Case study – Manual Inventory Management

atai

Abstract : ATAI deployed a solution at a container terminal to optimize process management by automating cargo counting and tracking resulting in 67% lower surveyor cost, 20% lower pilferages and 16% higher throughput.

Problem statement

Cargo bags/packages in the terminal are loaded/unloaded from trucks/containers into warehouse and vice versa. Current system is manual counting which leads to inaccurate counting, high surveyor costs, and without any evidence. The container terminal was looking for fully automated counting, tally with invoice and evidence backed for future proof.

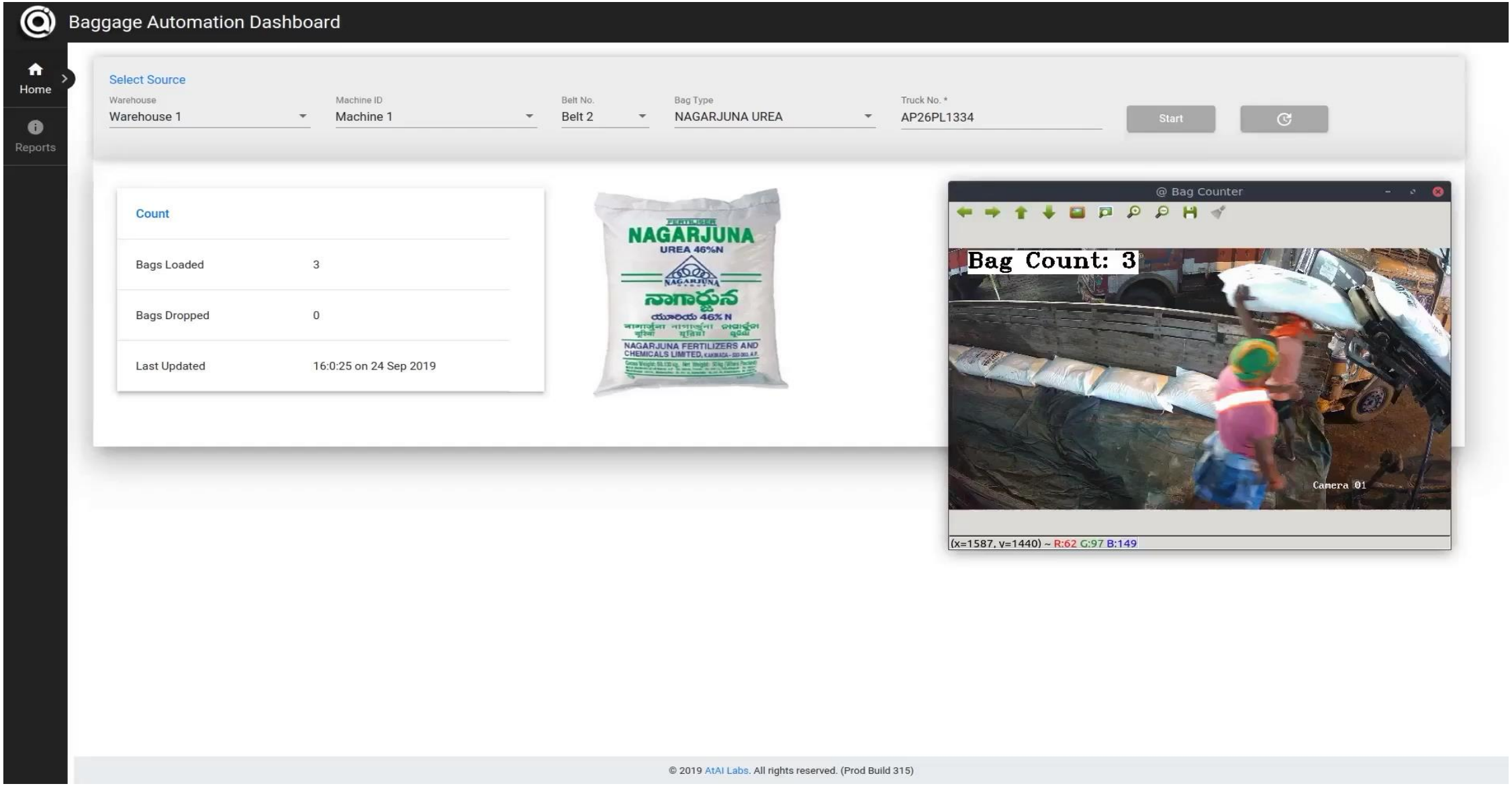
Description of the solution

ATAI deployed a cargo management solution (AtCargo) at the container terminal to fully automate cargo counting flow with no dependency on manual workforce. Solution is powered by Computer vision, Artificial Intelligence and Edge Computing to enable evidence backed real time cargo counting.

Business impact / RoI

The solution resulted in 67% lower surveyor costs, 20% reduction in wastage, 100% tracking accuracy and 16% higher throughput.

Case study – Manual Inventory Management



Case study – Manual Data & Process Management Compliance

atai

Abstract : ATAI deployed a solution at a Pharmaceutical Manufacturing unit to ensure tracking and automation of process resulting in optimal space utilization with 100% counting accuracy, 33% higher forklift capacity and decrease in maintenance costs.

Problem statement

