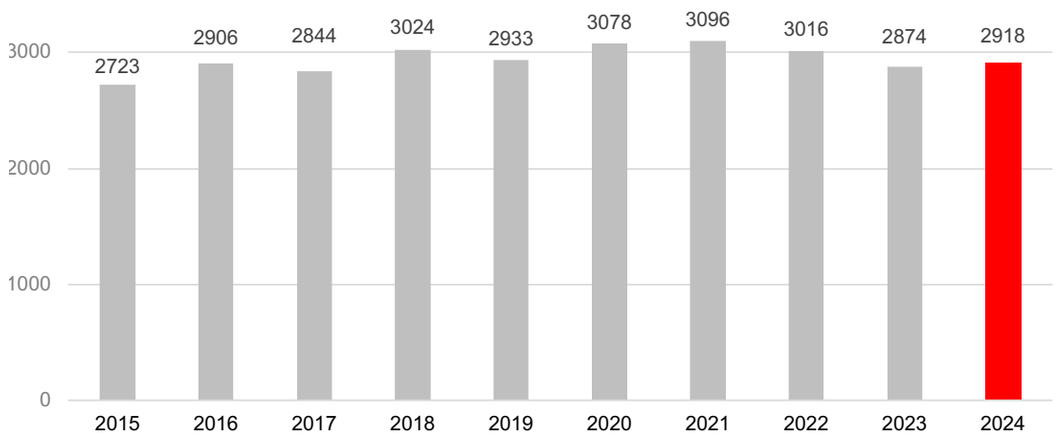
This number includes collaboration agreements, clinical trial agreements, Innosuisse IPR and EU collaboration agreements. SNSF projects (with funding provisions) are only included in these numbers if they involve multiple partners and therefore a collaboration agreement (Fig. 2).

Research collaborations between academia and industry are a key aspect of TT, they do indeed bring benefits to academia and the economy. They not only allow industry to access the know-how and infrastructure of academia, companies also gain access to academic talents through such collaborations. Likewise, academic labs can also benefit from the know-how and infrastructure of the industrial partners. The funding of joint projects by partners from the economy may account for a significant part to the research budgets of certain PRO.

Such collaborations are a great opportunity to feed and enrich each other in cutting edge innovation areas.

In addition to research collaborations, TTO handle other types of agreements which foster the cooperation between academia and economic partners, such as consulting agreements, material transfer agreements (MTA), and non-disclosure agreements (NDA). In 2024, the institutions reported altogether 2629 such other types of TT agreements (-9.5%).

Fig. 2: Number of Research Agreements Contracts handled by TTO

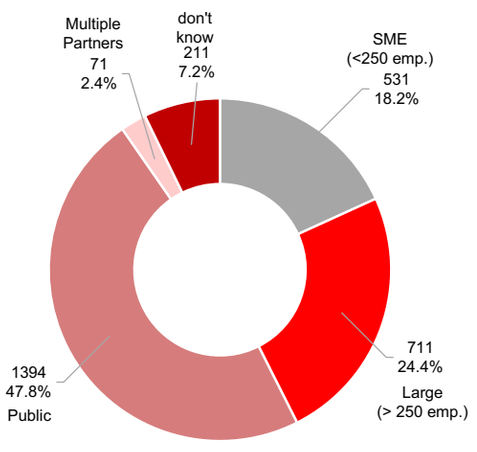


3.2 Type of Collaboration Partners

With respect to the type of collaboration partner, the small- and medium-sized enterprises (SME), i.e. companies with fewer than 250 employees, account for 18.2 % of total research contracts reported for 2024 (Fig. 3).

If one considers only reported collaborative projects with the private sector (SME plus large companies and multiple partners), SME account for 40.4 % of all projects with commercial partners.

Fig.3: Partners in Research Contracts



CASE STUDY

Institute of Oncology Research

GRAPHSIGHT

GRAPHSIGHT – AI-POWERED ENERGY FORECASTING

Problem – Challenge

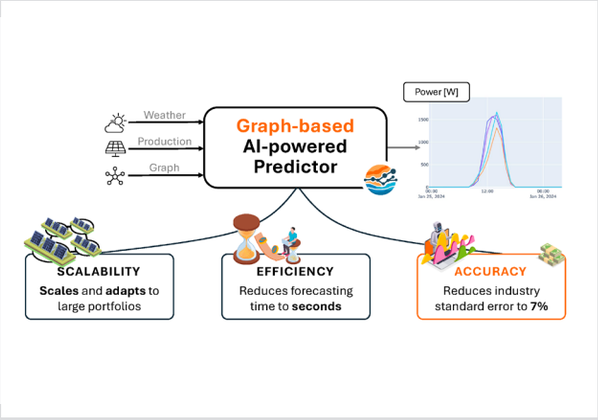
Photovoltaic (PV) energy production is inherently volatile, influenced by factors such as weather, temperature, and system aging. This variability complicates energy pricing and forecasting, presenting challenges for producers, grid operators, and energy traders. Accurate forecasting is essential to stabilize energy markets, reduce costs, enhance grid reliability, and support the broader integration of renewables.

Solution

GraphSight SA delivers next-generation PV production forecasting, reducing prediction error by over 10% compared to existing methods. Its forecasting service provides highly accurate intra-day and day-ahead predictions, enabling energy stakeholders to optimize trading strategies, improve grid balancing, and lower reliance on costly reserves. GraphSight's platform efficiently captures complex spatial and temporal dependencies, delivering forecasts that are more robust, adaptive, and computationally efficient than traditional models. This results in tangible benefits across the energy value chain, from producers to traders and consumers.

