

***Valutazione economico-finanziaria degli  
asset intangibili e dei brevetti***

30 giugno 2011



- La valutazione degli asset immateriali e dell'IP
  
- La valutazione dei brevetti
  - Il processo di valutazione dei brevetti
  - La valutazione del portafoglio
  - La valutazione del singolo patent

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**The Intellectual Property Finance Institute (IPFI)  
is a European research and competence centre  
completely focused on IA/IP Economics & Finance**

- **The Institute merges multidisciplinary skills of subject matter experts and researchers from academic, financial, industrial and IP professional world**
- **The current body of knowledge and expertise includes researches, case studies, best practices, valuation methodologies, risk management, IP asset analysis by industry and cluster, IP-based financing instrument structures, patent data bases, IP intelligence infobases**
- **IPFI founders:**
  - Innovation Studies Group of the Politecnico di Torino DSPEA
  - ICM Research, the Intangible Equity Research Unit of ICM International
- **IPFI Executive Member – Turin Chamber of Commerce**

- To support a widespread adoption and implementation of best management & financial practices of intangible and intellectual property assets
- To support the development of financial solutions based on intellectual property value **in terms of financial and technical methodologies, instruments and best practices.**
- To increase the intellectual property value of firms **through initiatives such as asset monetization (patent, trademark, know-how, design,...) and innovative financial services (IP-backed financial services).**

- **IP-based financing market demand by industry and cluster (technology markets)**
- **IP-based financing solutions**
- **IP risk management methodologies for firm and financial institutions**
  - IP valuation standards
  - IP insurance
- **Business models for IP exploitation**
- **IP Asset Valorisation for Small and Medium Enterprises (SMEs)**
- **Patent landscape & positioning**
- **Innovation/IP Policies for Public Agencies & Organizations**

- **Market identification and sizing – Patent data bases and financial performance by sectors/cluster/firm (Technology Equity)**
  - Mechanics/Mechatronics
  - Cleantech (Photovoltaic, Biomasses, Green Building,..)
  - Packaging machinery
  - FoodTech
  
- **PATQUAL - policy making support project for future discussion of European patent**
  
- **IPEuropAware – EACI project for IP management Instruments for SME**
  
- **IA/IP non-voluntary disclosure model for business-financial communication (major Commercial Banks & industrial Association)**

**ICM International Group**

**ICM Advisors**  
INTELLECTUAL CAPITAL MANAGEMENT

**ICM Research**  
INTANGIBLE EQUITY RESEARCH

**ICM Industrial**  
INNOVATION CONTRACT RESEARCH

**Leverage the Intangible assets**

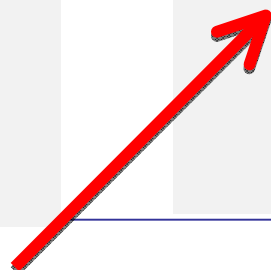
Brand Valuation (b2c,b2b)  
Technology Valuation (know-how & patent)  
Intangible Asset Valuation  
Business Valuation  
Intellectual Property Financing Solutions  
Innovation Strategy & Planning  
Brand Technology Business model  
Technology commercialisation scouting & deal management

**Intelligence for competitive advantage**

Industry Sector Research  
Intangible Equity Research  
Global Market Research  
Competitor Intelligence  
Technology & Patent Intelligence  
Market Research for in/out licensing  
Research Partnership  
IP FINANCE INSTITUTE Politecnico of Torino – DISPEA  
NORDEST INTANGIBLES Competence Center University of Padua – DTG

**Enabling sustainable Innovation**

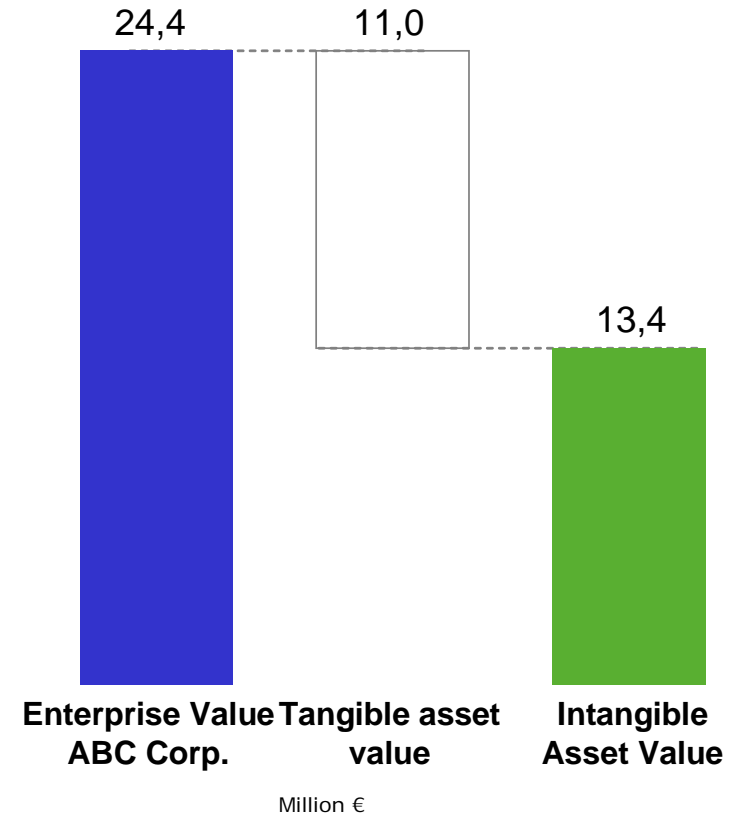
Innovation & Technology Management Platform  
Cleantech patent landscape & strategy  
Sustainable Manufacturing  
Eco Manufacturing strategy  
Economic modeling  
Technology Solutions  
Green Processes  
Industrial product-related services Innovation  
R&D Quality Assurance Services  
Technology know-how management & transfer



## **La valutazione degli asset immateriali e dell'IP**

## *Why Intangible Assets are important ?*

- **Enable the achievement of the strategic and financial objectives**
- **Represent a significant part of the enterprise value**
- **Absorb large proportion of CAPEX and OPEX (over 60-80%)**
- **When legal protected can be utilized as source of competitive advantage and financial leverage**



Intangible assets fall into three categories

Enterprise Value

=

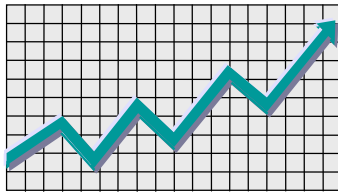
Intangible Assets

+

Tangible Assets

Intangible Asset Categories	Professional Assets & Intangible factors	Structural Assets	Intellectual Property & Legal recognized Assets
<b>Families (asset bundling)</b>	Not qualifiable	Potentially qualifiable	Qualified
<ul style="list-style-type: none"> <li>▪ Brand-related</li> <li>▪ Customer-related</li> <li>▪ Channel-related</li> <li>▪ Employee-related</li> <li>▪ Supplier-related IA</li> <li>▪ Business partner-related</li> <li>▪ Social-related</li> <li>▪ Financial community-related</li> <li>▪ Product Technology-related</li> <li>▪ Service Technology related</li> <li>▪ Innovation-related</li> </ul>	<ul style="list-style-type: none"> <li>▪ Know-how                             <ul style="list-style-type: none"> <li>▪ Business</li> <li>▪ Technical</li> </ul> </li> <li>▪ Relationship</li> <li>▪ Reputation</li> <li>▪ Values</li> <li>▪ Culture</li> <li>▪ Heritage</li> <li>▪ Uniqueness</li> <li>▪ other</li> </ul>	<ul style="list-style-type: none"> <li>▪ Asset-specific</li> <li>▪ Business Model</li> <li>▪ Processes</li> <li>▪ Systems                             <ul style="list-style-type: none"> <li>▪ Management</li> <li>▪ Operational</li> </ul> </li> <li>▪ Business Methods/ Practices</li> <li>▪ Codified Knowledge</li> <li>▪ Other</li> </ul>	<ul style="list-style-type: none"> <li>▪ Innovative IP                             <ul style="list-style-type: none"> <li>▪ Patents</li> <li>▪ Industrial Design</li> <li>▪ Trade - secret</li> </ul> </li> <li>▪ Creative IP                             <ul style="list-style-type: none"> <li>▪ Trademarks</li> <li>▪ Copyrights</li> <li>▪ Computer software</li> </ul> </li> <li>▪ Contract-related rights</li> </ul>
<b>Monetary Assets (Working Capital)</b>	<ul style="list-style-type: none"> <li>• Inventories</li> <li>• Accounts receivables</li> <li>• Cash</li> <li>• Reserves</li> </ul>		
<b>Fixed Capital</b>	<ul style="list-style-type: none"> <li>• Offices</li> <li>• Warehouses</li> <li>• Manufacturing</li> <li>• Research labs</li> </ul>		

