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Preface

IPscore® 2.1 is a tool for evaluation of patents and technological development projects. IPscore® 2.1 provides both qualitative and quantitative evaluation in the form of a financial forecast showing the net present value of the evaluated technology. Additionally, IPscore® 2.1 produces output in the form of graphical overviews and a report to facilitate communication of the results of the evaluation.

The Danish Patent and Trademark Office developed IPscore® 2.0, in collaboration with Professor Jan Mouritsen, the Copenhagen Business School and a number of Danish companies. The European Patent Office purchased the tool from the Danish Patent and Trademark Office. IPscore® 2.1, developed by the European Patent Office, is a multilingual and slightly improved version of IPscore® 2.0. IPscore® 2.1 is made available to users free of charge in order to support the patent strategy of companies, mainly SMEs and to steer the volume of applications by eliminating potentially "worthless" applications.

National patent offices and patent information (PATLIB) centres in serveral countries are prepared to provide support services on the use of and the interpretation of output from the tool to end-users.

We hope you will find IPscore® 2.1 useful.

February 2009

European Patent Office

Copyright

Terms and Conditions of Use

For the use of IPscore® the General Conditions for the Delivery of EPO information products apply.

Use of the IPscore trade mark

IPscore® is a registered trade mark owned by the Organisation. Reference in external reports and other publications may be made only if it is indicated that IPscore® is a registered trade mark.

Liability of the Organisation

IPscore® 2.1 does not come with any guarantee. The Organisation may not be held liable for any loss of data or other damage occurring during use of the program.

IPscore® 2.1 includes a mathematical model and affords no guarantee of accuracy for the results of the financial analysis of the evaluated patented technology. The patent's actual value may be significantly higher or lower than the value calculated by IPscore®, because the value is influenced by many commercial and economic factors not contained in the model, or other factors beyond control.

Decisions made on the basis of results determined by IPscore® 2.1are at the user's own risk. The Organisation bears no responsibility for any decisions taken by users including but not limited to decisions regarding investments or annulment of patents or any other commercial, economic or financial decisions and transactions.

Services

There is no technical support for installation of IPscore® 2.1 other than the accompanying instructions and guide, and information to be found on the EPO's websites. For information about training, please the EPO's webpage at www.epo.org/ipscore-training.

Customizations

IPscore® 2.1 has been created as database in Microsoft® Office Access 2003. IPscore® 2.1 can only be run under that version or newer compatible versions of Microsoft® Office Access. IPscore® can be customized in the ways available in Microsoft® Office Access. Responsibility for all changes lies with the user and not with the Organisation.

Introducing IPscore® 2.1

Contents:

- **Components of IPscore® 2.1**
- **Why you should use IPscore® 2.1**
- **Patents as an option for value creation**
- **IPscore® shows the way to innovative thinking**
- **Finding forgotten treasure**
- **Phasing out weak patents**
- **Building the foundations for an IP strategy**
- **Aligning business strategy and IP strategy**

IPscore® 2.1 is a unique evaluation tool, developed to provide a comprehensive evaluation of patents and technological development projects. IPscore® 2.1 is a simple, user-friendly tool that can be used by all companies that have a portfolio of patents and development projects. IPscore® 2.1 provides a framework for evaluating and strategically managing patents and development projects and thereby integrating them into company management strategy.

Experience gained from working with the IPscore® basic model and the subsequent development phase of IPscore® 2.1 shows that IPscore® can be used for the evaluation of tangible development projects, from the birth of an idea and the IP management of patents through to the expiry of a patent.

This section gives an overall introduction to IPscore® 2.1.

Components of IPscore® 2.1

IPscore® 2.1 comprises:

- a basis for identifying the conditions that create value for the patent or development project. A strong evaluation profile with tried and tested assessment factors and new reports provides a comprehensive evaluation of the various conditions determining the value of a patent or development project.
- a basis for assessment and valuation of the patent or development project. A new quantitative financial module works out a financial forecast and thereby determines the financial order of magnitude in the overall qualitative evaluation.

IPscore® 2.1 includes:

- defined assessment factors which, on a user-friendly basis, translate professional specialist input into a common frame of reference.
- reports which illustrate different perspectives for the patents or development projects.
- a radar profile which sets up a picture of the future prospects and an overall interdisciplinary picture of the evaluation results.
- organized and separate risk and potential assessment factors related to technology and investment needs.
- a matrix model which makes it possible to compare relative strengths among evaluated patents or development projects.

The construction of IPscore® 2.1 is founded on the practical experiences gained in the pioneering development of the IPscore® basic model. Established Danish and international companies were involved in the development of IPscore®, which was first launched in January 2001. In its structure, IPscore® is generally applicable to all lines of business. This ensures that IPscore® 2.1 can easily be used by companies wishing to adapt the model to company- or industry-specific conditions for the assessment of the risks and potential embodied in patents and development projects.

Why you should use IPscore® 2.1

Strategic patent leadership or IP management is the name we give to the work of utilizing all of the opportunities inherent in patents and patented technologies. IP management is about utilizing all the possible opportunities in the patent, which, combined with other company assets, gives the company an advantage in the global market.

IPscore® 2.1 is a management tool which can contribute to the development of technology companies' work through strategic patent leadership and promote the benefits of working with ideas, patenting and business development.

The thoughts and ideas behind IPscore® are explained in detail in the following sections and illustrate how using IPscore® 2.1 can contribute to developing the company's strategic patent leadership – IP management.

Patents as an option for value creation

Generally speaking, patents can be viewed not only as a legal document protecting a technical solution to a problem, but as a basis for commercial opportunities – an option. Business prospects arise when patents exclude others from a given market, prospects for either producing and selling a product related to the patent or for patent licensing to other companies,

which are then entitled to use the technology. The assessment factors in IPscore® provide an overall evaluation of carefully selected conditions, which exert influence on how the company can make the most of this option.

IPscore® shows the way to innovative thinking

There are many prospects for utilizing the potential inherent in an idea - a patent. A patent can, for example, be the basis for the expansion of a company. This was the case with the establishment of the global LEGO Company, which developed and then obtained patents on a plastic building brick. Patents were an essential element in the development of the original small wooden-toy factory into a larger industrial company, and eventually into a world-wide enterprise. The LEGO Company has itself developed, produced and sold its products by exploiting the options in its patents.

Other companies are interested solely in developing new ideas using patents as the legal document required for setting up licence agreements with companies which, on the basis of these licences, produce and sell the actual product.

Thus there are clearly different ways in which patents may be utilized. Regardless of the chosen strategy, IPscore® 2.1 adds a basis for rethinking in the company, thereby giving rise to new, challenging and profitable thinking, setting the scene for new, value-enhancing actions.

Finding forgotten treasure

The development process behind IPscore® has revealed that many companies miss considerable business opportunities. A patent should not be just a legal document, “filed and forgotten”. IPscore® 2.1 sets the stage for “dusting off the patent file” and re-assessing the opportunities lying dormant in the patent. Are there opportunities for new products embodied in the patent? Or new services? Can a licence be given to a non-competitor? These are the kind of thoughts that should be triggered during the IPscore® evaluation process, leading to the retrieval of forgotten treasure and benefitting the company. The company can use IPscore® as a basis for IP management and thereby uncover the value hidden in company-owned patents and development projects.

Phasing out weak patents

Patents grow more expensive each year – as renewal fees increase. IPscore® 2.1 facilitates continuous evaluation of the future prospects of a patent.

IPscore® 2.1 facilitates a systematic assessment of all the essential aspects concerning utilization and strategy. Decisions regarding the discontinuation or sale of the patent can then be made on a sound and qualified basis, or a new strategy for making the most of the patent can be initiated.

Building the foundations for an IP strategy

A serious IPscore® analysis, including all the conditions and factors described in IPscore® 2.1, will provide a sophisticated, multifaceted picture of the risks and potential surrounding patents. When more patents have been evaluated with the assistance of IPscore® 2.1, the company will be equipped with a sound professional basis for developing its IP strategy. This will be of benefit to the company’s own development process.

Aligning business strategy and IP strategy

Not all companies have a documented IP strategy (IP = industrial property, e.g. patents, trademarks and designs), but all companies have a business strategy. As a company with one or more patents, it is important that the purpose of those patents supports or is supported by the company's business strategy.

It may be that the strategy for product development is designed to ensure one new product launch per half-year (short term), whereas the patent strategy ensures the company has the right to put products from a specific technological area on the market over the next ten years (long term). This is one definition of "freedom to operate", guaranteeing a competitive edge in the company's core-technology areas.

IPscore® 2.1 combines IP strategic conditions, such as the status and strength of the patent and its strategic purpose, with the business strategy conditions, which are the patented technology's market(ing) potential, its licensing opportunities, and its influence on production conditions and finance.

This overall, comprehensive evaluation, with its accompanying report facilities, provides a good basis for developing close interaction between the company's business strategy and IP strategy. The evaluation forms a basis for stronger interaction between managers in different technical areas of production.

IPscore® 2.1 structural framework

Contents:

IPscore® 2.1 input categories:

- Legal status
- Technology
- Market conditions
- Finance
- Strategy

The “Financial results” category

IPscore® output:

- Radar profiles
- Strategic profiles
- Net present value
- Charts
- Diagnoses
- Portfolios
- Supplementary reports
- Reports

The IPscore® 2.1 framework is built on experience gained with the IPscore® basic model. IPscore® 2.1 retains the focus on an overall, comprehensive qualitative evaluation of a single patent or development project. In addition, IPscore® 2.1 comprises a built-in financial model which, by producing a financial forecast, presents an order of magnitude for the value of the patented technology when put to use in the company.

IPscore® 2.1 comprises five different categories of assessment factors, each a focal point on important elements for an overall evaluation of risks and potential inherent in the patent or development project. Altogether there are 40 assessment factors, each with a rating scale of 1 to 5 points, where 5 is the maximum (“best”) score. A built-in grading of answer options on the rating scale makes it easy and quick to arrive at a common frame of reference and clarification of the scoring. The assessment factors are divided into the following input categories.

IPscore® 2.1 input categories

A. Legal status
This category concerns the assessment of the patent as a legal document, i.e. the legal basis for maintaining and enforcing the patent and the company's ability and motivation to do so. The category looks at determining the patent's present position in the grant process, how broad the patent's claim is and how durable it is thought to be. Is the patent monitored with regard to infringements? And if so, does the company have the means to enforce the patent? Overall, the category provides a picture of the patent's legal status and situation.

B. Technology
The focus of this category is on assessing the patent's technology, the prospects within the technology, and the technology's demands on the company. It looks at whether the technology can be substituted by other technologies, whether infringing copycat products are easy to produce, whether the technology has been tested and whether it creates a demand for new production skills/equipment. The category aims to provide an overall impression of the technology's position of strength.

C. Market conditions
This is an assessment of various factors and conditions affecting the marketing options of the patented technology and the business opportunities created when the patented technology is incorporated in one or more products. Relevant areas are the market's competitive situation, market growth, product life expectancy in the market, licensing opportunities, etc. This category creates an impression of the different factors and conditions which, when aligned with the patent's legal status and the prospects in the technology, shows the potential inherent in the patented technology. Certain assessment results go on to become a factor in the calculations for the financial forecast.

D. Finance
The finance category concentrates on determining how the patented technology affects the financial structure in the business area where it is put to use. It is an assessment of the future costs for product development and production and earnings, coupled with the importance of these contributions to the company's total turnover, etc. It also assesses the investment needs for production equipment. The information gathered here is put together with key figures from the company accounts to become factors in the calculations for the financial forecast.

E. Strategy
The strategy section focuses on categorizing the patent (the legal document) with a view to weighing the actual purpose of the patent against the qualitative and financial assessments. The company assesses the purpose of the patent, how it intends to use the patent. Is the patent a defensive tool, short-term and only attached to one product, or does it also have an offensive, long-term purpose, e.g. by securing the right to come up with new product developments in new markets and thus ensuring company enterprise options?

The "Financial results" category

Apart from categories A-E, the model includes a financial results category, where key figures from the company accounts are entered. These figures form the basis for calculating the financial forecast of how much the patented technology is worth to the company when put to use in a given business area.

From the annual company accounts, key financial figures for turnover, costs and provision for depreciation are entered in this financial results category. The patented technology's business area is also defined. The figures provide an order of magnitude for the assessments made in

selected financial assessment factors in categories C and D. (The construction of the financial model and assumptions is explained in detail in Chapter 8.)

IPscore® output

IPscore® 2.1 includes a number of output reports, each revealing different dimensions of the qualitative evaluation and the financial forecast. The output reports contribute to interpretation and analysis of the patent evaluation. The reports can be used in dialogue and reference groups, and for presentation to interested parties.

Radar profiles
A new facility for strategic management of patents and development projects is the IPscore® radar profile. Radar profiles provide an overall view of the assessment factors in categories A to D. They can be used in dialogue and for interpreting how the different categories of assessment factors as a whole affect the value of the patent. Immediate strengths and weaknesses are made apparent and cross-referencing, e.g. technology status/marketing potential, will reveal the correlation between different categories.

Strategic profiles
The strategic profile presents distinctive features of the purpose of the patent, the patent's strategic position and its role as a legal document in the company. The strategic profile is used to illustrate how the patent plays an important strategic role. The strategic profile can be used as a counterpoint to the assessment of the patent's immediate financial value.

Net present value
The net present value is the financial forecast depicting the value of the patented technology, discounted at a selected interest rate. All assumptions for the calculations are shown here. Finally, there is a built-in facility enabling direct simulation of data in the output report.

Charts
Four output charts illustrate different aspects of the calculated foreseeable financial development to be achieved by implementing the patented technology: (1) a patent account forecast on the utilization of the patented technology in the selected business area; (2) a comprehensive total account forecast providing an overview of the quantitative relationship between the business area and other company finances; (3) a liquidity chart covering the calculation period; and finally (4) a graph depicting the net present value, which can be used to determine the discount rate used in the net present value calculations.

Diagnoses
All of the assessment factor results in categories A-D are grouped according to their degree of risk or potential. The diagnoses present the two groups of assessment factor results according to the score achieved, making it easy to identify critical areas.

Portfolios
In IPscore® 2.1 it is possible to examine and compare the evaluated patents or development projects in two separate graphical representations: (1) a portfolio matrix depicting the evaluated patents according to their score in the risk/potential assessment factors; and (2) a bar chart showing the score of each patent in categories A-D as well as the estimated net present value for each of the patents.

Supplementary reports

Special-interest areas can be singled out and presented in supplementary reports. These are radar charts showing the chosen assessment factors, grouped according to their area of interest

and running across all five IPscore® categories. You can choose a supplementary radar chart with the different assessment factors related to the company's ability and motivation to utilize the patent and the patented technology. When IPscore® has become an integral part of the organization it would be natural to design new supplementary focus reports in specific radar charts adjusted to the company strategy and business plans.

Reports

A final report contains selected output charts from the qualitative evaluation and the forecast of financial results, as well as a number of directional questions and topical headings that form the framework for creating a comprehensive evaluation report. The report can form the basis for further business discussions concerning the evaluated patent. The evaluation report can, for example, be used as a presentation of results to the company's strategic management division, in decision-making processes, etc.

How to use IPscore® - a guide for the company

Patents, ideas and development projects

IPscore® 2.1 is a specially designed software tool which can help any company with patents, development projects and ideas.
IPscore® 2.1 facilitates aspects of management, including evaluation and assessment of an idea, a patent or a development project.

By virtue of its database design, IPscore® 2.1 provides a range of facilities limited only by the company's own willingness and ability to integrate IPscore® as a strategic management tool in the organization.

Before IPscore® is put to use in the organization it is important to be clear about what is to be evaluated and the purpose of doing so, and to perform the evaluation accordingly. The returns from the evaluation will then be relevant and useful results.

A tool for management and communication

IPscore® is on the one hand a tool for professional specialists and on the other hand a tool which promotes a common frame of reference for future focus areas in the organization. IPscore® also provides a sound evaluation basis for the assessment of patents and development projects in the company. Managers from different sections of the company should be involved in the integration of IPscore® in the company.

By way of example, someone from business management ought to be involved. Depending on the company's organizational structure, this could be a director, a head of department such as a marketing manager, or somebody in a similar position. There also ought to be someone who is responsible for product development present, such as a technical director or the department head. Furthermore, the person responsible for the patent ought to be involved. This could be a head of department or the patent manager if there is one.

It is very important that the first patent evaluations are made collectively by all of the above-mentioned people, as a common frame of reference for several important areas is established between participants during the evaluation process. Examples of these areas are: elements in the long-term plans for product development, marketing and marketing conditions, clarifying and understanding problems concerning strategic issues of patent utilization, as well as joint decision-making on important or critical issues emerging during the evaluation.

When working with IPscore® has become an integral part of the culture within the company, it will typically be the person responsible for the patents who co-ordinates the IPscore® evaluation.

How to start

Go straight to the point! Target and define the business area to be evaluated. Set your sights on answering the assessment factors. Answer spontaneously and directly. Note important comments and assumptions that crop up during the process.

How to read the IPscore® results

Work on interpreting and using the results. The evaluations often carry messages to be "read between the lines". Are there any hidden patterns in the results? Are there areas of unused

potential? Are there risks that can be reduced? What decisions are necessary for achieving maximum returns?

Determine the relevance of the assessment factors. When two or more patents have been evaluated, adjust assessment factors and financial assumptions to align with company-specific conditions. The company will then have its own tailor-made working model.

IPscore® is designed to comply with the specific requirements of companies, but in its structure is designed for all branches in general. Therefore changes and adjustments may be required in certain situations. See “IPscore® - advanced technical options”.

Practical guide to IPscore® 2.1

Contents:

A. Registering a patent or project for evaluation

B. Starting the evaluation

C. Defining the business area

D. Evaluation of category A-E input data

E Analysing the patent's qualitative profile

F. Features of the patent's strategic position

G. Financial forecast and simulation

H. Financial development

IJ. Qualitative diagnoses of risks and opportunities

K. Comparing patents

L. Selecting special-interest reports

M. Communicating the results in reports

The IPscore® 2.1 practical user guide and instructions are designed for "hands-on" use. Divided into twelve sections, from the granting of the patent to the evaluation and analysis of results, the guide can also be followed "on-screen" in IPscore®, where each screen and its functions are explained in detail.

The guide is illustrated throughout with relevant screens. The guide refers to the screens by their computer title in square brackets, e.g. [Front page]. The individual 'button' commands are referred to thus: <OK>. Occasionally reference numbers are used, e.g. (5), referring to the explanation of an item on the screen.

Some sections start with a short guide, providing user-friendly support in future IPscore® processes.

IPscore® definitions

An IPscore® evaluation demands a clear decision on what is to be evaluated and the purpose of doing so. It is important that the elements of the evaluation are accurately defined, and that all participants in the process share a common understanding of these elements. The following is a list of some of the elements and definitions used in IPscore®**:**

Patent is the term given to the legal document that defines the exclusive right to an invention. This invention can be an element of several prospective products/processes. When a patent is evaluated in IPscore®, the process covers all the products and processes that could be developed on the basis of the invention embodied in the patent.

Description of a situation in IPscore®: In IPscore® input category A, "Legal status", it is the patent that is assessed. Depending on the evaluation situation, the company can decide to assess one patent, or more patents collectively in category A. If the company wants to evaluate a development project embodying a specific technology there may be several patents covering the technology. As such, the answers to category A must provide a comprehensive assessment of all the patents involved in protecting the technology.

Invention is the term applied to the idea or the invention the patent embodies.

The patented technology is the term used to describe the technology, product or process which is based on the patent and which will be commercially exploited.

There may be cases requiring a differentiation to be made between the patented technology and the patented product. In cases where the invention can be sold without being part of an actual product, the term 'patented technology' is preferred.

The patented product or the patented process is the term given to the finished products or processes that the company either sells or uses in its own production process. The patented product or the patented process may, unlike the patented technology, comprise several inventions.

A. Registering a patent or project for evaluation

Short guide:

1. Select language. Click on <Deutsch>, <English> or <Français>.

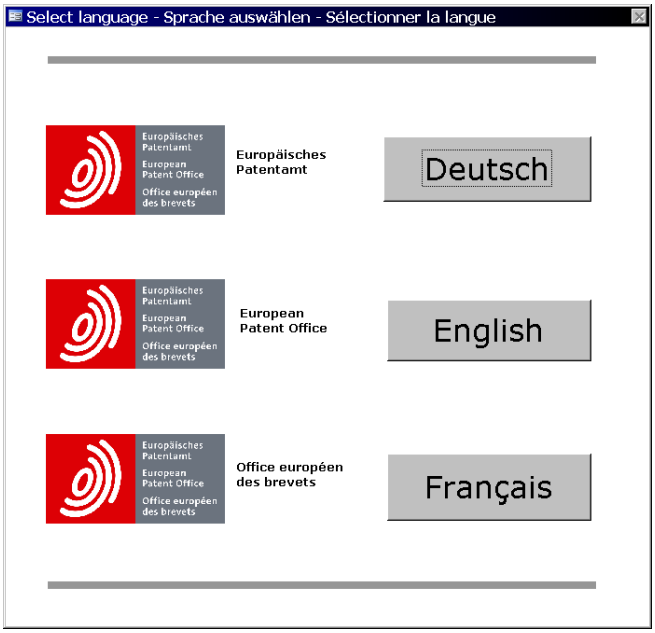
2. Register a new patent. Click on <Add>. Enter the name of the patent in the dialogue box, click <OK>. Confirm the registration by clicking <OK> in the next dialogue box. This brings you automatically to the patent assessment factors, [Patent] screen. You can also activate the patent by double-clicking on the patent's name on [Front page].

3. Continue in Chapter 6B: Starting the evaluation

Instructions:

To install IPscore®, insert the IPscore® DVD, read the "`ReadMe.txt`" file and follow the installation instructions.

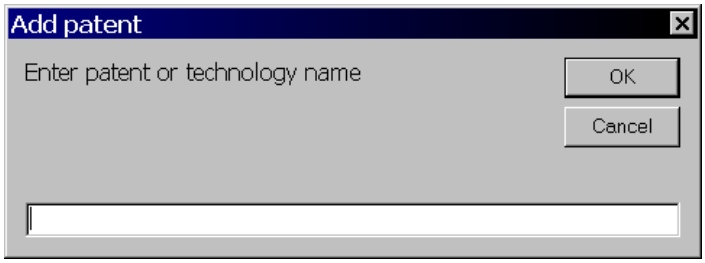
Start IPscore® by clicking the IPscore® icon on your desktop. The [Front page] screen will appear (shown on the next page). You can select the language by clicking the <Language> (<Sprache>/<Langue>) button and selecting the language on the [Select language] screen:



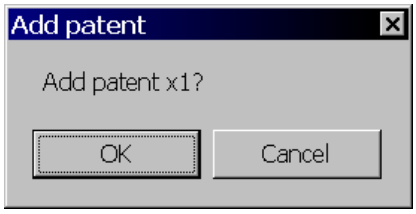
The language can be changed at any time during the evaluation process, but this action also resets the parameters as described in Chapter 7: Changing the rating scales.

To start the evaluation and gain access to the assessment factors enter the name of the patent or development project. Click on the <Add> command on the [Front page] screen (see the next page) to gain access to entering the name of a patent or project or technology.

Enter the name of the patent or the technology to be evaluated in the next dialogue box and click on <OK>.



Confirm the entry by clicking on <OK>.

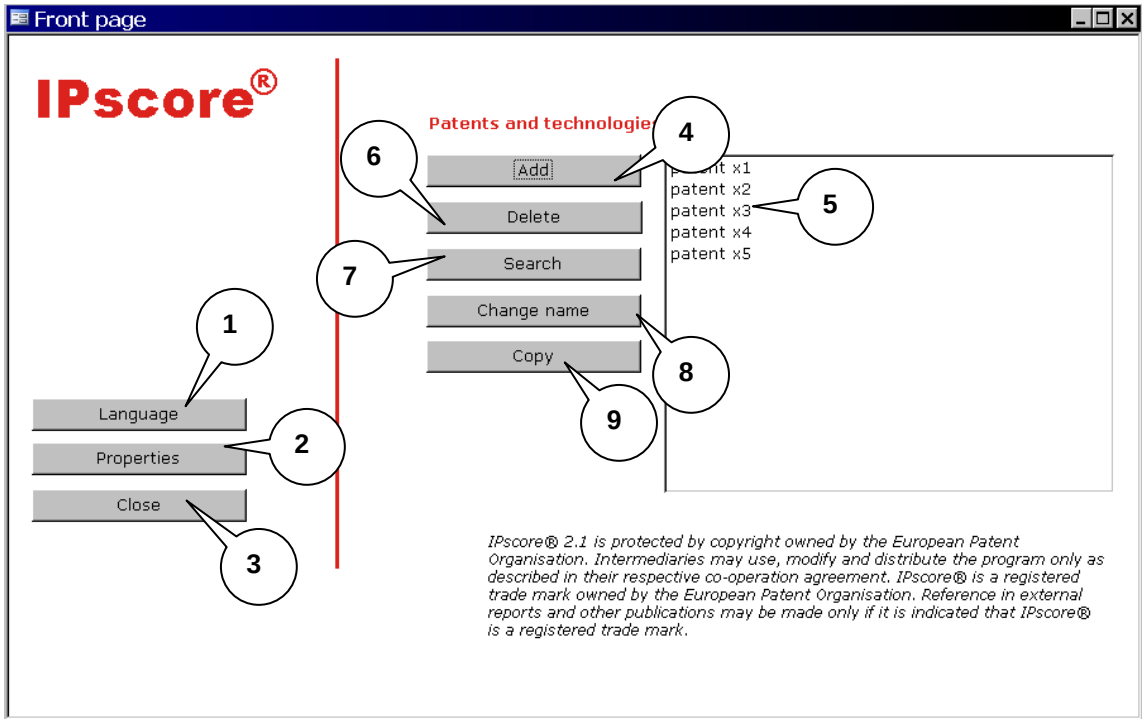


This automatically takes you straight to the patent assessment factors, [Patent] screen.