The innovation originates from cutting-edge research conducted at the Università della Svizzera italiana (USI). At its core is a novel application of graph deep learning, an advanced AI technique designed to model complex spatio-temporal dynamics.

Founded in 2024 as a USI spin-off, GraphSight has successfully in-licensed proprietary software developed at the university. GraphSight has already gained early recognition, earning an award at the Boldbrain Startup Challenge and securing a place in the USI Startup Centre incubator. It has also established a strategic partnership with DXT Commodities and is actively pursuing opportunities to scale and enter new markets.



CASE STUDY

ETH zürich HEMETRON

HEMETRON – BLOOD TESTS ENABLING PERSONALIZED TREATMENTS

Problem – Challenge

The ability to tailor treatments to each individual - based on how their body responds in real time - has the potential to dramatically improve outcomes, reduce side effects, and lower healthcare costs. But to truly personalize therapy, clinicians need continuous, objective insights into how a treatment is working for this patient - not just at the clinic, but every day. Today, most treatment decisions are still made with incomplete information. Doctors rely on infrequent check-ups, delayed lab results, and subjective symptom reports. As a result, treatment adjustments are often too late or too generic missing the chance to prevent complications or optimize care.

Solution

An at-home blood test for disease monitoring was developed, which yields quantitative, real-time data. A key component of the test unit are antibody coated gold nanoparticles. In case the disease target is present, the gold particles attach themselves via the antibodies to the target.

The electro-chemical read-out then quantifies the amount of gold as a proxy for the amount of disease targets. A noteworthy feature of the electrochemical procedure is that it completely avoids toxic oxidants for the dissolution of the gold particles. In addition, the hardware for the readout was developed to demonstrate translatability towards low-cost electronics. While the reader is reusable, the test strips are for single use.

The ETH spin-off Hemetron is commercializing the blood test for inflammatory rheumatic diseases. In rheumatology, frequent treatment monitoring is especially urgent. Autoimmune diseases like rheumatoid arthritis are dynamic and unpredictable, with inflammation levels that can change rapidly. Hemetron brings lab-grade monitoring into the home, giving rheumatologists a continuous stream of actionable data. They can detect flare-ups early, adjust treatments in time, and better match the right treatment to the right patient.

Hemetron's scanner for inflammatory rheumatic diseases: Patients receive a reusable reader and disposable test strips. Data sharing with the physician works seamlessly via smartphone app.

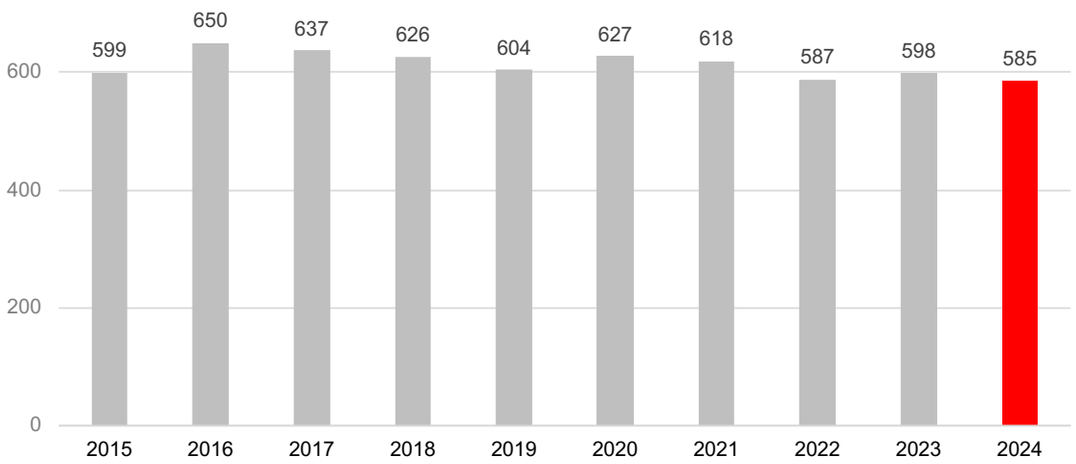
4. COMMERCIALIZATION ACTIVITIES

Research results of UNI and RI do have the potential to form the basis for innovative products and services which are developed and later commercialized by companies. The public institutions strive to make research results with a potential for socio-economic impact available to the private sector. Usually this is done through licensing of technologies to companies. To raise the attractiveness of academic TT and licensing for industry, research results with socio-economic potential need to be screened and identified, and the corresponding intellectual property rights need to be secured. While software is protected by copyright, protection of most new technologies is sought in form of patent applications. Without an appropriate protection of the intellectual property, industrial or financial investors in many industry sectors will not consider investing for the research and development of products that are then free to be copied by competitors.

With regard to patentable inventions, this process involves the following main steps: identification and evaluation of research results through invention disclosures, filing of patent applications, identification of suitable licensing partners, negotiating and concluding license agreements with existing companies or newly created start-up companies. Within many institutions, the creation of such start-up companies is supported by various additional services.

Sections 4.1 – 4.4. of this report describe the key TT indicators on commercialization activities from the participating institutions, section 4.4 is in particular related to start-ups.