## There are three common reasons for valuation and measuring of intangible assets/intellectual property



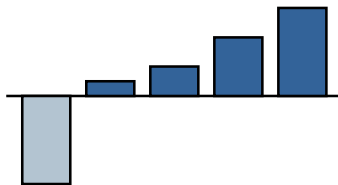
### Asset focus

Basis for company valuation; communication to shareholders; leverage strategies



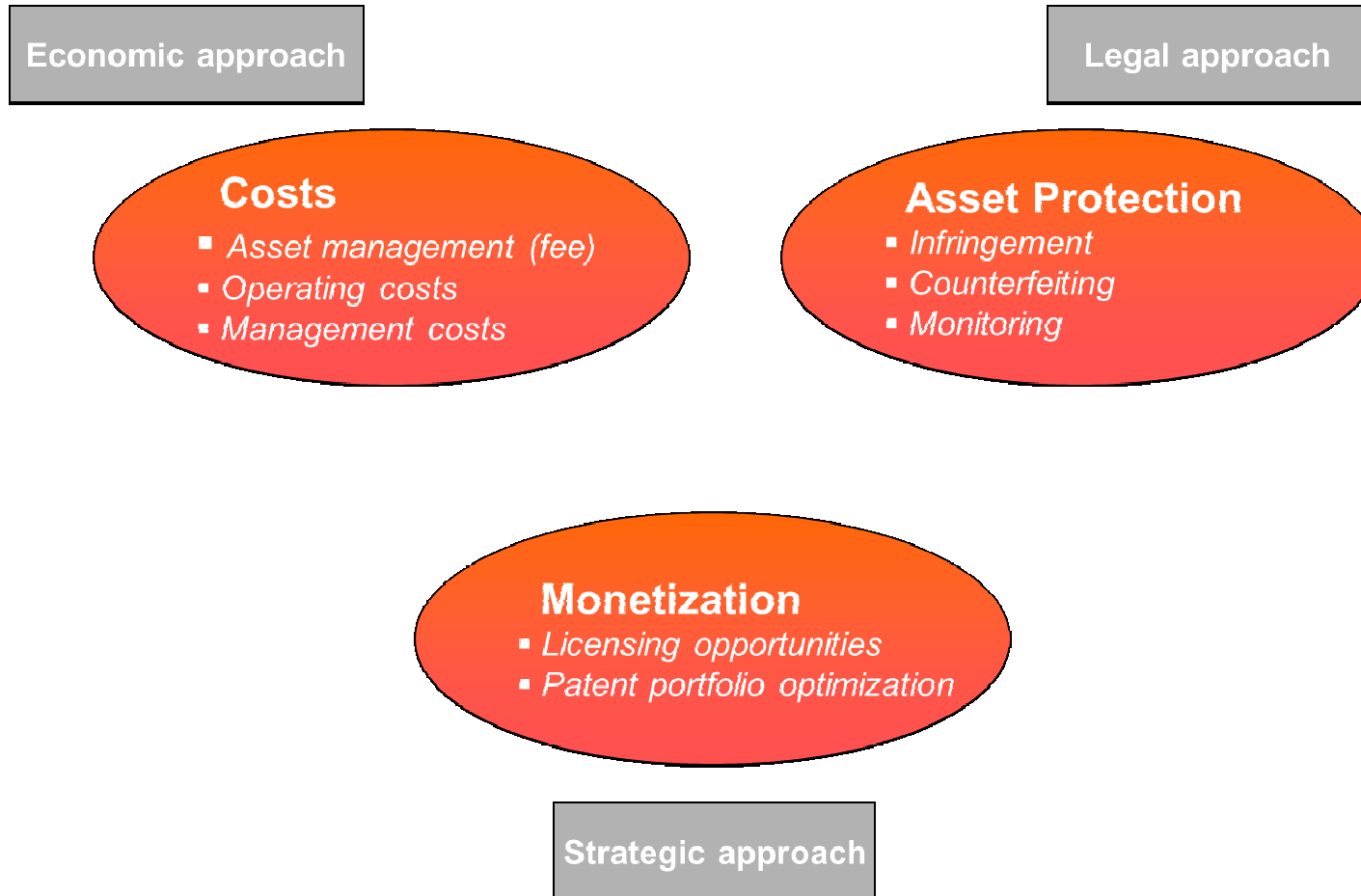
### Action focus

Stimulate management to concentrate on what is important

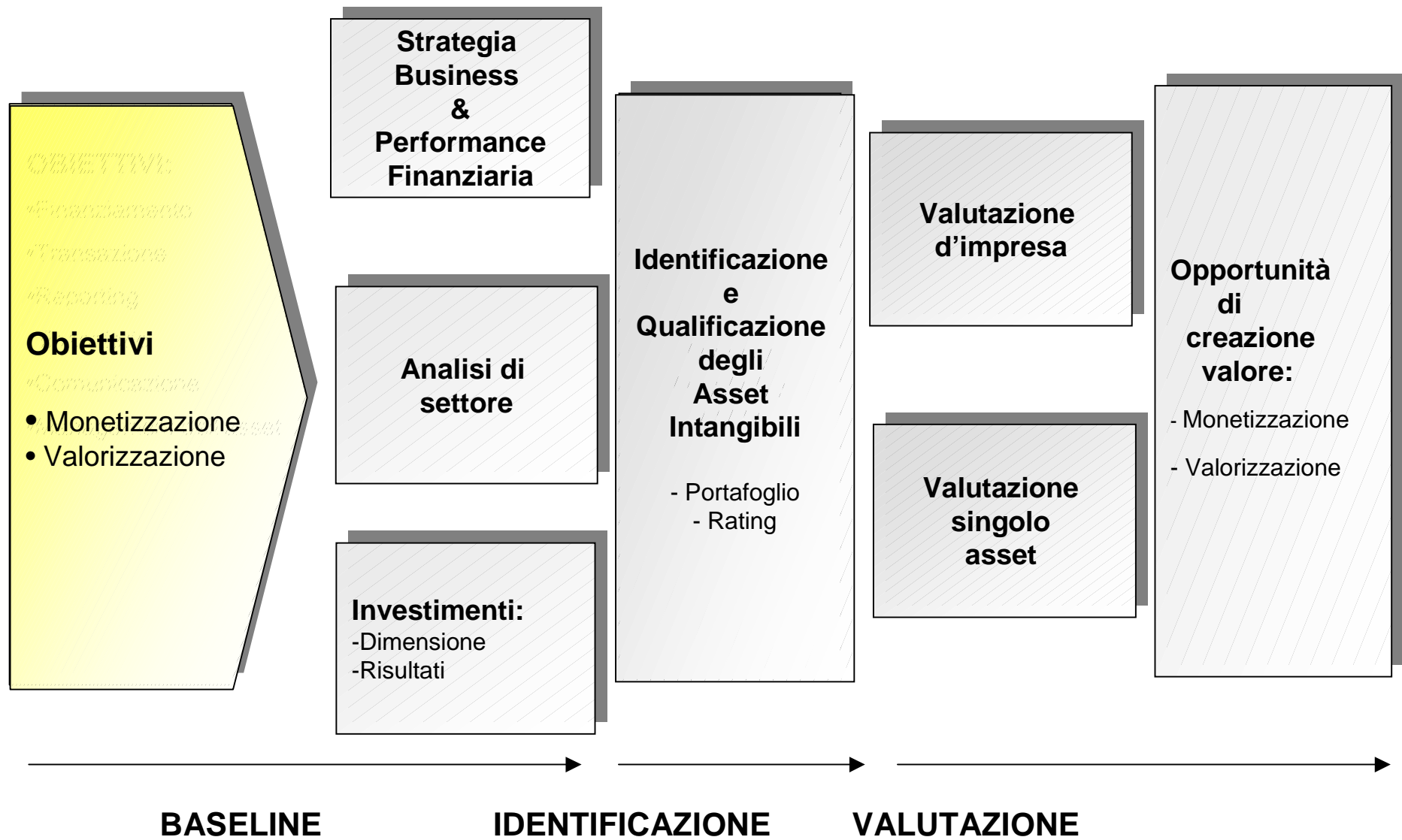


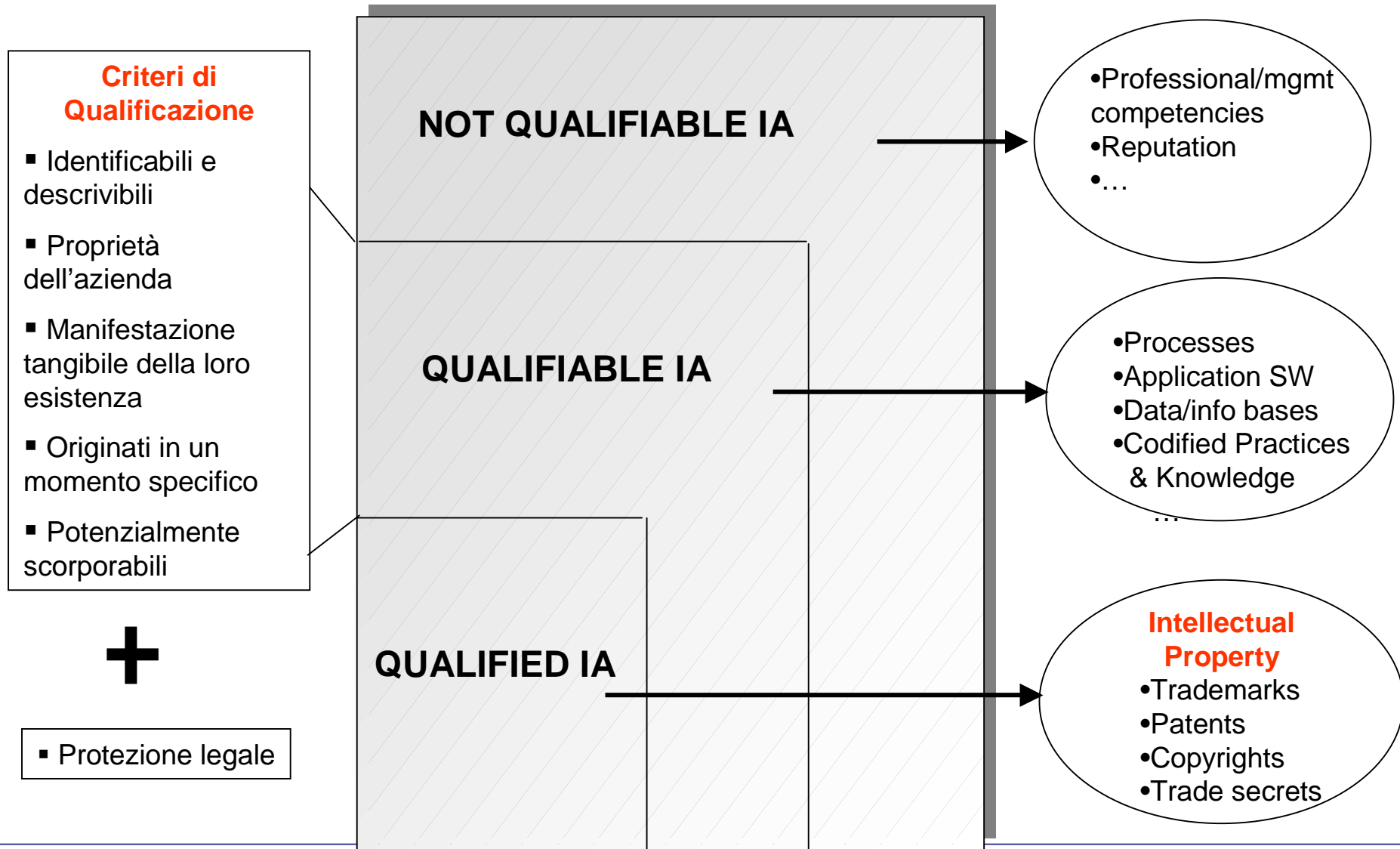
### Benefit focus

Use as a base-line for investment strategy and capital allocation

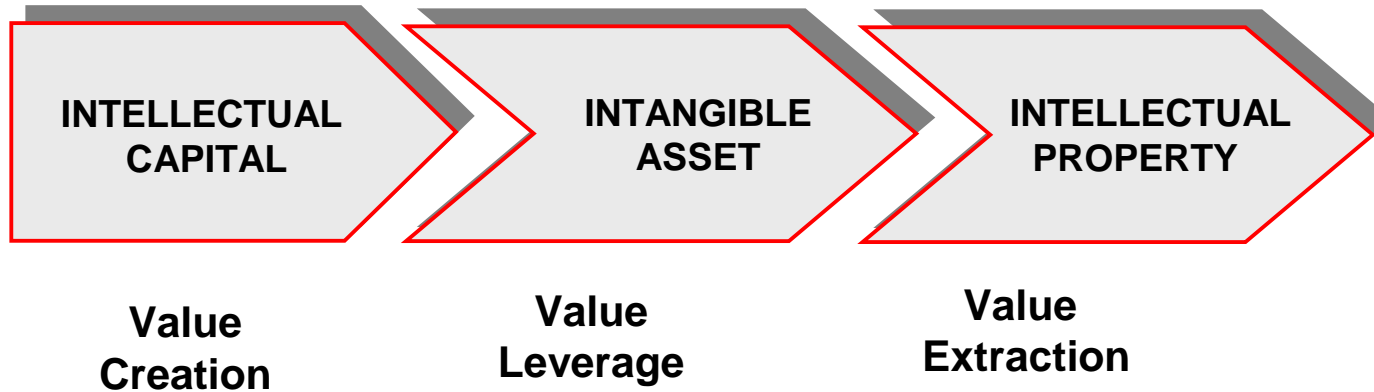


- Scope
  - Value in use in the business (contribution to the performance)
  - Value stand alone (market value)
  
- Valuation objectives
  - Value management and investment allocations
  - Transactions (buy/sell)
  - Licensing
  - M&A
  - JV
  - Collateralization (IP Loan)
  - Equity swap
  - IP Holding
  - Purchase Price Allocation
  - Impairment test (IFRS\_IAS)

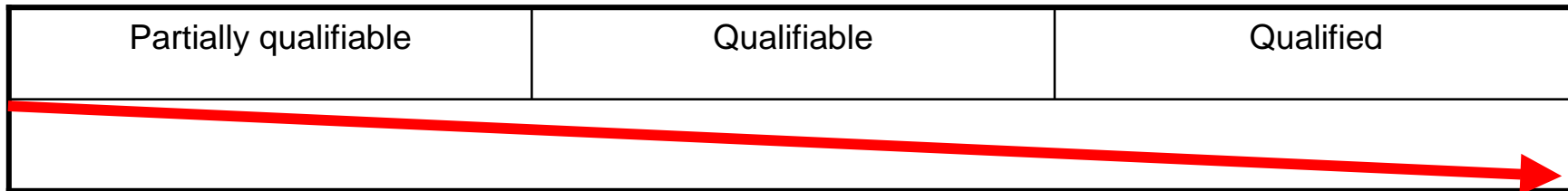




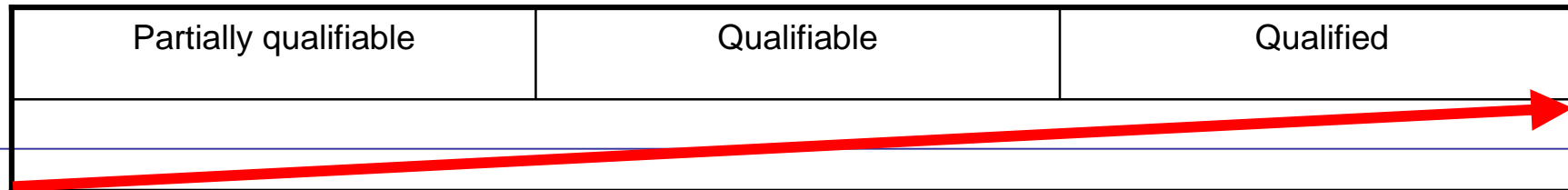
## Il processo di conversione del valore



