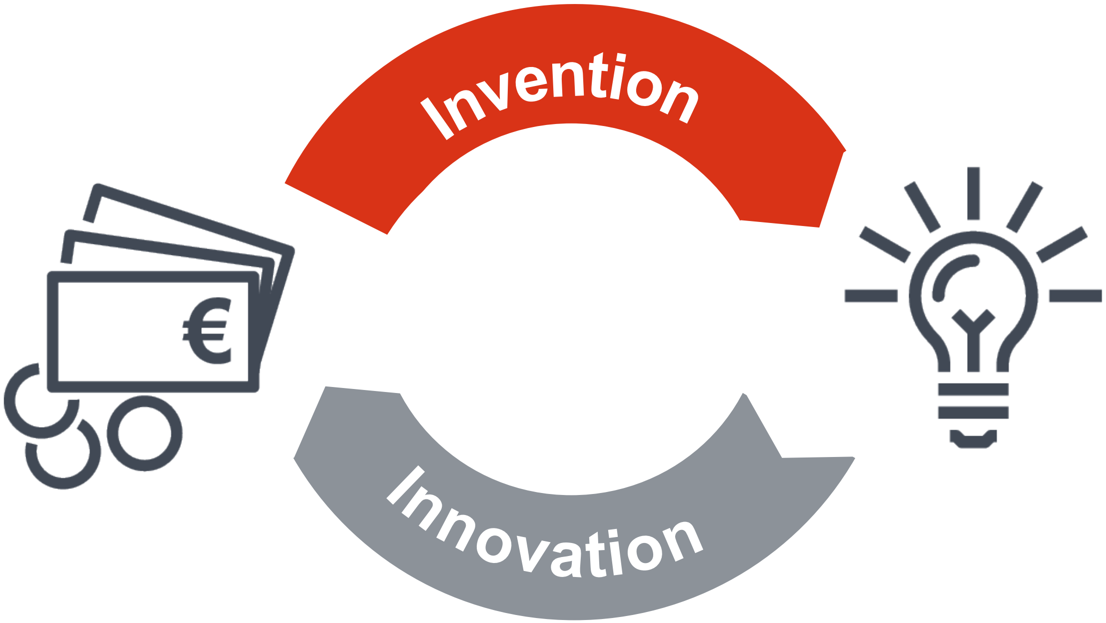
IP ASSESSMENT
HOW TO IDENTIFY THE WINNING TECHNOLOGIES IN YOUR PORTFOLIO

JOHANNES SCHAAF (OWNER) | CHIEF ECONOMIST UNIT | 18 JUNE 2025 | VERSION: 01

AGENDA

- Innovation management and valorisation
- The value of patents
- Overview of evaluation methods
- Evaluation with IPscore