Fig. 4: Number of Invention Disclosures



4.1 Invention Disclosures

A total number of 585 invention disclosures were reported by UNI and RI for 2024, a slightly decreased number compared to the previous year (Fig. 4)

4.2 Patenting Activities

4.2.1 Priority Patent Applications

The protection of intellectual property in the form of patents is of great importance in many industry sectors. This is particularly true for industries with high product development costs and long product lifecycles, e.g. biotechnology and pharmaceuticals.

The TTO at PRO must decide at an early stage about filing patent applications because patenting of an invention is no longer possible after the results have been rendered public in scientific journals or through other channels.

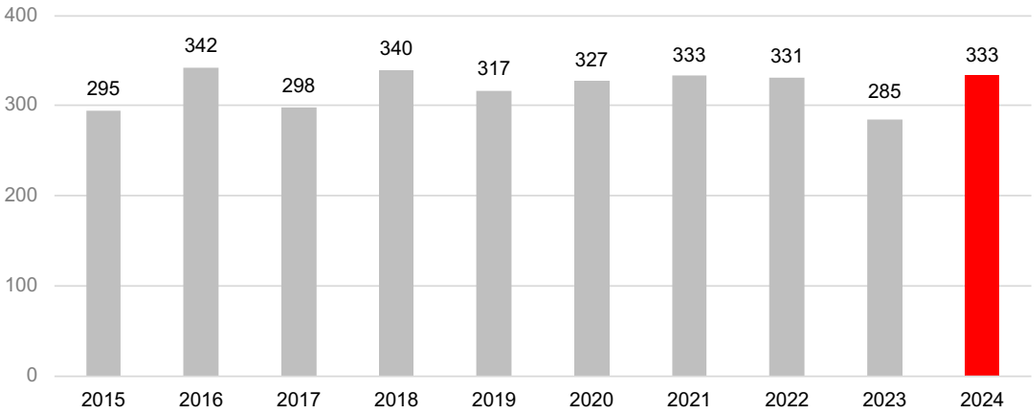
Moreover, many companies will not consider evaluating a new technology if it is not protected by a patent. Thus, patenting activities of PRO can be a prerequisite for entering into a partnership with an industrial partner. The reported number of 333 priority applications filed in 2024 by UNI and RI is a significant increase (ca. 16.8 %) compared to the previous years (Fig. 5).

4.2.2 Patent Portfolio – Active Patent Cases End of 2024

At the end of 2024, the institutions participating in the survey reported 2659 (-19.6 %) active patent cases which were either licensed to a company or for which they were searching for a licensee.

Marketing of such technology opportunities is done by the PRO through various channels. Identifying the responsible person within the organization of a potential licensee is a challenge, and often existing contacts of researchers are used to approach companies. To support the research institutions in their technology marketing efforts, swiTT runs the searchable national technology portal swiTTlist (www.switt.ch/swittlist) providing industry with a quick and easy, up-to-date overview of current technology opportunities from Swiss PRO. TTO regularly upload new technologies on this searchable portal. With the help of an automatic alert system, company representatives are informed immediately each time a new technology is available in their field of interest.

Fig. 5: Number of Priority Patent Applications Filed



4.3 Licensing

4.3.1 Licenses and Sales of Intellectual Property (IP)

In 2024, overall 203 (+8.0%) new IP agreements, usually licenses, were reported by UNI and RI, in a few cases the agreements involved a sale of the IP rather than a license (Fig. 6). In total 90.6% of all agreements were handled by Universities.

4.3.2 Type of Licensing Partners

PRO regularly license technologies to their start-up companies. Thus, start-up companies play an important role in developing university technologies. Depending on the industry segment that they are active in and on the particular product they have, these companies will either market the final products themselves or will sublicense the technologies to larger companies that have the necessary know-how and resources to bring the product successfully on to the market.

Frequently, projects or start-ups are acquired by larger companies once their products or services have reached sufficient maturity.

4.3.3 License Portfolio and License Income

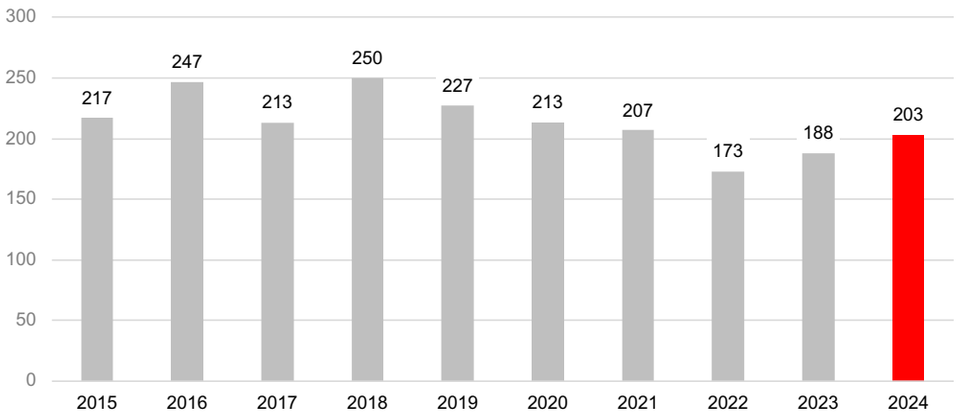
The number of active licenses under management by UNI and RI at the end of 2024 was reported as 1604 (+1.3%) cases.

These figures reflect the typical situation of licenses granted to industry by PRO. Many of the licensed technologies are at an early stage and require extensive development by the licensee. It often takes several years until a product reaches the market. The development risk is often high for these early stage technologies, and a significant number of projects are stopped before a marketable product is ready.

