

## STRUCTURAL CHARACTERISTICS OF NOVEL TECHNOLOGY

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**Keywords:** structural characteristics, technological innovation, technological transfer,

**Abstract:** At this moment, the technological innovation has gained an international meaning. It is understood and described as being a system called the innovation system. This system contains the components, the functions the internal and external relationships of the system with the main purpose the analyses of the economic performance generated by the scientific, technical, technological changes that exist for a long time at an enterprise, economic organization level. Within the innovation system, it is considered that the technological innovation has a very important purpose. The technological innovation generates the generic and key technologies that lead to fundamental changes in the new products, micro products and services production. In the paper it is analyzed the structural characteristics of the technological innovation. It is accentuated its' importance for the technical progress lasting development. The technological innovation activities assembly must be analyzed according to the technological innovation system.

### 1. INTRODUCTION

The term of "innovation" comes from the beginnings of the economic analyses. This term has been associated to the technical progress and to the production factor, the capital. Therefore, the innovation represents for the technical progress the holder of scientific and technical discoveries.

These discoveries are made in independent research laboratories, outside the enterprise. The scientific and technical discoveries have interferer within the enterprise, the first step of the practical research in order to be finally sent to beneficiaries, namely to market.

Starting with the year 1960, the notion pf innovation has been defined as a qualitative change that leads to transforming processes as far as the technical progress within the enterprise is concerned. By means of this, the enterprise gets directly involved in innovation, especially in the organizing innovation of the assembling technical fluxes.

Mainly, the innovation "from the enterprise" promotes processes, organizing and technical actions towards production (Fig.1) [4]. Under these circumstances the client position towards the producer is week.

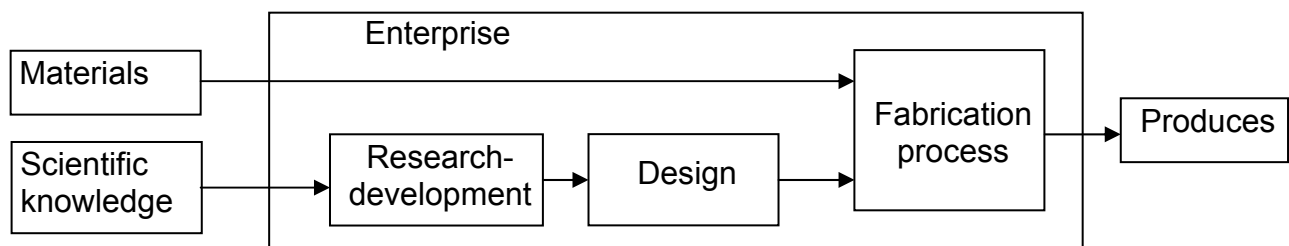
Around 1970 appears the concept of technical innovation. It represents the reaction to human factor existing problems: the energy crises, the raw material and food crises, the pollution of the environment, etc. In this context the technical innovation is tide to o profound technical change. It really breaks the old concepts for the technical progress within the enterprise.

Mainly, the technical innovation includes new technologies, new produces and new conceptions as far as the technical, economic control and organizing infrastructures are concerned.

This integration is characterized by the technical innovation orientation towards technology/market. (Fig.2) [4] By means of this, the technical innovation may be understood as a particular function of the economic system. [5]

## 2. TECHNOLOGICAL INNOVATION STRUCTURE

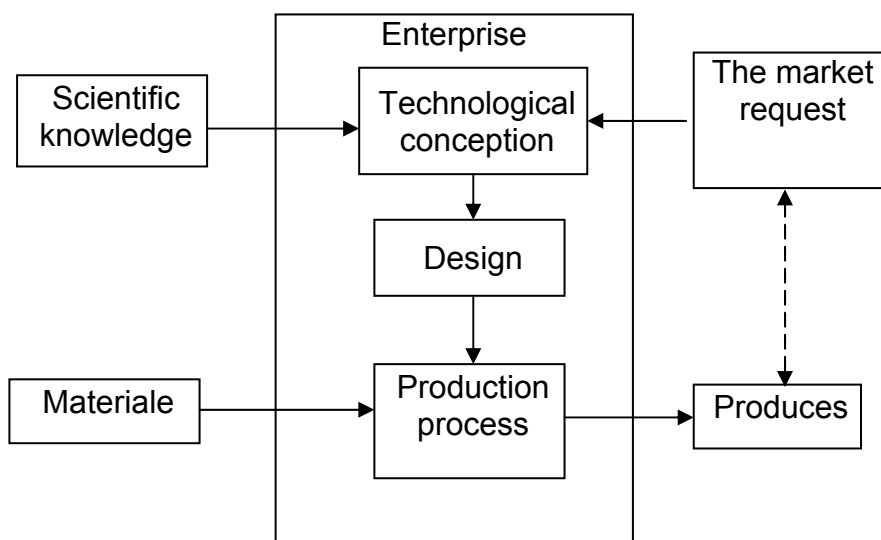
Mainly, the notion of technical innovation is functionally combined with vertical or horizontal technological transfer (the technical research and development proper to the enterprise) in form of licenses, know-how, devices etc. Through the technological innovation are realized complex bounds “in chain and curl” among the virtual market, the real market, the research-development activities and the scientific, technical, economic, ecologic knowledge. (Fig. 3) [6].