Should you in the future require an evaluation of a patent that has already been evaluated, you can access the patent by double-clicking on its name on [Front page].

The evaluation can now be started – go to the section “Starting the evaluation”.

Elements of the [Front page] screen



1. Select Deutsch, English or Français. This action also resets the assessment factor questions and answers (see Chapter 7: Changing the rating scales).

2. This is where the name of the database can be changed, e.g. when there is a need to establish several IPscore® databases designed to accommodate a specific group of patents or designed for a specific area within the company. When you click on <Properties> a number of options appear on screen. Use only the first command area – "Application Title". Enter the name of the new database and click on <OK>. ***Warning:*** ***Do not make any adjustments in the other command areas unless you are a skilled Microsoft® Office Access user.*** See Chapter 7: IPscore® - advanced technical options.

3. Closes IPscore® and Microsoft® Office Access.

4. This is where you enter the patent that is to be evaluated.

5. To access the patent required, double-click on its name here.

6. To delete a patent, select the name of the patent in the database (5) and click on <Delete> (6). For security reasons a dialogue box now appears requiring confirmation - twice - that the patent is to be deleted. If you are sure, click <OK> both times, thus deleting the patent.

7. Search facility for patents. Click on <Search> to access the dialogue box where you enter the name of the patent you want to find and click <OK>.

8. This command is for changing the name of a patent already registered in IPscore®. Click on <Change name>, enter the new name and click <OK>.

9. To copy a patent, select it and then click <Copy>.

B. Starting the evaluation

Short guide

1. **Access the patent** to be evaluated by double-clicking on the patent name. [Patent] now appears.
2. **Access instructions**: Click on <Instructions> in [Patent]. Read the instructions.
3. **Proceed** to Chapter 6C: Defining the business area.

Instructions

When the patent has been registered and [Patent] is on the screen, evaluation can begin.

You can activate a previously registered patent for evaluation by double-clicking on its name to access [Patent].

[Patent] shows an overview of the categories of input elements, output elements and report facilities in IPscore®. See below for a descriptive account of the [Patent] screen.

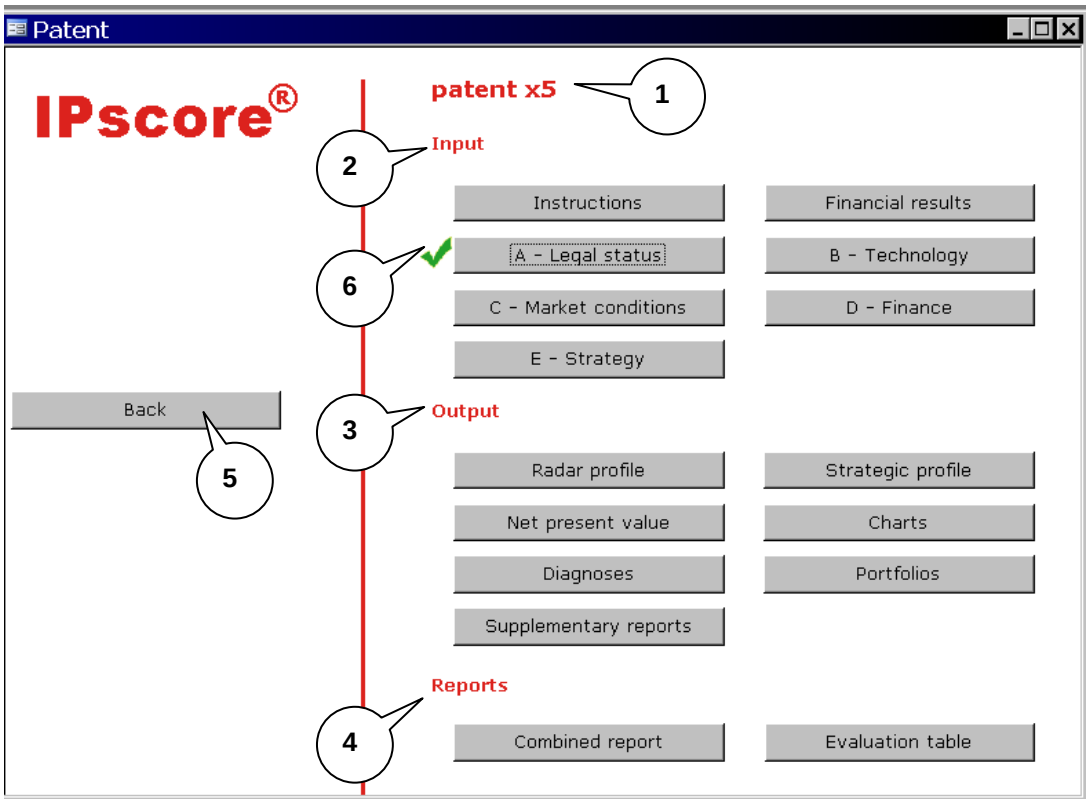
Click on <Instructions> in [Patent] and read the instructions. Choose the basis for the evaluation, which must then remain the same throughout the evaluation. It is important to establish this basis before proceeding to answer the assessment factors.

Determine whether a single patent or a patent family forms the basis for the evaluation. Be clear about whether the market and financial evaluation of the patent refers to one or more products. Answers to questions in Financial results and the assessment factors referring to percentage turnover must refer to the turnover figures given in Financial results.

Proceed to Chapter 6C: Defining the business area.

Elements of the [Patent] screen

This screen contains all the input and output elements included in the IPscore® evaluation.



1. The name of the patent being evaluated.

IPscore® input categories

2. The Input area comprises seven commands, six of which are linked to a questionnaire to ensure a maximum-benefit comprehensive IPscore® evaluation:

- < Instructions>: Short general guide to the evaluation.
- <Financial results>: Input of key financial figures, which will go forward to the financial section of the evaluation.
- < A – Legal status>: Assessment factors concerning the legal situation of the patent.
- < B – Technology>: Assessment factors concerning the patent's technological situation.
- < C – Market conditions>: Assessment factors concerning the patent's market conditions.
- < D – Finance>: Assessment factors concerning the patent's financial conditions.
- < E – Strategy>: Assessment factors concerning the strategic purpose of the patent.

IPscore® output categories

3. The output area comprises seven commands, each accessing the results of the evaluation:

- <Radar profile> accesses [Radar profile], presenting 4 radar charts depicting the results from the assessment factors in categories A-D.
- <Strategic profile> accesses [Strategic profile], presenting a radar chart depicting the results of the strategic questions in category E.

- <Net present value> accesses [Net present value], showing the net present value and providing net present value simulation facilities, activated by changing the scores and financial data.
- <Charts> accesses a dialogue box offering the following options: <Patent accounts>, <Liquidity>, <Company accounts> and <Net present value graph>.
  <Patent accounts> shows a bar chart depicting company profits with or without the patented technology. <Liquidity> shows a graph depicting annual liquidity and accumulated liquidity. <Company accounts> shows a bar chart of combined profits with and without the patented technology, and other profits. <Net present value graph> shows the net present value according to the discount factor.
- <Diagnoses> accesses a dialogue box offering a choice between a diagnostic report on <Risk factors> and a diagnostic report on <Opportunity factors>. <Risk factors> accesses [Diagnostic report on risk factors], where the risk factors are listed beginning with the lowest score, i.e. the highest risk. <Opportunity factors> accesses [Diagnostic report on opportunity factors], where the opportunity factors are listed beginning with the highest score, i.e. the highest degree of opportunity.
- <Portfolios> compares the patents in <Opportunity/risk matrix> or <Comparison of net present value/points>. <Opportunity/risk matrix> accesses [Opportunity/risk matrix], positioning the patents according to their risk/potential situation. [Comparison of net present value/points] shows a bar chart with the scores from categories A-D.
- <Supplementary reports> offers facilities to choose from a selection of cross-reference radar charts specific to company requirements.

IPscore® reports

4. The concluding reports <Combined report> and <Evaluation table> are accessed here.
- <Combined report> presents a combined evaluation report on the patent where you can add your text. See an example of a report in Chapter 6M.
- <Evaluation table> accesses a complete record of the assessment factors and scores obtained. Choose between a table <With comments> or <Without comments>.

5. Use <Back> when you want to back-track to avoid closing down IPscore® and Microsoft® Office Access.

6. The green symbol indicates that all questions in this category have been answered.

C. Defining the business area

Short guide:

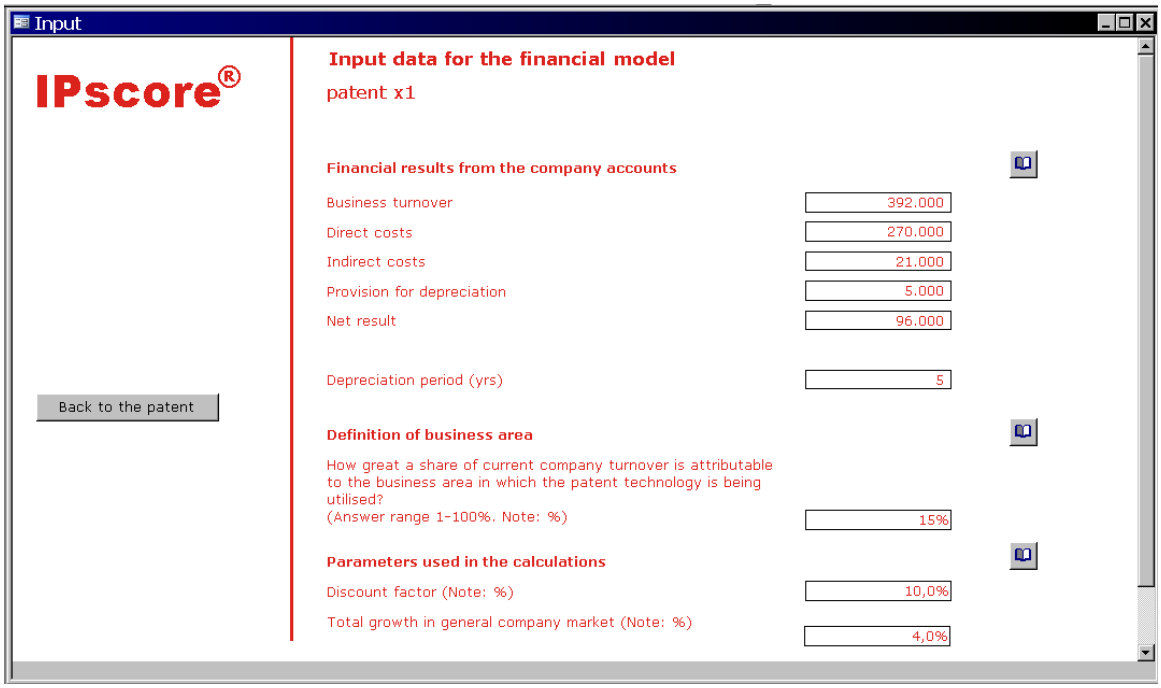
1. **Click on <Financial results>.** Enter key figures from annual company accounts in the spaces provided. See instructions given in the explanatory text box by clicking on .
2. **Define the business area** of the patent to be evaluated and enter the figure. See instructions given in the explanatory text box by clicking on .
3. **Determine the discount factor** and the company's general market growth rate and enter the figures in the spaces provided. See instructions given in the explanatory text box by clicking on
4. **Click on <Back>.**
5. **Continue in** Chapter 6D: Evaluation of category A-E input data

Instructions

This is an important stage of the evaluation, where it is vital to be clear when defining the relevant business area of the evaluated patented technology and about the correlation between the business area of the patent and the company's remaining financial area.

Firstly, key financial figures from the annual company accounts must be entered.
Click on <Financial results> in [Patent] to access [Input].

Elements of the [Input] screen – Input data for the financial model



See instructions given in the explanatory text box by clicking on . Enter key financial figures from the annual company accounts.

Guide box 1

You can use a simple economic structure based on company accounts from a specific company division or department/sector, depending on the basis for the evaluation of the patented technology. If so, all financial figures must relate to the chosen sector and represent a cohesive economic structure. The choice of financial basis for the evaluation affects the calculable results from the assessment factor questions, where the rating scales refer to percentage of turnover. This is the case in category C – Market conditions and category D – Finance. The figures for turnover given in this financial results category must be the same as the turnover figures forming the basis for your answers to the assessment factor questions. The upper limit for the depreciation period is 7 years.

Now enter the figures for business turnover, direct and indirect costs, provision for depreciation and depreciation period in the allotted spaces.

Define the business area to be evaluated. See instructions given in the explanatory text box by clicking on .

Guide box 2

Select the business area, specific to the patented technology, to be evaluated in IPscore®. The business area is defined as the percentage share of total company turnover. Alternative method: Where available, selected business area accounts would provide greater accuracy than an estimated share of total turnover, and as such can be used instead of the company accounts. In that case, the business area share of company turnover is equal to 100%.

Determine and enter the relevant percentage in the space provided.

Determine the discount factor and the company's general market growth rate. See instructions given in the explanatory text box by clicking on .

Guide box 3

Determining parameters for calculations and graphs

Discount factor
A calculation is made of net present value for the patented technology, using a predefined discount factor. Here you enter the desired discount factor for the net present value. Specification of the net present value calculation is presented in two output reports:

1. Net present value with assumptions, and
2. Comparison of net present value/points.

Total growth in general company market
Enter what you determine to be the general growth rate percentage in the company's active markets. The 'company' could be the company as a whole, a division or a department/sector, depending on the basis for the evaluation (see guide box 1 above).

The parameters are used to calculate the average growth rate in the other business areas within the company, i.e. areas not directly affected by the turnover from the patented technology which is being evaluated here.

The calculation is presented as a graph, in the 'Charts/Company accounts' output report. Here the growth rate percentage is a determining factor in deciding how much 'Other company profits' are expected to rise or fall during the ten-year calculation period.

Enter the discount factor. Determine and enter the company's general market growth rate. Choose the discount factor for the calculation.

Click on <Back to the patent>.

Proceed to Chapter 6D: Evaluation of category A–E input data.

D. Evaluation of category A-E input data

Short guide:

1. **Select category:** On the [Patent] screen, click on the input category required from A – E, e.g., <A – Legal status>, to access [Input]. Answer all of the assessment factor questions.
2. **Help**: Click on to access the explanatory text box containing a detailed description of each assessment factor.
3. **Evaluation:** Select the assessment factor rating that comes closest to reflecting the situation at hand.
4. **Register comments:** Enter any relevant comments in the comments box .
5. Proceed in the same way for all the assessment factors in the category.
6. Select the next category, e.g. <B - Technology>, complete the evaluation and continue the process through the remaining categories in [Input].
7. **Proceed to** Chapter 6E: Analysing the patent's qualitative profile.

Instructions

When the basis for the evaluation has been defined, **all** 40 assessment factors' questions in the five categories A – E must be answered. Start by accessing category A Legal status by clicking on < A - Legal status > in [Patent].

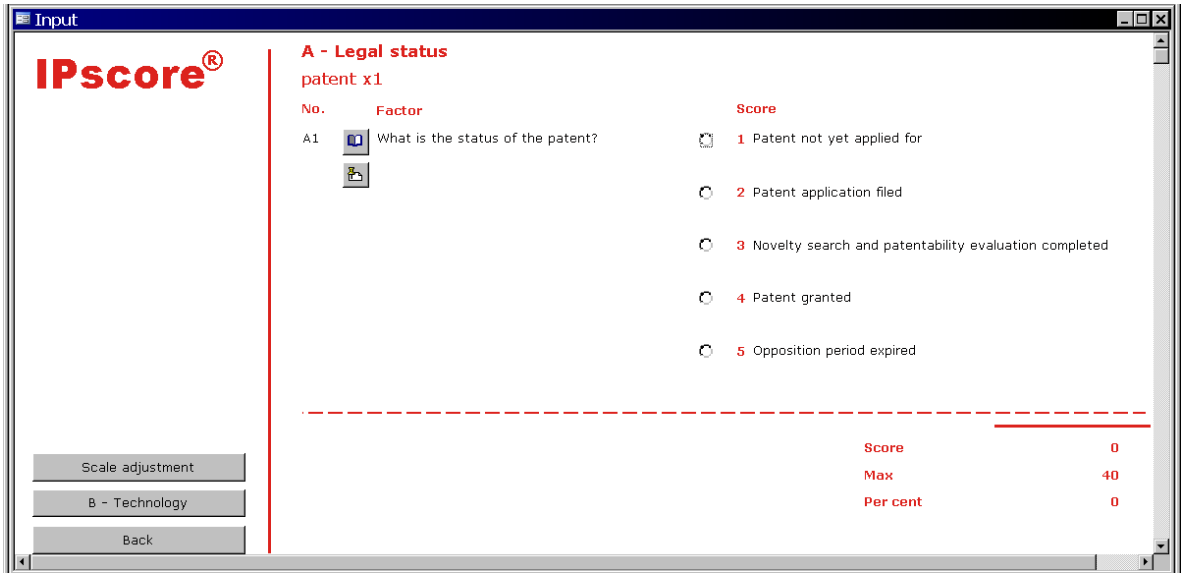
This accesses [Input] with assessment factors A1, A2, etc. Each assessment factor has a 5-point rating scale of answer options. ***IPscore® automatically saves the changes.***

For information on each assessment factor, access the explanatory text box by clicking on , which gives a detailed description of the assessment factor. Choose the answer most relevant to the given situation and click in the circle next to the answer.

Enter comments concerning the basis for the evaluation in the dialogue box accessed by clicking on .

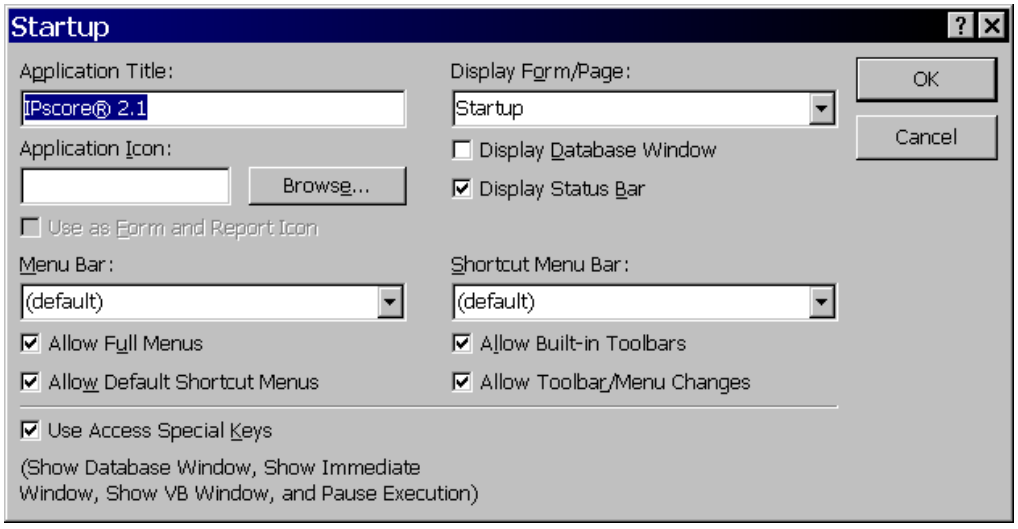
Continue answering the questions in this way through all category A assessment factors.

Go to the next category, B - Technology, by clicking on <B - Technology >. Complete the evaluation in all five categories in [Input]. Finally, click on <Back>. This accesses [Patent], where you now have a choice of outputs.

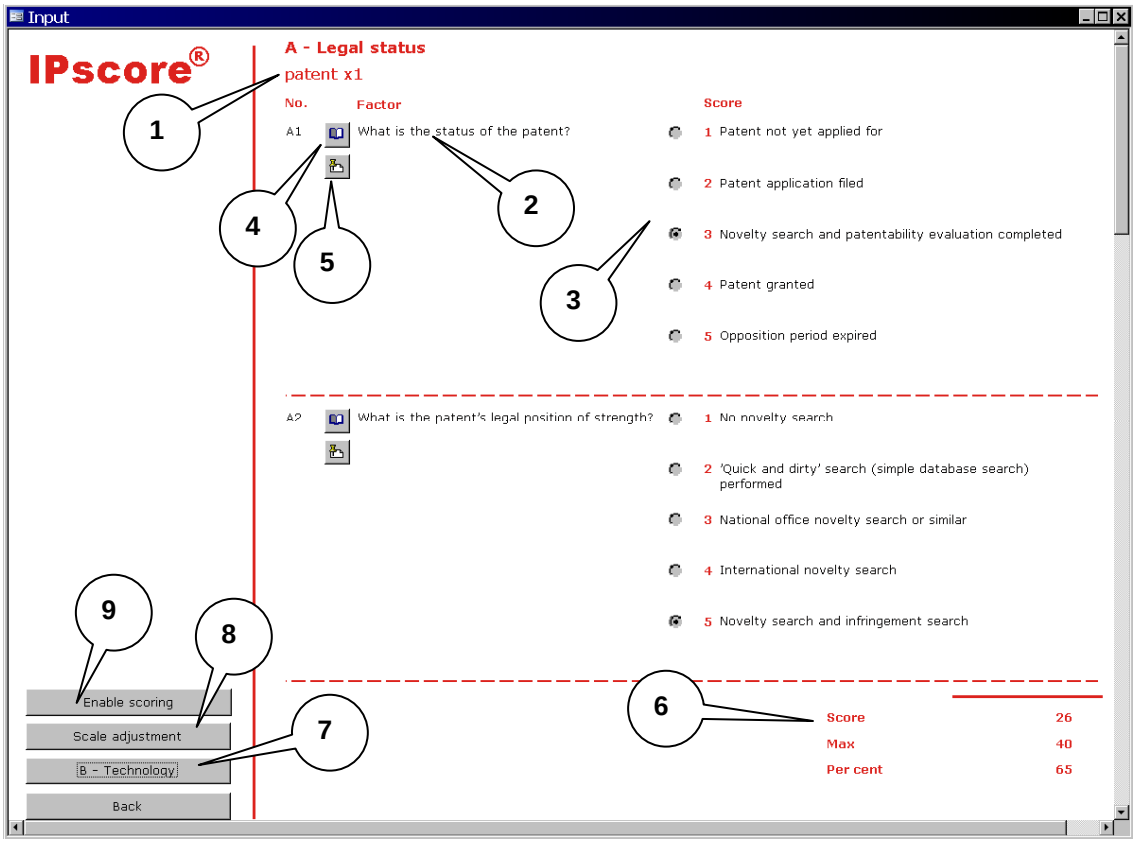


If the assessment factors (i.e., questions and answers) or the predefined financial assumptions are not applicable to the company situation, they can be changed to suit the situation. Click on <Scale adjustment>. The text becomes green, allowing you to make adjustments. In the assessment factors providing input for the built-in financial model, adjustments must be made both in the text ("Score") and in the numbers appearing in the column to the right ("Financial assumptions"). See also Chapter 7: Changing the rating scales.

NB: Adjusting the rating scale parameters of a patent will affect all patents registered in the database.



Elements of the [Input] screen:



1. The patent's name is entered automatically.

2. The individual assessment factor question, e.g. A1 "What is the status of the patent?"

3. Select the answer that most accurately reflects the situation.

4. The book icon accesses a detailed description of the assessment factor.

5. Click on the comments icon to enter comments during the evaluation. The comments will also appear on the [Input] screen (in green) and can be edited there too.

6. The total score appears at the bottom of the screen.

7. On completion of all category A assessment factors, proceed to the next category via <B - Technology>. Return via the <Back> command.

