



# World Class Manufacturing model in production management

**K. Pałucha\***

Management and Administration Institute, Organization and Management Faculty,  
Silesian University of Technology, ul. Roosevelta 26-28, 41-800 Zabrze, Poland

\* Corresponding e-mail address: kpalucha@polsl.pl

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## ABSTRACT

**Purpose:** of this paper is to show the complexity of issues related to modern management of production systems. Furthermore, it presents in a coherent form principles and the nature of the so-called World Class Manufacturing model. While presenting the model a wide variety of problems to be solved has also been identified in order to achieve the expected results, which allow organizations to build a strong competitive position in the market. This is a timely issue due to the fact that the model gives a possibility to improve production management systems. Thereby, reliability and quality of production process and its flexibility is improved. This, in turn, greatly affects the competitiveness of businesses. It should be also emphasized that variability in the environment in which organizations operate forces them to continuous search for new organizational solutions and implementation of modern management-supporting tools.

**Design/methodology/approach:** In order to achieve the aforementioned objectives literature studies on modern concepts of management were undertaken. Particular attention was paid to the production area. As a follow-up to literature studies a research was carried out in a number of companies that implemented some elements of the WCM model. As a results it was possible to get to know applied solutions, identified problems, achieved results, etc.

**Findings:** As a result of literature studies one can come to a conclusion that there are many different methods and techniques supporting management processes. The study shows that managers use these tools extensively. The number of management-supporting tools is increasing. There is a growing awareness of employees that any kind of change is necessary

**Practical implications:** The issue presented here is of great importance for the production practice. Ignoring rapid changes in the business environment and the need to adapt to them can weaken the competitive position in the market. What it all comes down to is that implementation of modern management models is necessary.

**Originality/value:** A major advantage of this paper is to show the complexity of production system management. Different pillars of the World Class Manufacturing model show the diversity of issues to be tackled, diversity of models, tools and techniques.

**Keywords:** World Class Manufacturing; Lean Manufacturing; Total Quality Management; Quality Control; Logistic and Customer Service

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## MATERIALS MANUFACTURING AND PROCESSING

## 1. Introduction

Transformation processes taking place in recent years, not only in the Polish economy, forced organizations to adopt a new approach to identify and understand customer needs. Businesses operating in a competitive environment have to meet customer needs by offering high value products. However, this is not the only goal. Companies must show a tendency to make their operations efficient and flexible. The efficiency of any organization depends largely on the organization level of production systems and the range of application of modern production management support tools [1,2].

Adjusting production processes to the requirements of a competitive market requires an analysis of activities from the perspective of material flow, flow of information and elimination of any source of waste. To perform process flow analysis, carry on their critical evaluation and finally improve them there are such tools used like Lean Manufacturing and Total Quality Management. Use of these management tools allows managers to improve the quality of manufactured products, eliminate unnecessary waste, reduce production costs, gives better control of the implemented processes, produce continuous improvement, etc. [3-6].

The need for restructuring of domestic enterprises to improve their competitiveness made them interested in the Lean concept. Initially the concept was used mainly in companies with foreign capital. A significant increase in efficiency with a relatively small outlay was possible just by knowing and using modern management tools. It was a stimulus to start applying the principles of lean manufacturing. This type of innovative solutions can raise the level of innovation of the economy of Poland, which is low at present.

Specific actions imposed by globalization allow companies to achieve a strong competitive position in the market. A fast pace of change shows that continuous analysis of the environment is necessary to quickly identify factors affecting the company's position in the market. Therefore, organisations must be highly flexible, i.e. show the ability to keep pace with recent changes in the environment, identify customer needs and expectations quickly and correctly and respond immediately to their needs. At the same time companies need to be properly managed, i.e. the decision-making process should be quick and the staff creative, supportive and adapting to changes. A research into the competitive advantage shows that companies point to quality of products, level of customer service, innovation of products and applied technology, a wide range of products, research and development facilities, competitive prices, environmentally-friendly green products and technologies, after-sales service, delivery time, etc. as major factors influencing the advantage of the company [7-10].

It shows the need for continuous improvement of management processes, mainly production systems [11-13]. The need to be innovative means that most of companies decide to intensify innovation-related activities both product and process-oriented, often associated with changes in production technology. These changes, in turn, force organizations to develop proper, competitive production processes. In industrial practice, one of the most well-known solutions in the area of production is the so-called Toyota Production System [14,15].

