



AI×DX×GX for Manufacturing Transformation

Practical Implementation from Thailand

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Tokyo-Thailand Business Connecting 2026

製造業変革のためのAI×DX×GX

January 29, 2026

WHY THIS MATTERS

Manufacturing Today



- Labor shortage and skill gap



- Cost and productivity pressure



- ESG and carbon requirements



- Fragmented and siloed data

“Automation exists, but management transformation has not yet happened.”

自動化は進んでいるが、経営や競争力の変革には まだ至っていない

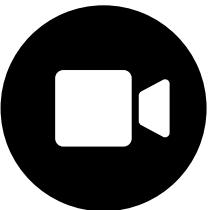
THAILAND PERSPECTIVE

Thailand as a Manufacturing Testbed



- Strong manufacturing supply chains
- Long-term Japan–Thailand partnership
- Real factories with real constraints
- Proven results from implementation

タイは「実装」で価値を証明する
製造拠点



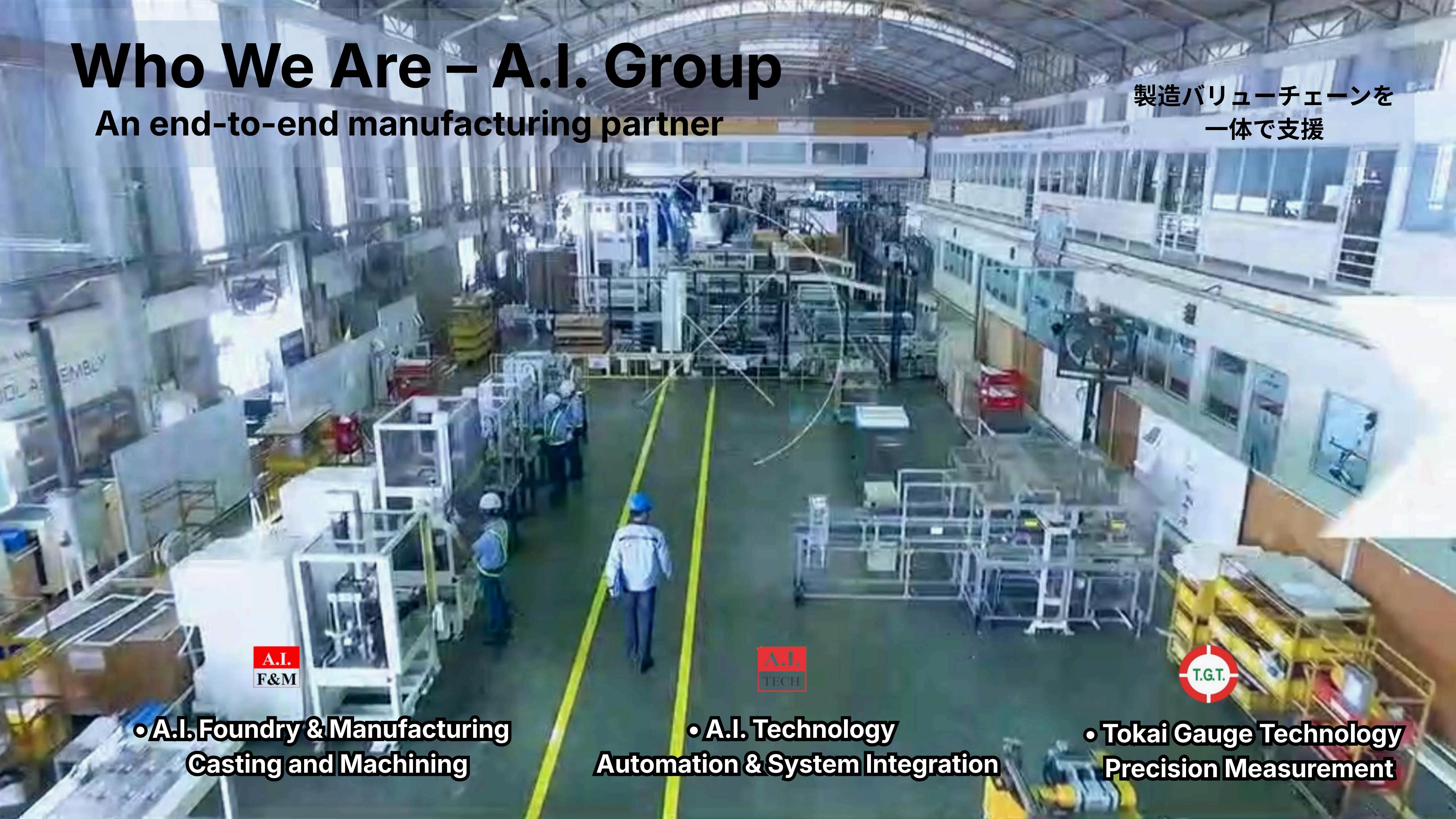
**» ONE STOP SOLUTION
» FOR FACTORY
» AND WAREHOUSE AUTOMATION**