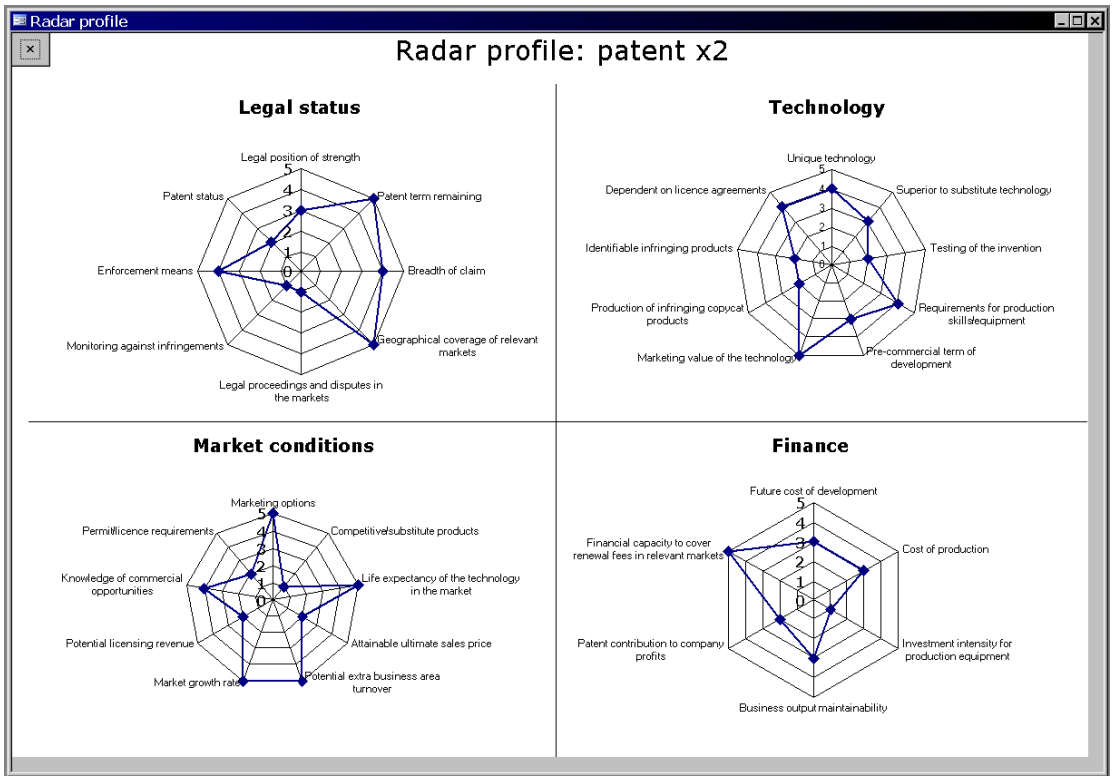
8. Clicking on <Scale adjustment> allows you to change assessment factors (i.e., questions and answers),and financial assumptions. When the parameters are green, they are 'open' and can be changed. To 'lock' them again, click on <Disable scale adjustment>. ***NB: Adjusting even one rating scale of a patent will affect all patents registered in the same database.*** See also Chapter 7: IPscore® - advanced technical options.

9. Click on <Enable scoring> to change the score. This button only becomes visible once all answers have been selected. When the score circles are white, they are 'open' and can be changed. To 'lock' them again, click on <Disable scoring>.

E. Analysing the patent's qualitative profile

The radar profile forms the core of IPscore®'s qualitative evaluation. It presents the results of the evaluation undertaken in categories A-D in 4 radar charts.

[Radar profile] screen



These radar charts position the score of each assessment factor so that the lowest score, 1, is shown close to the centre of the chart, and the highest score, 5, is shown on the perimeter. The joining-up of scores does not imply a particular relation between them, but has been done solely to produce a graphical image that creates a user-friendly, overall picture of the patent's scores.

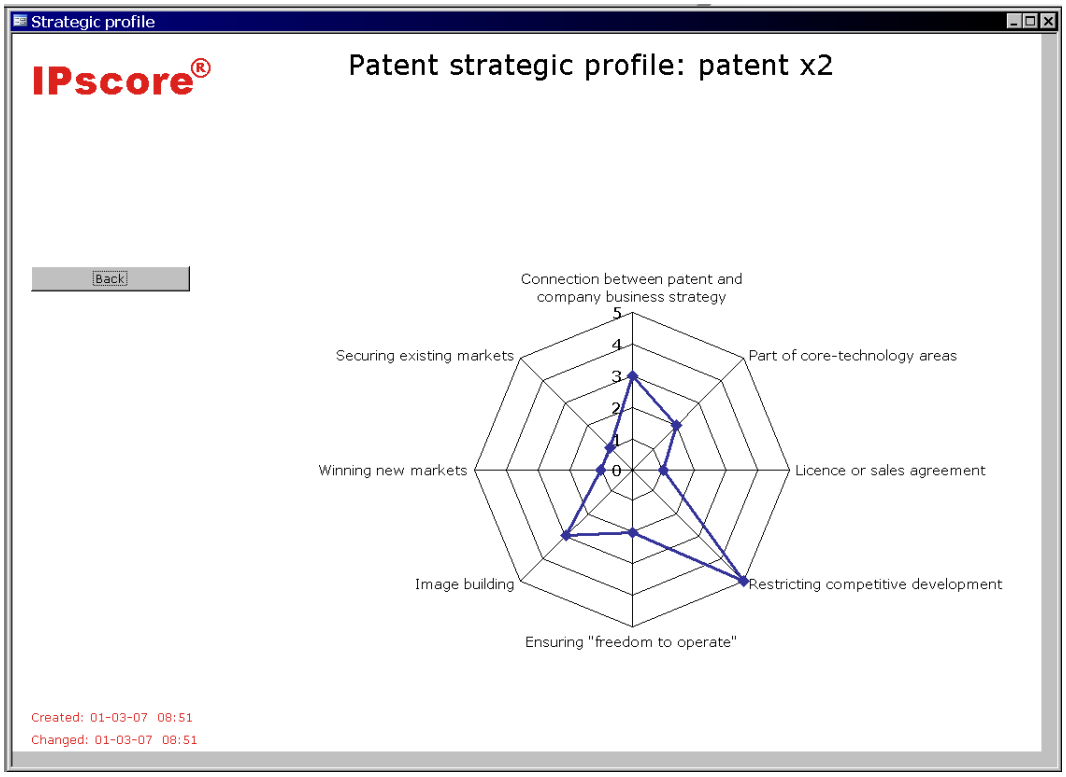
Example – interpreting the radar profile

Interpreting the profiles requires some practice in being able to see and 'read' the connections and correlations depicted in the profiles. For example, the ***Legal status*** radar profile shows that a patent application has been filed but that there is no monitoring against infringements, even though legal proceedings and disputes in the market are a common occurrence. This increases the risk factor.
Also, the ***Technology*** radar profile shows that it is easy to produce infringing copycat products, but quite difficult to identify them. This also increases the risk factor in the market.
The ***Market conditions*** radar profile shows there are great marketing opportunities in a growing market, but that there is also competition from substitute products that have already been developed. However, it is also apparent that it is possible to put the product on the market at a price lower than the competition's.
The ***Finance*** radar profile illustrates that the product does not have a great effect on company turnover or profits. So even though there is a high risk attached to the product, it is not a bad idea to enter the market and aim for the potential profit. Some of the interpretations may appear to be at variance with each other. However, this radar profile creates a realistic picture of the conditions inherent in a given company where IPscore® was tested.

F. Features of the patent's strategic position

The results from category E concerning the strategic purpose of the patent are expressed graphically in the patent strategic profile. These results are not to be interpreted as high-score, goal-achievement results, but rather as an ascertainment and demonstration of this patent's strategic role in the company. One strategic role may be where the patent is included in the company's core-technology area, another may be that the patent is used primarily to restrict competitive development.

[Strategic profile] screen



The strategic profile is an important depiction of the qualitative evaluation: a radar chart showing the results of category E assessment factors concerning the strategic purpose of the patent.

A radar chart positions the score of each assessment factor so that the lowest score, 1, is shown close to the centre of the chart, and the highest score, 5, is shown on the perimeter. The joining-up of scores does not imply a particular relation between them, but has been done solely to produce a graphical image that creates a user-friendly picture of the patent's scores.

Example – interpreting the patent strategic profile

Interpreting the profile requires some practice in being able to see and 'read' the connections and correlations depicted in the profile.
For example, this profile illustrates that the most important strategic purpose of this patent is to restrict competitive development and, to a lesser degree, ensure the company's "freedom to operate". Here the patent is intended to act as a block on competition and is therefore extremely valuable from a strategic point of view, even if the patent does not contribute directly to company profits.

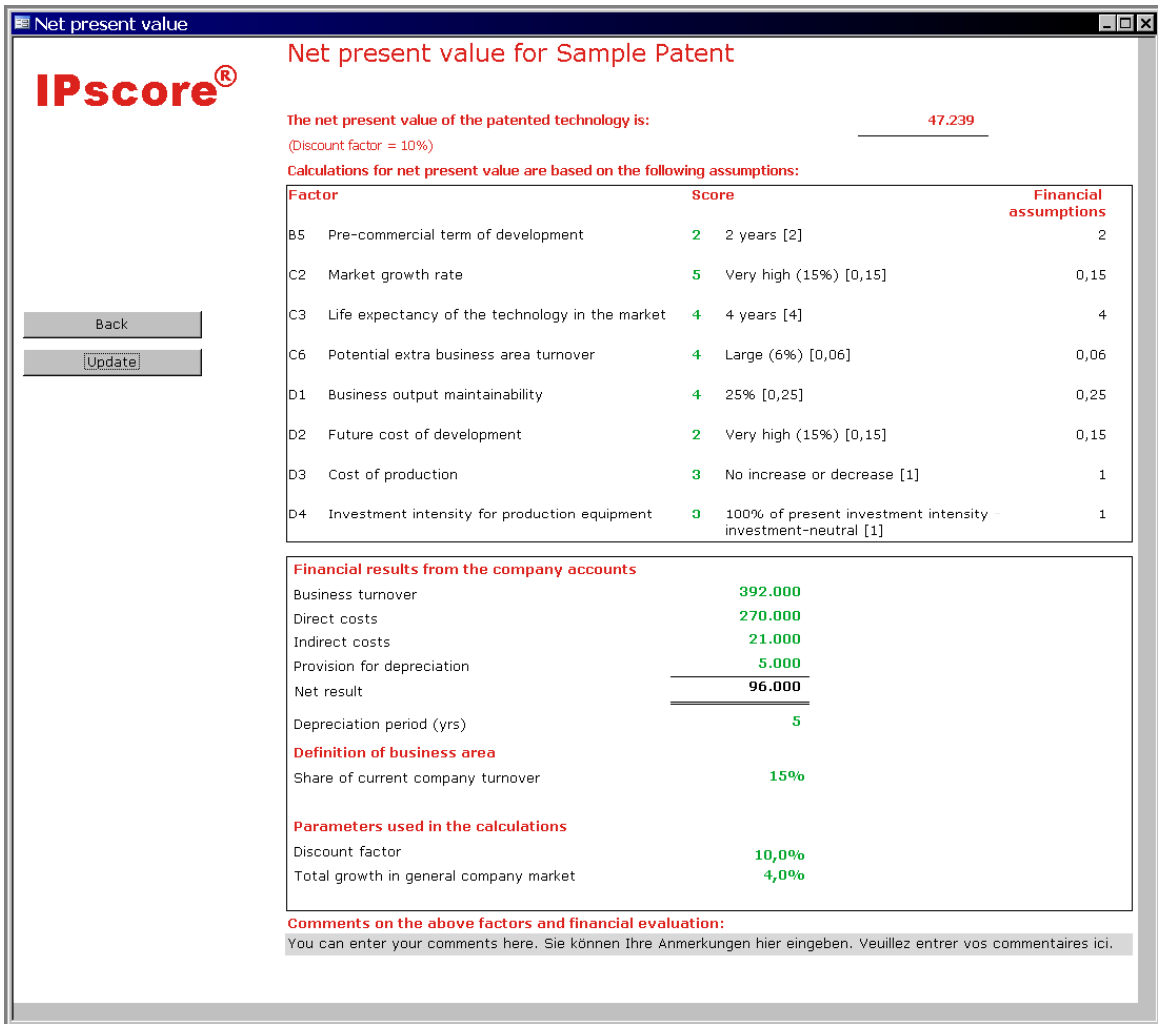
G. Financial forecast and simulation

IPscore® calculates the net present value of the patented technology.

IPscore® uses the entered data in a financial model that provides a forecast of the patented technology's foreseeable contribution to liquidity over a ten-year period. The period of calculation is however governed by the pre-commercial period and the predetermined life expectancy of the patented technology. The net present value is a discounted foreseeable liquidity flow. The net present value is calculated with a selected discount factor and entered in the IPscore® financial results category.

The screenshot below shows the discounted net present value, the chosen discount factor and the other data for the financial calculations from the IPscore® evaluation. For a detailed explanation of the assumptions in the financial calculations, see Chapter 8: IPscore® 2.1 financial model.

[Net present value] screen: Net present value with simulation facilities



[Net present value] shows the result of the IPscore® calculations for the financial forecast. The screen shows all of the assumptions included in the calculations. It is possible to simulate the effect of other answers by changing the assumptions. All figures shown in bold green typeface can be changed, apart from "Result" in the figures from company accounts.

How is the net present value simulated?

1. **Changing the scores or financial assumptions**: You can change the scores on the [Net present value] screen. You can change the scores, the answers and the financial assumptions on the [Input] screen. Then click on <Update> on the [Net present value] screen and the new calculated net present value appears. ***NB: IPscore® automatically saves the changes, so if the original score is to be kept, it must be entered again and registered via the IPscore® <Update> command.***
2. **Changing the financial results:** You can change the financial results on the [Net present value] screen and then click on <Update>. The new calculated net present value appears. The upper limit for the depreciation period is 7 years. The relevant business area share of current turnover must lie between 1 and 100%. ***NB: IPscore® automatically saves the changes, so if the original financial assumptions are to be kept, they must be entered again and registered via the IPscore® <Update> command.***

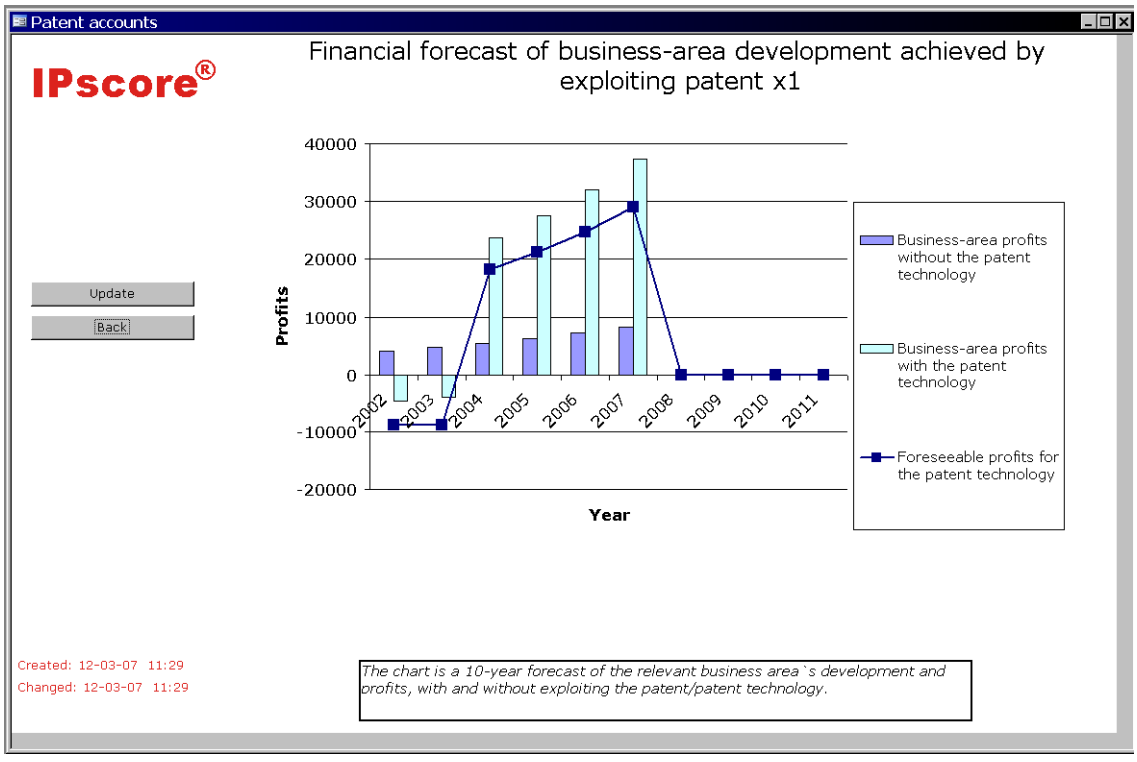
H. Financial development

IPscore® has four output charts illustrating the different aspects of the foreseeable financial development achievable by implementing the patented technology (click on <Charts> on the [Patent] screen).

The calculations are based on financial figures selected in the financial results category. The IPscore® financial model uses these figures and selected assessment factors in a forecast of the patented technology's net present value and in a future patent account for the patented technology. For a more detailed explanation of the assumptions in the financial calculations and for an explanation of how these output charts are produced, see Chapter 8.

Patent account

IPscore® calculations are based on the entered financial data and assessment factors. The patent account is a projection of the financial effects generated by the patented technology within the defined business area (entered in the financial results category). This data is compared with the financial effects of not implementing the patented technology in the business area. Thus, the value ratio of implementing and not implementing the patented technology in the business area is illustrated.



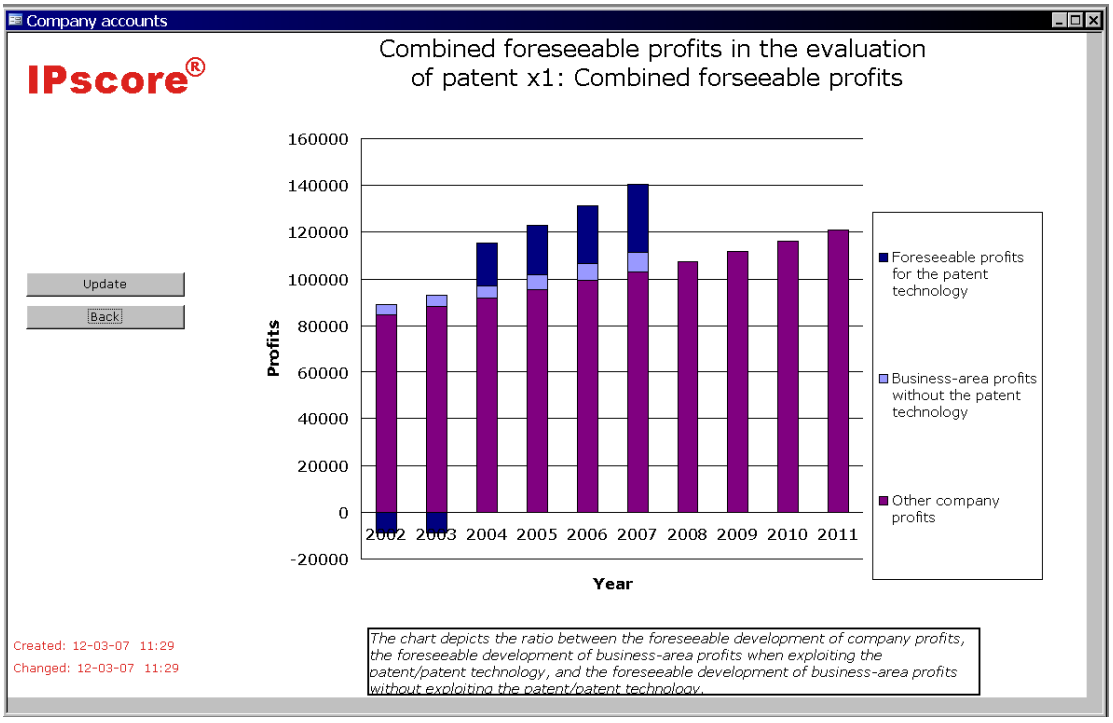
There are three graphical elements in the patent account: (1) a blue line indicating the patented technology's effect on company accounts; (2) a purple column representing the profits in the business area without the patented technology; and (3) a pale blue/green column representing the total business area profits when implementing the patented technology. (The years shown can be changed by using the open .mdb version of the the database. Please refer to Chapter 7 and the **Hjælp_økomodel_2** table.)

Example – interpreting the patent account

The patent account shows the patented technology to be operating at a loss during the first year. The blue line shows a minus. This can be attributed to the estimated development costs prior to the patented technology being commercially worked (see assessment factor B5 and D2). Should the company choose to implement the patented technology in the relevant business area, the estimated account for that business area will show a negative yield for the first two years. The pale blue/green column depicts this information. Should the company decide not to implement the patented technology, it will maintain a positive financial trend for the relevant business area for the first two years: the pale blue, positive columns for 2002 and 2003. However, during the third year, the estimated account for the business area is already substantially more positive when the patented technology is being utilized than when it is not. The pale blue and pale blue/green columns mark this contrast from 2004 onward. IPscore® uses a ten-year time frame, though this will, in each case, be determined by when the patented technology is ready to be commercially worked (assessment factor B5), and by the estimated life expectancy of the patented technology (assessment factor C3). The chart shows that the four-year technology life expectancy limits the time frame to the year 2007.

Company accounts

The Company accounts chart illustrates the role of the patented technology in relation to the company's combined finances. Company accounts can be used to assess the importance of the financial consequences of implementing the patented technology, in relation to the company's combined finances. This is achieved by combining the accounts for the patented technology in the relevant business area with other company profits, i.e. profits from other business areas and technologies.



The chart shows three results. The dark purple area of the column shows other company profits, i.e. those not related to the business area of the patented technology. The data in this area is taken from figures entered in the financial results category. The light purple area shows the profits achievable in the selected business area without implementing the patented technology. Finally,

the dark blue area shows the patented technology's contribution to company profits in the selected business area. The data in these areas is taken from figures entered both in the financial results category and in categories C and D.

Example – interpreting the company account

This chart illustrates the patented technology's strength/weight in the company's financial picture, where the patented technology does not have a critical effect on the company account.

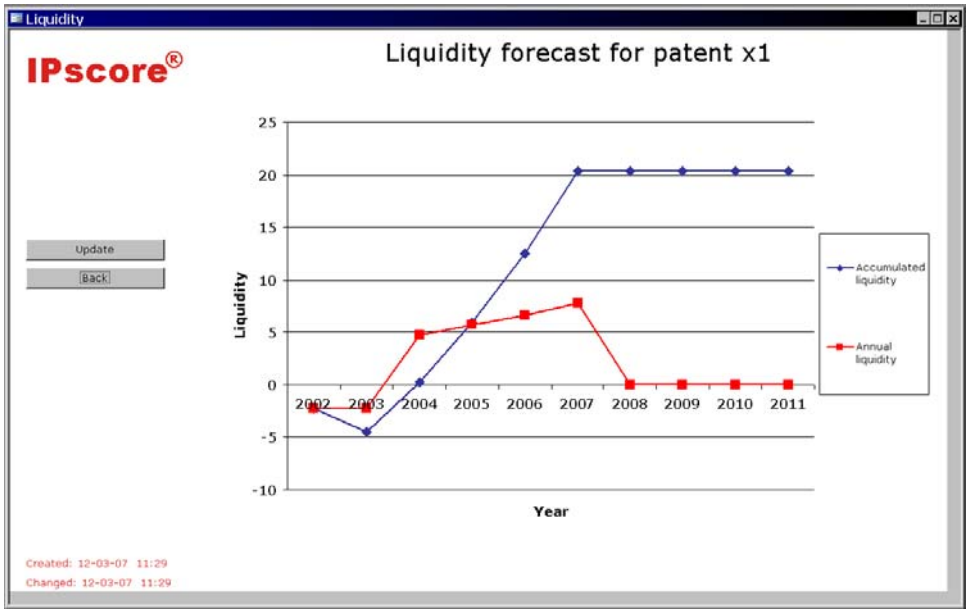
'Other company profits' constitute a greater share of total company finances. Furthermore the pale blue/green area of the columns shows a regular increase in profits. IPscore® asks for a growth rate in the area of company turnover not connected with the market of the patented technology. This provides the option of selecting a general growth rate percentage, making growth in the other markets independent of the growth rate percentage in the market associated with the patented technology. This information is entered in the IPscore® financial results category.

This financial forecast indicates that the consequences of implementing the patented technology in the relevant business area are, for the company, not so crucial despite a negative result in the first two years, because the expected business area development over the following years will have a great and positive effect on total company finances.

When interpreting the chart, note that it only shows the business area's effect on total finances for the period defined as the life expectancy of the patented technology (determined in assessment factor C3). Therefore the calculations and depiction of the general financial development in the selected business area stop in accordance with the life expectancy of the patented technology.

