

## The Textile Game: An Overview

The Textile Game engages participants in a simulation of the textile production pipeline and its attendant dynamics. The textile production pipeline begins when fibers, natural or synthetic, are collected for processing and ends when a finished sewn product reaches a retail outlet.

In general, the production sequence is as follows: fibers are woven into fabrics, the fabrics are cut into piece goods, piece goods are sewn into products (for example, garments, home furnishings, or industrial goods), and products are delivered to consumers. In reality the production of textiles and sewn products is very complex, composed of sophisticated interactions among various companies.

In the Textile Game, the textile pipeline is represented as four closely linked sectors: (1) Fiber, (2) Textile, (3) Sewn Products, and (4) Retail. Each participant in the Textile Game governs the simulated manufacture of products in one of these four sectors. Each sector has only one supplier (a provider of raw materials for the manufacturing process) and one customer (the recipient of finished goods). The customer-supplier relationships are shown in Figure 1. Note that the Fiber supplier is Origin Materials, which provides an unlimited supply of raw material, and the customer for Retail is a Consumer Demand card deck, which represents a predetermined sequence of retail sales.

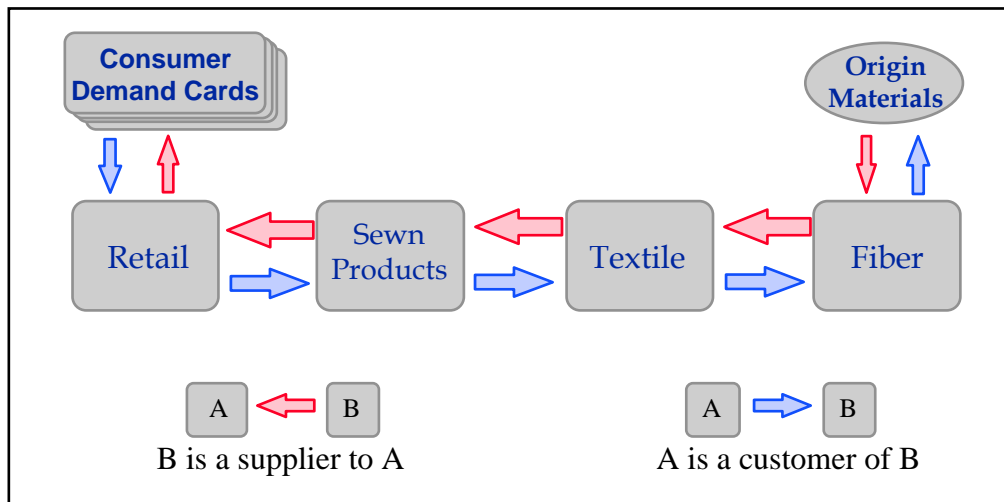


Figure 1. Sectors and their relationships in the Textile Game.

The Textile Game is a competition among two or more teams to achieve the best pipeline performance. Each team consists of four people, one player for each sector. Each player responds to a customer's orders for finished goods and prepares to meet future demand by planning a production level and ordering raw materials from a supplier. The Retail player determines demand by drawing the top card from the Consumer Demand deck.

A "turn" of the game is one set of actions by the players in all of a team's sectors. Each turn represents a fixed time cycle. For these instructions the time cycle is considered to be one week, but facilitators can set any time cycle they deem appropriate.

At the end of a turn, each player records the state of his/her sector, that is, the current inventory and order backlog. (The order backlog is the quantity of finished goods that have been ordered by a customer but not yet shipped). The score for a team at any given time is

the sum of all sector costs for holding inventory and maintaining order backlog. The competition is won by the team with the lowest score.

## **The Purpose of the Game**

The Textile Game demonstrates that the difficulties in managing the pipeline originate in the system itself, not in the capabilities of the players. This illustrates a fundamental principle: system structure, not people, strongly influences performance.

The structure of a system consists of a set of cause-and-effect mechanisms—the “rules of the game”—that define the system. Participants learn how these mechanisms affect their work as they struggle with inherent system delays and a lack of information upon which to base decisions.

## **Number of People Needed to Play**

As a competition the Textile Game requires a minimum of nine people: two teams of four players each and one facilitator to act as game leader and call out instructions. Additional facilitators may be used as assistants, one per team to answer questions that arise during play. An ideal game would place three or four teams in competition, directed by the game leader and three or four additional facilitators.

If only four players are available, a single team can play the game and work with the game leader to analyze its score. A single team might also play the game more than once, trying to improve its score each time.

## Materials

This kit contains the following materials:

Facilitator's manual  
Transparency masters and PowerPoint slides  
Tokens (two boxes—one of blue, one of red)  
Paper slips in each sector's color (green, blue, red, and beige or light brown)  
Scoresheet master  
Three graph masters  
A deck of 36 Consumer Demand cards  
One gameboard (**NOTE:** You will need one gameboard for each team.)

You will need to obtain the following items:

Flip chart  
Overhead projector or Computer projector  
Masking tape  
Transparencies of instructions or PowerPoint software on your computer  
One pencil for each participant  
Four markers per gameboard (one marker in each sector color—green, blue, red, brown or black)  
Three cups or other small receptacles for each gameboard (two for tokens, one for the Retail sector)  
Scoresheets (one per participant or four per gameboard, to be made from the master scoresheet in the Appendix)  
Several hand-held calculators per team (for calculating team scores)  
Graph worksheets (one each of three types per participant, to be made from the master graph worksheets in the Appendix)

## Estimated Game Time

After you have prepared the transparencies or slides and acquired necessary supplies, the preparation will take about 30 minutes. Preparation includes reading the **GET READY** section and following the steps in the **GET SET** section. The steps involved in actually playing the game—listed in the **GO!** section—will take up to 1 hour, 30 minutes. The steps listed in the **DEBRIEF** section will take about 30 minutes, depending on the number of teams.

Allow at least 2 hours, 30 minutes for the game and the **Debrief** session. A game of 36 turns is suggested; fewer turns can be played if time is limited. However, the game dynamics build slowly, so the game leader should execute at least 30 turns of play to ensure that the teams experience the game's full characteristics.



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