The aim of this paper is to present a complexity of issues related to the management of production processes and tasks this

area of business management has to tackle. Actions taken in order to respond to challenges of the turbulent environment must be faster and faster. They have to be flexible, efficient and meet specific standards. All these conditions are constantly changing due to customer needs and requirements as well as rapid pace of technology development and state-of-the-art technologies.

This paper presents basic principles and characteristic features of World Class Manufacturing model and implementation requirements of such a model. This program is a compilation of a modern approach to production systems development as it is based on the concept of Toyota Production System, Lean Manufacturing elements and Total Quality Management. The case study, based on the examples from the automotive industry, shows some of the problems of this concept. Together with other problematic issues, outlined in this article in a nutshell because of publishing limitations, WCM takes manufacturing processes as a whole.

## 2. World Class Manufacturing

Currently a customer making a purchase is not only interested in a product but also, to a large extent, in extra services provided under the purchase contract. Hence, policies of many organizations are based on such principles as: customer satisfaction with products and/or services, value added, appreciation of employees. It is possible to achieve these objectives through continuous improvement. One can say that only "learning" organizations can be successful in a competitive market. "Learning" activities should be focused on the development of employees qualifications, process development, continuous management model development and change of business models.

World Class Manufacturing (WCM) is an example of such a system. World Class Manufacturing is a management concept introduced by organizations using the best production systems in the world. WCM is an integrated management model, which assumes continuous improvement of activities within the framework of organizational system. The aim is to achieve global competitiveness by adhering to the following principles: "no waste", "no stock", "no failure", "no defect", improvement of applied processes, increased productivity, improved security, cost reduction, etc. Additionally, to run world-class manufacturing processes it is necessary to use teamwork and prepare employees to work in such teams. Benchmarking is carried out at the level of leading organizations from given industry group [16,17].

The concept of World Class Manufacturing shows an advisability of a modern, comprehensive approach to develop a model that better organizes new product development processes and manage them. It is a comprehensive program for production management system reorganization, which is based on the fundamental principles of continuous improvement of safety and elimination and attacking of waste of any kind. Organization management according to the principles of WCM is based on high quality reliable methods and tools with extensive involvement of all employees and managers of the company. Only adoption of such approach makes it possible to achieve high, world-class quality and measurable savings in the manufacturing process [18].