### Rischio

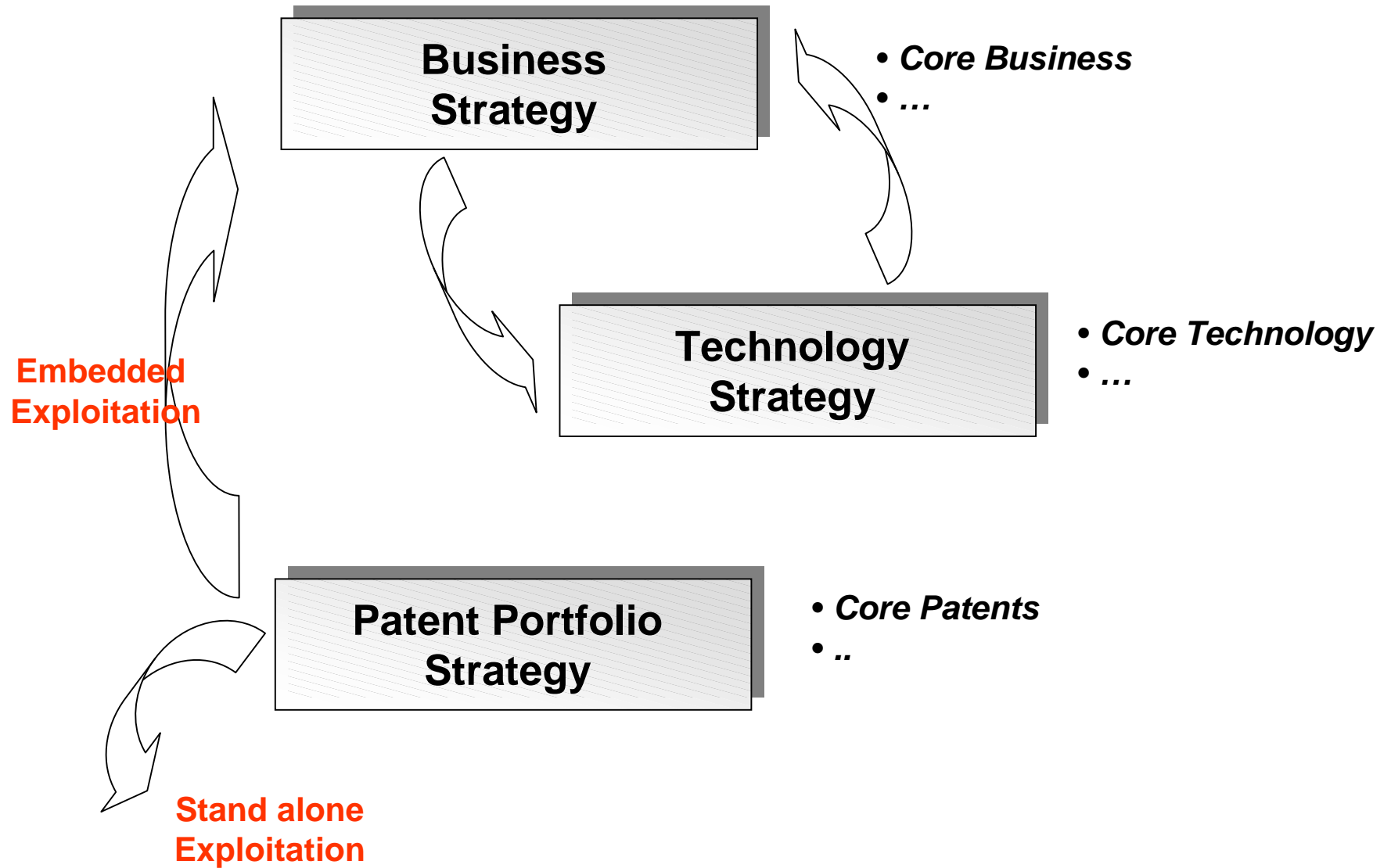


### Valore



**Perché è importante valutare il portafoglio brevetti**

# Why a patent portfolio evaluation



## PATENT PORTFOLIO VALUATION

### Market

- From 2008 Ocean Tomo Auction generate more than 100 M\$ in patent sales.
- GIK Worldwide used its patents as collateral raising 17 M\$ based on an appraised value of 57 M\$.
- Yale University received a \$100 million payment based on the securitization of its patents for the HIV drug Zerit.
- IBM patent licensing revenues are over \$1.5 billion, accounting for over 10 percent of IBM's net profits.
- According to a survey conducted by the American Intellectual Property Law Association, the median cost of patent litigation is \$799,000 for each party through the end of discovery, and \$1,503,000 each through the end of trial and appeal.

### Management

- Patent valuation can help to deeper understand the role of patent portfolio as a business asset and to leverage on it to increase company value
- Patent management decisions involve many possible decision paths and final financial outcomes: valuation can support decision process

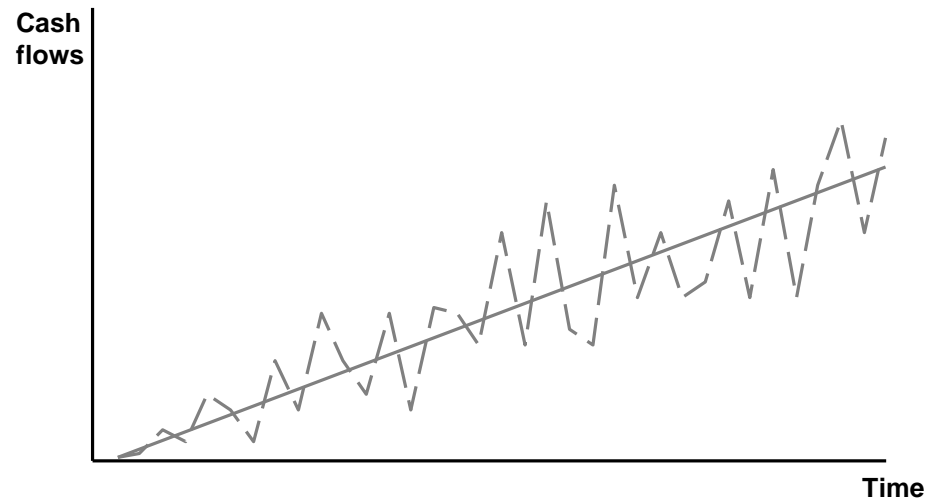
- Practice on patent valuation is, till now, developing area...

***“Most investment banks have teams of accountants, tax advisers, management consultants, and regulatory affair experts to structure their deals to a company’s greatest advantage. But one would be hard-pressed to find a major investment bank that employs even one individual with experience in evaluating patent portfolios..”(Harvard Business Review, January/February 2000)***

- ...especially under uncertainty
  - Lack of appreciation of practical methods of valuing patents, particularly early in their life under conditions of uncertainty about their future prospects.
  - Lack of practical valuation methods under such conditions can lead to sub-optimal decisions.

## Valuing patents: similar to valuing any asset, only harder

- The nature of an asset does not alter the core concepts of value
- **The value of an asset is based on the future returns that are expected to be generated by that asset itself**
- Patent value is characterized by high degree of **internal variability in comparison to other physical assets and by lack of historical data on patent pools performances:**



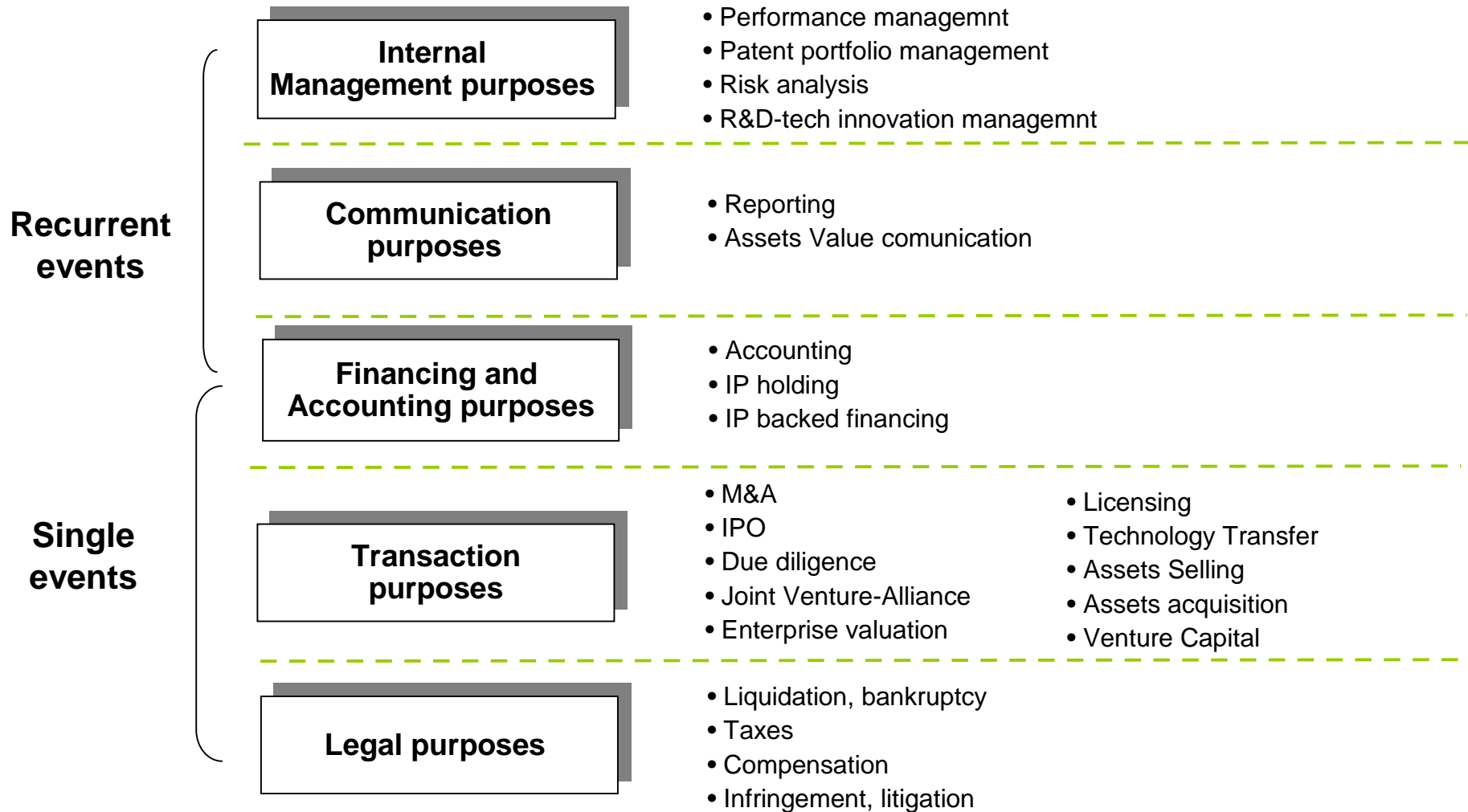
### Uncertainty in cash flow forecasts and specific risk factors

- Value could be realised in combination with other assets (tangible and intangible)
- Value may depend on form and scope of legal rights protecting the patent
- Values can vary depending on circumstances and owner's strategy