When licensing to start-up companies, some institutions may accept equity in such companies as a partial compensation for the licensing of technology. Such equity transactions usually replace down-payments or early milestone payments in order to avoid any cash drain from the start-up at the early stage of development. This results in a deferral of license revenues from such licenses until the shares in such start-up companies are sold by the institutions.

In the past years more institutions started to accept equity as part of their license deals, thus reducing the annual licensing income and adding the management of an equity portfolio to their services.

Fig. 6: Number of new Licenses, Option or Sales agreements for Intellectual Property Rights (IPR)

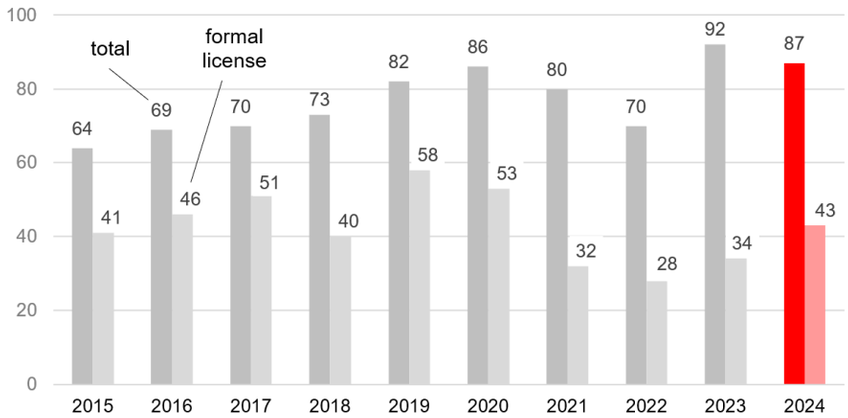


4.4 Start-up* Companies

In 2024 the TTO reported a total of 87 new start-up companies (-5.4%), whereby 43 of these companies (49.4 %) relied on a license or a contractual transfer of intellectual property from a PRO (Fig. 7).

The remaining companies were created on the basis of know-how developed at the research institutions without a formal license. After a decline in number of start-ups from 2020 to 2022 down to 70, the total number has stabilized in 2023/2024 in the range of 90.

Fig. 7: Number of Start-up Companies Founded



* *The PRO have partially different designations for the newly founded companies with relations to the organisation. The terms "Spin-off", "Start-up", "Spin-out" and more are used and are partially based on different definitions. In the frame of this report (as in the previous reports) the term "Start-up" is used for newly founded companies fulfilling the following criteria:*

- *The companies have a business case dominantly based on research results of the PRO, a formal IP license is not required*
- *At least one (co-)founder has an affiliation to the PRO (employee, graduate, alumnus).*

CASE STUDY

UNIVERSITY CHILDREN'S HOSPITAL ZURICH
Swiss Children's Rehab

moovly

compliag

MOOVLY – REHABILITATION AND PHYSIOTHERAPY USING VR

Solution

moovly® is an innovative add-on to conventional physiotherapy, creating a motivating, varied and safe training environment for movement activities. During a therapy session with moovly®, patients are immersed in a virtual environment using a virtual reality head-mounted display. They can actively move around the room and interact with the virtual objects. The therapist can monitor what the patients are experiencing on a smartphone and adjust the therapy settings to the patient's individual level and therapy goals.

moovly® was developed at Kinder-Reha Schweiz in close collaboration with the therapists. Young people with movement disorders and their parents were involved in the development. The aim was to enable the training of gait-related activities that are relevant for patients in everyday life.

The research team of the Swiss Children's Rehab of the University Children's Hospital Zurich created the concept and developed the application. The company compliag AG, Zug, acquired the software license from the University of Zurich and is manufacturing, improving and distributing the product moovly® since January 2025 as a medical device in Switzerland.

CASE STUDY

BTRY – RETHINKING BATTERIES

Problem – Challenge

Lithium-ion batteries are everywhere: from smartphones and laptops to cars and satellites orbiting the earth. It is currently our most mature battery technology. Nevertheless, it is not ideal for all applications. Lithium-ion batteries lose capacity with every charging and discharging cycle, charge relatively slowly and only work well in a rather narrow temperature range.

Solution

To address these issues, Empa and ETH Zurich spin-off BTRY is developing a next-generation battery technology: Thin-film solid-state batteries that are not only safer and more durable but can also be charged and discharged in just one minute. The battery achieves a high energy density thanks to an innovative process in which thin layers are precisely stacked on top of each other. What's more, it is non-flammable, temperature-resistant and more environmentally friendly to manufacture. Thin-film batteries have a wide range of applications. They could be used in consumer electronics such as smartphones or smartwatches, but also in sensors, robots, drones or satellites.

Until recently, thin-film batteries could only store very little energy. The founders have succeeded in stacking the thin-film cells, which are only a few micrometers thick, into more powerful batteries. They have developed a new process that uses a high-precision vacuum coating and no toxic solvents. Production is scalable and uses advanced but proven techniques to ensure efficiency and quality.

With funding secured from an initial financing round, BTRY is starting pilot production to manufacture the first prototypes and obtain customer feedback. The goal: to further optimize the battery and tailor it to the requirements of different markets.

BTRY exclusively licenses the technology originally developed at Empa. The founders Abdessalem Aribia and Moritz Futscher see great potential in their technology and want to optimize it to revolutionize energy storage in the long term.

