



BIZIM

Toptan Market

BIZIM TOPTAN SUCCESS STORY

Transforming FMCG Logistics Through
Human-Machine Integration and AI

THREAD IN MOTION





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of Operational
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Get in Touch



Bizim Toptan holds undisputed market leadership in Turkey's wholesale sector.

Supported by a vast network of stores and the integration of g2m, the surhar, g2m operational footprint handles millions of consumer goods routing to professional kitchens, corporate clients, and retail outlets daily.

The Omnichannel Imperative

Three critical market pressures dictate the need for a paradigm shift:

Unprecedented Supply Chain Volatility

Omnichannel Distribution Demands

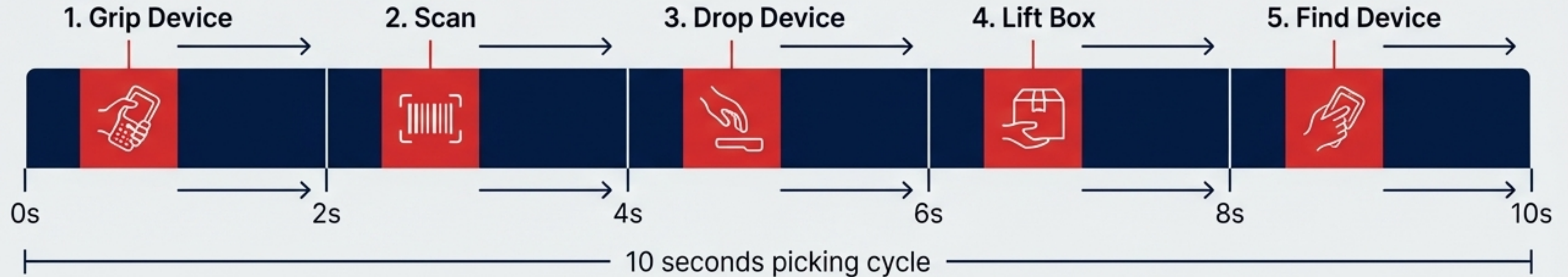
Absolute Zero-Error Tolerance

Maintaining competitive advantage requires elevating operations from mere functional storage to intelligent, dynamic data hubs.

The Friction of Traditional Hardware

Traditional rugged handheld terminals provide immense durability and processing power. However, their physical form factor inherently limits modern logistics velocity.

The Pick-and-Drop Tax



Premium Insight Box

When a warehouse worker is forced to constantly pick up and put down a device to perform physical tasks, it creates structural delays. A **delay measured in milliseconds** at the individual level compounds into **thousands of lost labor hours** across **millions of inventory transactions**.

Cognitive Load & Ergonomic Strain

In high-volume FMCG environments, workers face on-screen verification fatigue. Thousands of products share nearly identical packaging, dimensions, and barcodes. Constantly looking at a screen to verify “Did the system accept this?” forces micro-hesitations and breaks concentration.



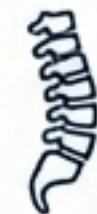
Cognitive Drain:

Screen reliance breaks the visual chain of custody between the worker and the physical product.



Physical Strain:

Concentrating device weight in a single hand causes repetitive musculoskeletal stress over 8-10 hour shifts, creating occupational hazards.



03

**FROM MANUAL OPERATIONS
TO INTELLIGENT AUTOMATION**

The Hardware Paradigm: VEGA Wearable Technology

Replacing restrictive handheld terminals with a form factor that acts as a natural extension of the human body. VEGA restores completely hands-free operation to the warehouse floor.



