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ASPECT OF PRODUCTION PROJECTS

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Abstract: *In the first part the article deals with the issue of drawing up the plan of the project factors in preproduction. In the second part of the article we have been using the project itself in order to achieve stability of the plan. Refers to a variety of risks associated with projects in preproduction and production phase. It sketch the way of elimination of the negative effects to the project from the perspective of scheduling production planning.*

Key words: *production project, production plan project*

1 INTRODUCTION

The manufacturing process, the result of which is supposed to be the new productive value, represents a continuous activity, purposeful using work equipment and work items. In terms of the large enterprises to the large number of people involved in this activity, internal services and subcontractors. The need of the optimization and the effectiveness requires rigorous coordination of all participants of the manufacturing process.

2 PRODUCTION PLAN

The basic document of production process is the production plan, which contains all of the material, technical, technological and economic aspects related to the achievement of the stated objective. It is a comprehensive document, a kind of plate production plan with milestones, which is intertwined economic and technological requirements and options expressed a lot of numbers and dates. It is important that this complex world embraced by all the participants in the production process. To do this, we need simple rules as possible, comprehensible to all. We will achieve this gradual decomposition of the plan, which involves, in particular, brings us the key parameter [1]. They can express themselves, but also to hide, various other indicators such as quality, production time, cost of production, a variety

of production, ecological, etc. In that their detailed description is beyond the capabilities of this article, we point out only on support of production, responses to the facts in the development of the plan [2].

When we create a project, we must strive, as far as possible, in the manufacturing and the most accurate look to the future. A very valuable tool here is the lessons learned of the past. Furthermore, it is always appropriate for a tool to simulate (SW model), where all of the known properties are contained, plus unknown character (a healthy reserve experience) [3]. In doing so, he repeatedly raises three basic themes:

System, or method – here is the idea of interconnection with all business activities. It is a way to achieve fast, accurate and effective communication between all business activities (complexity and complexity), in order to control its development.

Experience – it can easily help and replace misunderstanding brief descriptions of already proven in reality. Experience in the production process is patience. The manufacturing process is an endless spiral-there it is always something to improve, because people tend to generalize things, are underlie to fatigue, thereby committing an error. Optimal management of the production establishment, it depends on the capabilities of the modelling it as a whole.

Model — people and companies love simply skin modelling but not always verified. If the output of such a model will show the unreality plan, there almost always it takes up the "people's creativity," by the Bulgarian constants. Then I patiently advise to search path not viable compromise. It is necessary to search for and find an appropriate method in order to fix the optimal trajectory. Here is nothing to harm, model shows what is possible, what is the risk, which is not possible. A simple model does not appear anything just pointing out and, in particular, has a preventative-predicting character [4]. Experience without the model and model without the experience of today are insufficient. The current objectives of the planned production units are the results of the comparison between different companies in the same or similar elements of the historical branch.

Almost by every test (benchmark), by deeper analysis of the manufacturing plant, under the surface of the economic (Controlling) criteria, we find:

- lengths of the time – the commitment of capital;
- needed production time – an insatiable consumed capital;
- a variety of production - economic-technological use of capital ;
- quality – survivability, the return of capital;
- stability (i.e. continuity) – availability of capital (as well as the pre-grow stability);
- life cycle – how long is it possible to keep healthy embedded capital (mainly human).

Less-used indicator is the fluidity of change produced an assortment of the production plan. A few examples from practice to the requested and obtained the criteria where (Tab. 1):

P0 and P1 are already realized projects of production units, currently in full operation,

P2 is the realized project of a production unit, in ramp-up phase of production,

P3 is planned production unit in the process of finalization

Tab. 1 *Basic parameters and limitations of projects*

	P0	**P1**	**P2**	**P3**
Production time	36 Hours	24-26 Hours	≤ 24 Hours	< 20 Hours
Output of end item	1 minute	1 minute	1 minute	< 1 minute
Amount of produced model/mark	4	4	3	3
Amount of different dynamic equipment's	3	3	5	5
Precision of supply day	90 %	80 %	> 90 %	min. 95 %
With variance	±12 hours	±11 hours	±11 hours	±8 hours
Plenitude sequence of the plan (sales)	till 80 %	max. till 80%	80 % - 90 %	>90 %
Full (*planned) production from SOP in	10 months	11 months	*11 months	*9 months
Production modification	3 – 6 years	3 – 6 years	3 – 6 years	3 – 6 years

Mainly the points of the preproduction phases are from time aspect known and fulfilled

3 PRODUCTION PHASE – PLANNING AND SCHEDULING OF PRODUCTION

Here is a link of external factors (e.g. bespoke logistics) with internal factors (e.g., manufacturing process and its capacity options) of the project. From this point of view planning and scheduling of production integration requirements between requirements from outside and the expectations of the creators of projects is after implementation of the input (offers).

The production phase is usually the longest period of the project. Therefore, only a simple evidence with a technological-economic orders sorting, with the use of materials and capacity balances with the inclusion of the requirements (of the contract) in the production process for planning and scheduling production cannot be absolute [5]. Due to the fact that this is the longest period of time, it is necessarily aggregated all the available external factors with all internal factors, which can influence the project in at least two horizons (in the short and medium term). Note changeableness and valuables all the factors. Therefore, more often, is the importance of the concepts of the system (e.g. production information system), experience (practice directly from production) and a model (not only production, but also the management). Therefore, everything that is described in the first part of the article, we recommend that have to be used with even higher frequency in the planning and scheduling of production, of course with a different weight [6].