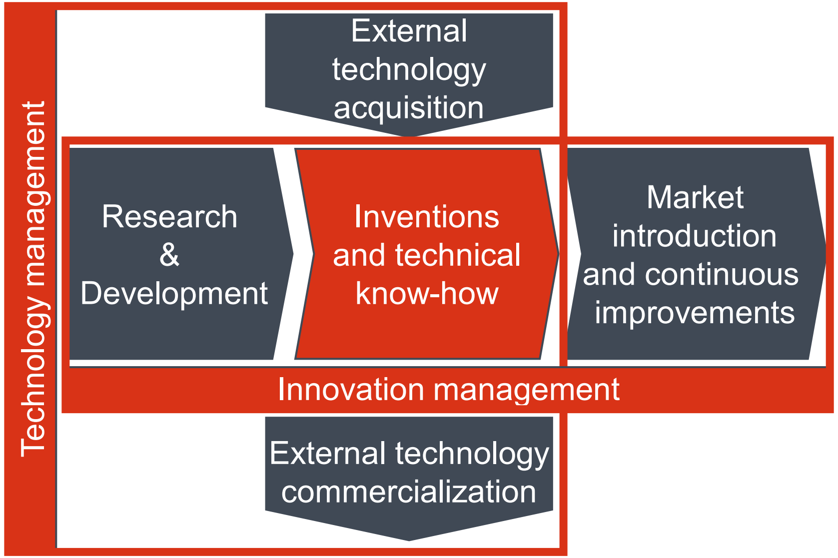
INNOVATION VERSUS INVENTION



THE FUNCTION OF PATENTS IN VALORISATION IN TECHNOLOGY AND INNOVATION MANAGEMENT

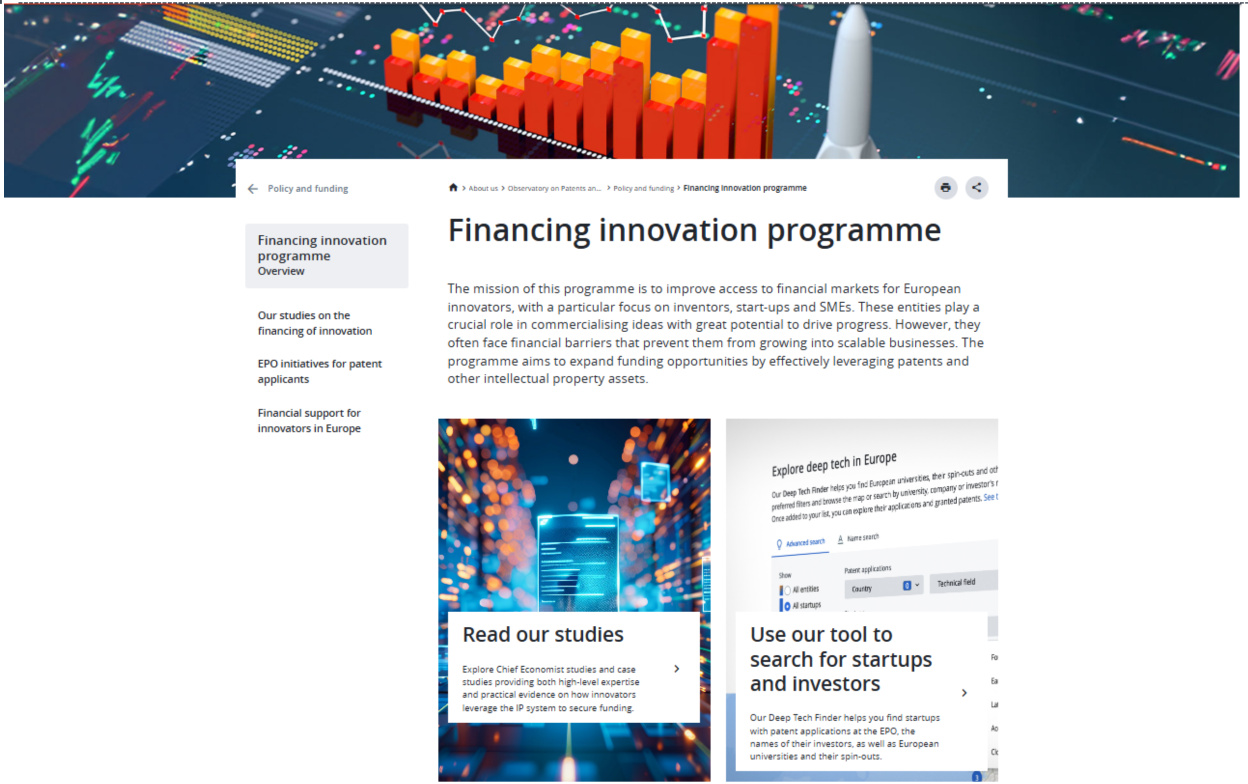
Internal use of patents supports

- business and R&D strategy
- internal innovation and inventor engagement
- **blocking** competitors litigation deterrence
- freedom to operate (**FTO**)
- **negotiating power** in X-licensing deals and partnerships
- **company valuation**
- brand reputation
- standardisation efforts



External use of patents supports

- IP **sales**, **Royalty** income, patent pooling, **enforcement**
- Open innovation, university-industry partnerships
- Joint ventures, spin-offs
- **Investor attraction**, collateral, **IP-backed financing**



Policy and funding

About us > Observatory on Patents an... > Policy and funding > Financing innovation programme

Financing innovation programme

Financing innovation programme
Overview

Our studies on the financing of innovation

EPO initiatives for patent applicants

Financial support for innovators in Europe

The mission of this programme is to improve access to financial markets for European innovators, with a particular focus on inventors, start-ups and SMEs. These entities play a crucial role in commercialising ideas with great potential to drive progress. However, they often face financial barriers that prevent them from growing into scalable businesses. The programme aims to expand funding opportunities by effectively leveraging patents and other intellectual property assets.