Liquidity forecast

IPscore® produces a forecast of the patented technology's foreseeable costs and earnings, making it possible to produce a profile of the accumulated liquidity. This is illustrated in a liquidity forecast for the patented technology.



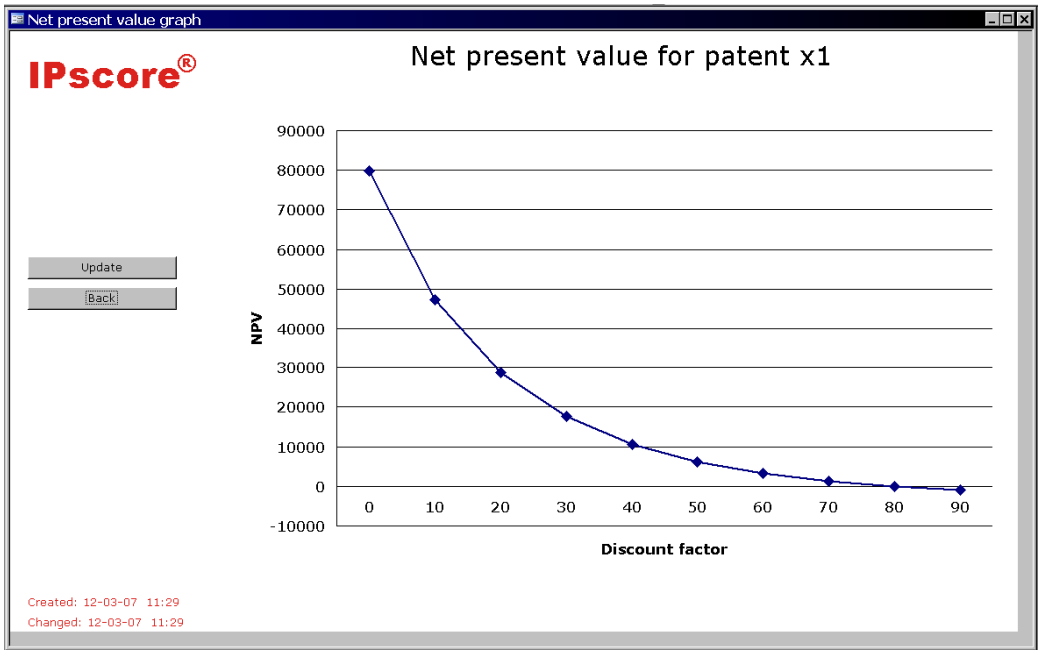
The chart shows the accumulated liquidity (blue line) and the annual liquidity (red line). The accumulated liquidity is the consecutive sum of annual liquidity throughout the ten-year period of calculation. This calculation period may be less than ten years depending on the pre-commercial period and product life expectancy. A descending graph shows a negative period of liquidity, whereas an ascending graph shows a positive period of liquidity.

Example – interpreting the liquidity forecast

This graph shows that investing in the patented technology reaches break-even point in 2004, where the graph crosses the '0' line. It shows that there are costs during the first two years (developments costs, etc.) and that earnings are positive in 2004. This is due to the fact that commercially working the patented technology began in 2004.

Net present value

Finally, IPscore® has an output chart showing the calculated net present value at a variable discount rate. This chart provides an overall picture of the net present value with different discount factors set. The chart can be used to select the discount factor for the net present value calculations in the "Net present value" output report.

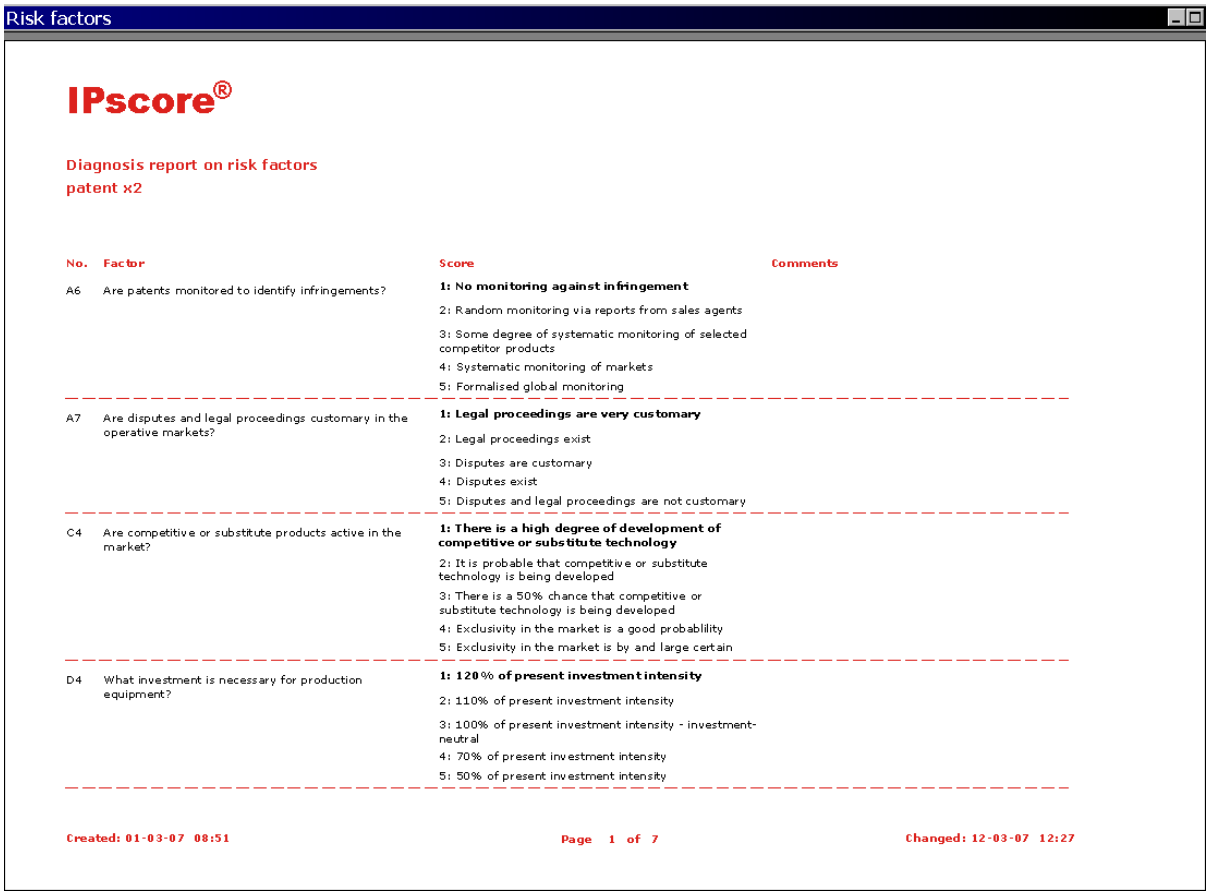


The chart shows what the net present value will be with different discount factors. The net present value of the entire patent liquidity flow can be seen on the y-axis, and the different discount factor rates are shown on the x-axis. Selecting a 10% discount factor rate puts the net present value at 47 000.

IJ. Qualitative diagnoses of risks and opportunities

The Diagnoses output facility on the [Patent] screen produces two reports. The risk factor results and the opportunity factor results from categories A-D are positioned in order of priority, according to their assessment factor score.

Diagnostic report on risk factors


Risk factors

IPscore®

Diagnosis report on risk factors
patent x2

No.	Factor	Score	Comments
A6	Are patents monitored to identify infringements?	**1: No monitoring against infringement** 2: Random monitoring via reports from sales agents 3: Some degree of systematic monitoring of selected competitor products 4: Systematic monitoring of markets 5: Formalised global monitoring	
A7	Are disputes and legal proceedings customary in the operative markets?	**1: Legal proceedings are very customary** 2: Legal proceedings exist 3: Disputes are customary 4: Disputes exist 5: Disputes and legal proceedings are not customary	
C4	Are competitive or substitute products active in the market?	**1: There is a high degree of development of competitive or substitute technology** 2: It is probable that competitive or substitute technology is being developed 3: There is a 50% chance that competitive or substitute technology is being developed 4: Exclusivity in the market is a good probablility 5: Exclusivity in the market is by and large certain	
D4	What investment is necessary for production equipment?	**1: 120% of present investment intensity** 2: 110% of present investment intensity 3: 100% of present investment intensity - investment-neutral 4: 70% of present investment intensity 5: 50% of present investment intensity	

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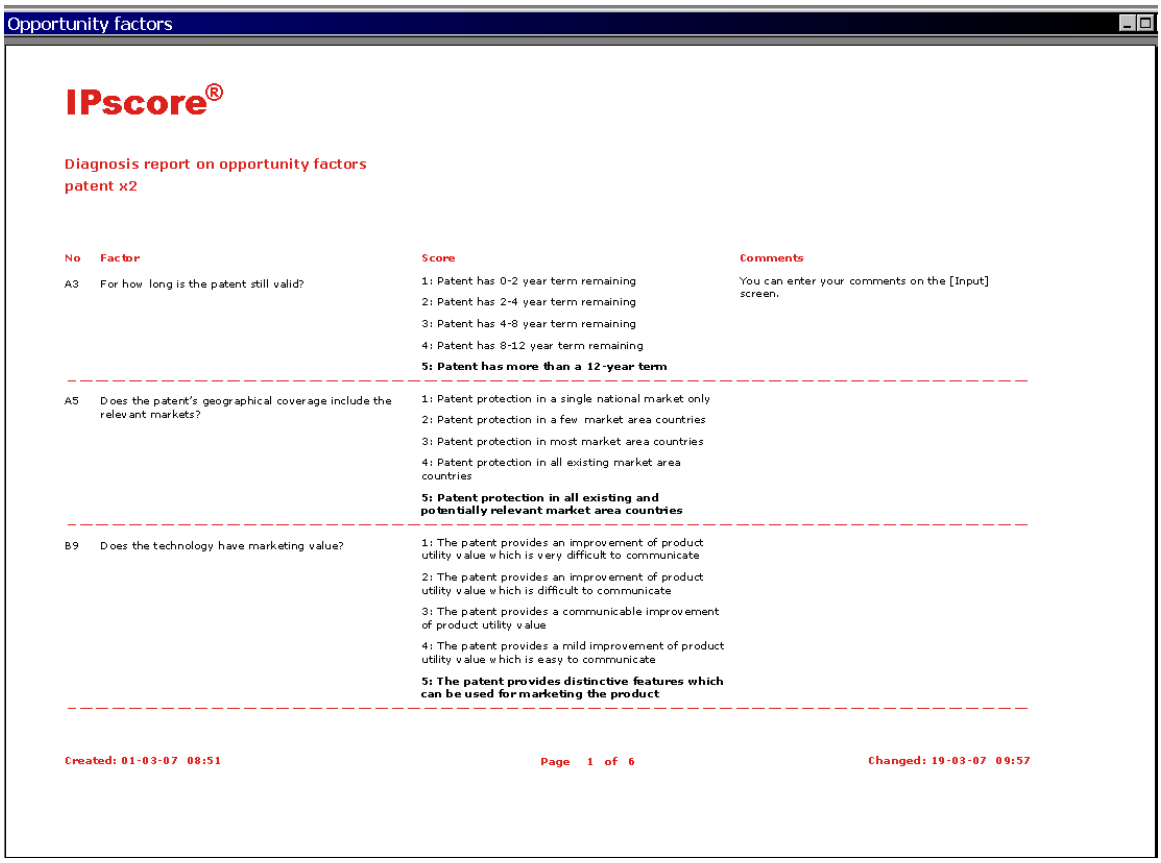
The risk factors are selected assessment factor results where a low score shows high risk, and a high score, all things considered, is equal to a lesser risk.

The diagnostic report on risk factors shows which assessment factor scores can be defined as risk factors. The lowest scores – and thereby those assessment factors constituting the highest risk – come first. Comments made during the evaluation can be seen on the right-hand side of the screen.

Example – interpreting the risk factor diagnosis

It is vital to understand the significance of a low risk factor score, in terms of what it means to the patented technology and the company. For example, A7: “Yes – legal proceedings are very customary” shows that patents are important and necessary, that they are enforced and that the rights of the patented area are not to be infringed upon. Many disputes and legal proceedings increase the financial burden on patenting**,** especially the enforcement process, but are a necessary element in protecting your rights.

Diagnostic report on opportunity factors


Opportunity factors

IPscore®

Diagnosis report on opportunity factors
patent x2

No	Factor	Score	Comments
A3	For how long is the patent still valid?	1: Patent has 0-2 year term remaining 2: Patent has 2-4 year term remaining 3: Patent has 4-8 year term remaining 4: Patent has 8-12 year term remaining **5: Patent has more than a 12-year term**	You can enter your comments on the [Input] screen.
A5	Does the patent's geographical coverage include the relevant markets?	1: Patent protection in a single national market only 2: Patent protection in a few market area countries 3: Patent protection in most market area countries 4: Patent protection in all existing market area countries **5: Patent protection in all existing and potentially relevant market area countries**	
B9	Does the technology have marketing value?	1: The patent provides an improvement of product utility value which is very difficult to communicate 2: The patent provides an improvement of product utility value which is difficult to communicate 3: The patent provides a communicable improvement of product utility value 4: The patent provides a mild improvement of product utility value which is easy to communicate **5: The patent provides distinctive features which can be used for marketing the product**	

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The opportunity factors are selected assessment factor results where a high score, all things considered, means the highest opportunity, and a low score is equal to a lesser opportunity.

The diagnostic report on opportunity factors shows which assessment factor scores can be defined as opportunity factors. The highest scores – and thereby those assessment factors constituting the highest opportunity – come first. Comments made during the evaluation can be seen on the right-hand side of the screen.

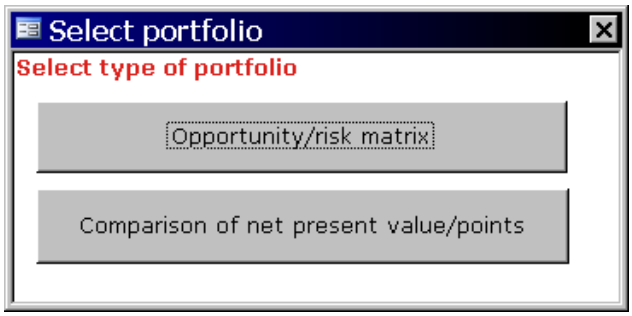
Example – interpreting the opportunity factor diagnosis

It is vital to understand the significance of a high opportunity factor score, in terms of what it means to the patented technology and the company. For example, an area of great opportunity is possible if the patent is valid for a long time and the patent-related products also have a long life expectancy, otherwise opportunity is illusory.

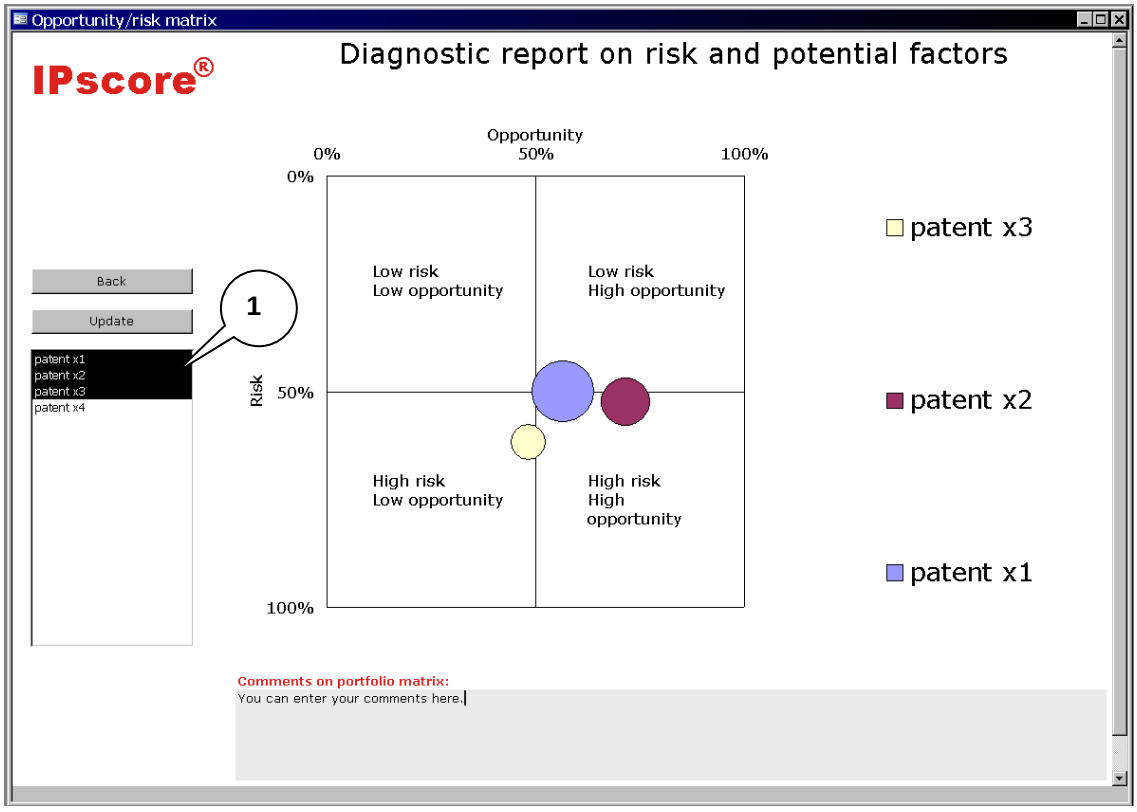
To see definitions of the various risk and opportunity factors go to Chapter 7: IPscore® - advanced technical options.

K. Comparing patents

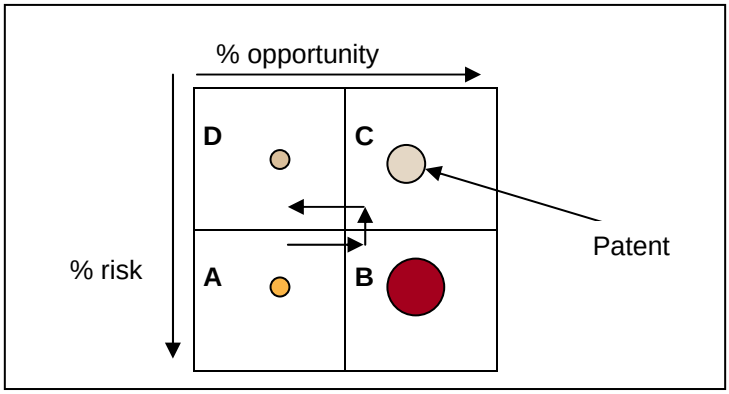
In the Portfolio output facility on the [Patent] screen, it is possible to activate two types of reports that compare selected patents.



Portfolio matrix: opportunity and risk diagnoses



On the left-hand side of the screen (1), select the patents to be included in the matrix. The matrix shows the relation between opportunity and risk factors in the IPscore® evaluation, i.e. the risk/opportunity position:



The risk factors are selected assessment factor results where a low score shows high risk, and a high score, all things considered, is equal to a lesser risk. The opportunity factors are selected assessment factor results where a high score, all things considered, means the highest opportunity, and a low score is equal to a lesser opportunity. The horizontal axis shows the patent's opportunity score as a percentage of the highest achievable opportunity score. The higher the percentage, the greater the opportunity. The perpendicular axis – downwards! – shows a patent's risk score as a percentage of the highest achievable risk score. The higher the percentage, the higher the risk.

The four quadrants, A, B, C, and D, contain different characteristics:

A: High risk and low opportunity – not a very attractive area. If the patent is situated here, take one day at a time and be grateful for earnings achieved. There are no prospects worthy of any larger investment.

B: High risk and high opportunity – a challenging area with great opportunity, but with little certainty of success for the patent/project. Working on high profit margins may be a solution.

C: Low risk and high opportunity – clearly the most attractive area, with great opportunity and, in general, a good degree of security.

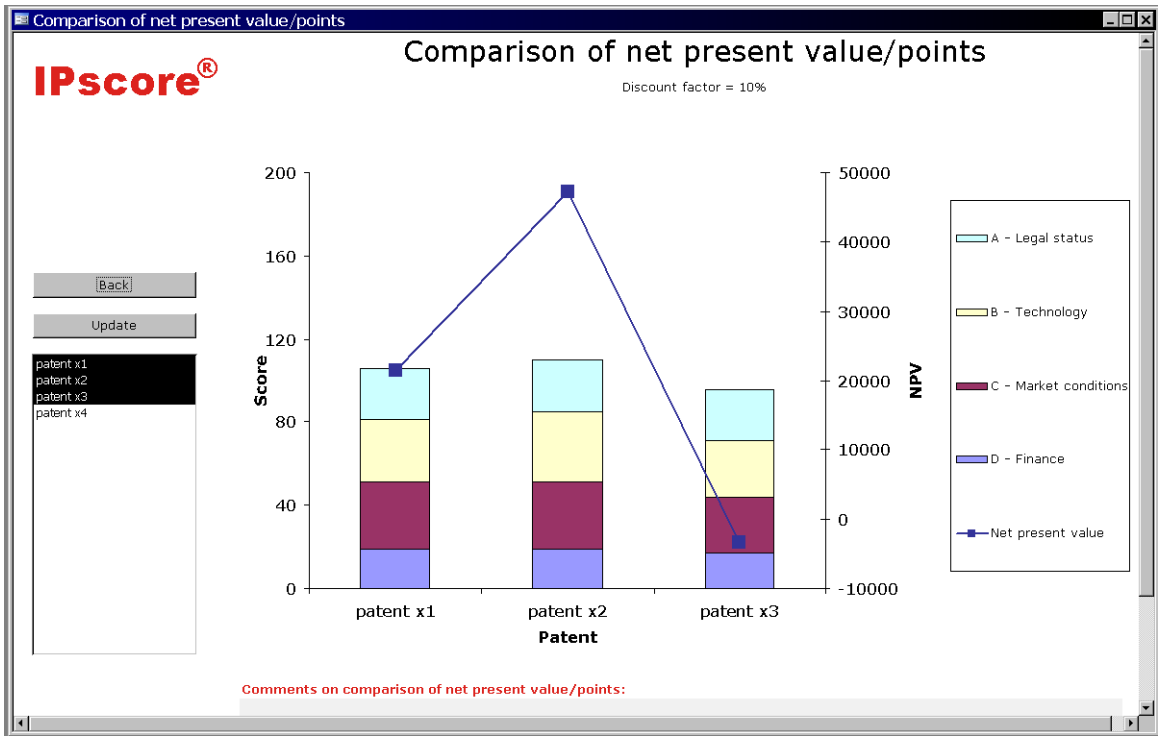
D: Low risk and low opportunity – opportunity here may relate to a mature or over-ripe market. If the patent still has something to offer, it will be at no great risk. Otherwise the patent should be dropped, as there would be little reason to keep it.

The size of the "bubble" depicts the importance of the patented technology in relation to company profits. Thus the chart also offers an insight into whether the patent is of little or great importance to the company. See also Chapter 8H: Opportunity/risk matrix values.

Example – interpreting the portfolio matrix

Some projects can 'move' through the chart analogously to the life-cycle of the product – starting in the A quadrant as an idea with possible but unclear potential and with a high risk of never becoming a product. As the product develops in the direction of greater and more clearly defined potential, it moves into the B quadrant. As a phase in the project, efforts are made to reduce areas of uncertainty (thereby reducing risk) and to further develop the potential so that the project can move into the C quadrant. Here the product has entered the market and the potential is being exploited. When demand for the product decreases, it enters the D quadrant. At this stage it may become necessary to consider terminating the project/patent.

Comparison of net present value/points



[Comparison of net present value/points] makes it possible to compare selected patents in the patent portfolio. It is a comparison of the patent's scores in categories A-D and a comparison of the net present value of the patents.

On the left-hand side of the screen, you can highlight the patents you want to compare. In the example given, all patents except 'patent x4' have been highlighted and are shown in the chart. The chart shows the relation between the scores from categories A-D, grouped in a column with the scores on the left side axis.
The discounted net present value is shown by way of connected dots, with the value axis on the right side of the chart.

Example – interpreting the Comparison of net present value/points chart

The columns in the chart show the scores from each category and the accumulated score of categories A-D. This enables cross-category comparison of scores, e.g. whether a patent is weaker than the other patents in the legal status area. The net present value curve may trace the upper outline of the columns in a more or less regular pattern. Comparing the scores (points) with the net present value will be very general, but deviations from a generally regular pattern will require investigation and explanation for new insights to be gained.

L. Selecting special-interest reports

The Supplementary Reports output facility on the [Patent] screen provides a radar-chart depiction of assessment factors selected on a special-interest basis. Here, assessment factors to which you want to pay special attention can be put together in one radar chart. For practical information on setting up a supplementary report, see Chapter 7: Setting up new supplementary reports.

