

## **Report on IGLO in Action on Knowledge Valorisation**

Online European Practitioner Workshop, 21 January 2025, Brussels

The report has been compiled in February 2025 by <u>FFG</u> and <u>KoWi</u> with thanks to the supporting <u>IGLO</u> <u>offices</u> (ELO, ISERD, NorCore, PolSCA, SBRA, SWERI, SwissCore)

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**IGLO** is an informal association of Brussels-based non-profit R&D Liaison Offices. The aim of IGLO is to facilitate and enhance the interaction, information exchange and co-operation between Members of IGLO, their national research systems and the European institutions on issues related to EU RTD, in particular, the Framework Programme.



**FFG** The Austrian Research Promotion Agency (FFG) is the national funding agency for industrial research and development in Austria. All FFG activities aim to strengthen Austria as a research and innovation centre on the global market and thus help to ensure the long-term availability of high quality jobs and maintain the prosperity of one of the world's wealthiest countries.



**KOWI** The European Liaison Office of the German Research is a dynamic information hub on all aspects of European research funding - for science organisations, German universities and researchers in Germany. We are in close contact with the EU institutions in charge of research policy and funding for research and innovation.

#### Disclaimer

This report presents a summary of the IGLO in Action Knowledge Valorisation on 21 January 2025. The statements and findings presented are those of the individuals participating in the event and do not necessarily reflect the views of their institutions, the IGLO network or its individual members. This summary report is **not** an IGLO position paper or the network's official statement on the topic.



## **Executive Summary**

The online IGLO in Action Practitioner Workshop on Knowledge Valorisation on 21 January 2025 provided a platform for the direct exchange of European research and transfer management practitioners on the Council Recommendation (EU) 2022/2415 of 2 December 2022 on the guiding principles for Knowledge Valorisation (Guiding Principles), including a brief introduction of all four codes of practice. The workshop aimed to support the valorisation of research results and innovations into economic and societal values. By providing a platform for exchange between around 60 universities and research organisations, innovation and funding agencies, as well as policymakers from 16 EU Member States, it responded specifically to the recommendation of the European Commission's MLE (2023/2024) "to encourage intensive collaboration and networking among various actors."

Such exchanges play a crucial role in facilitating the interconnection of various sectors as well as transforming research findings into services, products and solutions for the benefit of society. Previously, learnings from national stakeholder workshops in Austria, facilitated by <u>NCP-IP</u>, had indicated that strategic approaches within individual organisations as well as engagement by Member States and collaboration with the European Commission are necessary for the successful implementation of the Guiding Principles. This IGLO in Action workshop seconded these learnings at European level.

The IGLO in Action workshop concluded that a strategic approach from top-down as well as bottomup activities is needed to support successful implementation. To ensure progress and to enable close collaboration among various (including "new") actors and stakeholders, investments in necessary infrastructures, skills and competencies are needed.

- The workshop succeeded in introducing the topic and providing the platform for good practice examples from the university and the RTO sector. In addition, more specific forms of engagement were shown to be needed, with, for instance, workshops aiming at specific target groups, dedicated co-creation settings, and/or further exchange of good practice examples.
- The workshop underlined that further work needs to be undertaken to highlight the added value of the shift in terminology from technology transfer (i.e. focus on patent, licencing, commercialisation, etc.) towards Knowledge Valorisation. Concerning this, it is vital to make the topic salient to the leadership in research organisations to ensure the necessary strategic support to practitioners to address issues around incentives, training and resources.
- Furthermore, this strategic level needs to be underpinned through the creation of a shared vision and by the political will to support implementation at policy level.

More broadly, within the geopolitical context, the development of a suitable roadmap for all levels of actors and the target groups will be helpful in order to maximise the societal and economic impact of knowledge. The importance of such a vision can be seen as part of the broader policy discussion, including the <u>Draghi report</u> on "The Future of European Competitiveness". It calls for the commercial exploitation of knowledge generated by European researchers in order to transform the European research and innovation landscape and to maximise the extensive European innovation potential.



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## The Workshop

#### Format

The IGLO in Action online practitioner workshop on Knowledge Valorisation was jointly organised by FFG and KoWi under the IGLO (Informal Group of R&D Liaison Offices in Brussels) umbrella. IGLO in Action is an established format, focussing on connecting practitioners from IGLO countries to provide the insights from their day-to-day work with EU R&I funding.

#### Background

The **EU's** <u>Guiding Principles for Knowledge Valorisation</u> aim to maximise the transformation of research and innovation results into solutions that benefit society. They address mainly national, regional and local policymakers but are also relevant for practitioners, such as research managers from various sectors, particularly within the university sector.

The **Four Codes of Practice** in the area of Knowledge Valorisation have been created to provide more specific guidance. Additional recommendations on the topic were also provided in 2024 via a Mutual Learning Exercise on Knowledge Valorisation (link to summary <u>report</u>).

#### Aim of the workshop

The workshop's aim was to introduce the new terminology, including the Guiding Principles (Council Recommendation (EU) 2022/2415 of 2 December 2022 on the guiding principles for Knowledge Valorisation) and four codes of practice. This was to enable a discussion on how the shift from technology transfer to knowledge transfer and ultimately to Knowledge Valorisation constitutes a substantial change for the work of research managers and technology transfer officers. With this broader perspective in mind, the webinar was to facilitate the collection of lessons learnt, thereby bringing forward discussion at national as well as at European level, which this report is intended to further support.

Furthermore, the aims were:

- to better inform relevant practitioners and actors in the field on the topic itself;
- to collect their views and perspectives on Knowledge Valorisation;
- to discuss how the Guiding Principles on Knowledge Valorisation inform the ways in which research results are created and exploited (at European universities, research institutes, Research Technology Organisations and in industry).

#### Participants

Approximately 70 research and transfer managers from 16 different countries (Austria, Belgium, Estonia, Finland, France, Germany, Israel, Lithuania, Netherlands, Norway, Poland, Romania, Slovakia, Spain, Sweden, Switzerland) were in attendance. Participating organisations were either universities or RTOs, with a respective split of 3 to 1. They represented a variety of regional, national as well as academic characteristics.

#### Contributors

The IGLO in Action organisation team is grateful to the speaker from the European Commission on Valorisation unit RTD E.3 and for the two inspiring Knowledge Valorisation case studies presented to



us by colleagues from <u>Hannover Medical School (MHH)</u> and the <u>Institute of Science and Technology</u> <u>Austria (ISTA)</u>.

## Overview of inputs

Opening Remarks EU Knowledge Valorisation Policy Latest developments (EC, DG RTD) *Ioannis Sagias, Unit, E2 Valorisation policies and IPR, Directorate E, Prosperity, DG Research & Innovation, European Commission* 

DG RTD provided a short explanation of the concept of Knowledge Valorisation, the state of play of the various European Commission initiatives as well as an outlook on what to expect. Knowledge Valorisation is an umbrella term with the aim to more broadly cover the exploitation of research results. Beyond traditional tech transfer, Knowledge Valorisation also encompasses, for example, policymaking, standardisation (incl. the update of existing standards), and industry-academia exchange and citizens.

The overall motivation for fostering Knowledge Valorisation is that too much EU-funded research and innovation remains unexploited, or could be exploited further or differently. The European Commission is aware of the complexities around making Knowledge Valorisation work, the multitude of actors with different needs as well as the wide range of valorisation channels. Knowledge Valorisation is an area where DG RTD is trying to supply more tools at large.

It was also stressed that Knowledge Valorisation can be part of the solution to the greater challenges and policy objectives to be tackled by the EU in the coming years, including those highlighted in the Draghi Report on Competitiveness.

The European Commission is also aware of issues and barriers, including disparities between different countries, regions, and sometimes even organisations within a country when it comes to capacities and experience with Knowledge Valorisation. Researchers are often not rewarded for engagement with exploitation activities. There is ongoing work by the European Commission on further Codes of Practice, metrics as well as the collection of Knowledge Valorisation best practices.

Existing European Commission guidance and tools are now grouped on the <u>Knowledge Valorisation</u> <u>platform</u>.

