

WIPO – ITALY International Convention on Intellectual Property and Competitiveness of Micro, Small and Medium-sized Enterprises (MSMEs)

organized by
World Intellectual Property Organization (WIPO) and Consiglio Nazionale dell'Economia e del Lavoro (CNEL)

supported by: the United States Patents and Trademark Office (USPTO) and the Ministry of Economic Development and the Ministry of Foreign Affairs of the Government of the Republic of Italy

Valuation of Intellectual Property (IP) Assets and Accountability of Intangibles as Tool for Accessing Financing

**A FRAMEWORK FOR
THE ECONOMIC ANALYSIS OF PATENTS
IN A BUSINESS CONTEXT**

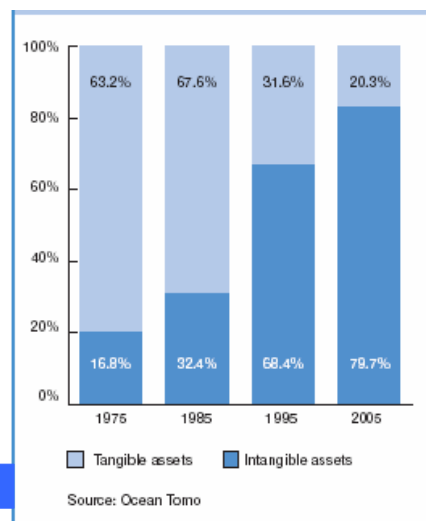
dott., dott. ing. Sara Giordani, MBA
UIBM Valuation Expert
Technology Transfer and IP Valuation Expert - TTP Lab Co-Founder

Rome, December 10 and 11, 2009

© 2008-2009, Sara Giordani 

Why a framework?

- New paradigms for innovation and economic growth
 - Knowledge Economy
 - Open Innovation
- (New) disclosure of new information having economic – financial impact
- Evidence of such economic financial impacts (LEs and SMEs as well)



**Intangibles 70-80%
Intellectual Property is 50-70%
of Intangibles**

In this context there are (at least) 3 elements for innovation and economic growth

- Industrial Property (R&D, technology, innovation)
- Exploitation for creating economic value
- **Access to financing – Debt / Risk capital** (investments / funding)

Potential for creating future economic value
strategy, operations

Industrial Property
Patents

Business Plan

Business Potential
Profits

Investments / Financing

2

© 2008-2009, Sara Giordani

TTP Lab
Technology Transfer Program & Laboratory

Nurturing “enabling conditions”

- **Patent Systems shape today's economic and business arena; are considered a fundamental component of development**
 - **Patents represent a competitive resource and could be a competitive advantage**
 - **Patents act as catalysts in the business context**
 - **impact the revenues generating potential and capability of enterprises**
- ✦ **can affect business sustainability, business risk, as well as the bottom line**

Keywords:

- **Patent system / Institutions;**
- **Enterprises / Industry;**
- **Finance Sector / banks**