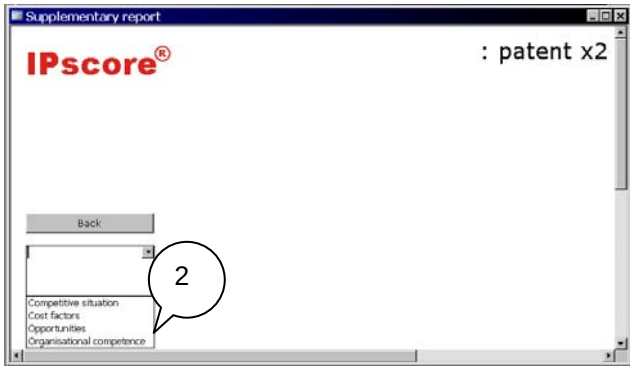
Supplementary reports

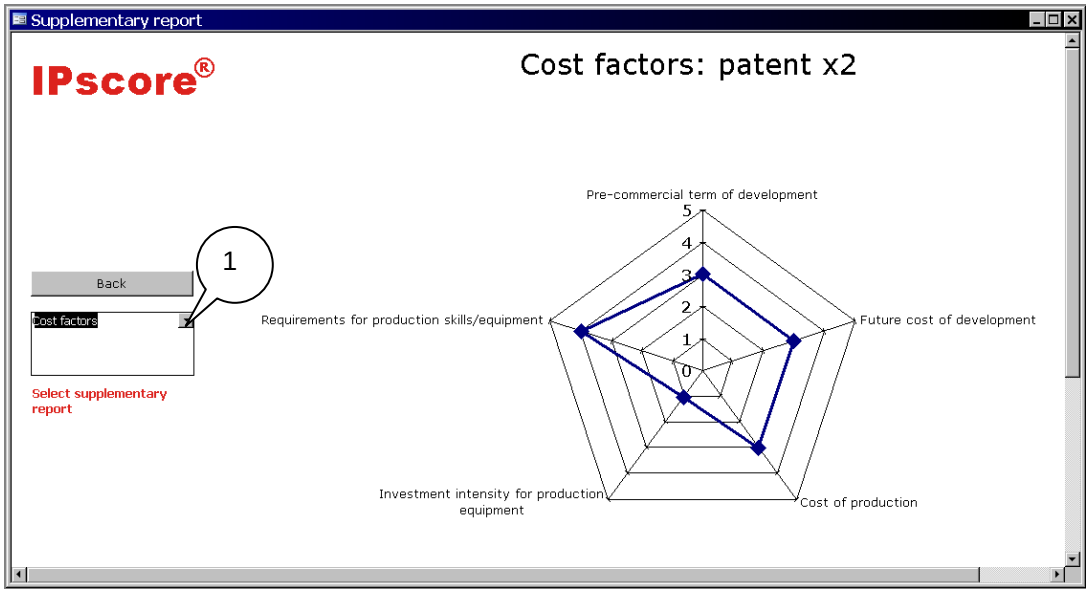
IPscore® contains the following predefined cross-reference supplementary reports, where selected assessment factors illustrate the problem specified:

- **Competition**
- **Cost factors**
- **Organisational competence**
- **Opportunities**

These predefined charts can be accessed via [Patent], by clicking on <Supplementary reports> in the Output command. The predefined diagrams can be selected in the area above “Select supplementary report” (click on the arrow (1) to see the report list).

Select the chart required in the menu, e.g. Cost factors (2).





M. Communicating the results in reports

When the patent has been evaluated and the results examined and analysed with help from the output reports, IPscore® has a facility for creating a single, comprehensive report of all evaluation results, providing an overview of some of the essential benefits of the task performed.

The framework for the report and many of the patent's graphical outputs are automatically generated. The report contains active areas for inserting assumptions, comments, conclusions and other additional information for further use. The report can for example, be used to present to decision-makers, management, etc.

When the report is printed it is compressed. This manageable, user-friendly composition and layout facilitates communication of results to interested parties in the company.

Tips on filling in and working with reports

You are recommended to take the opportunity to make notes on important observations made and conclusions drawn during the evaluation. Otherwise valuable thoughts and insights are quickly forgotten. Use the following guidelines:

- Describe the basis for the evaluation. Why was the patent evaluated? What was the actual situation? Was the evaluation about a new project, or was it about whether to maintain the legal status of the patent, or was it a patent sale or licensing situation?
- What specific type of patent was evaluated? The strategic profile is a good starting point. Are there special strategic conditions to be considered?
- Which conditions are relevant for the value of the patent? This concerns the qualitative evaluation, e.g. information derived from the patent's radar profile. But other important conditions are also described, e.g. whether there are other rights, designs and trademarks for example, supporting the patent.
- What is the calculated value of the patent? How does this value compare with the value of other patents or other projects? Are there particular assumptions or prior conditions critical to the calculations?
- It is generally an advantage to list the products pertinent to the patent so that this perspective can be included in the report.
- Does the patent belong to a cluster of patents? If so, list the other patents in the cluster, possibly making a note of whether the patent's position in the cluster is central or peripheral.
- Describe the more important problems emerging during the evaluation. Are important risks exposed? Make a note of any possible solutions to the problems.
- Define the patent's main areas of opportunity, maybe offering suggestions on how to exploit these opportunities.
- Briefly describe the more important elements of insights gained during the evaluation process.
- It could be advantageous to the estimation of the patented technology's net present value to simulate some of the relevant assumptions, e.g. by increasing turnover or costs by 10%. Make a note of considerations derived from the simulation.
- Record comments relevant to factors determining the financial forecast, e.g. whether growth in the market is positive or negative.
- Enter comments in the portfolio matrix on the patent's position in relation to other evaluated patents.
- Write a comprehensive conclusion on the evaluation, including recommendations and opinions.

Using the report facility

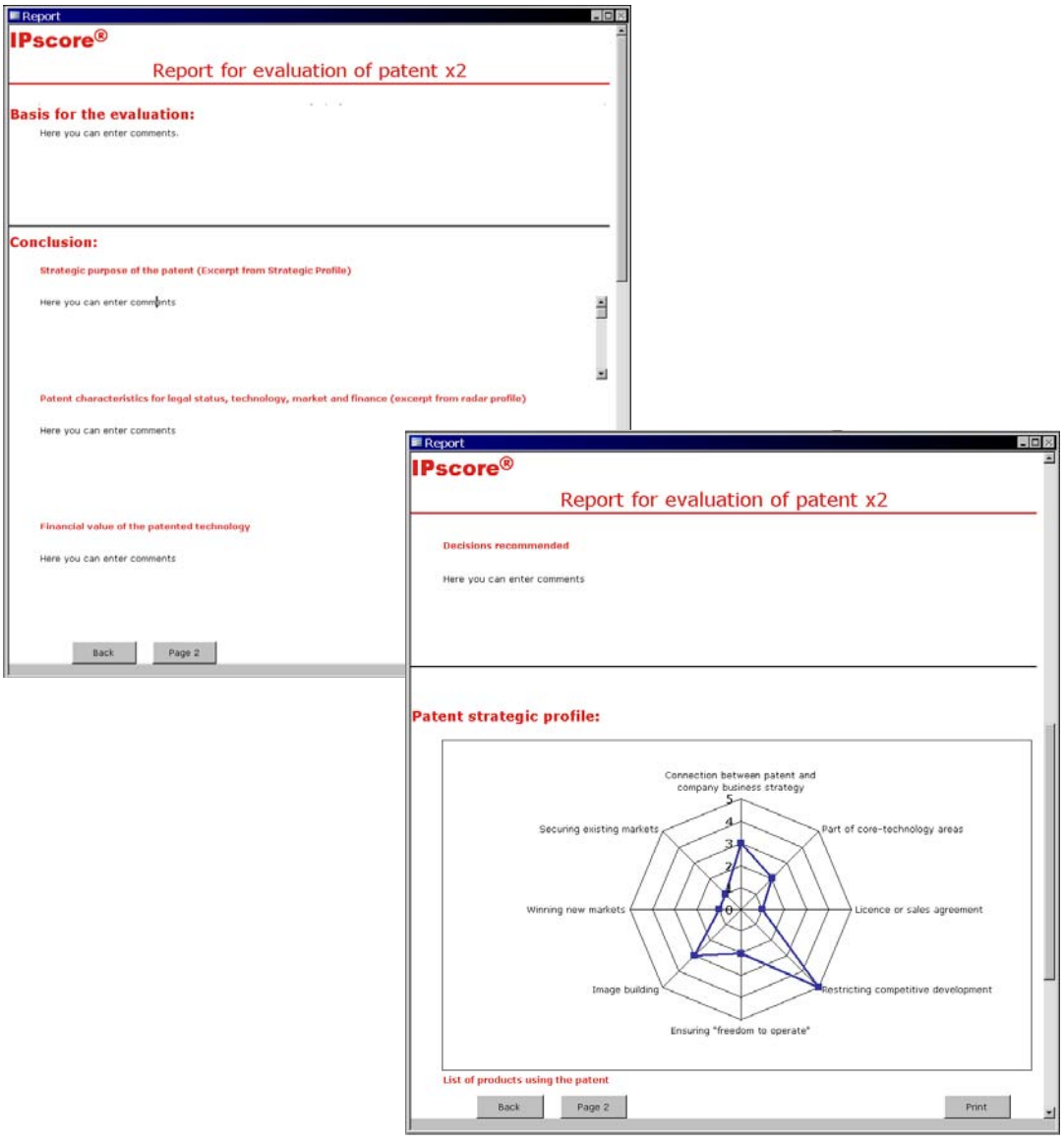
In [Patent], click on <Combined report>, which gives access to [Report].

In the program, the report comprises three one-page sections which, when printed, appear as a single comprehensive report. The report always opens on page 1. Click on <Page 2> to access the next page, where <Page 1> and <Page 3> can be accessed.

Page 1 of the report contains a description of the basis for the evaluation and the conclusion on the evaluation.

This is followed by the Patent strategic profile with comments, the Radar profile with suggestions on interpretation, Patent accounts, Net present value with all assumptions and finally, the Portfolio matrix with the opportunity/risk evaluation.

Comments can be made in all the open areas of each paragraph. To enter them you click in the paragraph, which activates the cursor and sets up a “scroll box” to the right. Enter comments and proceed to the next area, repeating the procedure.

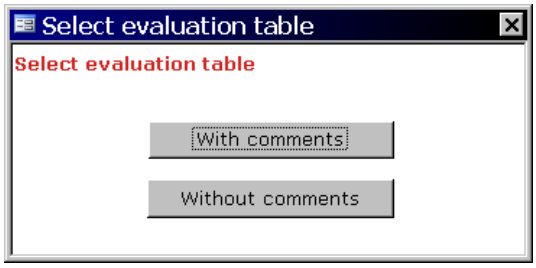


Comprehensive evaluation table

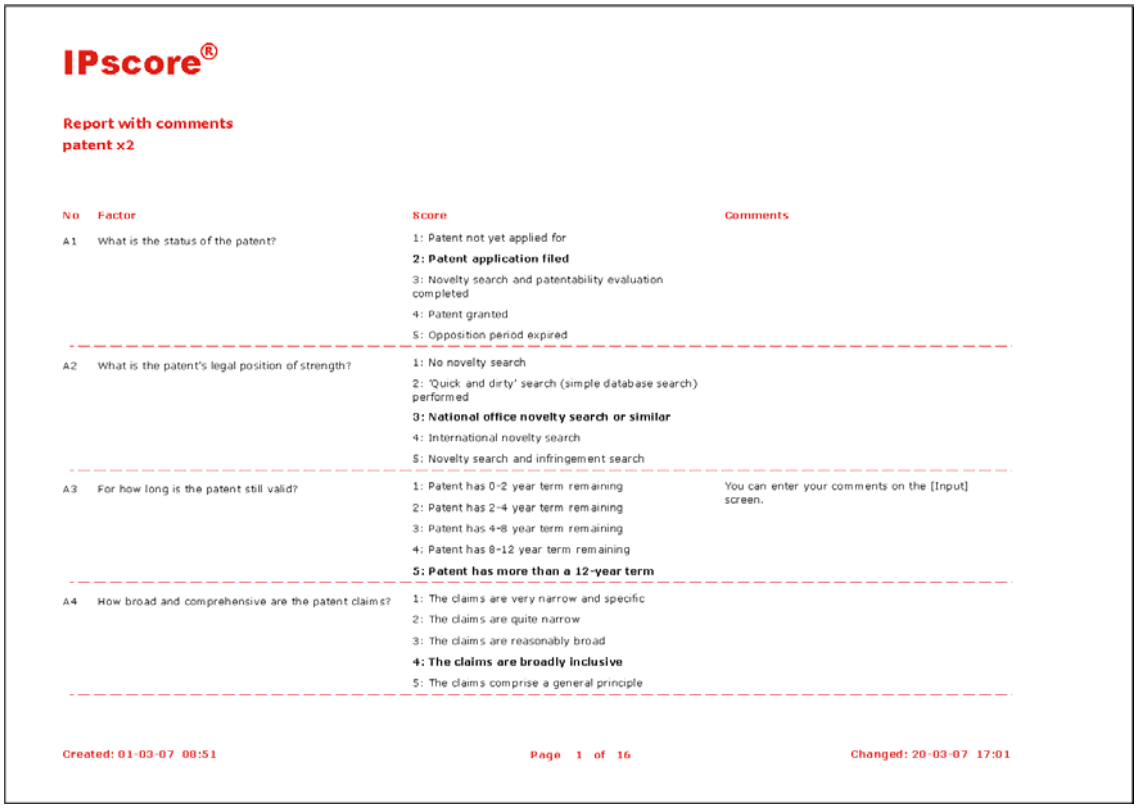
There are many ways in which the comprehensive report depicting IPscore®'s evaluation table can prove important. The evaluation table could, for example, be used in preparations for an evaluation meeting, or as an evaluative element in such a meeting. It is also important that the results of the evaluation, with the accompanying comments on each assessment factor score, can be conveyed in their entirety.

In [Patent] click on <Evaluation table>. The dialogue box accessed offers a choice between an evaluation table containing the comments made during the evaluation <With comments>, or an evaluation table <Without comments>.

The evaluation table can be printed prior to evaluation being made, e.g., as a blank questionnaire.



Evaluation table with comments:



IPscore®

Report with comments
patent x2

No	Factor	Score	Comments
A1	What is the status of the patent?	1: Patent not yet applied for **2: Patent application filed** 3: Novelty search and patentability evaluation completed 4: Patent granted 5: Opposition period expired	
A2	What is the patent's legal position of strength?	1: No novelty search 2: 'Quick and dirty' search (simple database search) performed **3: National office novelty search or similar** 4: International novelty search 5: Novelty search and infringement search	
A3	For how long is the patent still valid?	1: Patent has 0-2 year term remaining 2: Patent has 2-4 year term remaining 3: Patent has 4-8 year term remaining 4: Patent has 8-12 year term remaining **5: Patent has more than a 12-year term**	You can enter your comments on the [Input] screen.
A4	How broad and comprehensive are the patent claims?	1: The claims are very narrow and specific 2: The claims are quite narrow 3: The claims are reasonably broad **4: The claims are broadly inclusive** 5: The claims comprise a general principle	

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Evaluation table without comments:

IPscore®

Report without comments
patent x2

No	Factor	Score
A1	What is the status of the patent?	1: Patent not yet applied for **2: Patent application filed** 3: Novelty search and patentability evaluation completed 4: Patent granted 5: Opposition period expired
A2	What is the patent's legal position of strength?	1: No novelty search 2: 'Quick and dirty' search (simple database search) performed **3: National office novelty search or similar** 4: International novelty search 5: Novelty search and infringement search
A3	For how long is the patent still valid?	1: Patent has 0-2 year term remaining 2: Patent has 2-4 year term remaining 3: Patent has 4-8 year term remaining 4: Patent has 8-12 year term remaining **5: Patent has more than a 12-year term**
A4	How broad and comprehensive are the patent claims?	1: The claims are very narrow and specific 2: The claims are quite narrow 3: The claims are reasonably broad **4: The claims are broadly inclusive** 5: The claims comprise a general principle
A5	Does the patent's geographical coverage include the relevant markets?	1: Patent protection in a single national market only 2: Patent protection in a few market area countries 3: Patent protection in most market area countries 4: Patent protection in all existing market area countries **5: Patent protection in all existing and potentially relevant market area countries**
A6	Are patents monitored to identify infringements?	**1: No monitoring against infringement** 2: Random monitoring via reports from sales agents 3: Some degree of systematic monitoring of selected competitor products 4: Systematic monitoring of markets 5: Formalised global monitoring

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IPscore® - advanced technical options

IPscore® is programmed in Microsoft® Office Access 2003 as an open database (i.e. the mdb version provided on the DVD). IPscore® can therefore be modified and adapted in the many ways available in Microsoft® Office Access, i.e. in content as well as in form. It is advisable not to change the design, and only to change the content when absolutely necessary.

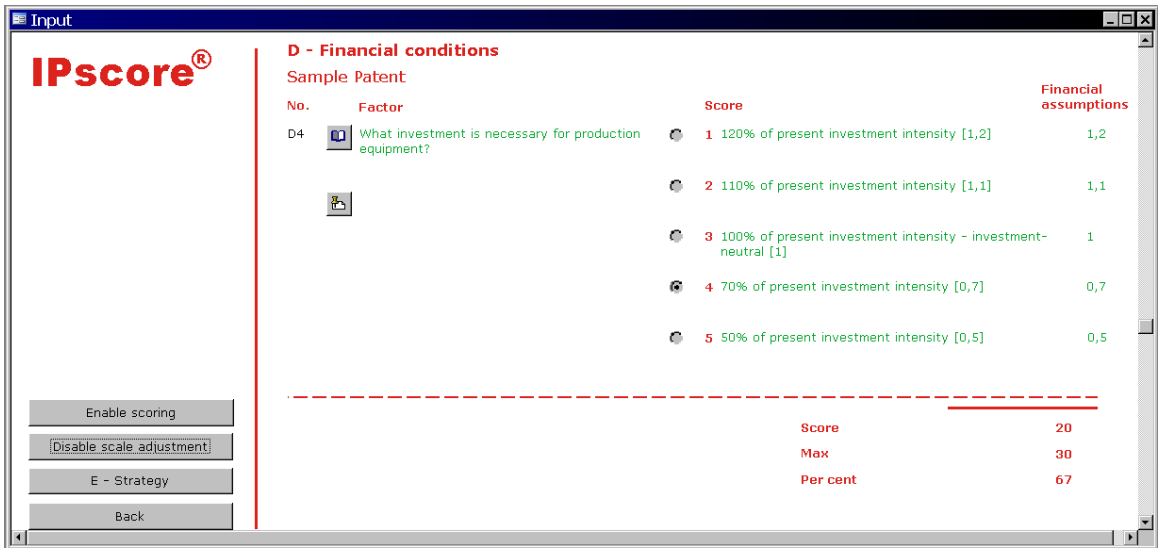
IPscore®'s structural set-up is based on the specific requirements of companies, but in its structure is generally applicable to all lines of business, and as such the need for changes and adaptations in certain situations may arise. You can make a number of important changes by following the instructions below.

Changing the rating scales

The assessment factors and financial assumptions used in the evaluation can be changed without having to access the tables behind the user interface in the mdb version. Click on <Scale adjustment> on the [Input] screen. This will change the text to green in various places.

All the green areas can now be changed. A column also appears to the right of the screen, “Financial assumptions”, showing a list of figures relating to assessment factor data that delivers data to the financial model. If the rating scale for this type of assessment factor needs to be changed, ***it is important to make the change in both the answers and the financial assumptions.*** Note that in the assessment factors' answers, a percentage is often used, whereas the related data in the column for the financial assumptions must be given in figures.

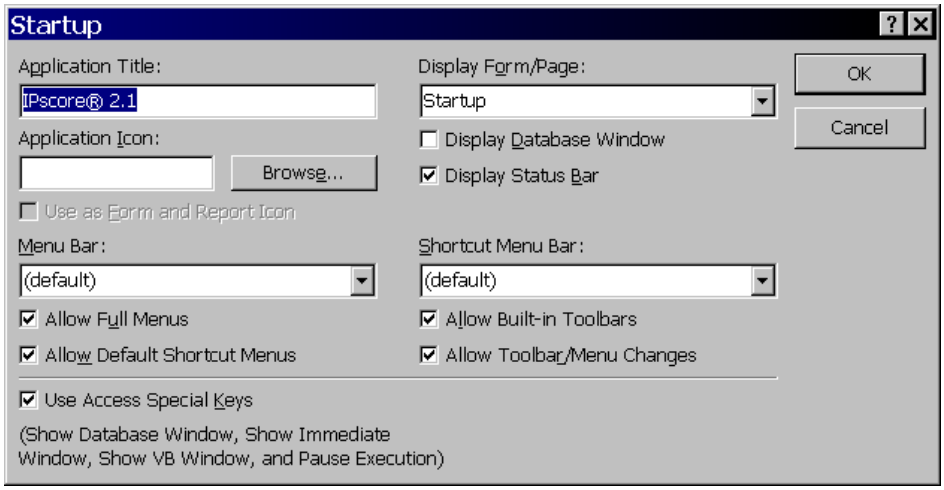
When the changes required have been made, click on <Disable scale adjustment>, and the screen will return to its original form and the “Financial assumptions” column will disappear. When changes to assessment factors and financial assumptions are made, the changes are registered simultaneously, behind the user interface, in the tables and in the automatic input for the financial model. ***Your changes to questions and answers will persist only until the next selection of the application language*** (see <Language> on the [Front page] screen); this action will re-establish the default values of the assessment factors' questions and answers, but NOT of the financial assumption values - they should be corrected manually based on the default values given in square brackets in the answers.



Adjusting the rating scale parameters of a patent will affect all patents registered in the database. If you require different scale parameters for specific groups of patents or company divisions, you need to create a new IPscore® database with the new rating scales. To create a new IPscore® database, copy the existing IPscore® database. However, you can copy only the mdb or the mde version of the database. Open the copy and change its name as described in the following section. The rating scales for the relevant group of patents can now be adjusted without affecting other IPscore® databases.

Changing the name of the IPscore® database

The name of the database (.mdb) can be changed in [Front page], e.g., to a collective name or heading for a particular company division or for a group of patents being evaluated collectively, e.g., patents sharing the same market.



Clicking on <Properties> accesses a dialogue box [Startup] with a number of commands. This box will always appear in the language of the Microsoft® Windows operating system installed on the computer. Use only the "Application Title" command area. Enter the new name of the database and click on <OK>. ***Do not make changes in any of the other command areas unless you are an experienced Microsoft® Office Access user.***

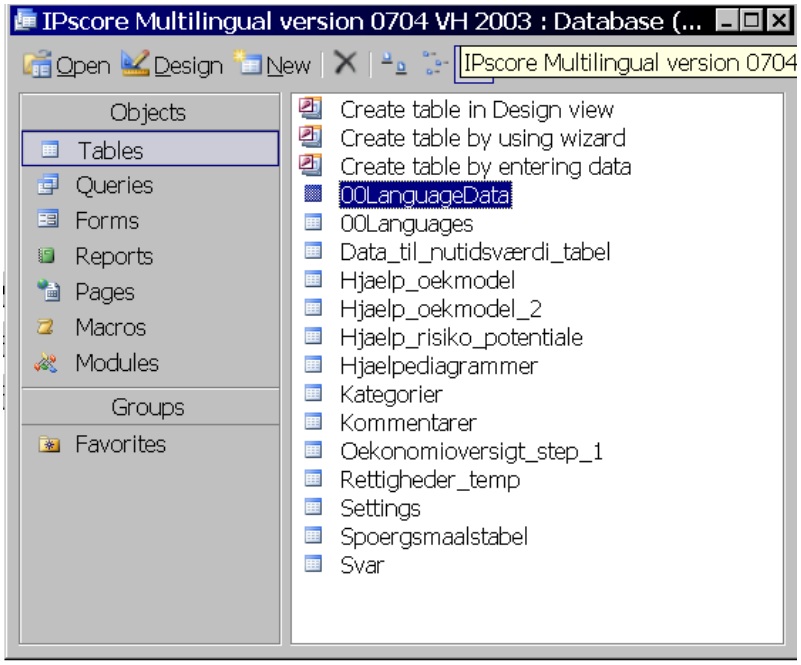
Structural set-up of tables behind the user interface

Behind IPscore®'s user interface are a number of support facilities, so-called objects, in the Microsoft® Office Access program: tables, queries, forms and reports (.mdb).

For non-trained Microsoft® Office Access users, only the tables will be relatively easy to change without incurring risk of damage to the system, although changing tables also requires care and accuracy.

The tables where changes are most likely to be required are examined below, in "Setting up new supplementary reports" and "Changing the assessment factors (risk factors, opportunity factors and "hide[1]")".

