

IDENTIFYING PROBLEMS AND OPPORTUNITIES IN CONNECT DAYS APPLYING STRATEGIC PLANNING TOOLS



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ABSTRACT

Connect Day has been developed as a time-cost effective one-day event to connect the challenges and promote the collaboration of the academic talent of Tecnológico de Monterrey with companies. The event consists on identifying problems and opportunities and defining projects to solve them, allowing the companies to be more competitive and improve their business models.

Prior to these events, it is important to know the information of the innovation strategy and business models of companies to define problems and opportunities of the challenges they are facing. Two of the challenges that must be addressed are competitiveness related with micro environment and disruptive innovation related with macro environment.

To accomplish successful results, a methodology based on the integration of strategic planning tools can be applied to identify the areas and challenges. Porter's Five Forces (Competitive Rivalry, Supplier Power, Buyer Power, Threat of Substitution and Threat of New Entry) can help to recognize areas with opportunities for the microenvironment or competitive environment [4]. In addition, PESTLE Analysis (Political, Economic, Social, Technological, Legal, and Environmental) contributes to select the challenges related to macro environment, with external and uncontrollable factors that influence the organization's decision making and affect its performance and strategies.

The application of these two tools (Porter and PESTLE) for the identification of problems and opportunities for Competitiveness and Disruptive Innovation helps to build strategic relationships based on Research, Innovation and Entrepreneurship projects while providing solutions to current problems. Events like Connect Day offer an opportunity for companies to understand the environment of their industry to define a strategy. Furthermore, it helps to create a win-win relationship with the University and to develop skills to have a business

model with the knowledge and technology to transform organizations.

Keywords

PESTLE, Porter, problem, opportunities, strategy, planning

INTRODUCTION

The challenge that every organization has, regardless of its size or core business, is to be competitive despite the globalized market and constant changes of the environment [3] Some of the challenges companies face are increased competition, market expansion and increased customer expectation [1]. Considering this, it is convenient to develop a strategic planning roadmap and identify problems and opportunities, so the company can be aware of its environment and define beneficial projects to be competitive.

The strategic planning process here proposed consist of three elements: 1) Identification of mission and vision, 2) Analysis of internal and external conditions and 3) Strategies for implementation and control [5]. As part of this process, it is important to identify the factors that are influencing the system and consider the two sides of the business environment: Macroenvironment and Microenvironment. For the macroenvironment, PESTLE Analysis can be used as a strategic tool to analyze the external factors of the system, which can be grouped into six categories: Political, Economic, Social, Technological, Legal and Environmental [7]. For the microenvironment, Porter's Forces (Buyer Power, Threat of New Entrants, Supplier Power, Threat of Substitution, Competitive Rivalry) can be used to include the closest factors to the company.

The purpose of this work is to demonstrate the utility of these strategic tools as part of a diagnosis strategy for Connect Day, an event that where organizations in Mexico can share their challenges with academic talent of Tecnológico de Monterrey in order to identify problems and opportunities and define projects to solve them.

CONNECT DAY

Connect Day offers an opportunity to connect the challenges of companies with the academic talent of Tecnológico de Monterrey. The event objective is to define suitable projects based on problems and opportunities identified by companies in association with Tecnológico de Monterrey. By solving them, it is expected that companies will become more competitive and improve their business models. The activities related with this collaborative model are here divided in seven stages:



Figure 1. Connect Day Stages

Exploration of liaison opportunities

Companies must define a plan to collaborate with the university, looking to align the innovation, research and development strategies of both parts. Once this is determined, work teams need to be formed. It is strongly recommended to look back to previous collaboration projects and take advantage of past contacts to facilitate the information exchange.

Innovation strategy and business model

The innovation and research strategy is presented; companies explain their business model while university presents their liaison model. Following this, the innovation, research and development capabilities are displayed. Strategic leaders (sponsor) must be defined and finally a confidentiality agreement is signed.

Priority areas and preliminary projects

Companies define their priority strategic areas and Tecnológico de Monterrey identifies which of its focus groups have a research line that aligns with companies' interests. Afterwards, the strategic challenges are classified as problems or opportunities. For

problems, the following questions must be answered: what is wrong (primary metric), where does it happen? (place), since when it happens? (time), how much? (magnitude), how do I know it is a problem? (gap). On the other side, for opportunities, the Job to be done must be identified and a value-proposition canvas is elaborated. To end with this stage, the preliminary project must be defined by stating a SMART objective, and strategic and operative leaders are named for both parts.