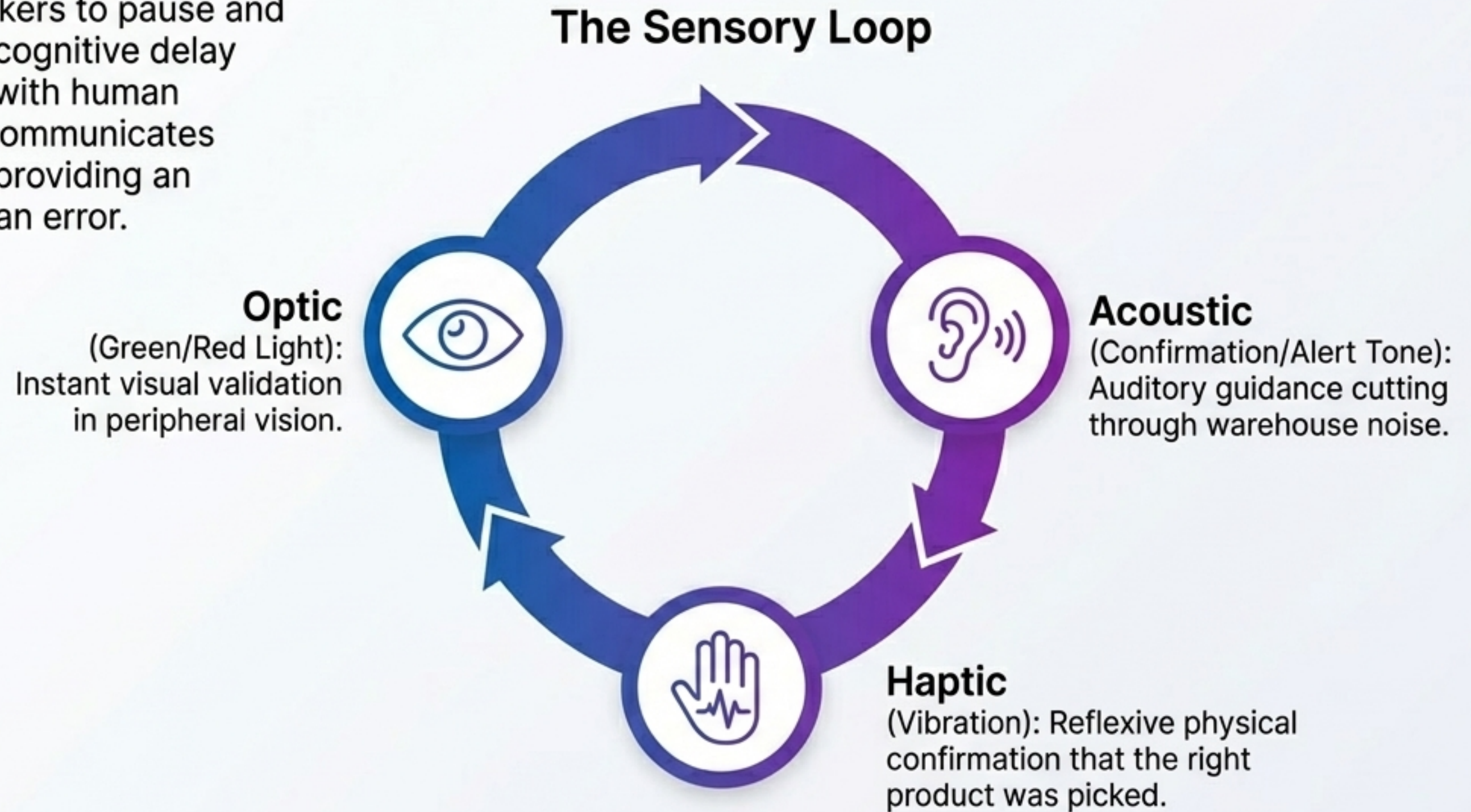
○ **Balanced Weight Distribution:**
Eliminates localized wrist and shoulder strain.

○ **Conductive Breathable Thread:**
Ensures thermal comfort and unrestricted finger flexibility.

○ **Hands-Free Form Factor:**
Allows workers to lift heavy boxes, steer pallet jacks, and handle materials without breaking their physical rhythm.