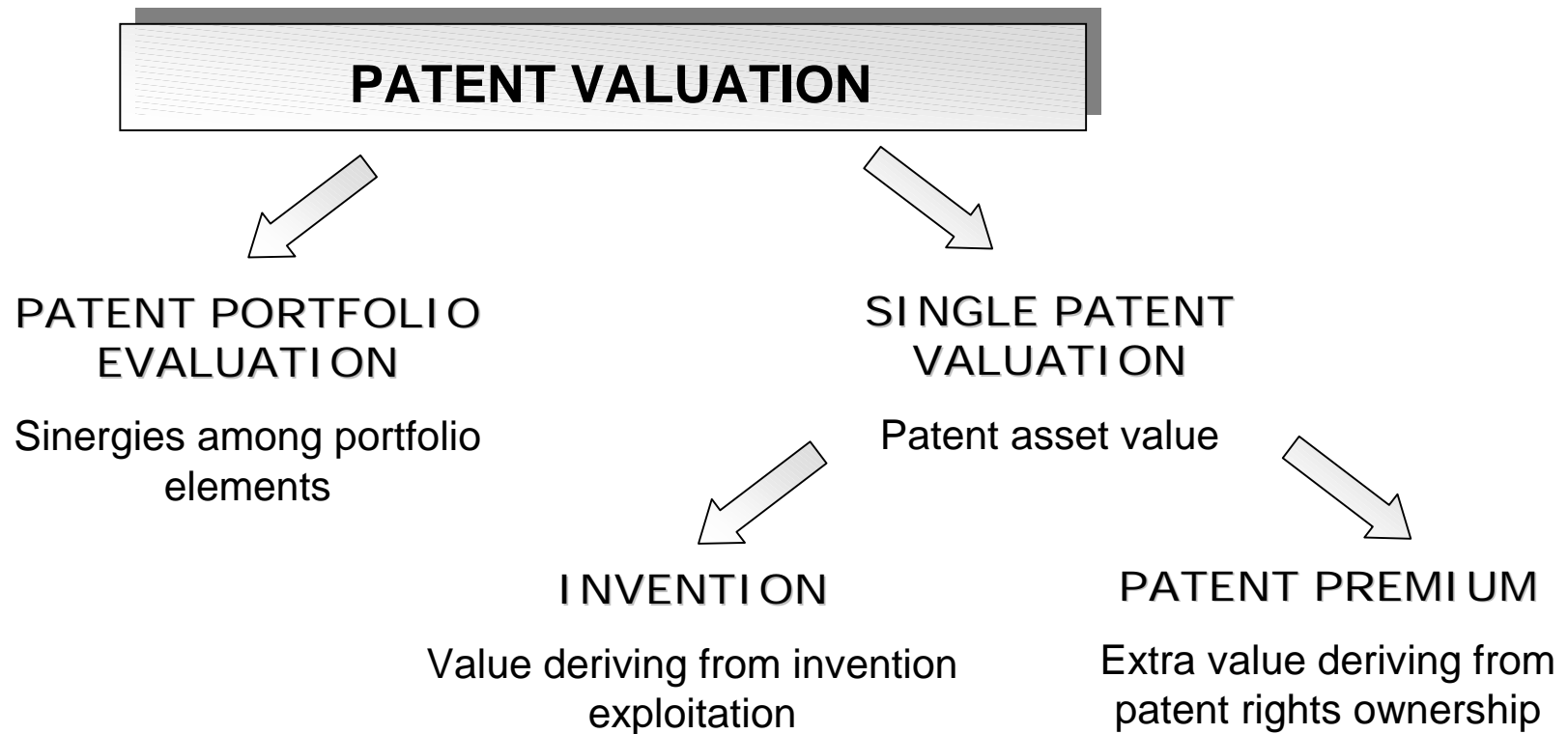
- Patent as signals: **The value of patents is linked to their ability to serve as credible signals.**
- Patents as internal metrics: **Patents are useful for intra-firm purposes, to measure employee productivity.**
- Patents as lottery tickets: **while most have only a negligible value, a few are of such great financial value that they provide a sufficient incentive to inventors to obtain patents**
- Patents as strategic tools/patent portfolio: **the real value of patents lies in their aggregation into a portfolio. Firms use patents to block other firms from patenting an invention, to increase power in negotiations for cross-licensing or other forms of technology access, and to prevent infringement suits.**
- Patent as a financial assets: **the use of patents to obtain financing and improve market valuation is another important motive for patenting**

## **Il processo di valutazione dei brevetti**

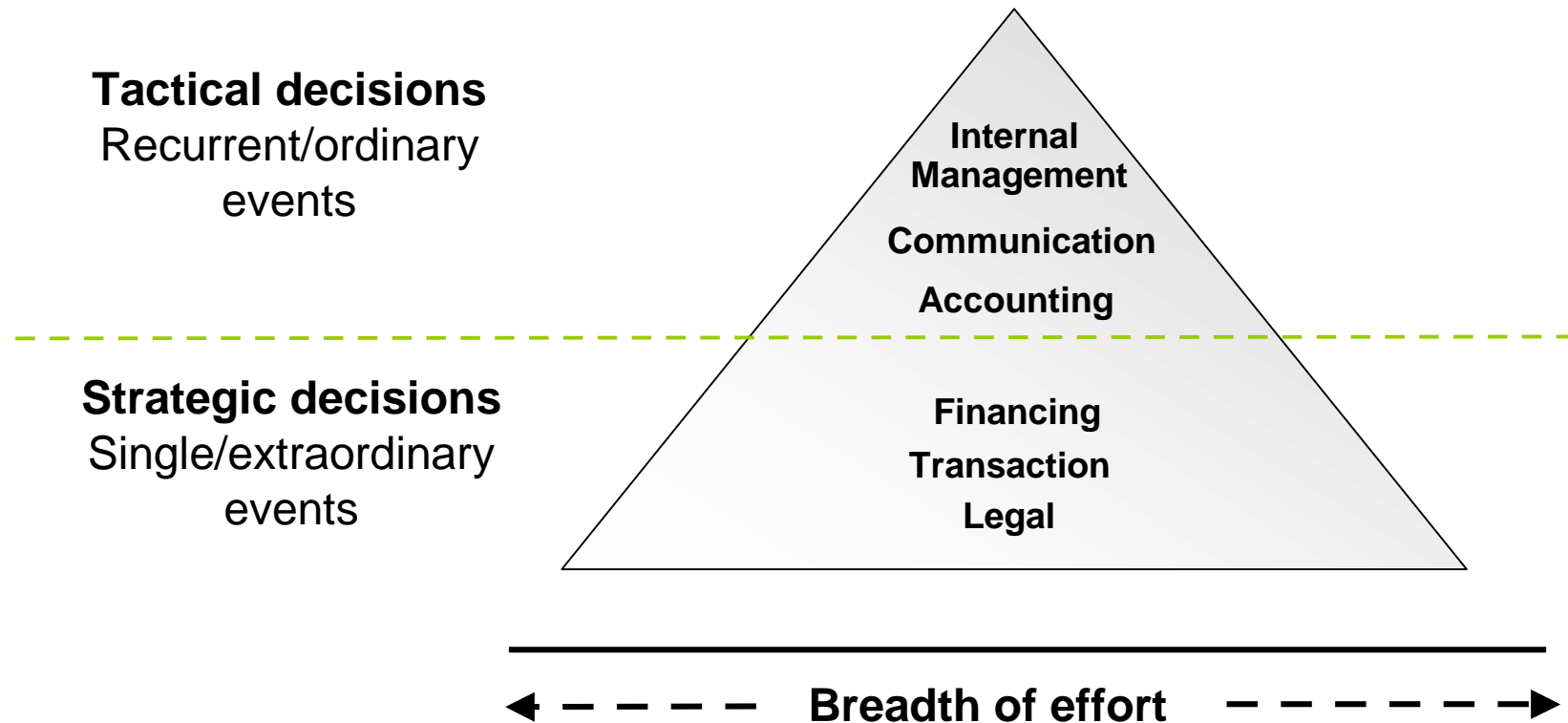
- **The Valuation Purpose refers to the primary usage of the valuation analysis.**
- **The purpose of the valuation defines acceptable methodologies**



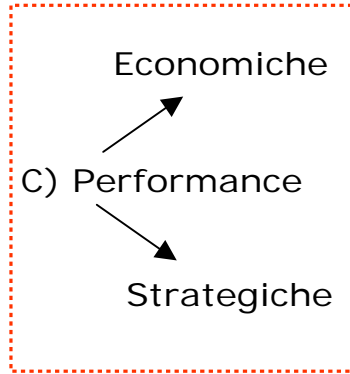
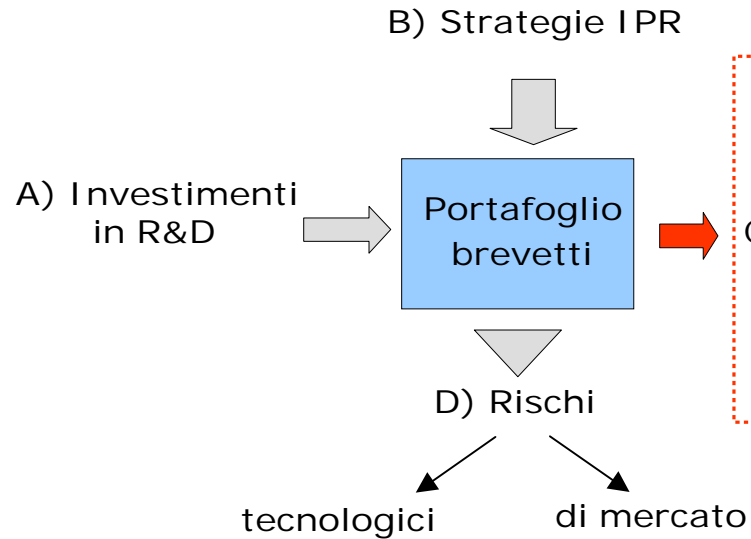
- **A patent is the right granted to an inventor by a State, or by a regional office, which allows the inventor to exclude anyone else from commercially exploiting his invention for a limited period, generally 20 years.**
- It is critical to define what is valuation perimeter



**Valuation purpose and nature of decision process (tactical or strategic decisions) drives breadth of effort in making patents valuation**