Read our studies

Explore Chief Economist studies and case studies providing both high-level expertise and practical evidence on how innovators leverage the IP system to secure funding.

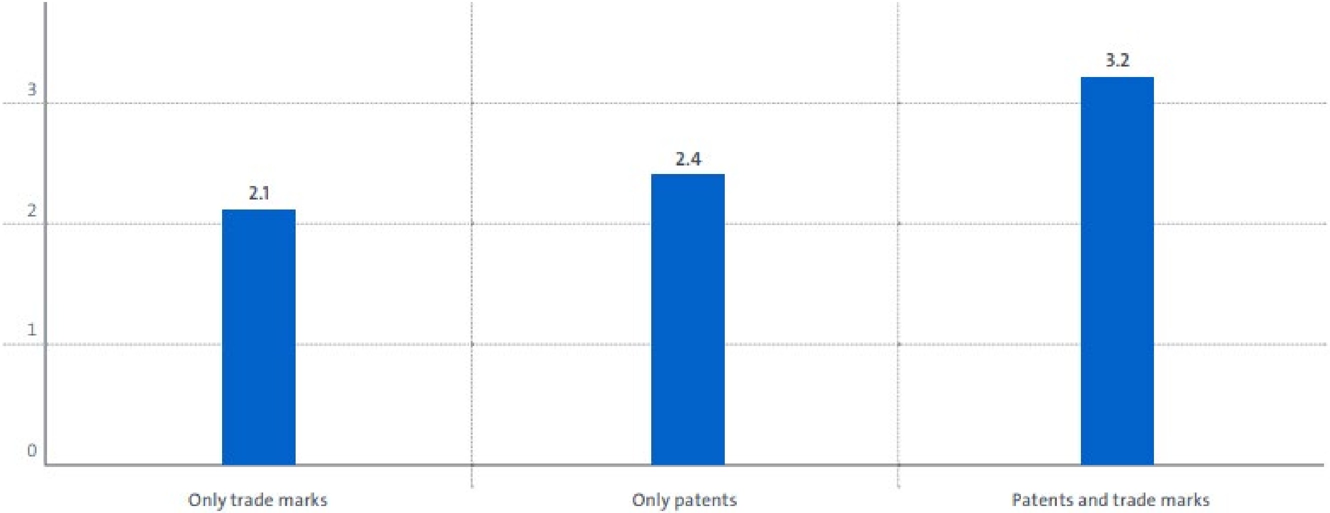
Use our tool to search for startups and investors

Our Deep Tech Finder helps you find startups with patent applications at the EPO, the names of their investors, as well as European universities and their spin-outs.

https://www.epo.org/en/about-us/observatory-patents-and-technology/policy-and-funding/financing-innovation-programme

