

# RUSSIAN AVIATION BUSINESS: CRITICAL AREAS FOR BENCHMARKING

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## ABSTRACT

Russian aviation business has faced a challenge. There are only two ways to proceed - either to change quickly and effectively or stay and slowly loose positions. Best practices of production systems creation from 3 world famous production companies were analyzed in order to come to the result, which is a basic fundament for production system. Fundament consists of four major columns living under major ideologies: first, supply chain management, production and internal logistics processes with supplier-customer ideology, second, human resources management process with deployed function of personnel development, third, quality management process serving and steering the production process and forth, management structure adjusted according to the process value-based approach.

## JEL CLASSIFICATION & KEYWORDS

■ M11 ■ Production System ■ Process ■ Value Based ■  
Development ■ Benchmarking ■

## INTRODUCTION: FROM HISTORY TO PRESENT TIMES – REVEALING CRITICAL AREAS

Going back into the history, as a part of five year plans of USSR industrialization former Russian plants were producing according to five year plans as well – they didn't have to be effective and efficient, the most important thing was being according to the plan. While political modes change the time was setting different priorities (Kotkin S., 1992). A business in its now modern understanding started to appear. All the remaining plants started optimization in order to be able to be self-efficient and profitable. If it is a military part of aviation industry – government is still very focused on it and supports as a major priority, but when it comes to commercial aviation – business is only supported by its profit. That was long time ago, but people who used to be working that time and are still working now need much more time to change – it's much easier to change production process then processes of thinking, understanding and acting of people.

Russian aviation industry is an industry with lots of bright examples of such plants. Some plants have more the 70-year history and had to survive through different times. Some areas were able to go through optimization with own forces of companies, some are still in optimization stage – but would need a good benchmark to quicken the process and avoid mistakes that were done by companies and countries that had to be effective and efficient from the very beginning. Either successful and recently established Russian production plant or successful foreign company specializing in industrial production would be ideal for benchmarking. Having done a short look into the history and knowing the industry from inside it's the time to scope major subjects of interest for benchmarking. First, starting from the very top - management structure, which has to be a flat one and allowing for cross communication. Second,

production areas core ideology – it's not just doing one part by another – its being a service provider to another chain in production line. Third, quality role changes to more than just inspecting the results of what was produced. Finally, people are the first resources striving to be developed. These all lead to a very important step in development of the production-based companies which is a need for strong lean production system supported by just mentioned four commitments.

## MANAGEMENT STRUCTURE: FROM HIERARCHY APPROACH TO PROCESS AND VALUE ADDING APPROACH

Hierarchy is a very traditional, familiar, but also a positive phenomenon when it comes to discussion of structural changes. Current status is the following – many levels, too many deputies at each level and too many departments with subdivisions within departments with its subheads. Positive is the fact that people know their roles and are concentrating purely on them without squander themselves (Heizetr J., Render B., 1999). It sounds really complicated but in fact it is even more. Structure was created long time ago and it was working for its purposes and is working currently, but purposes are continuously changing, structure has to become flexible as well. First rule of being flexible is being simple, when it comes to structures - flat and simple. The best approach to be so is a process approach (Keen P., Peter G., 1996). In order to apply this approach a company needs to distinguish between its core processes and supporting processes at the first stage. At the second stage it is necessary to describe all the processes, which means answering key questions – WHOW, with WHAT, with WHOM and HOW GOOD. First question refers to methods and tools usable for the process, second question is about resources that are necessary to live the process, third question identifies responsibility, i.e. people and their departments involved which are actually making the process, final question is aimed to measure the results of the process – i.e. key performance indicators (further – KPIs) that would allow to know whether the process is going well or not well enough. The process itself is a core and is a goal oriented substance – the only reason for its existing is value adding. Having analyzed through this prism all operational activities of a company it would be clear which level in a hierarchy brings value – and which exists just because it was created using old rules and methods.

## HUMAN RESOURCES ROLE ACCENT - PEOPLE DEVELOPMENT

Another topic which is closely related to the management structure is human resources (further – HR) as far as it is exactly the resource creating a structure, then, living it and finally being able to change it. Obsessive quantity of company hierarchical levels with no concrete function just a function of managing people in its supervision, are a sign of lack of trust from one stand point, from another - lack of developed enough people being able to execute the process within the needed KPIs levels without additional supervision.



