Size Designation System of Clothes and Footwear Based on Croatian Anthropometric System

Darko Ujević ^{a,*}, Renata Hrženjak ^a, Ksenija Doležal ^a Mirko Drenovac ^b, Lajos Szirovicza ^c

^aFaculty of Textile Technology, University of Zagreb, Zagreb 10000, Croatia

^bFaculty of Philosophy of the University of Osijek, Croatia

^cInstitute for Anthropological Research, Zagreb, Croatia

Abstract

The compound technological project Croatian Anthropometric System is a national project. The anthropometric measurement of the population of the Republic of Croatia was performed within this project with the aim of adopting the Croatian Anthropometric System as the basic document for the size designation system of clothes and footwear. The measurements of anthropometric characteristics as well as collecting data under social and economic conditions were carried out by previous teams. The successful implementation of this project includes strategic planning, which includes an adequate selection of associates, planning and proper organization, precise distribution of tasks, synchronization of the dynamics of their performances and interactive way of managing the project implementation process. In managing research projects, a strategic management approach also includes the connection and harmonization of diverse knowledge, specific methodologies and specific professional interests of members of a (often multidisciplinary) team of scientific and professional associates, and maintaining the consistency of the methodology of research.

Keywords: Anthropometry; Anthropometric Measurement; Strategic Planning Project; Standards

1 Introduction

The developed countries update their standards every 15 to 20 years. Since the last anthropometric measurement of the population was on a sample of 5000 subjects of both sexes taken in 1962 (Autonomous Province of Vojvodina), the need was felt to initiate the project "Croatian Anthropometric System" in the Republic of Croatia.

A team of 25 experts coming from different areas of human activities: anthropology, medicine, garment construction, technology, mathematics prepared a proposal of the compound technological project "Croatian Anthropometric System" (Technological Project 03/0117-012).

Email address: darko.ujevic@ttf.hr (Darko Ujević).

^{*}Corresponding author.

Within the scope of this project the anthropometric measurement of the population in all Croatian counties and the city of Zagreb was made, and the whole implementation of the project was harmonized with the international standards ISO 8559, ISO 3635 and ISO 9407.

2 Anthropometry

Anthropometry as part of anthropology methods is the study of the measurement of the human body in terms of the dimensions of individual human body parts. Anthropometry requires well defined procedures to obtain homogenous, accurate and reliable data that can be compared with different populations. These anthropometric instruments and methods of measuring are standardized, and a standard set of anthropometric variables has been established.

In addition to monitoring changes in body morphology occurring during growth, anthropometry makes it possible to recognize changes occurring gradually in successive generations.

Within the framework of investigating the morphological variability of human beings great interest originates for anthropometric indicators showing how well nourished world populations are as well as in all life periods [1].

Results obtained by anthropometric measurements are compared with referent values by means of which "normality" is assessed and its deviation.

3 Strategic Approach to the Compound Technological Project Croatian Anthropometric System

Strategic approach to the project management implies adequate selection of associates, planning and appropriate organization, accurate distribution of tasks and harmonization of the dynamics of its performance, and the interactive process of the project implementation (including permanent monitoring and timely professional, organizational and logistic intervention in critical moments of its implementation).

Strategic approach to project management defines the answers to the questions in advance: who, what, where, when and how should a task of the program of project activities should be performed, what operating tools are used for monitoring and regulating the performance of single tasks, and how their products are connected into a single entity specified by the subject of goal of the project.

Activity management of the preparation of the preconditions for the initialization and control of the project implementation Croatian Anthropometric System included:

- documentation preparation of the project (creation of research project study and working documents),
- definition of a sample of subjects and methodologies of field measurements,
- creation of the operational schedule of the implementation of tasks,
- logistics solutions and administrative support,
- selection of associates and formation of field measurement teams,