

## Mission in academic body training process engineering the case of Technological University Tlaxcala

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The Spanish Language Dictionary defines the word mission as a custom job or a person or a group is required to do. The Academic Process Engineering Corps condotti to SWOT analysis, which results in the importance of aligning the activities to develop to 10 goals and 10 shares short, medium and long term in order to consolidate in 2014 the Academic Body Enhancement Program for Teachers (PROMEP), in order to achieve a substantial improvement in training, dedication and performance of university academic bodies as a means to improve the quality of higher education, vocation which is reinforced in the framework the Comprehensive Institution Building Program (IIFT), and our institution within the strategic framework in the current and future scenario.

### Academic body, Strategy, indicator, Goal

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## 1 Introducción

Several authors stipulate that beginning in the eighties of the last century, it is possible to observe a series of changes in the institutions of higher education as the main producer organisms of codified knowledge.

These changes have their origin in the institutions of the developed countries; but in the nineties of the twentieth century and in the first century are moved toward the institutions of the developing countries, so it is interesting to review the behavior of our universities before that new context (Low & Martinez, 2006).

The academic bodies were created, mainly, to strengthen the tasks of production and application of knowledge since it is defined as: a set of teachers-researchers that share one or more lines of research (study), whose goals and targets are aimed at the generation and/or application of new knowledge, in addition to that through its high degree of specialization, the members of the whole exercise teaching to achieve a good quality education (<http://promep.sep.gob.mx>).

For some authors the most appropriate is to handle the concept of "academic communities", referring to groups of experts who have as their mission solve a series of problems through the application of scientific knowledge (Maldonado 2005).

Based on this idea is interesting to review the concept of academic body, as there are differences and alternative visions to the raised and driven from the official agencies in Mexico.

The Program for the Improvement of the Faculty (2006), is a strategic program that was created with the purpose to achieve a significant reduction in the training, dedication and performance of the academic bodies of the universities as a means to raise the quality of higher education, vocation that is reinforced in the framework of the Comprehensive Program of Institutional Strengthening (PIFI).

The emergence of the concept of academic bodies in the official discourse delimited tasks and obligations of the academics to the institution.

In its beginnings that concept was interpreted in various ways, but the definition in the official texts conceived as a group of full-time teachers that share one or several lines of knowledge generation (LGAC), applied research or technology development and innovation in interdisciplinary or multidisciplinary topics and a set of goals and academic goals.

Additionally attend the educational programs (PE) related to their specialty in several levels for the full implementation of the institutional roles (PROMEP, 2008).

Before this new concept, both the institution and the academics that are integrated, the change of culture of participation in collective work is part of networks of knowledge at the level of the institution itself.

The researchers of other institutions in the region of the country and abroad, began to exhibit the problem that each unit of Higher Education applied his process of creation, development and evaluation of their academic bodies.

That there are variations or differences between if; which does not ensure compliance with the requirements set forth in the Guide to analysis of evaluation of Academic Bodies (IIFT), self-academic bodies (PROMEP) and institutional initiatives.

Institutional strategic planning should be based on the fact that: "The educational model is called to become the "intellectual compass" that must guide us in the future the innovations that will lead to the transformation of the activities of the institution, so that is responsive, with the appropriate quality and relevance, to the great challenges that come from the dominant phenomena in contemporary society, including globalisation and the emergence of knowledge societies" (Boyer, 2010).

Technological University of Tlaxcala (UTT) formed part of this program in 2006 and from 2008 onwards it is fundamental in shaping and planning of the development of the first three bodies academics (CA), who begin to operate under the status of "In Training", with the objective to comply with the following strategic activities: 1. Increase the level of development of the academic body. 2. Improving the educational innovation. 3. The impetus to overcome the staff of the academic body. 4. Develop scientific research projects among other things, because if it is not doing so would have an impact on the funding that would receive the own teacher-researchers and the institution through the support and PROMEP category of the profile.

The result is presented that responds to the process of strategic planning for the Academic Body in Engineering in the process that has had among its objective to generate a model of strategic management that contributes to respond to the question how do you achieve align the process of development and consolidation of the academic body in Engineering in processes of the University of Tlaxcala Technological.

To meet the institutional commitment that is declared in the vision and in harmony with our mission.

## 2 Methodology

In the integration of the methodology, are expressed in the design of the strategic profile of the academic body below (Figure 1).

