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the selection of the company to ensure its serious involvement.

Having Innovation Management training sessions opens new opportunities and horizons to organizations involved, especially when their managers take advantage of it and ensure its sustainability. The organizational challenge is to provide conditions for innovation use, like creating an adequate climate for Innovation Management implementation, in order to motivate employees.

During the study, we had the opportunity to see closely the barriers of innovation within North African firms. One of them is the lack of awareness about the training session. In effect, when the company has a crisis problem, the managers forget about Innovation Management, whereas in fact this program helps them to manage crisis. On the other hand, generally North African companies risk to have a short vision, by neglecting to maintain the innovative mindset when engaged in the daily chores.

Therefore, it is recommended for companies which are engaged in the innovation management process, to ensure a suitable climate for the innovation manager. This person is considered as a conductor of the team, who involves and motivates everyone for monitoring and managing innovative projects and also to ensure the transfer of the training. Finally, it would be interesting to provide continuous training to meet the needs of the company and ensure its competitiveness and its sustainability.

Table 4: Evaluation (Company X)

Strengths:	Weaknesses
- o Establishment of a structured innovation process - o The vision of the company is now shared: the staff is involved - o Complementary departments: making work in groups - o internal communication improved - o Have more a sense of belonging to Company X - o Have the concept 27ft he project and project management - o Application of some tools such as creativity methods „Brainstorming“ - o Employees are more Motivated and have the initiative for launching new projects	- o Timing: have a team meeting for training is not always obvious - o Availability: Ensure both work and training session is not easily manageable - o learned theoretical tools, but cannot currently apply them

4. Implication

The current study allowed us to highlight that Innovation Management is recent in the North African context. The establishment of Innovation Management model (INNORPI, 2012) is a key driver in the future of innovation in this region of the world. Nevertheless, more accurate projects are underway to improve and develop the current model.

In order to improve the current innovation management model, we suggest to customize the training session to the specific companies' needs. On the other hand, we recommend to add a preparative stage before

			with our suppliers	further training to meet the needs of the Company. • To avoid sharing experience with competitors, the company can meet and share experience with international companies.
	25	1,25	We meet and share experiences with other firms to help us learn	
	35	4,25	We are good at learning from other organizations	

The table below (Table 4) summaries the evaluation of the innovation management within Company X after the training session.

			products/service s or processes	ideas: each one has to cooperate with his team and apply some creative methods.
	33	4,75	We have a supportive climate for new ideas – people don't have to leave the organization to make them happen	
Linkages	4	4,5	There is a strong commitment to training and development of people	Although national system doesn't encourage the linkage between universities and companies, Company X can explore the opportunity to communicat e their needs to move research into production with respecting tools of confidentiali ty (contracts, patents, secret..)
	14	4,25	We work well with universities and other research centers to help us develop our knowledge	
	24	4,5	We collaborate with other firms to develop new products or processes	
	34	2,25	We work closely with the local and national education system to communicate our needs for skills	
Learning	5	3	We have good 'win-win' relationships	It would be interesting to provide

Table 3: Areas of improvement after IM

Category	N ^o	Score	Statement	Recommendations
Strategy	36	4,5	There is a clear link between the innovation projects we carry out and the overall strategy of the business	• The innovation manager would play a key role after GIZ program: she is becoming a conductor who engages, motivates the team and ensures the transfer of the training. • It is important to promote Innovation Management program internally and ensure its sustainability.
Processes	7	4	Our innovation projects are usually completed on time and within budget	• It is recommended to develop a project management approach and respect GIZ model.
Organization	13	4,75	People are involved in suggesting ideas for improvements to	• Only managers are involved in suggestion

			mistakes	customer. • The company has new tools that make the managers learning from competitors. • Existence of indicators: it should be matched to the innovation dashboard.
	20	5	We systematicall y compare our products/ Services and processes with other firms	
	30	5	We are good at capturing what we have learned so that others in the organization can make use of it	
	40	5,5	We use measuremen ts to help identify where and when we can improve our Innovation Management	

The next table (Table 3) shows the lowest scored statements of the Innovation Fitness Test after GIZ training session and highlights the recommendation.