IP RIGHTS ARE ASSOCIATED WITH A HIGHER LIKELIHOOD OF VC FUNDING

Increase in odds of exit for startups with prior IPR applications

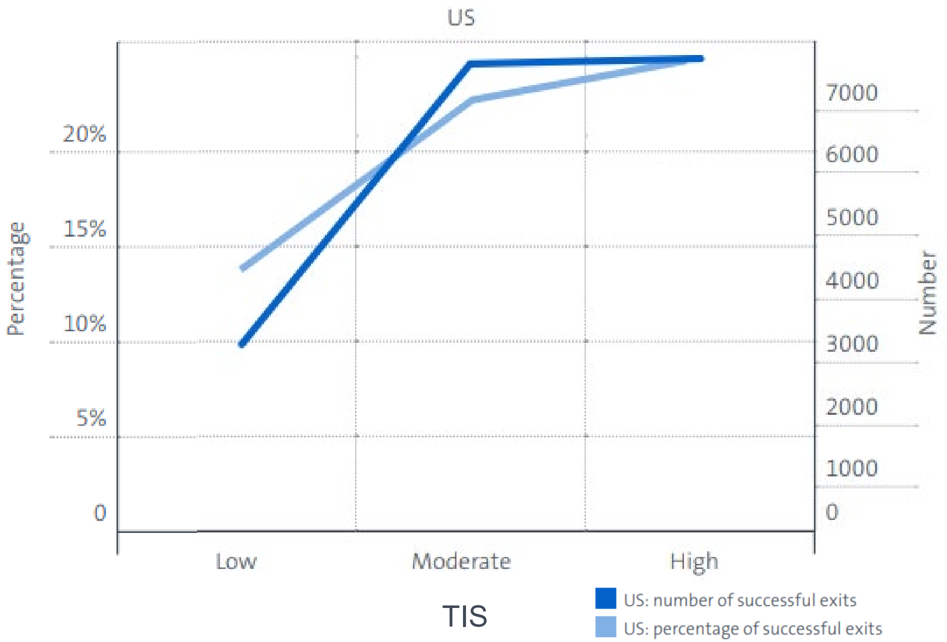


Source: EPO-EUIPO. Patents, trade marks and startup finance: Funding and exit performance of European startups, October 2023

INVESTORS WITH A HIGHER TIS (TECHNOLOGY INVESTOR SCORE) ARE MORE SUCCESSFUL

A higher TIS
(% of patenting companies in their portfolio)
is correlated with
more successful exits

Successful exits



TIS

Source: [Mapping investors for European innovators](#) EPO (adaptation fig. E4) , January 2025

INNOVATION – VALUE CHAIN

IP Strategy

Creation → Assessment → Protection → Commercialisation

TWO BASIC QUESTIONS

- **Is it possible** to file a patent application?
- **Does it make sense** to file a patent application?

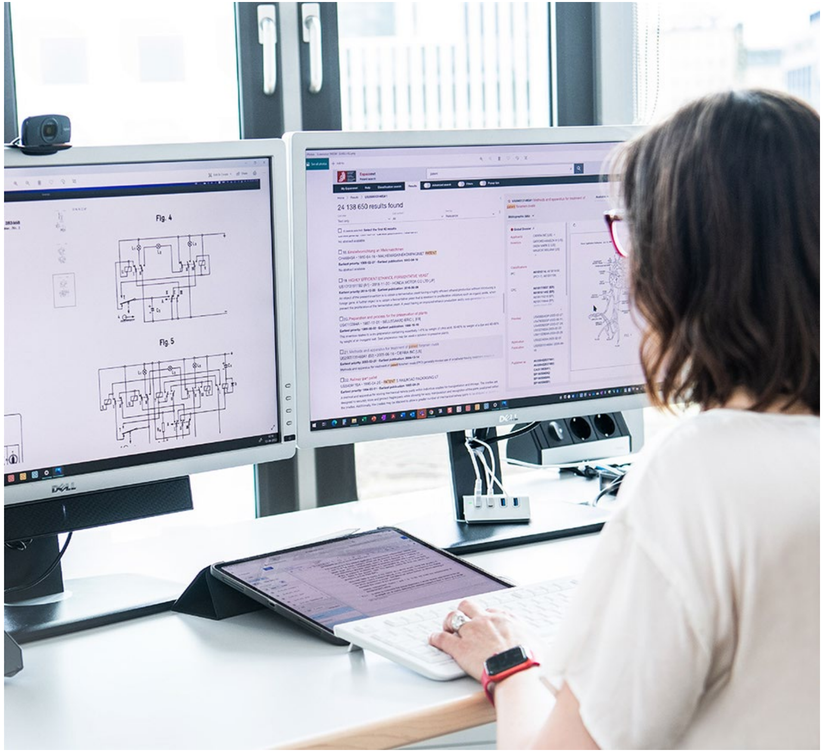
PATENTABILITY

Patents are granted for **inventions** in all fields of technology.