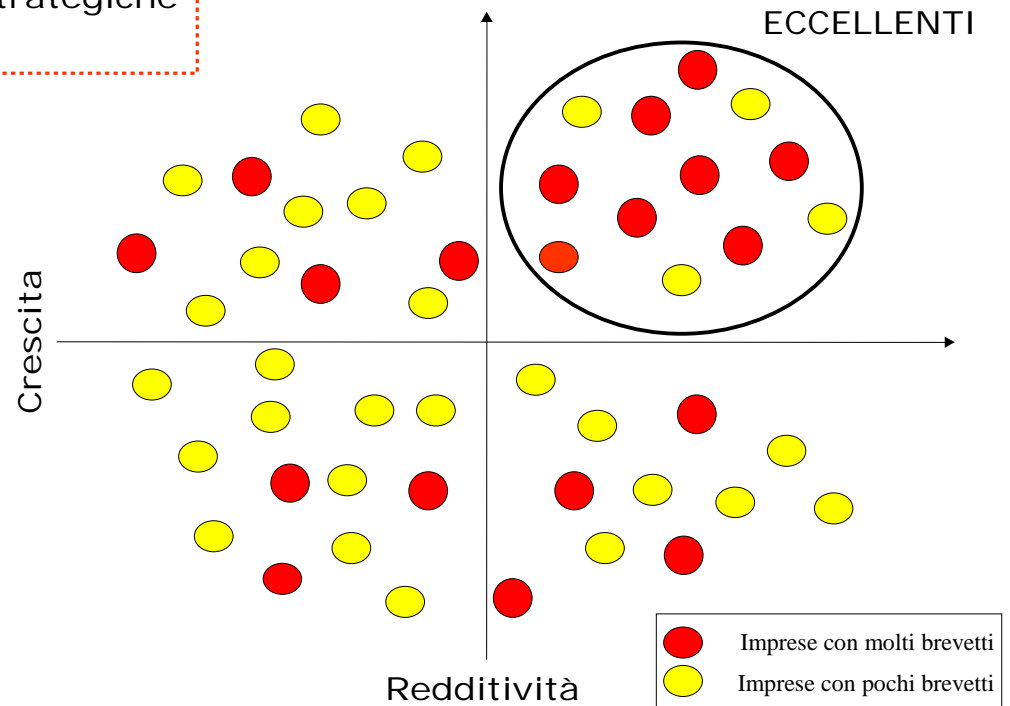


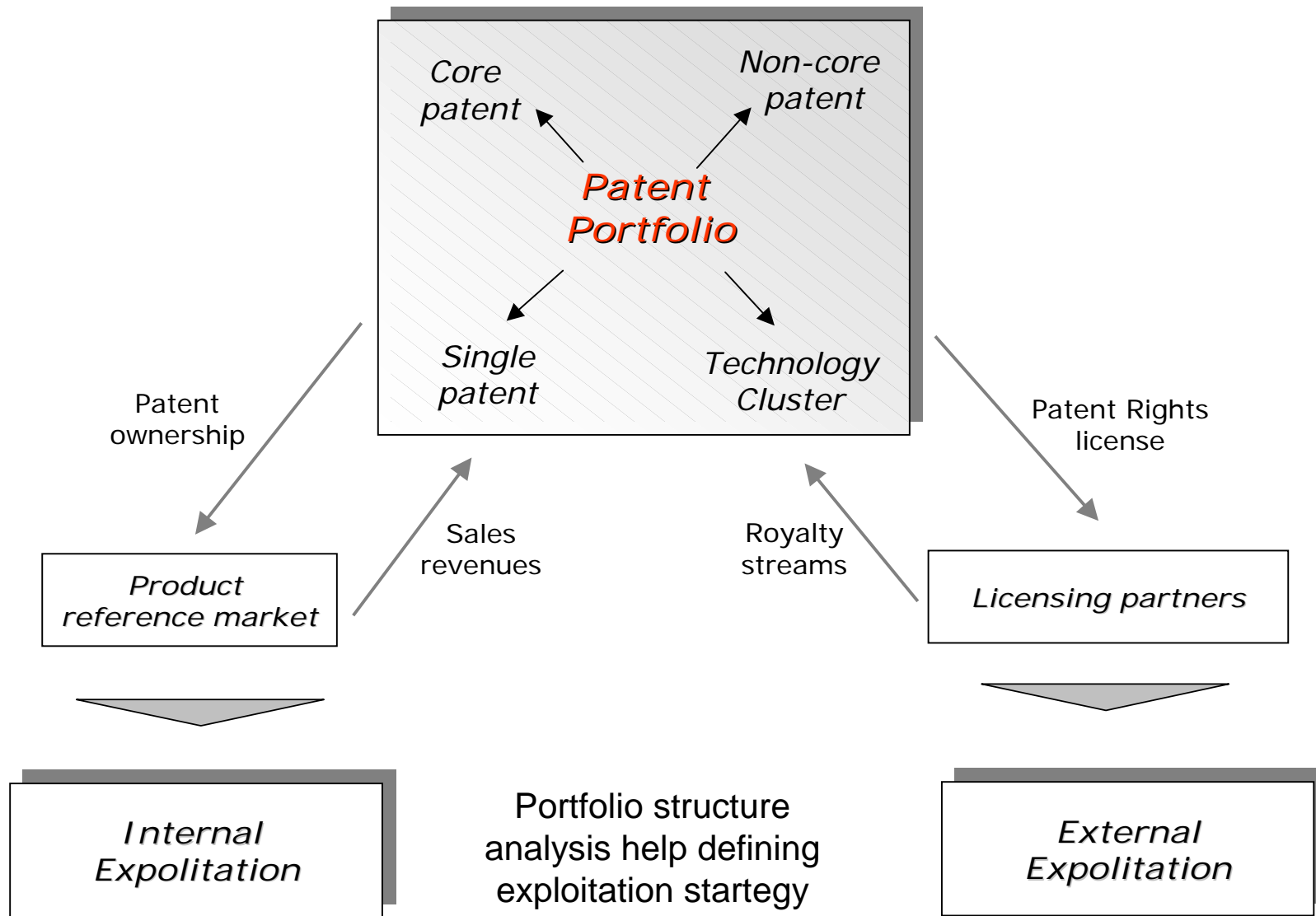
# **La valutazione del portafoglio brevetti**



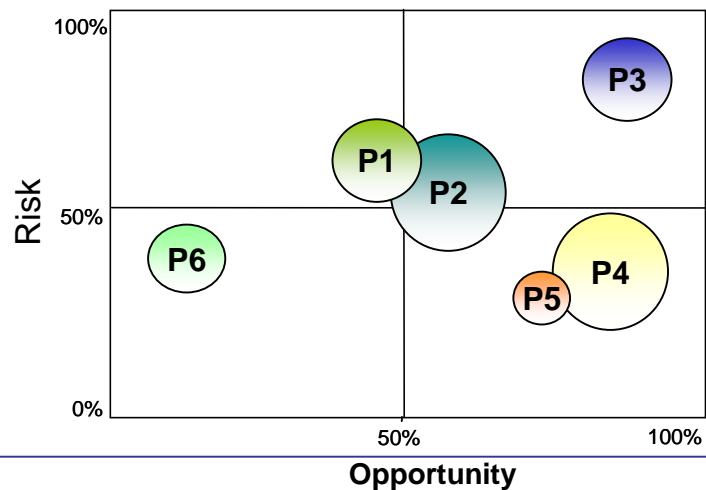
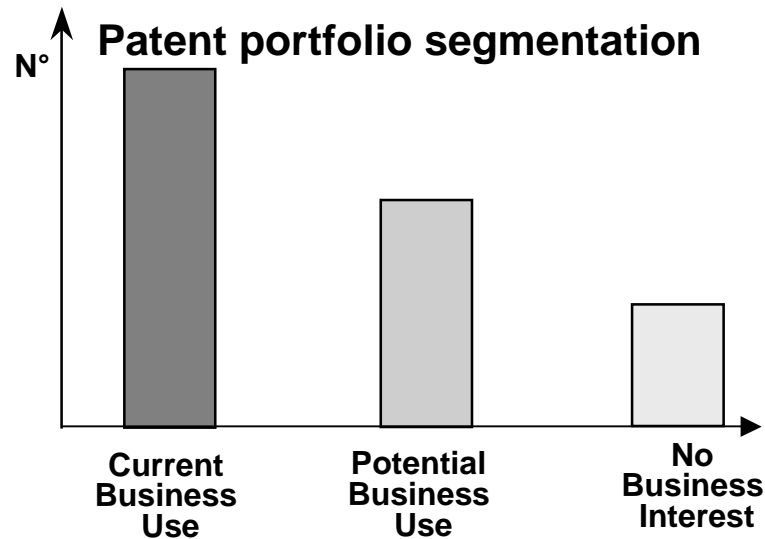
Il portafoglio brevetti è strumento che protegge, incentiva e diffonde l'innovazione ma è anche una leva di interazione strategica con i competitor.

**Valutare l'impatto del portafoglio brevetti sull'andamento delle performance economico-finanziarie è fondamentale per comprendere l'output dell'attività innovativa dell'impresa.**





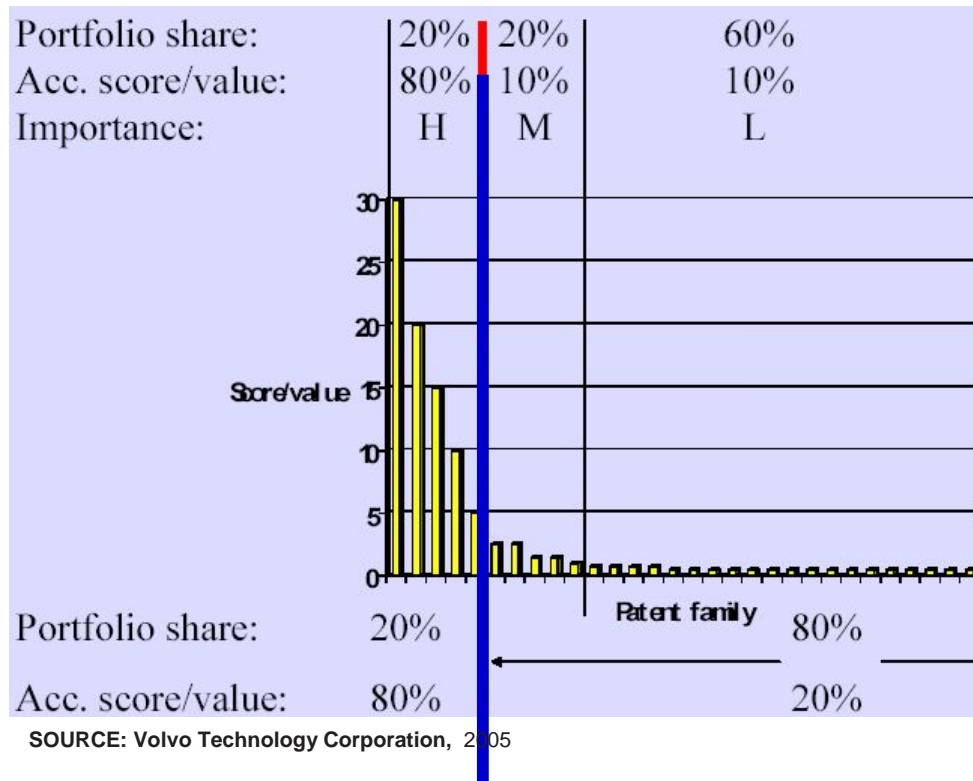
Important is not only the number of patents but their quality



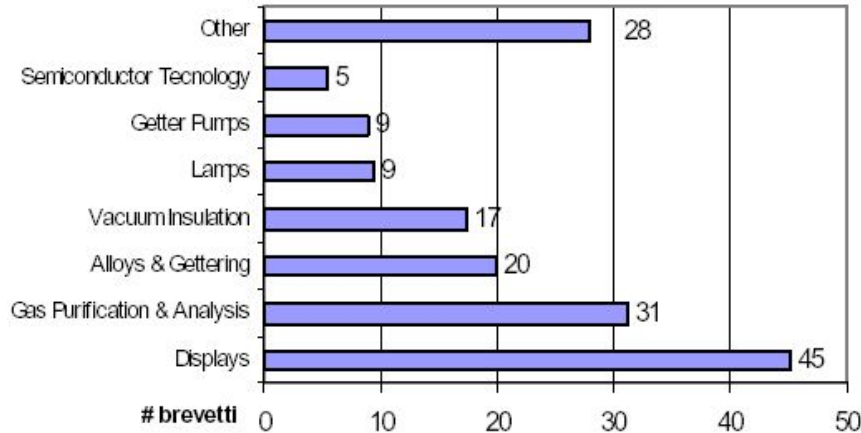
- In general the use of patents in own products is no longer the only goal (strategic use of patents, signalling)
- Important patents are those:
  - which protect "brand-identifying" or "visible" features of the products,
  - which protect a significant competitive advantage of the products,
  - which can block the competitors and suppliers,
  - for which evidence for infringement easily can be shown
  - which are suitable to form an international standard
  - which protect emerging technologies (broad scope of protection possible)
  - which protect systems and sub-systems

## Asset quality drivers

- Quality of competitive/technology intelligence
- Quality of R&D/Technology Strategy
- Patent intelligence analysis
- Quality, scope, technology relevance, technology relevance, ...
- Patent quality index
- ....



