

Advanced Fit Logic

*"It is a new use of knitwear in the market in general...
Products, which can be developed along different categories...
I am convinced... beautiful sellable products.."*

— Developer and Owner
of the Leading Luxury
Store Chain

INITIAL STAGE: Pre-programming

The perfect harmony between self-adaptation and structure is achieved through a precise correlation between dynamic panel movements and stable reinforcement zones on **Pre-programmed constructions**.

The process begins with the selection of a **Pre-programmed construction** for a future garment type. Guided by the principles of the **Patented Correlation Method (HiK)**, these pre-programmed constructions achieve a calculated balance between movement and control, embedding self-adapting panels and reinforcement zones directly into the garment's structure.

Each panel interacts at defined angles, triggering directional stretch and stabilisation. These responses are not reactive—they are pre-engineered to ensure the garment adapts in motion while maintaining its precise shape, fit, and integrity over time.

At this stage, the Method already addresses the industry's key challenges of fit, stability and deformation—enabling modular development, zero waste production and, through self-adaptation, guaranteed extended market coverage.

While all fabrics exhibit some degree of stretch and directional behaviour, the Patented Method transforms this variability into **engineered, predictable responses**—ensuring that the fit is not just adaptable, but **structurally intelligent**.

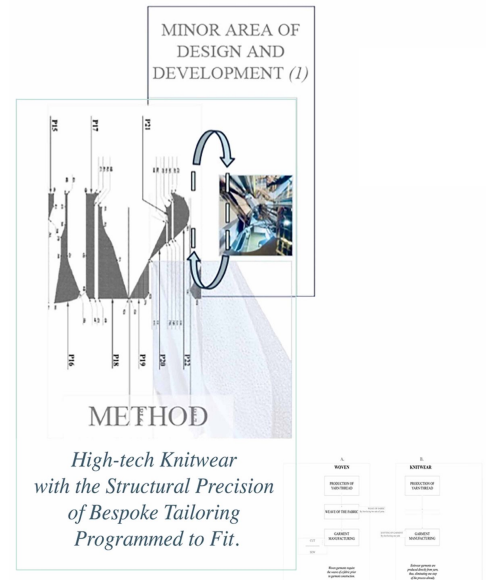
The greater the number and specificity of panels, the more refined and localised the fit—bringing couture-level precision to mass-produced garments.

The Method eliminates the need for 3D body scans, individual measurements, bespoke patterns, or customised programming. It also removes reliance on fasteners and reduces size fragmentation—allowing **three sizes to cover an eight-size standard range**, significantly reducing overproduction and inventory costs.

- This is the **only process** capable of creating an **unlimited combination of self-adjusting structures**, making it a breakthrough solution. It integrates innovative mechanical principles with advanced manufacturing capabilities to enable scalable, precise, and reliable production of self-adjusting tailored garments.

The **Pre-programmed Principle** of such a process is more than just technical preparation—it is the real canvas for the entire design and development process. **Every decision made determines the performance of the future garment, the precision of the final mass-market fit and the feel, right from the start.**

SLIDE 1: Logic of Form



At this stage, developers and businesses define critical parameters:

- Yarn, fabric and structure to be created;
- Intended fit precision (adjustable through panel detailing);
- Style, shape, and visual identity of the garment;
- Projected production cost.




Garments designed with the Patented Method to fit between two adjacent sizes—for example, a size Small between 38 IT and 40 IT— can also accommodate 36 IT (with a slight looser fit) and 42 IT (with a slight tighter fit), thereby providing a perfect fit. With this adaptive system, just three programmed sizes can effectively cover the eight traditional sizes that are typically produced using cut-and-sew methods.

For example, the 3-size production engineered with the Method, may fully cover the following 8 sizes: 36 IT, 38 IT, 40 IT, 42 IT, 44 IT, 46 IT, 48 IT, and 50 IT.