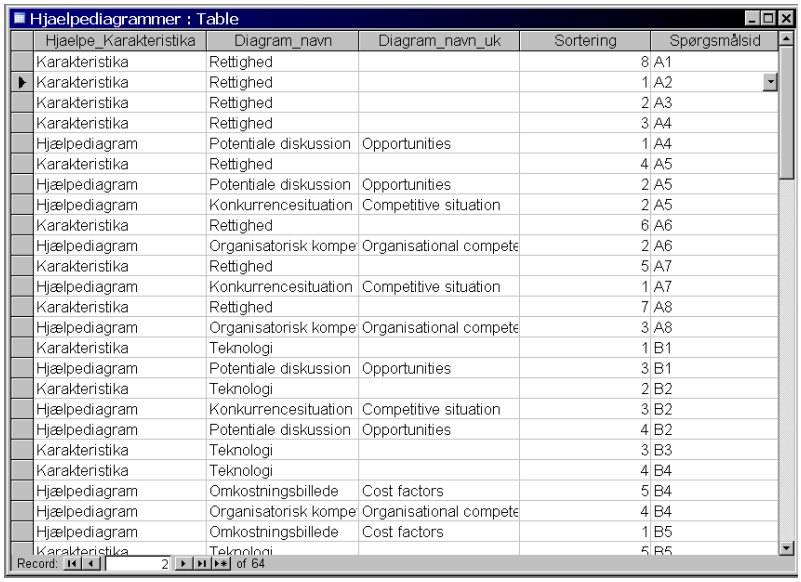
[1] In the Danish-language IPscore® Microsoft® Office Access database the programming has been done with Danish vocabulary. The respective table allows to select which assessment factors should be included as risk and opportunity factors and which should be excluded (hidden) from the evaluation. The hidden assessment factors can be found in the column named "skjul".



Access the tables behind the user interface by clicking on the database icon (also called "Database Window (F11)") - which resembles three overlapping tables - located on the toolbar. The [Database] screen which includes the tables, queries, forms and reports used in the design of IPscore® will appear. Click on “Tables” and find the relevant tables for the changes.

Setting up new supplementary reports

In the [Database] screen and “Tables” it is possible to set up new supplementary reports designed for specific needs (.mdb). Find the table named “Hjælpediagrammer” (Danish for supplementary reports). When you access this table the [Hjælpediagrammer – Table] screen will open. Here the radar profile and the predefined supplementary reports in IPscore® are defined, and here new supplementary reports can be designed.



The radar profile is defined in “Hjælpediagrammer – Table” by the name “Karakteristika” (Danish for characteristics), which appears in the first column of the table. ***Avoid changing the radar profile standard output report without serious consideration.*** Changing the radar profile affects the basic philosophy of the IPscore® output design.

The supplementary reports are predefined radar charts which focus on selected cross-category assessment factors.

A supplementary report is defined first of all by the name “Hjælpediagram” (Danish for supplementary report) in the first column. When designing a new supplementary report, start by writing “Hjælpediagram” in the first column of a new line. Then define the title of the supplementary report (the new radar chart) in the second and third columns. The second column, “Diagram_navn”, is for the title of the supplementary report in the Danish version of the IPscore® database; the third column, “Diagram_navn_uk”, is for the title in the English version of IPscore®. In the fourth column, “Sortering”, the placement of each of the assessment factors in the radar chart is defined. The positions of the assessment factors on the radar start with 1 at the top and continue with 2, 3, etc. in a clockwise direction. In the fifth column the actual assessment factor required for the new supplementary report is selected. The fifth column is called “Spørgsmålsid”, or assessment factor ID in English. Click in the column and use the scroll bar on the right when selecting the assessment factors required for the new supplementary report. A complete list of the 40 assessment factors in IPscore® will appear. Select the assessment factor by writing a code of one letter and a number, e.g., A4.

Changing the assessment factors (risk factors, opportunity factors and "hide")

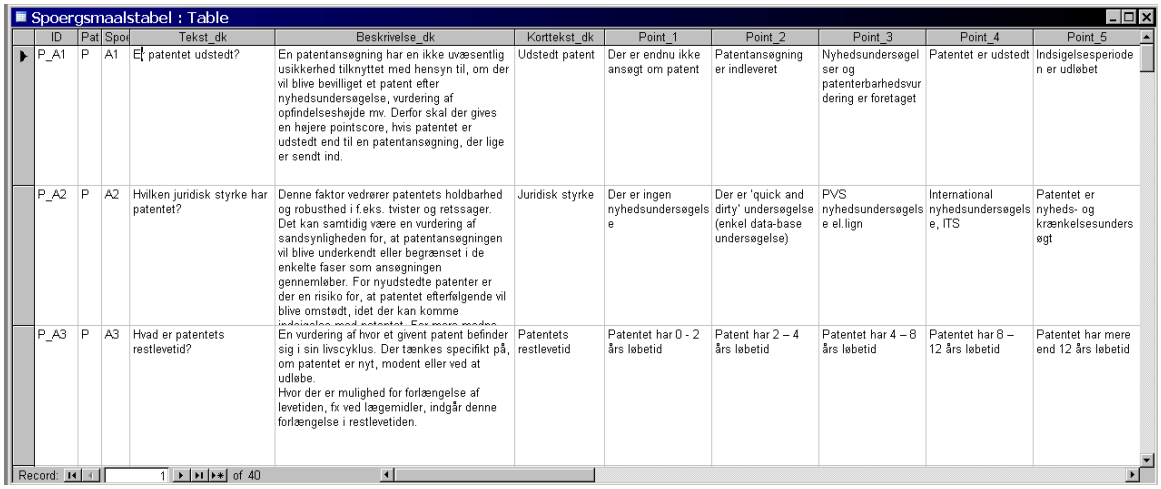
The program includes a table named “Spørgsmålstabel” (Danish for table of questions[2]), where all the assessment factors and related descriptions are based (.mdb). The table contains information that can be changed – but make sure you know what you are doing, or you may cause irreparable damage to the system!

Every area of the table can be changed, both the text and the use of the assessment factors in the user interface and charts, for example changes regarding the assessment factors which are to form part of risk or opportunity factors. The predefined risk and opportunity factors are marked in the columns “risikofaktor” and “potentialefaktor”. It is possible to change this marking.

Be aware that changes affect the original philosophy of IPscore®. If certain assessment factors are to be excluded from the evaluation table, mark the assessment factor in the column “Skjul” (Danish for "hide").

Note that the Microsoft® Office Access program automatically saves the changes, so it is not possible to experiment freely and then not save the changes if they are not the ones wanted after all. ***If the changes are not to be kept, the original data must be re-entered, the software re-installed or the original database (.mdb) copied.***

[2] In the Danish-language IPscore® Microsoft® Office Access database the programming has been done with Danish vocabulary. The respective table allows to select which assessment factors should be included as risk and opportunity factors and which should be excluded (hidden) from the evaluation. The hidden assessment factors can be found in the column named “skjul”.



Spoergsmaalstabel : Table

ID	Pat	Spo	Tekst_dk	Beskrivelse_dk	Korttekst_dk	Point_1	Point_2	Point_3	Point_4	Point_5
P_A1	P	A1	Er patentet udstedt?	En patentansøgning har en ikke uvæsentlig usikkerhed tilknyttet med hensyn til, om der vil blive bevilliget et patent efter nyhedsundersøgelse, vurdering af opfindelseshøjde mv. Derfor skal der gives en højere pointscore, hvis patentet er udstedt end til en patentansøgning, der lige er sendt ind.	Udstedt patent	Der er endnu ikke ansøgt om patent	Patentansøgning er indleveret	Nyhedsundersøgelser og patenterbarhedsvurdering er foretaget	Patentet er udstedt	Indsigelsesperioden er udløbet
P_A2	P	A2	Hvilken juridisk styrke har patentet?	Denne faktor vedrører patentets holdbarhed og robusthed i f.eks. tvister og retssager. Det kan samtidig være en vurdering af sandsynligheden for, at patentansøgningen vil blive underkendt eller begrænset i de enkelte faser som ansøgningen gennemløber. For nyudstedte patenter er der en risiko for, at patentet efterfølgende vil blive omstødt, idet der kan komme	Juridisk styrke	Der er ingen nyhedsundersøgelse	Der er 'quick and dirty' undersøgelse (enkel data-base undersøgelse)	PVS nyhedsundersøgelse el.lign	International nyhedsundersøgelse, ITS	Patentet er nyheds- og krænkelsesundersøgt
P_A3	P	A3	Hvad er patentets restlevetid?	En vurdering af hvor et givent patent befinder sig i sin livscyklus. Der tænkes specifikt på, om patentet er nyt, modent eller ved at udløbe. Hvor der er mulighed for forlængelse af levetiden, fx ved lægemidler, indgår denne forlængelse i restlevetiden.	Patentets restlevetid	Patentet har 0 - 2 års løbetid	Patent har 2 – 4 års løbetid	Patentet har 4 – 8 års løbetid	Patentet har 8 – 12 års løbetid	Patentet har mere end 12 års løbetid

Record: 1 of 40

A brief description of other relevant tables:

Hjælp_økomodel_2 (Danish for support for financial model). This table defines the year in the financial model. The first column 01–10 represents the 10 numerical years of calculation - the time frame for the calculations - and **must not** be changed! The second column represents the 10-year calendar period for the calculations and charts. It can be adjusted, e.g. once a year, to correct the present starting year shown in the charts.

Kommentarer (Danish for comments). Here the user comments entered on the screens with output data (e.g. [Net present value]) are listed.

Svar (Danish for answers). Here all input data from scoring during evaluation of each patent and the user comments entered on the [Input] screen are listed.

00LanguageData. This table contains all texts used in the software, in three languages (English, French and German).

IPscore® 2.1 financial model

IPscore®'s financial model produces a financial forecast of the patented technology's net present value, liquidity and future patent account. It is an assessment and calculation of the value of the patented technology when put to use in a given business area. It is not only an evaluation of the patent as a legal document, but the evaluation of a patent-protected technology when put to use in a selected business area.

The financial model is based on a number of simple and general economic principles which make it relatively easy and quick to carry out the evaluation and create an overview for the company of the order of magnitude represented by the patented technology. The financial forecast depicts the financial value that the patented technology has for the company by pinpointing the resources and opportunities the company is able to draw on and exploit.

The financial forecast is a product of specific IPscore® assessment factors, as well as key data relating to the company's basic financial structure and the business area where the patented technology is being commercially worked.

The IPscore® financial model philosophy

It is often difficult for a company to directly define the financial value of a patented technology. The philosophy of the IPscore® financial model is based on this fact. If, however, a number of 'small' questions which are easy to answer individually are put together, significant progress is made towards answering the 'big' question: What is the financial value of the patented technology?

Based on a number of selected assessment factors, the IPscore® 2.1 financial model calculates the patented technology's financial effects within the company by focusing on how the patented technology can potentially change the company's current financial structure. The financial structure is defined by using the company's current accounts and figures from the business area of the patented technology.

IPscore® first establishes a ratio between the current and estimated future turnover in the patented technology business area and then determines how implementation/utilization of the patented technology will affect the cost structure.

Contents:

A. Introduction to the financial model

B. The basis for the evaluation

C. Key figures for the basic financial structure

D. The technology's financial effect

E. Determining the time frame

F. Calculation results

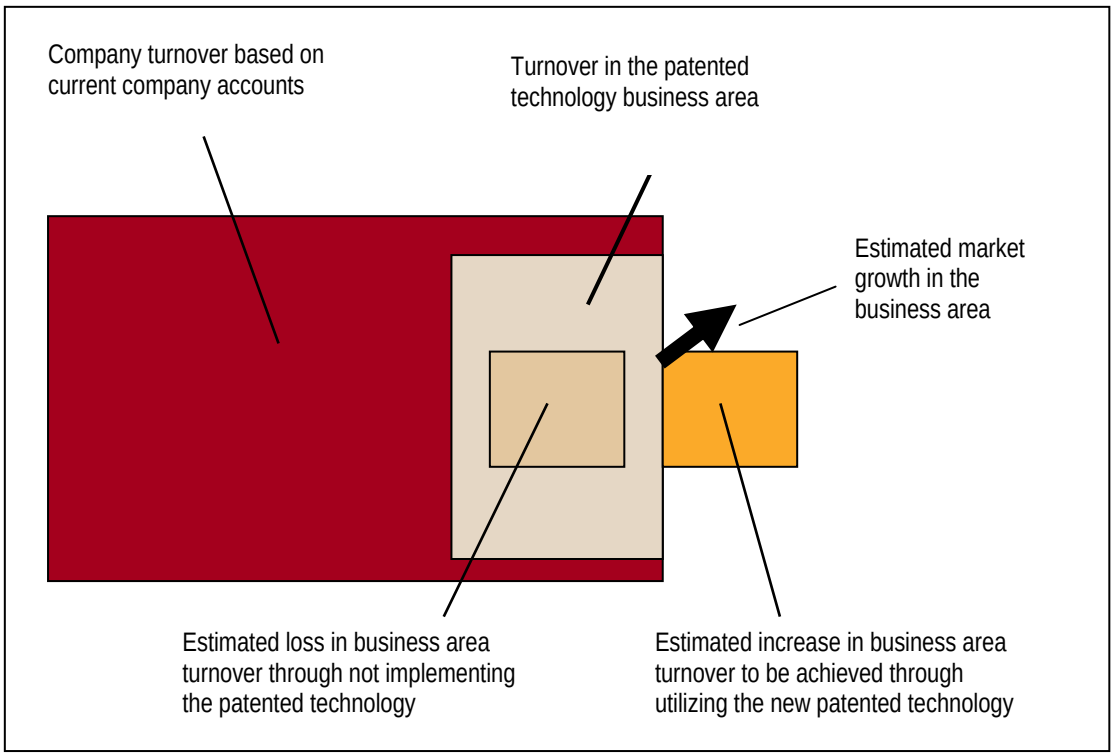
G. Implementation of the financial model

H. Opportunity/risk matrix values

A. Introduction to the financial model

Diagram showing the basis for the financial calculations

The diagram below illustrates the basis for the financial calculations in IPscore®, i.e., the relative size of the patented technology business area and the increase in turnover achievable by utilizing the new patented technology.



The large red rectangle depicts the total company finances, as expressed in the company's current accounts. The smaller, pale grey box within this rectangle is the defined business area relevant to the patented technology. This area makes up between 1 and 100% of total company business turnover. This share is very important as it forms the basis for all the financial analyses in IPscore®.

The actual basis for calculating the financial value of the patented technology is the defined business area of the patented technology. As illustrated, IPscore® uses three parameters for calculating the degree to which the relevant business area can be expected to develop.

Firstly, an assessment is made of the possible reduction in business area turnover without the patented technology. In other words, how valuable is the patented technology as a protector of the business area's current turnover? This value of the patented technology can be characterized as the defensive value because, on the strength of the patented technology, the company avoids losing turnover. This value is represented by the beige box.

Secondly, an assessment is made of the patented technology's foreseeable contribution to increase in business area turnover in the relevant business area. How great an increase in turnover can be expected, provided that the patented technology reaches and penetrates new product or market areas? Is it an increase reflecting the fact that the patented technology can be used in new areas, or does it show potential for gaining a share in current markets? This

value of the patented technology can be characterized as the offensive value, and it is represented by the orange box.

Thirdly, an assessment is made of the business area's general market growth rate. Is the business area experiencing an increase in demand?

In this way the size and development of turnover in the patented technology business area is defined. This creates the basis for calculating some of the other economic effects generated by utilizing the patented technology - effects that can be defined as cost level effects.

This includes the following:

- future development costs before the patented technology can be commercially worked
- effects when the patented technology facilitates production
- effect on the company's investment needs, e.g. when the patented technology allows less complex production technology to be used.

Elements in the IPscore® financial forecast calculations

The financial forecast in IPscore® requires you to do the following:

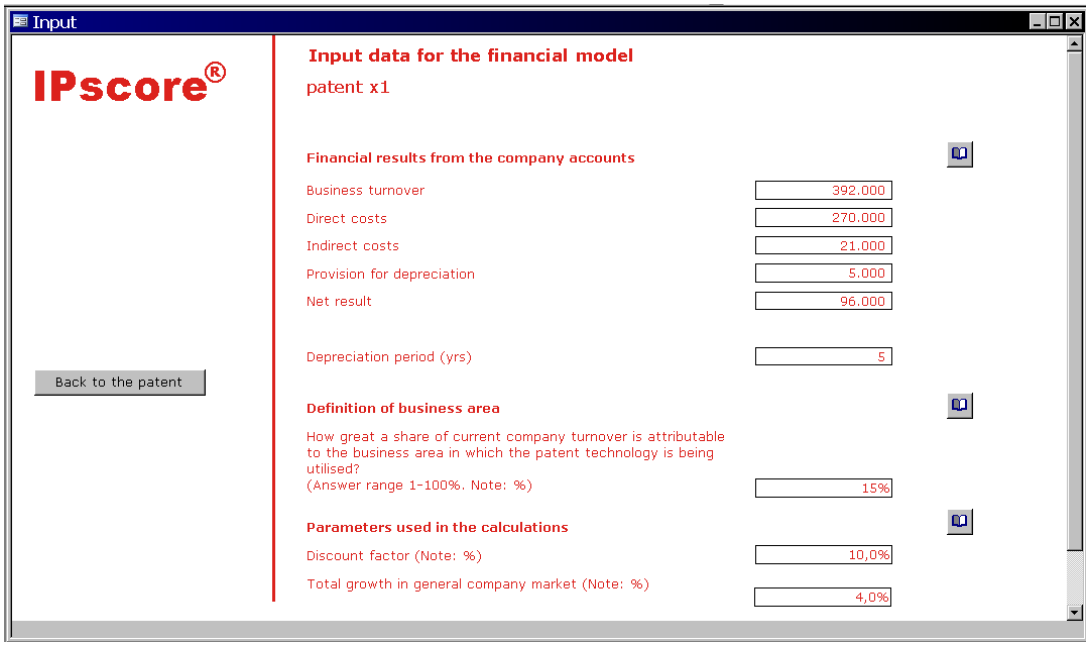
1. Determine the turnover in the patented technology business area, i.e. by establishing the share in company turnover represented by the relevant business area.
2. Determine whether this turnover is affected by the company implementing and commercially working the patented technology. The question is whether the effect on business area turnover is partly defensive, avoiding a loss in turnover, or partly offensive, by increasing business area turnover. Both elements can be present. Next, determine future prospects regarding demand, to be quantified as the estimated market growth in the business area.
3. Determine whether the patented technology has an effect on the current cost level. What are the future development costs, production costs and investments?

IPscore® calculates the financial value of the patented technology by calculating its effect on future company accounts. First the net present value is determined and then an estimated future account for the patented technology is established. Both are given a ten-year time frame. Also, the calculations are influenced by when the company anticipates working the patented technology commercially and by the life expectancy of the related products.

B. The basis for the evaluation

IPscore®'s calculations for the financial forecast are based on the company's current financial structure, a structure showing the correlation between earnings, direct costs and overheads/fixed costs, and provision for depreciation.

This data forms the basis of the calculations for the financial forecast and is entered in the IPscore® "Financial results" category:



The data taken from the company accounts can be based on the company as a whole or a company division, a particular market or department. This basis is used to establish two things: a benchmark for the company's financial structure and the financial scope of the business area relevant to the patented technology. This defines the object of the evaluation, i.e. the business area relevant to the evaluation of the patented technology.

To ensure that the calculations are as precise as possible, it is very important that the object of the evaluation remains consistent throughout the process and that answers to the IPscore® assessment factors refer to the information provided in the "Financial results" category.

The three boxes are a guide to filling in the "Financial results" category:

Guide box 1

You can use a simple economic structure based on company accounts from a specific company division or department/sector, depending on the basis for the evaluation of the patented technology. If so, all financial figures must relate to the chosen sector and represent a cohesive economic structure.

The choice of financial basis for the evaluation affects the calculable results from the assessment factor questions, where the rating scales refer to percentage of turnover. This is the case in category C – Market conditions and category D – Finance. The figures for turnover given in this financial results category must be the same as the turnover figures forming the basis for your answers to the assessment factor questions.

The upper limit for the depreciation period is 7 years.

Guide box 2

Select the business area, specific to the patented technology, to be evaluated in IPscore®. The business area is defined as the percentage share of total company turnover.

Alternative method: Where available, selected business area accounts would provide greater accuracy than an estimated share of total turnover, and as such can be used instead of the company accounts. In that case, the business area share of company turnover is equal to 100%.

Guide box 3

Determining parameters for calculations and graphs

Discount factor
A calculation is made of net present value for the patented technology, using a predefined discount factor. Here you enter the desired discount factor for the net present value. Specification of the net present value calculation is presented in two output reports:

1. Net present value with assumptions
2. Comparison of net present value points.

Total growth rate in general company market
Enter what you determine to be the general growth rate percentage in the company's active markets. The ‘company’ could be the company as a whole, a division or a department/sector, depending on the basis for the evaluation (see guide box 1 above).

The parameters are used to calculate the average growth rate in the other business areas within the company, i.e. areas not directly affected by the turnover from the patented technology which is being evaluated here.

The calculation is presented as a graph, in the ‘Charts/Company accounts’ output report. Here the growth rate percentage is a determining factor in deciding how much ‘Other company profits’ are expected to rise or fall during the ten-year calculation period.

C. Key figures for the basic financial structure

Based on information taken from the accounts figures provided, IPscore® selects a number of key figures which are used to calculate the financial value of the patented technology:

- *business area turnover* = turnover figure from company accounts * the percentage share in turnover represented by the patented technology business area.
- *cash costs* = direct costs + fixed costs/overheads (but excluding provision for depreciation)
- *net profit ratio* = profit / turnover
- *investments* = provision for depreciation * period for depreciation
- *investment intensity* = profit / investments (or in conventional terms: asset rate of turnover / capital turnover).

Direct costs and *fixed costs/overheads*: these costs are added to form a single cost category in the analysis - *cash costs*, which define the cost level. These costs have a direct effect on liquidity. They are in this way different from the provision for depreciation, which is only calculated costs excluding direct annual provision for depreciation.

In this model *cash costs* make no distinction between variable and fixed costs, where variables may fluctuate in proportion to sales, while fixed costs do not. IPscore®'s streamlining does not take this factor into consideration. This streamlining is based on the following: (a) that the calculation is a forecast, and (b) that in the long term (IPscore® has a time frame of ten years) most costs are variable.

Provision for depreciation is important for determining and establishing the scope of investment. It is used to determine how the investments will be affected by the patented technology.

D. The technology's financial effect

As mentioned previously, the financial forecast for the patented technology is based on the company's current financial structure. Selected IPscore® assessment factors are then used to demonstrate how the patented technology causes a change in the company's financial structure.
This change is the patented technology's financial value to the company.

In the "Financial forecast" calculations, IPscore® translates the five-point rating scale in seven selected financial assessment factors into numerical financial terms. When these assessment factor answers (i.e., "Financial assumptions") are put together, they demonstrate how the patented technology causes a change in the company's financial structure. Two further assessment factors determine the time frames used in the calculations.

Therefore the assessment factors (a) determine the patented technology's effect on the business area economy and (b) determine the time frame for the financial forecast.

Determining the patented technology's financial effect

The seven assessment factors used to determine the patented technology's financial effect in the relevant business area can be divided into specific groups: the patented technology's effect on

1. Turnover
2. Costs, i.e.
2a. Development costs
2b. Cash costs
3. Investment

1. The patented technology's effect on turnover

The patented technology's effect on business area turnover is determined by

(a) the added increase in turnover achieved by utilizing the patented technology (this can be the ability of the patented technology to create an increased market share or to make it possible to conquer new markets)
(b) the business area's general market growth rate
(c) the decrease in business area turnover the company will experience through not implementing/using the patented technology.

These three questions are included in IPscore®, making it possible to determine how the patented technology affects future earnings. The current relevant business area turnover is multiplied by the estimated increase in turnover, market growth and earnings lost through not utilizing the patented technology.

Estimated business area turnover = total business turnover * the relevant business area's share of total business turnover * estimated increase in business area turnover when using the patented technology * business area market growth + total business turnover * the relevant business area's share of total business turnover * share of business area turnover maintained when not implementing the patented technology * relevant business area market growth

The relevant information for the financial model is taken from the following assessment factors:

C6: What is the potential extra turnover to be obtained within the business area when utilising the patented technology?

This assessment factor determines what effect utilising the patented technology has on the current business area turnover. Does utilising the patented technology capture market share and thereby increase business area turnover?

In the rating scale, the potential increase in turnover is expressed as the foreseeable percentage rise in current business area turnover. The current turnover figure is given in the "Financial results" category.

The information is used in the forecast of financial results to calculate the share of the total increase in turnover attributable to the patented technology.

C2: What is the market growth in the business area where the patented technology is utilised?

This assessment factor determines the foreseeable market growth in the business area of the patented technology.

The rating scale is expressed as percentage growth in market.

