



Amalgamation AI for Vision

Walking Deck

Fujitsu Research



What break in real Production Lines?

- Late detection (found down stream)
- Manual checks slow throughput
- Variation/changeover break settings
- No close the loop (detect → OT action)

What does it cost every week?

0.6-2.2%

of scrap + rework (% of sales) [1]

+2.4 pts

of missed revenue growth [2]

Example

\$120M revenue factory with 2.2% scrap/rework: **\$50k/week**

Why this persists: The line changes daily; inspection systems don't. Setup and updates are often too slow

[1] [APQC benchmark](#), [2] [Oxford Economics report](#)

Achieve Faster Deployment, Lower Cost, Higher Yield, and Simpler Operations with Amalgamation AI

Major Industrial Problems



Amalgamation AI offers

Yield Optimization

- Earlier detection by real-time alert system
- Closed loop from detection to action

Operational Agility

- Automated inspection with data via cameras
- Flexibility to new production conditions

Easy Operation

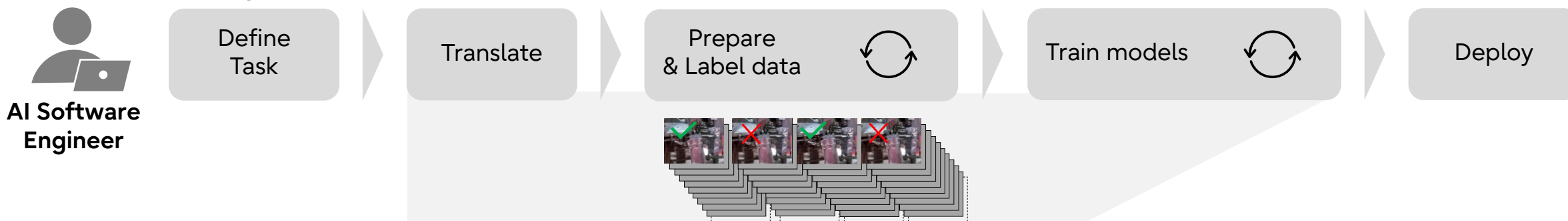
- Intuitive UI/UX accessible to operators
- No dependency on AI engineers and complex ML workflows
- No operational bottlenecks caused by slow AI

Cost reduction

- Reduces labor (inspector, AI SWE, etc.), outsourcing costs
- Lower rework, reinspection, and scrap costs

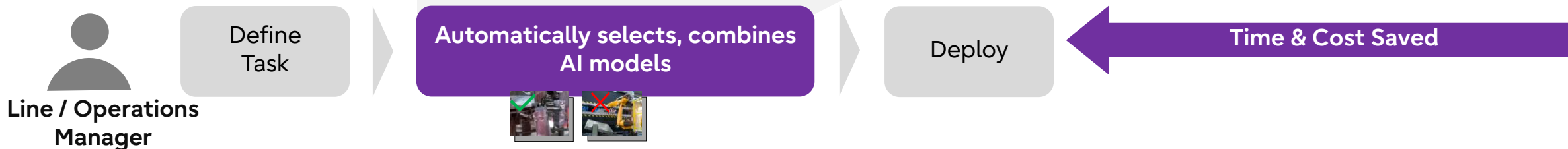
Traditional Computer Vision

approach requires a new model and a large data set for every task: Data collection, data labeling and model training for every use case!



Amalgamation AI for Vision

offers a new approach: Blueprints, not models; compose a custom workflow of vision tools for every task based on a simple text prompt with a few samples.

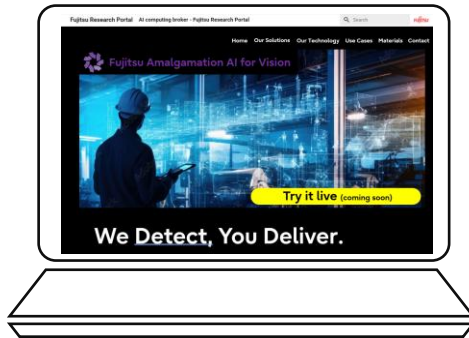


When things change, update the inspection — don't restart a training project

Phase 1

Free cloud trial

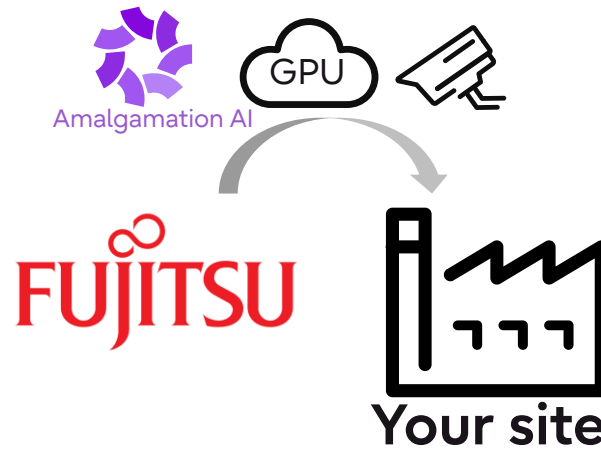
Validate on your parts & images from our website
[link to arcade and QR]



