Development of Information and Communication Technologies (ICM) increasingly allows the sale and purchase of various fashion products all over the world, causing shortening the life cycle of products and reducing time of introducing products to the market. On the other hand, there comes the global competition and one can survive on the market only if all unnecessary costs are reduced, the range of production is expanded, and consumers are considered individually, not as statistical average sizes. Therefore, it is necessary to adjust production to market demands, i.e. to set a flexible production model that is capable of quick and easy adjusting to modern requirements.

Rapid technological changes and customer expectations demand from manufacturers to improve their quality of fashion products constantly and thus survive in the market. The process of making clothes is very complex and the application of the latest technological achievements is not enough for producing high-quality clothes.

Due to frequent changes in fashion trends, overcrowded markets, low purchasing power, as well as changes in habits and tastes of consumers, we are faced with a permanent decline in product sales. Changes in the world market require creating and maintaining development policy to be based on identified customer needs. Preconditions of development of workable strategies of corporate fashion industry are primarily the assessment of market potential, its own strengths and weaknesses. It is necessary to explore and explain all phenomena and laws of modern production-market-environment, in order to obtain information indicating what products to produce so that the market would accept them, and that a design as a creative discipline can create optimum products with very different characteristics.

Organization of the technological process of making clothes is different for different garments, because each item is different and requires a different organization of technological processes. Therefore, it is necessary to find the most economical ways of work and time required to perform work operations.

Production of clothing does not bring results if it does not tend to the necessity for improvements, which will lead to the growth of productivity, rational usage of productive resources and reduction of costs. It is necessary to see the growing need to change management, capacity and planning. This

implies the implementation of new solutions in manufacturing, information systems, management techniques, design, etc. For successful survival in the market, it is necessary to establish control over other stages of the production cycle such as procurement, sales, promotional activities, logistics, pricing the final product, etc.

Optimization of production within the global logistic chain in the 21 century is all about the problem of determining the optimal production quantity in time, provided that the costs of purchase, costs of production, costs of storage of finished products, transportation costs and demand costs are minimal. Activities of the logistic chain begin by customer specification, and end when a satisfied buyer pays for the clothing supplied. Modern logistic chains are dynamic and flexible networks, which operate on the principle of "predict and do" versus the traditional approach of "produce and sell." Fast response to changes in demand requires solutions in all phases of the logistic chain: production, procurement, warehousing, transportation and distribution.

The world trend is to be the best, not just successful. Being competitive is not a question of success but it is the question of survival, and production business systems must be flexible, innovative and constantly improving. If the production is viewed as a chain of values that include activities which bring or do not bring the value to the product, the goal of modern production is to reduce the activities that do not bring value.

This book is the author's attempt to show, apart from introducing classical technology of production of clothing, the importance and need for improving the organization and methods of work, ways of thinking and finding new fashion markets. It is intended primarily for students of textile technology, engineers in garment industry, as well as top managers and production managers in garment industry.

I would like to thank Professor Dr Danijela Paunovic for her professional support, and Professor Sladjana Milojevic for editing.

Dr Gordana Colovic

The author of this unique book, on the basis of years of experience and research in the field of garment industry, provides theoretical and practical examples of management and technological systems in garment industry in the region of Southeast Europe.

The dynamics of technological development goes beyond the dynamics of human perception and the difference between innovators and traditionalists brings acceptance and introduction of technology into all life processes. The path from tailor workshops to large companies goes through crises of organization. It is therefore important to organize every company adequately, according to its size, and adjust to the market economy. Clothing products are no longer the result of production but they are the products selected carefully, following the wishes of customers.

Volatility of fashion trends and modern technologies impose a permanent change in the organization of work in garment industry. The life cycle of the product is not in accordance with the life cycle of technology and it is necessary, as the author describes in Chapter 2, to define the parameters of technological systems that provide high technologics.

Flexibility and dynamics of production can be realized only through quality management. Tools for control, as well as methods for determining the time of technological operations, are described in Chapter 3 and they can be useful not only to beginners, but also to professionals experienced in this field.

To achieve the maximum level of working potential in order to increase the economy, the quantity and quality of production, it is necessary to ensure the best ergonomic conditions for workers. System, corrective, software and hardware ergonomics are shown in Chapter 4 and through ergonomic requirements they provide important factors which enable a more humane and successful work in garment industry.

Providing ergonomic principles of times, machines, production space, materials and organization a technological system can, within contemporary demands of the international fashion industry, adapt and develop business concepts in the unique world market. For customers it is not important where the product comes from but the parameters that define it through quality and price. Chapter 5 presents the analysis of planning, layout and logistics in the production of clothing as key parameters of strategic and operating management.

## Foreword

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Modern CAD/CAM technology integrated into the CIM concept gives the advantage to producers, through the integration of all logistic activities from the moment of ordering to the delivery of finished fashion product.

Modern organizations are permanently improving, they follow the fashion changes adjusting their production capacities and adopting new methods, tools and techniques of organization of clothing production. Throughout Chapter 6 the examples of JIT concept, Toyota Production System, Kanban, PPORF and TQM system are shown, with the same aim to improve working conditions, motivate employees and increase profits. It is particularly shown in the concept of lean production and case studies.

The book is comprehensive, with numerous examples from practice, and its content is highly useful for teachers, students and those who want to enter the world of garment industry.

Dr. Danijela Paunovic

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