

Management strategies to reduce conception/creation risks of intellectual property

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Abstract: *This paper is focused on finding the best management strategies to reduce conception/creation risks of intellectual property. For this we performed a SWOT analysis of conception /creation risks of intellectual property, which was analysed in a Brainstorming session, where several management strategies for risk reduction were found. Then a multi-criterion analysis was conducted which resulted in finding the best management strategy to reduce conception/creation risks of intellectual property.*

Key-words: *risk analysis, strategy, performance, intellectual property.*

1. Introduction

According to ISO 31000 (ISO / FDIS 31000: 2009, 6) among the main goals of risks treatment of an efficient risk management that any organization wants to implement, are as follows:

- Identification of opportunities and threats within the organization;
- Application of specific legislation in accordance with the requirements, both nationally and internationally;
- Using all resources for treating risks and minimizing losses.

2. Objectives

In our context, in order to reduce the risk of conception/creation of intellectual property, the main objectives of risk management must be adapted. For this, we will perform a SWOT analysis of conception / creation risks of intellectual property, after which we will identify opportunities and threats.

In previous studies (Secară, Fântână 2010, 311) related to intellectual property, the most important risks of conception/creation were identified, namely:

- Risk of failure to protect inventions in design/research/development;

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- Risk of failure to protect utility models in design/research/development;
- Risk of failure to protect industrial drawings in design/research/development;
- Risk of failure to protect topographies of integrated circuits in design/research/development;
- Risk of intellectual theft;
- Risk of failure to pay the original creation applied;
- Risk of unfair contract terms;
- Risk of failure to protect the software of the company;
- Risk of counterfeiting;
- Risk of piracy;
- Risk of forgery.

The application of the SWOT analysis on the risks of conception/creation is necessary in order to identify the most effective solutions for reducing them and to capitalize intangible assets of intellectual property in a market that is constantly changing. The scheme of SWOT analysis on conception/creation risks is shown in Table 1.

3. Material and methods

In order to find the best management strategies, after performing the SWOT analysis of conception/creation risks, we organized a Brainstorming session with experts in the field of intellectual property.

After the Brainstorming sessions, the following strategies have been proposed to reduce the conception/creation risks of intellectual property, namely:

- Strategy of conception/creation risks prevention by applying all forms of intellectual property protection;
- Capitalization strategy of intellect property assets through assignment contracts, licenses etc.;
- Simulation strategy of intellectual property risks reducing their negative effects.

In order to determine which conception/creation risk reduction strategy is more effective, a multi-criteria analysis was proposed.

The first stage of the multi-criteria analysis is to establish the criteria, in our case, the characterization criteria of conception/creation risks of intellectual property.

The characterization criteria of conception/creation risks are:

1. The probability of capitalization of drawings - industrial models without the consent of the authors. Abuse- according to (Law 129/1992, Art. 10) (**PVDMI**).
2. The probability of reproducing integrated circuit topographies for marketing without the author's agreement. Counterfeiting infringements - according (Law 16/1995, Art. 40) (**PRTCI**).

3. The probability of counterfeiting utility models. According to (Law 350/2007) (PCPMU).

SWOT ANALYSIS OF CONCEPTION/CREATION RISKS OF INTELLECTUAL PROPERTY			
<p>STRENGTHS:</p> <ul style="list-style-type: none"> -application of risk management principles within the company; -preventing negative impact events; -explicit approach of uncertainty; -Once identified, their reduction is facilitated; -their reduction helps the development and continuous improvement of the company. 	<p>Methods of operation:</p> <ul style="list-style-type: none"> - Implementation of an effective management of IP risk, a management of IP; -application of protection measures to reduce the risk of conception / creation; -training the company's staff on how to protect against the risk of conception/creation; -taking the right decisions of protection, as required by law. 	<p>WEAKNESSES:</p> <ul style="list-style-type: none"> -late identification of conception/creation risks of IP (it can have serious consequences on the company); -inexistence of confidentiality contracts between the company and employees; - contradictory legislation on IP rights. 	<p>Methods of reduction:</p> <ul style="list-style-type: none"> -implementation of an efficient management of IP; -knowing the prevention and protection legislation; - permanent review of internal documentation of IP, in order to maintain their protection; -permanent monitoring and IP analysis of competitors in order to avoid infringement of IP rights.
<p>OPPORTUNITIES</p> <ul style="list-style-type: none"> - IP capitalization by specific documentation issued by OSIM. 	<p>Methods of operation:</p> <ul style="list-style-type: none"> -conclusion of assignment contracts with other companies in order to obtain long-term profits. 	<p>THREATS:</p> <ul style="list-style-type: none"> - the company's bankruptcy; - the increase in the number of competitors/imitators on internal/external market; - the risks of conception/creation listed above. 	<p>Methods of reduction:</p> <ul style="list-style-type: none"> -knowledge and application of the law; -application of all forms of IP protection, such as: <ul style="list-style-type: none"> - Utility model certificate; - Certificate of design - industrial design; - Integrated circuit topography certificate; - Patent certificate etc.