An Active Pharma Ingredients (API) manufacturer was facing the challenge of end-to-end tracking and traceability of raw materials to produced goods for complying with 21CFR guidelines. The manufacturer was looking for a fully automated system along with AI based analytics.

Description of the solution

ATAI deployed a solution to fully automate placement, movement and pickup flow and tracking within the facility. The approach comprised of precision asset and inventory tracking with AI, computer vision, along with sensors such as Ultrasonic, RFID, vision sensors, and edge computing. This ensured end to end traceability of raw-materials to produced goods for every batch wise with complete audit trail.

Business impact / RoI

The solution resulted in 100% counting accuracy, 100% traceability, 100% evidence backed operations, 67% decrease in maintenance costs, 33% higher forklift capacity and real time reporting along with audit trail in compliance with 21CFR guidelines.

Case study – Manual Data & Process Management Compliance

atai

Case study – Product Quality Issues

atai

Abstract : ATAI implemented a solution at a wheel manufacturing unit to prevent losses from wheel rejections due to quality issues by deploying rig automation resulting in 100% elimination of subjectivity, 100% decrease in customer rejection and reduction in production costs.

Problem statement

One of India's top 3 Wheel Manufacturers was facing the challenge of maintaining highest quality of wheels manufactured and to minimize wastage. The manufacturer wanted to detect damages and ensure customer satisfaction.

