

VALORISATION MAKING RESULTS WORK FOR SOCIETY



EUROPE IS A SCIENTIFIC POWERHOUSE

- 79 % of the European citizens are interested in new scientific discoveries
- In the EU, 19.3 per 1,000 of those aged 20-29 choose a scientific career
- > The EU counts 1.97 million researchers
-) and produces one third of the world's scientific publications

COOPERATION IS KEY

- > 51% of EU researchers work in the private sector
- Only 35% of academics report cooperation with non-academic actors
- Mobility of academics to industry and the public sector is decreasing overall
- The number of patent co-applications with industry has doubled over the past 10 years in OECD countries
- Looking at the number of public-private copublications per million population, the EU (28.7 per million population) is behind US (63.4) South Korea (59.9) and Japan (46.2)
- Horizon 2020 has funded more than 1.5 million oneto-one collaborations between participants from 149 countries

A CULTURE OF VALORISATION SHOULD BE AT THE HEART OF EUROPEAN RESEARCH AND INNOVATION POLICY KNOWLEDGE-BASED INSTITUTIONS HAVE TO IMPROVE HOW THEY MANAGE THEIR INTELLECTUAL CAPITAL

CAN EUROPE EFFECTIVELY

- More than 60% of the European start-up founders have a Master or PhD
- Two thirds of patented inventions are exploited for commercial purpose
- The EU-28 example on artificial intelligence (AI):
 ✓ accounts for 26% of the world's AI publications and
 ✓ 25% of the most-cited publications on AI
- AI top patent applicants are:
- ✓ Japan 40%
- ✓ USA 20%
- ✓ China 16%
- ✔ EU 13%
- ✓ South Korea 11%
- The EU's share of patents has fallen over the past 10 years (e.g. in climate from 35% to 28%)



LINKS NEED TO BE IMPROVED BETWEEN THOSE WHO HAVE A ROLE TO PLAY IN KNOWLEDGE VALORISATION, SUCH AS ACADEMIA, INDUSTRY, CITIZENS AND POLICYMAKERS

Research and Innovation

WHY DO WE NEED A VALORISATION POLICY?

Research and Innovation should be a driving force for the transition of European society towards a sustainable future. Valorisation policy is promoting knowledge and technology use, intellectual property management and the involvement of the citizens, academia and industry. Based on a toolbox designed to increase the impact of R&I investment, valorisation policy ensures that data, research results and innovations are turned into sustainable solutions with economic value and societal benefits.

SCIENCE IS MADE IN EUROPE

The EU is a curiosity-driven region. European citizens are interested in scientific discoveries (79%) but are also willing to choose science as a career. Science and technology is an important economic sector in the EU, creating growth and generating employment. More than 76 million people aged 25-64 are employed in science and technology in the EU, and no fewer than 17 million are scientists or engineers.

Excellence spreads well beyond the EU's borders. Despite representing just 7% of the world's population, the EU, with its 1.97 million researchers and an estimated 760,000 doctoral students, produces almost one-third of the world's best science.

VALORISATION POLICY: RESEARCH RESULTS MATTER...

People expect science to be a driving force that will create solutions to many of the challenges faced by society.

Climate change, environmental protection, an ageing population, the new data economy, cybersecurity, sustainable prosperity and the future of transport are some areas where the fast uptake of research results is imperative. Only by translating excellence into action will the EU be ready to face the future.

...TO MAKE EUROPE "FUTURE-PROOF"

54% of the EU citizens think that in 15 years, science and technological innovation will have had a more positive impact on the fight against climate change than the actions and behaviours of individuals. Climate and sustainability are high on the political and social agenda. They have to be a priority in research and innovation too, and have in fact been so in existing research funding mechanisms. We saw above,

however, how the EU's patent share in this area has fallen from 35% to 28% and only 4% of the start-ups created in the EU in 2018 were registered as green tech companies.

INTELLECTUAL PROPERTY

European knowledge generators should be more aware of the value of the intellectual capital produced in their institutions. In modern knowledge economies, intellectual property assets are not only core growth drivers but enablers of social transitions.

Industries that make intensive use of intellectual property rights (IPRs) such as patents, trademarks, industrial designs and copyright generate 45% of annual GDP ($\in 6.6$ trillion) in the EU, and account for 63 million jobs (29% of all jobs).

COOPERATION CREATES STRENGTH

One indicator of academia-industry cooperation in bringing research results to market is co-patenting. In 2014, the European Patent Office counted 948 co-patent applications by universities and industry. This was 43% of all European Patent Office patent applications, up from 24% in 1992.

Still, valorisation cannot happen without strong synergies that can come in the form of researchers mobility, cooperation agreements, etc.

All actors need to be involved in valorisation, and knowledge generators in the EU need to become aware of the different ways of finding practical applications for their results.



Sources: Eurostat, SRIP 2018 report, EU start-up monitor 2018 report, University-Industry Collaboration OECD report 2018, The State of University Industry cooperation in Europe 2018, Special Eurobarometer 419. MORE3 survey. IPR-intensive industries and economic performance in the European Union (EPO-EUIPO). Market success for inventions Patent Commercialisation scoreboard: European SMEs (EPO). KU Leuven.