

# It's time to rethink IP education

Further interdisciplinary training on IP management is vital if the full potential in IP rights is to be realised. What is needed is a master's programme that helps to overcome current educational shortcomings

By **Roya Ghafele, Stephan Hundertmark, Yves Reboul** and **Alexander Wurzer**

The strict separation of disciplines is a relatively recent phenomenon and is essentially the result of late 19th century thinking. Today's universities half-heartedly recognise the need for interdisciplinary approaches. While real-life challenges can rarely be resolved through one-dimensional approaches, most universities would rather hire experts in a specific discipline than seek out interdisciplinary-minded researchers.

This attitude also prevails in the field of IP. As a result, current educational systems on IP train students in a single discipline – be it law, economics or technical studies. Each school of thought affords a specific perspective on IP. Lawyers view IP through the legal lens, asking what is and is not permissible in various jurisdictions. Economists look at IP from an innovation/technology perspective and seek to identify how benefits from innovation systems can be maximised most effectively and efficiently. For their part, technicians are thrilled by the prospect of advancing science and offering new solutions to technical challenges.

We believe that money is being left on the table because few people in the market can view IP from various standpoints at the same time and develop interdisciplinary strategies. As a result, IP-based wealth is not being leveraged to its fullest extent.

Taking a long-term approach, education seems an appropriate strategy to correct current market failings. The *status quo* is disappointing: according to our research, there is not one professorship or university institute

for interdisciplinary IP management in Germany, Austria or Switzerland, for example. Across Europe, North America and Australia, IP centres are traditionally located within law faculties. While other faculties may work on similar issues, these are often called by different names, such as intellectual capital management or knowledge management. Thus, the disciplines are kept strictly separate. Linda Oakley at Ideas 21 observes: "Thousands of inventors and innovators file patents each year, and it is estimated that only one in 100 will cover costs and only one in 1,400 become a cash-cow. Can this phenomenon really be explained by the fact that patents are intrinsically unprofitable or rather be understood in light of the fact that we do not know how to leverage them?"

## Context

Former BTG CEO Ian Harvey notes: "Today, IP underpins between 50% and 70% of a country's private sector gross earnings, so it is often decisive for commercial success or failure. This stands in strong contrast to IP management skills of top management. Many chairmen or CEOs do not grasp the simple distinction between patentability and freedom to operate. It is like not knowing the difference between profit and cash flow." His observation confirms the view that general management does not equal IP management. Thus, IP managers must not only build up their specific competencies, but also know how to communicate their skills to senior management.

Equally, Billy Harkin, CEO of Science Ventures, paints a realistic picture of current market practice: "IP commercialisation is a completely unregulated activity – there is no common operating system, no quality standard. Each project is managed by whoever shouts

## The role of IP management at the business level

IP management	Typical contributions to IP management	
	Business managers	Technology and IP professionals
Strategy	<ul style="list-style-type: none"> <li>Setting and communication of business strategies</li> </ul>	<ul style="list-style-type: none"> <li>Corporate technology strategy</li> <li>Lifecycle concepts of technology and IPR</li> </ul>
Decision	<ul style="list-style-type: none"> <li>Valuation and portfolio analysis</li> </ul>	<ul style="list-style-type: none"> <li>Corporate technology strategy</li> <li>Lifecycle concepts of technology and IPR</li> </ul>
Implementation	<ul style="list-style-type: none"> <li>Effectiveness and efficiency considerations</li> <li>Definition and implementation of value chain concepts</li> </ul>	<ul style="list-style-type: none"> <li>Appropriateness of IP rights</li> <li>Filing strategies</li> </ul>
Organisation	<ul style="list-style-type: none"> <li>Corporate and business structuring</li> <li>Operational asset exploitation</li> </ul>	<ul style="list-style-type: none"> <li>IPR enforcement</li> <li>Cooperations</li> </ul>
Leadership	<ul style="list-style-type: none"> <li>Human relationship management</li> </ul>	<ul style="list-style-type: none"> <li>Administrative processes in IP department</li> </ul>
IP business development	<ul style="list-style-type: none"> <li>Entrepreneurship</li> <li>Business planning</li> </ul>	<ul style="list-style-type: none"> <li>IPR expertise and advisory</li> </ul>

loudest or holds strongest control; each project team is typically assembled by osmosis, rather than by design. Then these teams advance by whatever path appears to make best sense on a day-to-day basis. Not surprisingly, the resulting outcome is disappointing."

A look at major business schools supports these views from commercial practice. The INSEAD Business School's former assistant professor in strategy, Marco Ceccagnoli, offered a single optional class in IP management. At Copenhagen Business School, participants are well aware of IP, but compartmentalise it as a legal issue even while recognising its importance to business. At the Vienna School of Business and Economics, again, innovation management is taught without giving students any grounding in IP. Clearly, this is just anecdotal evidence which warrants further systematic analysis, but broadly speaking it would appear that educational institutions are neglecting the IP strategy element.