Who We Are - A.I. Group

An end-to-end manufacturing partner

製造バリューチェーンを
一体で支援



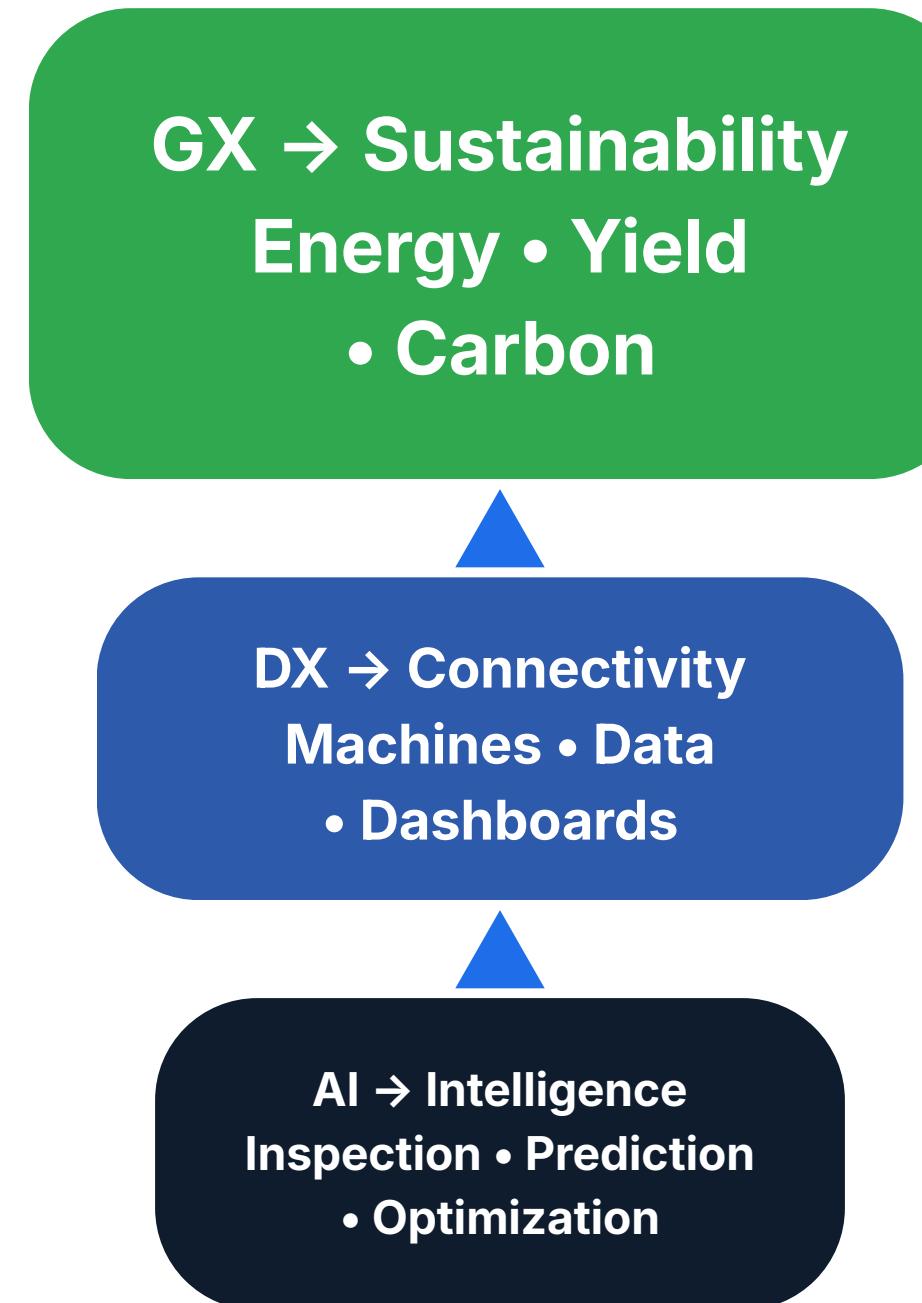
- A.I. Foundry & Manufacturing
Casting and Machining

- A.I. Technology
Automation & System Integration

- Tokai Gauge Technology
Precision Measurement

AI × DX × GX FRAMEWORK

slide นี้สรุปแนวคิดหลักของเรารับ
AI, DX และ GX ไม่ใช่โครงการแยกกัน
แต่เป็นลำดับของการเปลี่ยนแปลงใน
ภาคการผลิต



AI accelerates DX,
and DX enables GX

ダッシュボードを、日々の意思決定と行動へ

AIで知能化し、
DXで全体をつなぎ、
その結果としてGXを実現する。

GXはレポートではなく、
製造現場から始まります。



From Concept to Practice



- AI inspection & defect prediction
- Connected machines & dashboards
- Energy, yield & quality visibility

GXはレポートではなく、
製造プロセスから始まる

A.I. F&M Use Case – IoT-driven Foundry Optimization

From shop-floor data to productivity and sustainability improvement

What A.I. F&M does: IoT-enabled Foundry Operation

Context (Before)