## Technologies analysis

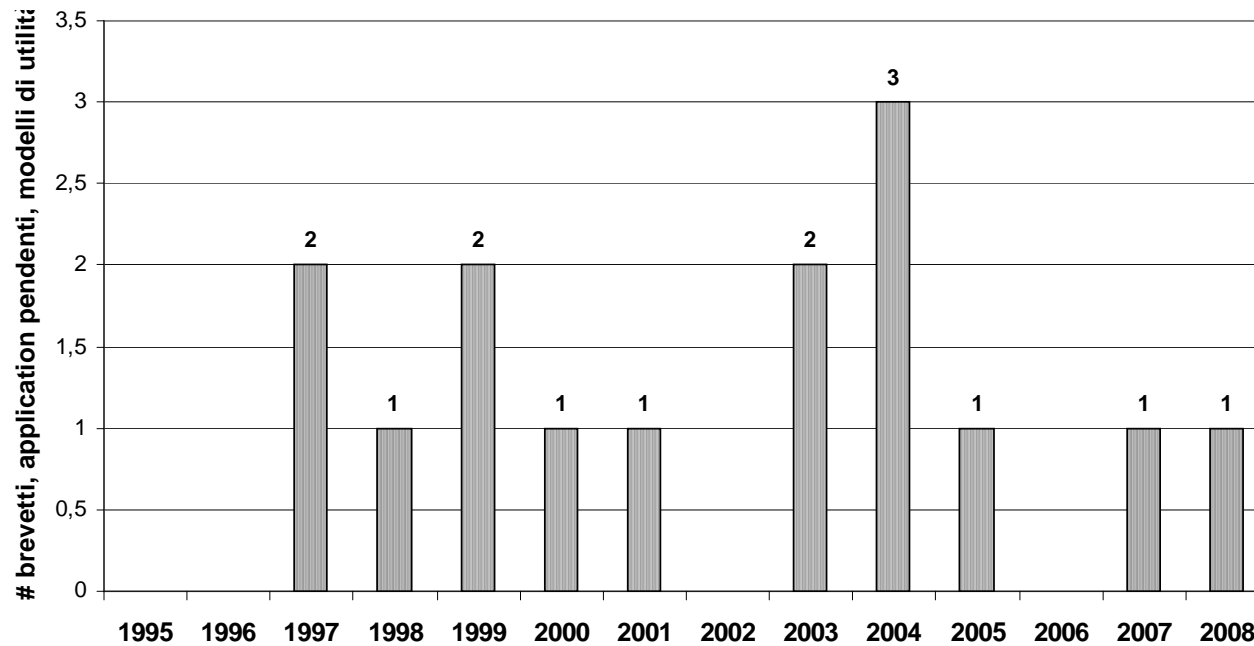


The **patent/product matrix** combines **product lines** and **patent portfolio** with the aim of understanding whether products and technologies that generate a high percentage of sales ("core" products/ technologies) are well protected by patents rights.

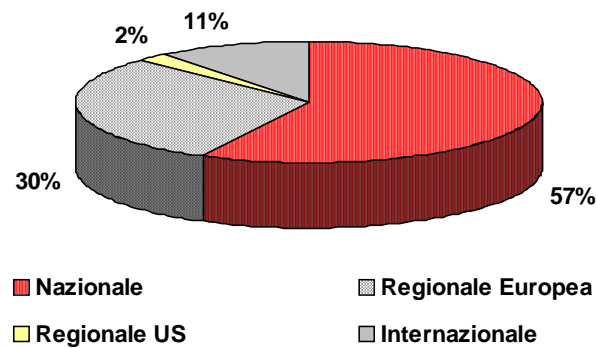
## Patent/product matrix

		% ON BUSINESS SALES							
		31,94%	26,97%	12,49%	8,23%	7,80%	6,39%	4,05%	2,13%
		<i>cathode ray tubes</i>	<i>flat panel display</i>	<i>pure gas tech</i>	<i>electronic devices</i>	<i>lamps</i>	<i>facilities tech</i>	<i>vacuum system and thermal insulation</i>	<i>analytical tech</i>
% PATENT	<i>displays</i>								
	<i>gas purification &amp; analysis</i>								
	<i>alloys &amp; gettering</i>								
	<i>vacuum insulation</i>								
	<i>lamps</i>								
	<i>getter pumps</i>								
	<i>semiconductor technology</i>								
	<i>other</i>								

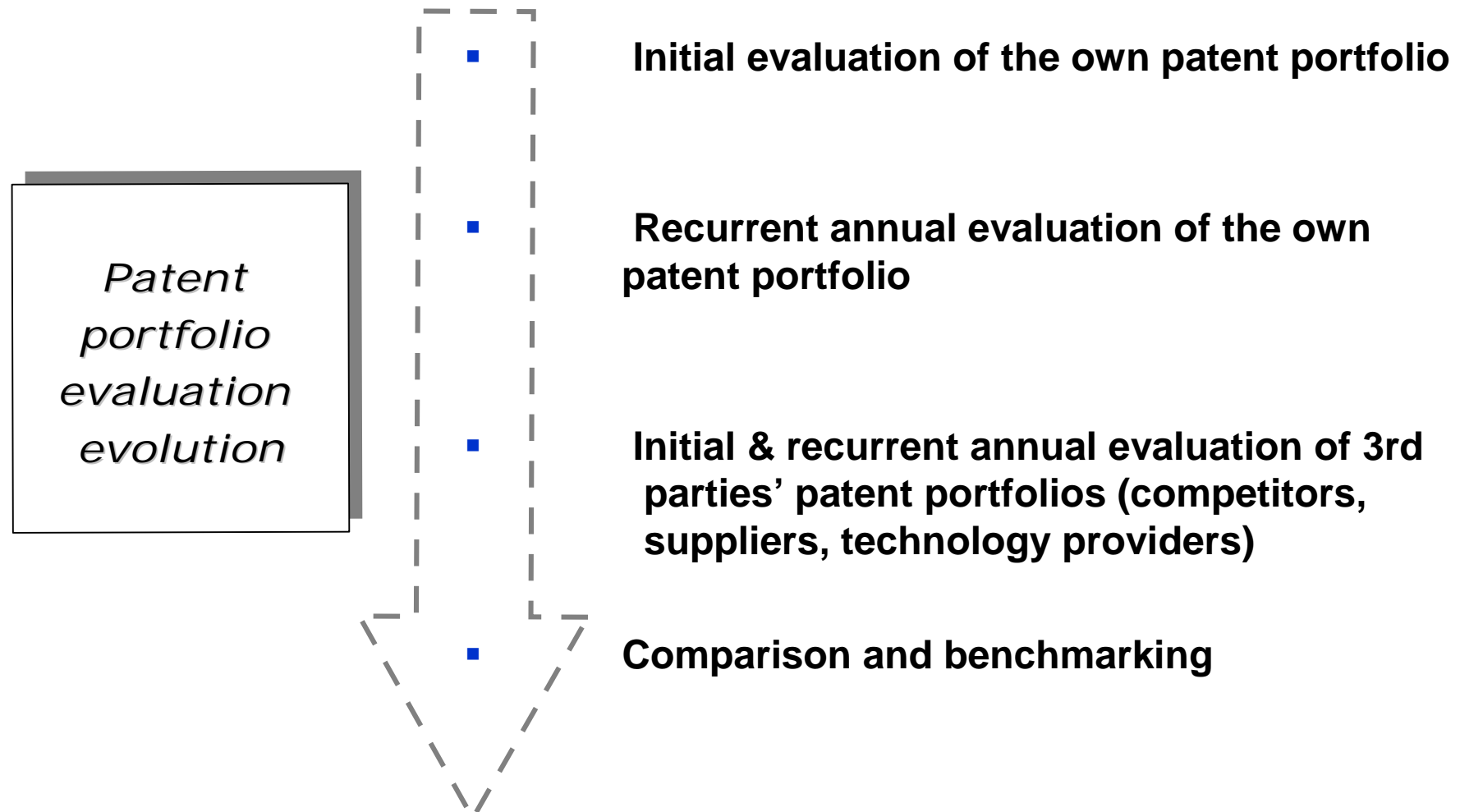
## Brevetti, application pendenti e modelli di utilità - Distribuzione temporale



