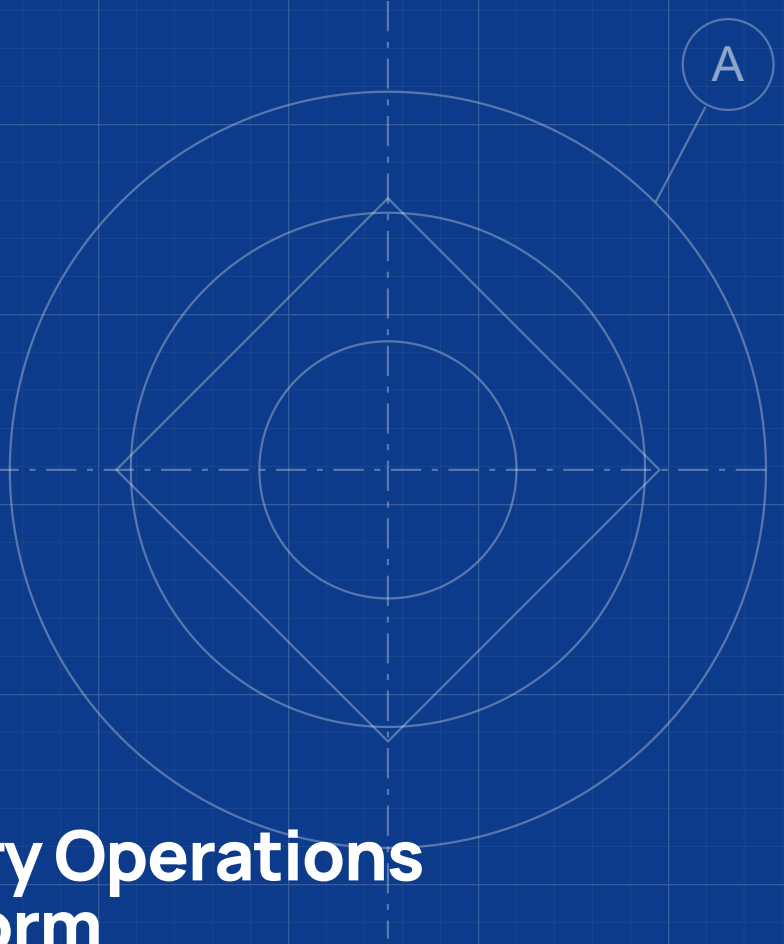


SOLUTION PROPOSAL

SOLUTION PROPOSAL & QUOTATION

26 SEPTEMBER 2026



PLC-Driven Factory Operations Intelligence Platform

An auto-parts factory running 3 production lines and 45 machines, most equipped with PLCs.

SAMPLE PROPOSAL



PROJECT
PLC-Driven Factory Operations Intelligence Platform

DRAWN BY
**DNA Maker AI
Engineer**

CHECKED BY
DNA Maker engineering team

DATE
26 September 2026

SHEET
01 / 09

REV.
A

Executive Summary

Downtime, quality issues and maintenance are recorded on paper and in Excel by separate departments, so the factory has no single live view of what its machines are doing. With PLCs already on most of the 45 machines, we will build an AI factory operations platform that reads those signals and turns them into live downtime and production-anomaly analysis, quality-issue summaries, searchable SOPs and predictive maintenance. The result is faster response to stoppages, fewer recurring defects, and maintenance planned before it becomes unplanned downtime.

SPECIFICATIONS

CLIENT

An auto-parts factory running 3 production lines and 45 machines, most equipped with PLCs.

PROJECT

AI Factory Operations Platform

OVERALL TIMELINE

10 weeks

DELIVERY PHASES · SYSTEM

COMPONENTS

4 · 6

3

production lines

45

machines, most with PLCs

6%

production time lost to unplanned
downtime

OUR DIRECTION

A PLC data layer reads live signals from the machines and feeds a downtime and anomaly engine that flags stoppages and abnormal production as they occur. Quality records and SOP documents are connected to the same platform, so summaries, search and maintenance forecasts are drawn from one operational picture rather than separate departmental files. Operators, quality staff and maintenance all work from the same live dashboard.



Problem Analysis

Four distinct problems were found in how the factory records and acts on production data.

1

FINDING 01

Fragmented Paper Records

Downtime, quality and maintenance are each recorded on paper and in Excel by different departments, so no one holds a complete picture of a line's day. Reconciling these separate records consumes supervisor time and delays every decision that depends on them.