Challenges

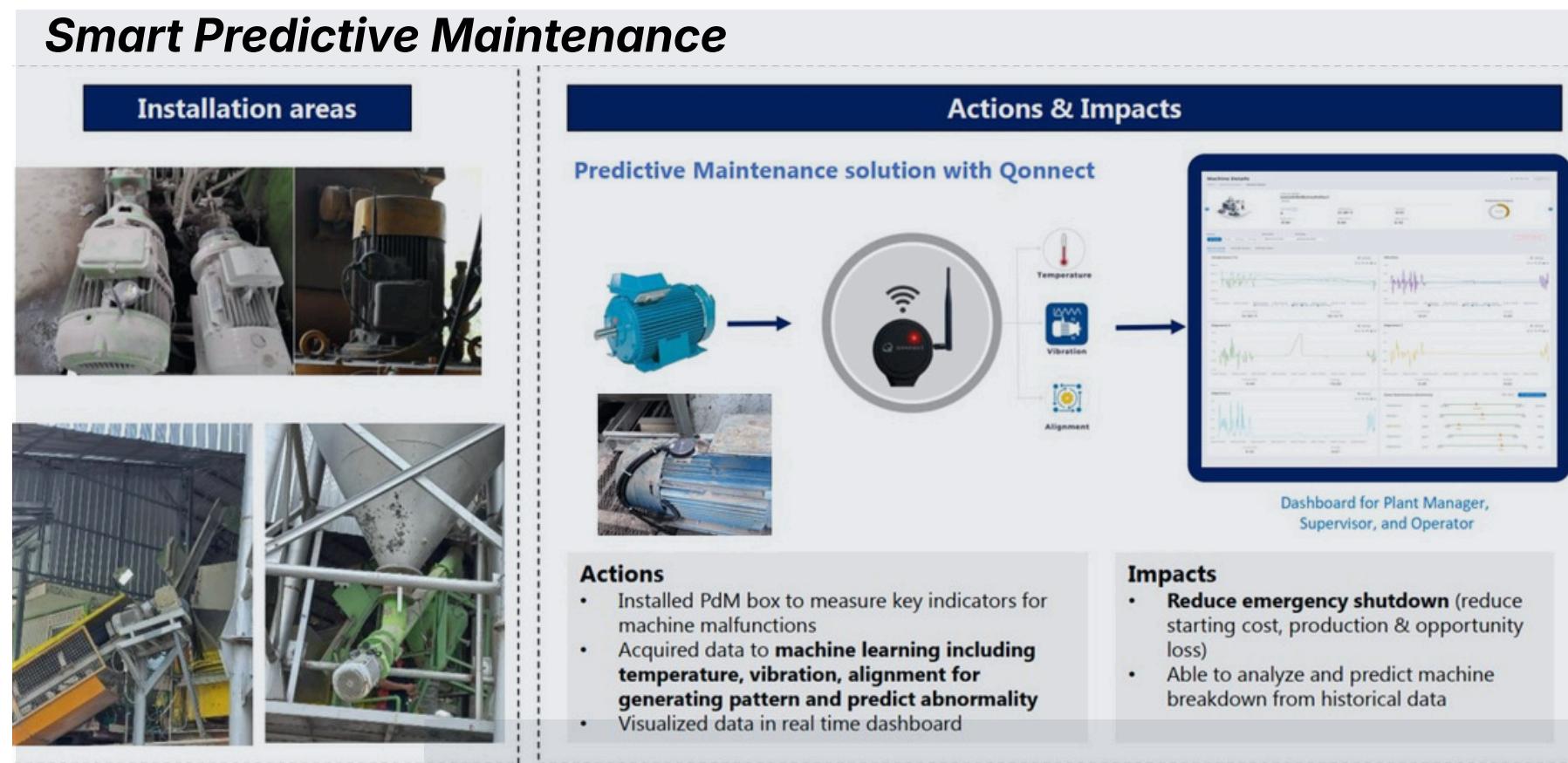
- Yield fluctuation
- Scrap & rework
- Energy intensive process
- Limited real-time visibility

- Sensor data from casting process
- Real-time monitoring: temperature, cycle, energy
- Yield & defect correlation

Outcome (After)

Results

- Yield improvement
- Energy optimization
- Stable quality
- Data foundation for GX reporting



Key Message

GX starts from the shop floor, enabled by DX, and accelerated by AI.

GXはレポートからではなく、製造現場から始まります。

A.I. F&M Use Case – IoT-driven Foundry Optimization

From shop-floor data to productivity and sustainability improvement

Example: Shop-floor AI & IoT Implementation

Real-time PdM Dashboard



- Improved machine stability
- Reduced unplanned downtime
- Data foundation for GX initiatives

Before / After Detection



- PdM sensors on critical machines
- Real-time vibration, temperature, alignment monitoring
- AI-based anomaly detection

GX starts from the shop floor, enabled by DX, and accelerated by AI.