The information is used to calculate the growth in turnover attributable to the patented technology. In the calculations for the forecast of financial results it is assumed that company turnover, in the business area market, will grow at an equal rate.

Note that the calculations for market growth commence from the present moment in time, i.e. regardless of a possible period of development prior to commercialisation.

It is furthermore necessary to note that a distinction is made between the market where the patented technology is put to use and the other markets the company operates in. In this assessment factor you determine the growth in the market used by the patented technology, whereas the overall expected growth in company-operated markets, excluding those of the patented technology, is given as '% in growth' in the "Financial results" category. This information is used in the calculations for the area of total company growth in turnover, which excludes the patented technology.

D1: Can the existing business area output in the relevant market be maintained without utilising the patented technology?

This assessment factor determines whether the patented technology is a necessary element in maintaining business area turnover for the patented product/service. If the entire business area turnover can be maintained without the patented technology, it becomes, in principle, superfluous, whereas if the company is unable to maintain business area turnover/output without it, the patented technology is an essential element.

The rating scale expresses the percentage of business area turnover that can be maintained without the patent.

The information is used to calculate how great a share of the business area turnover/output can be achieved if the patented technology is kept in force.

2. The patented technology's effect on costs

IPscore® operates with a number of cost categories

2a. The patented technology's effect on development costs:
The first cost category is for product development and pre-commercial costs, both of which precede patented technology earnings. This cost category is depicted in IPscore® as percentage of business area turnover in the patented technology's business area prior to the patented technology being commercially worked as a product or process. This principle is based on the fact that research and development (R&D) costs are often listed in the figures for turnover in published accounts.

development costs = total business turnover * business area share of total business area turnover * *R&D %*

R&D % is taken from assessment factor D2:

D2: What are the necessary future development costs?

This assessment factor is for determining the development costs incurred annually before the patent product/service is ready for use commercially. It is only the future development costs which are to be assessed, including patenting costs and market introduction costs, but excluding costs already accounted for. In the rating scale, the estimated figure for cost of development is expressed as a percentage of the current business area turnover, where turnover refers to the turnover figure given in the "Financial results" category. This information is used to calculate the remaining investments for product/service development before the product is saleable or the service is usable.

2b. The patented technology's effect on cash costs:
When products related to the patented technology are launched, the company is faced with production costs, which rise and fall in relation to company business turnover.
IPscore®'s basis for calculating the patented technology's effect on cash costs is the net profit ratio (profit / turnover). The net profit ratio defines the alignment between earnings and costs expressed in %, thereby demonstrating the average profit margin per capital unit of turnover

The new patented technology has an effect on the net profit ratio, e.g. by facilitating production, making products less expensive to produce than those currently in production. In this case the net profit ratio will increase.

To adjust the net profit ratio, the estimated/foreseeable production costs index when implementing the patented technology must be determined. This index adjusts the relation between costs and turnover.

estimated production costs for the patented technology = estimated/foreseeable turnover for the patented technology * production costs index * (1 - net profit ratio)

The production costs index is determined in assessment factor D3:

D3: What is the index for cost of production when implementing the patented technology?

The future production costs for the patent-related product are assessed in relation to the level of the current production costs in the company. You need to determine whether the patent-related product will be easier and cheaper to produce compared to production at present due to implementation of the patented technology, or whether implementation of the patented technology will make the production process more difficult and thereby more expensive.

In the rating scale, production costs are expressed as percentage change in level in relation to the current level of production costs.

This information is used in the calculations for the forecasts of financial results, primarily in the profit calculations.

3. The patented technology's effect on investments

A third element in the cost calculations are investments that involve provision for depreciation.

Implementing the patented technology has a twofold effect on investments:

a. Increased activity (increase in turnover), generated by the patented technology, gives rises to a demand on investment. An increase in turnover gives rise to a demand for greater production capacity; thus investments also rise.

b. The patented technology, if dependent on a whole new production technology, may require an upgrading of production equipment. This effect on investment concerns investment intensity, which is expressed as turnover / investment (otherwise known as rate of turnover). Investment intensity is affected by whether or not the existing production technology can be used to produce the product. If it *can* be used, the investment intensity remains the same as current investment levels. If the new patented technology requires a more complex (i.e. more expensive) production technology, investments will rise per capital unit of turnover, whereas the opposite is the case if the patented technology requires a more simple (i.e. less expensive) production technology. Thus, investment intensity will remain at the current level of investment if the existing production technology can be used. However, if an entirely new and more complex technology/method of production is required, investment intensity will increase, and will decrease if the production process can be made more effective.

Investment intensity is measured on the company's provision for depreciation in relation to turnover. Investment level and frequency depend on the period set for depreciation. Thus the basis for calculating the level of investment is the annual provision for depreciation multiplied by the depreciation period (current year). This figure is then multiplied by the figure for investment intensity, multiplied by the business area turnover figure. This assumes that the business area turnover figure will be supported by a solid capacity for production during the provision for depreciation period.

investments =
expected average business area turnover * (investment intensity * investment index)

The investment index is determined in assessment factor D4:

D4: What investment is necessary for production equipment?

This assessment factor determines whether the current level of investment for production equipment is affected by the new production technology. Does the new patented technology affect the current level of investment necessary for production of the related patent product?

The rating scale expresses the percentage change expected in relation to the current investment intensity for production equipment. If the necessary production technology costs the same as the existing technology, the score is 100%. If it is less expensive, the score will be less than 100%. If there is a need for investments over and above the existing level, the score will be higher than 100%.

This information is used to calculate investments and re-investments when production equipment is depreciated and has an effect on liquidity.

E. Determining the time frame

The calculations in the financial forecast have a ten-year time frame. Included in the specifications for this time frame are two assessment factors relating to (a) the pre-commercial phase and (b) the life expectancy of the patented technology.

a. The first assessment factor, (B5) “How much time is required before the patented technology can be commercially worked?”, determines when the patented technology is expected to be put on the market, and so marks the start and length of the time frame for future development costs.

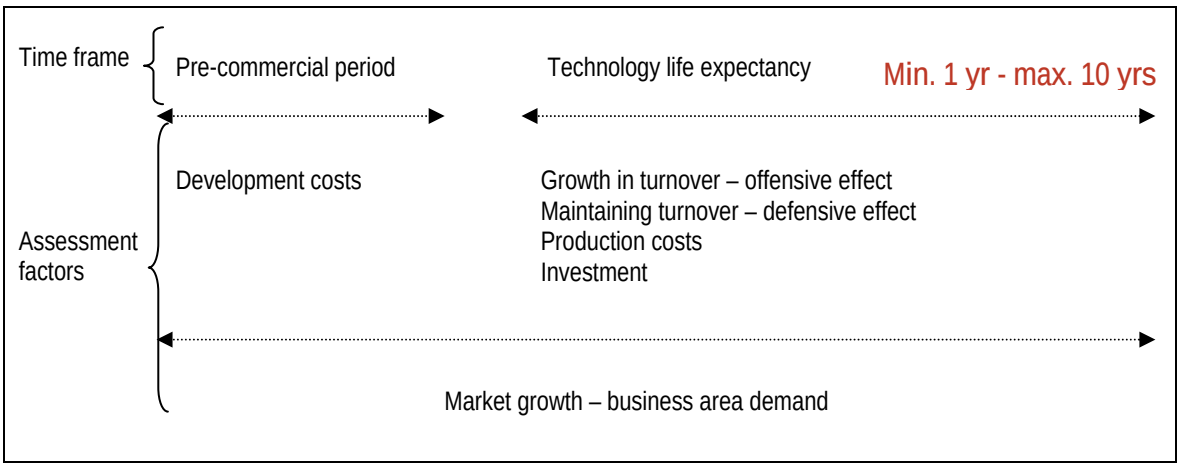
B5: How much time is required before the patented technology can be commercially worked?

b. The second assessment factor, (C3) “What is the life expectancy of the patented technology in the market?”, will determine when the calculations are to cease after the patented technology has been launched on the market.

C3: What is the life expectancy of the patented technology in the market?

However, IPscore® has an overall maximum time frame of ten years. This overall time frame includes the period of development and the period the patented technology is active in the market and generating income.

Diagrammatic overview of the IPscore® time frame and use of assessment factors



Note that the assessment factor relating to market growth covers the whole of the time frame, which may mean having to adjust the assessment factor for market growth rate to the remaining pre-commercial phase, i.e. the time left before the patent can be commercially worked. This avoids an unrealistic estimated market growth.

F. Calculation results

The results of the financial model calculations – the financial forecasts – are presented in the following output charts:

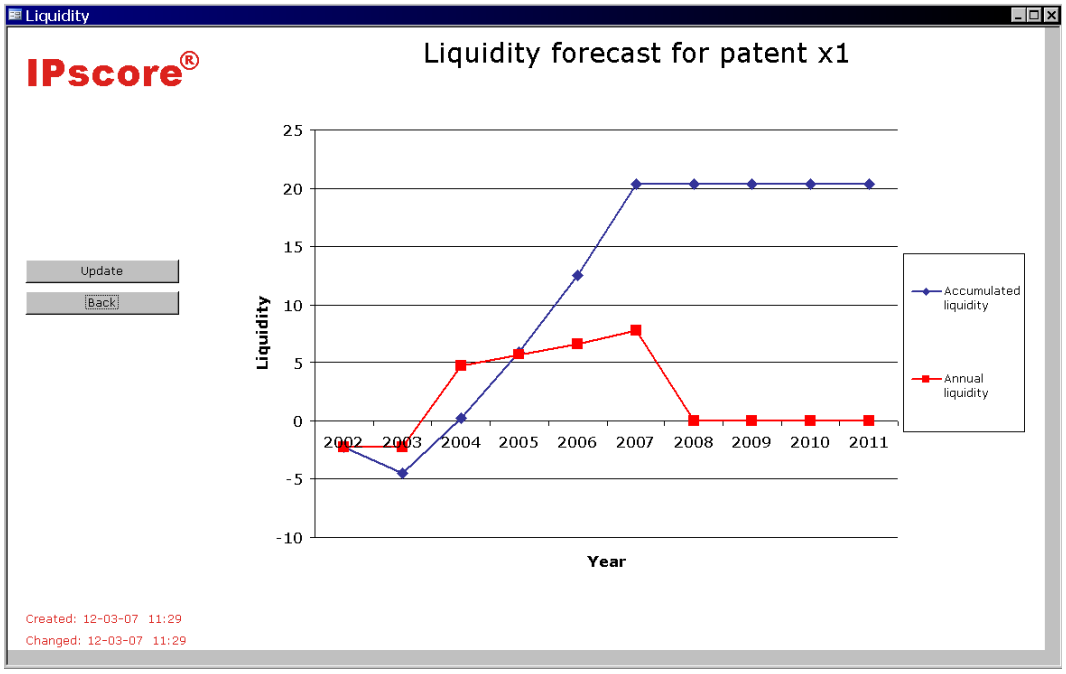
1. Liquidity forecast
2. Net present value
3. Charts of foreseable accounts

The following is a description of the output charts, an explanation of how the model produces them, and their role in the financial evaluation.

Liquidity forecast

IPscore® produces a forecast depicting the earnings and costs that the patented technology is expected to generate. This makes it possible to provide a forecast on accumulated liquidity over the model's ten-year period.

An example of the "Liquidity forecast" output chart:



This chart shows the accumulated liquidity (blue line) and the annual liquidity (red line).

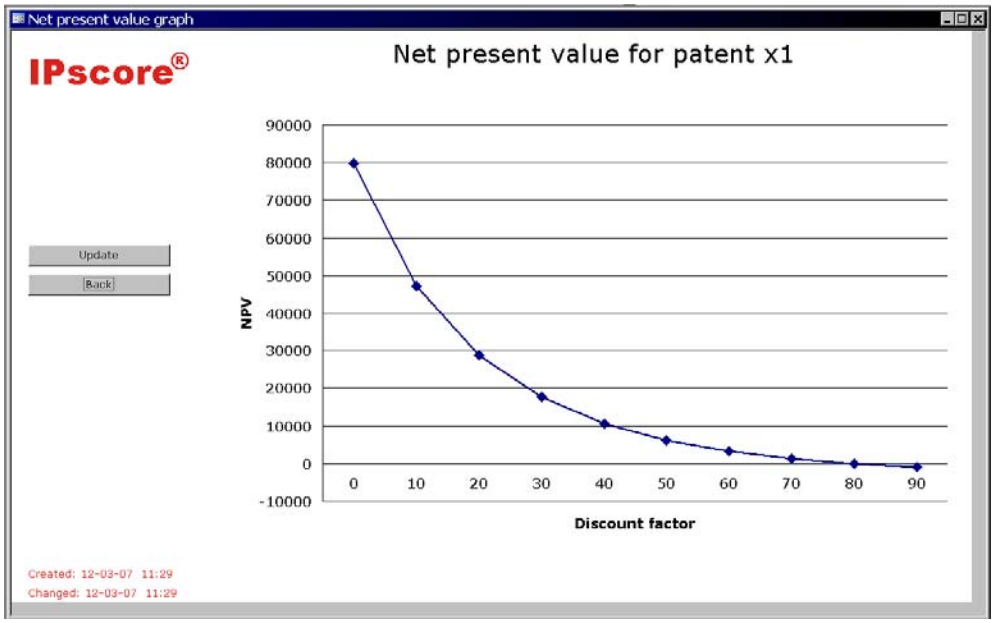
The accumulated liquidity is the sum of the annual liquidity for the total liquidity period in the ten-year time frame. A descending graph line depicts negative liquidity, whereas an ascending graph line depicts positive liquidity.

This graph shows that investing in the patented technology reaches a break-even point. This is where the graph crosses the '0' line. It shows that there are costs during the first two years (development costs, etc.), and that earnings are positive in 2003. This is due to the fact that commercially working the patented technology began in 2002.

Net present value

Based on the liquidity profile it is possible to get a picture of the patented technology's net present value. The net present value is the financial value of the liquidity flow produced by the patented technology. This liquidity flow is discounted with a discount factor to the present time of the IPscore® evaluation.

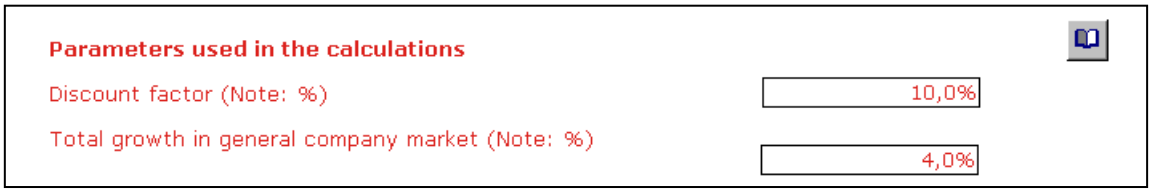
Therefore the net present value should represent the lowest price acceptable at the time of evaluation if the patented technology were to be sold. The discount factor needs to be established, so IPscore® produces a chart of the net present value where the discount factor is variable. The following "Net present value graph" is an example of this output facility:



The net present value of the entire liquidity flow is presented on the y-axis, while different discount factor rates are placed along the x-axis. The graph shows the net present value of the patented technology over a ten-year period. Technically, this involves discounting costs and earnings occurring over the years, to a collective present point in time – using a rate of interest. This rate of interest is called the discount factor, and the chart shows the net present value when set at different discount factors. The discount factor is selected based on weighting the return on investment and the investment risk. The figure shows the consequences of different discount factors. If a 10% discount factor is chosen, the net present value is 47 000.

Calculating the net present value

Select the discount factor required and enter it in the IPscore® "Financial results" category:



Determining parameters for calculations and graphs

Discount factor
A calculation is made of net present value for the patented technology, using a predefined discount factor. Here you enter the desired discount factor for the net present value. Specification of the net present value calculation is presented in two output reports:

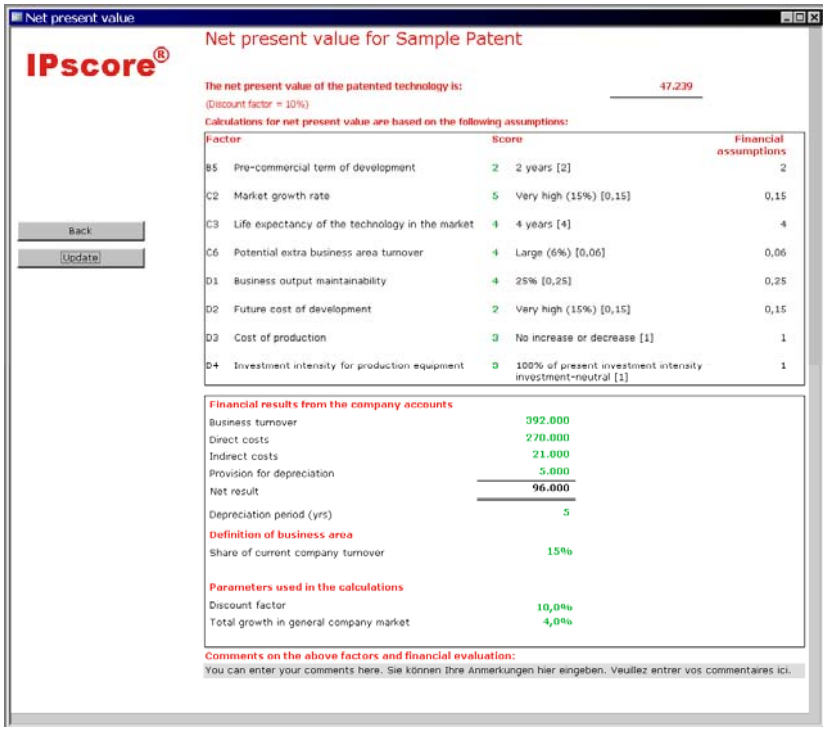
1. Net present value with assumptions
2. Comparison of net present value points.

Total growth in general company market
Enter what you determine to be the general growth rate percentage in the company's active markets. The 'company' could be the company as a whole, a division or a department/sector, depending on the basis for the evaluation (see guide box 1 above).

The parameters are used to calculate the average growth rate in the other business areas within the company, i.e. areas not directly affected by the turnover from the patented technology which is being evaluated here.

The calculation is presented as a graph, in the 'Charts/Company accounts' output report. Here the growth rate percentage is a determining factor in deciding how much 'Other company profits' are expected to rise or fall during the 10-year calculation period.

When the data has been entered and the discount factor selected, IPscore® will provide the net present value of the patented technology.



The discounted net present value is shown here for the selected discount factor. Also shown are the assumptions IPscore® uses in calculating the net present value.

This part of the financial model (the screen image) offers a net present value simulation facility in which you can change the financial key figures and then update the calculations (see Chapter 6G).

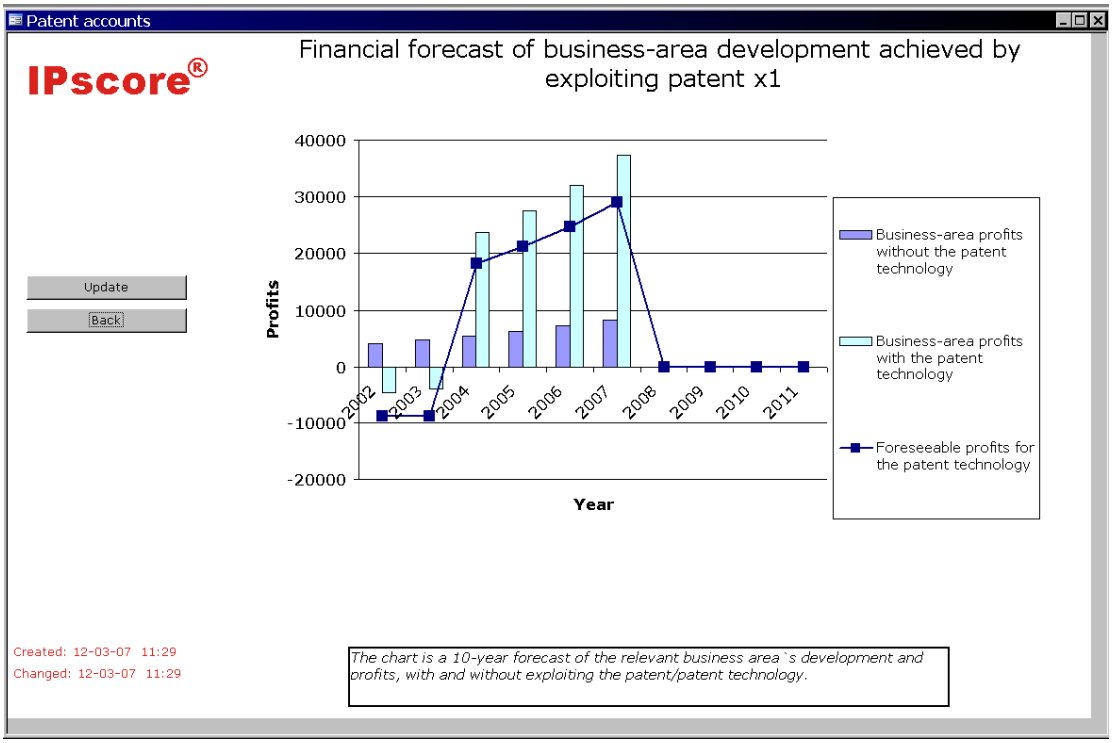
The estimated future account – patent account and company account

In IPscore® the net present value is the patented technology's financial value. This is not the same as a financial value in annual accounts, because profits in accounts are not liquidity flows but turnover and costs.

Thus IPscore® can produce a future account with or without the patented technology, as developments in each of the mentioned elements are taken into account and put together to produce profits that take account of turnover, cash costs and depreciation occurring during the relevant periods of depreciation.

Thus the patent account is a projection of the patented technology's effect on accounts, and this is compared with an estimated account without implementation of the patented technology. The patented technology's value ratio then becomes apparent.

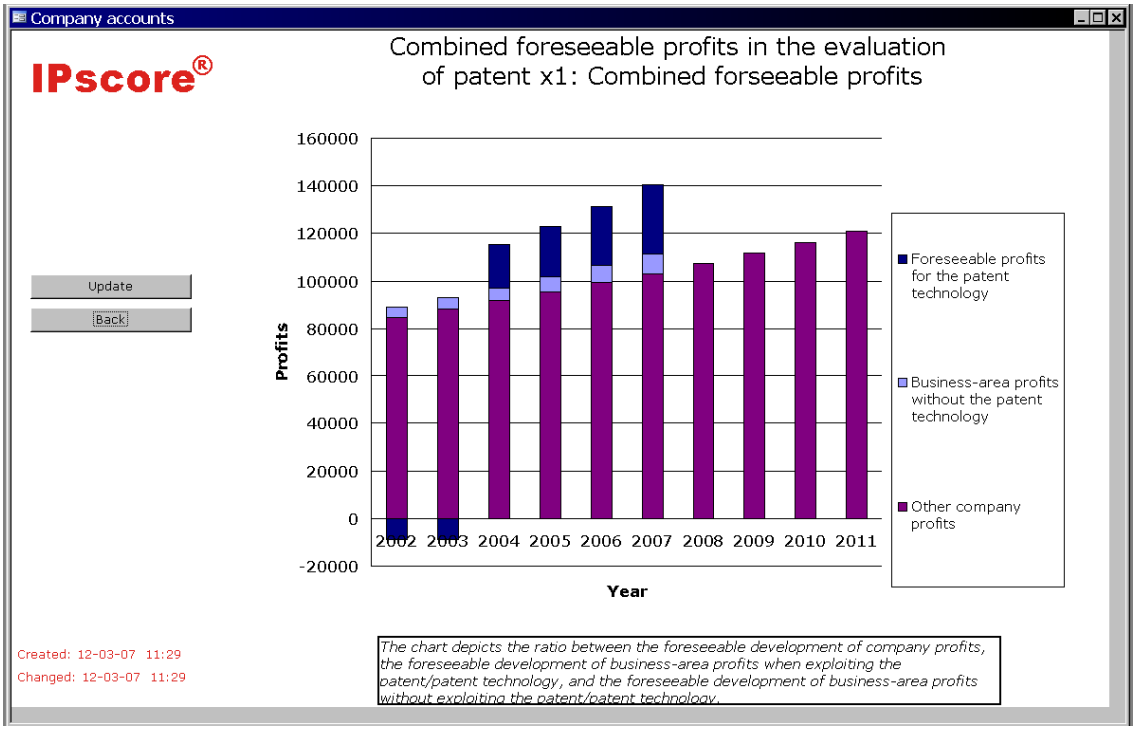
The patent account features three graphical elements. One is the line depicting the patented technology's defined effect on company accounts. The blue column shows the profit achievable if the patented technology is not utilized, and the pale blue/green column shows total profits including the patented technology, i.e. the line value added to the value of the blue column. The output chart is "Patent account".



The chart shows the patented technology to be operating at a loss in the first year, as there are some development costs. However, profits are already positive in the second year. These results provide a steadier picture than the more irregular features of the liquidity profile. This is because the provision for depreciation is spread over the entire investment period, thus evening out the financial results.