Next steps for the European Commission include awareness raising for the use of the already developed guidance, tools and codes of practice, capacity building of Knowledge Valorisation services, work on a European scheme on socially responsible licensing principles, as well as a learning lab for value creation aimed at students, researchers and innovators. Research actors can expect a series of projects implemented through future Horizon Europe topics.

#### Moving from Technology Transfer to Knowledge Valorisation

#### FFG Austrian Research Promotion Agency, Elisabeth Hajicek, Programme Manager NCP-IP

The session was intended as an explainer to facilitate the discussion. It was based on learnings from Austrian stakeholder workshops during 2023 and 2024. The resulting guidance is to be provided and published as part of <u>NCP-IP</u> in 2025). The information provided focussed on:

Overview of Knowledge Valorisation



- Terminology (i.e. Technology Transfer, Knowledge Transfer)
- Overview and details on the Codes of Practice
- Purpose and Key Recommendations
- Definitions as well as Implementation issues.

#### Case Studies of Good Practice Examples from Germany and Austria

How do organisations organise themselves internally, from coaching researchers, science explained in the park to own venture capital funds?

## Simone Hess, Head of Staff, Unit for Research - Knowledge - Translation – Transfer. Hannover Medical School (MHH, Germany)

Simone Hess from MHH explained how her organisation build up what could in the future be called a Knowledge Valorisation unit, bringing relevant functions and competences from EU research management and transfer activities into one team. The team provides a single point of contact for researchers seeking national, EU and international funding, as well as offering advice and coaching on different aspects of Knowledge Valorisation. The service accompanies the researchers from the basic research idea, all the way to transformation of results into solutions that benefit society.

The MHH model already works well, but there is room for improvement. In order to truly implement Knowledge Valorisation for EU projects, Simone also shared some practical considerations and needs: expectations are increasing and becoming more complex to manage as consortia are becoming bigger and more complex with more actors and stakeholders to be involved. The focus is the expansion from generating knowledge to transferring it and implementing it, ideally in a profitable way. *This needs to be supported professionally and researchers need to be trained, but who will train the trainers and who picks up the additional bill in times of ever scarcer resources?* 

#### *Ingrid Kelly Spillman, Partner, xista and Christian Bertsch, Head of Science Education, VISTA. ISTA (Institute of Science and Technology Austria)*

ISTA presented two aspects of their Knowledge Valorisation work: societal engagement through VISTA and tech transfer through XISTA.

VISTA is the outreach brand of their institute that has taken on the challenge of bringing more understanding of how science works to citizens. This is done via a number of ways, including science presentations in parks, training for school teachers, fostering the dialogue with young students all the way to building a state-of-the-art visitor centre to open in 2025. Research staff are incentivised to participate in these activities, for example through credits for PhD students and training in science communication.

ISTA also runs XISTA, an ecosystem going beyond traditional tech transfer office work, with the aim of helping researchers deliver innovation to society with positive impact. It provides traditional tech transfer support with an emphasis on spin-off generation as well as a fellowship programme for its researchers with intensive nurturing and training to help ideas develop into viable spin-offs. There is also a science park with lab facilities and office space for prospective spin-offs. The services are completed by XISTA science ventures, a venture capital fund which is independent of the ISTA institute. The fund invests in early stage science-based spin-offs all over Austria and beyond.



## Discussion

#### Set up

Participants were split in a total of eight groups of between five and eight practitioners, consisting of a mix from different countries, types of organisations and job profiles to discuss the added value of the concept of Knowledge Valorisation as well as its implementation in the context of their day-to-day work and collaborations along the following three questions:

- **1.** What is the added value provided by a broader understanding of Knowledge Valorisation compared to the more traditional approach of knowledge transfer?
- 2. What does this change in understanding mean for the role of research management more broadly? What is the role of transfer managers and where is the overlap between professions? Is there an opportunity to work together and if yes, how? What is needed for such a collaboration?
- 3. How can the envisaged increased collaboration between a wider range of stakeholders be undertaken effectively?

Beyond answering the set questions, participants had the opportunity to share ideas and suggestions to facilitate the increased uptake of a Knowledge Valorisation mind-set and related activities in EU research and innovation projects.

#### Key points

Question 1: What is the added value provided by a broader understanding of Knowledge Valorisation compared to the more traditional approach of knowledge transfer?

- Knowledge Valorisation is a more inclusive term: it can pave the way for tackling societal challenges as it goes beyond technical solutions, embraces all disciplines and a wide range of stakeholders. It better integrates and reflects social sciences and humanities approaches.
- Knowledge Valorisation allows researchers to be involved with different activities and investors are given more possibilities to engage.
- Knowledge Valorisation leaves more room in projects to work on the entire value chain (which also brings challenges).
- Knowledge Valorisation should not only mean use of a "push-strategy" where researchers are pushed to exploit their results but there is need for a "pull-strategy" through addressing existing market needs at the centre.

Question 2: What does this change in understanding mean for the role of research management more broadly? What is the role of transfer managers and where is the overlap between professions? Is there an opportunity to work together and if yes, how? What is needed for such a collaboration?

- Organisations often already carry out Knowledge Valorisation activities intrinsically, but it is not always labelled and often not (yet) a joined-up process within organisational structures
- Implementing Knowledge Valorisation successfully poses challenges. The multitude of actors that need to work together, including within a single organisation, within an EU project and also more globally.



- Knowledge Valorisation could foster collaboration, help organisations better structure and align their capacities on technical and societal transfer.
- Knowledge Valorisation needs to be incorporated from the start, from the first project ideas and implemented throughout.
- Areas where transfer and EU research managers could work together are proposal support as well as implementation (examples: IP, business plans, multi-actor approach/consortium building, industry-academia collaboration, outreach to citizens etc.)

Question 3: How can the envisaged increased collaboration between a wider range of stakeholders be undertaken effectively?

- Different actors (research managers, transfer officers etc.) need to have basic knowledge of each other's work.
- Those supporting and training researchers to work on Knowledge Valorisation also need continuous training and coaching.
- Including stakeholders from outside academia and finding common ground and a way of communicating can be a challenge.

### Summary

- Having clear expectations, rules, templates for incorporating Knowledge Valorisation in proposals and projects is important: a Knowledge Valorisation plan could be made part of Horizon Europe proposals, the evaluation and following a Knowledge Valorisation plan in projects could be a requirement in the Grant Agreement.
- Knowledge Valorisation will not just happen if there is no dedicated funding, including from the Framework Programme.
- A cultural shift will be needed researchers need to embrace entrepreneurship, translating research for business application, society and policy makers. They need to be incentivised to do this, from their hierarchy as part of changes in the system as a whole.
- Successful change from a solely technology transfer perspective to the broader concept of Knowledge Valorisation cannot just come from the working level, it needs to be understood, wanted, promoted, prioritised and rewarded from the top. The concept and relevance of Knowledge Valorisation needs to be communicated by the European Commission to not just to research managers and TTOs, but also to the leadership level, i.e. university deans and those heading up research institutes and RTOs.

## Recommendations

Strategic Level

- Guidance from the Commission to the policy level at universities on how to implement these new approaches and with a focus on desired outcomes.
- Mutual learning of the Commission with vice deans, policy officers as well as national ministries on how to implement these guidelines and develop shared visions for Knowledge Valorisation.
- Increased internal collaboration within organisations to manage the interfaces between EU research projects and Knowledge Valorisation aspects effectively.



### Operational Level

- More resources need to be dedicated to this collaboration and Knowledge Valorisation activities (e.g. staff, access to expertise).
- Better training and awareness for researchers and support staff to help create the right mind-set to support Knowledge Valorisation.
- Support from the hierarchy Knowledge Valorisation needs to be wanted and fostered top-down within the organisation.
- Researchers need incentives to engage with Knowledge Valorisation.
- Research and transfer management have different ways of operating and often still work towards different KPIs this needs to be overcome.