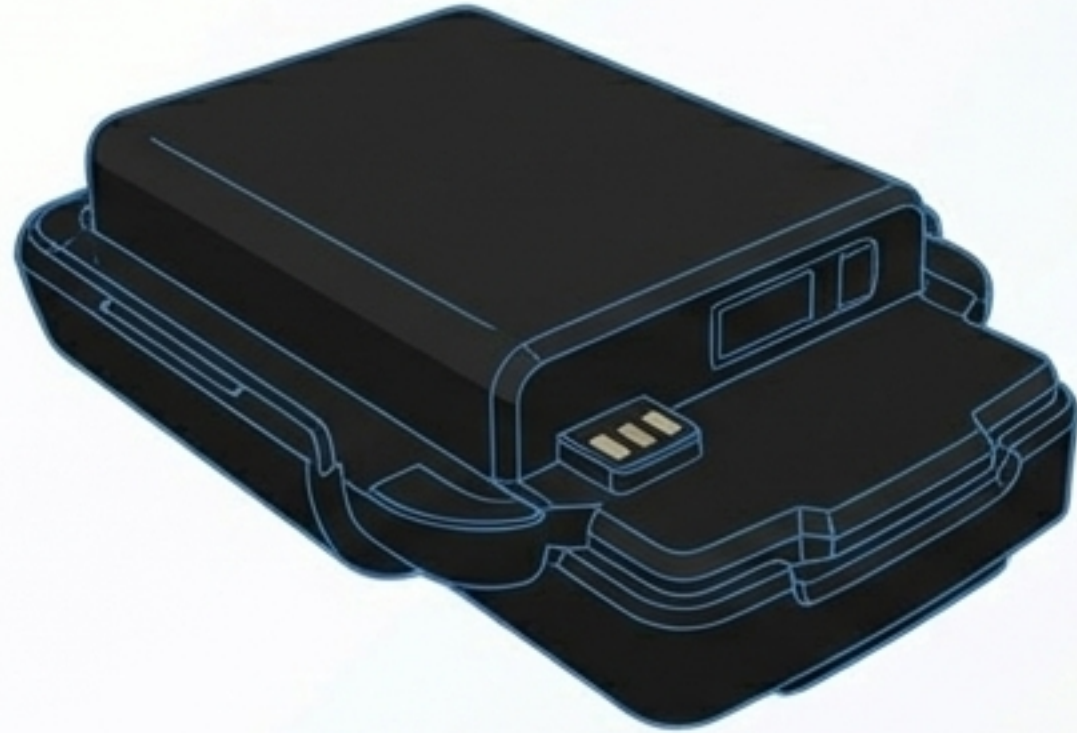
The Sensory Loop: Instant Mistake-Proofing

Traditional devices require workers to pause and read screens. VEGA bypasses cognitive delay entirely by interacting directly with human reflexes. The microprocessor communicates with the WMS in milliseconds, providing an impenetrable wall against human error.



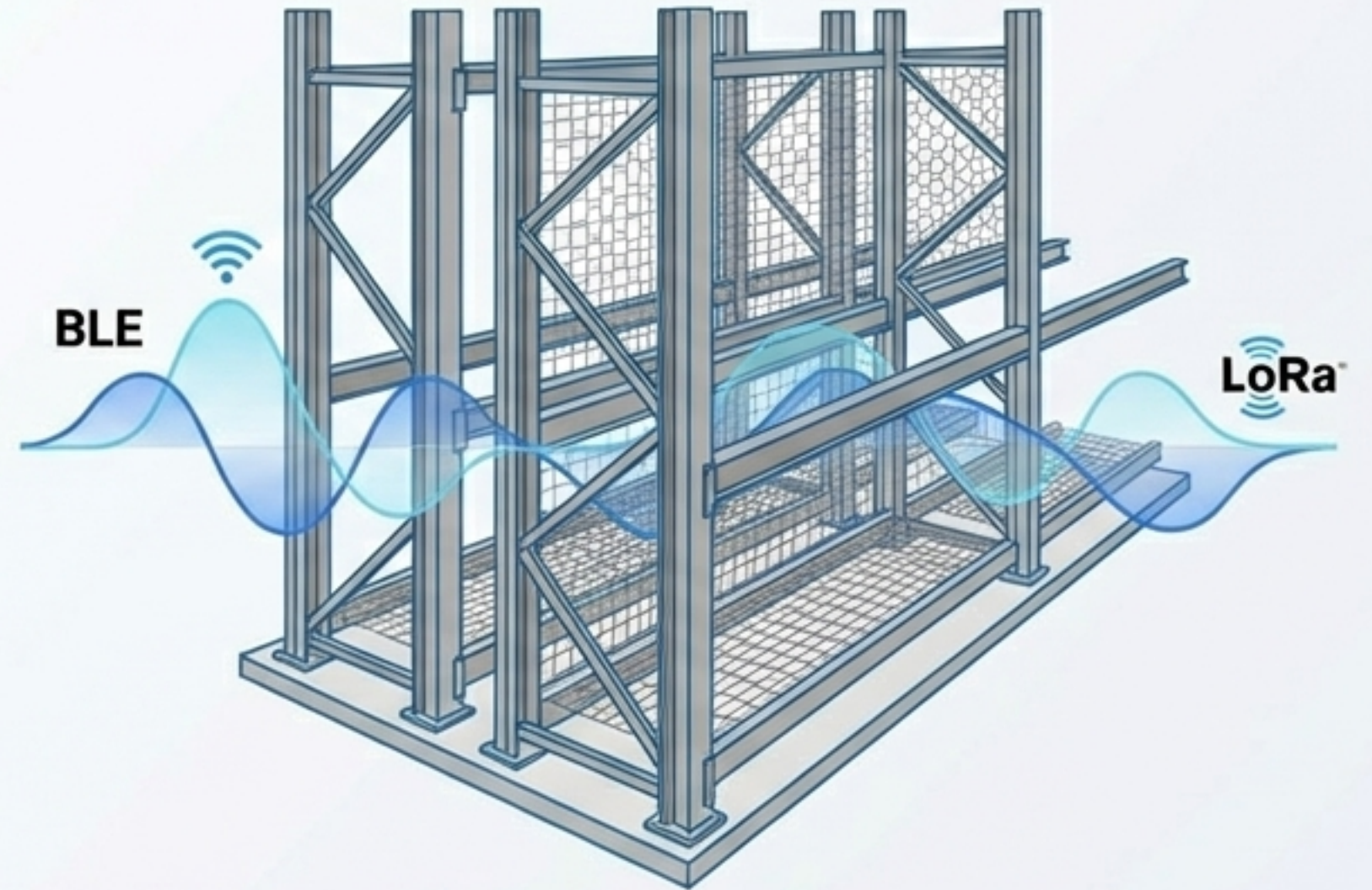
Unlimited Power & Seamless Edge Connectivity