Connect Day

Strategic and operative leaders of companies meet with focus groups leaders, professors and researchers whose areas are of interest for the organization's business. Companies present their challenges and, according to the highlighted needs, an agenda is defined, including research presentations, visits to facilities, laboratories or special events at campus. To conclude the day, a One Page Definition Project is written after a roundtable discussion.

Technical and economic proposal

A solution proposal is presented by Tecnológico de Monterrey leaders with high expertise on the topics required by companies. Together, Key Process Indicators, deliverables and a schedule are defined, and a technical proposal draft is elaborated. Work teams are formed, responsibilities are decided, and budget is assigned. Finally, the economic proposal is reviewed, and the proper negotiations are conducted until both parts agree.

Project proposal selection

The project portfolio is defined and liaison strategies are evaluated according to the portfolio's magnitude and impact (Project, Chair, Distrito Tec). The contract is written, approved and signed, and the project is authorized to start.

Project execution, follow-up and closure

Every three months, strategic leaders from both parts report their progress until the project is finished. To conclude, the project closure is made, results are evaluated and the ROI is calculated.

Connect Day as a link between companies and university

The interaction between members of the industry and investigators offers an opportunity for the companies to understand the environment of their industry and to define a strategy. Furthermore, creates a win-win relationship with the University and contributes to develop the necessary skills to have a business model with the knowledge and technology to transform the organizations.

The identification of problems also brings the opportunity to cooperate with Continuing Education resources by determining academic training programs in which members of a company can enroll to develop the necessary skills to generate solutions for the company. For the University, it is an opportunity to know the challenges that companies are facing and evaluate the academic programs offered to assure the topics included on the syllabus are aligned with the needs of industry.

Prior to Connect Day, it is important to know the information of the Innovation Strategy and Business Models of the company to define properly problems and opportunities. Two of the challenges that need to be addressed are Competitiveness, related with the microenvironment, and Disruptive Innovation, related with the macroenvironment. To accomplish successful results, this article suggests the implementation of a methodology

based on the integration of strategic planning tools to identify opportunities and challenges.

MACROENVIRONMENT AND MICROENVIRONMENT ANALYSIS

To evaluate macroenvironment, each factor of the PESTLE analysis provides information that helps to determine the impact of external forces in the organization [8]:

- Political-Legal: Regulations, laws and pressure groups that affect society.
- Environmental: Natural resources required, use of resources, physical characteristics.
- Social: Aspects that are part of the society (Culture, values, symbols).
- Technological: Potential for new products and market opportunities.
- Economic: Purchasing power, consumers spending patterns, salary, production indicators.

On the other hand, the Porter's Five Forces model is used to comprehend the microenvironment, Understanding the competitive forces, and their underlying causes, reveals the roots of an industry's current profitability while providing a framework for anticipating and influencing competition (and profitability) over time [3].

- Buyer Power: Powerful customers can capture more value by forcing down prices, demanding better quality or more service, and generally playing industry participants off against one another, all at the expense of industry profitability.
- Threat of New Entrants: New entrants to an industry bring new capacity and a desire to gain market share that puts pressure on prices, costs, and the rate of investment necessary to compete.
- Supplier Power: Powerful suppliers capture more of the value for themselves by charging higher prices, limiting quality or services, or shifting costs to industry participants.
- Threat of Substitution: A substitute performs the same or a similar function as an industry's product by a different means.
- Competitive Rivalry: Rivalry among existing competitors takes many familiar forms, including price discounting, new product introductions, advertising campaigns, and service improvements. High rivalry limits the profitability of an industry.

The results obtained from the PESTLE analysis help to understand the major drivers and trends on a big scale, which is crucial to comprehend the underlying causes that influence the Porter's Five Forces model. However, in order to fully integrate the interaction between the macroenvironment and the microenvironment, it is proposed to use a SWOT analysis, which is a tool that facilitates to know and evaluate the real operative conditions of an organization by analyzing four variables (Strengths, Weaknesses, Opportunities and Threats) with the finality of proposing actions and strategies for its own benefit [5].

- Strengths: The areas where the organization is competent, keeping a high performance, generating benefits and attractive possibilities in the future.
- Weaknesses: The areas where the organization has a low performance, thus making

it vulnerable. They constitute an obstacle to achieve its objectives.

- Opportunities: Changes or trends in the environment that are detected and are potentially favorable for the organization. They can give an advantage to reach or surpass objectives.
- Threats: Changes or trends in the environment that lead to adverse situations. They can be sudden or progressive, and they create unstable conditions that put objectives at risk.