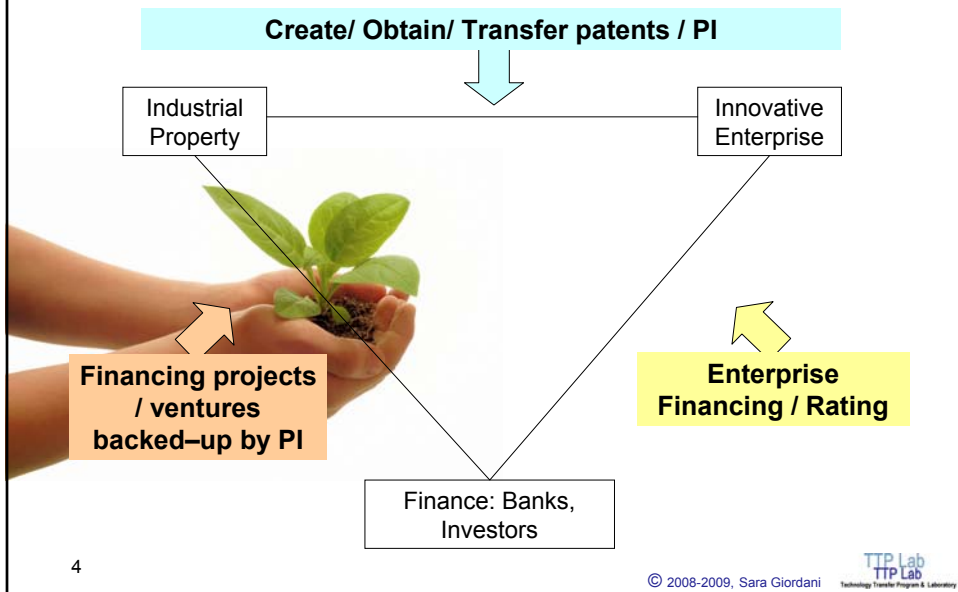
3

© 2008-2009, Sara Giordani

TTP Lab
Technology Transfer Program & Laboratory



The triangle: patent – business- financing



Linking IP and Finance:

A Methodology to recognize the economic value in the business context and communicate it

How a patent, or a patent portfolio, or a cluster of various IPRs could impact profitability (profit margin, bottom line...)?

This is a question for the entrepreneur, who invest in IP for a project, his own enterprise / venture...



The banks or the venture capitalist or the investor of a project / venture backed up by PI, (too), would have a similar question



Objectives

*... elaborate and **deploy** an evaluation model with which to identify and locate the economic value of patents, namely the added value accruing to an enterprise from the exploitation of new patented technologies". [UIBM Project]*

Mapping and Measuring the patents in a business context **together with the business plan** for value extraction;

TARGET: instrument to support analysis, evaluation and appraisal according to a joint methodology for **evaluating the relevance and solidity of the contribution of patents** (intellectual property) to the cash-flow generation potential

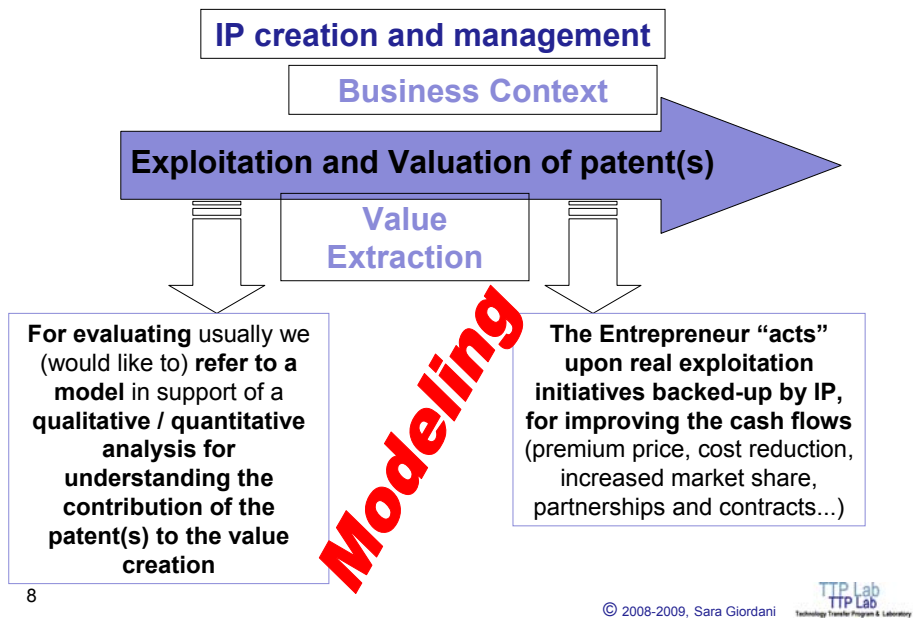
Patents as business tool and their relevance for decision of investing/financing

Challenges

The approach should:

- Balance complexity and standardization
- Comply with qualitative and quantitative analysis
- Measure relevance and merit
- Be compatible with current evaluation practices (e.g. of projects) in banks
- Be aligned with other regulations/ definitions (e.g. IAS, FASB, Basel II...)
- Be a communication tool; comprehensible and transparent

Value Extraction and Modeling



Evaluation in a business context

Recognize the Value Drivers;

Identify, select and “read” the Value Driver Indicators in the

- **Value Creating Process (enterprise)**

Recognize the Enablers;

Identify, select and “read” Opportunities & Threats in the

- **Value Creating Process in the Market (context)**



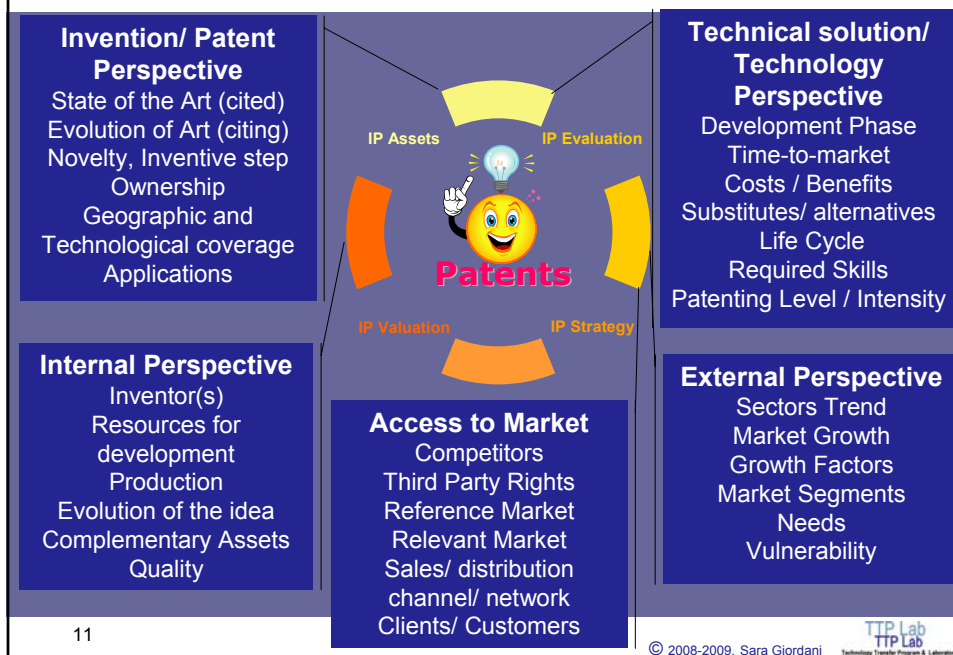
**Evaluation Process
(model)**

Structuring the areas of analysis

In the valorization and exploitation path, the patent/ IP can be viewed through the factors that, in the following areas, could have an impact on income

1. Efficacy of protection
2. Position of the invention(s) in the state of the art and in the technology road-map
3. Placement of the patent(s)/ invention(s) in the enterprise: efficacy and efficiency of the exploitation
4. Marketing of the patent(s) / invention(s) (market access channels)
5. Market (trend, readiness...)

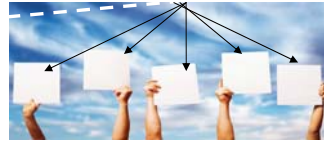
Analysis/Valuation framework: UIBM Platform



Developing the framework of analysis

➤ **Organizing and Structuring criteria and indicators, mapping the asset(s)**

- *It should allow considering different perspectives*



- *It should allow for correlations among parameters*

➤ **Availability of Rating/ Ranking Methods**

- Flexible/ Multi-criteria/ Multi-parameters
- Already known and used by Financial world, (Banks, Investors), by Marketing experts, by technical-economic valuation practitioners...