FMCG logistics cannot tolerate downtime. VEGA is engineered for continuous, uninterrupted flow, solving both power and facility-wide connectivity challenges.



Zero Downtime Power

450 mAh high-performance lithium-polymer batteries are hot-swappable. Devices remain active while batteries are swapped in seconds.



Infrastructure-Free Connectivity

Integrated BLE and LoRa communication bypass the Faraday cage effect of metal racking. Ensures 10,000mm dynamic scanning range without requiring costly additional network routers.

The Software Brain: TIM PERFORM Ecosystem

While **VEGA** captures data at the edge, **TIM PERFORM** acts as the central nervous system. We upgraded Bizim Toptan from static WMS data logging to **predictive, AI-driven operational intelligence**.

Static WMS Management:	Historical reports, reactive problem solving, isolated data points.
Predictive AI Management:	Real-time visibility, dynamic tasking, integrated intelligence.



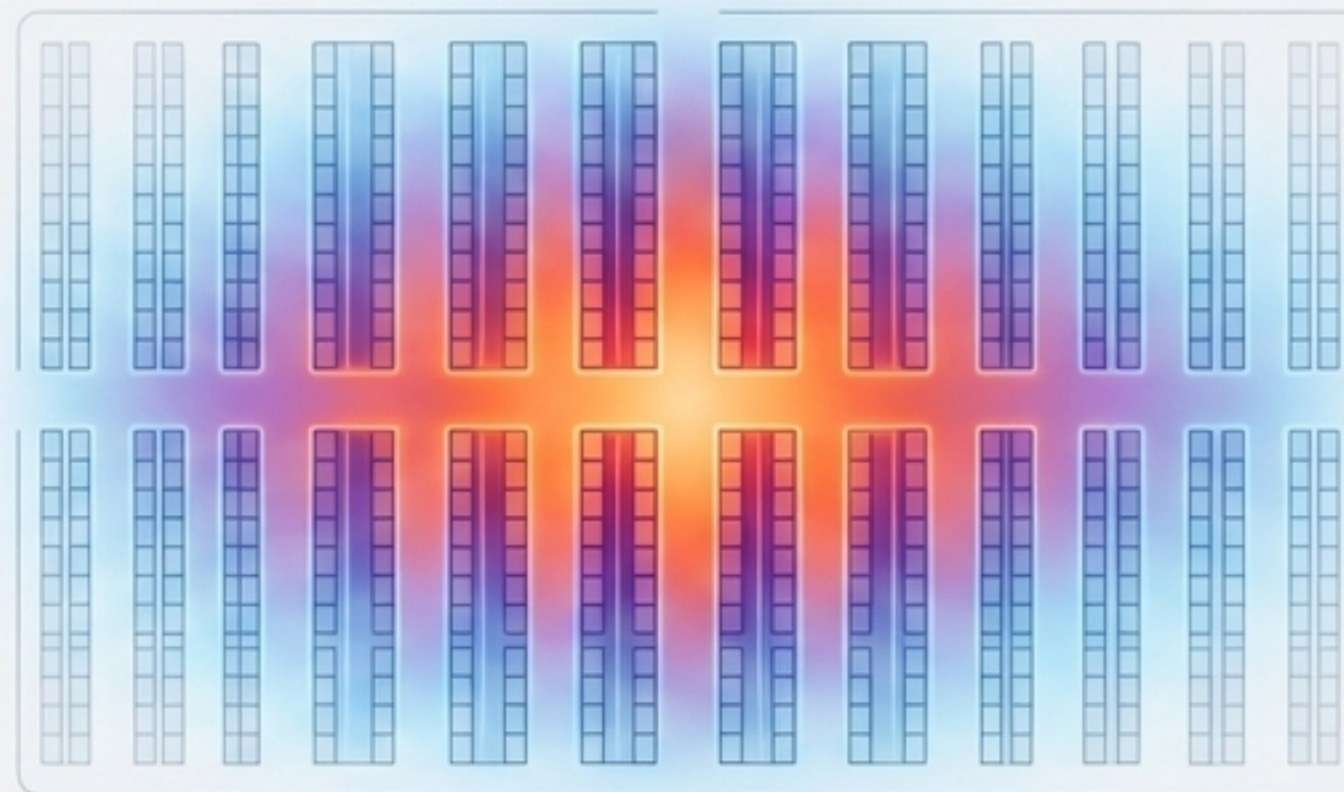
Real-Time Data Visibility

AI-Driven Workforce & Spatial Optimization

TIM PERFORM treats the warehouse as a **dynamic, living organism**. By processing millions of data points instantly, the platform optimizes both human movement and inventory placement.



Spaghetti Diagrams & Rerouting: AI analyzes physical movement patterns, calculating the shortest, safest, and most efficient picking routes to reduce wasted labor hours.



Live Heatmaps & Dynamic Slotting: Real-time traffic visualization allows management to relocate fast-moving products to optimal locations, eliminating warehouse bottlenecks instantly.

Seamless Enterprise Integration

Technological excellence only matters if it adapts to the warehouse floor. Implementation across Bizim Toptan's distribution centers was executed as a frictionless, plug-and-play transformation.



VEGA Wearables

Zero-Latency API Bridge



**SAP ERP / WMS
Infrastructure**

End-to-End Bridging:

Modern API modules created a zero-latency bridge between VEGA wearables and Bizim Toptan's existing SAP ERP and WMS infrastructure.