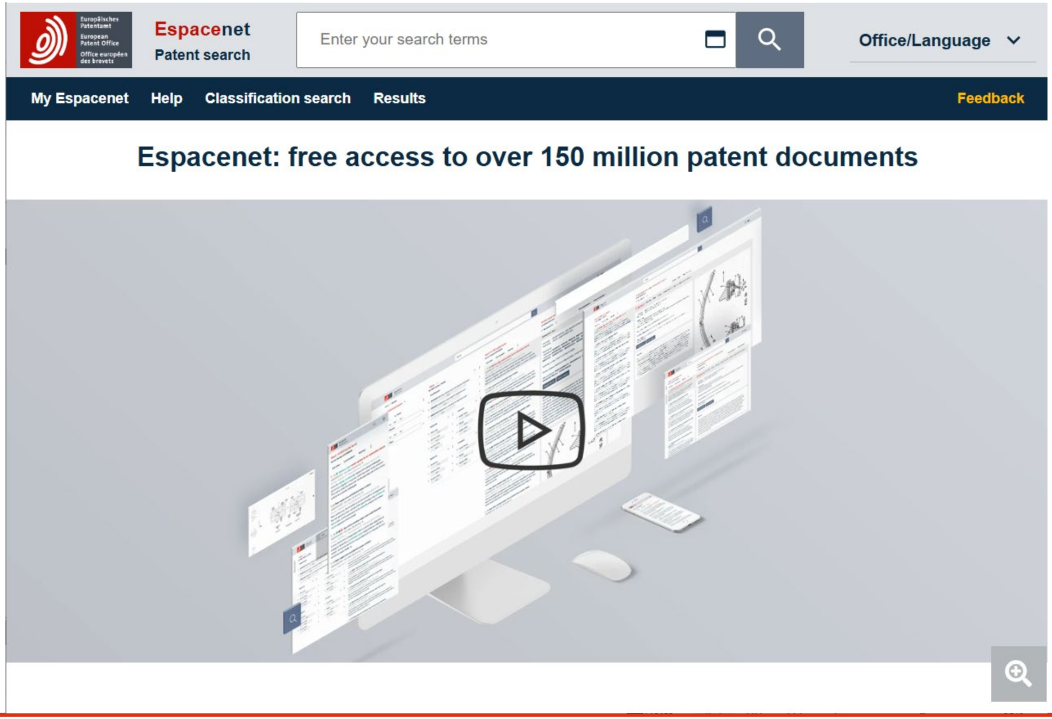
To be patentable, **inventions must**

- **be new**
- **involve an inventive step**
- **be industrially applicable**

They must relate to a product, process, apparatus or use.



SEARCHING STATE OF THE ART WITH ESPACENET



TWO BASIC QUESTIONS

- **Is it possible** to file a patent application?
- **Does it make sense** to file a patent application?

WHAT IS THE "VALUE" OF THE INVENTION?

Value
Individual utility

1 soft drink = satisfy thirst (at home / in the desert)

Price
Exchange value

1 soft drink = 0.5 - 1 €

Cost

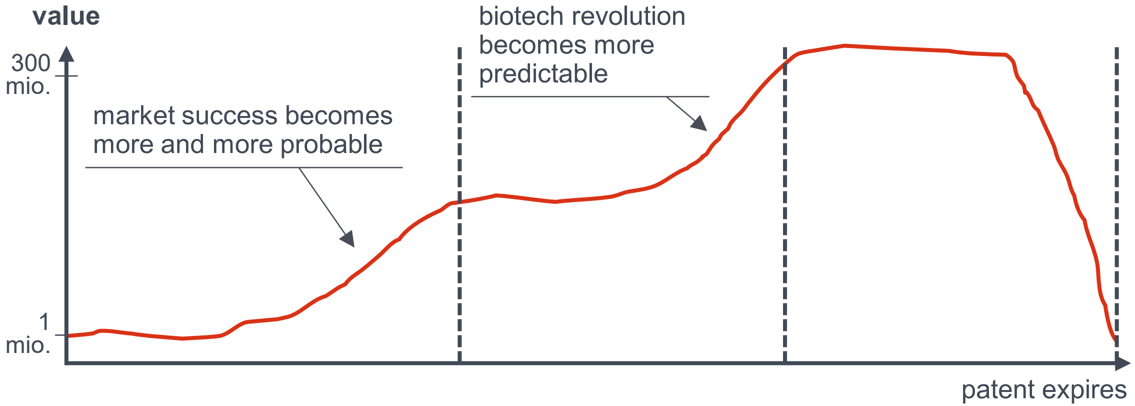
1 soft drink = 0.2 €

The value of a patent is the future commercial utility of the patented invention!

