

The Structure - Process Model is a new tool for the understanding of the complex and dynamical organizational behavior. The Model defines what Structure and Process inside the organization are and how do they dynamically interact to influence each other. The organization then, will have the opportunity of change the behavior, changing the structures required, which in all cases are under organization control. The clue in the Model is the comprehension of what Structure and Processes means inside organization in two dimensions:

- Technical, Administrative, Human and Cultural vectors.
- Organizational, Cultural and Personal levels.

The thesis that support this new approach is that “All the organizations are perfectly designed to obtain the results that they generate... and an ideal tool for its transformation is the CM~SC based in the Structure - Process Model”.

**Structure - Process Model**

The Structure - Process Model (SPM) allows us to manage the complex organizational behavior. Based on simple, but of great scope principles, this model divides the organization in two big poles: **Structures** (variables, which trigger conducts) and **Processes** (conducts and behaviors, which are generated by those variables). **SPM** is especially useful to improve the performance of the fundamental processes of the organization, as a tool to comprehend and manage the complexity, and for the integral adaptation of the organization to its changing environment. The organizational Changing Process will be accomplished in learning cycles considering the essential framework to reach a high organizational performance.

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| <p align="center"><b>“The Process-Structure Model”</b></p> <p><i>“The <b>Processes</b> (conducts and events) are originated in their <b>Structures</b> and when these occur they reinforce or modify the <b>Structures</b>”</i></p> <div align="center"> <p>The diagram shows an oval shape representing the organization. Inside the oval, on the left, is a circle labeled 'S' (Structures) and on the right is a circle labeled 'P' (Processes). A solid arrow points from 'S' to 'P', and another solid arrow points from 'P' back to 'S', indicating a feedback loop. A dashed line forms an outer boundary around the oval, labeled 'System Frontier'. Above the oval is the word 'Environment'. Arrows point from the environment into the system and from the system into the environment.</p> </div> <p><i>fig. 1</i></p> | <p>The Structure - Process Model (SPM) (fig. 1) is based on the systematic approach, and can be applied to the organization as a whole and also to any situation to improve its understanding and comprehension.</p> <p>The advantage for separating situations in structures and processes is that it allows to intervene in the organization in an integral way, but orienting efforts only to the structural change, in those structures which affect the main processes.</p> <p>This way, trial and error practices are avoided, which in some cases can cause adverse consequences for the system and it’s complexity.</p> |
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**Organizational Structures**

Based on the Patrick Williams’ Model (technological, administrative and human dimensions) we can segment some of the different variables, which constitute the structure of the organization:

| <b>Technology</b>   | <b>Management</b>   | <b>Human</b>  |
|---|---|---|
| <ul style="list-style-type: none"> <li>• Production equipment</li> <li>• Operation manuals</li> <li>• Methods</li> <li>• Operating procedures</li> <li>• Installations</li> <li>• Lay-Out</li> <li>• Product specifications</li> <li>• Computer systems and networks</li> </ul> | <ul style="list-style-type: none"> <li>• Strategies</li> <li>• Policies</li> <li>• Values</li> <li>• Objectives</li> <li>• Goals</li> <li>• Organization Chart</li> <li>• Managerial procedures</li> <li>• Reward mechanisms</li> </ul> | <ul style="list-style-type: none"> <li>• Mental models</li> <li>• Experiences</li> <li>• Abilities</li> <li>• Personal values</li> <li>• Paradigms</li> <li>• Knowledge</li> <li>• Beliefs</li> <li>• Personal Profile</li> </ul> |

These structures are the ones that provoke different conducts within the organization. The structures are modified, although sometimes in a very small measure, by the continuous effect of the repeating processes. The organization’s learning is the evaluation guideline in order to modify the structures, once the system is compared in an integral way against the dynamic environment and the required processes.