Preserved Investments:

Existing systems were not replaced; they were upgraded with real-time intelligence.

Immediate Cultural Adoption:

Customizable device profiles and universal strap designs reduced the worker learning curve from weeks to mere minutes.

04

**MEASURABLE IMPACT
& VALUE CREATION**

Velocity & Efficiency Unleashed

Eliminating the micro-frictions of device handling resulted in massive compounding returns across Bizim Toptan's daily operations.

4
SECONDS

Time saved per single transaction by breaking the 'pick-and-drop' cycle.

+50%
VELOCITY

Overall increase in operational speed, allowing the same workforce to handle higher e-commerce volumes effortlessly.

3,000
SCANS









Processing capacity per single device charge cycle.

The Zero-Error Logistics Model

Human error carries severe hidden costs: reverse logistics, inventory deviations, and retailer dissatisfaction. The multi-sensory feedback loop transformed operational accuracy into structural financial protection.



Capability Comparison Matrix

Dimension	Traditional Processes	TIM Integration Ecosystem
Speed	 Micro-delays from device handling	 Continuous, hands-free rhythm (+50% faster)
Accuracy	 Visual screen verification required	 Proactive sensory mistake-proofing (Zero-error goal)
Ergonomics	 Unbalanced single-hand weight	 Evenly distributed, natural movement restoration
Analytics	 Reactive, end-of-shift reporting	 Real-time AI heatmaps and dynamic tasking

The Human ROI: Ergonomic Efficiency

Bizim Toptan placed worker well-being at the center of its algorithmic efficiency. The transition to wearable technology fundamentally changed the physical experience of the warehouse the warehouse floor.

Reduced Occupational Hazards



Freeing both hands:

Freeing both hands minimizes the risk of drops and accidents when moving heavy FMCG inventory.

Eliminated Fatigue



Distributing weight across the hand rather than the wrist eradicated end-of-shift musculoskeletal exhaustion.

