



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

IP evaluation and protection

Evaluation dimensions



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- Lecturer on Patent Valuation
- World's Leading Patent Strategists (IAM)
- Vice-Chairman German standards committee on patent valuation
- Vice-Chairman committee on patent valuation of the German chamber of patent attorneys
- Editor-in-Chief MITTEILUNGEN DER DEUTSCHEN PATENTANWÄLTE
- Author of "PCT Handbook"



Disclaimer

Opinions expressed in this presentation are those of the speaker and not necessarily those of the European Patent Office.

Main purpose of this module

- This first module provides an introduction and overview into the different evaluation dimensions.
- For each topic, examples of relevant factors of the respective perspective should be given.
- However, of course the list of examples is always incomplete and should provide insight to the students how to approach the various dimensions.

Valuation approaches



Market approach



Cost approach



Income approach

Income approach

$$value = \sum_t \frac{Income_t - cost_t}{(1 + WACC)^t}$$

- All values are expectation values (E)
- $E(\text{Income}) = \text{Income} * \text{Probability}(\text{Income})$

Income approach

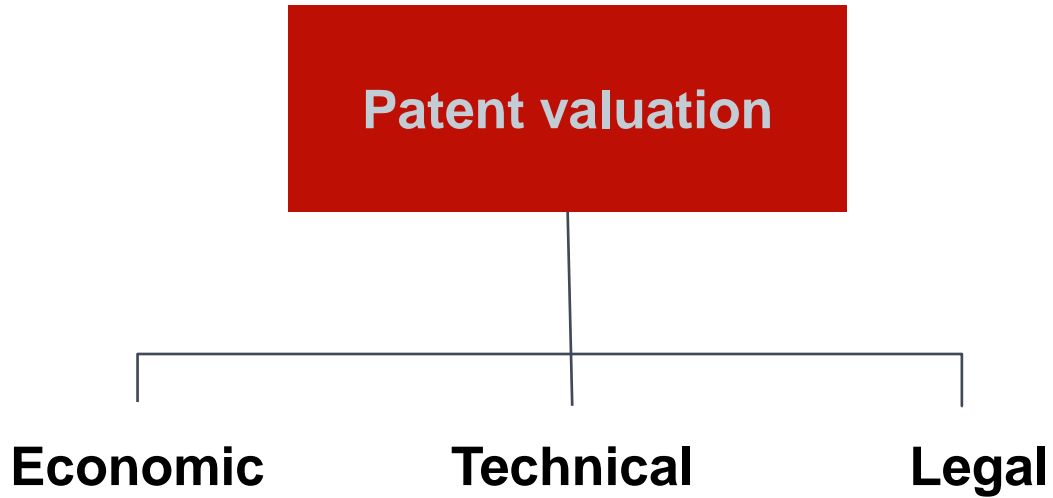
Isolation of patent related cash flows by comparison with comparable products:

- Identification of a patent related increased market share
- Identification of a patent related premium price
- Identification of patent related cost reductions

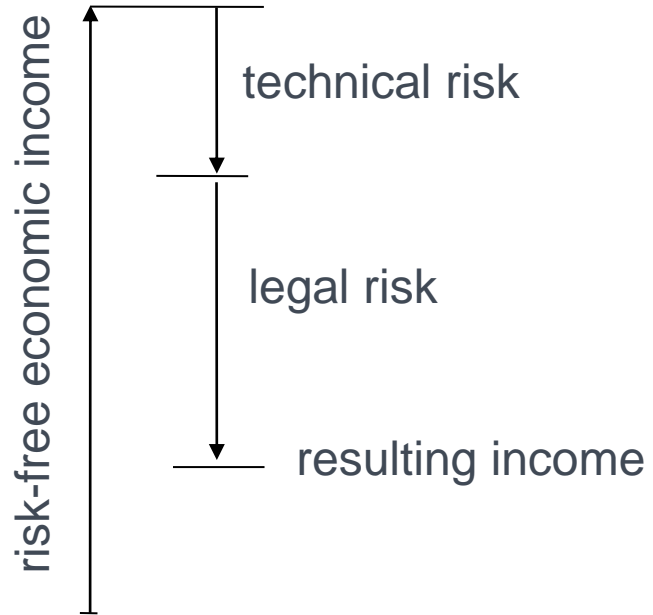


**Incremental
cashflow
method**

Patent valuation (with the income approach)