## EU Knowledge Valorisation Policy Latest developments

IGLO in Action January 2025

#### **IOANNIS SAGIAS**

Unit E2 - Valorisation policies and IPR Directorate E - Prosperity DG Research & Innovation European Commission

> European Commissio

## Challenges for valorisation of research & innovation

- High-tech innovation clusters typically form around first-class higher education institutions. A lack of these institutions in the EU
  and weak interaction between universities and businesses limit technology transfer, innovation capacity and ultimately
  economic growth.
- Insufficient awareness of the potential benefits of collaboration between research and industry and an insufficiently developed management of intellectual property rights (IPR) prohibits commercialisation of research.
- Even if European universities now have Technology Transfer Offices, they are often understaffed, lack the necessary expertise and financial resources and struggle to effectively act as intermediaries between researchers and the private businesses sector.
- There are significant differences in the management of IPR across universities, including differences about who legally
  owns IPR and whether universities can acquire stakes In spin-offs. In many cases, financial incentives for researchers are
  limited, as they cannot fully appropriate royalties from licencing IPR.
- Researchers' assessments do not adequately reward multi-track careers, and dual university-industry appointments are uncommon.



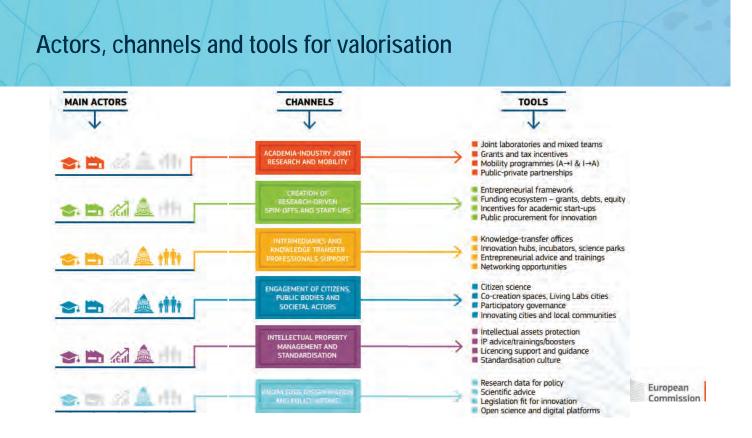
## Challenges for valorisation of research & innovation

- The commercialisation of research results is insufficient. Much of the knowledge generated in research institutions remains commercially unexploited. According to the European Patent Office (EPO), only about one-third of the patented inventions registered by European universities or RTOs are commercially exploited.
- EU companies, especially SMEs, underutilise the possibility of formally protecting their Intellectual Property Rights (IPR), which is often necessary to compete globally. Only 9% of SMEs in the EU own formal IPR such as patents, trademarks and designs, compared to more than 55% of large companies. This is partially due to the complex and costly procedures involved in filing IPR applications across fragmented national systems, as well as by a lack of expertise and awareness regarding the importance of protecting IPR
- Access to ERC funds for applicant research units will be determined on the basis of scientific excellence, as well as the unit's ability to facilitate technology transfer, foster start-up creation, promote innovation clusters, and incentivise researchers to engage in entrepreneurial activities and collaborate with companies.



## A complex ecosystem with many R&I actors





Knowledge valorisation: at the heart of the solution



### Knowledge valorisation

- the process of creating social and economic value from knowledge by
- linking different areas and sectors and
- transforming data and research results into sustainable products and solutions that
- benefit society in terms of economic prosperity, environmental benefits, societal progress and better policy making.

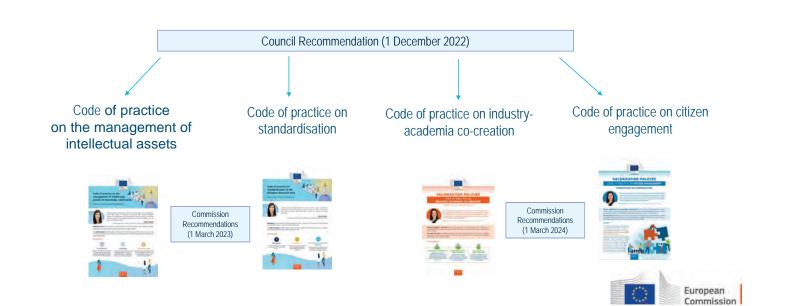
#### Intellectual assets



- any result or products generated by R&I activities
  - that can be legally protected through IP rights (patents, copyrights, trademarks etc.) or
  - are not covered by specific IP rights (data, know-how, prototypes, processes, practices etc.)



## Guiding principles for Knowledge valorisation



## Best practices per valorisation channel

## IP and intellectual assets strategies



National intellectual property rights strategy of Finland

ScoutinScience: Al-based tech transfer scouting

Build and Manage an IP Portfolio: Identifying and Evaluating Commercial Potential of Portuguese Higher Education Institutions' Assets

#### Standardisation



Standardisation supporting the dissemination of healthcare solutions for older persons

How standardisation helps applying innovative research results to reduce the numbers of diagnostic errors in healthcare



#### Industry academia co-creation



Knowledge Valorisation through Industry Collaboration – Collaborative Laboratories (CoLABs)

Open Entrepreneurship Platform

ODIN an open innovation in science platform

#### **Citizen engagement**



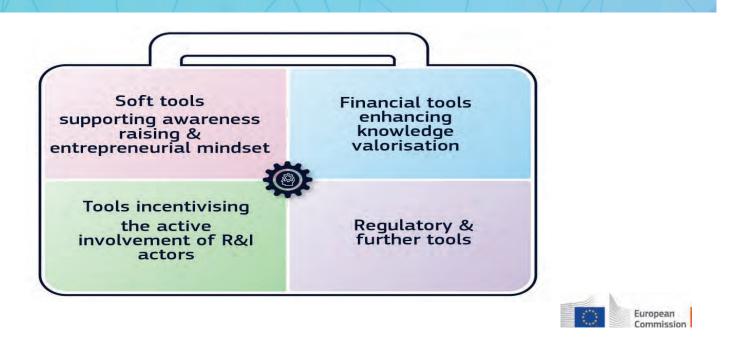
Voluntary integration of residences in energy markets

How participatory workshops can contribute to generating social licences and policy guidelines

<u>Citizens' jury on responsible smart</u> mobility



## A knowlege valorisation toolbox



## Awareness raising, skills and entrepreneurial mindset



Awareness Raising

- Communication on vision and strategy with clear terminology
- <u>EU awareness-raising</u> <u>campaign to boost knowledge</u> <u>valorisation</u>
- <u>COTEC Foundation for</u> <u>Innovation</u> (Spain)



SKILLS DEVELOPMENT

Knowledge valorisation skills are needed, notably to empower R&I ecosystem actors

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 <u>DINA-ITC.programme</u> (Spain)
 <u>Stockholm School of</u> <u>Entrepreneurship</u> (Sweden)



INNOVATION AMBASSADORS

- Role models and successful examples can serve as inspiration, stimulate peer learning and learning from experience
- Slush (Finland)

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#### GUIDANCE FOR INTELLECTUAL ASSETS MANAGEMENT

- Guidance and one-stop-shop for intellectual assets management
- National Contact Point on IP (Austria)
- Ireland's National IP Protocol and <u>Resource Guide (Ireland)</u>
- Interactive guide to Knowledge Transfer (Belgium)



## Tools for the involvement of R&I actors



MENTORS COMMUNITY/ PEER SUPPORT

- Individual, tailored and targeted formal or informal support in the form of mentoring or peer support
- <u>City of Espoo and Aalto</u> <u>University –</u> ecosystem (Finland)



#### INCENTIVES FOR RESEACHERS & RESEARCH ORGANISATIONS

- Contractual agreements, recognition, rewards, career development
- Performance agreements with universities and research institutions (Austria)
- Sexenios de transferencia (Spain)

## RIMAP 2.0.

UNI

Regional innovation matchmaking platform

NETWORKING EVENTS AND PLATFORMS

- Link knowledge supply and the demand side with the intention to spark valorisation activities and collaboration.
- <u>Regional Innovation Matchmaking Platform</u> -<u>RIMAP</u>(Croatia)
- BLIKOPENER (Belgium)



## **Financial tools**



FINANCIAL SUPPORT FOR START-UPS

- Combination of public and private funding for volume and risk mitigation
- INNVIERTE (Spain)
- Deep Tech Accelerator (Finland)



NETWORKING AND CLUSTER SUPPORT

- Dedicated support to setting up, maintaining, extending and developing networks of R&I actors
- <u>Norwegian Innovation Clusters</u> (Norway)