2

FINDING 02

Unplanned Downtime Loss

About 6% of production time is lost to unplanned downtime, and the PLCs that could signal a stoppage the moment it happens are not being read. Each stoppage is discovered late and diagnosed by hand, extending the loss well beyond the failure itself.

3

FINDING 03

Unstructured Quality Data

Quality issues are logged but never summarised, so recurring defects stay invisible until they are large enough to be noticed anecdotally. Without a consolidated view, corrective action targets symptoms rather than the pattern behind them.

4

FINDING 04

SOPs in PDF Binders

Standard operating procedures live in PDF binders, which makes them slow to search when a worker or technician needs an answer at the machine. The delay shows up directly in response and recovery time.

Solution Architecture

AI Factory Operations Platform

DETAIL A – HOW THE SYSTEM WORKS

Factory Operations Intelligence Platform

Turns PLC signals and shop-floor records into live downtime, quality and maintenance insight.

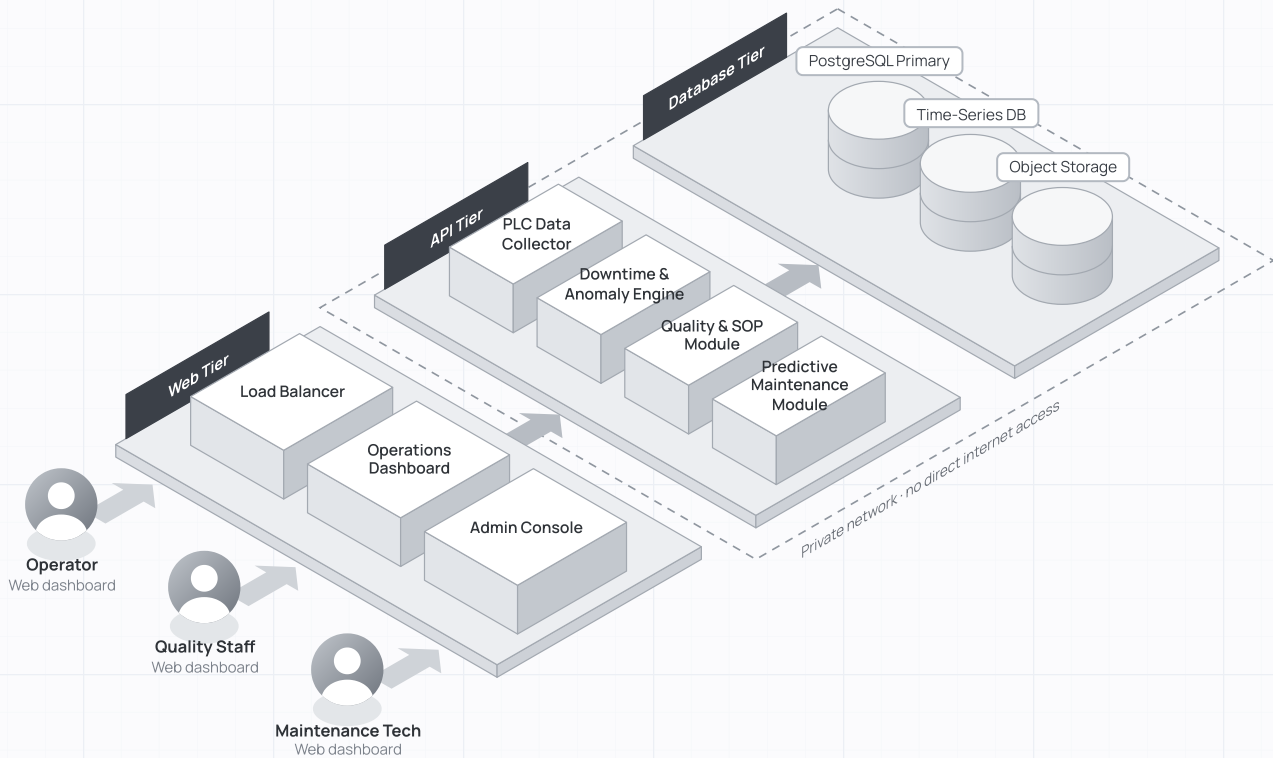


Factory Operations Intelligence Platform – Turns PLC signals and shop-floor records into live downtime, quality and maintenance insight.



Deployment Architecture

A true 3-tier deployment — web, API and database on separate tiers, with the database in a private network, never exposed to the internet.