Value if exclusively used by owner	Value as a collateral
Value to licensees	Value to a company blocked by the patent: 600 Mio $

THE DYNAMIC OF A PATENT'S VALUE: AN EXAMPLE

DNA polymerase patented	improvements → broad applicable	commercial biotech "revolution"
"nice"	market success	extremely high demand



IDENTIFY IDEAS AND PATENTS WITH HIGH VALUE

- for own products and services
- for technology commercialisation

METHODS FOR THE EVALUATION OF PATENTS

Quantitative (monetary)

- Net present value
- Market value (licence analogy)
- Cost
- Computer-generated estimates
  - "The patent is equivalent to 5 average patents"
- ...

"The patent is worth € 500.000"

Qualitative (multidimensional)

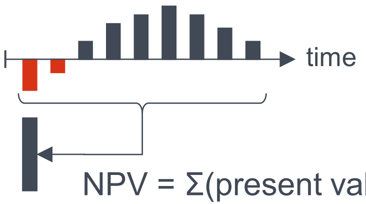
"The patent protects a technology of strategic importance for an attractive market, it can be enforced efficiently, but significant investment is still needed"

NET PRESENT VALUE METHOD (NPV, DCF)

COMPARISON TO AN ALTERNATIVE INVESTMENT

cash inflow
- cash outflow
- interest (hypothetical)

= present value



NPV = Σ(present values)

"Expected profit due to patent, after cost of capital"

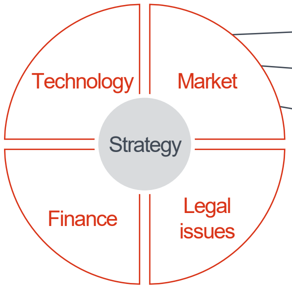
Advantages

- Accepted method for any managerial valuation
- Takes into account the specifics of a case
- Simple decision rule
  - NPV > 0 => keep/commercialize!
  - NPV < 0 => discontinue/divest!

Disadvantages

- Predictability of cash flows
- Identification of cash flows
  - Which share of turnover, cost, profits pertains to the patented invention?
- Only one scenario, no flexibility
- Indirect benefits diff. to acc. for
- Strategic benefit, synergies
  - Often: One interest rate for borrowing+lending

QUALITATIVE EVALUATION WITH IPscore



Marketing options? There is a known market! (3)

Market growth? high, 15%! (5)

Increase in sales price? Higher than competitors! (4)

Advantages

- Accommodates the complexity of patent evaluation
  - Strategic aspects, risk
- Fast + easy to understand
- Good basis for discussion
- Highlights opportunities

Disadvantages

- No calculation of exp. profit
- No monetary value
  - Cannot be used alone in accounting, taxes
  - Potential sales price is unclear
- Not a single value figure
  - The weighting of individual valuation factors is possible, but not meaningful

Equivalent to technology evaluation with scoring models
(a standard approach in innovation management)

IPscore 3.0

C. Market conditions questions	Explanation	Patent 1
C1: What are the marketing options?	This assessment factor is an evaluation	5 - There is a well-known market and other
C2: What is the market growth in the business area where the patented technology is utilised?	This assessment factor determines the	15,0%
C3: What is the life expectancy of the patented technology in the market?	This assessment factor determines the	4,0 years
C4: Are competitive or substitute products active in the market?	How probable is it that competitive or	1 - There is a high degree of development of
C5: What ultimate sales price is the consumer willing to pay compared to existing known products?	What is the highest potential sales price	2 - Lower than competitors` price
C6: What is the potential extra turnover to be obtained within the business area when utilising the patent	This assessment factor determines what	6,00%
C7: What knowledge does the company have of application potential and commercial opportunities?	This assessment factor requires an	4 - Knowledge of application potential and
C8: Does the patented technology embody potential revenue from licensing agreements?	Here you assess the potential for	2 - Licensing revenue is possible to a lesser
C9: Do commercial activities require special permits/ licences	In some situations special	5 - Life-term permit/ licence approval from