An example of a simple scheduling in the short term:

Quarter by months – cumulative Input and Output – just for whole car plant,
Month by weeks - cumulative Input and Output – just for whole car plant,,
Week by production days - cumulative Input and Output through all manufacturing parts of the production process,
Day by production shifts - cumulative Input and Output through all manufacturing parts of the production process,
Shifts by Hours - cumulative Input and Output through all manufacturing parts of the production process.

To have management skills with the systematic without the expertise and experience, even with the high-quality model, is not sufficient. Furthermore, it is necessary to open the imagination, with the constant discovery of education [7]. Sometimes it is necessarily go back and use only simple relationships. If we will not, otherwise, be qualified and professional, then will not the desired result.

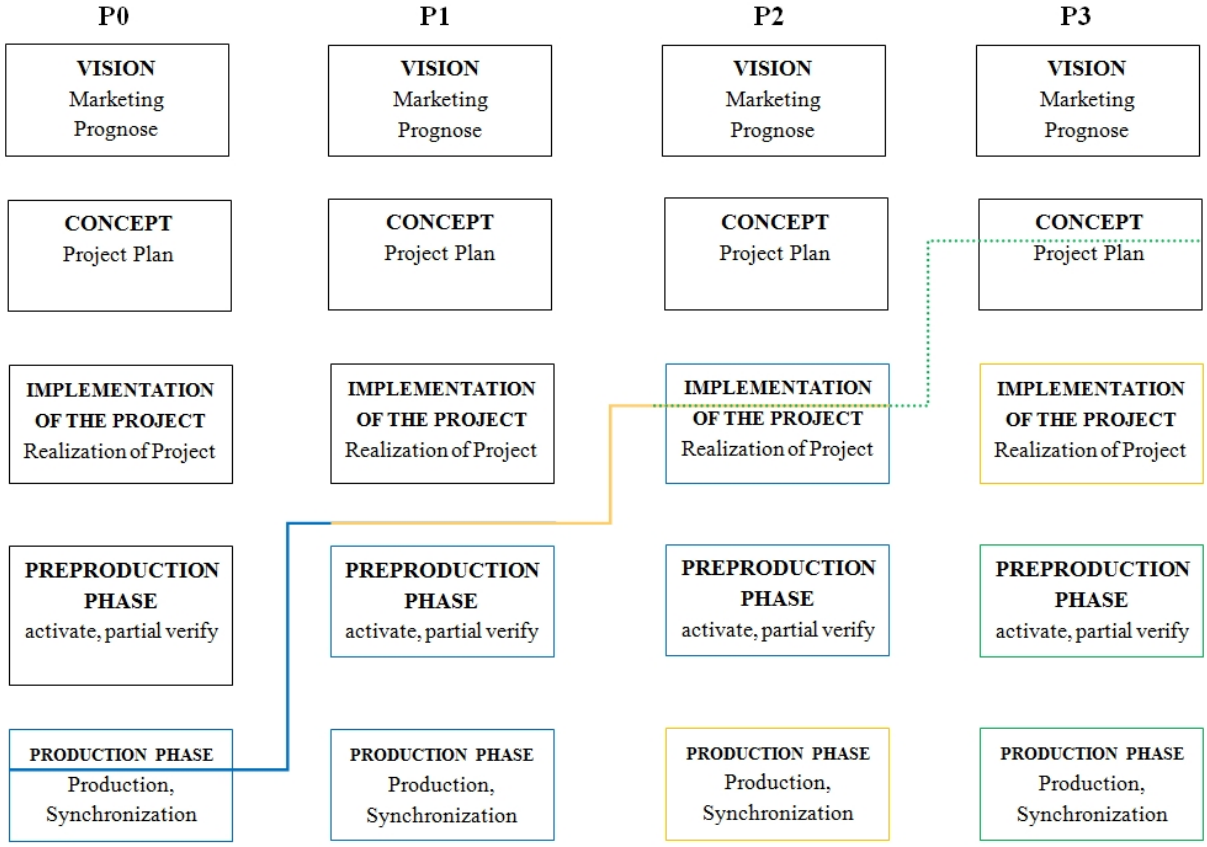

Fig 1 *Parts of projects, dividing line indicates the author's input into the stages of projects*

4 CONCLUSIONS

When we understand what is hidden beneath concepts for your specific manufacturing plant or project, we have the first (β) version of the model, which can be developed to support the creation, implementation and use of the project with the aim for a realistic production programme. A good model is the only one that is developed by the internal and external factors affecting the project. Modelling of the model is nothing spoils, can only help. Even with the unexpectedly bad outputs from the model can be a great help. Of course, replacing the information to the right place must be.

Not extinguish – in response to a number of incompetent but slide colour capable salesmen to adventurers, but to drive responsibly, professionally, factually. Easy to respond appropriately to the (un) predictable causes, as well as offer solutions for declaration of decision with the appropriate use of already existing available resources.

To end – it is important to show the most important thing: there must be a social understanding of the requirement, even though the need is always.

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