Who uses the system



Operator

Web dashboard

Monitors live line status and downtime alerts.



Quality Staff

Web dashboard

Reviews quality summaries and searches SOPs.



Maintenance Tech

Web dashboard

Acts on predictive maintenance forecasts.

Traffic estimate

Daily volume

~65k PLC events/day

Peak load

~3 req/s, shift-start peak

Concurrent users

~20 users

Capacity plan

2 app servers behind load balancer, auto-scaling to 4; PostgreSQL primary + replica, time-series DB

Assumed 45 machines × 1 status/min = ~65k events/day; 15% peak hour ≈ 3 req/s; launch 2 app servers sustain >10 req/s, >3× headroom.

Server and cloud hosting costs are not included in this proposal; they are billed by the provider directly to you.



PROJECT

PLC-Driven Factory Operations Intelligence Platform

DRAWN BY

DNA Maker AI Engineer

DATE

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Scope of Work

BILL OF MATERIALS

NO.	KEY COMPONENTS	ROLE
1	PLC Data Collector	Reads live signals from the PLCs on the production machines and normalises them into a single data stream.
2	Downtime & Anomaly Engine	Detects stoppages and abnormal production patterns in real time and raises alerts to the right team.
3	Quality Summary Module	Consolidates logged quality issues and produces recurring-defect summaries for corrective action.
4	SOP Search Assistant	Makes the existing PDF procedures searchable so workers get answers at the machine.
5	Predictive Maintenance Module	Uses machine signals and maintenance history to forecast which equipment needs attention next.
6	Operations Dashboard	Presents line status, downtime, quality and maintenance in one live view for supervisors.

INCLUDED

- ☒ PLC data integration from the production machines
- ☒ Live downtime and production-anomaly detection
- ☒ Quality-issue consolidation and summarisation
- ☒ Searchable SOP assistant over existing PDF procedures
- ☒ Predictive maintenance module
- ☒ Operations dashboard for line, quality and maintenance status

NOT INCLUDED IN THIS SCOPE

- ☐ Supply or replacement of PLC hardware and sensors
- ☐ Authoring or rewriting of SOP content
- ☐ On-site electrical and network cabling work
- ☐ Server and cloud hosting costs

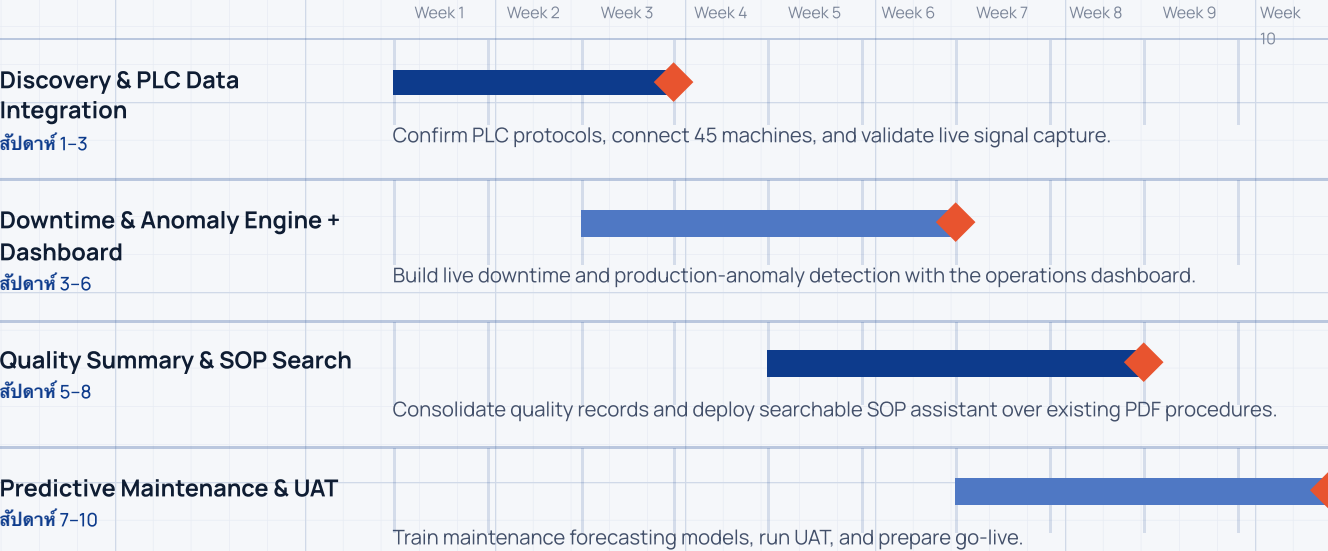
RISKS & MITIGATION

Mixed PLC protocols and legacy machines may require custom adapters.	Phase 1 protocol audit and use of industrial gateways.
Paper/Excel data quality may limit anomaly and predictive accuracy.	Data cleaning sprint and baseline rule-based alerts.
Scope expansion across 45 machines and 3 lines.	Fixed module scope with change control for additional machines.