Salvatierra [6] proposes a methodology to detect threats and opportunities using PESTLE analysis for macroenvironment and Porter's Five Forces model for microenvironment using a series of questions related to each item of both analysis and weighing the answers according to an adaptation of a model proposed by Yüksel [9], where a sub-factor is evaluated. If the factor is partially acceptable or better, it is considered an opportunity, while if it is partially unacceptable or worse, it is considered a threat. The authors of this work consider these results can feed the Opportunities and Threats items for SWOT analysis and can also potentially unveil Strengths and Weaknesses of an organization with the aid of an internal assessment conducted between their members and the academic counterpart of the collaboration.

Once the Strengths, Weaknesses, Opportunities and Threats for an organization have been identified, a strategic roadmap can be constructed, highlighting the areas where a collaboration between academic entities and industry are more suitable.

STRATEGIC PLANING TOOLS AND CONTINUING EDUCATION

The proposal presented in this article suggests that the implementation of strategic planning tools, as part of the preparation for Connect Day, can contribute positively to identify the problems that the organizations need to solve and to promote Continuing Education.

Strategic Planning is important because it has the capacity of helping organizations to anticipate and respond to changes in a wise and effective way [2].

PESTLE and Porter analysis of the organization prior to Connect Day

When the liaison opportunity is defined, a PESTLE and a Porter Analysis of the organization who will be collaborating with the University are implemented.

The analysis of the macroenvironment (PESTLE) and microenvironment (Porter's Forces) will help to detect potential projects to be defined at Connect Day. With this diagnosis, it is possible to identify the Weaknesses and Threats of an organization.

From the perspective of a SWOT analysis, the collaboration will focus on the risk factor (Weaknesses + Threats) detected [5].

During the Connect Day event, the participants will continue with the current dynamic:

- Representatives from the company present the challenges that they are facing and the projects that they are working
- Academic talent of Tecnológico de Monterrey presents its research areas,

professional experience and collaborative projects with industry.

- Representatives from the industry and academic talent exchange information and define the next steps for collaborative work.

According with the problems detected and the strategy that was selected, a review of the academic programs is completed to select which is the most appropriate training to contribute with the development of the projects.

The activities of the process can be related with the SWOT analysis on the following figure:

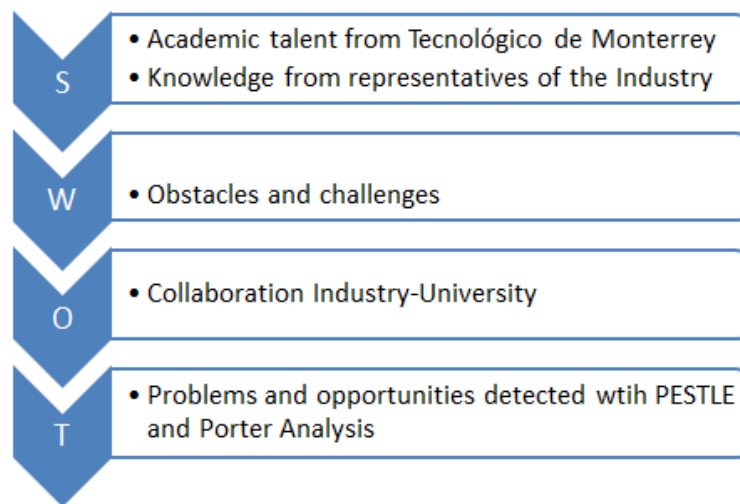


Figure 2 SWOT Analysis

CONCLUSIONS & RECOMMENDATIONS

The application of PESTLE and Porter's Forces as strategy planning tools helps to determine the problems that needs to be solved and includes the main factors to consider in order to define the right projects. The incorporation of the macroenvironment and microenvironment analysis before a Connect Day session can be useful to understand the environment of the company and the projects that need to be developed to have a significant impact on the performance of the organization.

The collaboration in Connect Day between Industry and teachers from Tecnológico de Monterrey creates a platform to build long-term relationships where they can join forces to work in projects to solve challenging problems. Moreover, it helps to promote academic programs and training that can help to acquire or improve skills that will help to achieve successful results.

With events like Connect Day and the incorporation of strategic planning tools, the collaboration between Industry-University contributes to the competitiveness of the organizations, generates innovative solutions and helps to promote participation on

collaborative research opportunities.

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