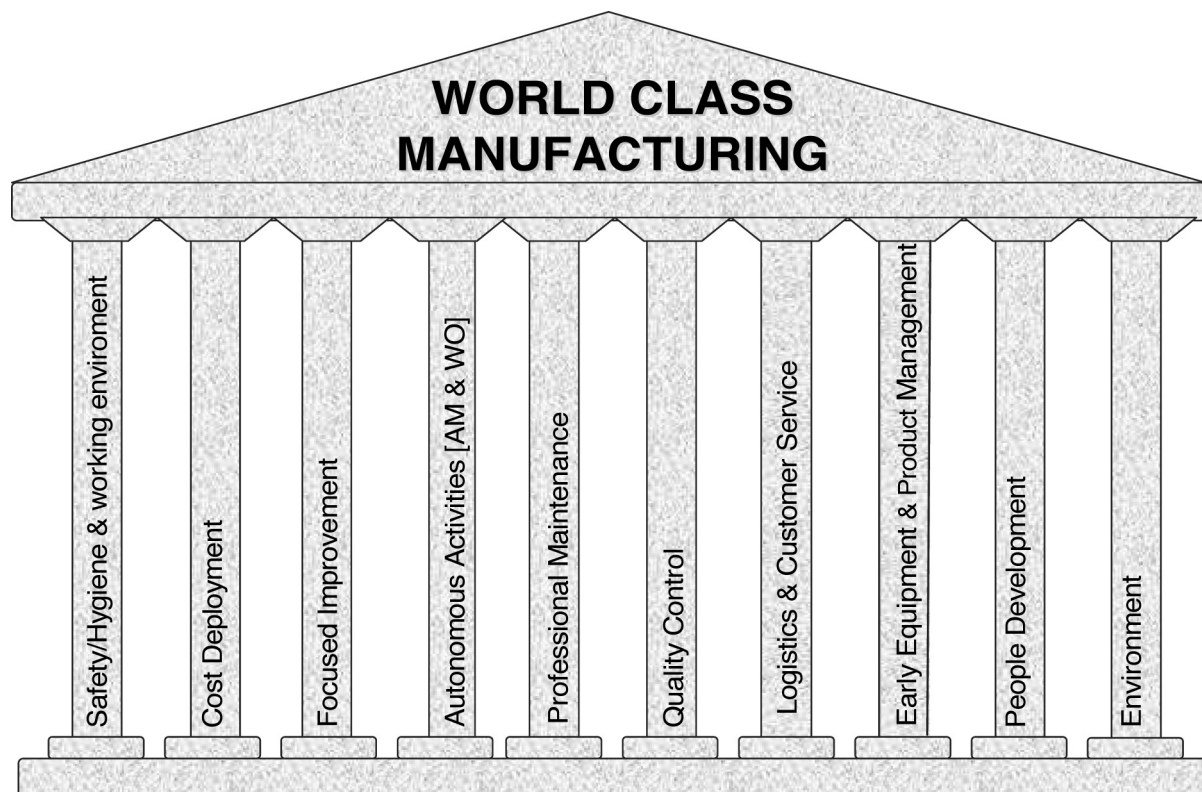


Fig. 1. Pillars of WCM [17]

Fiat Auto Poland and other Group companies like Fiat Powertrain Technologies Poland have introduced the concept. Activities carried out under WCM program are most evident in design, production and sales processes. Introduction of WCM, based on Toyota's management model is useful to achieve high, world-class production quality and reliability of products. It is also aimed at the elimination of waste.

WCM as a management model introduces its own methods and tools that enable organizations to achieve competitive advantage, based on the principle "to manufacture highest quality products at low prices". The WCM model is based on ten interlinked pillars in order to achieve aforementioned objectives. High operational level of production and logistics processes referring to both methodology used and results achieved by the world's best companies lay a foundation of the World Class Manufacturing model. Experiences gained by these organizations made it possible to recognize World Class Manufacturing as a model having as a basis following concepts:

- Total Quality Control (TQC),
- Total Productive Maintenance (TPM),
- Total Industrial Engineering (TIE),
- Just In Time (JIT).

Results of continuous improvement of all parameters and ongoing involvement of all employees, regardless of their position in the organizational structure are certified by external experts.

As mentioned above, the WCM model is based on 10 interlinking technical pillars (manufacturing process-related) and managerial pillars as illustrated in Figure 1.

Below please find a brief description of individual pillars. A seven step methodology developed for each pillar is used to implement accepted solutions.

### 1. Safety

It is a technical pillar that involves continuous improvement of working environment and reduction of factors generating accidents and dangerous occurrences.

The aim of SAFETY pillar is to eliminate accidents. It requires more intense preventive actions, continuous improvement of ergonomics in the workplace and skills and qualifications necessary to eliminate potential hazardous events and accidents.

### 2. Cost Deployment

Manufacturer, as part of COST DEPLOYMENT pillar, for company's management analysis/audit has to introduce an effective plan of waste reduction where such activities can bring substantial benefits. It is necessary to develop an improvement program that will lead to a reduction of waste. There are activities carried out in order to identify waste, determine the place of their production, value them, identify elimination methods and expected results.

### 3. Focused Improvement

The purpose of this pillar is to eliminate major waste identified previously within the Cost Deployment pillar. This way

organizations do not exploit resources for problematic issues of minor priority. Corrective actions are targeted and have to lead to a final problem solving and restore or introduce a new, specific standard. This work should be carried out periodically because of its unique nature. The aim of this pillar is to achieve waste reduction in the production system and eliminate activities not generating value added and therefore not likely to increase the cost competitiveness of the product.

#### 4. Autonomous Maintenance

As machinery and equipment often operate in poor conditions and never work at full capacity this pillar becomes really important. The aim of this pillar is to improve the efficiency of the global production system by:

- Restoration of a mechanical device or equipment to its original state and maintaining its initial technical parameters to prevent deterioration,
- Increased involvement of production staff and development of a co-operation system favourable for both machine operators and maintenance service staff,
- Development of technical skills and qualifications.