12

© 2008-2009, Sara Giordani

TTP Lab
Technology Transfer Program & Laboratory

Framework Components *(according to Razgaitis and other authors)*

- I. **Scoring criteria** – Criteria, indicators
- II. **Scoring System**
- III. **Scoring Scales**
- IV. **Weighting factors**
- v. **Decision Table – Partial and overall results; specific areas to look at**

13

TTP Lab
Technology Transfer Program & Laboratory

The Model – framework of analysis

- Assigning rates / scores
- Using weights
- Taking into account correlations among modules and within modules
- Possibility of using individual, aggregated, module's or overall results
- Analysis tool, in support of strategy, evaluation methods (traditional ones, too)

14

© 2008-2009, Sara Giordani

TTP Lab
Technology Transfer Program & Laboratory

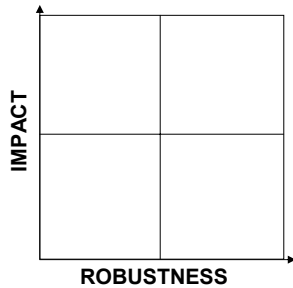
MODULO 1 - Brevetto					MODULO 1 - Brevetto				
	Punteggio (0) 1-5	Peso (0) 1-3	Valore (punt x peso)	Note					
Robustezza/ Capacità del brevetto									
1 Stato del brevetto: - Fase nel ciclo di vita della domanda - Fase nel ciclo di vita del brevetto	R								
2 Esame di merito complessivo	P			Rapporto di ricerca, Opinione...					
3 In che misura il brevetto sottintende ed è stato chiesto per una tecnologia superiore/ unitica dell'invenzione?	P			Novità					
4 In quale misura l'invenzione è migliorativa superiore rispetto alle tecnologie assimilabili?	P			Altezza inventiva					
5 La descrizione comprende esempi esauritivi e chiari	R								
6 Portata delle rivendicazioni - Ampiezza dell'ambito di protezione conferito dalle rivendicazioni indipendenti - Copertura Prior Art (anticipazioni stato dell'arte e della tecnica)	R			"breadth of claims"					
7 Indice di Prior Art: - Numerosità della Prior Art - Rilevanza della Prior Art - Importanza della Prior Art	P								
8 Possibilità / Probabilità di superare il rischio per il brevetto di essere reso invalido o limitato	P								
9 Premio di controllo: titolarità o altrimenti disponibilità del brevetto / invenzione	P								
Robustezza/ Capacità del brevetto	somma punt.	somma pesi	somma valore	rapporto: somma valore / somma pesi					
Impatto / Effetto									
10 In che misura la descrizione comprende più esempi e applicazioni industriali	R								
11 Eventuale interesse di terzi ad attaccare o sollevare opposizione - Possibilità di non incorrere in un'opposizione - Beneficio che deriverebbe, come "indicazioni" di valore	P								
12 Coerenza strategico-economica tra la protezione e il piano di sfruttamento dell'invenzione	R								
13 In che misura l'invenzione è non e' facilmente riproducibile/ imitabile	P								
14 Difficoltà a re-inventare (inventing around)	R								
15 Limitazione/ la contraffazione dell'invenzione è facilmente riconoscibile e identificabile	P								
16 Indice di "forward art": il brevetto / l'invenzione sono stati citati in altri brevetti o paper - Rilevanza delle Citazioni - Intensità delle Citazioni	R								
17 In che misura si ha copertura geografica adeguata e coerente	R								
18 Possibilità e efficacia dell'enforcement (far valere la privativa in caso di violazione dei diritti)	P								
19 Beneficio "economico" rispetto all'intensità dei costi e delle tasse di deposito / registrazione / mantenimento; - Sostenute; - Da sostenere	R								
20 Aspettativa di "sopravvivenza" del brevetto / invenzione / Residenza del brevetto / invenzione all'obsolescenza	R								
Impatto / Effetto	somma punt.	somma pesi	somma valore	rapporto: somma valore / somma pesi					
Opzioni									
21 Livello di opzioni aperte per le estensioni all'estero	O								
22 Livello di opzioni aperte sulla base del deposito brevettuale - Opzioni aperte oggi divenute possibili dopo il deposito - Opzioni ancora aperte dal deposito e utili per essere sfruttate	O								
Opzioni	somma punt.	somma pesi	somma valore	rapporto: somma valore / somma pesi					