Phase 2

4-week on-site pilot

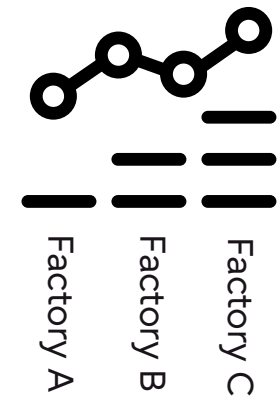
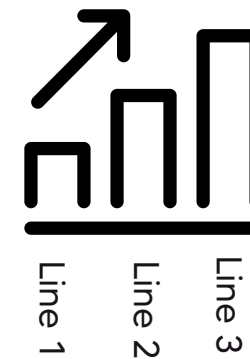
Run live one line, measure KPIs, week-4 go / no-go



Phase 3 **On-prem**

Production rollout on your site

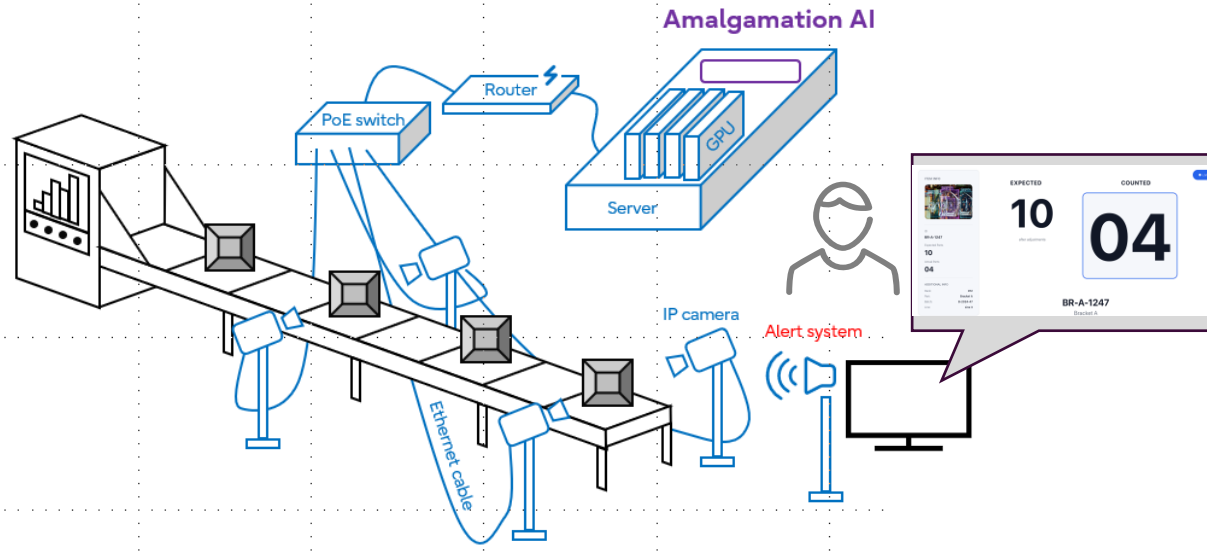
Integrate actions and audit trail, and expand line-by-line / plant-by-plant with your hardware



Fujitsu world class SI integration team support your factory settings

Clear Station Guidance to Move KPIs not just Model Accuracies

Factory Floor

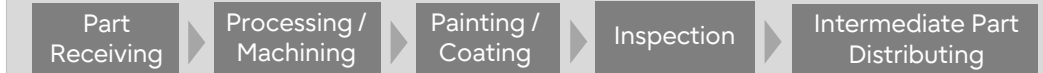


Design per station to move FPY/OEE:

- <3s station-level response; PLC interlocks and andon signaling reduce escapes.
- Fj world class SI integration tailored to your factory settings
- Intuitive UI/UX design for any users to operate

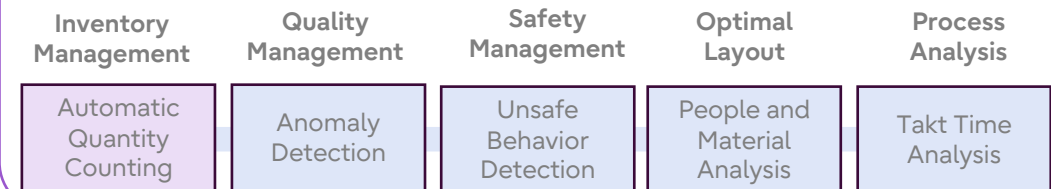
Other Opportunities

E.g., Process for Sheet Metal Painting



Amalgamation AI

AI models & Tools Pool



One Vision AI platform can solve all your challenges

How it works: Describe, Test, Review, Deploy

1 Define Inspection


Tell us what "good" and "bad" look like



- Describe task in plain language
- Upload 2-3 photos (good + bad if possible)
- Add simple notes: "ignore edges"

UI/UX example

What do you want to detect?