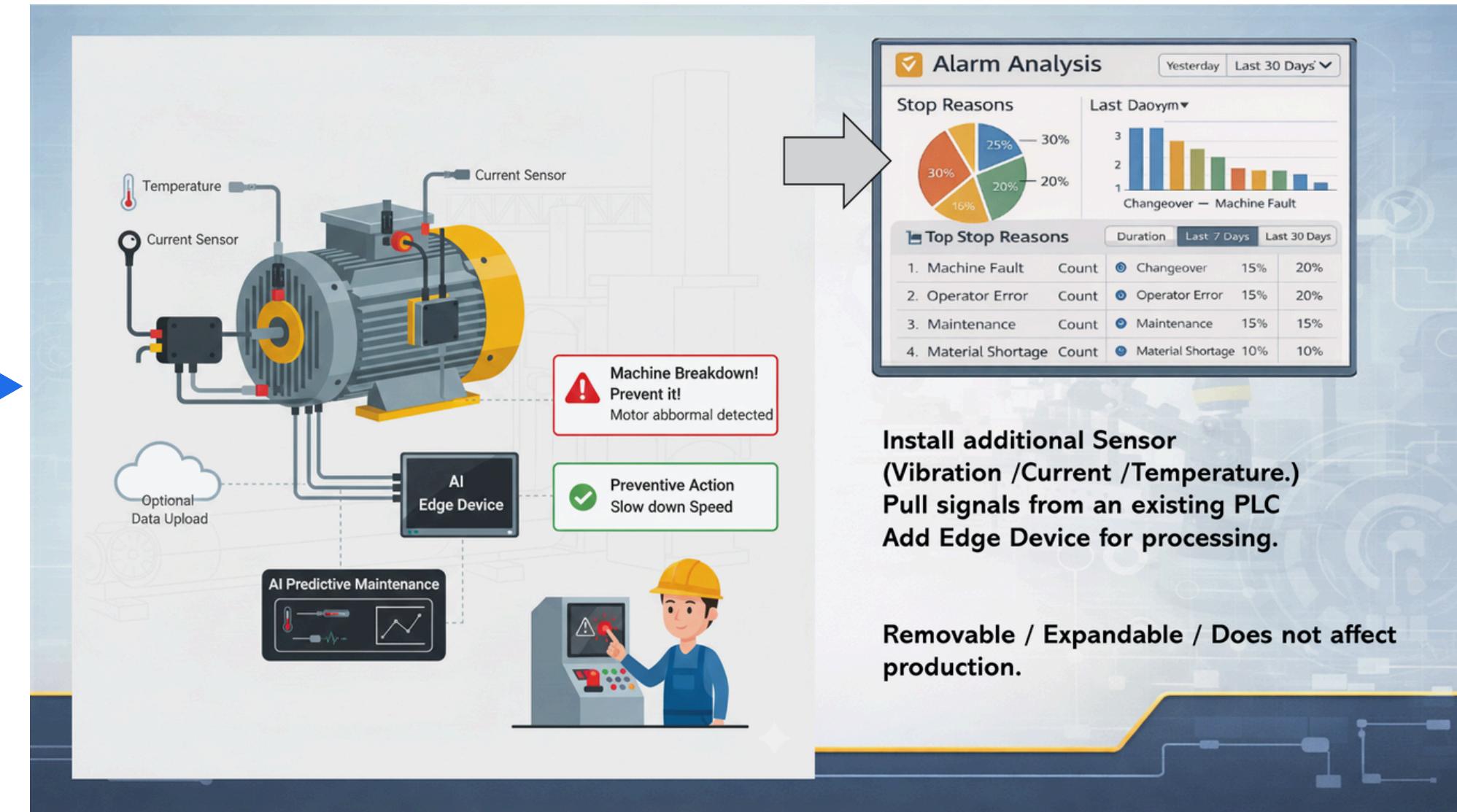
GXはレポートからではなく、製造現場から始まります。

A.I. TECH Use Case – AI Predictive Maintenance Architecture

From sensor-level data to preventive action

Data Source

- Temperature / Current / Vibration sensors
- AI Edge device (local processing)
- Existing PLC (no line modification)



AI-driven Insight

- Early abnormal detection
- Root cause visibility (alarm & stop reason)

Preventive Action

- Speed adjustment
- Maintenance planning
- Breakdown prevention

Key Message

AI detects early signals, DX connects machines, and the factory acts before breakdown.