Working thin-film battery from BTRY

APPENDIX 1 – INSTITUTIONS WITH TECHNOLOGY TRANSFER ACTIVITIES CONTACTED FOR THE SURVEY AND COMMENTS ON THEIR DATA PROVIDED

Universities	TT-Office	Comments on data provided
Ecole Polytechnique Fédéral (EPF) Lausanne	TTO	Complete data, research contracts <50 kCHF only partly
Eidgenössische Technische Hochschule (ETH) Zürich	ETH transfer	Complete data, research contracts <50 kCHF only partly
Universität Basel / Universitätsspital Basel	Unitectra	Only aggregated data, data only for the Medical, Natural Sciences and Psychology Faculties, partial data for hospital
Universität Bern / Inselspital	Unitectra	Only aggregated data, data only for the Medical, Vetsuisse and Natural Science Faculties, no data for research agreements of other faculties
Université de Fribourg, including Adolphe Merkle Institute	Tech Transfer Fribourg	Partial data, not all contracts pass through TTO, especially SNSF or EU-grants are treated by other entities as the TTO
Université de Genève / Hôpitaux universitaires de Genève	Unitec	Complete data for commercialization activities, research contracts
Université de Lausanne / Centre Hospitalier Universitaire Vaudois Lausanne	PACTT	Complete data for commercialization activities, research contract
Université de Neuchâtel	TTO	No data
Università della Svizzera italiana (USI) / Institute for Research in Biomedicine (IRB) / Institute for Oncology Research (IOR)	USI Transfer	Complete data
Universität Zürich / Universitätsspital	Unitectra	Only aggregated data, data only for the Medical, Vetsuisse and Natural Science Faculties, no data for research agreements of other faculties

Research Institutes	TT-Office	Comments on data provided
Swiss Federal Institute for Materials Science and Technology (Empa)	Empa-Eawag TTO	Complete data
Swiss Federal Institute of Aquatic Science and Technology (Eawag)	Empa-Eawag TTO	Complete data
Paul Scherrer Institut (PSI)	PSI TTO	Complete data

Following universities with main scope in humanities were not contacted:
University of Lucerne, University of St. Gallen

APPENDIX 2 – DETAILED DATA 2015 – 2024

All Public Research Organisations	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Full-time equivalents (FTE)	64.3	68.4	79.3	81.2	84.9	85.5	88.1	90.3	95.2	96.0
Research contracts (incl. EU contracts)	2723	2906	2844	3024	2933	3078	3096	3016	2874	2918
Invention disclosures	599	650	637	626	604	627	618	587	598	585
Priority patent applications	295	342	298	340	317	327	333	331	285	333
Active patent cases end of the year	2182	2388	2505	2567	2696	2776	2960	3408	3307	2659
License agreements	217	247	213	250	227	213	207	173	188	203
Active license agreements end of the year	1472	1588	1412	1541	1647	1462	1366	1485	1583	1604
License agreements with revenues in resp. year	246	461	450	380	400	442	605	510	500	327
New start-ups	64 (41)	69 (46)	70 (51)	73 (40)	82 (58)	86 (53)	80 (32)	70 (28)	92 (34)	87 (43)

Universities	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Full-time equivalents (FTE)	55.5	59.2	70.2	70.3	73.7	74.5	77.1	79.3	84.1	84.9
Research contracts (incl. EU contracts)	2303	2465	2435	2574	2508	2603	2548	2493	2327	2414
Invention disclosures	565	606	593	592	568	589	579	558	571	565
Priority patent applications	262	320	271	314	293	301	307	304	271	308
Active patent cases end of the year	2008	2202	2318	2376	2492	2560	2743	3179	3074	2419
License agreements	192	229	198	228	206	189	173	163	158	184
Active license agreements end of the year	1352	1478	1313	1438	1543	1393	1306	1430	1489	1550
License agreements with revenues in resp. year	203	410	429	357	373	414	584	491	470	297
New start-ups	58 (41)	64 (44)	61 (44)	71 (38)	78 (54)	80 (49)	77 (32)	65 (27)	86 (30)	85 (41)

RI	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Full-time equivalents (FTE)	8.8	9.2	9.1	10.9	11.2	11.0	11.0	11.0	11.1	11.1
Research contracts (incl. EU contracts)	420	441	409	450	425	475	548	523	547	504
Invention disclosures	34	44	44	34	36	38	39	29	27	20
Priority patent applications	33	22	27	26	24	26	26	27	14	25
Active patent cases end of the year	174	186	187	191	204	216	217	229	233	240
License agreements	25	18	15	22	21	24	34	10	30	19
Active license agreements end of the year	120	110	99	103	104	69	60	55	94	54
License agreements with revenues in resp. year	43	51	21	23	27	28	21	19	30	30
New start-ups	6 (0)	5 (2)	9 (7)	2 (2)	4 (4)	6 (4)	3 (0)	5 (1)	6 (4)	2 (2)

For new start-ups the numbers in parentheses refer to start-ups on basis of a formal license.
The number of the institutions that participated in the survey varies between years.