Linkages	9	6,25	We take time to review our projects to improve our projects to improve our performance next time	• Launching new project during the program which “improved prospecting and monitoring customer” The main objectives of this project are: ○ Increase customer base potential ○ Improve customer relations ○ Customer loyalty and satisfaction ○ Improving the image of the company and its products to the customer ○ Increase its turnover
	19	5,25	We work closely with our customers in exploring and developing new concepts	
	29	5,5	We try to develop external networks of people who can help us – for example, with specialist knowledge	
	39	6,5	We work closely with ‘lead users’ to develop innovative new products and services	
Learning	10	6	We are good at understanding the needs of our customers/end-users	• Thanks to the project presented before, Company X has developed how to understand the needs of the
	15	6	We learn from our	

			development to allow small 'fast-track' projects to happen	
Organizational	3	6,33	Our organization structure does not stifle innovation but helps it to happen	• Improvement of internal communication • Having more sense of belonging to Company X • Employees are more motivated and have the initiative for launching new projects • Employees work well in team across departments: before the training session, employees from different departments used to work as competitors within the same company. Now, they discover how it is fruitful to work together: "we complete each other" as the marketing manager said.
	8	6,5	People work well together across departmental Boundaries	
	18	5,25	Our structure helps us to take decisions rapidly	
	23	6,25	Communication is effective and works top-down, bottom-up and across the organization	
	28	6,25	Our reward and recognition system supports innovation	
	38	6	We work well in teams	

			effective mechanisms for managing process change from idea through to successful implementation	
	22	6	We systematically search for new product or service ideas	
	27	6	We have mechanisms in place to ensure early involvement of all departments in developing new products/ services/ processes	
	32	5,25	We have effective mechanisms to make sure everyone (not just marketing) understands customer needs	
	37	5,5	There is sufficient flexibility in our system for product	

			shared vision of how the company will develop through innovation	
	26	5,5	There is top management commitment and support for innovation	
	31	5	We have processes in place to review new technological or market developments and what they mean	
Processes	2	5,75	We have processes in place to help us manage new product/service development effectively from idea to launch	• Establishment of a structured innovation process • Complementary departments: team work • Knowing new tools as project management • Application of brainstorming method
	12	6	We have effective mechanisms to make sure everyone (not just marketing) understands customer needs	
	17	5,5	We have	

Table 2: The strengths assessment

Category	N°	Score	Statement	Strengths
Strategy	1	6	People have a clear idea of how innovation can help us compete	• The Vision of the company is becoming clearly shared: the staff is becoming involved. • Collaboration and synergy between various departments. • Employees are highly committed to the program.
	6	5,75	Our innovation strategy is clearly communicated so everyone knows the targets for improvement	
	11	5,75	People know what our distinctive competence is – what gives us a competitive edge	
	16	5,5	We look ahead in a structured way (using forecasting tools and techniques) to try and imagine future threats and opportunities	
	21	6	Our top team have a	

Before GIZ training session:

Areas of improvement & development

We analyzed the low score statements per category. According to the Innovation Fitness Test, we used first the meaning of each low or high score and the recommendations-proposed by Tidd, Bessant & Pavitt (2005). Then, we used our diagnostic analyzed through an interview for those who did the test, to describe the initial situation within Company X before starting the training session.

After GIZ training session: Strengths assessment

The table below (Table 2) shows the highest scored statements of the Innovation Fitness Test after GIZ training session and highlights the company assets.

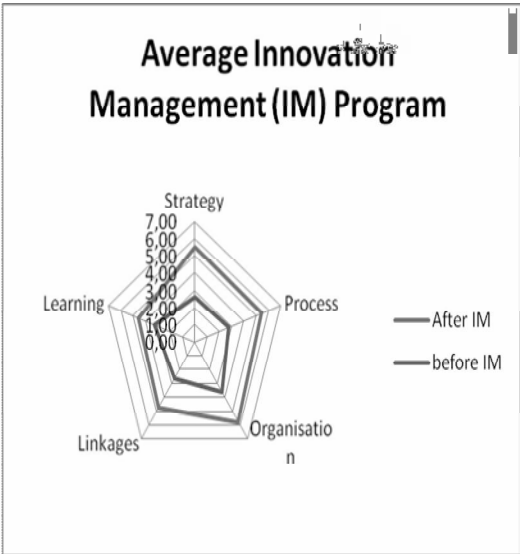


Figure 4: Average of Innovation Fitness Test of Company X

The results resumed are shown in Table 1.

Table 1: Results interpretation before and after IM (Company X)

Before IM	After IM
In general, all scores are under the average. The highest score is attributed to the Organization which is one of strength point of Company X; employees have a great sense of belonging to the company and work together as family members. However, the lowest score is assigned to Linkages.	After the training session, scores increase. The highest score still be attributed to the Organization. The lowest score is assigned to Learning.

3.2. Analyzing the results

A deeper assessment is required to spot out the key success points and to identify the areas of improvement and development to foster further innovation in this firm.