Table 1. SWOT analysis of conception / creation risks of intellectual property.

The characterization criteria of conception/creation of risk of intellectual property being identified, the weight coefficients of each criterion will be calculated, using the formula (Bobancu 2012, 63):

$$Y_i = \frac{p + \Delta_p + m + 0.5}{-\Delta_p' + \frac{N_{crt}}{2}} \quad (1)$$

where:

p = sum of points obtained (on line) by the item taken into account;

Δ_p = the difference between the score of the item taken into account and the score of the item on the last level; if the item taken into account is the one on the last level, Δ_p results with the value 0;

m = the number of criteria outclassed (outdated in terms of score) by the criteria taken into account;

N_{crt} = the number of criteria taken into account;

$-\Delta_p'$ = the difference between the score of the item taken into account and the score of the first item (resulting in a negative value); if the item taken into account is on the first level, $-\Delta_p'$ results with the value 0.

Weighting coefficients values are shown in Table 2, as follows:

	PVDMI	PRTCI	PCPMU	Points	Level	Yi
PVDMI	1/2	1	1	2.5	1	4.66
PRTCI	0	1/2	1	1.5	2	8
PCPMU	0	0	1/2	0.5	3	0.33

Table 2. Determination of the weight of each criterion.

According to our study, few variants (management strategies) were chosen to reduce the risk of conception/creation of intellectual property, namely:

Variant 1:

The strategy of prevention of conception/creation risks by applying all forms of intellectual property protection.

Variant 2:

The strategy to capitalize intellectual property assets through contracts of assignment, license, etc.

Variant 3:

The simulation strategy of intellectual property risks reducing their negative effects.

After identifying the variants, grades will be given to each variant according to each criterion, as it can be seen in Table 3.

	PVDMI	PRTCI	PCPMU
Variant 1	10	10	10
Variant 2	8	8	9
Variant 3	9	9	9

Table 3. Giving a grade to each variant.

Each variant will be analysed, in order, in Table 4, in terms of each criterion, until all variants are exhausted and this table is also called the "Matrix of consequences".

	C1	C1*Y1	C2	C2*Y2	C3	C3*Y3	Total
V1	10	46.6	10	80	10	3.3	129.9
V2	8	37.28	8	64	9	2.97	104.25
V3	9	41.94	9	72	9	2.97	116.91

Table 4. Raising grades with importance coefficient.

4. Results and Discussions

According to Table 4, the grades for each variable in Table 3 were multiplied with weight coefficients for each variable, and finally all the sums obtained by the multiplication for each variant added up.

Following the calculations that were made in Table 4, it was found that the highest amount (129.9) ranks variant 1 on the first place followed by variant 3 on the second place with a score of 116.91, and variant 2 on the third place with a score of 104.25.

Following the interpretation of the results, it is seen that the variant with the highest score is variant 1, namely: The strategy of prevention of conception/creation risks by applying all forms of intellectual property protection.

According to OSIM nationwide and WIPO internationally, the main reduction forms of conception/creation risk of intellectual property are:

- The utility model certificate;
- The certificate of design - industrial design;
- The integrated circuit topography certificate;
- The Patent certificate.

Awareness at the management level of the organization on the risks of conception/creation of intellectual property is the first step to prevent them, but this should be done by complying with the rules of professional conduct, in order to transfer the rights under the law in force.

Although obtaining these intellectual property rights through various forms of protection listed above can be considered expensive, in time they will bring long-term profits and economic security.

On a market with an increasing number of competitors/imitators, an efficient management should include all methods and strategies to reduce the risks of intellectual property and *The strategy of conception / creation risks prevention by applying all forms of intellectual property protection* is recommended to avoid losses and eventually bankruptcy of the company.

5. Conclusions

According to the multi-criteria analysis applied to our study, it resulted that the most efficient strategy to reduce risk of conception/creation of intellectual property is the management strategy of conception/creation risks prevention by applying all forms of intellectual property protection within the company.

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