Comments to questions	Enter comment relating to Patent 1 below:
C1: What are the marketing options?	
C2: What is the market growth in the business area where the patented technology is utilised?	
C3: What is the life expectancy of the patented technology in the market?	
C4: Are competitive or substitute products active in the market?	
C5: What ultimate sales price is the consumer willing to pay compared to existing known products?	
C6: What is the potential extra turnover to be obtained within the business area when utilising the patented technology?	
C7: What knowledge does the company have of application potential and commercial opportunities?	
C8: Does the patented technology embody potential revenue from licensing agreements?	
C9: Do commercial activities require special permits/ licences	

Adaptation of questions and answers (change below)	Explanations	Answer 1
What are the marketing options?	This assessment factor is an evaluation of	There is no known market for the patented te

Security classification: Public

FINANCIAL RESULTS WORKSHEET

	A	B	C
1			
2	**Factor/Financial assumptions (to be changed in the respective categories)**	**Patent 1**	**Patent 2**
3	B5: How much time is required before the patented technology can be commercially worked?	2,5 years	0,0 years
4	C2: What is the market growth in the business area where the patented technology is utilised?	15,0%	3%
5	C3: What is the life expectancy of the patented technology in the market?	4,0 years	2,0 years
6	C6: What is the potential extra turnover to be obtained within the business area when utilising the patented technology?	6,0%	6%
7	D1: Can the existing business area output in the relevant market be maintained without utilising the patented technology?	25,0%	100%
8	D2: What are the necessary future development costs?	15,0%	15%
9	D3: What is the index for cost of production when implementing the patented technology?	100,0%	100%
10	D4: What investment is necessary for production equipment?	100,0%	70%
11			
12			
13	**Financial results from the company accounts**	Patent 1	Patent 2
14	Business turnover	€252.000	€252.000
15	Direct costs	€180.000	€180.000
16	Indirect costs	€21.000	€21.000
17	Provision for depreciation	€5.000	€5.000
18	Net result	€46.000	€46.000
19			
20	**Depreciation period (in yrs)**	5,0 years	5,0 years
21			
22	**Definition of business area**		
23	Share of current turnover	15,00%	40,00%
24			
25	**Parameters used in the calculations**		
26	Discount factor	10,0%	10,0%
27			
28	**The net present value of the patented technology is:**	**€22.473**	**€4.865**

ADAPTATIONS

Change the Wording of questions (automatic highlighting):

A. Legal Status questions
A1: What is the status of the patent?
A2: What is the patent's legal position of strength? changed (ADAPTED)
A3: For how long is the patent still valid?
A4: How broad and comprehensive are the patent claims?
A5: Does the patent's geographical coverage include the relevant markets?
A6: Are patents monitored to identify infringements?
A7: Are disputes and legal proceedings customary in the operative markets
A8: Does the company have the means to enforce patent rights?

Comments to questions
A1: What is the status of the patent?
A2: What is the patent's legal position of strength? changed (ADAPTED)
A3: For how long is the patent still valid?
A4: How broad and comprehensive are the patent claims?
A5: Does the patent's geographical coverage include the relevant markets?
A6: Are patents monitored to identify infringements?
A7: Are disputes and legal proceedings customary in the operative markets
A8: Does the company have the means to enforce patent rights?

Adaptation of questions and answers (change below)
What is the status of the patent?
What is the patent's legal position of strength? changed
For how long is the patent still valid?
How broad and comprehensive are the patent claims?

Is a factor a risk / an opportunity factor?

Adaptation of questions and answers (change below)	Explanation	Risk factor
What is the status of the patent?	A patent applicatio	yes
What is the patent's legal position of strength?	This factor relates t	no
For how long is the patent still valid?	An assessment of tl	yes
How broad and comprehensive are the patent claims?	The breadth of a pa	no
Does the patent's geographical coverage include the relevant markets?	Patents held in mar	yes
Are patents monitored to identify infringements?	This assessment fac	yes
Are disputes and legal proceedings customary in the operative markets?	A patent is valuable	yes

SUMMARY

- IPscore can be used to assess small portfolios of patents, ideas and projects
- IPscore version 3.0 is based on Excel
- Please find more information on www.epo.org/ipscore and this [patent knowledge nugget]()