Across the Atlantic, anecdotal reports describe a similar scenario. For example, MBA graduates of Georgetown Business School have been rejected by major IP law firms, which argue that they lack legal training and that their business skills are not required by firms providing legal services.

As a result, IP management in most companies is still at an elementary stage. Companies either view IP management as a

merely defensive activity "As long as we don't infringe other right holders' patents we have achieved our goal," declares the global IP manager of a Dutch-based multinational oil company; prioritise the legal aspects over a strategic approach "We patented everything for the last 10 years; only now are we starting to think whether these patents are actually of any relevance to our business processes," admits the patent manager at a multinational vehicle producer; or regard the entire IP management function as a Sisyphean task "We know that 96% of the patent portfolio is useless; hence we don't seek to invest too much effort into it," shrugged the global patent manager of a multinational consumer goods company headquartered in the UK at the European Industrial Research Management Association conference in Hungary last year.

#### Overcoming the challenge

It is clear that a new training programme is required which is capable of sparking a cultural shift and developing IP managers who can think and act in an interdisciplinary way, and leverage IP with an eye towards company performance. So what would such a training programme look like?

At CEIPI, the Centre for International Industrial Property Studies, a newly created master of intellectual property law and management course provides a novel and comprehensive approach to IP education. It

starts by looking at IP from a business perspective and what is needed to exploit it for maximum benefit. Importantly, there is a specific focus on the business skills required to manage IP as an asset, while there is also an emphasis placed on developing interdisciplinary knowledge to address specific intellectual properties according to their specific characteristics. But before you can arrange such content in a programme, a clear understanding of IP management is crucial.

IP management differs fundamentally from IP administration. Management comprises all activities necessary to lead an organisation, whereas administration deals more with operational issues and the smooth functioning of processes. IP management is responsible for an organisation's IP policy, its IP strategy, the coordination of IP-related work within the company and the elimination of threats posed by third parties. An IP management training course should reflect this understanding of management, preparing graduates for leadership positions by training them in IP-related strategies, decision making, planning and control.

Thus, an efficient and effective training programme for sustainable IP management should provide high-quality academic training modelled on a twin-pronged approach:

- Content –
  1. Prepare participants to meet the challenges of high-level IP management.
  2. Build up IP professionals who can operate at firm level and as independent experts.
  3. Ensure an unrestricted flow of continuously updated teaching materials.
  4. Communicate empirical findings through an approach that is as praxis oriented as possible.
  5. Teach best practice IP management across various industries.
  6. Adopt a practical definition of IP management.
  7. Provide training materials that reflect academic and practical best practices.
- Context –
  1. Ensure affordability.
  2. Strive for excellence in participants and professors.
  3. Provide customised training to participants from diverse academic backgrounds.
  4. Develop interactive methodologies and be as empirical as possible in the classroom.

5. Gather feedback and create an informal, pan-European network for graduates.

### Content of academic training

Graduates of the programme must be able to fine-tune a company's IP element to reflect its overall business goals. To do this, the company's goals must be broken down into individual objectives that can be achieved through the IP function. This involves strategic planning of the company's respective units. To move from planning to practice, focused implementation, organisation and management of identified measures is required. The results should be compared against established milestones and their implementation should be supervised.

The responsibilities of the IP manager can thus be summarised as defining strategy, taking adequate decisions and putting strategy into practice. In much the same way, renowned management scholar Peter F Drucker structures management into strategy, decision making, implementation, organisation, leadership and business development.

A master's programme in IP management should relate these factors to IP and give participants both practical skills and theoretical knowledge in these six areas. A brief look at the content of the ideal IP programme helps to clarify how the various requirements of high-level training in IP management can be satisfied.

### Strategy module

As Sun Tzu reflected in *The Art of War* some 2,500 years ago, strategy is the art of maximising one's interests while minimising one's efforts. Strategy comprises the know-how and know-why of sustainable value creation. Of most importance in the context of IP management is to align the company's IP portfolio with its overall business targets.

In this module, participants are taught to ask how a firm's IP portfolio helps it to create value.

### Decision-making module

Decisions are made on the basis of available information. The mind processes and selects information according to the individual's training and cultural background. What seems relevant to a technician may appear irrelevant to a lawyer.

The decision-making module trains participants to gather internal and market-based external information relating to IP, while keeping apprised of the wider IP framework: what does the competitive landscape look like

in the IP field? Are any legislative amendments planned that might impact on business? How does customer demand relate to IP-protected business segments? What is the value of the IP portfolio? What is the lifecycle of the IP portfolio and how likely is it that competitors will succeed in inventing or marketing around the company's IP?

Issues such as risk assessment and new opportunities through joint ventures, patent pools and licensing agreements also come into play here.