Description of the solution

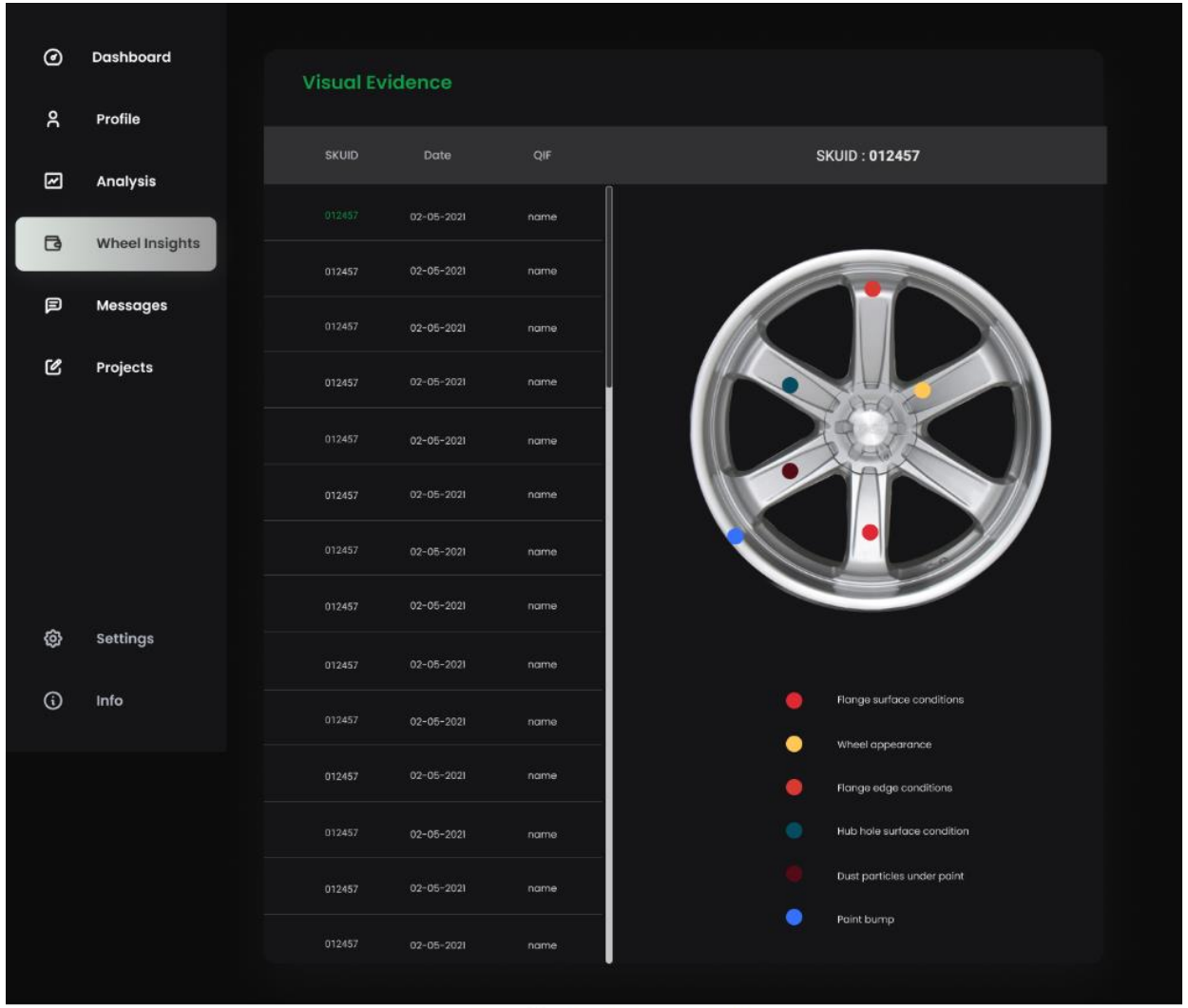
ATAI deployed a solution at the wheel manufacturing unit to fully automate the rig for omni-direction camera sensor-based wheel inspection to move away from visual based inspection to vision (AI) based quality control for consistency and speed. The approach comprised of precision asset and inventory tracking with AI, computer vision and fiduciary markers along with edge computing. This resulted in end-to-end automated quality inspection.

Business impact / RoI

The solution resulted in 100% decrease in subjectivity, 100% decrease in customer rejection, and 8% lower correction time. 20+types of defect identification with 100% accuracy.

Case study – Product Quality Issues

atai



Top 10 Industry 4.0 Use cases

1 Manual data & process management
Solution: Shop floor digitisation using AI and analytics
Business benefit: Process improvement, paperless operation, high productivity and efficiency

2 Manual inventory management
Solution: Paperless inventory management using AI & Analytics
Business benefit: Lower material management cost

3 Frequent machine failures
Solution: Predictive maintenance using IoT, AI and Analytics
Business benefit: Planned shutdown, lower production loss, lower machine failure cost

4 High Energy Cost
Solution: Smart Energy Management using AI, ML and IoT solutions
Business benefit: Improved energy efficiency

5 Product quality issues
Solution: Computer Vision/IoT Solutions for Quality Inspection
Business benefit: Better quality control

6 Low market reach
Solution: VR based plant visits
Business benefit: Better customer reach

7 Remote customer / expert support
Solution: AR/VR based solutions
Business benefit: Quick problem solving, remote outreach

8 Managing worker health & safety
Solution: AI & IoT based remote monitoring of worker's health
Business benefit: Better worker mgmt.

9 Compliance Management
Solution: Computer vision and AI based solutions
Business benefit: Safety & Compliance

10 IoT security
Solution: Cybersecurity based solutions
Business benefit: Data protection, User access control, better security