3. Results

The company involved in our study (Company X) is one of the leader companies in the North African market. It's an Internet service provider, positioned as a strong local and international competitive firm. The company was established in 2001, after a short time, it has become an incubator of ideas for new technologies and has developed several products. Innovation is in the heart of company activity, based on the continuous technological development of products and services, that's why the CEO promotes and supports Innovation Management GIZ program.

The Innovation Fitness Test has been used to evaluate the innovation within the industry before and after the program to capture the added value.

We made the test with four employees; the responsible of Innovation Management, responsible of Marketing, responsible of distribution, responsible of quality.

In the following parts we discuss the results:

3.1. General evaluation

The graphic below (Figure 6) shows the average results for 8 questions on each of the above mentioned aspects. It allows us to have a global estimation of innovation in the company by comparing the score of each category to the ideal score before and after the implementation of Innovation Management system.

In practice, we assisted the Innovation Management expert in the implementation of the Innovation Management system. For confidentiality reasons, we can't give the name of the company.

2.2. Innovation Fitness Test:

To help answer the research questions, we use the Innovation Fitness Test to analyze the degree of adoption of Innovation Management within the company involved in the study.

The "Innovation Fitness" is a diagnostic tool which provides an easy-to-use questionnaire to evaluate a company's capabilities. The questionnaire contains 40 statements. For each on them, the score could vary between 1 (= not true at all) to 7 (=very true). After that, we calculate the total by category. Finally, we draw the profile of innovation as shown in the figure 5.

Innovation Fitness Test was designed by renowned innovation expert Professor John Bessant (AIM Practice, 2011) to help managers to:

- Identify how fit their organization is to innovate
- Diagnose their innovation dead ends
- Understand the five innovation drivers: Strategy, Organization for innovation, Processes, Linkages and Learning
- Identify how their organization can become truly innovative.

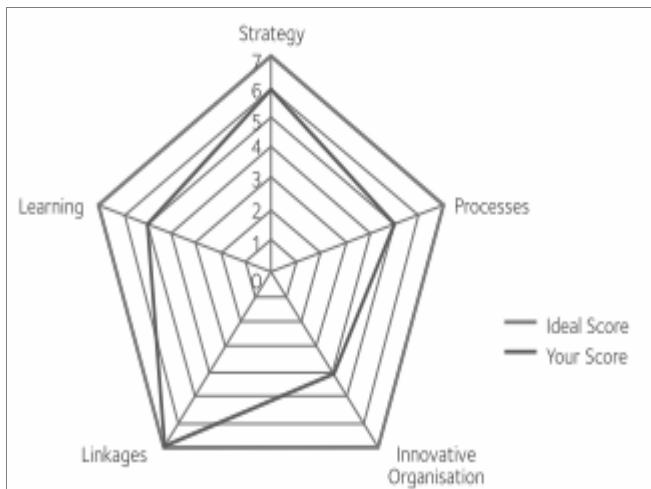


Figure 3: Profile of innovation (AIM Practice, 2011)

This Innovation Management system emphasizes the interest of business intelligence and steering of information in order to enable companies to develop their own competitive advantage. Setting the pace for innovation deals with providing a favorable environment for creativity and collaborative work, ensuring staff development and stability of human capital and capitalization and sharing of skills and experiences.

The model involves several parts closely interconnected. It takes into account current and future environmental issues, by considering eco-innovation and eco-efficiency through the integration of sustainable development concepts into the country policies business innovation (INNORPI, 2012).

Although this model includes the four principal stages which searches for the opportunities, idea selection and implementation and capturing the benefits, it is not a linear process: the various connections lead us to consider it much more than the spaghetti model of innovation stated by Tidd & Bessant (2009).

In addition to that model, a variety of standard tools are used (INNORPI, 2012; PASRI, 2012):

- Conducting a diagnosis of innovation: calculation of the internal potential of**
- Innovation and establishment of innovation radar, the conduction of a SWOT analysis.**
- The establishment of the QFD (Quality Function Deployment) matrix to understand Customer expectations.**
- The establishment of a roadmap: vision / Strategy / Mission / action plans (Balanced Scorecard BSC)**
- The organization of Business intelligence activities**
- The organization of project management and project portfolio**
- Establishing business plans**
- Managing innovation performance, strategic selection (the matrix of idea selection).**

- 1st stage: Launch: it's a key step to get the agreement of the main employees involved in the program such as the innovation team and the RMI.
- 2nd stage: setting Innovation structure and creating a conducive environment to innovation: it's useful to prepare the ground for the next stage by means of several strategic tools and concepts.
- 3rd stage: Innovation process: it aims to move from theory to real practice: it allows involved employees to turn ideas into well-structured innovative projects.
- 4th stage: Evaluation: it aims to assess the achievements and whether the company has absorbed the process or not and if it could manage the innovation autonomously.

