

# Chapter 14

## A Mass Customisation Implementation Model for the Total Design Process of the Fashion System

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### ABSTRACT

*Global economic development has been increasingly segregating the design and manufacturing functions of industries both geographically and administratively. In response, fashion companies in advance economies have increasingly operated as brand houses that engage in design and marketing as their sole activities. The total design processes of the contemporary upstream fashion supply chain is therefore investigated and analysed as an integrated fashion system. A new conceptual model of mass customisation aligning the activities and interests of the collective fashion supply chain producers is subsequently developed with its associated implementation strategies. This model takes a consumer-centric approach, and places designers/brand houses as the instrument and channel for mass customisation. The objective is to enable the prospect for small medium fashion enterprises to deploy the vision and principles of mass customisation in a more coordinated, cost effective, and responsive way. The prospective benefits and practical issues of this new model are discussed.*

### INTRODUCTION

Fashion companies in advance economies have increasingly become brand houses performing the functions of design and marketing exclusively at two polarised ends of the lengthy and fragmented

fashion supply chain (FSC). This includes, firstly, functions of total design processes interacting with off-site manufacturers at the FSC up-stream. Secondly, it includes the functions of marketing and sales interacting (directly or indirectly) with end-consumers at the FSC down-stream.

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This chapter refers to end-consumers collectively as the fashion ‘Customers’. It refers to all participants of the FSC design and manufacturing functions collectively as the fashion ‘Producers’. This includes most critically, brand-houses/designers companies, textiles suppliers, and garment manufacturers. The “Fashion System” refers to all workings of the global fashion apparel industries.

Mass customisation (MC) has been recognised as an effective strategy in response to the contemporary climate of “the Fashion System” in an age of diverse Customers demand, product proliferation, global competition and information technology. This climate has been further challenged by the global economic downturn and the impact of currency fluctuations on trading supply and demand. However, MC implementation tends only to be deployed in the mass market sector by global corporations with large scales of economy and extensive technological investment capability, whilst more than 90% of the Producers in the Fashion System are small-medium enterprises (SMEs).

This chapter explores the strategic and practical possibilities of mass customisation for the total design processes (TDP) at the FSC upstream. This includes all processes from design conceptualisation (creative direction) and sourcing to design development and pre-production. The set time conditions of the seasonal calendar are established as the key parameter of the FSC. These time conditions are often neglected in studies of design processes, yet they provide a critical and competitive basis to all works of the Fashion System. The set components and definition of the fashion garment is established as the key output of the FSC. The garment components are what all efforts of the Fashion System ultimately work towards and generate revenues from.

A new model for a mass customised FSC is developed to enable a two-way balance between a consumer-centric demand and a design-led supply process. This balance is critical to the optimisation of the contemporary Fashion System. Due to the

process-based principles, the new model does not necessarily require large investment or substantial technological intervention for brand-houses or small medium designers companies to implement, but warrants the benefit of mass customisation.

## **BACKGROUND**

### **The Fashion Design Process: A Calendar of Prescribed Timing for Supply Push**

For fashion brand houses and apparel designers’ labels companies, the FSC design process generally includes all stages from ideas generation and creative direction to garment prototype development (Secor, 1992). Much published research explores the design and development process with respective diagrams devised to illustrate key sequential stages.

Carr and Pomeroy (1992) classified four phases with linear operative steps in each: 1) Origin of styles, comprising market research, design, concept, and market screening. 2) Sample development phase, including prototype pattern, sample, and range meeting. 3) Business objective refinement phase, encompassing pattern adaptation and testing, while production planning and scheduling is also carried out. 4) Attainment of commercial products. This takes the process from production pattern, grading, markers, production templates, specification, into two strands of feedback from manufacturing and marketplace. And while technological advances and geographical shifts of fashion design and development have evolved since the 1990s, the process stages and functional output of the FSC processes have remained largely unchanged.

Gaskill’s (1992) retail product development model splits activities after 1) Trend analysis and concept development, into three parallel areas of 2A) Fabrication selection, 2B) Palette selection and 2C) Fabric design. This is then followed by

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