GXはレポートではなく、
現場での「予防行動」から始まります。

Operation & War Room at A.I.Tech

Turning Data into Daily Decisions

データを「見る」から
データで「動かす」へ

AIが気づきを生み、
DXが現場をつなぎ、
War Roomが行動に変える。

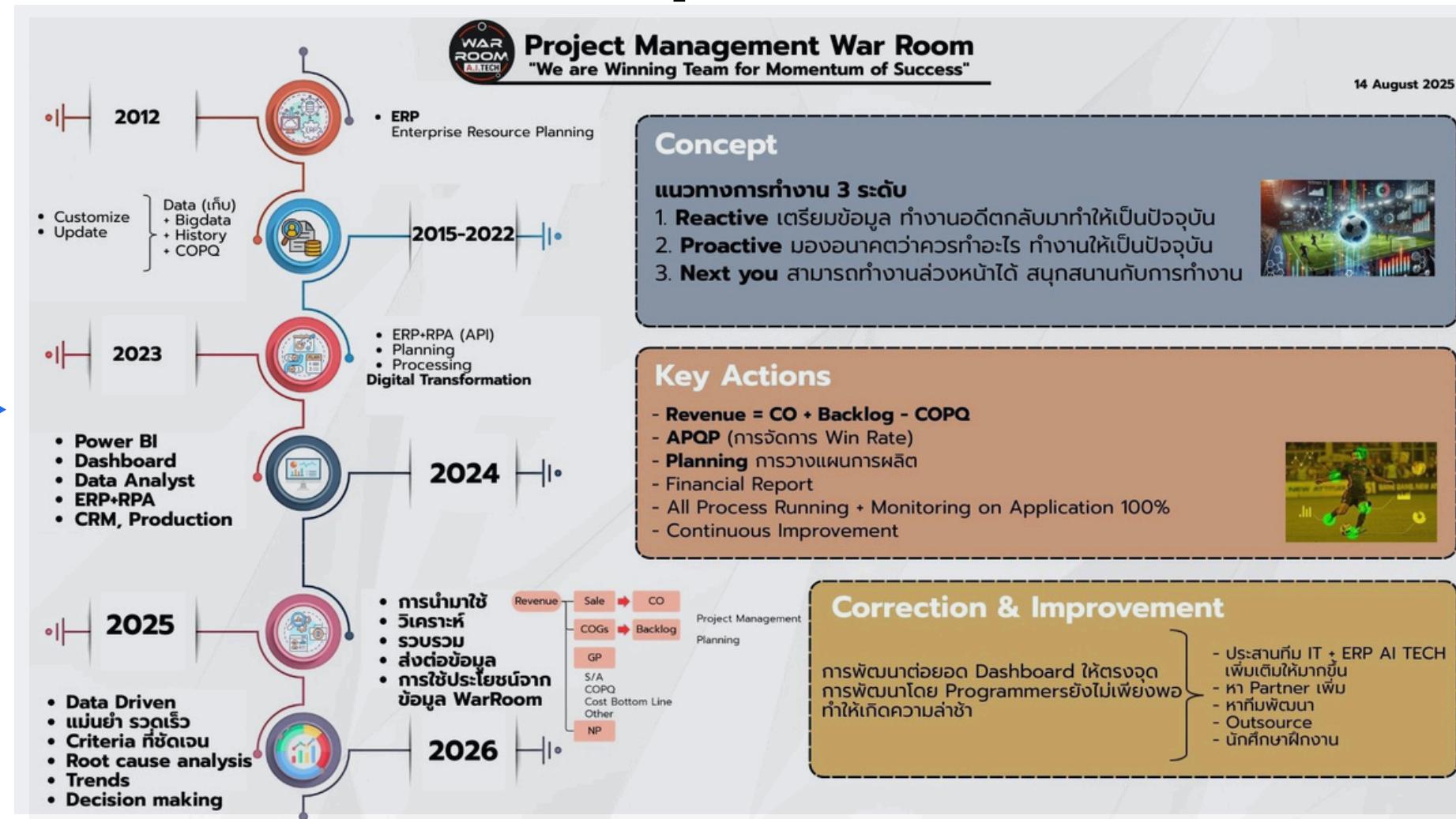
What feeds the War Room

INPUT

- Revenue, backlog, COPQ
- Project & resource status
- Operational issues (on-site)

現場・プロジェクト・財務データ

WAR ROOM Centralized Operation Platform



What the War Room drives

OUTPUT

- Daily / weekly decisions
- Cross-team actions
- Continuous improvement

日次・週次の判断と改善行動

Key Message

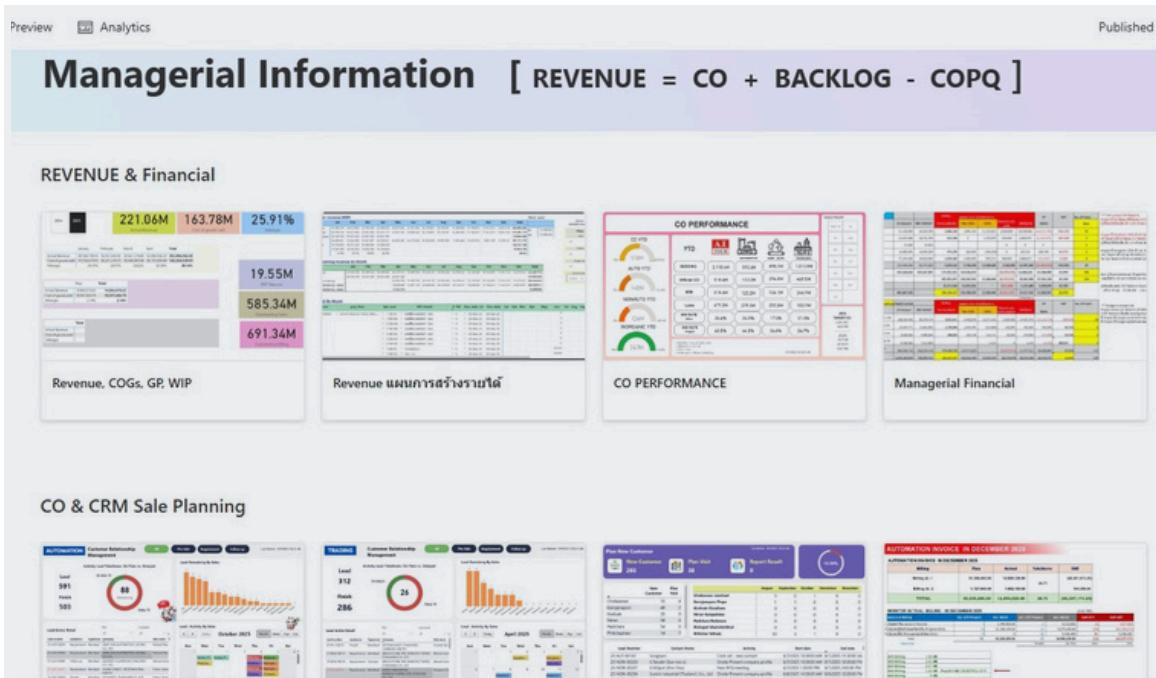
AI generates insight,
DX connects the operation,
and the War Room turns insight into action.

