

## **Recommendation regarding RTI-related start-up activities**

The recommendation regarding RTI-related start-up activities addresses eight areas of action.

### **1. Education**

While entrepreneurial thinking has already been anchored as a teaching principle at colleges for (higher) vocational education, there is an absence of such a focus in consistent quality at academic secondary schools. In particular, greater emphasis needs to be placed on conveying a knowledge of economics.

In the higher education sector, entrepreneurial content has already been integrated into the syllabus at a number of universities and Fachhochschulen. Yet in addition to this content, a greater openness for inter-departmental, inter-faculty and inter-university learning, teaching and research needs to be created to facilitate the bringing together of different educational and research backgrounds, in particular, economics, technology and science.

*The Austrian Council therefore recommends*

- introducing entrepreneurial thinking in a consistent quality as a tuition principle at academic secondary schools
- involving entrepreneurs as role models in secondary and tertiary education
- enabling different educational and research backgrounds, in particular of a technical/scientific and economic nature, to be brought together and facilitating flexible and innovative forms of education which promote independence and personal responsibility.

## **2. Start-up Consultancy**

The chambers of commerce offer training programmes for all kinds of start-ups in the regions. These services are wide-ranging and of very good quality, but chiefly address start-ups in general. They do not, however, go into further detail regarding the special needs of new businesses with a research and technology orientation. Consultancy services for RTI-orientated start-ups are sometimes offered by the aws and FFG within the framework of various funding measures. But generally speaking these have room for improvement as the main emphasis in the area of budgeting is usually on the subsidy and less on providing advice. The institutions should be placed in a financial situation that will enable them to expand these services to meet the need.

*The Austrian Council therefore recommends*

- expanding the range of training programmes offered by the chambers of commerce to include modules for RTI start-ups in cooperation and close contact with the AplusB centres
- expanding consultancy services for RTI-related new entrepreneurs at the aws, if necessary by introducing a joint consultancy package from the FFG, WKO and Federation of Austrian Industries.

## **3. Interface Science – Industry**

### **University Spin-Offs**

There has been considerable movement on the political front as regards the value attached to university spin-offs. The picture at the universities, however, is rather mixed. The attitude to spin-offs is positive where a great deal is being done in terms of commercialisation. Thus universities that have a strong record of commercialising their research results have professional property rights and commercialisation strategies. Basically, the IPR should be given to the companies to take with them.

However, in the long-term it is essential to have an adequate pool of people who can be motivated to start a business. In Austria there is an absence of the necessary start-up culture in which one can fail without endangering one's scientific career. Furthermore, the universities should also communicate a positive image of entrepreneurship as a career alternative.

*The Austrian Council therefore recommends*

- promoting a culture in which failure is allowed and safeguards are provided (e. g. the possibility to return to the institution)
- communicating a positive image of entrepreneurship as a possible career alternative for graduates from all disciplines
- establishing clear rules for dealing with patents when start-ups are founded at universities.

## **Patent Exploitation**

To strengthen patenting and commercialisation structures at universities, the BMWF has included the formulation of intellectual property rights and commercialisation strategies in the performance agreements. Merely proliferating and holding patents does not in itself constitute a form of added value. The number of patents should not be the sole decisive criterion for assessing a university's commercialisation performance. Priority should instead be given to the quality of the patents and the professionalism with which they are managed. The university system itself should also provide incentives for commercialisation – for example, within the framework of funding allocations.

*The Austrian Council therefore recommends*

- creating (economic) incentives for commercialisation in the university system
- that the universities formulate clear and carefully considered exploitation strategies which should then be communicated to the business community
- introducing indicators, e.g. within the framework of the Intellectual Capital Balance Regulation, which go beyond the mere number of patents and which enable an appropriate monitoring of university property rights and commercialisation strategies over a specific period of time.

## **Start-up Teams**

Team start-ups are a key factor for the success of research-driven start-ups. Yet despite this, there is little in the way of support to actively bring together inter-disciplinary start-up teams. The aim must be to create more platforms and interfaces where interested founders from different disciplines can meet. Use should be made of existing

experience in this area, for example, the experience of the AplusB centres with the gate2business portal.

The faculties are also urged to seek contact with other institutions and to give their students and researchers the opportunity to interact with colleagues from other faculties and universities as a normal part of university life.

*The Austrian Council therefore recommends*

- providing services such as platforms and interfaces to bring together inter-disciplinary start-up teams, where founders from different disciplines can meet
- setting up a contact exchange for founders who are looking for partners, for example, at the aws
- creating opportunities for students and researchers to interact with one another as a normal part of university life.

### **AplusB centres in the context of the IPR and commercialisation strategies**

With regards to the cooperation with AplusB, it is critically important to ensure that the centres are involved in future activities to formulate property rights and commercialisation strategies, which should be coordinated with them. In view of the establishment and expansion of regional knowledge transfer centres at the universities, cooperation should be sought with the AplusB centres as key transfer agencies.

*The Austrian Council therefore recommends*

- involving and consulting the AplusB centres when developing university strategies for property rights and commercialisation
- involving the AplusB centres as key transfer agencies in the establishment and expansion of regional knowledge transfer centres.

