

IP skills and training

The quality and effectiveness of IP systems depend on highly qualified and trained IP staff at various institutions involved in the design and implementation of IP policy, and on well-informed and experienced end users. Targeted training aimed at responding to the needs of different actors will potentially have the largest impacts on the IP system's contributions to innovation.

What are IP skills and training and why are they relevant for innovation?

IP skills and training refer to a variety of skills that are relevant for different players in the IP system to contribute to innovation. The list of players ranges from end users, such as universities and enterprises, to institutions and authorities, including IP offices, judges, policy makers, police, etc. The range of training spans from knowledge regarding IP application procedures and processes, to the ability to manage strategic firms' IP.

In practice, the quality of IP systems depends on highly qualified and trained IP staff from the public sector. Such skills are a critical element in helping IP systems provide ["legal quality"](#) [1]. Moreover, only well informed and experienced end users will be able to exploit IP strategically as a way to foster innovation. Poor IP management skills within SMEs reduce their ability to fully benefit from the system (e.g. lack of IP advice and skills decreases the chances of success in the registration and enforcement of IP rights) and, therefore, discourage the future use of IP (WIPO, 2004a).

What specific IP skills and training elements are required?

Regarding the nature of skills, lack of IP awareness among end users will reduce the efficiency of the IP system, so those entities with a high potential for interacting with IP should be aware of the types of IP that are most relevant to their businesses:

- Most OECD countries have recognized that promoting the use of IP among public research institutes (PRIs) requires specific support, even after an accommodating regulatory framework has been put in place. Effective IP management and technology licensing in PRIs require staff that combine broad business experience with technological depth, and have a sufficient understanding of IP operations and systems (Kamiyama et al., 2006). In order to develop such IP skills, PRIs usually require advice and training from IP and legal experts on how to manage IP assets (Zuniga, 2011).
- Firms also need to be sufficiently informed about how to use IP protection in order to obtain high returns from their IP assets. Efficient IP management requires an array of skills, ranging from the legal to the technical and the commercial, which not all firms (especially SMEs) have in-house (WIPO, 2004b). In this sense, strengthening the teaching of IP rights at universities and training institutions for entrepreneurs, engineers, scientists, designers and business managers would help to enhance awareness and knowledge of IP among firms' managers and staff (OECD, 2004). Nonetheless, advice and training from IP experts may also be required.
- Moreover, PRIs and firms would need specific skills for the preparation of any legal action if their IP rights were infringed. In such case, they may require the advice and assistance of legal and technical specialists (WIPO, 2004a). Furthermore, users should also know how to use online IP services, such as search systems, online registries and online filing systems.

On the other end of IP systems are policy makers, IP offices, courts, and other IP governing institutions that also require particular skills and training regarding different elements of IP protection systems:

- First, policy makers responsible for designing innovation policies need to know about how IP can best serve their policy objectives (OECD, 2013).
- Second, IP offices (particularly examiners) need to provide efficient and quality services for the examination and registration of applications for IP rights. In recent years, most IP offices have experienced substantial increases in workloads. The number of applications has increased significantly and many are in new technology areas in which patent offices had limited experience or access to prior art (e.g. software, genetics). The average complexity of applications, as measured by their length and number of claims, has also increased (Zhang, 2005). Within this context, providing efficient and high quality services becomes more difficult, and continuous personnel training (e.g. seminars and training programmes) and development of new skills (e.g. specialization in certain technology areas, utilization of new tools, such as information and communication technology [ICT] tools and electronic databases, etc.) are required (May, 2004; Zhang, 2005).
- Third, qualified courts and judges are needed to ensure IP enforcement. In many countries, judges lack judicial expertise in IP matters due to the relatively small number of IP litigation cases, the rotation of judges between different legal areas and the absence of specialist courts (EPO, judicial training). Thus, it is important that judges, and other litigation and enforcement authorities, such as public prosecutors, enforcement officers, customs police, etc., receive training regarding the theory and practice of IP, drawing on the skills and expertise that are required. In particular, these authorities need to know IP legal systems in depth, including litigation and enforcement procedures.

What are the implications for policy?

End users

In order to improve IP skills and the training of end users, IP institutions and authorities can hold conferences, seminars, or provide other information/support services (regarding e.g. IP registration, licensing, managing, etc.) with IP experts who are accessible to all types of IP users, especially small companies, PRIs and individuals. For example, the United States Patent and Trademark Office (USPTO), the Small and Medium-Sized Enterprises (SMEs) Division of the World Intellectual Property Organisation (WIPO), and the IPR Helpdesk (a service funded by the EU), provide free-of-charge assistance regarding IP rights issues (such as registration, financing, licensing, valuation of IP assets, etc.) to end-users, although special focus is also paid to the needs of small entities (Kamiyama et al., 2006). Training manuals with practical examples, like the WIPO-International Trade Centre (ITC) manual *Exchanging Value – Negotiating Technology Licensing Agreements*, have also proved to be very useful in this regard.

Helping firms identify how IP best suits their own purposes by providing tailored training for those with highest potential gains can be particularly useful for potential users of IP and in development contexts where local firms are still modest users of IP (OECD, 2013). Specific training courses for researchers can also contribute to enhancing the awareness of IP, and stimulate their use in [universities and PRIs](#) [2].

Public institutions and authorities

IP support programmes and training are also important among staff in public institutions. It is important to provide IP training to examiners, judges, lawyers, officials, police, etc. in order to build a solid system of IP registration and enforcement.

IP offices can design training programmes, ranging from seminars on IP enforcement and litigation, to study visits to IP offices and other institutions. The EU and the European Patent Office (EPO) provide this type of training for a large number of examiners, judges, lawyers, officials within administrative departments, professors in universities and staff in research institutions in other countries (Zhang, 2005). Several US agencies (including the PTO) also provide IP enforcement training in other countries (e.g. China) to help speed up their capacity building for IP enforcement. Overall, the experience of these projects suggests that international collaboration can serve as an important channel for improving the understanding on enforcement issues between different countries and to help speed up capacity building for IP enforcement (Zhang, 2005).

On the other hand, workshops and other interactive activities also provide an opportunity for judges (and other IP authorities) to meet and share views on different IP issues. They can exchange information about best practice and new ideas within the context of IP litigation and enforcement (EPO, judicial training).

Finally, it must be noted that these training activities also entail important costs. There are significant fixed costs in developing highly qualified examination and registration offices, and training examiners, judges and customs authorities (Maskus, 2001), so it is important to find appropriate and sustainable mechanisms to fund such activities (e.g. IP owners fees, public funding, etc.).

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