At this point a change in a paradigm of HR department role is necessary (Derek, T., 2004). Former days HR departments were responsible solely for procedural finding, hiring and firing of employees. Now they have to be in the field of an everyday operation – because this is a core function aimed to bring value to the people so that people would add extended value to the company at the end. Each person, once entered the company should have understanding that a company values him/her and, therefore, is willing to develop him/her in the areas that he/she has interest in, expertise and potential, which can be identified only with professional help. For that purpose benchmark of tools like skills management matrix, appraisal interview and employee opinion survey are a must. Somehow connected and also hugely important topic is a leadership development. Ability to be a leader is a very seldom quality that people have as an inborn characteristic, but it can give a lot of results to the company if being developed and managed appropriately. Therefore choosing high potential leaders, their development and empowering them for executing managerial roles is a vital step to creation of a good team able to create structures, change them and reach extraordinary results for the sake of the parent company.

**QUALITY: FROM INSPECTING RESULTS TO PRODUCTION STEERING**

Quality is a very broad topic, but as far as companies are striving for high quality employees – these employees are supposed to strive for the high quality that their companies produce. Usual for Russian plants understanding of a quality in the production is continuous checking of the results of what production department created. At the end if the quality was good – the product goes further in the production line, if the quality was not good enough – employees of production departments are punished for the things they did wrong. The truth is that nobody in this world is willing to be caught while doing something wrong, if it happens – predictable feeling of demotivation occurs. All the people are allowed to make mistakes – it is the only thing that forces as to learn, change and deploy. Seeing a mistake – is the only sign forcing you to analyze what was done wrong, change it and make it again, but already with no mistake behind. This is exactly the place where quality function should live – catch the situation when something happened, describe it, analyze it, work on it, find a root cause, liquidate it and spread results to the other areas where the problem could have occurred. Positive approach says that quality department should be looking forward for mistakes – each time they occur – involve people which were in the process when the mistake took place, each time they don't occur – just show the statistics that everything is going smoothly. By demonstrating these behaviors, quality is motivating production people to produce high quality and helping them to deal with mistakes.

**PRODUCTION: SUPPLIER – CUSTOMER IDEOLOGY**

Quality is one of measures helping to understand whether production is established well or needs some support (Jackson T., Thomas L., 1996). Although inside the production there are should be a certain understanding of this role. As far as all cycle of production of a product is a process – it should be treated as one process. The more chains there are in the process the harder it is to manage it. What really makes it easier to understand all the line is a treatment of each chain as a service for the next sequential step and as a customer of the previous one. In this case a chain, like a usual customer is becoming pretty demanding to what it gets – what time, what quality, in which way – customer is setting a standard or gages of what it accepts

and what does not – it goes then step by step to the very beginning of the chain and finally ends with development of suppliers of the plant. Having implemented this understanding in the minds of people – they're starting to get really better material/product as inputs to their process. Now they're already suppliers for the next step – knowing high standards of accepting the product at the next stage – they're striving to deliver it – but it's already easier because at the beginning they already got a better product from previous step in the chain and they used less time to process it which gives further optimization possibilities for the company ready to communicate this understanding for its employees.

**PRODUCTION SYSTEM'S BASICS**

These all supports a very basic but crucial for any production plant statement: a company needs to have a very strong lean production system in order to be effective at the market and efficient from financial stand point (Table 1 "Basics of a production system"). Production system is a basis that shows an ability of a plant to produce and a confidence to the customers that the company is able of doing it with a needed quality, in a needed time. Basis for this system was presented above: on the functional level first of all there should be commitment from supply chain management, production and internal logistics processes. These processes must live supplier-customer ideology. Second, human resources management process should deploy personnel development function. Finally, quality management process should change paradigm to steering the production and supporting it. At the management level structure should be corrected in a way to support all the processes, be flat enough and support cross communication.

Table 1. Production system's basics

Strong lean production system				
Management structure: process and value adding approach				
Management level	Supplier-customer ideology		People development	Production steering
Ideology level	Supply Chain Management	Production including internal logistics	Human Resources Management	Quality Management
Function level				

**CONCLUSION**

Article gave an overview of what production system can consist of, especially for companies operating at Russian aircraft market. It also creates a very basic understanding for any company willing to establish its production system independently on its industry, country and lifecycle. Further step is a breakdown of this approach to strategies for each functional area, and, accordingly, tools and methods. This part should be an industry-specific. To sum up, start from the very top – make your management structure flat and allowing for cross communication. Then, communicate to all the production-related areas customer-supplier ideology. Change current quality role to a production supporting one. Finally, deploy a function of personnel development.

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