PUBLIC-PRIVATE VALORISATION SPACES

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- Joint Laboratories, Co-labs, living labs, competence centres
- <u>Strategic Research & Innovation</u> <u>Partnerships (SRIPs)</u> (Slovenia)
- Lukasiewicz Research Network (Poland)



European Commission

## **Regulatory tools**



REGULATION OF UNIVERSITY SPIN-OFFS

- Clear rules and regulations
   promoting academic spin-offs
- Legal reform facilitating & providing incentives to support and invest in spin-offs (Greece)



- Public purchase of new solutions for the needs of national, regional, and local authorities
- Innovation Procurement
   <u>Competence Centre (</u>Sweden)



#### EU STATE AID FRAMEWORK

- Guidance and advisory services on State Aid rules for all public stakeholders
- Publication on State Aid Rules in <u>Research, Development and Innovation</u> (EU-Joint Research Centre)



## Next steps for knowledge valorisation

- Awareness raising and promote the use of the codes of practice
- Capacity building of knowledge valorisation services to strengthen the important role of wide range of intermediaries which provide professional support on knowledge valorisation operations.
- European scheme on socially responsible licensing principles to accelerate access to and use of research results
  addressing pressing societal challenges such as climate, health or food-related.
- "Learning lab for value creation" to strengthen the valorisation capacities and skills for university students, researchers, and innovators and to facilitate sharing and replication of best practices across Europe.
- Policy guidance for increased and accelerated uptake of non-technological/SSAH R&I results in the European Research Area.
- Further development of a measurement framework capturing the broad spectrum of knowledge valorisation activities



## Knowledge valorisation ideas for the future

- Valorisation calls that combine the best practices of existing Commission tools such as the EIC and ERC with specific valorisation goals
- Support the use of intellectual asset management plans in the projects for better valorisation
- Promote the making of an innovation marketplace that will provide networking and matchmaking services
- Provide dedicated support services for maturing R&I results in their valorisation path
- Develop synergies with other EU and National Programmes to increase value creation opportunities



## More information

- Guiding Principles for Knowledge Valorisation implementing Codes of Practice (europa.eu)
- <u>Code of practice on the management of intellectual assets for knowledge valorisation</u>
- <u>Code of practice on standardisation in the European Research Area</u>
- <u>Code of practice on industry-academia co-creation for knowledge valorisation</u>
- <u>Code of practice on citizen-engagement</u>
- Council conclusions : Strengthening knowledge valorisation as a tool for a resilient and competitive industry and for strategic autonomy in an open economy in Europe
- <u>Mutual learning exercise on knowledge valorisation</u>
- Science, Research and Innovation performance of the EU 2024 report











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## IGLO in Action: Online Practitioner Workshop on Knowledge Valorisation

21 January 2025





Moving from Technology Transfer to Knowledge Valorisation: Introduction of the new concept and the 4 Codes of Practices

(Management of Intellectual Assets, Standardisation, Citizen Engagement, Industry and Academia Co-Creation)

**FFG** Austrian Research Promotion Agency, European and International Programmes: **Elisabeth Hajicek**, Programme Manager <u>NCP-IP</u>



## IGLO in Action: Online Practitioner Workshop on Knowledge Valorisation

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## Agenda

- Genesis of the topic including overview of the Guiding Principles
- Intro to the 4 Code of Practices:
  - Management of Intellectual Assets for Knowledge Valorisation
  - Standardisation in the European Research Area
  - Citizen Engagement for Knowledge Valorisation
  - Industry-Academia Co-Creation for Knowledge Valorisation



## Starting Point

Bayh-Dole Act (1980, USA): https://en.wikipedia.org/wiki/Bayh%E2%80%93Dole Act

Universities – as patent owners – are in charge

More than just research. Focus now on outputs: Markets

-> start of the creation of **Technology and Knowledge Transfer Office** begins



## Emergence of "Knowledge Transfer"

- Tech transfer is happening but to be successful it needs to recognise and embrace further channels
- A broader approach, beyond tech transfer, is needed
- Knowledge transfers are starting to be operationalised, notably with the help of <u>European Commission recommendation on the management of</u> <u>intellectual property in knowledge transfer activities</u> and the Code of Practice for universities and other public research organisations (2008)





Move to "Knowledge Valorisation"

Council Recommendation (EU) December 2022 Guiding principles for knowledge valorisation

4 Codes of Practice:

- 2023: Code of practice on the management of intellectual assets for knowledge valorisation
- 2023: Code of practice on standardisation in the European Research Area
- 2024: Code of practice on citizen-engagement
- 2024: Code of practice on industry-academia co-creation for knowledge valorisation



# Societal benefits move into focus



## The Guiding Principles



European Commission (2024)

"Knowledge transfer mainly focuses on technology and commercialisation (as in the 2008 Recommendation), whereas **knowledge valorisation has a broader scope**, **includes all actors from the research and innovation ecosystem and covers all types of intellectual assets beyond technology and Intellectual Property Rights.**"



Knowledge Valorisation focusses on:

- Expanded concept of knowledge (instead of technology)
- Broader target groups
- Co-creation (away from "just" linear processes)
- Valorisation is more important because it is about creating benefits for society based on commercialisation



The Guiding Principles talk about:

- Broadening of target groups
- Standardisation as topic
- IA rather than IP
- Data defined as IA IA can be the basis for new innovation
- Open Science
- Open Innovation (includes new actors and new ways to collaborate)
- Wider impact of results becomes more important



# Code of Practice: Intellectual Assets (IA)



## CoP Intellectual Assets (IA): Purpose and Key Recommendations

## Purpose:

Directions for the management of intellectual assets to increase the impact of research results and to accelerate knowledge utilisation.

## Key Recommendations:

- Develop strategies for the efficient management of intellectual assets (all forms of IA!)
- Clarify ownership of IAs early in the research process
- Open science and open innovation practices are enabled: i.e. participation in OI platforms



Introduction to CoP Intellectual Assets (IA): The Details

## Broadening the concept and stakeholder groups involved requires:

- Change of terminology: a new name (IP Intellectual Property to IA Intellectual Assets)
- Moving to a more strategic approach, to help engage the various "new" actor types

## IA/IP-Strategy

- Structure, checklists
- Management of Open Science (OS) and Open Innovation (OI)
- Education, Training and Awareness

**IP regulations** – EU contract models can provide useful templates

## **Asset Management:**

- IA to market: cooperation and sharing of assets in new contexts
- Valuation of IP and IA, requires the focus on suitable licensing, due dilligence



# Code of Practice Standardisation in the European Research Area



CoP Standardisation: Purpose and Key Recommendations

## Purpose:

Focus is on bringing innovation closer to **market**: standardisation is key to support the integration of research and innovation activities

## Key Recommendations:

- Standardisation policy within research organisations to be developed
- Equip technology transfer offices (TTOs) to handle standardisation
- Promote the development of standards in order to facilitate market entry



## What is standardisation?

- Applies to products, services or processes
- "Standardisation is the process of implementing and developing technical standards based on the consensus of different parties that include firms, users, interest groups, standards organizations and governments." (Zongije et al., 2016)
- It is *not* regulation, i.e. **not a legal requirement**

Policy and Stakeholders are being brought together to enable cooperation, via normative and structural measures



CoP Standardisation in practice

- Slow, iterative process and broad consensus needed
- Needs to be considered early on in R&D
- Part of the project management process: stakeholder management and need to negotiate is key
- Standard Development Organisations (SDOs) are vital as **platforms**, facilitators, and project partners
- Standardisation is crucial in achieving the valorisation of knowledge



# Code of Practice Citizen Engagement for Knowledge Valorisation



CoP Citizen Engagement: Purpose and Key Recommendations

## Purpose:

• Guidance and tools for engaging citizens in research and innovation processes to **enhance knowledge valorisation** 

## **Key Recommendations:**

- Development of **engagement strategies** that include **impact pathways**
- Ensure **social inclusion, diversity, and gender equality** in engagement activities.
- Utilise a variety of means, including **digital technologies** to facilitate citizen engagement



## CoP Citizen Engagement: Definitions

Code offers definitions, incl. of "Citizens", "Citizen Engagement", "Citizen Science", as well as "Citizen Engagement for Knowledge Valorisation":

This refers to the engagement of citizens, citizens groups, civil society organisations, and communities with R&I actors to valorise knowledge and research results for innovative solutions that address societal needs, help exploit market opportunities and inform policy making. This is achieved through the commercialisation and market uptake and deployment at the workplace or in society of innovative products, technologies or services that better respond to users ' needs, through creating value for society that is not monetised, through informing policymakers, and improving policy making, as well as through raising awareness, cultivating skills and knowledge and developing new organisational, consumption, and production models that support behavioural changes and transformations within society.