From Dashboard to Daily Action

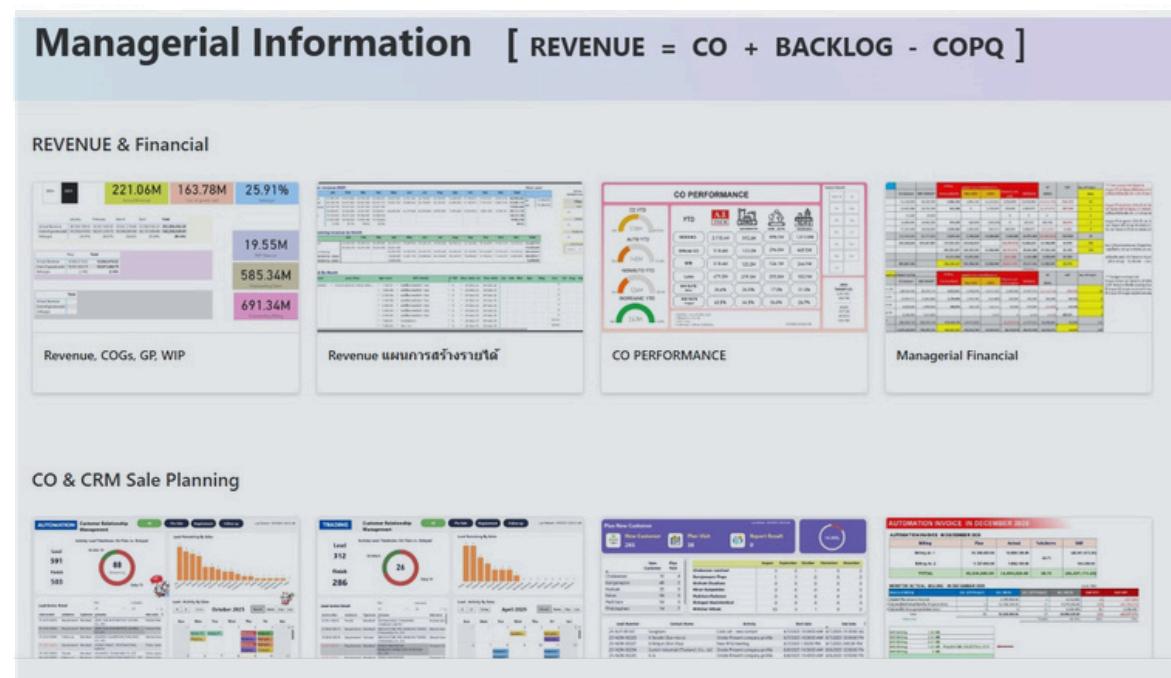
Operation & War Room at A.I.Tech

Turning Data into Daily Decisions

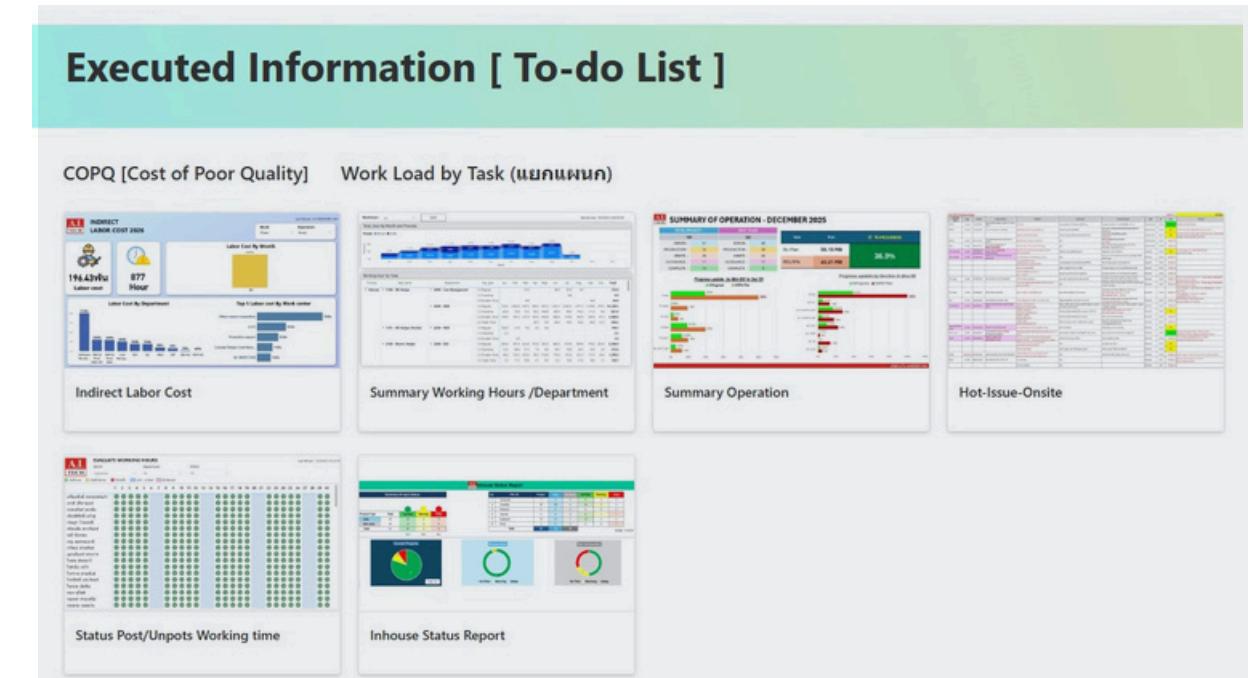
Operational & Financial Data (Real-time)
Revenue · CO · Backlog · COPQ