All above mentioned activities must be supported by skills development. Furthermore, this pillar is also responsible for the proper organization of the workplace (Workplace Organization), efficiency improvement and getting the productivity of the production system up.

#### 5. Professional Maintenance

Scope of activities associated with this pillar is a result of the number of failures that occur in many systems, lack of systematic preventive measures and poor co-operation between machine operators and the maintenance service staff. Main activities under this pillar focus on: control and failure cause analysis, further qualifications of maintenance service staff, collaboration with staff members responsible for Autonomous Maintenance, etc.

#### 6. Quality Control

Despite many preventive measures taken there are always situations when customers are not satisfied with our products or services. This reflects the importance of this pillar. Defects are found and the cost of rejected products becomes a considerable expense for the company. This pillar is generally designed to provide customers with high quality products at minimal cost, to develop proper operating conditions for production systems and to increase quality problem solving skills of staff members.

#### 7. Logistic & Customer Service

Large stocks or a necessity to reschedule production due to raw material shortages are usually the reason for performing tasks being a part of this element of WCM concepts. The aim is to create favourable conditions for the flow of materials within the company and between the suppliers and the plant, reduce inventory level, minimize the amount of displacement, reduce the number of kilometres and transit time inside the company and from direct suppliers, integrated purchase, production and sales network.

Main activities are based on the Value Stream Mapping in order to determine existing inventory shortages and the possibility of their removal.

#### 8. Early Equipment Management

Activities being a part of this pillar are usually undertaken if the start-up time of new equipment exceeds the initial settlements. Efficient implementation of this kind of work allows for cost optimization and loss elimination resulting from inactivity period. In addition, the pillar covers activities related to early equipment management during the product development process through a special revision of the model (Design Review), specification of technical requirements for submitting a tender and supplies consistent with the requirements of the user.

#### 9. People Development

Activities within this pillar are to ensure, through a structured system of training, appropriate skills and qualifications for every job position. In addition, maintenance service staff and technicians are prepared to train later other employees. There should be also knowledge and operational skills documentation system in place.

#### 10. Environment

The tenth pillar is used to meet the environmental management requirements (compliance with the requirements and standards of the environmental management), continuous improvement of the working environment, etc. The main activities include: periodic internal audits verifying the impact of the plant on the surrounding environment, risk identification and prevention, use of ISO 14000 standard and a variety of technical improvements such as production site improvements.

### 3. Case study

Fiat Auto Production System was developed to achieve satisfactory performance results together with results that satisfy clients. Only the best concepts, methods and management techniques can do this. Tools used in the WCM should:

- increase the flexibility of production process making it possible to meet market expectations and customer needs,
- improve the quality of products,
- improve processes,
- constant reduction of manufacturing cost,
- active involvement of workers in the improvement of processes,
- effective system for motivating employees.

“WCM is an integrated management system, based on 10 managerial and 10 technical pillars. Its aim is to develop manufacturing site organizational system in order to achieve World Class level of competitiveness”. [Fiat] Thus, WCM is based on four concepts: “no waste”, “no stock”, “no failure”, “no defect”. WCM has been recognized as a culmination of the development of quality management system in an organization. FAP had to pass through the following stages to go up to WCM: Total Productive Maintenance (1996), Total Quality Management

- ISO 9001 certificate (1997), ISO 14001 (2000), ISO 9001:2000 (2001), Integrated Quality, Environment, Occupational Health and Safety Management System certificate: ISO 9001:2000, ISO 14001, PN-EN 18001 (2002), Polish Quality Award (EFQM) (2003), "Recognised for Excellence 2005" in the 14th edition of European Quality Award (2005), EFQM Excellence Award Finalist (World Class Manufacturing (2006), WCM Bronze Level (2007r.), WCM Silver Level (2009r.).

In the opinion of employees of companies where a survey was conducted WCM is based on important principles. It requires to be familiar with various methods and techniques. It involves over a long period of time a large group of employees becoming a kind of working method. It allows you to develop an efficient system that is aimed at eliminating the sources of problems. Each of the ten pillars has to achieve a specific group of goals. Actions taken in one pillar are often reflected in another one. The number of steps to be done within each pillar has been unified.

