

# Fostering Innovation in the Danube Region through Knowledge Engineering and IPR Management

## IPR challenges of the Danube region, part I

READING MATERIAL prepared for KNOWING HUB advanced users

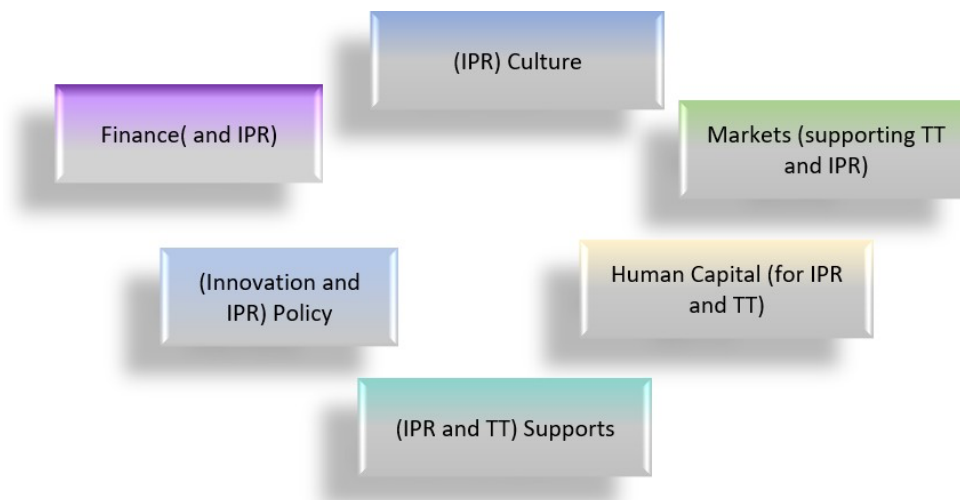
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# Challenges of the Danubian Entrepreneurial Ecosystem, part I

Information regarding challenges related to IPR in the Danube Region countries was collected primarily through desktop research, by extracting and analysing data from individual country reports, as submitted by KnowING IPR partners. Thus, data was collected on IPR challenges in Austria, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Hungary, Germany, Moldova, Montenegro, Romania, Serbia, Slovakia, Slovenia and Ukraine. The analysis revealed major discrepancies between the volume and quality of data contained in the report - while some reports provided in-depth and documented information on the situation of IPR in the respective countries, others offered a more general perspective of weaknesses and challenges at national level. However, since the analysis aimed at presenting challenges related to IPR not on national level, but rather at the level of the entire Danube Region, the data collected from the various country reports is very relevant.

**Figure 1: Pillars used in the analysis**



## Challenges related to POLICY

### **Overview**

IPR legislation is in place in the majority of countries in the Danube Region. However, there are obvious differences between industrialised countries (Austria and Germany) where the strategic frameworks are more focused on IPR and the emergent economies / former communist countries where the availability of legislative measures is still low.

In addition, while the former have well-established and functional technology transfer offices - which act as one stop shops for all matters related to intellectual property - and have put in place support programmes to enhance the commercial development of research results and foster science-industry collaboration, the latter are still confronted with fragmented policymaking, overly complicated legislation or by weak enforcement of existing regulations.

Not each country is confronting with the same challenges, but there are a lot of similarities among the Danube States.

## Challenges related to FINANCE

### **Overview**

Financing of R&D activities is particularly difficult in transition or developing countries, where the national economy still has a modest performance. R&D spending is below the EU average in a number of countries (Romania, Serbia, Bosnia and Herzegovina etc.). Moreover, there is a lack of incentives for funding innovative entrepreneurship and commercialization of research.

These facts influence IPR in different ways, but most notably, lack of R&D activities due to low funding available, results in lower level of inventive, novel and more radical inventions, which are appropriate for patent protection. Secondly, IPR are often seen as too expensive, especially for start-ups, private inventors, and junior researchers.

## Challenges related to CULTURE

### Overview

Awareness on the importance of IP is generally low, both among businesses as well as among universities and other research institutions. Moreover, few research institutions acknowledge the value of collaborating with the business environment and transferring the results of the research processes to the private sector. There are challenges mainly related to those Danube countries in which innovation culture remains largely underdeveloped. This in turn has led to a lack of awareness regarding the importance of IPR protection, high tolerance towards infringements of IPR, and low tolerance towards failure and risk-taking.

In research, the value of IPR is not acknowledged sufficiently. As a consequence, some of the research findings are not properly protected making them less attractive for technology transfer to private companies, as these desire stronger levels of protection garnered by IPR. HEIs should give stronger support to researchers, especially junior scientists, in protecting and exploiting their IPR.

## Challenges related to HUMANCAPITAL

### Overview

The majority of the analysed countries are confronted with a lack of specialists in IPR. Moreover, particularly in transitioning countries, there is a lack of collaboration between IPR and TT representatives, and only a small number of researchers are engaged in the private sector. In addition, the Danube countries lack a corps of experts in technology transfer.

## Challenges related to MARKETS

### Overview

A recurring problem in the majority of countries in the Danube Region is the small number of patent applications, coupled with the fact that the majority of patents are internationally owned (foreign applicants). In emergent economies / transitioning countries, large companies tend to conduct their R&D activities elsewhere. On the other hand, in economically developed countries (Germany, Austria), a large number of patents are “shelf patents” - i.e. are not used for commercial purposes, but either to prevent competitors from using a given technology or to improve the results of academic evaluations.

## Challenges related to SUPPORTS

### **Overview**

We explored supports particularly in relation to technology transfer as some issues in regard to IPR were already addressed under the previous chapter.

Overall, the transfer of research results is still difficult in the majority of analysed countries. In some cases, technology transfer offices are partially functional (e.g. Montenegro) and transfer mechanisms are not always clear. Other factors hampering technology transfer are lack of information and underdeveloped infrastructure.

## Conclusions

The results of the analysis conducted so far show that the level of IPR development in the Danube region is modest. While IPR development has been hampered by political instability, slow economic growth and the cultural background of many countries in the region (i.e. former communist countries), the situation is slowly changing. Still, challenges faced by stakeholders are numerous and diverse, covering all the six pillars of the entrepreneurial ecosystem (policy, finance, culture, human capital, markets, supports).

The portrait of the business stakeholders conducting innovation activities in the Danube region reflects a mix of lack of awareness on how they take benefits of IPR and how they can obtain support to integrate it in their daily operations in order to grow their businesses.

Overall, the results point out important insights with regard to the challenges faced by the various stakeholders in the Danube Region in terms of IPR. The problems are mainly related to the undercapitalization of the intellectual assets due to lack of a right mix between knowledge and skills and policy and administrative strategies.

# References

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