APPENDIX 3 – KEY PARAMETERS FOR INDIVIDUAL INSTITUTIONS FOR 2024

Institution	Name TTO	Start TTO	# of TTO FTE	# research contracts	# of invention disclosures	# of priority applications	# of IP agree-ments	# of start-ups
Universities								
Ecole Polytechnique Fédéral (EPF) Lausanne	EPFL-TTO	1993	15.0	256	129	79	46	24
Eidgenössische Technische Hochschule (ETH) Zürich	ETH transfer	1995	30.6	653	146	107	46	37
Universität Basel / Universitätsspital Basel Universität Bern / Inselspital Universität Zürich / Universitätsspital Zürich	Unitectra	1999	13.2	1065	152	73	56	13
Université de Genève / Hôpitaux universitaires de Genève	Unitec	1998	10.6	75	63	25	10	3
Université de Lausanne / Centre Hospitalier Universitaire Vaudois Lausanne	PACTT	2000	10.2	259	56	11	29	6
Università della Svizzera italiana (USI) / Institute for Research in Biomedicine (IRB) Institute for Oncology Research (IOR)	USI Transfer	2018	2.0	99	9	7	3	1
RI								
Swiss Federal Institute for Materials Science and Technology (Empa)	Empa-Eawag TTO	2005	4.1	194	13	17	6	0
Swiss Federal Institute of Aquatic Science and Technology (Eawag)	Empa-Eawag TTO	2001	1.7	74	0	1	0	0
Paul Scherrer Institut (PSI)	PSI TTO	1999	5.3	236	7	7	13	2

Note: The table lists individual data only of those institutions that agreed to publish it.

GLOSSARY

EPF	Ecoles Polytechniques Fédérales
ETH	Swiss Federal Institutes of Technology
EU	European Union
FTE	Full Time Equivalent (for the number of employees)
IP	Intellectual Property
MTA	Material Transfer Agreement
NDA	Non-Disclosure Agreement
PRO	Public Research Organisation
RI	Swiss Federal Research Institutions in the ETH domain
SME	Small- and Medium-sized Enterprises (<250 employees)
SNSF	Swiss National Science Foundation
Start-up	Newly established company founded or co-founded by researchers from the respective institution and which either relies on a formal license of IP or on know-how developed at the institution
swiTT	Swiss Technology Transfer Association
TT	Technology Transfer
TTO	Technology Transfer Office(s)
Universities	Cantonal Universities and Swiss Federal Institutes of Technology

CASE STUDY

UNIVERSITÄT BERN

machineMD

MACHINEMD – NEOS: A NEW ERA IN OCULOMETRICS

Problem – Challenge

Neuro-ophthalmic examinations are an essential part of brain function assessment. Abnormalities in eye and pupil movements can serve as important clinical indicators for diagnosing and monitoring systemic diseases such as Multiple Sclerosis and Parkinson's.

Currently, these exams are performed manually with mostly qualitative results. Misdiagnosis based on manual exams affects 50% of patients, leading to significant harm for 26% and unnecessary procedures for 80%.

These time-intensive manual examinations also result in long waiting times, exacerbated by a shortage of highly trained neuro-ophthalmologists, leaving a significant gap in the availability of accurate and timely diagnostic expertise.

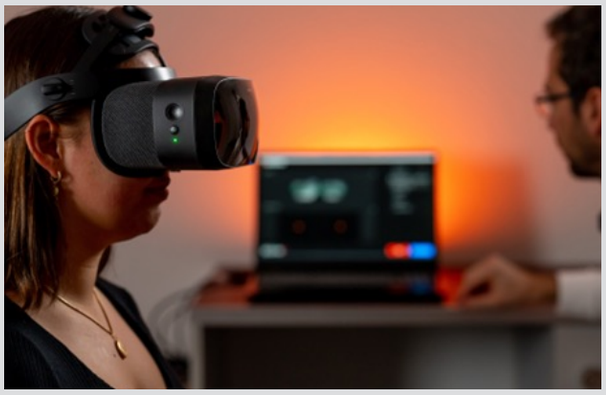
Solution

neos®, is a non-invasive medical device that automates the measurement of eye movements and pupillary function.

Using an industry-leading VR headset with high-speed infrared eye tracking, neos® performs a fast, objective examination, with intuitive, gamified stimuli that are accessible for pediatrics and adults.

Secure cloud processing transforms these measurements into quantitative insights, indicated to support the detection of disease-related impairments.

neos® is the first device to combine eight neuro-ophthalmic exams in a single, portable system, making advanced neurodiagnostics faster, more accessible, and cost-effective.



CASE STUDY

ANAXAM – IMPACT OF NEEDLE CLOGGING ON DRUG DISTRIBUTION

Problem – Challenge

Prefilled syringes (PFS) are a common packaging solution for the subcutaneous injection of drug solutions, offering both convenience and safety. However, the current trend towards developing increasingly concentrated drug solutions has led to a higher rate of needle blockage problems. These can result in increased injection forces and potential issues with correct drug delivery. One of the greatest challenges is understanding the impact of needle blockages on drug distribution in tissue and preventing this from affecting the effectiveness of the treatment.

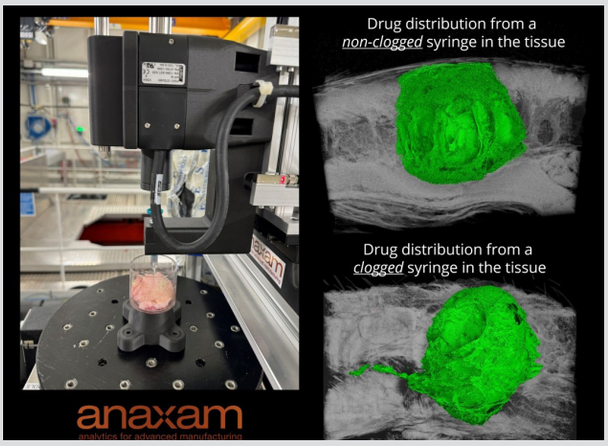
Solution

ANAXAM is a technology transfer platform for Advanced Manufacturing located in the Switzerland Innovation Park Innovaare and leverages the use of PSI's large research facilities. In collaboration with Novartis, ANAXAM conducted a groundbreaking study using synchrotron X-ray tomography.