**Fundamental Organizational Processes**

The reason for being of the organization is translated into 5 *fundamental processes* the same ones that will help us see the organization as a *living system*. The organization’s structures must exist in order to generate these 5 fundamental processes, which are described and given as examples (classified in the same 3 organizational vectors):

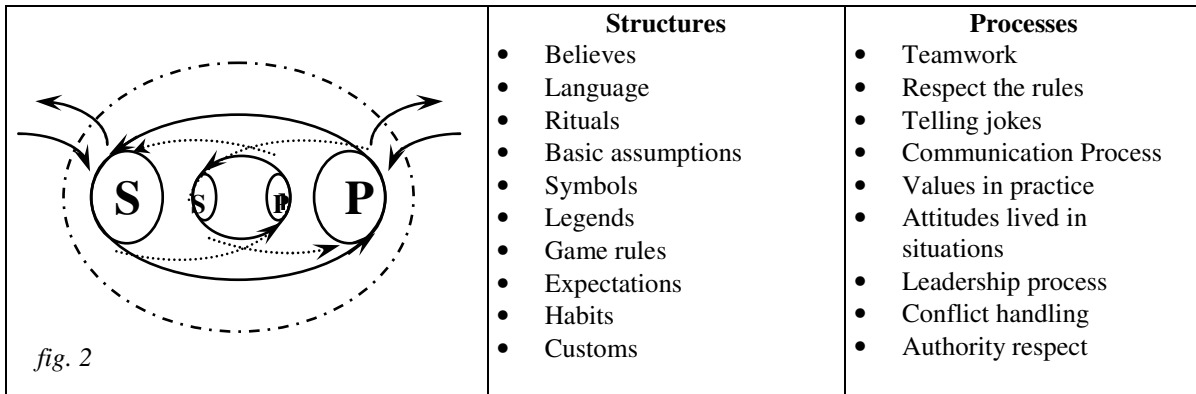
|   | <b>Technology</b>  | <b>Management</b>  | <b>Human</b>  |
|---|--|--|---|
| <b>Operation:</b> Input Transformation into products. Support activities to achieve the business’ fundamental transformation. Generation of the organization’s Added Value to society                   | <ul style="list-style-type: none"> <li>• To generate value added activities.</li> <li>• To generate services</li> <li>• To assure products and services quality</li> </ul> | <ul style="list-style-type: none"> <li>• To generate Accounting and the balances sheets</li> <li>• To hire personnel</li> <li>• To select suppliers</li> </ul> | <ul style="list-style-type: none"> <li>• To work in teams</li> <li>• To Leader working teams</li> <li>• Communication process</li> <li>• To make decisions</li> </ul> |
| <b>Maintenance:</b> Taking care of the state of systems and components. Homeostasis. Repairing components’ wear out during operation. Assure optimum system performance.                                | <ul style="list-style-type: none"> <li>• To Supply maintenance to production equipment and installations</li> </ul>  | <ul style="list-style-type: none"> <li>• To evaluate and reinforce organizational performance against policies and procedures</li> </ul>                       | <ul style="list-style-type: none"> <li>• To evaluate and maintain an organizational environment.</li> <li>• To train to maintain operation abilities</li> </ul>       |
| <b>Adaptation:</b> Organizational evolution. An operation of mechanisms for listening to the environment signals, and transform them into internal structure changes for organizational adaptation.     | <ul style="list-style-type: none"> <li>• To plan Technological development</li> <li>• To apply innovations to products</li> <li>• To assimilate Technology</li> </ul>      | <ul style="list-style-type: none"> <li>• Strategic planning and benchmarking process</li> <li>• Organizational change process</li> </ul>                       | <ul style="list-style-type: none"> <li>• To develop multiple abilities in personnel through training</li> </ul>   |
| <b>Learning:</b> Application of the organization’s acquired knowledge and experience. Degree in which the organization makes from each event an opportunity to improve its performance.                 | <ul style="list-style-type: none"> <li>• To evaluate the technological process</li> <li>• To adjust parameter in productive processes</li> </ul>                           | <ul style="list-style-type: none"> <li>• To evaluate systems and managerial policies vs indispensable processes in the organization.</li> </ul>                | <ul style="list-style-type: none"> <li>• To evaluate personnel performance and to give feedback.</li> <li>• Team Building Process.</li> </ul>                         |
| <b>Organizational growth:</b> An orderly, stable and balanced growth in size, systems and departments, but obeying to the size of the attended markets. New entities creation by capitalizing learning. | <ul style="list-style-type: none"> <li>• To install plant and production equipment</li> <li>• To construct buildings and offices.</li> </ul>                               | <ul style="list-style-type: none"> <li>• To create structure, roles and organizational responsibilities for new plant.</li> </ul>                              | <ul style="list-style-type: none"> <li>• To recruit, select and hire personnel to satisfy organizational growth requirements.</li> </ul>                              |