#### Implementation module

This module trains participants to develop value chains that help put theory into practice and examine the interplay between various value chains. In terms of skills, it teaches project management and the ability to align different value-added processes and attract funding.

Content-wise, it gives participants practical information on the investor's perspective, IP-related accounting and tax rules, and basic financial techniques such as the securitisation of IP portfolios. IP-related legal knowledge is required where technology transfers and inter-company cooperation are involved.

#### Organisation module

This module teaches participants to design organisational structures that help companies

to achieve their goals. This involves the development of a culture based on knowledge sharing, as well as the (re)structuring of the company, its departments and business units in the most beneficial way. Participants are trained to ask how the IP department can be aligned with other business units to promote cooperation rather than isolation.

Indeed, isolation is often responsible for underleveraged IP portfolios. A company's business strategy must receive the same care and attention as its filing strategy. This module will thus equip future IP managers with skills in IP portfolio analysis, portfolio exploitation, litigation, licensing and valuation. Basic control techniques are taught from the IP perspective.

#### Leadership module

This module teaches human relationship management and reporting. While human relationship management requires skills such as cultural sensitivity and the ability to recruit and retain superior talent and motivate staff to outperform set targets, reporting is an important tool in achieving these targets. Again, we are confronted with the reality that decisions – this time involving people – are based on available information.

This module thus explores how to foster motivation, innovation and creativity. It further explores what information is needed on IP and other business issues to manage people and

### The role of IP management at the business level

		Module 1: Strategy	Module 2: Decision	Module 3: Implementation	Module 4: Organisation	Module 5: Leadership	Module 6: IP business development	
Basic IP-related legal and economic knowledge	Legal	International trade and commercial law						
		International IP law						
		International taxation and accounting						
		Law of contract						
	Management	Organisation						
		Human relationship management						
		Cost accounting and results accounts						
		Investment and decision						
	Strategy	Economy and markets						
		Strategy objectives and success factors						
		Economic environment and influencing factors						

turn an administrative unit into a profit centre.

#### Business development module

Intellectual property as a knowledge-based asset has different characteristics from tangible goods. It is essentially a pure public asset: consumption of the asset by one individual does not reduce its availability for consumption by others, and it is not possible to exclude others from the asset's consumption. IP rights temporarily transform this pure public asset into a private asset, allowing the rights holder to manage knowledge as if it were a private asset. IP-based business models must take these aspects of IP into consideration if sustained competitive advantage is to be achieved.

This module trains participants to look at business development as a cross-disciplinary issue and consider topics such as monopoly design and cost-versus-quality-based markets when designing a business plan.

#### Context of academic training

The training module must be affordable in terms of both time and cost. Six months of postgraduate training on a part-time basis should be sufficient time to give practitioners a holistic view of interdisciplinary IP management. A training programme requiring attendance for one week each month over a six-month period will allow participants to continue working while studying and will thus offer financial security. If companies are to make provision for the training of their employees, they should be made aware of what is involved to ensure that participants have the necessary means and time to afford studying.

Participants must take a fixed set of core classes, but the curriculum offers various possibilities to study particular aspects of IP management in greater depth through seminars and self-study materials. Participants may also benefit from the diverse backgrounds of their peers. Extracurricular seminars and internal presentations are a good opportunity to learn not only through coursework, but also from the different knowledge and skill sets that participants bring to class.

Acceptance to the programme should be based on merit. Participants should apply by submitting a comprehensive application form, stating their interest in the programme and explaining how they aim to benefit from the education after they graduate.

Professors should equally be drawn from a variety of backgrounds and should be selected not only on academic merit, but also on teaching ability. Interdisciplinary thinking

should be the highest priority when choosing academic staff. Tutors may be drawn not only from top universities, but also from top companies in various sectors with best practice experience in IP management.

Teaching should be based on case studies and teamwork. Classes should be as interactive as possible. The classic lecture format – where one person speaks and the rest of the crowd tries to pay attention (or has a surreptitious nap) – should be avoided. According to current research, participants have greater recall of teaching content when it is communicated through teamwork rather than through a lecture. The study materials provided should balance the various backgrounds of the participants and encourage self-study. The case studies should likewise encourage participants to translate theory into practice and develop critical thinking.

Feedback from participants will enable an interactive university to improve continuously and will help to ensure that it offers the highest-quality teaching. The university may also consider providing an informal platform for a pan-European network that allows graduates and tutors to stay in touch and exchange information on recent trends in IP management.

#### Comprehensive understanding

An interdisciplinary curriculum must be based on a comprehensive understanding of IP management. It should enable participants to build up complementary skills, so as to combine practical IP management experience with theoretical knowledge. Overcoming the clash of mindsets may result in higher levels of return from IP. Providing adequate training opportunities is a first step towards this goal. It is to be hoped that more institutions follow CEIPI's example, as this is the only sure way to produce the IP leaders that the world's industries need. ■

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