Risk and patent income



The different perspectives

- **Legal Perspective**
- Technology perspective
Technical risk
- Market / economic perspective
- Internal perspective

Implicit assumptions

Statement	Patent X can generate earnings of € 100,000.		
More precisely	The Patent	fulfills the function	that generates a cash-flow.
Implicit legal assumption	Granted patent or patent pending? In which countries? Probability of grant Invalidity ...	Can the function be fulfilled? Invalidity? Breadth of coverage Enforceability ...	For who? Ownership? Contracts? Freedom-to-operate? Patent term? ...

Legal questions

The image displays a collection of 45 thumbnail images arranged in a grid, representing various patent-related documents. The thumbnails include:

- Legal notices and correspondence, such as one starting with "İhtikarlı Raportu Dr. Özgür" and another with "Confidential".
- Tables and spreadsheets, including a large table with multiple columns and rows, and a smaller table with a header row.
- Diagrams and flowcharts, including a complex network diagram with nodes and connecting lines, and a diagram showing a process flow with colored boxes.
- Text-heavy documents, likely containing legal arguments or technical descriptions.
- Charts and graphs, including a line graph showing data trends and a bar chart.
- Additional "Confidential" labels.

Dealing with legal risk

Clarifying aspects A, B, C, ...

e.g. ownership, invalidity, Freedom-to-Operate, ...

1. Requirement:

Don't forget anything relevant, **completeness**.

Don't forget any risk.

I.e. we need a **complete list of all legal questions / topics**.

List of topics

1. **Completeness** of the list of topics.
2. The topics should be **disjoint**.

Do not take risk into account twice!

Legal topics / aspects (1/4)

Status of the patent

- Is it in force?
- Countries covered?
- Remaining lifetime?

Legal topics / aspects (2/4)

Ownership and contractual issues

- E.g. employee inventions

Legal topics / aspects (3/4)

Patentability / Invalidity

- Has it been granted?
- If not, is it patentable?
- If yes, can it be invalidated?

Legal topics / aspects (4/4)

Freedom-to-Operate

- Third party patents
- Industry standards
- Legal restraints
- FDA approvals
- etc.

Mixed aspects (1/3)

Scope

- Does the patent really cover the product or process that it is meant to cover?
- Does it cover “your own” product?

Mixed aspects (2/3)

Circumvention and breadth of coverage

- Which “third party products” does it cover?

Mixed aspects (3/3)

