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Method for Raising Demands of Multi-enterprises for Services on Technological Support: “nit/materiais” Case

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Abstract
The ability to compete has assumed a key role to industry, universities and other segments of society. Industries have a major need to enhance this ability for their products and processes, to ensure that they will keep on business in the future. Small and medium sized industries find harder to keep and improve their ability to compete in the market compared to big sized industries. This happens mainly because the lack of technical and financial resources. In this context, new entities have arisen to uphold small and medium sized industries with technical support aiming the enhancing of their competitiveness. These entities, in order to fulfill their mission, must be able to identify the actual information needs of their clients (industry, university, etc.) and to check and adjust their internal competencies. To offer these services at an affordable cost to small and medium sized industries, one option is to identify common needs of industry groups and then proceed with a process of solutions development that makes possible to share costs among the industries. To execute this form of serving, one critical step is the performing of needs assessment of each industry individually and in group. It’s important to give priority to those that bring more impact on industries competitiveness at their attractive market. The use of strategic planning tools can be very useful to build an integrated view of the different perspectives that comprise all industry activities. It is Also important to say that through strategic planning it’s possible to align the ideas of the decision-makers, aiming to point the main needs regarding the strategy conducting of industries. Due to the lack of information related to this subject, this work aims to present the development and practical usage of a needs assessment technique applicable to a single industry and to groups of industries, performed through strategic planning. This technique is based on methods and concepts of Porter, Ansoff, Cook and Majluf, comprising survey tools, visits to the pro-
ductive line and meetings with industries executives. To carry out the needs assessment statistical methods, especially multi-varied analysis, it is applied to join industries into similar strategies groups. The method included a questionnaire applied to forty-two industries of tiles and structural ceramic sectors. The questionnaire had questions such as 1) What are the current actions that are being conducted at the industry? 2) How is the industry is developing competitive strategies? 3) What is the main demand for technical support services? The questions along with their respective labels of identification were: In group 1, the industries were questioned if they have, will develop in short term, do or take part of: a) products design - DESIGN; b) quality control laboratory - LABORATO; c) raw material control - CQMP; d) technological monitoring MONITORA; e) new design monitoring - MODESING; f) national fairs - P FEIRAS; g) international fairs - V-INTER; h) knowledge of the product critical features - ESPEC-CF; l) product quality control - CQ-PROD; j) environmental control program - PROG-AMB. In group 2, it was questioned what the industries do to acquire competitive advantage in relation to their competitors. The answers could be one or more than one among the following: a) cost (price) - CUSTO; b) product quality - QUALID; c) products differentiation - DIFERE; d) actuating in market niches with a flexible manufacturing process - FLEXIB; e) by quality services - QUALSERV. In group 3, it is identified the services sought by enterprises referred to: a) market - MERCADO; b) design - DESIGN; c) technology - TECNOL; d) human resources - RH; e) technical standards - NORMAS; f) product development - PRODUT; g) quality control - CQ; h) environmental control - CAMB; l) administrative techniques - ADM; j) processes development - PROCES; l) materials development - MATERI; m) quality system - SQ. The industries belonging to tiles and structural sectors were labeled as REVE/REV and ESTRUT, respectively. The Cluster analysis were applied to the information gathered from tiles and structural industries. The results were used to group industries according to specific and determined similarities. The method used was composed of: sample determination; questionnaire elaboration; utilization of descriptive statistics and analysis of variance, and Cluster statistical analysis of answers. As result, it was possible to notice that the tiles industries have shown a stronger pro-activity, with development of actions in the technical and organizational field. These industries have shared their strategies between cost reducing and product differentiation. Those that compete with low costs have invested heavily on increasing their productive capacity, raising their products offer. The immediate result was a market saturation. Thus, many of these industries are adopting product diversification to reach specific market niches. These efforts to reach special clients have demanded investments on quality control implantation, production and processes control, and design. On the other hand, the structural ceramics sector has seemed to be less aggressive. Around 90% of participant industries have their main focus on cost reducing. Less than 10% have adopted product diversification and development as a primary strategy to reach specific market niches. To these industries, the internal cost control and knowledge of technical standards related to product auditing are the main needs. By the analysis of the way that industries of the focused segment establish their competitive strategies it was possible to conclude that there is an apparent stronger competitiveness in the tiles sector.
of ceramic industry, compared to the structural sector. Thus, the former orientation of NIT/Materials to develop activities related to manufacture processes should be changed or complemented with competence for new business development and products design. One possible strategy is the establishment of partnerships with other organizations that work with product development and design. The method used was useful for the proposed objectives. The use of multi-varied methods in the statistical analysis, as Cluster analysis and Cross analysis, seemed to be very helpful to interpret the data. Nevertheless, the questionnaires must be re-evaluated for new studies, including new data, for example in the human resources area, manufacturing process technology, organization structure and computer infra-structure, which would complete the industries profile.