In the figure 4, we show the innovation management model as applied to one of the North African countries (INNORPI, 2012). This model has been designed and validated during the pilot innovation project initiated by GIZ (PASRI, 2012).

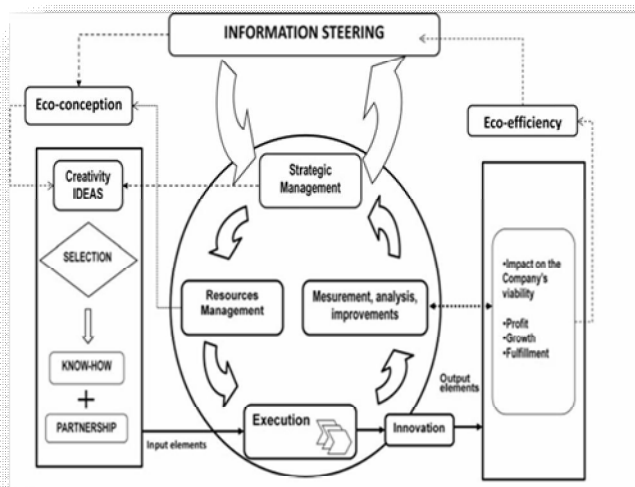


Figure 2: Innovation Management Model (INNORPI, 2012)

Finally, the literature confirms the importance of implementing innovation management instruments in SMEs firms, so to enhance their competitiveness.

2. Methodology

As a new field, many barriers faced North African SMEs to introduce innovation management approach. GIZ experts noticed some of them, as: lack of strategic vision, weak structures, resistance to change, lack of communication, teamwork undeveloped, low intake initiative and lack of competence in the management of human resources in most companies.

These barriers would help us to see the influence of innovation management system applied within SMEs: its improvement and efficiency. To see that, we propose to study the case of an north African company which implemented the innovation management system, as conceptualized by the GIZ model. That's why, as a first step, we show the GIZ model. Secondly, we expose the innovation fitness test, the tool that will help us evaluate the innovation adopted by the company analyzed.

2.1. GIZ Model

The training GIZ program has 46 Innovation Management practitioners distributed as twenty-five-man-day in one year. The figure below (Figure 2) exhibits the main phases of the training session.

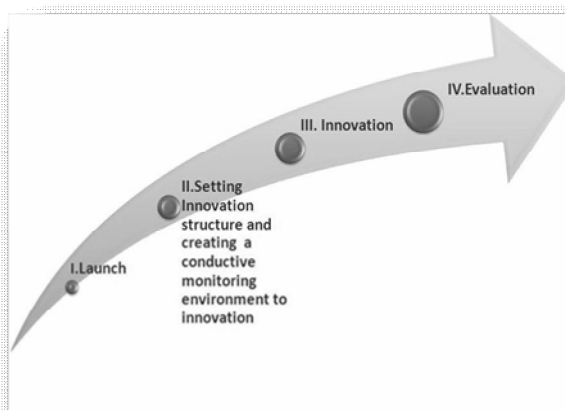


Figure 2: Training phases (own picture)

following part on tools and elements to consider in order to implement this concept within the small and medium-sized firms.

Innovation Management in SMEs:

To know more about Innovation Management in Small and Medium-Sized Firms, we expose Thom (1990)’s research. It describes the general characteristics of firms and management instruments which can promote innovations in small and medium-sized firms.

The author underlines the general characteristics of firms and management which can promote Innovations. They are the corporate culture which is related to the personal profile of managers, the kind of communication within the organization and the readiness to delegate by the entrepreneurs and the managers.

The author emphasizes on the importance to define a goal and a coherent strategy within the companies. In this context, goals should be adapted to the product innovation process or the planned improvements in human resource management. He also explains how to motivate employees for promoting innovations. To support this idea, Thom (1980) presents a model about the employment of special instruments for promotion of innovations in small and medium-sized firms.