Delivery Plan

Overall timeline	Delivery phases	System components	Deliverables
10 weeks	4	6	6



Estimated Investment

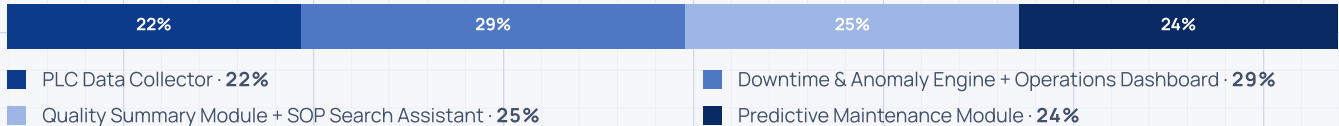
ESTIMATED TOTAL

฿400,000–1,200,000

Overall timeline

10 weeks

BUDGET BREAKDOWN



ITEM	PRICE RANGE (THB)	DURATION
PLC Data Collector Connect 45 machines and stream live signals into the platform.	฿100,000–250,000	3 สัปดาห์
Downtime & Anomaly Engine + Operations Dashboard Live stoppage detection, anomaly alerts, and unified line status view.	฿120,000–350,000	4 สัปดาห์
Quality Summary Module + SOP Search Assistant Quality-issue consolidation and searchable assistant over PDF SOPs.	฿100,000–300,000	3 สัปดาห์
Predictive Maintenance Module Maintenance forecasts from PLC and historical maintenance data.	฿80,000–300,000	4 สัปดาห์
Estimated total	฿400,000–1,200,000	10 weeks

PAYMENT TERMS



ESTIMATE ASSUMPTIONS

- PLCs support standard industrial protocols (e.g., OPC UA, Modbus) and can be accessed without production disruption.
- Historical downtime, quality, and maintenance records are available in Excel/PDF for model training.
- Client provides timely access to machines, SOP documents, and subject-matter experts for validation.
- Client IT/OT team is available for network and security coordination.

NOTE Every figure in this document is a preliminary estimate based solely on the information shared in conversation. Final pricing and timing are confirmed after a detailed requirements and systems review. Server and cloud hosting costs are not included in this proposal; they are billed by the provider directly to you.



Why DNA Maker

Thailand's leading banks, enterprises and government agencies trust us with systems that have to go live — and stay live.

500+
projects delivered since 2012

01 Chosen by Thailand's leaders

SCB, KBank, Krungsri, AIS, SCG, BDMS, the Treasury Department (Ministry of Finance) and Sony Device Thailand chose DNA Maker for systems where failure is not an option.

02 Bank-grade security, proven

A true 3-tier architecture (Web · API · Database) keeps your database off the public internet, validated by penetration and stress testing. Our Bluweo Engine is security-certified and runs at multiple bank groups.

03 You own 100% of it

Full source code and IP are handed to you — no plugin lock-in, no surprise licence fees, no limits on future changes.

04 Clears every go-live gate

We know bank and enterprise IT governance from the inside: every requirement in your TOR is covered, with no gaps and no surprises at acceptance.

05 Ready for the AI era

Content, search and data are structured for AI search engines and ChatGPT-style assistants, so the system grows with you instead of being rebuilt.

06 A partner long after launch

Multi-year client relationships, and a Bangkok team that stays on to improve the system and solve problems after go-live.

TRUSTED BY

SCB

Banking

KBank

Banking

Krungsri

Banking

AIS

Telecom

SCG

Industry

BDMS

Healthcare

Treasury Department

Ministry of Finance

Sony Device Thailand

Electronics

NEXT STEPS

- 1 Scoping session with engineering team to confirm PLC protocols, data sources, and success metrics.
- 2 Provide sample SOP PDFs and historical downtime/quality records for review.
- 3 Sign contract and schedule Phase 1 kick-off.

Built to go live. Built to last.



CEO & Solution Provider

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