The **Pre-programmed Principle** of such a process is more than just technical preparation—it is the real canvas for the entire design and development process. **Every decision made determines the performance of the future garment, the precision of the final mass-market fit and the feel, right from the start.**

While bespoke woven garments, crafted by skilled tailors (*see Table 1*), offer the best fit, they are costly and require adjustments for weight fluctuations. Bespoke knitwear offers the best personalized tailoring experience for custom-made garments (*see Table 1*) when combined with a personalised 3D body scan of the customer, alongside tailored programming and production.

- In contrast to bespoke, mass-produced woven garments offer limited personalisation through alterations, but lack flexibility as body parameters increase (*see Table 2*).
- On the other hand, mass-produced knitwear, available at various price points, offers a better fit due to its inherent stretch. However, it cannot be adjusted to fit different body types and does not retain its shape over time. High-tech programmable knitwear, when designed with precision, provides the most structurally intelligent solution for mass-produced garments—offering adaptability across a wide range of body types while maintaining fit over time (*see Table 2*).

1. 


2. and 3. 
- Perfect Fit achieved without individual measurements, 3D body scan, personalised pattern, fittings and modifications. Suitable for the mass production.
3-4 steps required for bespoke custom made garments.

TABLE 1: METHODS FOR ACHIEVING PERFECT FIT

No.	Action	√=1. THE PATENTED METHOD HIGH-TECH Knitting Programming Production	2. BESPOKE MADE TO MEASURE Woven Production	3. BESPOKE HIGH-TECH WITH 3D BODY SCAN Knitting Programming Production
1.	Perfect Fit without individual measurements or individual 3D body scan	√=	—	—
2.	Perfect fit with individual measurements	—	✓	Altern ative
3.	Perfect fit with individual 3D body scan	—	Altern ative	✓
4.	Prerequisite for a personalised pattern	—	✓	✓
5.	Prerequisite for personalised programming	—	—	✓
6.	Requirements for the fittings and modifications	—	✓	✓
7.	Built-in self-adjustment	√=	—	—
8.	Scalability for Mass production	√=	—	—

TABLE 2: COMPARISON OF PRODUCTION METHODS WITH REGARDS TO FIT & SCALABILITY

METHODS	FIT	SELF-ADJUSTABILITY	STABILITY/STRUCTURE	DISTORTION	COMFORT	WASTE	PRODUCTION COST	PRICE	SCALABILITY LITY
1. BESPOKE MADE-TO-MEASURE WOVEN GARMENTS	Perfect	Variable	Stable	Minimal	Comfortable	Variable	Very High	Very High	—
2. BESPOKE HIGH-TECH KNITWEAR WITH 3D SCAN	Perfect	Variable	Stable	Minimal	Very Comfortable	Minimal	Very High	Very High	—
3. MASS-PRODUCED WOVEN GARMENTS	Sub-Optimal**	—	Variable	Variable	Sub-Optimal**	High	Low- Medium	Variable	Unlimited
4. MASS-PRODUCED KNITWEAR:									
4.1. MASS PRODUCED LOW-MEDIUM-HIGH PRICES	Sub-Optimal**	—	Low	High	Sub-Optimal**	Variable	Low	Variable	Unlimited
4.2. HIGH-TECH PROGRAMMABLE KNITWEAR (ADVANCED TECHNOLOGY) WHOLEGARMENT, 3D KNIT AND SEAMLESS	Good	—	Variable	Variable	Very Comfortable	—	Moderate	Moderate	Unlimited
5. RESPONSIVE TAILORING THROUGH DYNAMIC FIT ADJUSTMENTS PATENTED CORRELATION METHOD (HK)	Perfect	√=	Stable	Minimal	Very Comfortable	—	Moderate	Variable	√=Unlimited

Variable*: The variability depends on specific factors such as the shape and style of the garment, the choice of yarn and the application of optimisation processes at different stages of production.
Sub-Optimal**: Unless the wearer's measurements are the same as the size for which the original prototypes were made, it is not easy to achieve a perfect fit. Or a very comfortable or a very good fit.