Results and Mapping

Primary Grouping

Criteria:

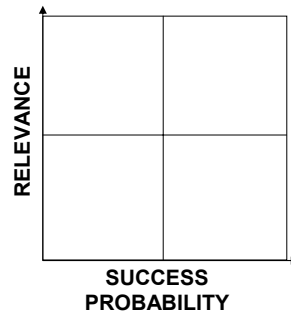
- Robustness of [...]
- Impact / Effect



Secondary Grouping

Criteria:

- Probability of Success
- Relevance

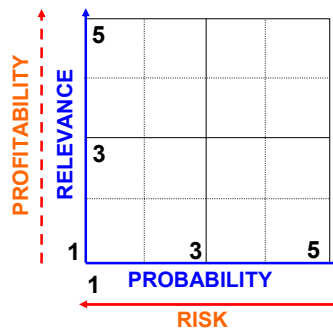


16

“Bank-oriented” secondary grouping

Criteria:

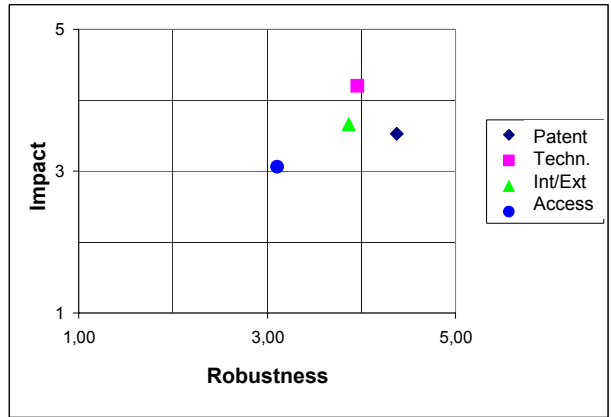
- Success Probability \rightarrow (Risk = 1 – Probability)
- Relevance \rightarrow (\sim “Profitability”)



17

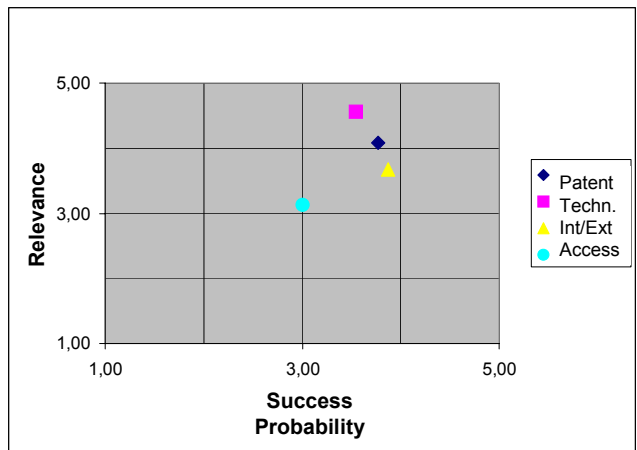
MODULES 1-5

	Patent	Techn.	Int/Ext	Access
Robustness	4.38	3.96	3.87	3.11
Impact / Effect	3.52	4.21	3.67	3.06

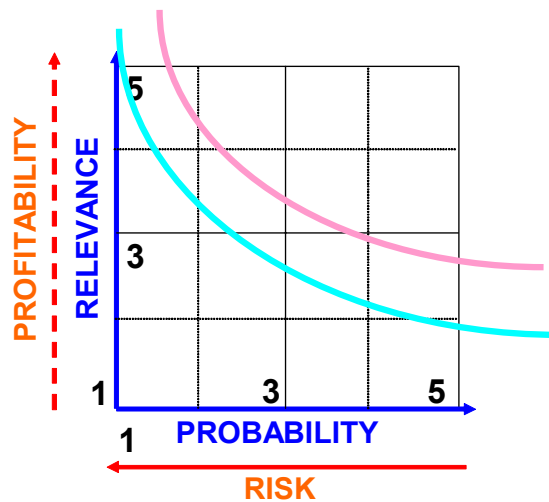


MODULES 1-5

	Patent	Techn.	Int/Ext	Access
Success Probability	3.77	3.55	3.87	3.00
Relevance	4.07	4.57	3.67	3.12