# CoP Citizen Engagement is addressed to all R&I actors:

- Universities
- Other HEIs
- Public & private RTOs
- Research and technology infrastructures
- Businesses of all sizes
- Policymakers

- Other actors such as cities and communities
- Civil society and citizens groups
- Intermediaries, such as knowledge and technology transfer professionals, incubators, science parks, labs, hubs



CoP Citizen Engagement: How?

- Building an enabling environment. This includes the
  - development of a Citizen Engagement strategy at institutional level (goals, valorisation road map, etc.)
  - capacity building / training
  - management of IA in open contexts: CoP IA is here in focus, incl. fair remuneration/recognition of contribution and incentives
  - social inclusion
- Management of Citizen Engagement for Knowledge Valorisation requires suitable, contextualised incentive systems. Communication and the use of digital tools is vital



## Code of Practice Industry-Academia Co-Creation for Knowledge Valorisation



CoP Industry and Academia Co-Creation: Purpose and Key Recommendations

## Purpose:

• To offer **practical guidance and tools for research and innovation actors** to facilitate co-creation between industry and academia

## Key Recommendations:

- Creation of an enabling environment and incentives for co-creation
- Fostering networking, communication, and awareness-raising between industry and academia
- Development of interactive models
- Utilisation of digital platforms to match innovation supply and demand



What is Industry and Academia Co-Creation for Knowledge Valorisation?

The process of joint production and valorisation of knowledge between industry, R&I actors and possibly other stakeholders, such as public authorities, social partners and civil society



The goal is to strengthen co-creation as it entails systemic relations based on joint interests between different stakeholders. Therefore, it covers a wider spectrum of interactions beyond joint research and technology transfer.



How to build and manage the enviroment to achieve Industry and Academia Co-Creation for Knowledge Valorisation?

- **Strategic approach** that supports different types of cooperation, incl. financial support
- Incentives
- Skill Development / Lifelong Learning
- Networking, Communication, Relationship Building
- Monitoring and KPIs



Industry and Academia Co-Creation for Knowledge Valorisation: Main Messages

- Aims at improving the **potential for cooperation** in all formats and for all opportunities
- Valorisation should be central in all collaborations
- Industry to science are asking for training and this is central to this code
- Policies and funding options are vital

For further Information contact:





KoWi: <a href="mailto:inga.benner@kowi.de">inga.benner@kowi.de</a> <a href="mailto:benner@kowi.de">bettina.schelkle@kowi.de</a>

**NCP-IP** (Austria): <u>https://www.ncp-ip.at/en/</u>



How We Support Knowledge Valorisation in Research

Hannover Medical School

Simone Hess, head of staff unit FWT2 at MHH **Research – Knowledge – Translation – Transfer (FWT2)** 

Bringing science to life. Your partner for life scientists.



#### Content

- I. Hannover Medical School
- II. Staff Unit Research Kowledge Translation – Transfer (FWT2)
  - Overview
  - History
  - Portfolio





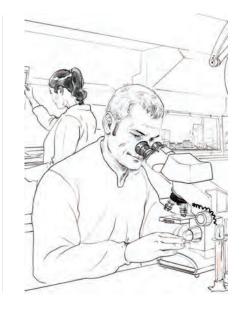
Hannover Medical School

## FWT<sup>2</sup>

#### Content

- I. Hannover Medical School
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  - History
  - Portfolio



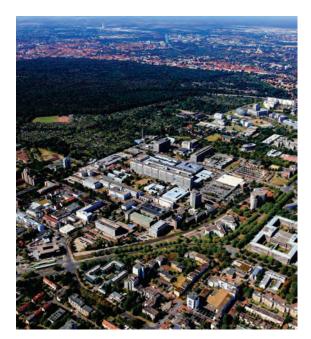


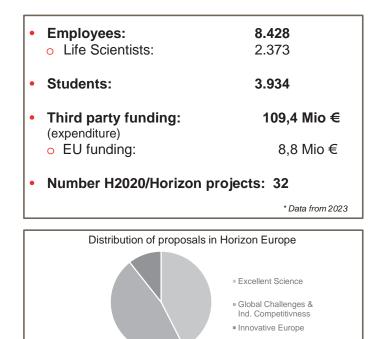
3 Staff unit Research – Knowledge – Translation - Transfer

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## Hannover Medical School (MHH) in numbers

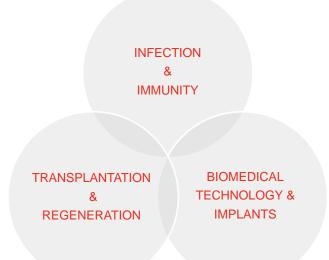






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**Research Priorities** 



Emerging new priority: Onkology: Comprehensive Cancer Center Lower Saxony (CCC-N)

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N<sup>T<sup>2</sup></sup>

#### Content

I. Hannover Medical School

Staff unit Research - Knowledge - Translation - Transfer

- II. Staff Unit Research Kowledge Translation – Transfer (FWT2)
  - Overview
  - Idea
  - Portfolio

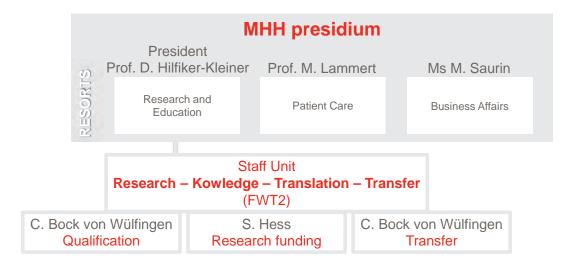






FWT2 - Overview

Organisational structure



Staff unit Research – Knowledge – Translation - Transfer

Hannover Medical School

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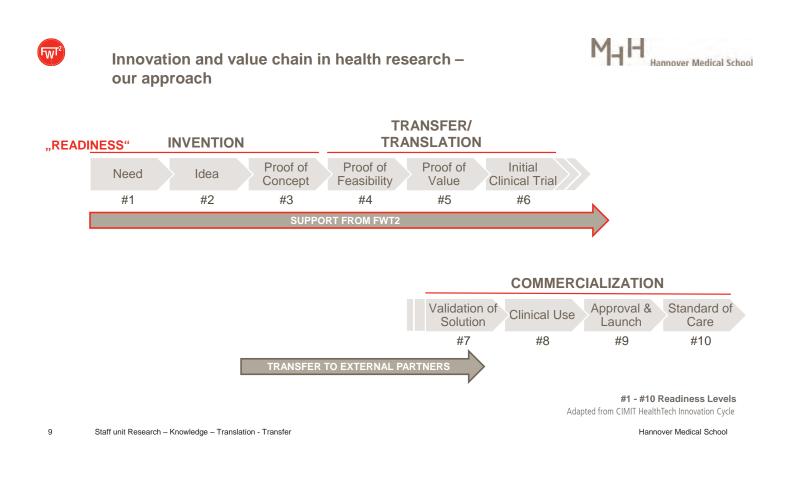
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FWT2 - Idea

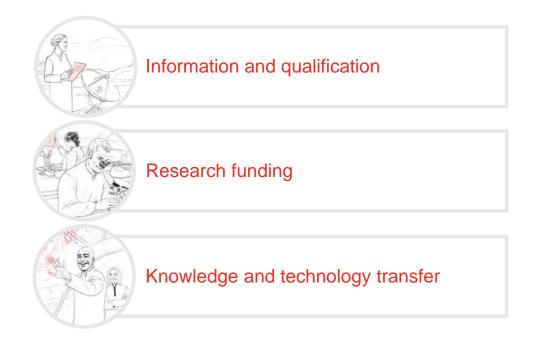


- One central point of contact for researchers
- One team, different expertise, collaborative approach for advice
- Support from basic research idea until transformation into solutions that benefit society
- Support throughout all career steps (PostDoc to head of clinic/department)