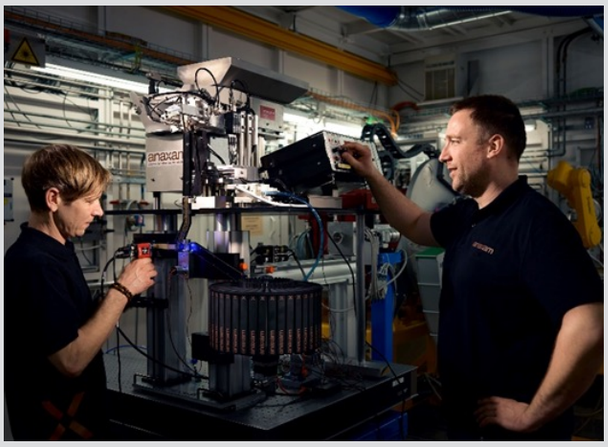
The goal was to understand how needle blockages affect the distribution pattern of drugs in tissue. Using high-resolution 3D images generated through tube-based X-ray and synchrotron radiation microtomography, it was demonstrated for the first time that a blocked needle distributes the drug differently than an unblocked one. Without blockage, the drug spreads in a three-dimensional pattern mainly between fat lobules, whereas with a blocked needle, the drug is forced deeper into the subcutaneous fiber network under high pressure.

These results provide valuable insights into improving injection safety and efficiency and help address future challenges in the development of PFS injections.

Synchrotron X-ray tomography enables high-resolution visualization of drug distribution in tissue. The study revealed clear differences between injections from clogged and non-clogged syringes.



ANAXAM engineers setting up an experiment using advanced imaging techniques to support industrial research and innovation.



APPENDIX 4 – THE QUESTIONNAIRE

swiTT Technology Transfer Survey 2024 (online survey)

Preliminary Notes:

► All questions refer to the previous calendar year. Please make your statements accordingly.

► If no answer is available for certain questions, please indicate with "**-1**". Questions for which your office or your institution does not collect data should be as well indicated with "**-1**" and should not be answered by giving an estimate.

1. Confidentiality

Do you agree to the publication of your individual data collected in the questions marked [pub] **under your institution name?**	☐ Yes	☐ No
Do you agree to the publication of your individual data collected in the question marked [pub2] *(Start-up companies based on license)* **under your institution name?**	☐ Yes	☐ No
Do you agree to the publication of your individual data collected in the question marked [pub3] *(Start-up companies in which your instutution holds equity)* **under your institution name?**	☐ Yes	☐ No

Note: In case you tick "Yes", your input for the questions marked [pub], [pub2] and/or [pub3] *will be published both in aggregated format as well as related to your institution (in the Appendix 3). In case you tick "No", your input for the questions marked* [pub], [pub2] *and/or* [pub3] *will be published in aggregated format only.*

2. Background Information

2.1 Name of the academic institution		
2.2 Is your institution associated with a university hospital? *Note: If "Yes", all figures given below should include the numbers of the hospital(s).*	☐ Yes	☐ No
2.3 Does your institution have a dedicated office (TTO) / responsible person for TT activities?	☐ Yes	☐ No
If "Yes", in which year did the TT program start? [pub]		
2.4 Name of the responsible contact person for the survey		

2.5 Contact information of the TTO and the responsible contact person for TT activities

Name Institution:	
Name of the TTO:	
Name contact person:	
Street:	
Postal Code:	
City:	
Telephone (1):	
Telephone (2):	
E-Mail:	

3. Activities and Human Ressources

3.1 What are the activities of your TTO?

(A) Research contracts (drafting, negotiating, controlling)	☐ Yes	☐ No
(B) Evaluation, protection and management of IP	☐ Yes	☐ No
(C) Commercialisation of IP (licensing, marketing)	☐ Yes	☐ No
(D) Support and/or Coaching of start-up projects	☐ Yes	☐ No
(E) Financial administration of research projects	☐ Yes	☐ No

3.2 Full time equivalents FTE employed in your TTO on Dec. 31st of last year [pub] FTE

Note: Please consider staff with main occupations (> 20%) in the area of technology transfer, such as 'Licensing Officers', 'Intellectual Property Managers', 'Technology Managers', or 'Research Contract Officers'. Please do not include project managers carrying out transfer projects.

3.3 Of these FTE, how many were employed to work on

(A) Technology transfer activities	FTE
(B) Administration and general management	FTE

Comment 3.1 - 3.3
(e.g.if additional people outside your TTO but inside your institution are also working in technology transfer activities according to 3.1, special organisation with specific faculties, centralized/decentralized organisations)

4. Research and Development

4.1 Total number of new research contracts handled by your TTO [pub]

Note: The number should include collaboration agreements, service agreements, clinical trial agreements, Innosuisse complementary and EU agreements. The number should not include MTAs, NDAs, other TT contracts (see 4.3) and SNSF contracts.