So, for example in the pillar of Quality Control there are actions taken, which are designed to provide customers with products of the highest quality. On the one hand it allows to reduce the number of defective products and reduce costs. Qualifications and skills of employees in quality problem solving are certainly higher. More attention is paid to the solutions used in production systems. Achievement of objectives assigned to this pillar is connected with: applied failure rate analysis, quality training courses, the so-called improvement groups.

The Quality Control procedure consists of the following steps:

1. Problem selection,
2. Understanding objectives,
3. Planning activities,
4. Cause analysis,
5. Defining and implementation of preventive measures,
6. Monitoring of results,
7. Standardization of control activities and their implementation.

The Quality Control concept implies that this issue is crucial for the existence of the company. Quality Engineering department is responsible for proper operation of this pillar. The pillar can be divided into three levels of action:

- reactionary - for example elimination of faults and defects at manufacturer or supplier's plant using established methods,
- preventive,
- proactive.

The second and the third action are intended to minimize the risk of faults and defects. Special attention is paid to the methodology of proceeding; first of all every problem must be well-defined and described and then its cause can be removed. This is to prevent the re-emergence of a specific problem. In case of complex problems a "4M + Project" analysis is carried out [18, 08/12]. The aim of the analysis is give an answer where lies the root cause (or causes) of the problem. Does the cause lie in the material, machine, methods used or is it a human-factor? If the cause is "material", "method" and "man" a tool called Problem Solving (Creative Problem Solving) is used and in case of machine-related causes it is a Quality Maintenance tool. Both of these tools have a developed seven step methodology. For the first three groups of causes a tool developed by quality staff called Quality Assurance Matrix is very helpful. It is a lists of all the problems that occurred inside and outside the company in the past and that are currently being solved. It makes it easier to find stages in the production process where the problems

are usually identified and prioritize them. Furthermore, it helps to decide what should be done first. The matrix enables a better diagnosis of the situation, taking adequate steps, discovering the cause of the problem and finally introduction of changes. All the work results in development of standards and adoption of appropriate management methods. A list of problematic issues is continuously updated and expanded. Duly authorized and appointed staff members analyse particular problems.

For machine related problems the analysis starts simply from inspection of current machine parameters. If the parameters are correct then further in-depth analysis is carried out to eliminate finally system waste. For example, Fiat Auto Poland carries out a detailed analysis of problems in the pillar and records are kept. Thus:

- "Material"-related problems - a quantitative tracking of supplies is done and any nonconformities are recorded, described and communicated to the supplier to adopt a proper standpoint. This way the supplier is obliged to draw up a report and its results affect supplier's assessment. This issue is really important as the greatest number of quality-related problems is connected with "material" and often explains the reason of change of a supplier or search for new alternative sources of supply.
  - Problems in a "man" group are of very diverse nature and their analysis is really comprehensive. The process of human error analysis involves an employee who made a mistake and a member of the employee technological team or its leader, etc. During the first stage of the analysis the employee defines existing nonconformity. Detailed description of operations is provided during the second stage and the problem is clearly presented. The team leader is responsible for specific knowledge assessment. If the assessment is positive further error cause identification is carried. Mainly the man-related quality problems occur in the assembly department. This is a consequence of the fact that the greatest number of operations is performed manually by an operator. If a human factor causes the problem actions to be taken are really important, as they are aimed at discovery and elimination of root causes of defects. It is also important not to release defective products outside the production unit.
  - Problems in the "method" group emerge most frequently because of mistakes of many different workers performing certain operations. This way a mistake of a single worker can be eliminated. If causes are found employees can be properly trained and processes secured against re-occurrence of defects in the future.
  - A group of defects associated with the "machine" directly affects the issues of proper maintenance (inspection scope and dates, cleaning, maintenance, etc.). Modern machinery stock ensures reduction of causes of errors and defects.
- In case it is impossible to identify causes of defects and categorize them, although comprehensive analyses were carried out, design work has to be initiated. The result is that the problem is redesigned and a new way of problem solving can be found. It usually relates to problems identified in operation or only by the customer.

The Quality Control pillar was given very high marks during the last WCM audit conducted at Fiat Auto Poland. The 4.0 mark is the highest rating received by a production plant within the entire Fiat group. Thanks to perfect solutions the number of

defects in produced cars is the lowest (compared with other Fiat plants) as well as the unit cost of repairing.