*Figure 1 The scheme of the innovation oriented towards production*

The technological innovation has three coordinates:

- the product innovation;
- the process innovation;



*Figure 2 The scheme of the innovation process oriented towards technology/market*

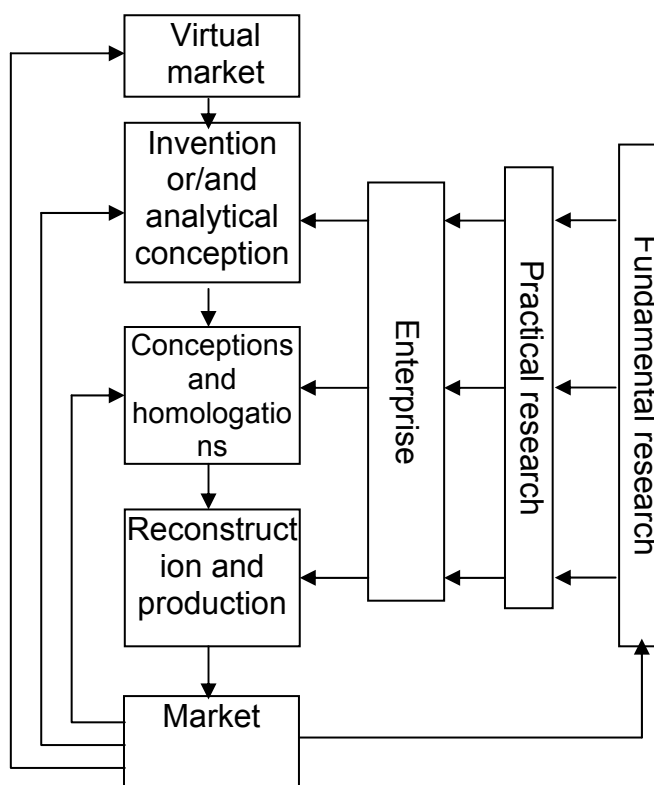
- the innovation through economic structures, organizing and control systems etc.

The “crash” or breaking through innovation consists in replacing a technology with other, the “key” technology. This technology may replace at a certain moment the performance standard of the initial technology.

The adapting or improvement technology consists in the improvement of the existence technology performance on the bases on the capital infusion.

### 3. THE PURPOSE OF THE TECHNOLOGICAL INNOVATION FOR THE LASTING DEVELOPMENT

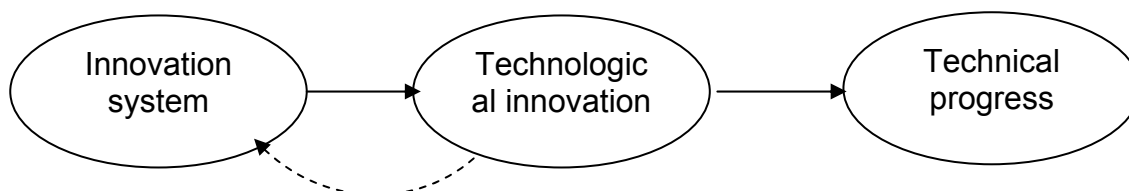
Recent systematic researches made in European countries and also outside Europe, shown the main tendencies that will characterize the near future consume:



**Figure 3** The "chain" of the technological innovation process

- the socio-demographic evolution that crosses the majority of these countries characterized by the growing old of the population, a great flexibility of conceptions, the break-through of nuclear energy within the husbandry, qualitatively and quantitatively mostly influence the consummator request;
- the permanent personalization of consuming that leads to continuous changes between offer and request;
- the request of real insurances for the quality of the bought products;
- the request of giving to technological innovation a practical function;
- the population becomes conscience by the importance of new technologies and technological innovation.

The mentioned tendencies bring in front the dynamic role of technological innovation in the science-technology-production triad. In this context the accumulation of knowledge and scientific, technical, economic competences and their systemic analyses leads as far as the technological innovation is concerned to the conception of technological innovation system. This system has an important role for displaying the accomplishment of the mentioned above tendencies. (Fig. 4)



**Figure 4** The scheme of the technological innovation system for dynamics of the technical progress

#### 4. CONCLUSIONS

The technological innovation represents a fundamental means in technological performance insurance. From a structural point of view it is found in three forms:

- the product innovation;
- the process innovation;
- the innovation through economic structures, organizing and control systems etc

The technological innovation activities assembly must be analyzed according to the technological innovation system.

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