

Advanced Predictive Programming

Case Preview

SYSTEMATISATION:

Moving the industry: From → Reactive & Fragmented To → Predictive & Structured



PREFACE

Why Unpredictability Dominates Apparel Operations

The apparel industry's operational inefficiency stems not from outdated assumptions alone, but from the fundamental unpredictability of customer behaviour – particularly around fit. Brands overproduce and overspend on marketing to compensate for inconsistent sizing outcomes and inventory mismatches.

The Correlation Method changes this dynamic: enabling each garment to fit up to four traditional sizes with Perfect Dynamic Fit, it reduces unsold inventory by up to 78.6% – shrinking unpredictability to just 11.4%. This shifts production from guesswork to precision, making operational planning far more reliable and cost-effective. Some examples of such a layered programmable approach are shown below, further information is available on request.

- **Inter-Panel Geometry & Force Distribution Systems** → **Inter-Panel Behaviour Mapping Tools** → Deformation Resilience Optimisation Tool: *Simulates the maximum threshold of deformation before panel integrity or intended fit is compromised.*
- **Dynamic Fit & Body Interaction System** → **Fit Dynamics Simulation Engines** → Wearer Mobility Optimisation Module: *Aligns garment logic with zones requiring mobility, avoiding over-restriction.*
- **Bio-Mechanical Correlation & Fit Standards** → Fit Retention Under Movement Validator
- **Rule-Based Design Generation & Adaptation Systems** → Algorithmic Garment Design Flow-builders
- **Recycling & Fibre Recovery Systems**
- **Resale & Second-Life Optimisation**
- ▣ **Human-AI Co-Engineering Interfaces**



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How the Correlation Method Changes the Equation

The patented Correlation Method transforms reactive production into predictive control. With fit, structure and fibre usage pre-engineered and programmable, it eliminates overproduction and misallocation from the outset. This unlocks a data-driven future where every garment is designed for real demand and every stage – from manufacture to recycling – is optimised for measurable results.

The structured system, based on predictable results, enables the creation of advanced monitoring and forecasting programmes to provide complete transparency, cost control and real-time tracking from fibre selection to end-of-life recycling. These programmes should be designed to reinforce the industry-transforming impact of such systematisation.

CASE STUDY PREVIEW: PREDICTIVE PROGRAMMING FOR HUMAN MORPHOLOGY AT SCALE

Among the system’s most forward-looking applications is its ability to anticipate morphological diversity across global markets – a key barrier to both fit and inclusivity in traditional sizing models. With the Correlation Method already ensuring garments adapt across four sizes, the next step is refining these adaptations through predictive regional calibration.

C7 – Human Diversity & Regional Morphology Systems

These systems map the anatomical diversity across regions, ethnicities, and populations—ensuring garments engineered with the patented method adapt optimally to morphological differences across global markets. They guide fit calibration, pattern logic, and scaling across demographically distinct body structures.

C7.1 – Global Morphological Variance Mappers

Capture and classify body shape differences by region, ethnicity, and demographic group, informing scalable garment engineering.

	SUBCATEGORY	L1	L2	L3	FUNCTION
1.	Regional Body Structure Database	v			A foundational data set compiling anthropometric references by region, gender, and age.
2.	Ethno-Anatomical Fit Adaptation Tool		v		Translates key morphological distinctions into structural garment logic and pattern zone adjustments.
3.	Population-Based Sizing Logic Simulator		v		Simulates sizing needs across markets to optimise scalable design, reduce returns, and avoid overproduction.
4.	Anatomical Zone Mapping Engine	v			Digitally defines key zones (motion/stability/pressure) by body type.
5.	Anthropometric Variation Integration System	v			Builds adaptable body templates for true inclusivity in patterning logic.

C7.2 – Adaptive Scaling & Inclusion Tools

Translate diverse morphology into adaptive design rules that preserve comfort, movement, and garment integrity across body types.

	SUBCATEGORY	L1	L2	L3	FUNCTION
1.	Inclusive Pattern Scaling Model	v			Defines rules for pattern scaling that maintain self-adjusting integrity across a wide range of body shapes.
2.	Global Morphotype Calibration Engine		v		Aligns morphological data with garment engineering standards to calibrate panel behavior globally.
3.	Cross-Population Fit Harmoniser			v	A harmonisation engine that adjusts fit principles for intersectional inclusion (age, ability, ethnicity).
4.	Human Shape Variability Visualisation Suite		v		Enables interactive exploration of diverse body types and how garments self-adapt or scale across them. Supports education, simulation, and visual confirmation of inclusivity and logic compatibility.
5.	Dynamic Torso Movement Interpreter		v		Analyses upper-body rotation and bending patterns to stabilise adaptive zones and maintain garment structure and balance during movement.
6.	Anatomical Fit Memory Recorder			v	Captures habitual postures and gestures over time to inform garment fit consistency—helping garments adapt based on personal motion history.