Of these research contracts, how many were executed with small and medium enterprises (SME), how many with large companies and how many with public partners?
Note: Companies with 250 or less employees should be considered as SME.

SME:	
Large Company:	
Public Institution:	
Multiple Partners:	
Don't know:	

4.2 Amount of cash payments due to your institution from research contracts that were handled by your TTO according to 4.1 CHF

Note: Please give the amount of cash due to your institution, without any material assets e.g. for machinery. Please consider not the total amount of research projects, e.g. if an EU project adds up to 3 Mio. EUR but your institution gets only 200'000 thereof, the latter shall be given. Please do not split the amount if the contract is covering several years but report the full amount in the year the contract is signed.

4.3 Number of other technology transfer contracts handled by your TTO

Note: Please consider non-disclosure agreements (NDA), Material Transfer Agreements (MTA), consulting contracts, inter-institutional contracts, sponsoring, donations. Please do not include the contracts already considered for 4.1 and do not include license, optioan and sales agreements.

Comment 4.1 - 4.3
(e.g. restrictions/regulations of your institution. Knowledge of ALL contracts or only contracts above a certain amount)

5. Patent-Related Activities

5.1 Number of invention disclosures received by your TTO [pub]

5.2 Number of priority applications filed by your TTO
Note: Priority application being the very first application in any patent office.

5.3 Overall number of active patent cases at the end of last year managed by your TTO

Note: Active patents cases are pending patent applications or granted patents on an invention (patent family). Applications in various countries on one invention (claiming the same priority date) count as one patent case.

6. Patenting Costs and Legal Fees

6.1 Amount spent by your TTO / institution on patenting costs and external legal fees CHF

Note: Amount should include all external costs for patent filing, prosecution, maintenance, litigation, expenses or costs for drafting or support in negotiation of contracts.

6.2 Amount of patenting costs and legal fees invoiced to commercialization partners CHF

Note: Amount should not include patenting costs or legal fees paid directly by licensees or external partners to patent attorneys, patent offices or other service providers.

7. License, Option and Sales Agreements

7.1 Number of license / option / sale agreements of protected or unprotected IP your TTO did execute [pub]

Note: Please count only the agreements for different technologies, i.e. 30 licenses for the same software library count as one agreement. If a license agreement is combined with a research agreement (e.g. advanced sale of the results of a research project), this contract shall count only as research contract and should not be included in this question unless the invention / software that is licensed / sold exists already at the execution date of the research contracts (background IP).

Of these license / option / sale agreements, how many were licensed to SME, how many to large companies or public institutions?
Note: Companies with 250 or less employees should be considered as SME.

SME:
Large Company:
Public Institution:
Multiple Partners:
Don't know:

7.2 Number of license / option / sale agreements including equity?
Note: Equity shall mean the ownership of interest in a company such as shares, options, warrants, etc. in consideration for granting a license or sale of IP.

7.3 Overall number of license/option/sale agreements active as of December 31 last year

Comment 7.1 - 7.3
(e.g. large variations to previous years, special situation, i.e. with free software licenses, openBSD, etc)

8. Number of License Agreements

8.1 Total number of license / option / sale agreements yielding revenues

8.2 Total number of license / option / sale agreements yielding running royalties
Note: Running royalties are based on product sales and are only due after the launch of a product in the market.

9. Start-up companies (*)

9.1 Total number of start-up companies formed at your institution [pub]

(A) Of these start-up companies, how many are dependent on license / option / sale agreement(s) with your institution? [pub2]

(B) Of these start-up companies, how many are dependent on unprotected know-how or technology of your institution (without formal agreement)?

9.2 Number of new start-up companies in which your institution holds equity [pub3]

(*) As "Start-up company" all enterprises should be considered, that had their first entry in the trade registry in the previous year and that have a business case dominantly based on research of your organisation.and that have at least one (co-)founder with affiliation to your organisation (employee, graduate, alumnus).

10. Post-Licensing Activities

Number of your institution's licensed technologies that became available for consumer or commercial use last year
Note: If you have success cases for publishing in the report, please use the template sent to you or contact swiTT.

Comments

(if you want to bring additional comments or suggestions to the attention of the team of the swiTTreport, please post them here)

swiTT
swiss technology transfer association

swiTT's vision is to advance Switzerland as a powerhouse of technology transfer, supported by a thriving network of collaboration and shared experience.

swiTT, the Swiss Technology Transfer Association, is the association of the professionals in Switzerland dealing with the interaction between public research and industry. swiTT currently has more than 100 members from all parts of Switzerland. Most of them work in technology transfer at PRO, others are employed in the private sector.

For further information about swiTT, please refer to **www.swiTT.ch.**

Among other services, swiTT operates swiTTlist, a unique portal with current technology opportunities from Swiss PRO available for licensing and development by industry. To search this opportunity database please visit.
www.switt.ch/swittlist.

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swiTT MISSION

- COOPERATION
- DEVELOPMENT
- SERVICES
- DIALOGUE

Facilitates and strengthens COOPERATION and technology transfer between Swiss public research institutions and the private sector;

Offers professional DEVELOPMENT to its members and other practitioners involved in technology transfer within public institutions and the private sector;

Provides SERVICES of common interest to its members, their institutions and other stakeholders involved;

Maintains an active DIALOGUE with research institutions, the private sector and the authorities to foster optimal processes and regulatory framework/regulations.

IMPRESSUM

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