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Evaluation of Inventions

Why Is It Necessary to Evaluate Inventions?

Only a small percentage of inventions ever make profit. The costs for patent protection of inventions can be substantial. The probability and risk of spending money for patenting inventions that will never make it to the marketplace are high. For the DKFZ to recoup its investment, a technology must be of sufficient commercial interest for an industrial partner to be prepared to obtain a license for the technology and pay royalties for it.

If there is an interest in a license at the time of *disclosure of the invention*, for example through a collaboration agreement with an industrial partner, then the financial risk taken on by the DKFZ with a patent application is low. In this case, the Office of Technology Transfer will try to agree with the company that they pay the patenting costs, develop the technology further and bring it to the marketplace.

If no industrial partner has yet shown an interest in a license at the time of disclosure, the Technology Transfer Office will conduct an evaluation of the invention based on commercial criteria. The goal of the evaluation is to assess whether a licensee can be found within a reasonable time and/or what steps should be taken to increase the appeal of the technology for potential licensees.

What Criteria Are Relevant for the Evaluation?

- Market size/ Market potential
  How big is the market for products or services based on the invention? Are there any competing products or services? How high are the expected revenues?

- Competitive advantage
  What are the benefits and what is the value added resulting from the invention compared to competing products or processes already existing in the marketplace?

- State of development
  How far is it from the invention to a product? Is there a proof of concept or a prototype?

- Sufficiency of patent protection
  Is protection by a patent sufficient to secure the competitive advantage? Can patent protection easily be evaded? Is there a 'freedom to operate'?

This is not a complete list, it is merely intended to present an overview of key criteria. Other factors connected with the invention also need to be taken into account, for example whether there are collaboration agreements in place or whether material obtained from an outside source was utilized. As a rule, it will take Technology Transfer four to six weeks to conduct such an evaluation, provided that no special circumstances arise. This evaluation will include a patent search and, if necessary, a consultation with an external expert. The evaluation criteria will be applied not only at the time of invention disclosure, but also during an ongoing patent granting procedure.

What Are Possible Outcomes of an Evaluation?

The Technology Transfer Office reports the evaluation outcome to the Management Board, which will then take the final decision. The evaluation outcome is not a statement about the quality of research, but merely about its marketability.

Typically, there are four possible outcomes:

1. Claim of the employee invention: Should the Management Board decide in favor of claiming the invention, the patent application process will be initiated. This means that Technology Transfer believes it can recoup the investment into patenting. However, later events or a lack of commercial interest can lead to the termination of a patenting procedure at a later date.
2. Release of an invention to the inventors: If the Office of Technology Transfer believes that it will not be able to find a licensee and thus to recoup the patenting costs, the invention is released to the inventors. In this case the inventors are free to file a patent application at their own expense and to exploit the invention. The DKFZ will not receive a share in potential revenues.
3. Holding back and waiting for further research data: Sometimes it is wise to disclose an invention at the time of "conception". However, a patent application will usually not be filed before the invention has actually been reduced to practice. This helps to avoid expenses for ideas that will not work. Moreover, it is often not possible to predict what critical details will facilitate actual reduction of an invention to practice and should therefore be included in a patent application to obtain good patent protection.

4. Testing the market: If it is hard to predict commercial interest in an invention, a sensible step to take before patenting can be to approach, together with the inventors, companies which might be interested in the invention. The companies would be committed to secrecy. If no interest is shown, the invention will be released.

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