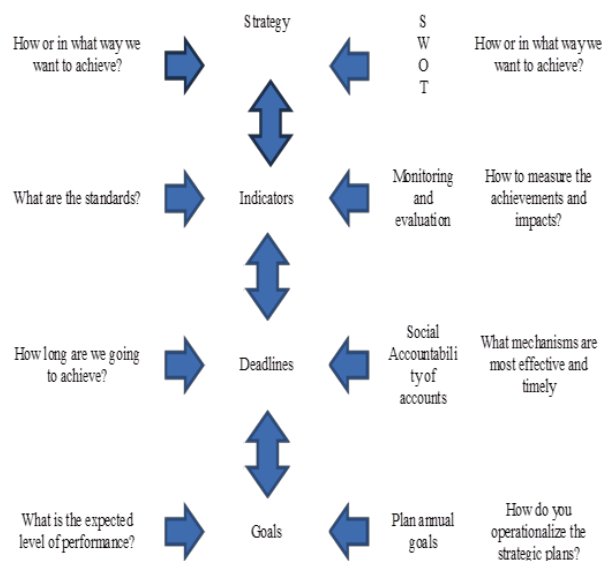


Figure 1

Where, the most important aspects that must be taken into account in preparing the strategic plan of the academic body, include the following steps:

In the first step, item is similarly to work the internal analysis with the members of the academic body to obtain this information and that is relating to the organization itself, in other words, they are characteristics of domestic origin and may be altered. The intent of this analysis is to see and take advantage of the internal strengths and overcome or minimize the effect of the weaknesses and correct them.

Identify the strengths and weaknesses is important because it will affect the future of the organization.

The second step, are the indicators (which constitute the form of quantitative measurement and/or qualitative). Of which we have the following: Promep desirable profile, internal collaboration networks, articles, books. The third step, are the time limits of attention in the short, medium and long.

In the fourth step, the goals are more specific in relation to time, and feasible to quantify; are achieved along the horizon of time planned; why the goals are changed frequently changed or that the objectives are based on the indicators (Table 1).

Description	Fortress Opportunity Weakness Threat	Rating Weighting Current Situation				Term Care Short(1) Medium(2) Long(3)	Priority of attention Nominal Scale
		81 To 100 per cent	61 To 80 %	41 To 60 %	21 To 40 %		

**Table 1**

As a final step we analyze the elements that are outside of the Organization and which are not controllable by the members of the CA.

This environment has positive aspects (Opportunities), or negative (Threats).

Opportunities: those that can be used for the benefit of the organization, if measures are taken to time.

Networks of external collaboration, Congresses, Patents, technical reports.

Threats: These are the hazards and risks which can do harm to the organization, if it does not act timely non-consolidation of the academic body before PROMEP, disintegration of the academic body, which does not achieve the objectives of the University, lack of financial support for research among others.

The actions on the basis of the SWOT analysis of the CA have yielded the following results.

### 3 Results

The Academic Body in engineering processes is a group of three full-time teachers that share two innovative lines of applied research or technology development (LIADT).

The first focuses on the characterization of deshidratadoras to improve the efficiency of the production processes, through the use of renewable energies where its purpose is the innovation in processes for the conservation of vegetables for the utilization of non-tradeables frescos and the second line is optimization of manufacturing processes in the SMES in the State of Tlaxcala with the intention of supporting the productive sector and services to strengthen their manufacturing processes and administrative.

Indicator 1: Promep desirable profile the number of members of the academic body was four in 2010, and had 75 per cent with the desirable profile and to date, the 100% has been achieved obtain it (Table 2).

Name	Category	Degree Academic	Profile PROMEP (period)	Amount obtained \$	Comments
Benito A. Hernandez Cervantes	Professor TC Holder "C"	Master's Degree in educational development	If 2013-2016	30,000.00 AT	First renewal
Romualdo Martinez Carmona	Professor TC Holder "B"	Master's degree in Engineering/Administrative Sciences of Quality	If 2009-2012 2012-2015	30,000.00 AT	Second renewal
Galaviz Jose Victor Rodriguez	Professor TC Holder "B"	Doctorate in Strategic Planning and Development of Technology	If 2008-2011 2011-2014	40,000.00	Second renewal

**Table 2**

Medium-term planning on the desirable profile. In 2014, it has three major goals and actions to keep the body in academic training with an option to go in a consolidation, the first action is to keep updated the curriculum and the individual academic body in the platform of PROMEP, the second is to give high before the Promep new technical support as an integral to the Mexican.

Yenni Vázquez Carrasco, who has an interest in participating in the research of the body and finally in 2014, the academic body shall be subjected to evaluation to find the degree of consolidation before the PROMEP, which is reason for participation of the members (Table 3).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M1. Tell the 100 per cent of the members with the desirable profile	Keep updated the curriculum and the individual academic body in the platform of PROMEP	N/A	75%	75%	100%	100%	100%
M2. Integrating a new participant in the body for the academic year 2013	Give high before the Promep new technical support as an integral to the Mexican Yenni Vázquez Carrasco.	N/A	0	0	1	0	1
M3. Count with 100 % of the requirements for the Consolidation of the academic body in the 2014	Participate in the convocation PROMEP to search for the consolidation of the academic body	N/A	0%	0%	0%	100%	100%

**Table 3**

Indicator 2:

Agreements between networks of internal and external partnerships. In 2011, the consolidated an internal network with the academic body of industrial maintenance of the University of Tlaxcala related technology being responsible for the body in the M. C. Jose Luis Hernandez Crown, and a external: has signed a letter of intent of working as a team and in review the collaboration agreement with the academic bodies of food technology and biotechnology represented by the beloved Dr. Enrique Navarro Frómata and M. in C. Jorge Seville Diaz respectively representatives before PROMEP.