Centralized War Room View
One version of truth for management



Action & Execution
Daily decisions · On-site actions ·
Continuous improvement



Key Message

AI accelerates DX,
and DX enables GX

ダッシュボードを、日々の意思決定と行動へ

From Decision to Product Execution

AI PLUS × NAC DRONE

Turning Data into Decisions Product development and test run for local manufacturing

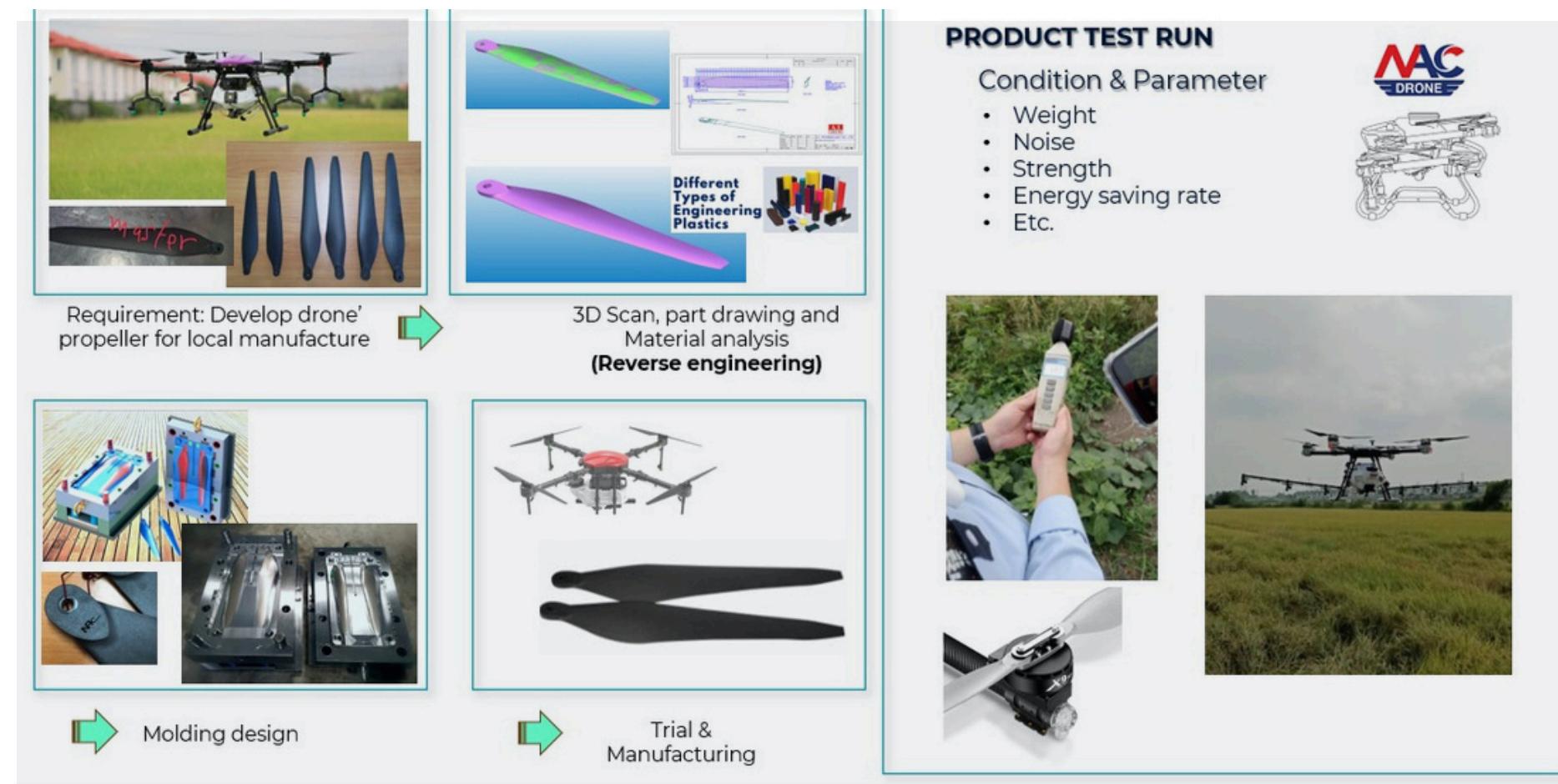
Business & Operation Requirement

INPUT

- Local manufacturing requirement
- Cost & performance optimization
- Energy efficiency & noise reduction

AI PLUS – Product Development & Engineering

- Reverse engineering (3D scan, material analysis)
- Molding design & trial manufacturing
- Engineering plastics optimization



NAC DRONE – Test Run & Validation

OUTPUT

- Weight, noise, and strength
- Energy-saving performance
- Field test in real operating environment