### FWT2 – Portfolio



1H

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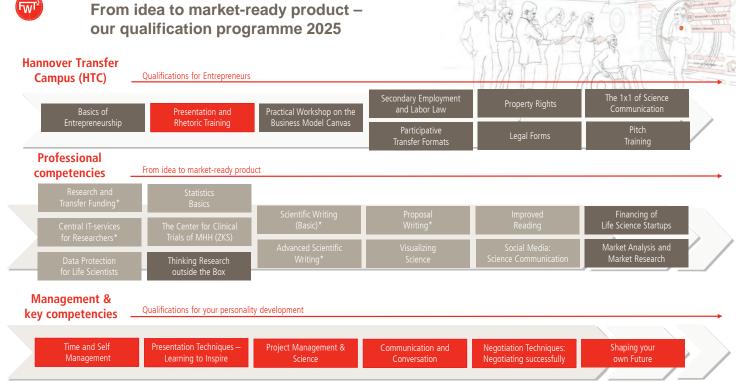




• For medical students: lecture on knowledge and technology transfer (in planning: expansion/transfer to other courses of study at MHH)

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Colour code of the qualifications: Dark gray: transfer, light gray: professional competencies, red: management & key competencies. Please note: Qualifications marked with a \* are held in English.

#### FWT2 - Portfolio



- National funding formats
- EU research funding
- Applications to US funding institutions
- Other international funding opportunities

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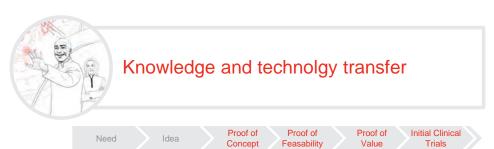
Hannover Medical School

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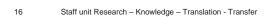
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FW12

### FWT2 - Portfolio



- Support for aquiring third party funding (from translational projects to startup founding)
- Coaching and support for startup teams
- Advice on IPR
  - (in cooperation with legal department & tech transfer company)
- Support for academia industry cooperation
- Lobbying / <u>awareness raising</u> (internal and external)



• Who coaches the coaches? Who helps us to prepare for the new challenges?

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## Some practical considerations

- The demands on the consortia are becoming ever greater, it is no longer just about generating knowledge, it must also be transferred and implemented profitably - at best in one project.
- Composition of consortia more complex
- New actors need to be included (new with regard to requirements to receive EU funding)
- Interaction within project more complex (different cultures / mind-sets)

- For example EIC transition / ERC PoC / collaborative projects (coordination)
- first contact most often via EU liaison officer at FWT2
- general advice on EU proposals (EU liaison officer)
- support for exploitation strategy and/or business plan, including IPR (transfer officer)
- advice on dissemination strategy (EU liaison officer)
- if applicable: interview/pitch training & coaching (FWT2 head of unit)





Hannover Medical School





# Thank you



Bringing science to life. Your partner for life scientis

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# We empower sciencebased innovators to drive transformative change.

Wednesday, February 19, 2025

## ISTA – an exciting new research institution

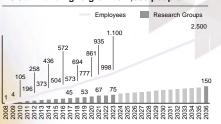
#### ISTA ranked number 3 in the world\*

Normal- ized rank	Institution	Normaliz FC 2018
1	Cold Spring Harbor Laboratory (CSHL), United States of America (USA)	0,17250
2	Weizmann Institute of Science (WIS), Israel	0,15298
3	Institute of Science & Technology Austria (IST Austria), Austria	0,1503
4	Institute for Advanced Study (IAS), United States of America (USA)	0,14305
5	Brandeis University, United States of America (USA)	0,1278
6	The Rockefeller University, United States of America (USA)	0,1261
7	Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR)), India	0,11890
8	Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland	0,11413
9	Okinawa Institute of Science & Technology Graduate University (OIST), Japan	0,10940
10	Princeton University, United States of America (USA)	0,1090

#### Consistently top success rates at ERC

	Home Institute at time of application	Total
1	Institute of Science and Technology Austria	48,1%
2	European Molecular Biology Laboratory (EMBL)	37,1%
3	Weizmann Institute	34,6%
4	Pasteur Institute	32,5%
5	Swiss Federal Institute of Technology Lausanne (EPFL)	29,4%
6	Swiss Federal Institute of Technology Zurich (ETH Zurich)	28,5%
7	Flanders Institute for Biotechnology (VIB)	28,0%
8	London School of Economics & Political Science (LSE)	25,9%
9	University of Basel	25,8%
10	University of Lausanne	25,2%

€3.3bln funding to grow to 2,500 people

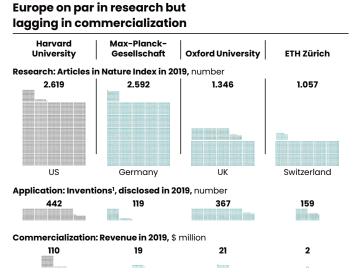


State of the art campus at the outskirts of Vienna



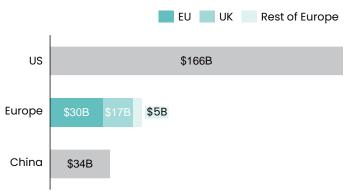
\*Source: Nature Index June 2019; European Research Council

# Science entrepreneurship is a key area of growth for our economy



## Leaving room for dramatically more venture investment

Global VC investment in Deep Tech by startup HQ (2020-2022)



3

1 An invention disclosure is a confidential document written by a scientist or engineer for use by a university's or company's patent department, or by an external patent attorney, to determine whether patent protection should be sought for the described invention. Source: Nature Index; annual reports. Source: McKinsey, Dealroom, Pitchbook, CB Insights, MFV Partners



## **First ISTA spin offs**

Solgate



Solgate is discovering novel therapeutic molecules targeting solute carriers (SLCs) across a range of clinical indications. The company was co-founded in July 2020 by a team of researchers from CeMM and ISTA (Prof. Gaia Novarino).

#### Cellgate



Syntropic



This company has been set up as sister company to Solgate in 2024. Solgate transferred certain assets to Cellgate (know how related to two molecular targets), Curie.bio (US venture firm) has invested \$9mln to develop these two molecular targets.



Neurolentech, co-founded in 2021 by Carsten Pfeffer, ISTA Professor Gaia Novarino and Christoph Bock, establishes and characterizes patient-derived cellular models of neurodevelopmental disorders.

Syntropic, incorporated in 2023, is a medical device company developing new technologies that enhance the brain's neuroplasticity, allowing for the drug free treatment of psychiatric disorders.

## **Further ISTA related spin offs**

Ribbon



Ribbon Bio was founded by one of ISTA's first postdocs. It has established a novel method to automatically synthesize long strands of DNA, a key building block in the field of synthetic biology across a wide variety of industries from pharma to chemistry and food production. Originally starting out at xista science park, it has now established production facilities in Vienna. In October 2023, management has transitioned to Jodi Barrientos (CEO), together with an Executive Chairman Roopom Banerjee, both experienc-ed US biotech executives, and John Luckey (CTO). Technical verification has been completed and first customer contracts through an Early Access Program have been entered into. Great recent BD progress Chia



Chia Network is a blockchain and cryptocurrency company that aims to address some of the environmental concerns surrounding traditional proof-of-work cryptocurrencies, such as Bitcoin. The centerpiece of Chia's technology is a new consensus algorithm called "Proof of Space and Time" co-developed by Prof. Krzysztof Pietrzak at ISTA. This algorithm allows users to "farm" Chia coins by allocating unused hard drive space instead of competing for computational power, which consumes a lot of energy. Neuralmagic