Describe what you want to detect and I'll help you create a blueprint. Add images and notes to refine it

Describe here 


 Image Upload 

2 Test Run

Try on real line images


- Upload a small batch of sample images
- Mix of good + defect examples
- See if it catches what you care about

UI/UX example

Blueprint to test 

"Please detect a crack on the glass bottles"

Upload sample test images



Use clear images where the inspected area and defects are visible. Start with 2-4 images (a mix of good and defective parts).

[Back to Step 1](#) [Continue to Results](#)

3 Validate

Confirm it's right or iterate

- See pass/fail
- View "why it flagged"
- Iterate steps 1 and 2 if necessary

UI/UX example

Analysis Results


1 image validated.

Overall result: **Defects detected in inspection**


Surface inspection: **Inspection status**

Scratch detection: **Detection results**

Severity threshold: **Threshold evaluation**

Confidence: High (89%) 

Reason:



[Continue to Results](#)

4 Deploy

Connect to a camera and trigger actions

- Pick camera / line
- Set alert: light, sound, PLC
- Go live

UI/UX example

Select camera [+ Add New Camera](#)

Blueprint for inspection

Stream quality

Live test performance of camera

Deploy action

[Back to Step 1](#) [Continue to Results](#)

The Outcome: Faster changeovers, update the check in minutes, not weeks.



Prompt-First, Data-Light Configuration

- Plain Language Setup: No coding or machine learning expertise required. Operators can simply describe what to monitor (e.g., “flag missing screws on assembly line”).
- Rapid Blueprint Creation: Detection logic can be configured in hours using just a few sample images.



Real-Time, Operator-First Deployment & Integration

- Flexible Connectivity: Connect to any camera and any line with simple controls.
- Immediate Action Triggers: Alerts via sound, email, or external monitors enable quick operator response, not just reporting.
- Unified Analytics: Track defect rates and performance trends to measure impact on KPIs.



Fast Validation & Tuning

- Instant Accuracy Check: Validate performance on real images before live deployment to reduce risk.
- Operator-Friendly Adjustments: Easily fine-tune sensitivity and correct false alarms for continuous improvement.



End-to-End Integration

- Integrated Solution: Software, edge devices, and compute server seamlessly—eliminating fragmented tools and handoffs.
- Repeatable Rollout: Standardized process from cloud test → PoC → multi-line enterprise integration.
- Flexible deployment option: edge, on-prem server, and cloud

Why Now: Two Shifts Changed Industrial AI Vision — Amalgamation AI Unlocks Operator-First Deployment

Market Shifts

1. AI Model Capacity

Foundation vision models are now strong enough for real factory variation

2. Compute

AI supercomputers are now routinely deployable on the factory floor



Amalgamation AI the missing integration layer

it composes the right vision tools into a working inspection.



- **Days to first working deployment** — no large datasets, no AI experts
- **Fast updates during changeovers** — keep pace with line variation
- **Scale across lines + use cases** — counting → defects → safety

**Every month without closed-loop quality is a scrap & downtime tax!
Shift to adaptive inspection now.**

Factory Floor Pilot: 4 Weeks to Prove ROI

Scope

1 line, 2 cameras, 1 use case, no-real time, total care package (hardware, software, installation, analysis)

Deliverables

configured inspections + audit trail + KPI scorecard + rollout plan

KPIs

miscount rate/count accuracy, defect catch/escapes (agree upfront)



Week 4 = go/no-go for expansion

Start Now – Guided Trial Signup or 30-Minute Discovery to Launch the Pilot

Book a 30-min discovery call today!!

- Pick a line, KPIs, # and arrangement of camera, and action path
- Give us a one-page pilot plan and start date



Choose a start date now!

Guided free online trial (coming soon)

- Upload some sample images or videos
- Validate the first inspection

Fujitsu Amalgamation AI
Website



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Appendix

Additional Information



- **Traditional Computer vision**

Define → Collect data → Label → Train → Tune → Retrain → Repeat

- **Amalgamation AI for Vision**

Describe → Validate → Run → Update