Decisions from the War Room
lead to real product development and on-site validation.
現場で検証される、実行可能な意思決定

Before → After Transformation

- Manual operations
- Fragmented data
- Reactive decision-making



見える化が
変革を生む

- AI-assisted operations
- Connected and transparent data
- Predictive decision-making



Group Synergy Creates Differentiation

- How group synergy delivers results:

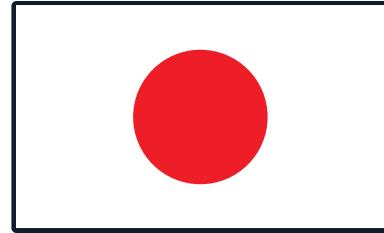


- Tokai Gauge
Data trust and accuracy
- A.I. Technology
Intelligent automation
- A.I. Foundry & Manufacturing
Real manufacturing insight



Result: Quality × Productivity × Sustainability

現場から生まれる競争力



Japan-Thailand Collaboration

Japan

- Technology
- Reliability



Together:

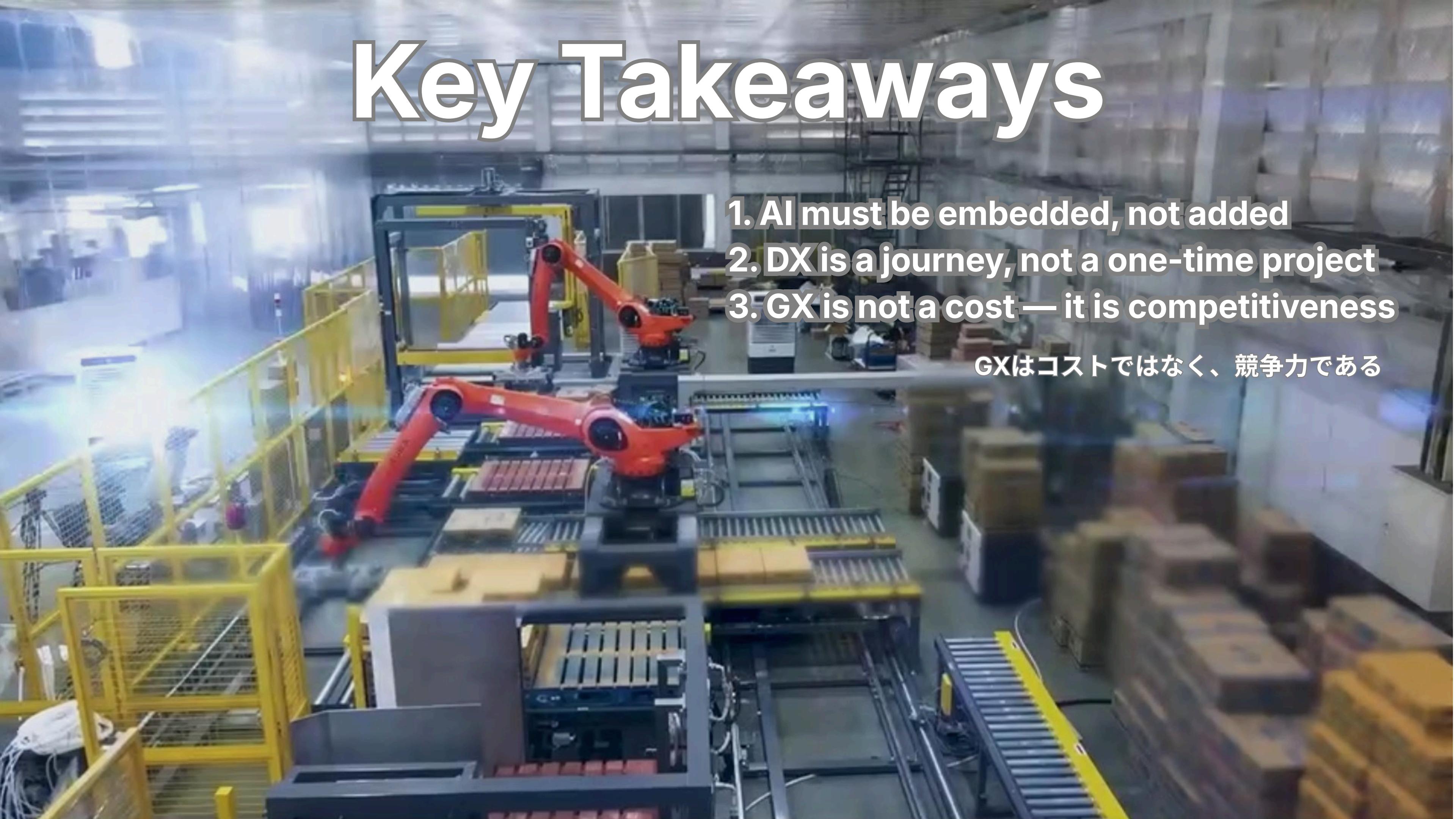
Scalable Manufacturing Innovation

Thailand

- Speed
- Implementation



Key Takeaways



- 1. AI must be embedded, not added
- 2. DX is a journey, not a one-time project
- 3. GX is not a cost—it is competitiveness

GXはコストではなく、競争力である



Warehouse
automation
solutions ➤

Thank You

Tokyo-Thailand Business Connecting 2026

ご清聴ありがとうございました