## Ampiezza della protezione

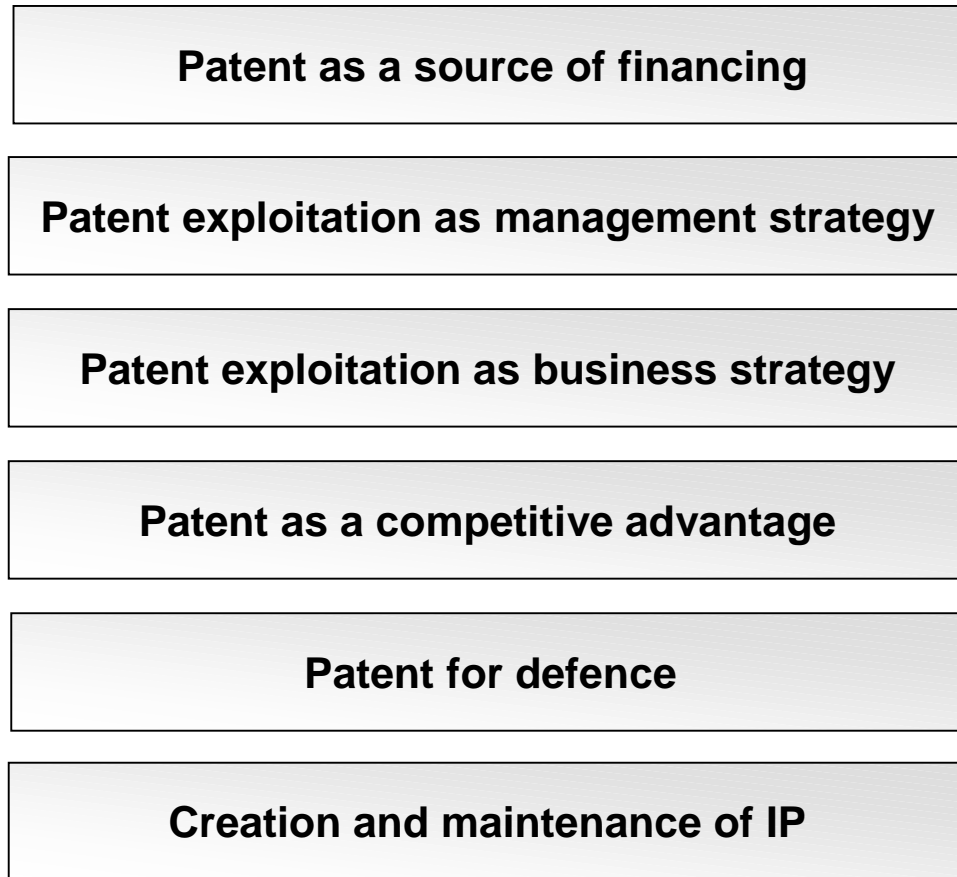


Fonte: ICM su dati Delphion



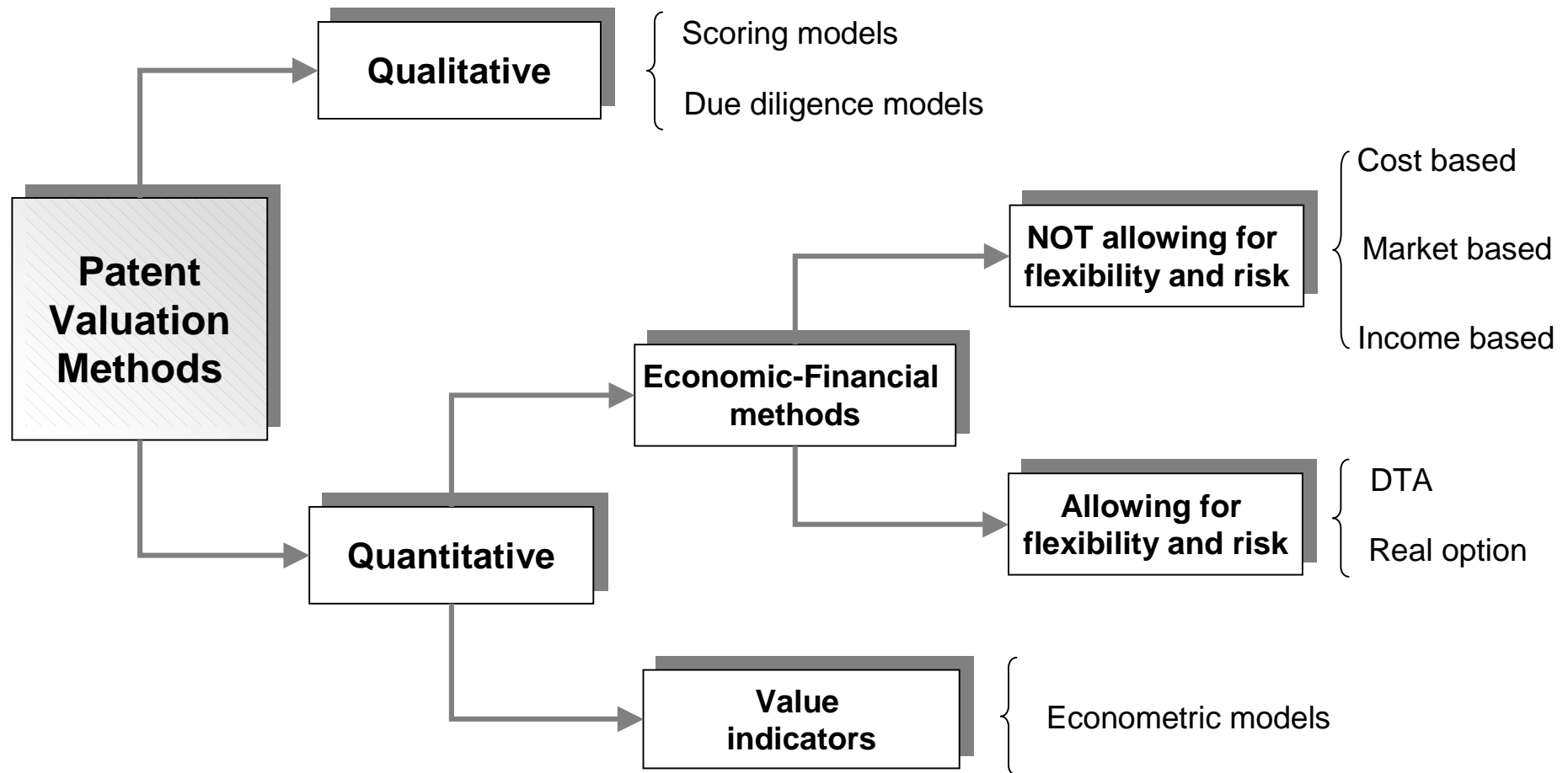
## **La valutazione del singolo patent**

Patents' role changed from a defensive use to strategic exploitation and source of funding: valuation demand and purposes changed as well



*Research & Innovation*

There are several methods for the assessment of patent value that usually are classified according to their qualitative or quantitative nature



## Choice of valuation approach depends on valuation purpose and available resources

- Typically, **analysts** try to assess patents value **using more than one single approach** to obtain a multidimensional perspective.
- A summary of the various value indications**, enriched by professional opinion and experience of the analyst, leads to a final assets value.

### Main patent valuation approaches for different purposes

	<i>Cost approach</i>	<i>Income approach</i>	<i>Market approach</i>
<i>M &amp;A</i>	-	++	++
<i>Financial Accounting</i>	+++	-	-
<i>Taxation</i>			
<i>Corporate Tax</i>	+++	-	-
<i>Inheritance Tax</i>	-	+++	*
<i>Sale Price</i>	++	++	*
<i>Licence</i>	+	+	+
<i>Collateral</i>	-	+++	*
<i>Infringement Litigation</i>	-	++	+
<i>Internal Management</i>	-	++	+++

Note: "+++": Theoretically or by rules is applicable and used widely.  
 "++": Used widely.  
 "+": Used to some extent.  
 "-": Not used.  
 "\*\*": Theoretically or by rules is applicable, but rarely used due to difficult applicability.

Source: Watanabe, 2002.

1. TECHNOLOGY	2. LEGAL STATUS	3. MARKET	4. FINANCIAL SITUATION	5. STRATEGIC INTENT
<ul style="list-style-type: none"> <li>▪ Is your technology unique?</li> <li>▪ Is it superior to other technology?</li> <li>▪ Has the invention been tested?</li> <li>▪ Do you need new production equipment?</li> <li>▪ When is it ready for commercialization?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Have you applied for a patent?</li> <li>▪ What is the legal position of strength?</li> <li>▪ How long is the patent still valid?</li> <li>▪ How broad and comprehensive are the claims?</li> <li>▪ Have you applied for patent on the relevant markets?</li> </ul>	<ul style="list-style-type: none"> <li>▪ What are the marketing options?</li> <li>▪ What are the market growth?</li> <li>▪ How long will there be a market?</li> <li>▪ What about competitive products?</li> <li>▪ Will the sales price give you profit?</li> </ul>	<ul style="list-style-type: none"> <li>▪ What are the future development costs?</li> <li>▪ What investment is necessary to start the production?</li> <li>▪ Have you the financial capacity to cover patent fees?</li> <li>▪ How much profit will the new technology give?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Is it to secure the position on existing markets?</li> <li>▪ Or is it to win new markets?</li> <li>▪ Or to ensure “freedom to operate”?</li> </ul>

CRITERIA	Score	Weight	Weighted score
1. TECHNOLOGY	2	10%	0,2
2. LEGAL STATUS	4	15%	...
3. MARKET	...	...	
4. FINANCIAL SITUATION	...		
5. STRATEGIC INTENT	...		...



**Final patent score**

**IPscore**<sup>®</sup>

prod perf enh geometry

Input

- |                         |                   |
|-------------------------|-------------------|
| Instructions            | Financial results |
| <b>A - Legal status</b> | B - Technology    |
| C - Market conditions   | D - Finance       |
| E - Strategy            |                   |

Output

- |                       |                   |
|-----------------------|-------------------|
| Radar profile         | Strategic profile |
| Net present value     | Charts            |
| Diagnoses             | Portfolios        |
| Supplementary reports |                   |

Reports

- |                 |                  |
|-----------------|------------------|
| Combined report | Evaluation table |
|-----------------|------------------|

Back

Help

**A - Legal status**  
prod perf enh geometry

No. Factor

A1 What is the status of the patent?

Notes that will be saved with this patent

Answer

1 Patent not yet applied for

2 Patent application filed

3 Novelty search and patentability evaluation completed

**4 Patent granted**

5 Opposition period expired

**Patent Number:** 05976156  
**Filed Date:** 11/2/1993  
**Priority Date:** 6/13/1991  
**Issued Date:** 11/2/1999  
**Current Status:** IN FORCE

**Named Inventor:** Taylor; Russell Highsmith (+1)  
**Assignee (orig):** IBM Corp. (unrecorded)  
**Assignee (cmt):** unrecorded  
**Security Holder:** unrecorded  
**Attorney or Agent:** Perman & Green, LLP

**Primary Field:** MEDICAL  
**US Class/Subclass:** 606130  
**Class Description:** Surgery  
**Int'l Class / SIC:** A61B / 3800

**Number of Claims (ind/dep):** 26 (3 / 23)  
**Number of Related US Pats:** 11  
**Number of Related Int'l Pats:** 6  
**Number of Forward Citations:** 31

**Summary of Scores & Ratings**

**Intellectual Property Quotient:** 202.1<sup>1</sup>  
**Overall Percentile Rank:** 99.8<sup>3</sup>  
**Overall Patent Rating:** A+<sup>3</sup>  
**Nominal Expiration Date:** 11/2/2016<sup>6</sup>  
**Remaining Life Expectancy:** 10.2 Yrs.<sup>6</sup>

Scores & Percentile Rankings<sup>2</sup>



## PATENT RATINGS™ REPORT

REPORT DATE: July 24, 2006



IPQ™ Score:

Overall Rating:

**US05976156**

Stereotaxic apparatus and method for moving an end effector

Factor <sup>4</sup>	Score/Rank	Raw Score <sup>5</sup>	Percentile Rank by Group <sup>2</sup>				
			Overall	Field	Class	Subclass	Assignee
TECHNOLOGY		1.412	91.6%	81.9%	--	--	85.5%
DISCLOSURE		0.944	40.8%	42.8%	38.4%	32.8%	24.8%
CLAIMS		1.077	61.7%	59.8%	59.2%	57.5%	51.9%
PROSECUTION		1.921	99.6%	98.6%	97.9%	98.7%	99.9%
OTHER		0.986	47.7%	50.8%	47.4%	43.4%	29.4%
IPQ SCORE <sup>1</sup>		202.1	99.8%	99.3%	99%	99.8%	99.9%
IPQ <sub>a</sub> SCORE <sup>4-vii</sup>		182.7	99.2%	98%	97.1%	98.8%	100%

The cost approach is based on the cost of obtaining a patented invention by either internal development or external acquisition.

- Reproduction cost: patent value = cost of constructing the patented invention
- Replacement cost: patent value = cost to obtain an invention with the equivalent utility to the patented invention subject to valuation

### Advantages

- Objective and consistent.
- Reliability of historic cost data

### Disadvantages

- If a recent acquisition cost of patent exists it is a reliable indicator of value: no link with future cash flow deriving from the assets
- No correlation between expenditure on an asset and its value.
- Difficult to distinguish between 'normal' operating expenses and patent investment expenditure.
- Subjective nature of estimate of replacement costs

### Typical Application

- Only used in limited circumstances
  - Relevant benchmark if a patent has recently been acquired.
  - Estimate minimum value of patents

The market approach uses comparable patent transactions in the market as a basis to obtain the value of the patent subject to valuation.

### Advantages

- Practical approach which makes use of prices actually paid for comparable assets.
- Variety of market-based approaches such as comparable companies, comparable transactions or a premium price-earnings multiple approach allows comparison.

### Disadvantages

- Given the uniqueness of patents, transactions involving similar patents are infrequent.
- Low number of exchanges and the lack of transparency for patent transactions

### Typical Application

- Extremely important indicator of value, if information exists.
- In practice sufficient information is rarely disclosed and this methodology is used as a cross check on other more theoretical methodologies and it is less reliable and useful than others.

The **income based approach** attempts to calculate the present value of the projected future income flow arising from the subject patent during its economic life. The discounted cash flow method allows an estimated future income flow to be converted to a present value by discounting future income estimates flow with an appropriately selected discount rate.

### Advantages

- Theoretically superior to other approaches since focused on future earnings or cash flow.
- Consistency can be achieved facilitating comparison across a patent portfolio.
- Widely accepted and concepts widely understood.

### Disadvantages

- Requires subjective cash flow estimation and parameter settings.
- Translation of theory into practice requires assumptions which are limiting.
- Relevant information is not always readily accessible from internal reporting systems.