An organization oriented to be profitable and to generate value as a business must then establish the appropriate structures to live its fundamental processes. In order for the organization to be considered as healthy it must work in a balanced form in its five fundamental processes and on the three systems (technological, managerial and human). Obviously this implies a systematic organization approach.

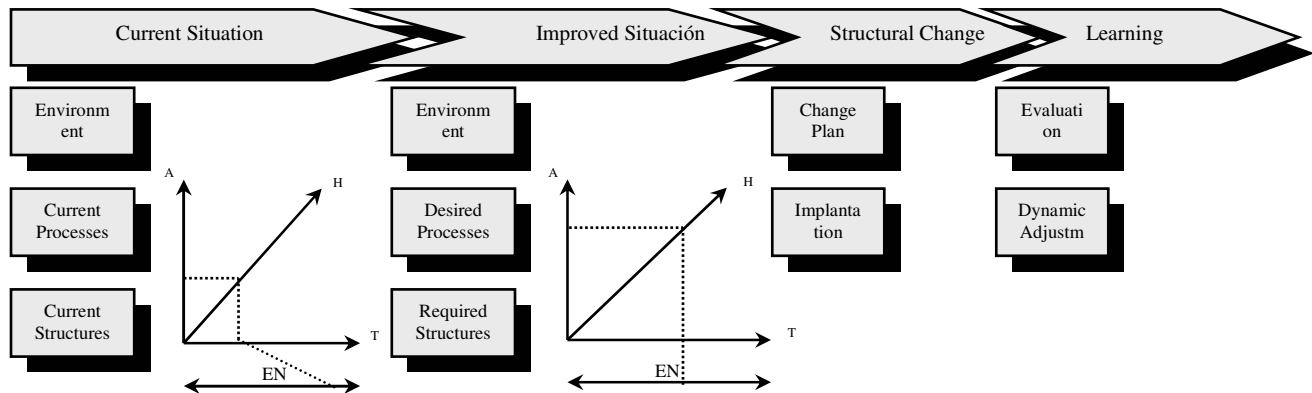
At any moment this must not be interpreted as to that all the organizations must live with the same intensity the processes here exemplified. This will better depend on the type of market where the organization is located and the type of dynamic and the environment change velocity.

**Culture**

The Culture “stays trapped” within the Structure - Processes Model, but at a second level (fig. 2). The cultural duality is manifested in the different structures and processes. It is also important to mention that the culture is complex in regard that it is influenced by other structural technological and managerial variables and not only by the common and shared human variables. Hence it is important to observe what kind of structural variables must change in order so that the cultural change will be effective.



**Complexity Management through Structural Change (CM~SC) ©**



The Methodology of the Complexity Management through Structural Change (CM~SC) © arises thanks to the need for utilization of the structure processes model for the organizational improvement in a logical and sequential manner. The (CM~SC) © methodology responds to the question, how to achieve a better organizational performance in a balanced manner? The stages are described, following:

1. **Current Situation:** An analysis of the current environment that surrounds the company is made. Likewise, the existing processes and the current structures, which generate these processes, are identified. Opportunity areas are examined.
2. **Improved situation:** The new characteristics and tendencies of the environment are identified. Equally, the required processes, to satisfactorily respond to the environmental demands are identified. Needed structures to support in an integral way the new required processes are recognized.
3. **Structural Change:** The required structural changes are determined and a structural modification plan is defined. Structural changes are executed.
4. **Learning :** The desired estate is compared against the previous estate and the structural change success is evaluated. The new resulting model is closely tracked and the guideline for a new organizational co-evolution cycle is established.