The 2012 to 2013 have been consolidated with the other two Autonomous University of Tlaxcala and Benemérita Autonomous University of Puebla (Table 4).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M4. Form an internal network	Management of internal networks of collaboration	N/A	0	1	0	0	1
M5. Form three external networks	Management of external networks of collaboration	\$ 5,000.00	0	1	2	0	3

**Table 4**

Indicator 3: Participation in congresses. In 2011, participated in the following conferences: a). XI National Congress in agribusiness management and related disciplines: networks of academic bodies and generation of knowledge, of the 25 and 26 February 2011 (b). 8th Congress of the Mexican Association for Rural Studies A. C. (AMER), from 24 to 27 May 2011.

C). XXIV International Congress of administration of farming companies 2011, in the Autonomous University of Chapingo, Mexico.

In 2012, participated in the following congresses and forums: a). international congress of industrial processes from 28 to 30 November 2012.

At the Technological University of Queretaro. b)" second research forum Interdisciplinary Rural Puebla - Tlaxcala from 27 to 28 September 2012, Benemérita Universidad Autónoma de Puebla. c). XVI International Congress on Research in Administrative Sciences, 22 to 25 May 2012, at the Technological of Monterrey, campus state of México.

From 2013 to 2014 it plans to participate four to have a goal of 10 national and international congresses (Table 5).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M6. Count with 10 national and international Congresses	Participate in the National Congress and International	\$ 50,000.00	3	3	2	2	10

**Table 5**

Indicator 4. Publication of articles. In 2011, will be published two articles in refereed journals (Table 6).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M7. Count with five scientific articles	Publish the two articles in refereed journals		0	1	2	2	5

**Table 6**

Indicator 5. Patents. Obtaining at least a patent application before the IMPI by each school cycle (Table 7).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M8. Have patents	Register with IMPI two utility models	\$50,000.00	0	0	1	1	2

**Table 7**

Indicator 6. Technical Reports. Give at least a technical advice by four months to the manufacturing sector for the improvement of their productive processes (Table 8).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M9. Count with 10 technical reports	Support to SMES at the State of Tlaxcala with technical advice	\$10,000.00	0	4	3	3	10

**Table 8**

Indicator 7. Books. Publication of at least one book on the part of the AC cycle by school (Table 9).

Goal	Actions	Resources requested	2011	2012	2013	2014	Goal
M10. Having two books	Publish the two books with publishers recognized	\$50,000.00	0	1	0	1	2

**Table 9**

## 4 Conclusion's and Discussion

The Technological University of Tlaxcala (UTT) as university focused on social performance, responds to its vision of being an educational institution of higher level that meets the expectations of students and society, consolidated in the training of professionals recognized nationally and internationally.

Without a doubt the greatest impact of the Academic Body in engineering processes is reflected in the accreditation of the program 5A and 5B, in the UTT said with the strengthening of its teaching staff, and in society is reflected in the medium- and long-term, specifically when the lines of knowledge generation will be consolidated and using a schema effectively linking, these can be transferred and applied in the productive sectors.

For the indicator one. Members of the academic body laying down three goals where the first is to have 100 % of the members with the desirable profile and to date, there are a compliance, the second is to integrate a new participant in the academic body for the year 2013 and has been met and the third is to have 100 % of the requirements for the Consolidation of the academic body in 2014, in the next call. On the dos prompt. Conventions between networks of internal and external partnerships.

The fourth goal an internal network has been consolidated with the academic body of industrial maintenance technology of the University of Tlaxcala related goal five with three external networks with the Technological University of Izucar de Matamoros, Autonomous University of Tlaxcala and Benemérita Autonomous University of Puebla. In the Indicator three.

Participation in national and international conferences, the goal is to participate in six 10 congresses that the date takes 6 interventions at the national and international levels. In the four indicator.

Publication of articles reach the target of 5 articles in journals indexed that to date we have one published in the Revista Mexicana de Agronegocios.

In the indicator five, Patent is planned with the goal eight generate two patents, being the first with the records of a metal pallet and a solar dryer. In the indicator six.

Technical Reports, with the goal is to have nine with 10 technical reports to the industrial sector and service of Tlaxcala, of which we have six to date.

Finally the indicator seven.

Ten books the goal is to have two books published in editorials internationally recognized being the first publication on sustainable technology strategy to dehydrate fruits, vegetables and pulses with the editorial Palibrio.

Hence the importance of aligning the activities about the role that must dominate the Academic Body in engineering processes that shape our institution within the strategic framework on the current and future scenario.

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