### Typical Application

- Primary valuation methodology and the most widely used where information of an appropriate quality can be obtained.
- Often associated to scenario analysis to reduce estimation risk

- Originally developed for pricing financial options:  
*“a right but not an obligation, at or before some specified time, to purchase or sell an underlying asset whose price is subject to some form of random variation”*
- The application of the concept of options is not limited today only to financial assets, as it also applies to non-financial assets, known as real options.
- Real option models include the
  - Discrete time: binomial model
  - Continuous time: Black-Scholes option pricing

## Advantages

- The real option method is able to take into account the flexibility of patent management, which can be considered as a series of options

## Disadvantages

- Complexity
- Parameters estimation

- **Several attempts have been made to use econometric methods to measure the economic value of patents.**

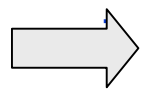
- Direct value indicators analysis
- Direct value measurement through survey
- Renewal decision analysis
- Market transaction analysis
- Analysis of the relationship between market value and patent indicators
- Venture capital activity valuation

**Some  
Results**



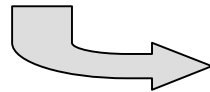
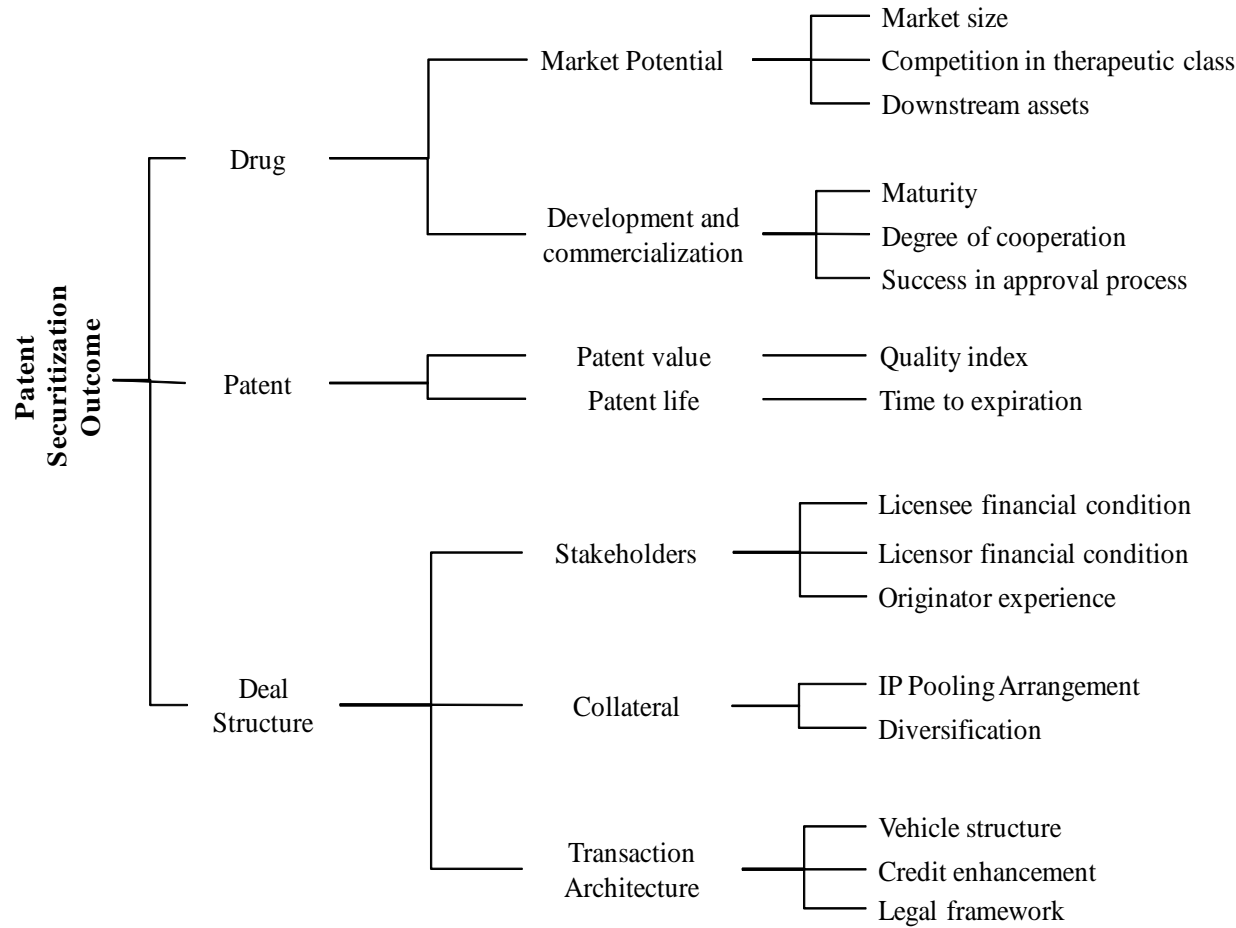
- For example Schankerman and Pakes (1986) found that the distribution of patent value for patents issued in Germany, France and the UK in 1970 had mean values respectively of \$19,124, \$6,656 and \$6,963 and median values respectively of \$17,329, \$847 and \$1,861 (all in 1980 prices).
- Analyzing data on commercial transfer of US patent rights Serrano (2005) obtained the median value to be equal to \$27,895 and the mean equal to \$86,782 (2003 prices).
- Bessen (2007) estimates an average patent value of \$376,000 for a sample of US firms for the period between 1969 and 2001 (1992 prices).
- Gambardella et al. (2008), based on a survey, estimated a mean of the patent value distribution higher than €3 million and the median as being almost €400 thousand.

- **Typically, analysts try to assess patents value applying more than one single approach**
- **Often, quantitative and qualitative methods are used together:**

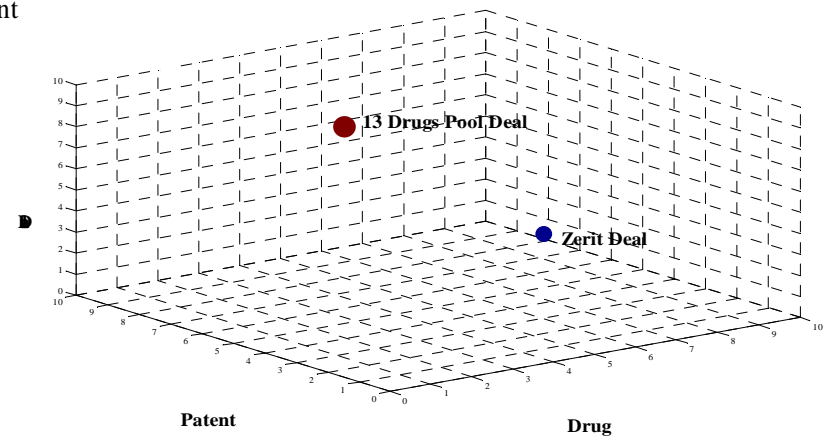


Standard & Poor's for BioPharma Royalty Trust rating assignement anlyzed following factors:

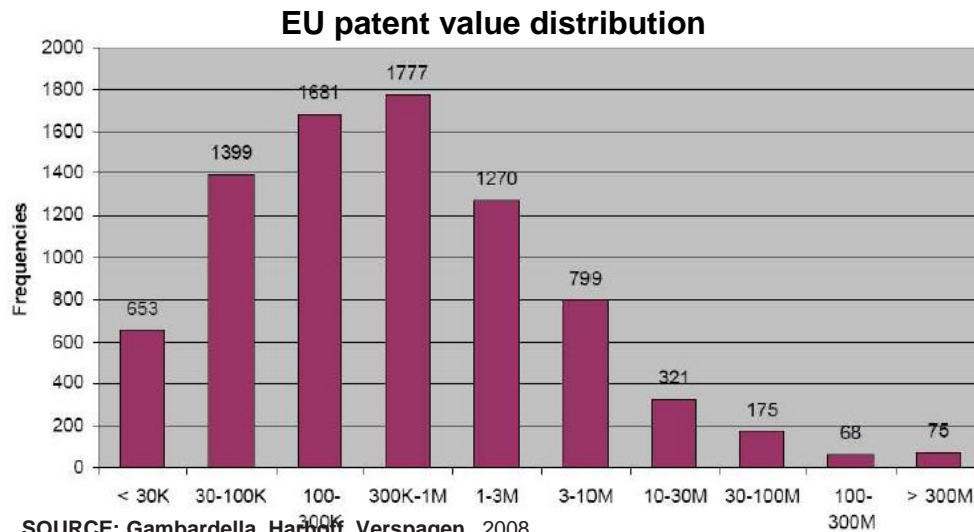
- ❑ Analysis included:
  - ❑ historical sales,
  - ❑ competition,
  - ❑ competitive advantage,
  - ❑ market share,
  - ❑ drugs pricing,
  - ❑ HIV/AIDS population,
  - ❑ expected trends in population,
  - ❑ Product obsolescence risk,
  - ❑ patent challenges,
  - ❑ generic risks,
  - ❑ currency/foreign exchange risks



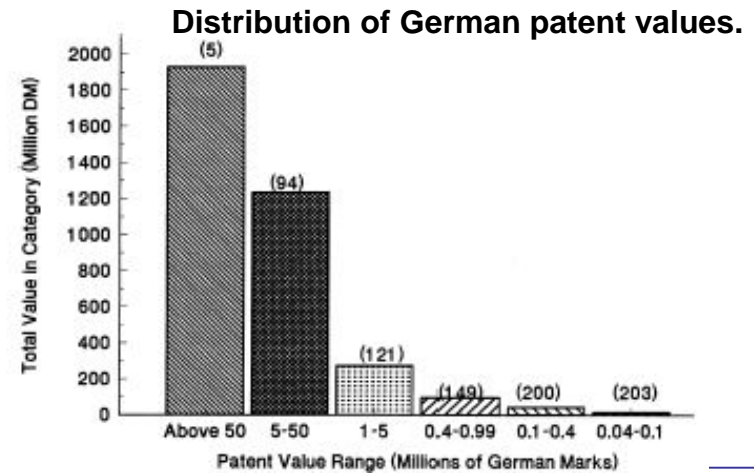
SOURCE: Odasso, Ughetto. (2011)



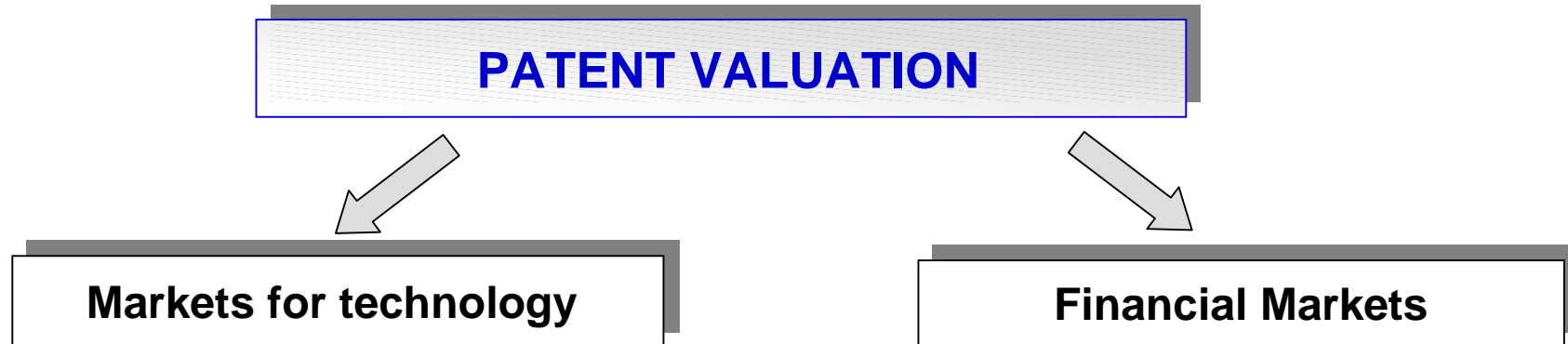
- Patents value depends on several factors:
  - **Patent/technology features:** quality, Scope, technological relevance, technological novelty, expiration, role in portfolio, role in business strategy, ownership, ....
  - **Assignee features:** type, size, industry, ...
  - **Inventor features:** experience, past inventions, demographics,...
  - **Industry features:** technology features, role of patents, ....
  - **Inventive process features**
- Significant correlation between value and indirect value indicators
- High skeweness of patent value distribution
  - Only a small fraction of patents are economically valuable
  - Patents are of little use if they are not implemented in the economy



SOURCE: Gambardella, Harhoff, Verspagen. 2008  
Value Classes (8217 obs.)



SOURCE: Harhoff, 2000



**Experience suggests that limitations in patent valuation can prevent the development of technology markets and the use of patents to access financial markets.**

Patent valuation open issues

- Patent value definition
- Assessment of future cash flow and measurement of revenues and incremental costs
- Uncertainty on market and technology returns (volatility)
- Assessment of synergies at portfolio level
- Standardization

**Grazie per l'attenzione**

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