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**Attributes of the PPC environment designed for enterprise networks: implications  
for a business unit of the metal-mechanical**

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## **ABSTRACT**

The production management is one of the most significant issues related to managing operations, requiring constant study to keep business units in the face of a competitive global market that is changing quickly. Then structure systems capable of clumping companies inserted in network environments requires a different view on the PPC.

**Keywords:** business networks, production planning and control, Management, Operation systems.

## **1 – INTRODUCTION**

One of the oldest and relevant segments linked to operations management, whose models are always being subjected to development efforts both by academics and by productive organizations (OP), are those that deal with the administration of production and new forms of work organization.

Proposals for strategic management of production bring in your bilge principles that seek to streamline processes, reduce production costs, aggregate values to business units (BU), identify problems of material flow and information in addition to seek reduction of response time through cohesive work teams.

The internal crossing time to the OP, lacks an analysis able to embed it on productive chains. The business networks composed of actors and linkages produce information shares permeated by material flows which transcend the physical limits of strategic BU.

Existing models have been exhausted, either as regards the administration of production or as regards ways of organizing work. So browse the best actions to achieve goals and targets set out in a successful PPC becomes necessary, since the productive environment must adapt to changes, fast and quirky, of an increasingly demanding market as quality, costs and delivery time.

Kyrillos et al. (2010), show that the need to manage the logistical flow aims to remove obstructions and misalignment that occur in the same, and that these lead to an accumulation of inventory and longer response times. It is necessary to see the term as a whole, that the interfaces between the components should be examined in detail, in addition to studying what activities add costs and which, in fact, they add value.

The research group on corporate networks and supply chains means that beyond the sharing of information and materials, today the time-sharing, between actor intra and cross-organization cooperation is, among others, a decisive factor to be able to meet targets within a PPC designed for corporate networks.

To Farina and Zilbersztajn (2010) a network of companies has a complex format architected to govern transactions inter-firms organization involving vertical and horizontal coordination.

To Granovetter (1985) in the row of economic sociology uses the network concept to argue that economic action is rooted in the socio-cultural structure.

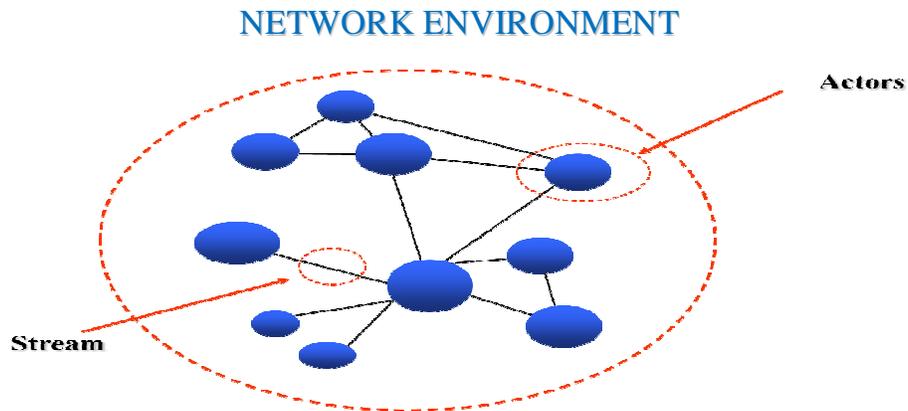


Figure 1: Enterprises inserted into the environment of networks seeking effectiveness and efficiency (Kyrillos, 2011).

This paper sought to meet the following objectives:

- Investigate and demonstrate the process of production planning and control (PPC) in companies that gradually and steadily, has been organizing into networks.
- Organization motivated by technological transformations, informational, economic, financial and political.
- Transformations that influence the directions of evolution of administrative thinking change the way business is run; impacting particularly the organization of production and labour. In this sense this article is meant to contribute to the above can effect on your business networks so that all actors have success within the production chain.

## 2 - METHODOLOGY

For the development of the work has been vital to conduct a thorough review of the literature regarding PPC, networks of enterprises, manufacturing strategies and tools employed to manage operations systems.

In addition, a logical argumentation supported on a set of case studies, has helped to illustrate the problems faced by production engineering; problems that have systemic characteristics with strong interactions between the variables:

- A. information and material flows,
- B. economic, financial and human resources,
- C. technological continuities discontinuities,
- D. dimensions and contours of the environment.

In order to demonstrate and validate the proposed model for the establishment of a PPC in corporate networks from the perspective of physical network governance, took as a reference a metallurgical company entered in the network environment. Thus, more specifically the study with applicative purpose, taking as its starting point a cutlery manufacturing inserted into business networks environment.

It is an empirical character study on the methodology of research-supported action. Below is the summary table of methodological activity.