Finally, IPscore® also helps to assess the risk to the total company finances of implementing the patented technology. This is achieved by combining the patent account with other company profits.

This correlation is used to create the output chart “Company accounts – the combined forseeable profits”.



The bar chart comprises three elements. The dark purple area of the column shows the company’s profits in the business areas which are unrelated to the patented technology’s business area. The light purple column shows the profits achievable in the evaluated business area without implementing the patented technology. Lastly, the dark blue column shows the patented technology’s foreseeable profit, i.e. the patented technology’s contribution to the business area profits and hence to total company profits.

The diagram is a depiction of the patented technology’s strength/weight in the company’s financial picture, an illustration of the fact that the patented technology is not too critical an element for the company’s economy as a whole.

Furthermore, it is apparent that other company profits rise. IPscore® asks for a growth rate for the area of company turnover not connected with the market of the patented technology. This provides the option of selecting a general growth rate percentage, making growth in the other markets independent of the growth rate percentage in the market of the patented technology. This information is entered in the IPscore® “Financial results” category, under ‘discount factor’.

G. Implementation of the financial model

This section explains the financial calculations in more detail. It is organised as follows:

4. Input variables
5. Liquidity and net present value
6. Patent and company accounts
7. Mapping to the formulas from Chapter 8D
8. Financial model variables

Input variables

The following financial assumptions are used in the financial calculations:

Financial assumption (Assessment factor)	Variable name (Hjaelp_oekmodel table)	Description
B5	Udviklingstid	Time to market
C2	Markedsvaekst	Business area market growth in the market where the patented technology is utilised (%)
C3	Levetid	Patented technology's life expectancy in the market
C6	Markedsandel	Estimated increase in business area turnover when utilising the patented technology (% of the business turnover)
D1	Omsaetnings-procent	Share of business area turnover maintained when not utilising the patented technology (% of the business turnover)
D2	Udviklingsudgifter	Development costs (% of the business turnover)
D3	Produktions-omkostninger	Production cost index when utilising the patented technology (% of the production costs)
D4	Noedvendige_ investeringer	Investment in production equipment for the patented technology (% of the current investment intensity)

The following input variables are entered on the [Input] screen for "Financial results" ("Input data for the financial model"):

Input variable (Financial results)	**Translation** (Fin = Financial, Def = Definition, Deprec = Depreciation)
oek_Omsaetning	Fin_BusinessTurnover
oek_Direkte_omkostninger	Fin_Direct_costs
oek_Indirekte_omkostninger	Fin_Indirect_costs
oeK_Afskrivninger	Fin_ProvisionForDeprec
oeK_Afskrivningsperiode	Fin_DeprecPeriod (yrs)
Bidrag_til_omsaetning	Def_of_BusinessArea (%)
Oek_Kalkulationsrente	Fin_DiscountFactor (%)
Oek_Vaekst_oevrige_marked	Fin_TotalGrowthIn_General_CompanyMarket (%)

The next sections briefly explain the IPscore® financial model. Most values are computed per year of the calculation period of 10 years. For the sake of simplicity, we omit the year index (0Y_) from the variable names. The exact formulas and variable name translations can be found in the "Financial model variables" section.

Liquidity and net present value (NPV)

NPV = (Liquidity$_{Y1}$ / (1+Fin_DiscountFactor) + Liquidity $_{Y2}$ / (1+Fin_DiscountFactor)^{2} + ... +
Liquidity $_{Y10}$ / (1+Fin_DiscountFactor)^{10}) * Fin_BusinessTurnover / 100

Liquidity = Revenue - Costs - Investments + Regained_revenue + Efficiency + InvestmentReduction

Accumulated liquidity is the sum of the liquidity values for the current year and all previous years.

Revenue = C6*(1 + C2)$^{Y-1}$ * Def_of_BusinessArea * (1 + C2)^{Y} * 100
(computed for each year in which the product is on the market within its life expectancy)

Fin_Share_Direct_costs_= Fin_Direct_costs/Fin_BusinessTurnover*100
Fin_Share_Indirect_costs_= Fin_Indirect_costs/Fin_BusinessTurnover*100
Share_Costs = (Fin_Share_Direct_costs + Fin_Share_Indirect_costs)/100

Costs = Revenue * D3 * Share_Costs + D2 * Def_of_BusinessArea * 100
(computed for each year before the product is introduced on the market)

Regained_revenue = (100 - Share_Costs *100) * (1-D1) * Def_of_BusinessArea * (1 + C2)^{Y}

Efficiency = Share_Costs * 100 * (1-D3) * Def_of_BusinessArea * (1 + C2)^{Y}

Share_Deprec = Fin_Share_ProvisionForDeprec = Fin_ProvisionForDeprec/Fin_BusinessTurnover*100

InvestmentReduction = Fin_DeprecPeriod * Share_Deprec * (1-D4) * Def_of_BusinessArea * (1 + C2)^{Y}
(computed for each 1st year of the depreciation period, from the market appearance until the 10th year)

Patent and company accounts

This section defines the values found in the corresponding charts.

Business-area profits without the patent technology:

WithoutPatent_Profits = WithoutPatent_Turnover - WithoutPatent_Costs - WithoutPatent_Deprec
(computed for each year from the introduction on the market until the end of the life expectancy)

WithoutPatent_Turnover = Fin_BusinessTurnover * D1 * (1 + C2)^{Y} * Def_of_BusinessArea

WithoutPatent_Costs = Share_Costs * WithoutPatent_Turnover

WithoutPatent_Deprec = Share_Deprec/100 * WithoutPatent_Turnover

Foreseeable profits for the patent technology:

Patent_Profits = Patent_Turnover - Patent_Costs - Patent_Deprec - Patent_Regained_Deprec +
Patent_regained_revenue

Patent_Turnover = Revenue * Fin_BusinessTurnover/100

Patent_Costs = (Fin_BusinessTurnover * Costs/100 - ((WithoutPatent_Turnover / Def_of_BusinessArea) *
(Efficiency/100) / (1 + C2)^{Y})) - (Patent_regained_revenue / (Share_Costs) * Efficiency)/100

Patent_Regained_Deprec = Fin_BusinessTurnover * Def_of_BusinessArea * Share_Deprec * (1-D1) *
(1 + C2)^{Y} / 100
(computed only if Revenue for the current year is greater than 0)

Patent_Deprec = ((Patent_Turnover * D4 * Share_Deprec / 100) -
(WithoutPatent_Turnover * Share_Deprec * (1- D4) / 100) -
Patent_Regained_Deprec * (1- D4))
(computed only if Revenue for the current year is greater than 0)

Patent_regained_revenue = Fin_BusinessTurnover * Regained_Revenue/100

Business-area profits with the patent technology:

WithoutPatent_Profits + Patent_Profits
(computed for all years)

Other (company) profits:

Other_Profits = Other_Turnover - Other_Costs - Other_Deprec

Other_Turnover = Fin_BusinessTurnover * (1 - Def_of_BusinessArea) *
(1+Fin_TotalGrowthIn_General_CompanyMarket)^{Y}

Other_Costs = Other_Turnover * Share_Costs

Other_Deprec = Other_Turnover * Share_Deprec / 100

Mapping to the formulas from Chapter 8D

The descriptive formulas from Chapter 8D are mapped to the detailed formulas here. The first column of each table shows the variables from Chapter 8D and the second column the variables from the sections above (and in some cases, in square brackets, the variables from the table in the "Financial model variables" section).

Estimated business area turnover

Estimated business area turnover =
total business turnover * the relevant business area's share of total business turnover * estimated increase in business area turnover when using the patented technology * business area market growth
+
total business turnover * the relevant business area's share of total business turnover * share of business area turnover maintained when not implementing the patented technology * relevant business area market growth

Estimated business area turnover	Patent_Turnover + WithoutPatent_Turnover
total business turnover	Fin_BusinessTurnover
the relevant business area's share of total business turnover	Def_of_BusinessArea
estimated increase in business area turnover when using the patented technology	C6*(1 + C2)$^{Y-1}$ = [Extra_Business_Turnover]
business area market growth	(1 + C2)^{Y} = [Accum_Growth]
share of business area turnover maintained when not implementing the patented technology	D1
relevant business area market growth	business area market growth

Development costs

development costs = total business turnover * business area share of total business area turnover * R&D %

development costs	D2 * Def_of_BusinessArea * 100 * Fin_BusinessTurnover
total business turnover	Fin_BusinessTurnover
business area share of total business area turnover	Def_of_BusinessArea
R&D % (future development costs)	D2 = [DevelopmentNeed] for all years before the product was introduced (Produktind=0)

Investments

investments = expected average business area turnover * (investment intensity * investment index)

investments	Investments (computed only for the 1st year of the depreciation period)
expected average business area turnover	Example for Y=6 if 06_Inv_index_2 (i.e., depreciation year number) equals 1, and Fin_DeprecPeriod = 5: 01_Inv_index_5 = (06_Revenue + 07_Revenue + 08_Revenue + 09_Revenue + 10_Revenue) / Fin_DeprecPeriod
investment index	Fin_DeprecPeriod * Fin_Share_ProvisionForDeprec / 100
investment intensity	D4 = [0Y_Inv_index_1]

Y = Year

Financial model variables

Y=year (1,2,...,10), Fin=Financial, Deprec=Depreciation, Def=Definition, Accum=Accumulated

Variable name	English translation	Defined in	Value
Udviklingstid	B5 Time to market	Input - Technology	User defined score - financial assumption
Markedsvaekst	C2 Market growth	Input -Market conditions	User defined score - financial assumption
Levetid	C3 Life expectancy	Input -Market conditions	User defined score - financial assumption
Markedsandel	C6 Turnover increase w. patent	Input -Market conditions	User defined score - financial assumption
Omsaetnings-procent	D1 Business turnover, no patent	Input - Finance	User defined score - financial assumption
Udviklingsudgifter	D2 Development cost	Input - Finance	User defined score - financial assumption
Produktions-omkostninger	D3 Production cost (patent)	Input - Finance	User defined score - financial assumption
Noedvendige_investeringer	D4 Investment	Input - Finance	User defined score - financial assumption
oek_Omsaetning	Fin_BusinessTurnover	Input - Financial results	User defined
oeK_Afskrivningsperiode	Fin_DeprecPeriod	Input - Financial results	User defined
oek_Direkte_omkostninger	Fin_Direct_costs	Input - Financial results	User defined
oek_Indirekte_omkostninger	Fin_Indirect_costs	Input - Financial results	User defined
oeK_Resultat	Fin_NetResult	Input - Financial results	User defined
oeK_Afskrivninger	Fin_ProvisionForDeprec	Input - Financial results	User defined
Bidrag_til_omsaetning	Def_of_BusinessArea	Input - Financial results	User defined
Oek_Kalkulationsrente	Fin_DiscountFactor	Input - Financial results	User defined
Oek_Vaekst_oevrige_marked	Fin_TotalGrowthIn_General_CompanyMarket	Input - Financial results	User defined
0Y_Produktind		Oekonomioversigt_2: Select query	Index of the year in which the product is on the market (1 if significant, otherwise 0)
0Y_Produkttid		Oekonomioversigt_2: Select query	Year in which the product is on the market from introduction to year 10 (1,2,3...)
0Y_Produkt		Oekonomioversigt_2: Select query	Index of the year in which the product is on the market within its life expectancy (i.e., C3); 1 if significant
oeK_Andel_Omsaetning	Fin_Share_BusinessTurnover	Oekonomioversigt_opret_step_1: Append Query	Fin_BusinessTurnover/Fin_BusinessTurnover*100
OeK_Andel_Direkte_omkostninger	Fin_Share_Direct_costs	Oekonomioversigt_opret_step_1: Append Query	Fin_Direct_costs/Fin_BusinessTurnover*100
OeK_Andel_Indirekte_omkostninger	Fin_Share_Indirect_costs	Oekonomioversigt_opret_step_1: Append Query	Fin_Indirect_costs/Fin_BusinessTurnover*100
OeK_Andel_Afskrivninger	Fin_Share_ProvisionForDeprec	Oekonomioversigt_opret_step_1: Append Query	Fin_ProvisionForDeprec/Fin_BusinessTurnover*100
0Y_Udviklingsbehov	0Y_DevelopmentNeed	Oekonomioversigt_5: Select query	D2 for the years before the product was introduced (0Y_Produktind=0), otherwise 0
0Y_Kumuleret_vaekst	0Y_Accum_Growth	Oekonomioversigt_3: Select query	(1 + C2)^Y
0Y_Ekstra_oms_pot	0Y_Extra_Business_Turnover	Oekonomioversigt_3: Select query	C6*(1 + C2)^(Y-1)

0Y_Indbetalinger	0Y_Revenue	Oekonomioversigt_3: Select query	0Y_Extra_Business_Turnover * 0Y_Produkt * Def_of_BusinessArea * 0Y_Accum_Growth * 100
0Y_Inv_index_2		Oekonomioversigt_4: Select query; Inv_index_2: Public Function in Module 1	The year within the depreciation period between the market appearance and the 10th year
0Y_Inv_index_1		Oekonomioversigt_4: Select query	D4 (investment intensity) for each first year of the depreciation period within the period between the market appearance and the 10th year
0Y_Omkostninger	0Y_Costs	Oekonomioversigt_5: Select query	0Y_Revenue * D3 * (Fin_Share_Direct_costs + Fin_Share_Indirect_costs)/100 + 0Y_DevelopmentNeed * Def_of_BusinessArea * 100
0Y_Genvundne_indtaegter	0Y_Regained_revenue	Oekonomioversigt_5: Select query	(100 - (Fin_Share_Direct_costs + Fin_Share_Indirect_costs)) * (1-D1) * Def_of_BusinessArea * 0Y_Accum_Growth This value is computed for the years in which the product is on the market within its life expectancy (C3), i.e., only if 0Y_Produkt>0.
0Y_Effektivisering	0Y_Efficiency	Oekonomioversigt_5: Select query	(Fin_Share_Direct_costs + Fin_Share_Indirect_costs) * (1-D3) * Def_of_BusinessArea * 0Y_Accum_Growth This value is computed for the years in which the product is on the market within its life expectancy (C3), i.e., only if 0Y_Produkt>0.
0Y_ Inv_index_5		Oekonomioversigt_6: Select query; Inv_index_5: Public Function in Module 1	The share of Revenue per (depreciation) year within the depreciation period, but only for the 1st year of the depreciation period (from the market appearance until the 10th year). Note that the upper limit for the depreciation period is 7 years. 'Example for 01_Inv_index_5 for year 06 if 06_Inv_index_2(i.e.,depreciation_year_number)=1, Fin_DeprecPeriod=5: 'Inv_index_5([01_Revenue],[02_Revenue],[03_Revenue],[04_Revenue],[05_Revenue],[06_Revenue],[07_Revenue],[08_Revenue],[09_Revenue],[10_Revenue],[06_Inv_index_2],[Fin_DeprecPeriod],6) AS 06_Inv_index_5 'Afskriv_aar=1, Aar=6, Afskrivnings_per=5 'Inv_index_5 = (06_Revenue + 07_Revenue + 08_Revenue + 09_Revenue + 10_Revenue) / Fin_DeprecPeriod

0Y_Investeringer	0Y_Investments	Oekonomioversigt_6: Select query	0Y_Inv_index_1 * (Fin_DeprecPeriod * Fin_Share_ProvisionForDeprec/100) * 0Y_Inv_index_5
0Y_Investeringsreduktion	0Y_InvestmentReduction	Oekonomioversigt_6: Select query	Fin_DeprecPeriod * Fin_Share_ProvisionForDeprec * (1-D4) * Def_of_BusinessArea * 0Y_Accum_Growth * [1 if 0Y_Inv_index_1>0, otherwise 0] This value is computed only for each first year of the depreciation period (D4 comes from 0Y_Inv_index_1 whereby Y is the 1st year of the depreciation period when the product is on the market).
0Y_Likviditet	0Y_Liquidity	Oekonomioversigt_7: Select query	0Y_Revenue - 0Y_Costs - 0Y_Investments + 0Y_Regained_revenue + 0Y_Efficiency + 0Y_InvestmentReduction
0Y_Kumuleret_Likviditet	0Y_Accum_Liquidity	Oekonomioversigt_7: Select query	01_Liquidity + 02_Liquidity + ... + 0[Y-1]_Liquidity
Overskud uden patent	Profits without patent - Business-area profits without the patent technology	Data til patentregnskab_1: Select query; Charts - Patent accounts; Charts - Comapny accounts	01_WithoutPatent_Profits,..., 10_WithoutPatent_Profits
Patentets overskud	Profits through patent - Foreseeable profits for the patent technology	Data til patentregnskab_1: Select query; (see Charts - Patent accounts; Charts - Comapny accounts)	01_Patent_Profits,..., 10_Patent_Profits
Overskud med patent	Profits with patent - Business-area profits with the patent technology	Data til patentregnskab_1: Select query; (see Charts - Patent accounts)	01_WithoutPatent_Profits + 01_Patent_Profits,..., 10_WithoutPatent_Profits + 10_Patent_Profits
Oevrigt overskud	Other (company) profits	Data til patentregnskab_1: Select query; (see Charts - Comapny accounts)	01_Other_Profits,..., 10_Other_Profits
0Y_Upatent_oms	0Y_WithoutPatent_Turnover	Oekonomioversigt_8_Patent: Select query	Fin_BusinessTurnover * D1 * 0Y_Accum_Growth * Def_of_BusinessArea
0Y_Patent_oms	0Y_Patent_Turnover	Oekonomioversigt_8_Patent: Select query	0Y_Revenue * Fin_BusinessTurnover / 100
0Y_Patent_genv_indt	0Y_Patent_Regained_Revenue	Oekonomioversigt_8_Patent: Select query	Fin_BusinessTurnover * 0Y_Regained_Revenue/100
0Y_Patent_omk	0Y_Patent_Costs	Oekonomioversigt_8_Patent: Select query	(Fin_BusinessTurnover * 0Y_Costs/100 - ((0Y_WithoutPatent_Turnover / Def_of_BusinessArea) * (0Y_Efficiency/100) / 0Y_Accum_Growth)) - (0Y_Patent_regained_revenue / ((Fin_Share_Direct_costs + Fin_Share_Indirect_costs)/100) *0Y_Efficiency)/100

0Y_Patent_genv_afskriv	0Y_Patent_Regained_Deprec	Oekonomioversigt_8_Patent: Select query	Fin_BusinessTurnover * Def_of_BusinessArea * (if 0Y_Revenue > 0 then (Fin_Share_ProvisionForDeprec * (1-D1) * (0Y_Accum_Growth)/100); otherwise 0)
0Y_patent_afskriv	0Y_Patent_Deprec	Oekonomioversigt_8_Patent: Select query	if 0Y_Revenue > 0 then ((0Y_Patent_Turnover * D4 * Fin_Share_ProvisionForDeprec / 100) - (0Y_WithoutPatent_Turnover * Fin_Share_ProvisionForDeprec * (1- D4) / 100) - 0Y_Patent_Regained_Deprec * (1- D4)); otherwise 0)
0Y_Patent_res	0Y_Patent_Profits	Oekonomioversigt_8_Patent: Select query	0Y_Patent_Turnover - 0Y _Patent_Costs - 0Y_Patent_Deprec - 0Y_Patent_Regained_Deprec + 0Y_Patent_regained_revenue
0Y_Upatent_omk	0Y_WithoutPatent_Costs	Oekonomioversigt_9_Uden_Patent: Select query	(Fin_Share_Direct_costs + Fin_Share_Indirect_costs) / 100 * 0Y_WithoutPatent_Turnover
0Y_Upatent_afskriv	0Y_WithoutPatent_Deprec	Oekonomioversigt_9_Uden_Patent: Select query	Fin_Share_ProvisionForDeprec/100 * 0Y_WithoutPatent_Turnover
0Y_Upatent_res	0Y_WithoutPatent_Profits	Oekonomioversigt_9_Uden_Patent: Select query	if 0Y_Produkttid > C3 then 0; otherwise 0Y_WithoutPatent_Turnover - 0Y_WithoutPatent_Costs -0Y_WithoutPatent_Deprec
0Y_Rest_oms	0Y_Other_Turnover	Oekonomioversigt_10_Rest: Select Query	Fin_BusinessTurnover * (1 -Def_of_BusinessArea) * (1+Fin_TotalGrowthIn_General_CompanyMarket)^Y
0Y_Rest_omk	0Y_Other_Costs	Oekonomioversigt_10_Rest: Select Query	0Y_Other_Turnover * (Fin_Share_Direct_costs + Fin_Share_Indirect_costs) / 100
0Y_Rest_afskriv	0Y_Other_Deprec	Oekonomioversigt_10_Rest: Select Query	0Y_Other_Turnover * Fin_Share_ProvisionForDeprec / 100
0Y_Rest_res	0Y_Other_Profits	Oekonomioversigt_10_Rest: Select Query	0Y_Other_Turnover - 0Y_Other_Costs - 0Y_Other_Deprec
Nutidsvaerdi	Net present value	Opdater_nutid: Update query; nutidsvaerdi: Public Function in Module 1; MS Office Access Function NPV(Fin_DiscountFactor, Liquidity) (see Charts - Net present value graph for discount factors from 0 to 0,9, step 0,1)	(01_Liquidity/(1+Fin_DiscountFactor)^1 + 02_Liquidity/(1+Fin_DiscountFactor)^2 + ... + 10_Liquidity/(1+Fin_DiscountFactor)^10) * Fin_BusinessTurnover / 100

H. Opportunity/risk matrix values

This section explains the calculations of the values for the opportunity/risk matrix (see Output - Portfolios).

To draw a circle corresponding to a patent in the matrix, we need to know its risk value (%), its opportunity value (%), and its diameter.

The base for the calculation are the assessment factors relevant to risk factors ("Risikofaktor") or opportunity factors ("Potentialefaktor"). This relevance is part of the IPscore® design and is given in the "Spoergsmaalstabel" table:

Assessment factors	Risk relevant	Opportunity relevant
A	A1, A2, A3, A5, A6, A7, A8	A3, A4, A5
B	B2, B3, B4, B5, B6, B7, B8	B1, B2, B9
C	C1, C4, C9	C1, C2, C3, C4, C5, C6, C7, C8
D	D2, D3, D4, D5	D3

Note that some factors, such as A3 or A5, are counted as both risk and opportunity relevant (see also the "Hjaelp_risiko_potentiale" table).

The opportunity value (%) is computed for all opportunity relevant factors as

Opportunity = (Total_score -Min_score) / (Max_score - Min_score)

The values refer to the scoring of the opportunity relevant assessment factors as determined by the user (Total_score), the maximum possible scoring (Max_score, i.e., the number of factors multiplied by 5 as the highest possible score), and the minimum possible scoring (Min_score, i.e., the number of factors multiplied by 1 as the lowest possible score).

The risk value (%) is computed for all risk relevant factors as

Risk = 1- (Total_score - Min_score) / (Max_score - Min_score)

Finally, the diameter of the circle representing a patent is proportional to the score for assessment factor D6 ("What is the patented technology's contribution to company profits?").

The following table gives an overview of the relevant variables:

Variable name	Translation/Description	Defined in	Value
Samlet_score - Risikofaktor	Total_score for risk factors	Matrix_1: Select Query	Sum of scores (Svar.vardi table) for all risk relevant assessment factors (Spoergsmaalstabel table)
Samlet_score - Potentialefaktor	Total_score for opportunity factors	Matrix_1: Select Query	Sum of scores (Svar.vardi table) for all opportunity relevant assessment factors (Spoergsmaalstabel table)
Antal_faktorer - Risikofaktor	Number of risk relevant assessment factors	Matrix_1: Select Query	Number of all risk relevant assessment factors
Antal_faktorer - Potentialefaktor	Number of opportunity relevant assessment factors	Matrix_1: Select Query	Number of all opportunity relevant assessment factors
Maksimal_score - Risikofaktor	Max_score for risk relevant assessment factors	Matrix_1: Select Query	5 *Antal_faktorer (risk relevant factors only)
Maksimal_score - Potentialefaktor	Max_score for opportunity relevant assessment factors	Matrix_1: Select Query	5 *Antal_faktorer (opportunity relevant factors only)
Minimal_score - Risikofaktor	Min_score for risk relevant assessment factors	Matrix_1: Select Query	Antal_faktorer (risk relevant factors only)
Minimal_score - Potentialefaktor	Min_score for opportunity relevant assessment factors	Matrix_1: Select Query	Antal_faktorer (opportunity relevant factors only)
Pct	Opportunity value (%) in Opportunity/risk matrix	Matrix_1: Select Query	(Samlet_score - Minimal_score) / (Maksimal_score - Minimal_score)
Korr_pct	Risk value (%) in Opportunity/risk matrix	Matrix_1: Select Query	1 - Pct