Taking into account efficient operation of a company another pillar of the WCM, i.e. Logistics & Customer Service plays a very important role. Despite the ongoing work to improve the results companies are continuously striving to reduce inventory levels, more efficient supply of workstations with necessary components, accessories, assemblies, etc. Sometimes, shortages disturb the production process and it is necessary to reschedule production planning. Therefore, main objectives of this pillar are:

- to reduce inventory levels,
- to minimize internal displacement of materials (frequency and distance),
- continuous optimization of flow between organizational units and between the company and its suppliers,
- integration of purchase, production and sales Network.

Objectives can be achieved through continuous system improvement especially using the following methods: Value Stream Mapping, Just In Time, Kanban, FIFO, etc. There are seven steps to be introduced within this pillar:

1. modernization of the so called production line engineering,
2. reorganization of internal logistics,
3. reorganization of external logistics,
4. production levelling,
5. improving internal and external logistics,
6. integrating purchase, production and sales network,
7. use of sequence and just-in-time programming.

As shown in the above example tasks to be performed are very complex and require considerable knowledge. The scope and complexity of issues show that it is a long-lasting process to achieve objectives. Despite the importance of all ten pillars, their interdependence and their interaction, the Cost Deployment pillar is considered as a strategic one in terms of "value added". Within this pillar different cost analyses are carried out, waste and its causes as well as waste centres are identified; this pillar also supports projects aimed at waste reduction. Activities carried out within this pillar and related analyses are so important that the audit is carried out twice a year.

Fiat Group has been working worldwide on the development and implementation of WCM program for over five years. After the merger with Chrysler the program was extended to both groups. WCM was implemented and has been used in over 160 companies, 106 of which 106 belongs to Fiat Spa-Chrysler. This year, gold WCM medal (gold level) was awarded to Fiat Powertrain Technologies Poland in Bielsko-Biala [18, 5/2012]. There's been ongoing work since 2007 and the first positive result was a bronze medal (bronze level) as early as 2008. Within the next 12 months the company was awarded a silver WCM medal. The gold level achieved in 2012 allowed Fiat Powertrain Technologies Poland to win "best in class" award; especially the pace that allowed FIAT to reach record levels was appreciated which, in turn, made Fiat Powertrain Technologies Poland a leader of the entire Fiat Group.

Implementing the WCM program in Bielsko plant special attention was paid to:

1. raising employees awareness of the WCM foundations and benefits through a training program,
2. convincing employees to the method - like active involvement in the development of working environment,

3. increase of staff creativity - bringing forward improvement ideas,
4. growth of staff motivation.

All in all, assessing the WCM program it should be clearly stated that, as a result of actions taken, unit cost of production was reduced, reliability of products and customer satisfaction increased, accident and incident figures decreased, etc.

Analysis of implemented solutions shows that earning the highest marks possible is not an objective on its own for the majority of organizations. WCM is a set of methods that enable to achieve outlined objectives, streamline processes, improve quality, reliability, safety, working conditions, eliminate waste, etc. It is very important that each of the above processes is subject to a separate evaluation and rating during the audit. So, plants set quantitative objectives and try to approach them. At the same time certain standards are implemented, however they are not taken as a target. It is said that WCM is a never ending process.

WCM know-how is widely distributed in Fiat-Chrysler group. The Development Centre is fully responsible for all WCM-related activities and exchange of information and experience between plants that successfully implemented individual pillars of WCM. Currently the Group is trying to include to the system as many suppliers as possible.

#### 4. Summary

Issues concerning implementation of modern organizational solutions that the paper deals with prove the need for a comprehensive approach for the transformation process of existing enterprises. All employees have to engage in full, conscious, and active participation in the process of change as well as improve their skills and qualifications. Managers of different organizational units express their opinion that people are not as resistant to new ideas as they were before. It seems that employees awareness has increased: mid-level managers and frontline workers are familiar with various methods of management support. Changes in structure enable better cooperation between internal and external units (mainly suppliers, consumers, co-operators, etc.).

Literature cited examples of modern management tools show that they affect in a significant way economic performance of companies, so they become more competitive.