IP-based Project Portfolio



20

© 2008-2009, Sara Giordani
TTP Lab
Technology Transfer Program & Laboratory

Modular Platform Proposal

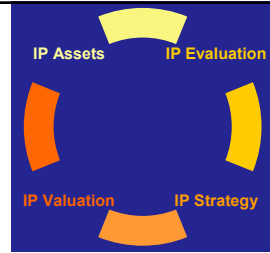
- **Organize Business Context related indicators and criteria**
 - Business Context related criteria are usually hard-to-quantify
- **Structure and simplify analysis, allowing for systematic grouping and integration of indicators/ parameters/ modules**
 - Indications of risk vs potential areas (like on a chart) to facilitate credit worthiness analysis
- **Provide guidelines / checklists**
- **Flexible, manageable, customizable**
- **Integrable and usable in support of “judgmental” evaluation methods**
 - E.g. for new innovative enterprises, start-ups, spin-offs

21

© 2008-2009, Sara Giordani
TTP Lab
Technology Transfer Program & Laboratory

Usages and Benefits

- Guidelines for simplified evaluation, stretching between finance and strategy, in support of decision making.
- Control / check tool; Recursive check-up
- Improved understanding of *intrinsic value* and more reliable calculation of *monetary value*;
- Adding more parameters for assessing risk, e.g. for financing innovative projects or opening a credit line for innovative SMEs (mitigation of business risk, better credit rating thanks to competitive advantages...)
- Devising financial instruments to facilitate access to capitals to SMEs, to new and innovative firms/ ventures
- Integrate IP related policies into programs in support of enterprises' creation and development



22

© 2008-2009, Sara Giordani

TTP Lab
Technology Transfer Program & Laboratory

UIBM Project at a glance

Not looking specifically at a monetary value, but at a tool to collect, select, assess the merit of patent in a comprehensive view of credit worthiness of the project

Looking at IP correlation with other business or project components for:

- Improving the analysis of credit worthiness, in presence of IP;
- Improving risk management: risk mitigation logic;
- Locating and "reading" patents in a business, strategic and financial-economic context;
- Facilitating access to debt and venture capital;
- Considering feasibility of using patents as collaterals, guarantee, pledge.

23

© 2008-2009, Sara Giordani

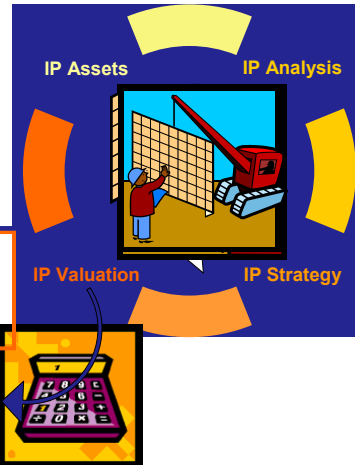
TTP Lab
Technology Transfer Program & Laboratory

1. Framework of Analysis

Use / Evaluate

- Criteria
- Indicators

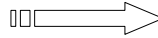
Matrix – grid with scores and weights to present how the project scores in terms of Robustness, Risk / Probability of Success, Relevance, Impact



2. Valuation

Valuation Methods

- Cost Approach
- Market Approach
- Income Approach
- ❖ Real Options



Thank you!

Sara Giordani

Office Tel.: +39-0444-326515

Office Fax: +39-0444-327132

Skype: *giordanisara*

E-m.: sara@giordani-consulting.com

sara.giordani@ttplab.com