## **4. Direct Support**

### **Central points of contact for knowledge and technology-intensive entrepreneurs**

There are many different points of contact in the regions for knowledge and technology-intensive entrepreneurs. Establishing a one-faceto-the-customer in the form of regional points of contact, which should

systematically refer entrepreneurs seeking advice and funding to the proper support systems should remain the goal. The AplusB centres, which in some regions are already very well established, would be a logical, although not mandatory choice to take on this role. Should it not be possible for the centres to take on this role, suitable one-stopshop alternatives, for example at the chambers of commerce or the provincial business promotion agencies should be considered. In this case, steps must be taken to ensure that services which meet the specific requirements of research-based start-ups are provided. The central point, however, must be appropriate communication on the part of the contact points in the regions.

*The Austrian Council therefore recommends*

- establishing regional one-stop-shops for entrepreneurs seeking advice and funding in the knowledge and technology-intensive sector and communicating them.

### **Broadening Pre-Seed and Seed Funding**

Pre-seed and seed funding address limited target groups in the area of high-end research. As experience from the pilot project of the pre-seed calls for innovative service providers shows, there is a need to broaden access to such funding. Restricting it to certain branches might indeed be expedient for budgetary reasons, but is not productive in terms of the impact on the innovation system. Pre-seed and seed financing should be open to all knowledge and technology-intensive start-ups.

*The Austrian Council therefore recommends*

- opening up access to pre-seed and seed financing for all knowledge and technology-intensive start-up sectors.

## **5. Indirect Funding**

In Austria the New Business Support Act (NeuFöG) provides for tax concessions for start-ups. These concessions are granted to all companies, irrespective of their innovation focus. There are no additional tax concessions that are based on the innovation content and research output of the young business.

International examples of tax concessions for young science and technology-based companies should be examined with a view to the feasibility of implementing them in the Austrian system. Models from

France and the Netherlands in particular can serve as models in this regard. A model which allows a differentiated research premium with percentages in excess of ten percent for new and small companies should be hammered out and implemented.

*The Austrian Council therefore recommends*

- examining international examples of tax concessions for young knowledge and technologybased companies (for example in France and the Netherlands) to see whether they are suitable for implementation in the Austrian system
- a differentiated research premium with higher percentages in excess of ten percent for young and small enterprises.

## **6. Follow-up Financing**

There is still a financing gap at the interface to commercialisation. Soft loans, the assumption of liabilities and guarantees in particular are an important form of support. The aws must be put in a position where it can better fulfil its role as a business development bank for enterprises. Revolving funds of the kind used in other EU countries, could also be of interest to Austria. This type of fund could be set up at the aws.

There are currently a host of initiatives at the EU level which seek to support the commercialisation of innovations and which provide for suitable forms of financing. Horizon 2020, for example, refers to what it calls innovative financial instruments. These include all interventions with the exception of pure subsidies. Financial instruments offer an important means of followup financing. Banks and other institutions in Austria, such as the aws, should be appropriately prepared for this.

*The Austrian Council therefore recommends*

- providing all suitable research and technology-intensive companies with support services for commercialisation (e. g. by expanding Markt Start)
- providing greater support to the aws in its role as a business development bank
- examining the use of revolving funds as a funding instrument (also at the aws)

- preparing banks and other suitable institutions for financial instruments as a possible form of follow-up financing.

## 7. Social Perception

Individual initiatives that are designed to raise awareness have been launched by a number of institutions or within the framework of existing funding programmes. While these initiatives are very welcome, their impact is patchy. However, achieving the necessary change in attitude in society requires a broad-ranging and comprehensive approach that encompasses all key actors and measures and which must be implemented in every area of life. In particular, the process of raising awareness must be started early on – i.e. in the upbringing and education of children and those who care for them.

Prejudices against entrepreneurship must be broken down. It is especially problematic that entrepreneurial values, such as a willingness to take risk, are discredited in Austria by society at large and often even by politics. The system of incentives in our society is structured so that failure is punished and not regarded as a learning experience.

*The Austrian Council therefore recommends*

- a broad-ranging and comprehensive approach to changing attitudes in society that encompasses all key actors and measures and which must be implemented in every area of life and which starts early in the process of raising awareness, i.e. in the upbringing and education of children and those who care for them.
- using targeted information and the presentation of good practice examples, and involving entrepreneurs as role models, to break down prejudices against entrepreneurship.
- promoting entrepreneurial values such as a willingness to take risks and creating appropriate incentive systems in the different sectors of society that can be politically influenced.

## 8. Database

The RTI strategy xx7 has, among other things, set itself the goal of accelerating the growth of innovative companies and increasing the number of knowledge and research intensive-start-ups by an annual average of three percent by 2020. However, the question remains as to how the number of knowledge and research-intensive start-ups should

be ascertained, as there are no comprehensive statistical records of start-up activities in the knowledge and technology-intensive sector. There is therefore an urgent need to keep regular, consistent, statistical records of all Austrian start-ups in the knowledge and technology-intensive sector. This should be done in consultation with Statistik Austria. When defining an RTI start-up, the exclusive use of sectoral taxonomies such as NACE codes should be avoided, as a start-up in a research-intensive sector does not necessarily also have to be research-intensive and sectors that are not typically research-intensive can also produce start-ups with a strong propensity to innovate. Instead, other criteria such as data concerning research intensity and the number of patents should be applied. Besides the number of start-ups, information should also be collected about their background, business purpose, growth and composition. The details should be hammered out in consultation with external experts. The BMWFJ could, for example, assume overall responsibility for this.

*The Austrian Council therefore recommends*

- keeping regular, consistent, statistical records of Austrian start-up activities in the knowledge and technology-intensive sector based on a precise definition of an RTI start-up drawn up in consultation with suitable external experts.