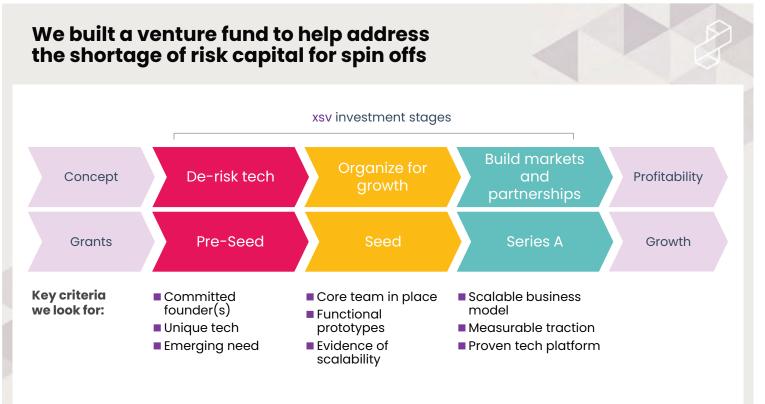
Neural Magic is a Boston-based startup that is addressing the infrastructure intensity of LLM deployment. The company was founded by a team of MIT researchers, including now ISTA Prof. Dan Alistarh, who discovered a way to run deep learning models on commodity CPU hardware. 5

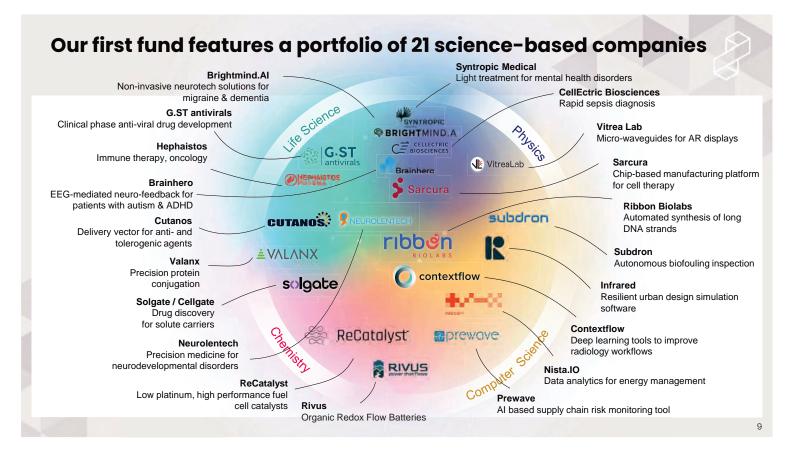
# **xbio – First pan-institutional biomedical entrepreneurship program in Vienna** 3<sup>rd</sup> cohort starting April 2025

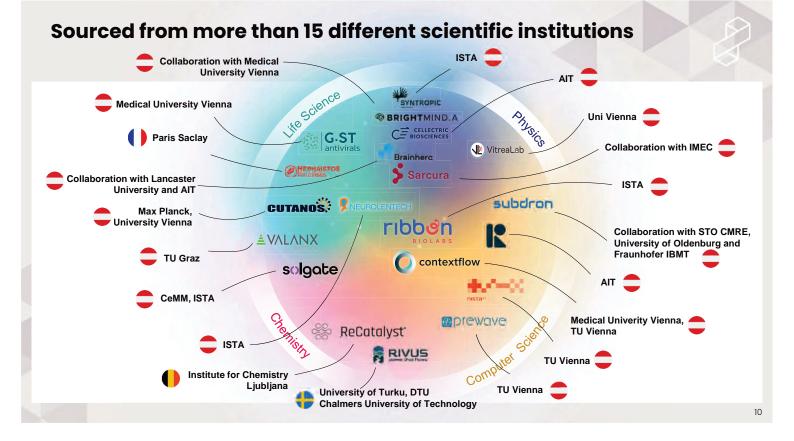


+ Next vertical: Quantum Tech Kickoff late 2024 together with Unis Vienna, Innsbruck, OeAW

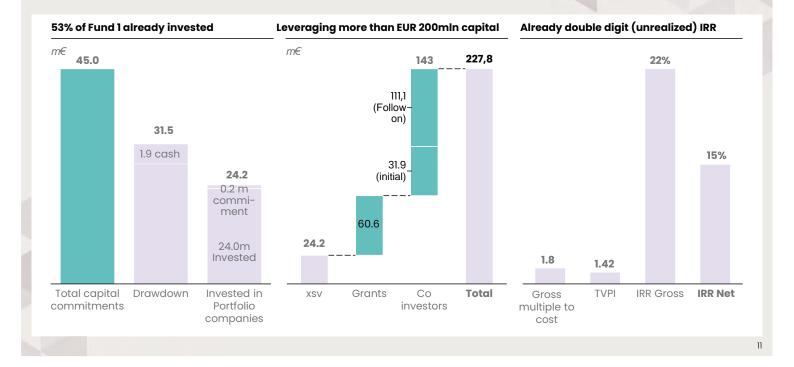








## 50% of Fund 1 invested, first promising results



## Meet our team



#### Ingrid Kelly

- European Patent Attorney >10 years experience in pharma industry as in-house patent counsel and consultant (Novartis, Chiesi)
- PhD in molecular biology Cambridge





#### Valentina Caradonio

- Fund controller, Financial management Startups
- Financial analyst KPMG, PwC
- MSc Bocconi



#### Francesca Besostri

- IP Manager 8 years experience in IP management
- PhD in Chemistry , Master of IP Law and Management from CEIPI



#### Wanko

- 20 years investment (QIA), and consulting (Boston Consulting Group) experience Architect of ISTA's inno-vation ecosystem; Director of AUTM
- MBA MIT



- Venture partner, focus on life science investments
- Involvement in several publications on stem cell biology PhD in Medicine, University of Munich

## 6 years Alex

- Fischl
- Startup advisory

- 6 years Alex Schwartz
- >10 years consulting experienc McKinsey (biotech, chemicals, pharma, innovation) . with
- Jury member Houska prize PhD in Chemistry (Vienna), Post doc Harvard University



#### Sophie Bundle

- Commercial Officer 5 years in think tank (IIASA) & >10 years in banking and consulting
- Co-Founder of e-com startup MSc in Mathematics, TU Berlin

## 3

#### Sophia Hannes

Scientific communicator MSc at the University of Vienna with focus on stem cell- and organoid research



## Resch

- Experienced venture capital investor, led >15 early-stage transactions and several exits M&A Advisory experience at EY (Healthcare, ICT, Industrials)
- . LLM WU Vienna



#### Edmundo R. Sánchez Guajardo

- > 10 years experience in deep tech research and innovation projects
- Business development strategies PhD in physics | MBA in Entrepreneurship & Innovation



- Awesome team assistant
- Master of coordination



3



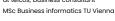


- Communications expert with >10 years experience
- Brand and growth strategies for startups in the renewable energies and telecom sector Master in communications



- Seipelt Biotech expert
- Research at Boehringer Ingelheim and academic experience at the Medical University Vienna

- Product and business development at telcos, business consultant



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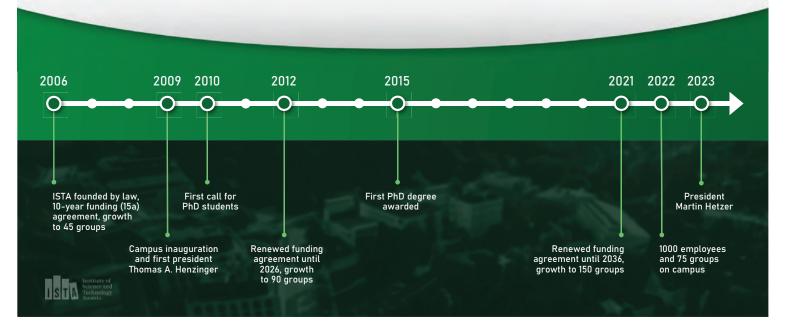