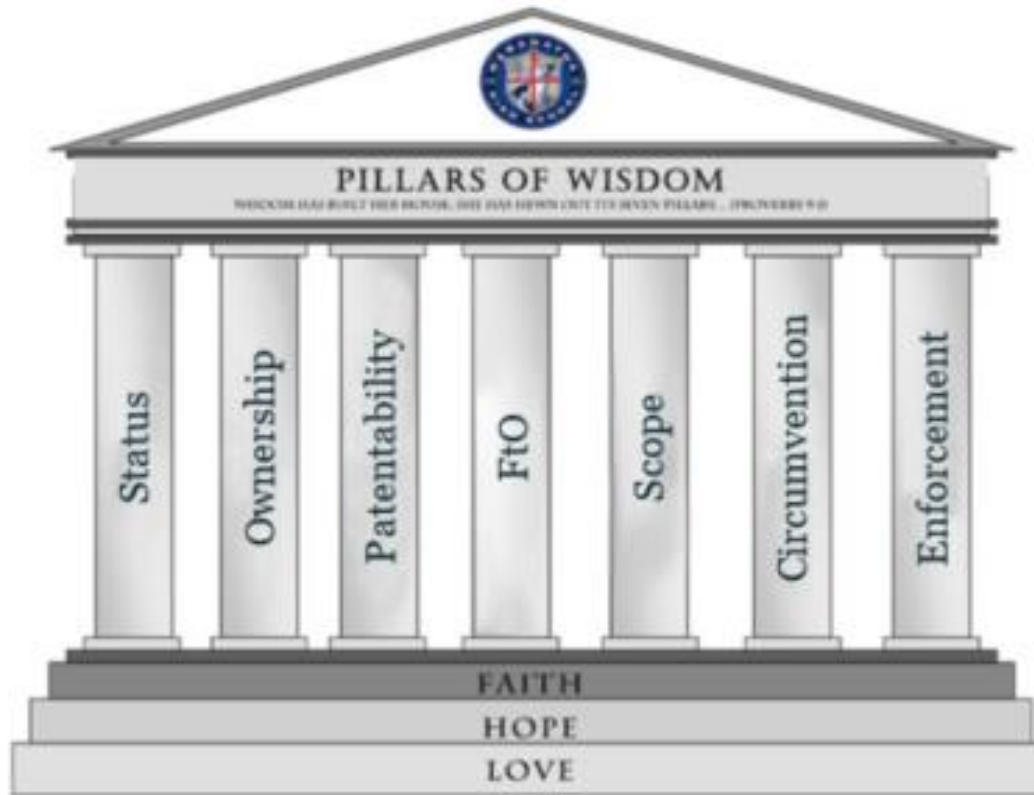
Detectability and Enforceability

- Can infringement of the patent be detected?
- Can the patent be enforced?

(Complete? Disjoint?

There are different lists imaginable.)

7 Pillars of wisdom (for patents)



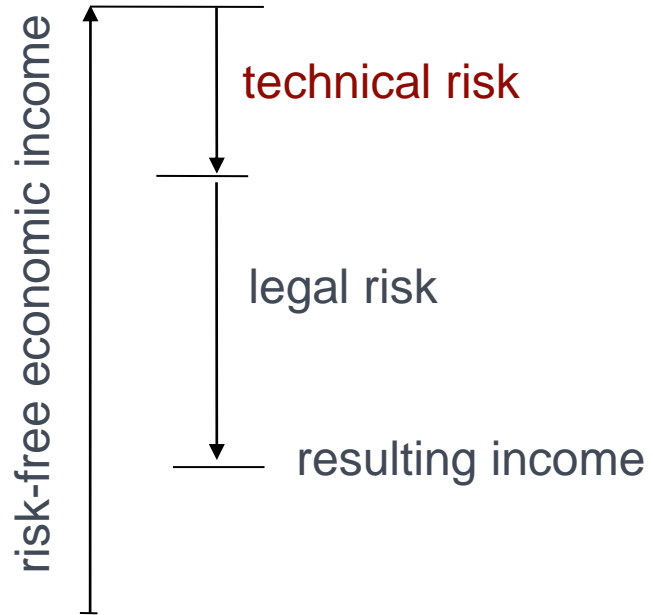
"Wisdom has built her house;
she has hewn out its seven
pillars ..."

(Bible, Proverbs 9:1)