Research on the involvement of Polish companies in implementation of modern management tools in production systems shows growing interest in these tools. On the one hand it is required to increase efficiency, productivity, quality and attractiveness of the market while on the other hand it is a necessity to meet certain requirements set down by various organizations including subsidiaries of international holdings. A number of companies forming elements of logistics and supply chain has to meet certain standard requirements related to the flow of materials and information.

Introduced methods allow, in a relatively short period of time, to achieve results that improve competitive position of the company. So, productivity grows, number of defects decreases, the amount of waste is reduced, revenues increase while inventory level decreases, etc. There should be an ongoing monitoring of results of introduced changes and developed indicators periodically analysed.

Implementation of modern production management tools helps to improve organization's internal system. There is a growing understanding of processes, employees better identify emerging problems and get involved in company's activities.

Both available literature and industrial practice shows that to achieve a significant improvement of company's operations it is required to change the way of thinking of all employees. Corporate culture, awareness of employees, motivation and training systems have to be changed. Human resources become the leading element of the process.

Research carried out in automotive, machine and metal industry shows that to use these concepts efficiently it is required to:

- train managers and project managers to make them fully understand new concepts, methods and techniques,
- enable workers to participate in management processes while improving their skills and qualifications to better understand the changes taking place in an organization,
- develop favourable conditions for effective introduction of changes, reduction of resistance and conflict solving,
- implement modern IT solutions to enable rapid exchange of information,
- introduce solutions for active collaboration between organizations / plants (their co-operation),
- develop a system that enables to raise professional skills, stimulate creativity and understand processes happening in the environment and the entire organization,
- maximize use of available resources, both tangible and intangible,
- etc.

As presented and discussed in this paper currently managers can benefit from a variety of tools that support managements processes, especially production management. A study, based on my own observations, analyses and discussions with managers of different levels allow to come to the following conclusions:

- Introduction of new management tools is difficult, time consuming and shows potential for conflict. So, there should be a program in place of comprehensive implementation of new solution and favourable conditions to run implementation processes smoothly,
- Decision concerning the selection of various concepts and their implementation belongs to the top management. They are consistent with adopted long-term business strategies. Different tools aimed at ensuring high quality of products and processes can work as a specific standard for the entire industry. Introduced methods and concepts complement each other and practically cover the entire set of processes carried out in the production area,
- Discussing benefits (access to which is very difficult) derived from the implementation of WCM and other new solutions, immeasurable results should be also presented: increased level of production quality, increased efficiency, reliability, timekeeping, modernity, occupational and environmental safety, increased creativity and commitment of employees, reduced number of defects and their costs, improved internal and external communication, standardization of documentation used, improved company's image,
- In organizations where the relationship with their suppliers and customers in the logistics and supply chain is particularly strong, selection and implementation of new methods of management support must be agreed with external partners.

Here implementation of new solutions is regarded as a need of the hour. Business partners find joint solutions interesting,

- A considerable need for WCM implementation is noticeable in order to achieve a strong competitive position. On the one hand organizations want to raise the level of efficiency, productivity, quality and market attractiveness and on the other, to meet certain high standards of various cooperating companies.

To bring to an end future processes of change in business management will be more comprehensive and more rapid. Increasing complexity of processes will require application of special but also diverse skills and qualifications. Basically, new challenges that today's businesses have to respond to in the improvement of production processes will force organizations to develop and implement concepts enabling them to optimize activities. It becomes evident when analysis of all WCM pillars is carried out.

The key implication message is that WCM solutions and methods enable to:

- Reduce overcapacities,
- Reduce excess inventory,
- Reduce number of employees,
- Improve operating effectiveness,
- Use machines and equipment more efficiently,
- Reduce finished goods inventory,
- Simplify logistics and supply chain,
- Response rapidly to changes in the business environment,
- Response immediately to changes in demand,
- Combine production with logistics,
- Improve relationships with suppliers, cooperatives, customers,
- Develop modern cooperation and communication system with business partners,
- Improve return on assets ratio,
- Reduce the capital employed in specific task,
- Track and implement state-of-the-art technologies,
- Shorten preparation time and lead time while the risk of failure is reduced,
- Shorten the production cycle,
- Give easier and quick access to information concerning the company and its business partners,
- etc.

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