Elevated Morale

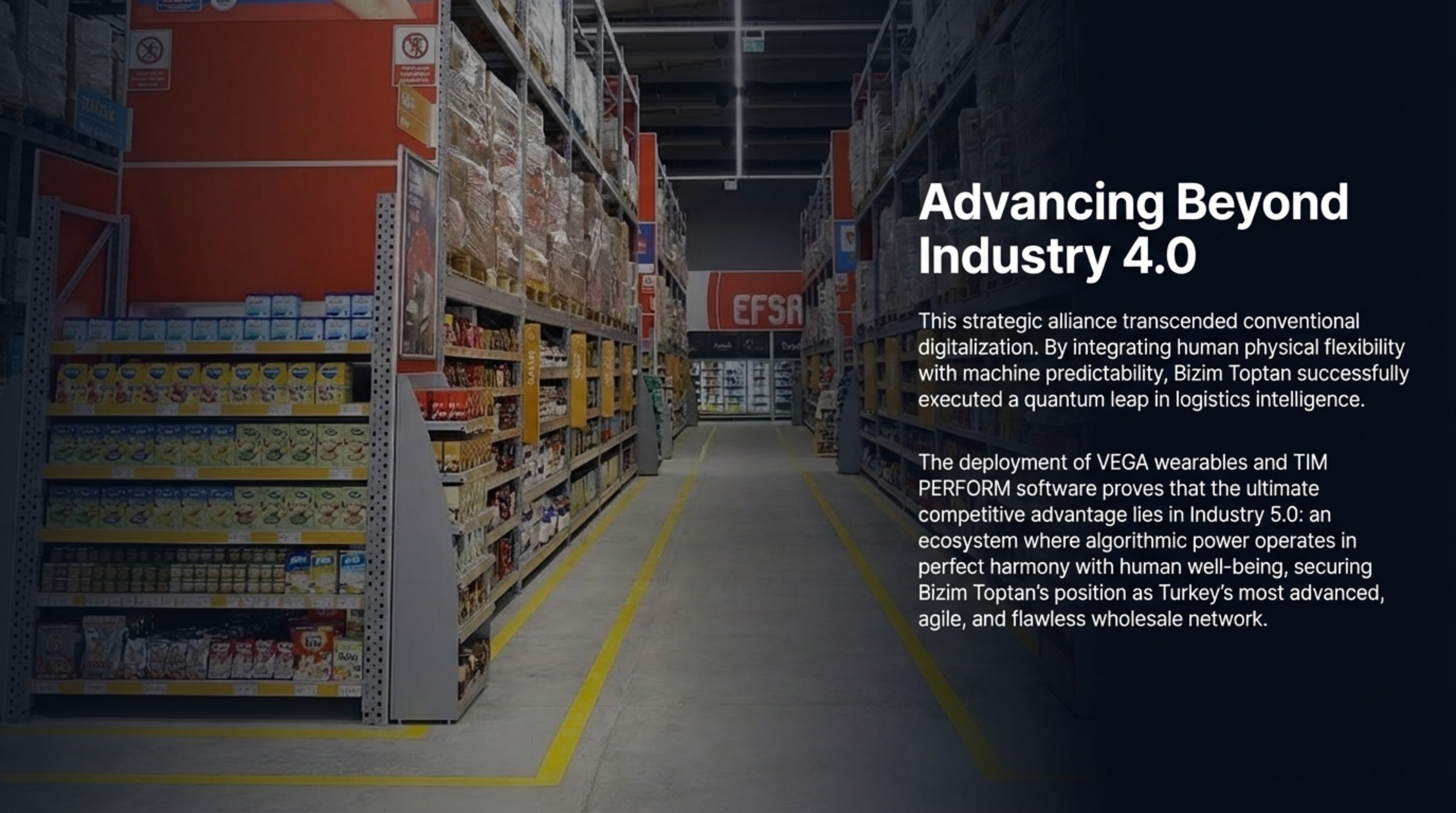


Elevated Morale:

Workers view the technology not as a surveillance tool, but as an intelligent, friction-reducing solution partner.

05

PIONEERING INDUSTRY 5.0



Advancing Beyond Industry 4.0

This strategic alliance transcended conventional digitalization. By integrating human physical flexibility with machine predictability, Bizim Toptan successfully executed a quantum leap in logistics intelligence.

The deployment of VEGA wearables and TIM PERFORM software proves that the ultimate competitive advantage lies in Industry 5.0: an ecosystem where algorithmic power operates in perfect harmony with human well-being, securing Bizim Toptan's position as Turkey's most advanced, agile, and flawless wholesale network.

THREAD IN MOTION



Website

www.threadinmotion.com

Phone

+44 20 4587 4397

E-mail

info@threadinmotion.com

HQ address

7 Henrietta Street, WC2E 8PS,
London, United Kingdom

**GET IN TOUCH
WITH US**