The different perspectives

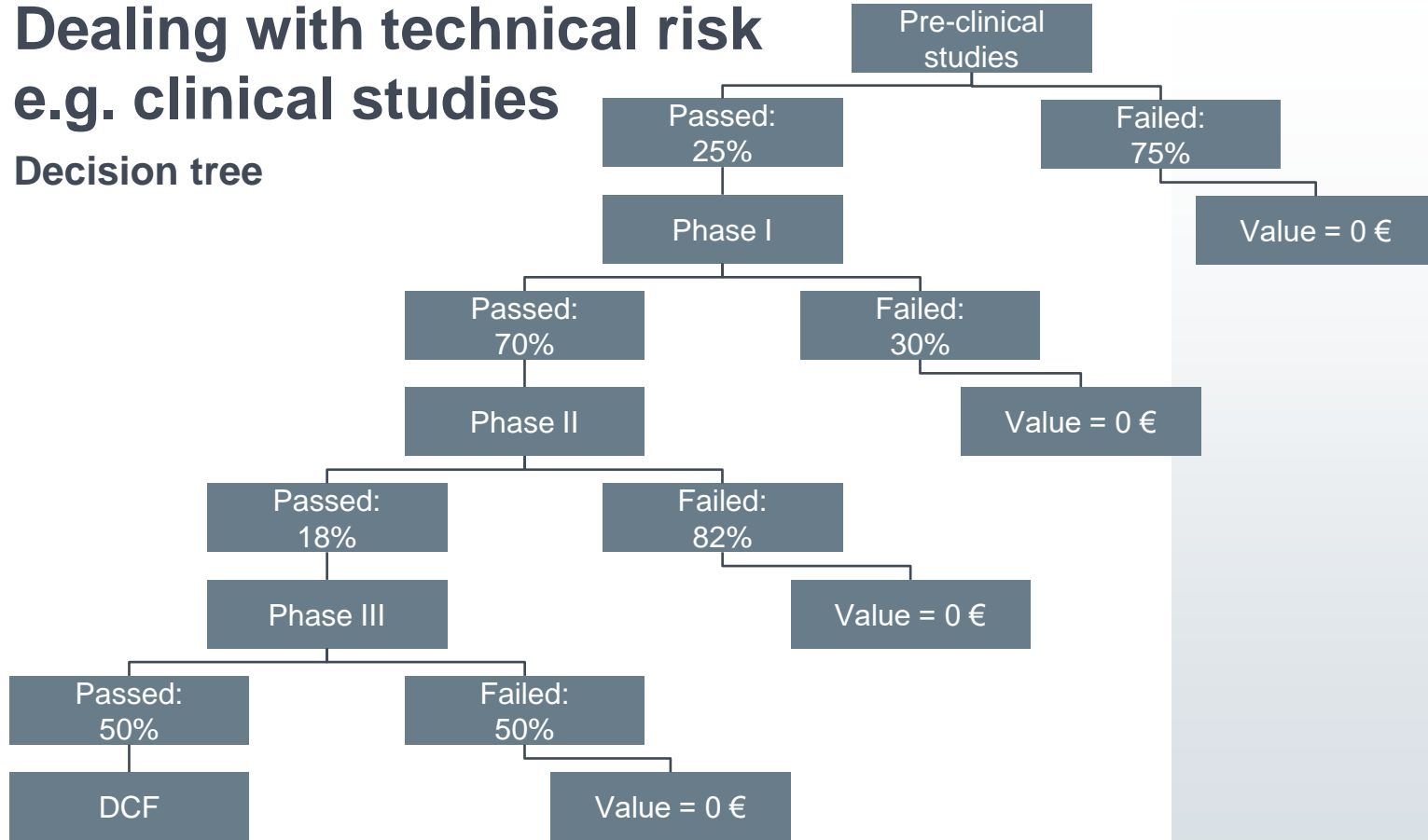
- Legal Perspective
- **Technology perspective**
- Market / economic perspective
- Internal perspective

