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The triangle team approach: Collaboration to provide technologically diverse customers with qualitative patent information research

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A B S T R A C T

Patent information service activities cannot always easily be outsourced. External patent information consultants, in spite of their expertise, are sometimes not satisfying the customer's need for high quality searches. The cause of the inadequacy may be the consultant's lack of in-depth knowledge of a particular field of technology and insufficient acquaintance with the subject of study. Customers can cope with this by training the consultant and intensely reviewing the first assignments. If however the customer has limited knowledge of how patent information research is done, training and instructing the consultant and assessing performance may not be practicable. This article illustrates a collaborative approach that a technical consulting organisation which is also a PATLIB centre, having available a multitude of technical research consultants and a small team of patent information specialists, can apply, in association with the customer's own technical and/or product expert, to deal with these possible shortcomings. Sirris launched a pilot project to develop and implement a collaborative model. The article gives an account of how the model was created and implemented, and describes the lessons learnt after 2 years in use.

1. Introduction

Sirris is the collective centre of the Belgian technological industry. We help companies in the implementation of technological innovations, enabling them to strengthen their competitive position over the long-term. About 130 technical experts, many of them involved in research consortia, visit companies on site, offer them technological advice, launch innovation paths, and provide guidance until they reach the implementation phase. Integrated into these innovation activities Sirris has delivered patent information services since 1998 to its customers, since 2002 being a member of the PATLIB network supported and coordinated by the European Patent Office and the Belgian Patent Office. Today 3 people are running the Sirris PATLIB. Two of them focus their efforts on providing patent information services. Whilst doing patent state-of-the-art sweeps for researchers, tackling the freedom-to-operate concerns of worried SME customers, assessing the patenting aspirations of our ambitious research partners, calming down panicking companies sued for infringement and sharing experiences with in-house patent information specialists of many companies about the performance of search consultants, it gradually became clear to us that the accepted model of a small team of patent information (PI) specialists doing patent research does not match the demand of a highly varied mix of companies. In 2009 we decided to develop a collaborative model. In a first step we created the profile of the ideal patent researcher and analysed the resources at Sirris that could be brought to bear by Sirris. Secondly we identified the building blocks of a model emulating the ideal patent researcher deploying these resources. In a third step, in the course of 2010, we started implementing in the Flanders Region these building blocks and a practical approach emerged. In a last but surely not final step we evaluated the approach after a first full year of practice in 2011.

2. Step1: the conventional model: the ideal patent information researcher

We started from the conventional model: one extraordinary "genius" expert in patent information able to complete patent information research projects for the customers of a highly complex and varied market of customers, similar to the one Sirris offers its services to.

This expert should have permanently and up-to date

1. in-depth knowledge of every technology that is mastered by our technical experts (the ultimate "Sirris person-having-ordinary skills in the art")

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2. extensive knowledge of the markets of the customers, their products and processes, acquainted with their preferences and jargon.
3. a creative and inquisitive "finding" [6] mindset paired with a methodical discipline [5]
4. a communicative consulting style
5. profound knowledge of the patent system and experience of doing patent information research

It is obvious that one person never can match such a profile and even a limited team with members having complementary knowledge cannot do so.

In order to identify the building blocks of a collaborative model we first identified the resources in our organisation we could use to achieve a service emulating the characteristics of the ideal patent researcher.

2.1. Mastering the state-of-the-art

One person cannot comprehend the continuously evolving state-of-the-art in every single domain of technology covered by our 130 experts. Admittedly there is an overlap between adjacent fields, but knowing that the EPO employs thousands of specialised examiners, we were convinced that building a team of for instance 5 experts and training them to become patent information specialists would be a rather poor solution. This approach would hamper the ability of the individual expert to stay sufficiently active in scientific and technology research projects, in our view a clear prerequisite for mastering the state-of-the-art. Moreover, the project portfolio at the time would not permit us to keep them busy more than 20% of the time. A person spending 20% or less of his time in patent related activities cannot accumulate enough searching expertise. In spite of this we observed from best practices in research intensive global companies [3] that it is inevitable that technical experts have to play an important part and not only for their skills in the art. This was one of the first basic insights and from it the challenge emerged to make technical experts spending less than 20% of their time on patent information, contribute to our goals of emulating the ideal patent information researcher.

2.2. Affinity with customers and their markets

Our technical research consultants are well acquainted with many of the players in technical markets, and have often dealt with the customer before in a non patent related context. They have a quick grasp of the facts and intuitively assess the novelty and inventive step of an invention rather than that of the patent it may produce. Intuition is derived from years of experience, and cannot be mimicked. Thinking in a certain ontological system as defined by for example the EPC and examiner guidelines by the EPO can be learnt more quickly. However the absence of being imbued in this system, the natural way of building up in-depth knowledge, is a point of concern.

2.3. Creative and methodical

What Evert Nijhof [6] describes as a balance between a finders and a searchers mindset, equilibrium of creativity and method is necessary to find and deduce from well structured though not unambiguously documented facts a qualitative conclusion, transparent and thus acceptable for the customer. We have observed that most of our experts are certainly not inclined to stick to a linear method. Foremost they have to be motivated and coached to follow a methodical thread to the limit however of not losing the indispensable serendipity. In general, technical experts are at first instance hesitating to commit to patent search and analysis projects. Reluctant at first, many are drawn in the game of "seek and find" and find it an exhilarating experience broadening their own expertise. This observation suggests to give novice searchers in the first assignments challenges of a moderate complexity, and to observe their progress to keep them neither unchallenged nor discouraged.

2.4. Service minded

Our technical researchers have a service mindset typical for consultants. Many research experts in research organisations, who participate in longer term projects in work packages not requiring regular communication with customers, do not display such a mindset. For this reason our approach may not be valid for organisations predominantly staffed with such experts.

2.5. Profoundly knowledgeable of the patent system and patent information research

The ideal patent researcher must have a nearly comprehensive expertise in patent matters. As asserted it is not a feasible option to transform every expert into a full professional patent expert, faced with the limitation of 20% availability for patent searching. The discontinuity of working on patent research is clearly inhibiting the build up of a profound experience. We considered this obstacle to the learning curve the major challenge to address and a well organised collaboration of our patent information experts and our technical research consultants a critical activity to overcome it.

Given the resource limitations and the insights gained by contemplating them, the essential blocks to build the model were identified.

3. Step 2: the building blocks for emulating the "genius" patent researcher

In this step are identified new blocks to be implemented and left out elements, for instance our search software & current IT tools, which are in place and will only have to be extended or will be mildly affected by introducing a new model. Also customer interaction was not addressed as it is well adopted in all our services (Fig. 3).

3.1. Multi functional project teams doing the patent research

At the heart of the collaborative approach to emulate the ideal patent researcher is a multi functional team staffed with at least 3 experts each distinguished by a particular profile. Most striking and very critical feature is the managerial role of the patent information specialist. Thus the team comprises:

- a technical expert having
  - extensive knowledge in a particular field of technology
  - broad knowledge of several related technologies
  - experience in participating in technical innovation projects in a dynamic multi project environment
  - a fair balance between creative solution finding and following a method
  - enthusiasm after first search projects
- the invention specialist (mostly a customer representative) having
  - specific knowledge about the invention
  - a good view on the competitive market environment of the customer.
- the patent information specialist having