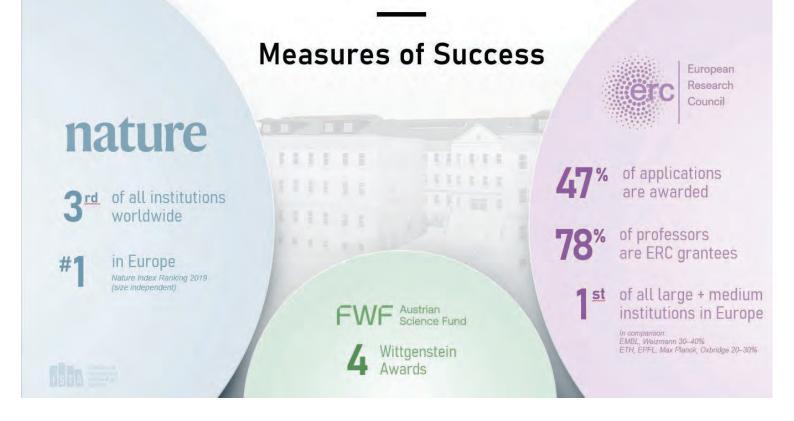






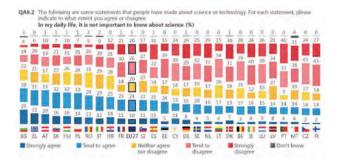












#### Endbericht

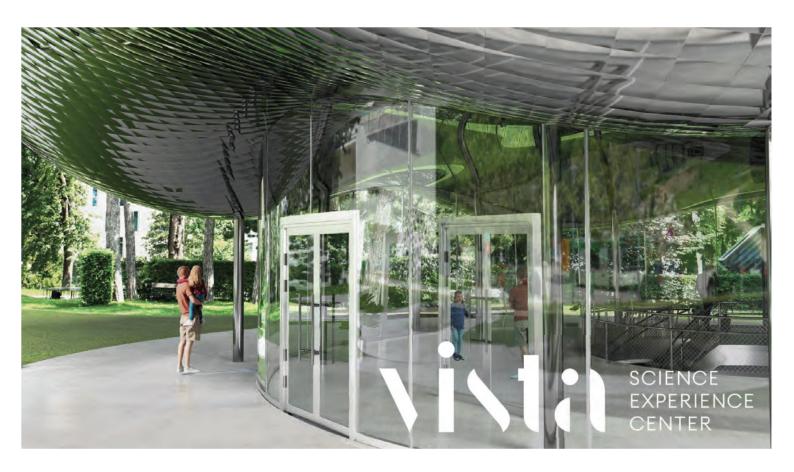
Ursachenstudie zu Ambivalenzen und Skepsis in Österreich in Bezug auf Wissenschaft und Demokratie

Johannes Starkbaum, Katrin Auel, Valentina Bobi, Simon Fuglsang, Peter Grand, Erich Griessler, Thomas König, Lucilla Losi, Fabian Seiser, Guido Tiemann, Klaus Taschwer und Martin Unger

https://irihs.ihs.ac.at/id/eprint/6648/4/ihs-report-2023-starkbaum-auel-et-al-

Science is not very present in the everyday lives of many citizens and there are often abstract ideas among the population about how science works.

Science communicates its activities and methods to a limited extent and does not reflect enough on the fact that research results can also be contradictory.



## **Vision**

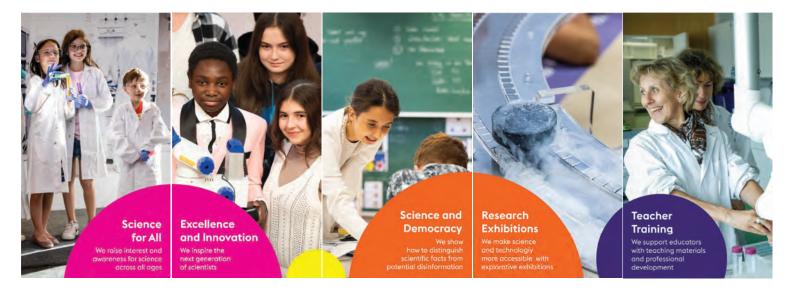
# A society that trusts and celebrates science

# **Mission**

We foster the understanding of science as a process and make cutting edge science accessible

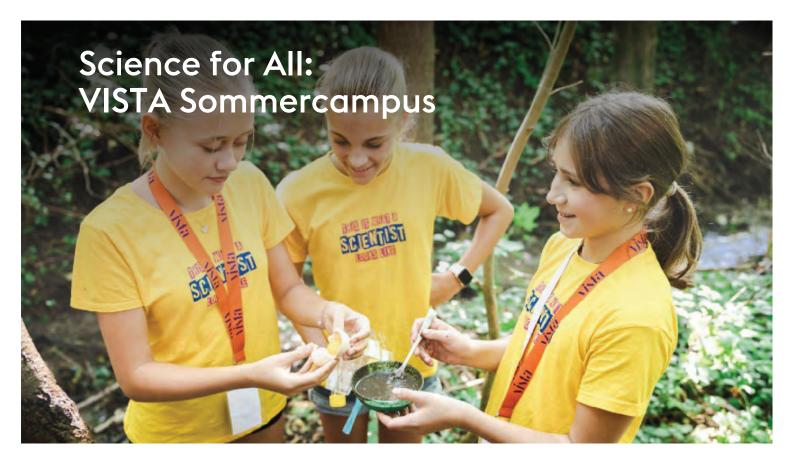


# **Objectives**



# Science for All: VISTA workshops for school classes & families





## Science for All: #STEMLooksLikeMe

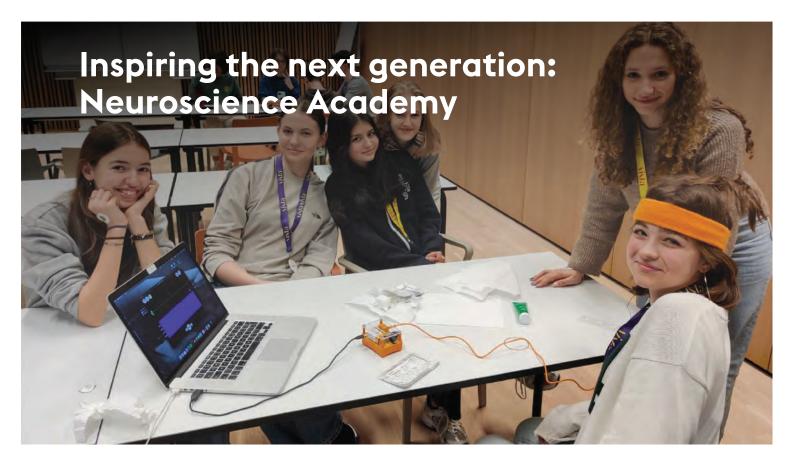


- Photo portraits of female STEM (MINT) role models at ISTA
- Traveling exhibition + workshops in schools throughout Austria
- Teaching materials

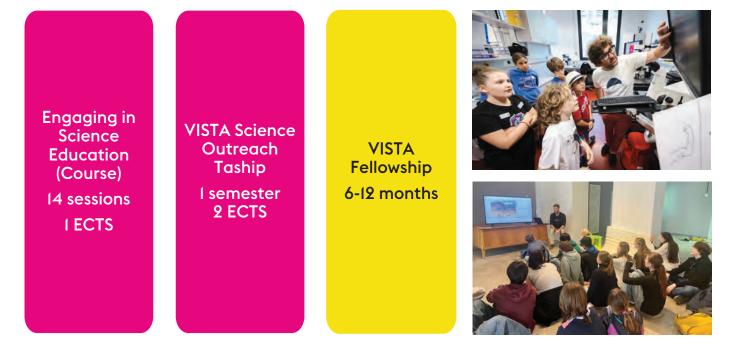


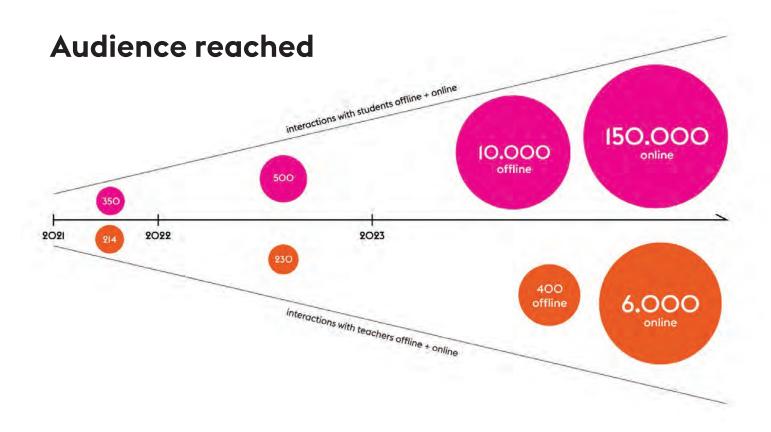
# Inspring the next generation of scientists





# #scientist involvement and training





# **KEEP IN TOUCH!**

# www.vistascience.at





Website