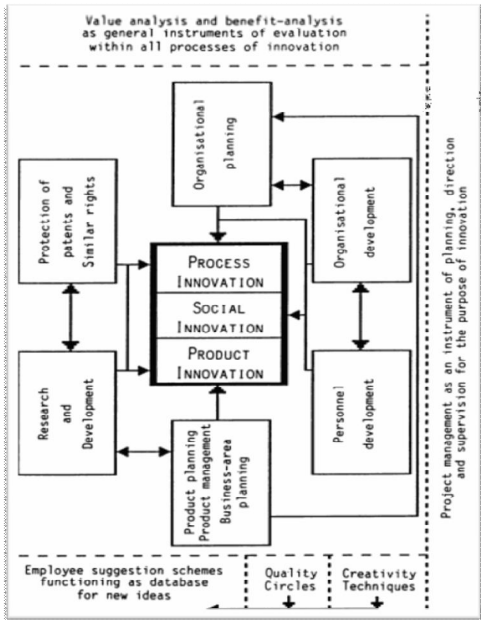


Figure 1: Mix of Innovation Instruments (Thom, 1980, p.500)

We begin the study with a brief review of the literature about Innovation Management, in particular within small and medium sized firms. In the second part, we expose first the model of innovation management program based on North African context and then, the methodology of analyzing the degree of Innovation Management adoption. Final parts are dedicated to results and then implication.

1 Literature review

Innovation Management:

The OECD/Eurostat (2005) defines innovation as containing more than developing cutting-edge technologies. It includes the adoption, adaptation and diffusion of products, processes, marketing or organizational methods in a new country context and to country and locally specific conditions (new to the world, new to the market and new to the firm innovations).

On the other hand, according to the World Bank (2010), Innovation is defined as the commercially successful introduction or implementation of a technical or organizational novelty. The same author stresses on the fact that it represents the main source of economic growth.

Furthermore, the authors of Strategic Business Guide think that innovation is the engine of development and well-being. The new technologies, products, services and organizations create jobs and renew businesses. But to take advantages of this, companies must understand the process of innovation and evolution. This has implications for entrepreneurs if they want to feed the company's innovation.

Several researchers have spoken about how to implement a process and to manage innovation. They also underline the importance of Innovation Management. According to Mootee (2013), Innovation Management is not only about planning new products, services, brand extensions, or technology inventions. It also concerns imagining, mobilizing and competing in new ways.

Kimberly & Evanisko (1981) and Damanpour & Evan (1984) added that innovation is the most important tool for enterprises to keep their competitive advantage.

Aware about the importance of innovation management for the improvement of the situation of the company, we focus in the

well-defined system. During the recent years, North African countries have been aware about their exceptional geo-economic context which has increasingly facing competition with Asian and other countries. That's why they have stepped up efforts to improve the national research system and innovation. This includes both the allocation of responsibilities and the implementation of mechanisms and instruments for their development and promotion. Although North African national economic systems aren't very developed, they are potentially very interesting.

In this context, and in order to carry out the crucial task of supporting innovation and research, GIZ (German agency for international cooperation) resorts to Innovation Management experts to back North African SMEs (Small and Medium Enterprises) - which are enrolled in the program - with technical support to develop competencies to innovate. Subsequently, those SMEs would be able to actively participate, as key actors, to the growth of the National Innovation System.

In the light of what it has been said, we focus in this study on the extent to which the North African companies have been able to improve their innovation management, by applying the GIZ's program. That's to say, we aim, through this study to respond to the following research questions: which are motivators and barriers of the adoption of the Innovation Management Program by North African companies? And, how to ensure the sustainability of this program?

In this context, we have chosen to present a case study of a company which adopted this program with the support of a consultancy company named Trade Partners International (TPI)¹. Implication of the adoption of the innovation management program is then discussed.

¹ Trade Partners International (TPI) is a consultancy company specialized in Export counseling, based in North Africa and Sub-Saharan Africa. It offers in particular coaching services to SMEs and supports them to enhance their competitiveness through implementing a system of

Impact of Innovation Management adoption on North African companies: a case study

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Abstract

This study focuses on the extent to which the North African companies have been able to improve their innovation management, by applying the GIZ's program. Through a case study, we aim to know motivators and barriers of the adoption of this program by North African companies, and how to ensure its sustainability. Implication of the adoption of the innovation management program is then discussed.

Keywords: Innovation Management, North African companies, GIZ

الملخص:

تركز هذه الدراسة على مدى قدرة شركات شمال أفريقيا على تحسين إدارة الابتكار، وذلك من خلال تطبيق برنامج GIZ. ونهدف من خلال دراسة حالة، إلى معرفة المحفزات والحوجز لاعتماد هذا البرنامج من قبل شركات شمال أفريقيا، وكيفية ضمان استدامته. وفي الأخير يتم مناقشة الآثار المترتبة على اعتماد برنامج إدارة الابتكار. الكلمات المفتاح: إدارة الابتكار، شركات شمال أفريقيا، GIZ.

1. Introduction

Being one of the main ways to gain a competitive advantage, innovation has become a necessity to ensure a successful economic growth. When nation encourages innovation, its economy becomes more open to new ideas, new projects and new technology, which requires quite a