Risk and patent income

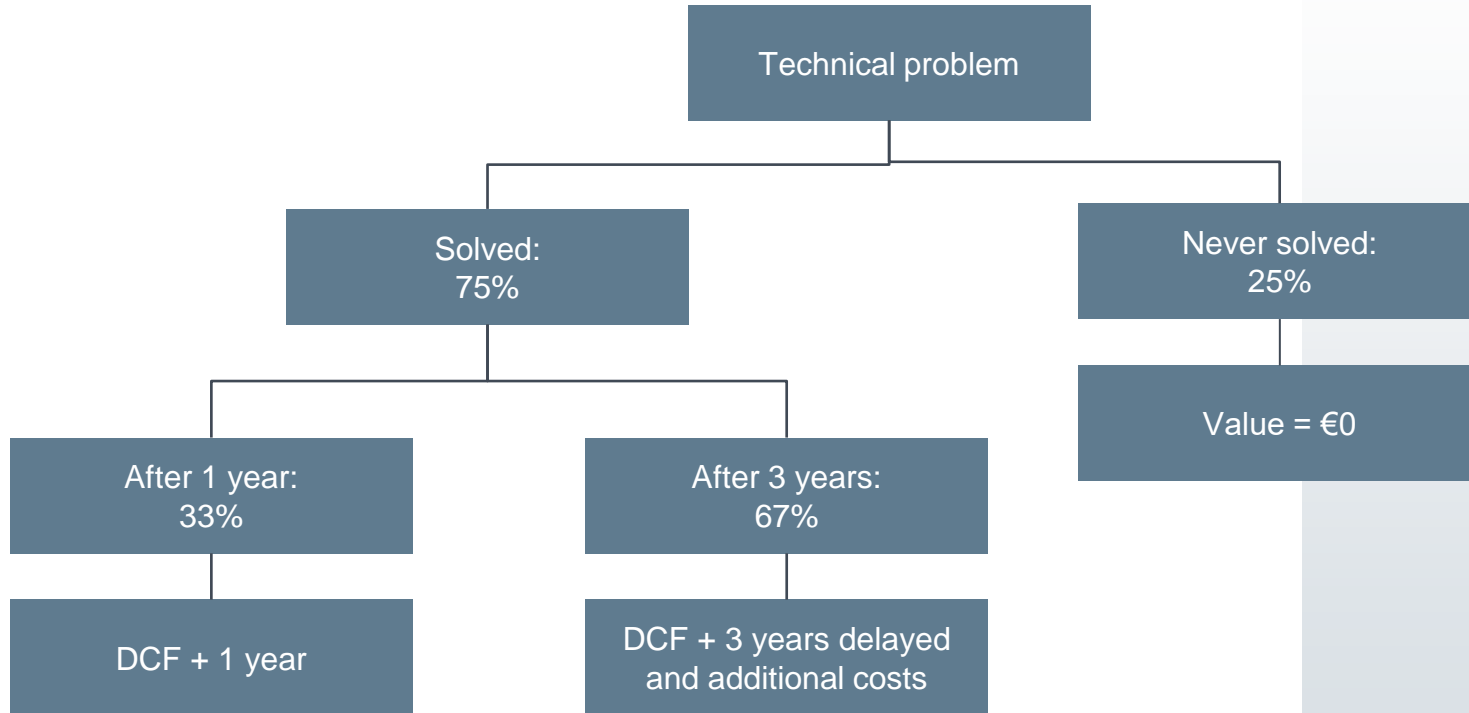


Dealing with technical risk e.g. clinical studies

Decision tree



Dealing with technical risk, e.g. technical product



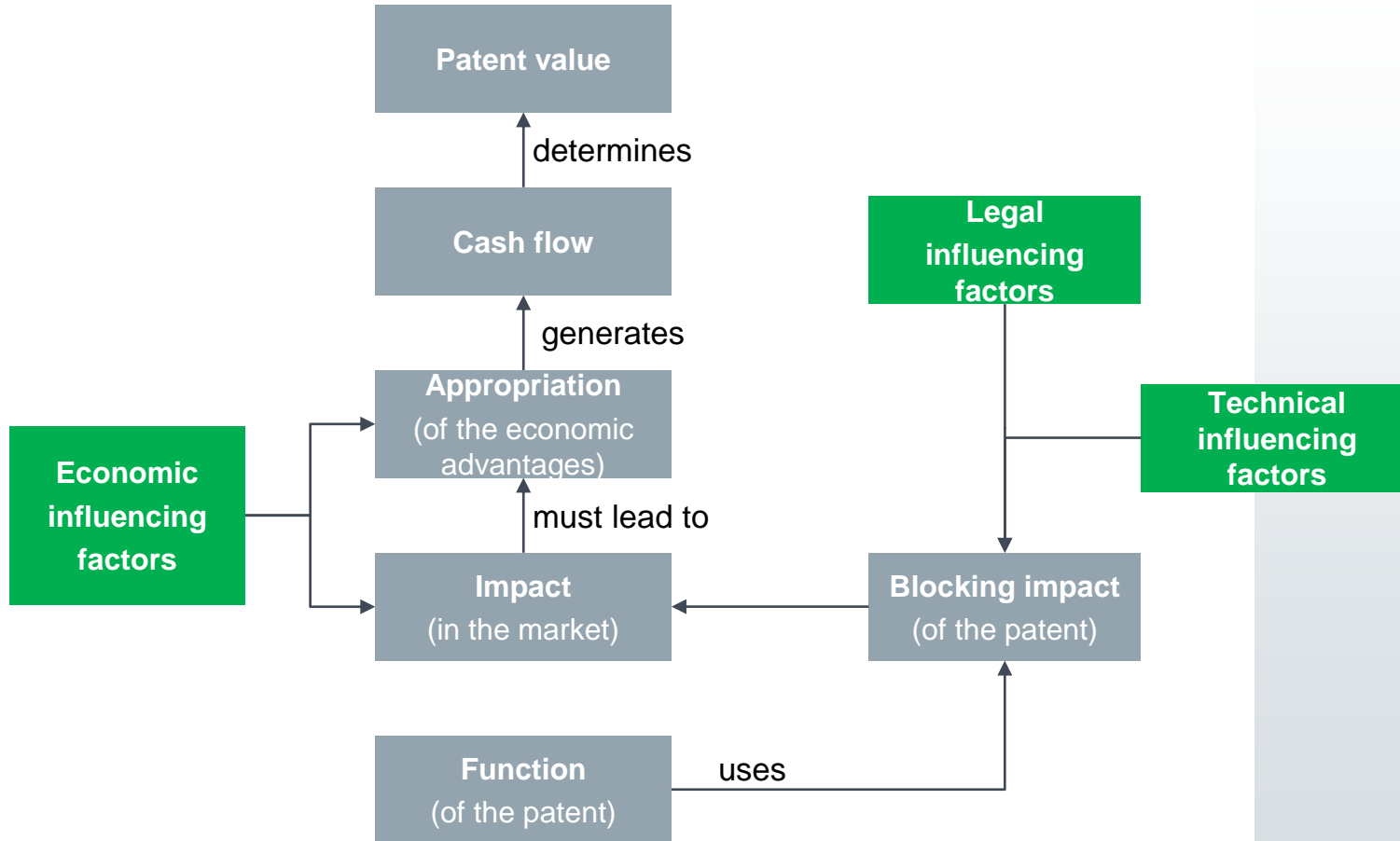
Technical risk

Status of development	Technical risk
Idea	80%
Prototype	50%
Pre-series	35%
Start of production	20%
Commercial launch	10%
Established on the market	0%

The different perspectives

- Legal Perspective
- Technology perspective
- **Market / economic perspective**
- Internal perspective

