

METRO

METRO SUCCESS STORY

Redefining High-Volume Logistics with
Wearable IoT and Edge Computing

THREAD IN MOTION



TABLE OF CONTENTS

01 Introduction

02 Hidden Costs of Operational Inefficiency

03 From Manual Operations to Intelligent Automation

04 Seamless Integration & Data Continuity

05 Measurable Results & Gains

06 Strategic Impact & Vision for the Future

Taking a world-class logistics backbone to the next frontier of human-centric automation.



Global Scale

Operating in **30+** countries with **622** wholesale stores.

FSD Powerhouse

102 dedicated Food Service Distribution (FSD) depots driving a massive multichannel HoReCa focus.

Strategic Context

Metro's '**sCore Strategy**' requires flawless integration of physical stores and out-of-store delivery (OOS).

Digital Backbone

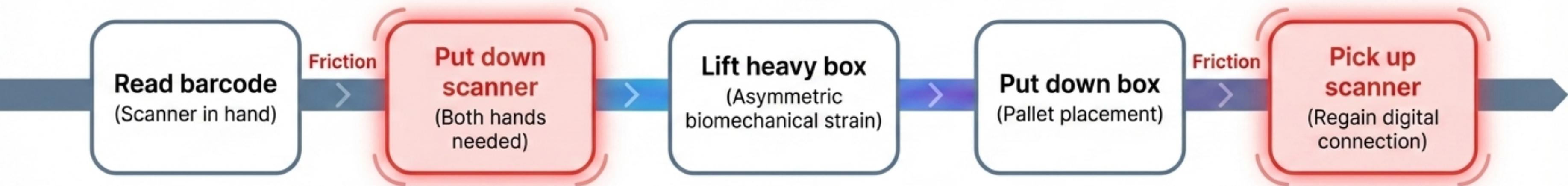
Utilizing **SAP EWM** and **Blue Yonder** for granular, 52-week demand forecasting and supply chain planning.

The Goal

Optimize the Human-Machine Interface (HMI) at the micro-level to prepare for unprecedented future e-commerce demands.

The hidden financial and operational drain of the 3-second drop-carry-pickup cycle.

The Biomechanical Bottleneck

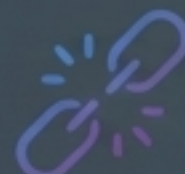


Macro-Scale Time Loss



In a high-volume FSD environment, a **2-3 second delay** per scan compounds into **tens of thousands of lost labor hours** annually.

Digital Blind Spots



Disconnecting from the device creates **micro-gaps** in **real-time traceability**, hindering just-in-sequence loading.

Ergonomic Risk



Single-handed device manipulation forces **asymmetric lifting of heavy** wholesale goods, **increasing physical strain**.

Shifting from conventional handhelds to wearable edge-computing for seamless human-machine synergy.



Comparison Matrix (Old vs. New)

		Old vs. s	New
1	Device Interaction	Manual Drop & Pick	100% Body-Integrated (Zero interruption)
2	Physical Effort	Asymmetric Strain	Hands-Free Biomechanical Balance
3	Visual Focus	Screen-Dependent	Multi-Sensory Heads-Up Routing

The Poka-Yoke Sensory Framework

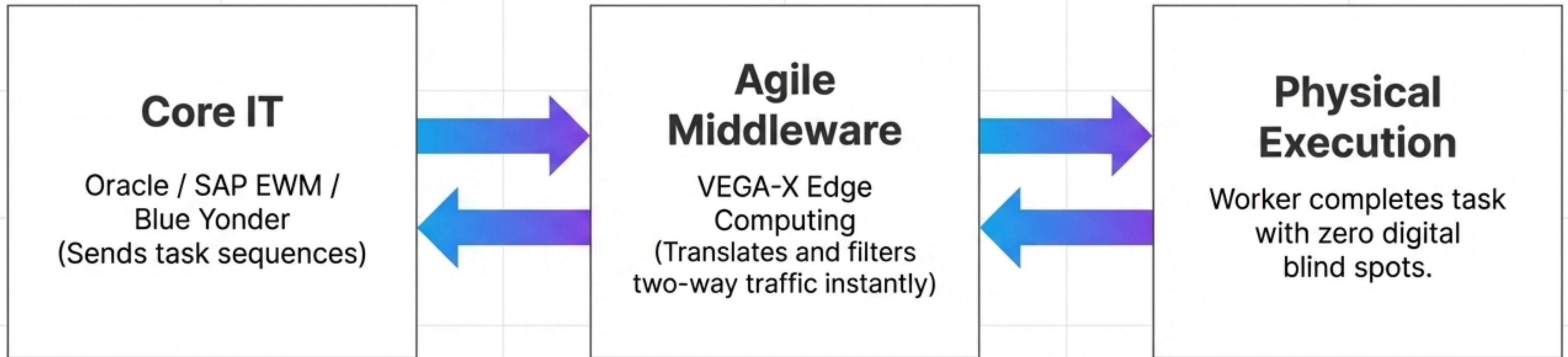


Haptic (Vibration) + Acoustic (Sound) + Optic (Light): Instant, multi-sensory feedback alerts workers to incorrect picks before they happen. Eliminates the need to look at a 1.77-inch screen, 1.77-inch screen, achieving proactive mistake-proofing without breaking physical momentum.



Industrial Grade: IP65 durability, 14-meter laser scanning range, and a removable battery enabling an Unlimited Power 6,000-scan shift cycle.

Plug-and-play integration ensuring zero disruption to existing SAP EWM and Blue Yonder architectures.



Continuous Traceability

Real-time synchronization eliminates missing data gaps, enabling flawless just-in-sequence order routing for dynamic HoReCa deliveries.