Table 1: Summary Table of methodological activity

Aims of research	Descriptive and exploratory
Nature of work	Current Original Scientific
Object	Field research, with bibliographic support.
Procedure	Study of empirical character, supported on the methodology of action research.
Purpose	Applied research
Approach	Quali-Quantitative Research

### 3 - RESULTS

The results of the research group have shown that attitudes taken under the PPC of a network actor cause large impacts on the other. Being the same aligned these changes produce benefits; unlike, disarticulation, may cause irreparable damage. Changes to the PPC on OP upstream cause implications as regards the effectiveness and efficiency in a UN made downstream interfering in their productivity and competitiveness.

Thus, the argumentation diagram prepared by Kyrillos, Milreu and Sacomano (2009), is able to give answers to business strategies and production by means of a PPC for companies organized into networks, as Figure 2, above.

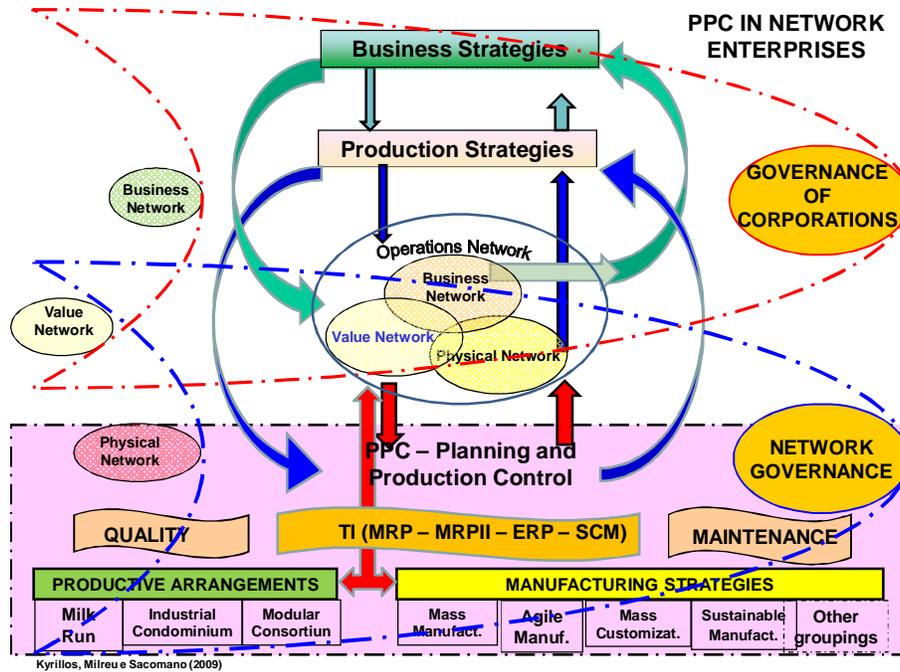


Figure 2: Planning and Production Control in network enterprises

#### 4 – CONCLUSION AND RELEVANCE

- A. The current study is: this is a theme whose theoretical is under construction.
- B. How to define and shape the PPC, aimed at studying the relationships in business networks, it becomes the unheard.
- C. Apply it using the principle of Simultaneous Networks makes it original.
- D. Productive organizations utilize the integration in the form of companies in networks; revealing his importance.

Therefore, investigate attitudes capable of promoting competitiveness of business units manufacturing segment becomes current, original and relevant.

## REFERENCES

GRANOVETTER, M. Economic action and social structure: the problem of embeddedness. *American Journal of Sociology*, v. 91, n. 3, p. 481, Nov. 1985.

KYRILLOS, S. L.; MILREU, F.J.S; SACOMANO, J. B.; SOUZA J. B.; FUSCO, J. P. A.: “*Adaptação da produção aos objetivos de competitividade e produtividade: A pesquisa-ação em uma manufatureira de cutelaria inserida em rede*”. XXX Encontro Nacional de Engenharia de Produção – ENEGEP. Maturidade e desafios da Engenharia de Produção: competitividade das empresas, condições de trabalho, meio ambiente. São Carlos, SP, 2010.

KYRILLOS, S. L.; MILREU, F. J.S.; SACOMANO, J. B.: Fatores determinantes para o PCP em Redes de Empresas XVI Simpósio de Engenharia de Produção – SIMPEP, Faculdade de Engenharia de Bauru, FEB-UNESP: 2009.

KYRILLOS, S.L. *Fatores determinantes para o Planejamento e Controle da Produção em Redes de Empresas: Estudo exploratório em unidades de negócios do segmento metal-mecânico*. Tese (doutorado), Universidade Paulista, SP, 213 pp., 2011.

ZYLBERSZTAJN, D.; FARINA, E.M.M.Q.: *Dinâmica de governança de redes: uma contribuição para o estudo de formas complexas*. Revista Eletrônica de Administração. UFRS – REAd – Ed. 65 vol. 16 n° 1 janeiro-abril 2010.