Economic effect of a patent



Business plan

		1983	1984	1985	1986	1987	1988
turnover	DM	232.000	415.000	546.000	573.000	541.000	487.000
selling price	DM	351	369	387	407	427	448
production costs	DM	183	183	183	183	183	183
gross margin per unit sold	DM	168	186	204	223	244	265
gross margin in %		48%	50%	53%	55%	57%	59%
royalty rate of gross margin	33%	16%	17%	17%	18%	19%	20%
saved royalties		36.615	68.898	94.910	103.865	101.896	95.010
legal risk - remaining		78%	78%	78%	78%	78%	78%
expected relieved royalty	DM	28.699	54.004	74.393	81.412	79.868	74.471
WACC	8%						
discounting factor		100%	93%	86%	79%	74%	68%
discounted royalt	DM	28.699	50.004	63.780	64.627	58.706	50.684
Summe nach Steuern	DM	493.850					
fictitious taxes	20%						
sum after tax	DM	395.080					

Business plan

- Where does the business plan come from?
- Do you have an independent perspective?

Income approach

$$value = \sum_t \frac{Income_t - cost_t}{(1 + WACC)^t}$$

Business plan

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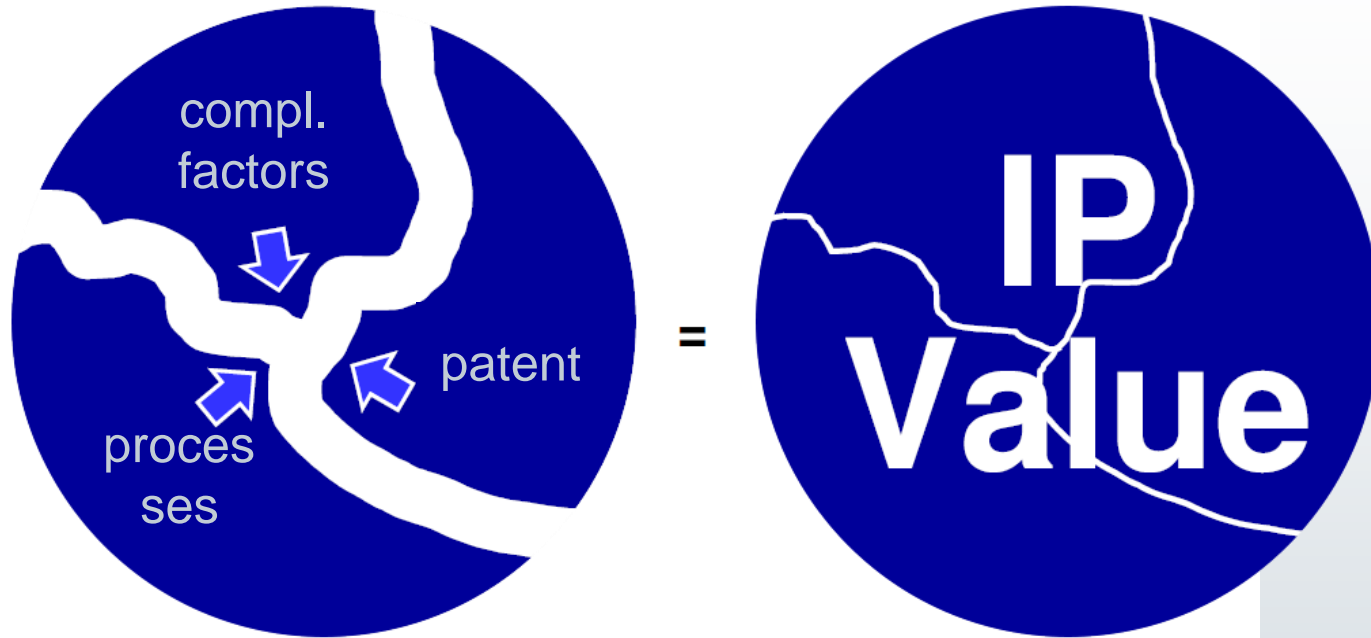
- Legal Perspective
- Technology perspective
- Market / economic perspective
- **Internal perspective**

Complementary factors to generate income

To generate the income, you need more than the patent alone, namely:

- Know-how
- Capital
- Skilled persons
- A factory
- A sales force
- A big market / customers
- Processes / things must really happen
- ...

Complementary factors



The End

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