Rapid Cultural Adaptation

Intuitive UX and natural muscle memory drastically reduced worker learning curves, transforming potential change-resistance into enthusiastic adoption.

Measurable operational leaps in speed, accuracy, and workforce well-being.

SPEED



**+25%
Operational
Efficiency**

Total elimination of the frictional drop-carry-pickup cycle. Yields massive capacity liberation, allowing Metro to manage 25% more volume within the exact same physical footprint and headcount.

ACCURACY



**Near-Zero
Error Rate**

Proactive mistake-proofing prevents wrong picks at the source. Virtually eliminates reverse logistics costs, spoiled food waste, and customer dissatisfaction.

WORKFORCE



**100%
Hands-Free
Ergonomics**

Complete biomechanical alignment. Workers lift heavy wholesale loads symmetrically, drastically reducing workplace strain, musculoskeletal injury risks, and cognitive fatigue.

Transitioning from Industry 4.0 automation to Industry 5.0 human-centric logistics.



Module 1: Human-Centric Automation

The focus has shifted from merely moving boxes faster to optimizing the worker's physical and cognitive experience. Technology now serves as an invisible, weightless extension of the human body.

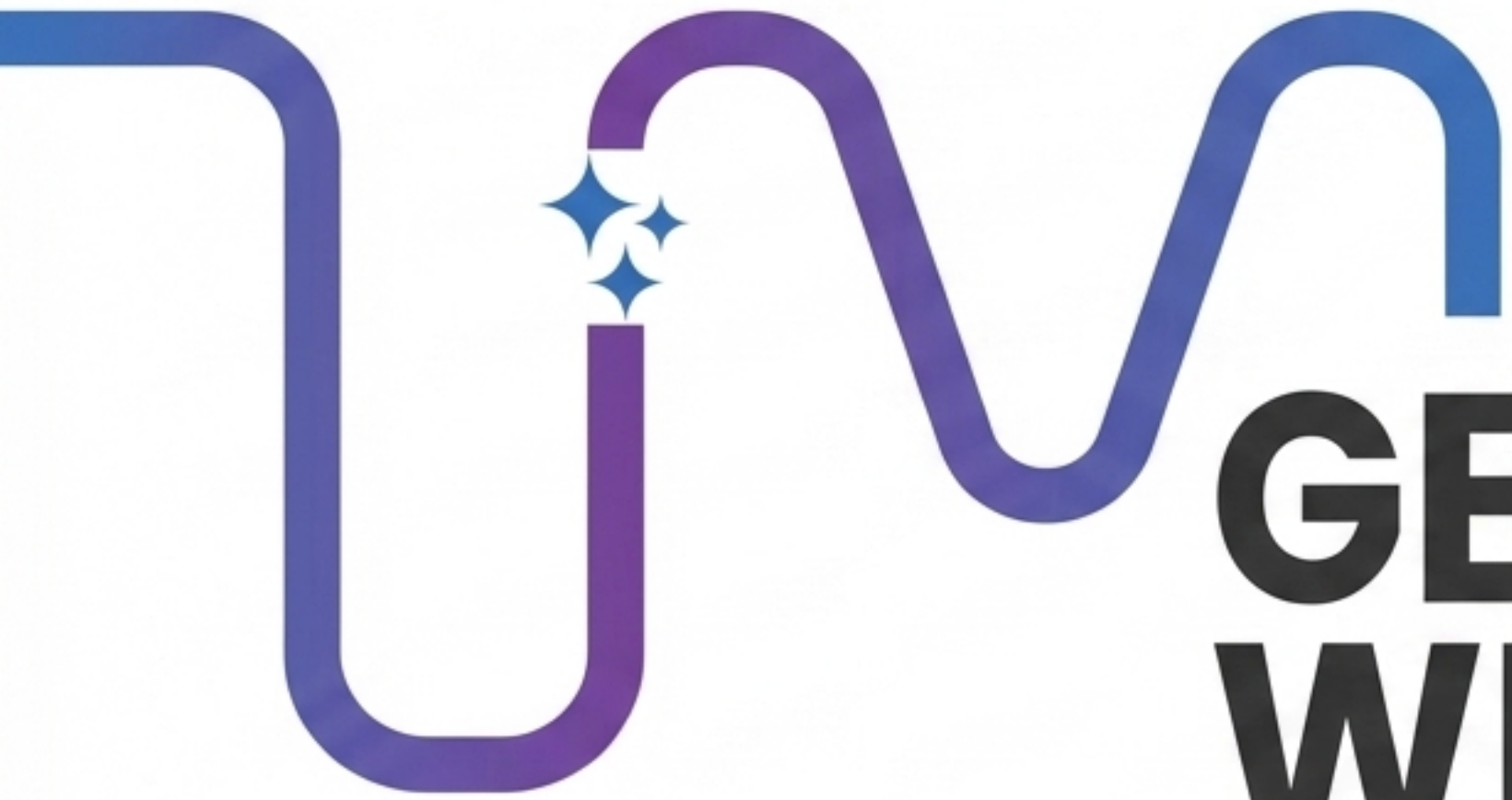
Module 2: Data-Driven Agility

Every micro-movement on the warehouse floor is now part of a continuous, fully traceable data ecosystem, empowering real-time decision-making for management.

Module 3: Future-Proof Logistics

By refining the human-machine interface (HMI), Metro AG and Thread in Motion have established a new global benchmark for high-volume, multichannel retail supply chains.

THREAD IN MOTION



GET IN TOUCH WITH US



Website: www.threadinmotion.com



Phone: +44 20 4587 4397



E-mail: info@threadinmotion.com



HQ address: 7 Henrietta Street, WC2E 8PS, London, United Kingdom