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# Case Study

## IMPROVE LOGISTICS AND PRODUCTIVITY WITH AVATHON INDUSTRIAL AI PLATFORM

**HOW CAN GLOBAL DISTRIBUTORS FIND EFFICIENCY GAINS THROUGH REAL-TIME VISUAL ANALYTICS?**

### PROBLEM

Mondelez International, Inc. needed to monitor the effectiveness of the third-party vendor managing its product logistics operations in India.

### SOLUTION

The company implemented Avathon Industrial AI platform, applying computer vision to their existing CCTV infrastructure to address issues such as cargo vehicle use and loading dock operations, including turnaround time, labor usage, and more.

### OUTCOME

Industrial AI platform captured valuable real-time metrics on truck wait times and loading schedules, cargo space optimization, equipment utilization, labor usage, and health and safety monitoring.

The supply chain challenges experienced by businesses and consumers beginning in late 2020 brought attention to the intricate process that takes place every day to ensure we can purchase the goods we want. From the people making products all over the world to those transporting them to their final points of sale at your local store, thousands of labor hours are involved every step of the way.

That level of coordination comes at great expense for manufacturers and distributors who need to effectively manage the intake of raw materials or finished goods and get them to the next points in the supply chain in a timely manner. For decades, that meant manually tracking materials in specially tailored management software systems that didn't offer real-time data or the ability to monitor live situations—such as trucks that have been waiting far longer than normal to enter a bay to load or unload their cargo.

Mondelez International, Inc. is a Chicago-based holding company that was spun off from Kraft Foods in 2012 to operate its snack food and beverage business. Some of Mondelez's more well-known brands include Nabisco, Cadbury, Oreo, and Ritz.

The company has a huge global footprint, with roughly 79K employees and revenue of $26.5B generated from products sold in more than 160 countries. Doing that level of business requires massive attention and resources devoted to the logistics of manufacturing food items from raw inputs and then shipping the finished goods to distribution centers across the globe. Prior to the Covid-19 pandemic, the company was already attuned to the importance of tracking its logistics performance to control the expense side of its business performance. But with the supply chain difficulties that have persisted across continents after the major waves of the pandemic, gaining as much efficiency as possible in its shipping and receiving operations became a matter of basic business survival for the company to be able to reliably make its products available for shoppers at popular retail outlets.

To monitor the performance of the outside vendor managing its logistics at an India-based shipping and receiving center—one of 16 it has in the country—Mondelez turned to Avathon to provide real-time, accurate data and insights throughout the facility.


*Avathon Industrial AI platform can track and analyze forklift usage as well as the safety and efficiency of storage/stacking practices.*

### IDENTIFYING VALUABLE INSIGHTS FROM VISUAL DATA

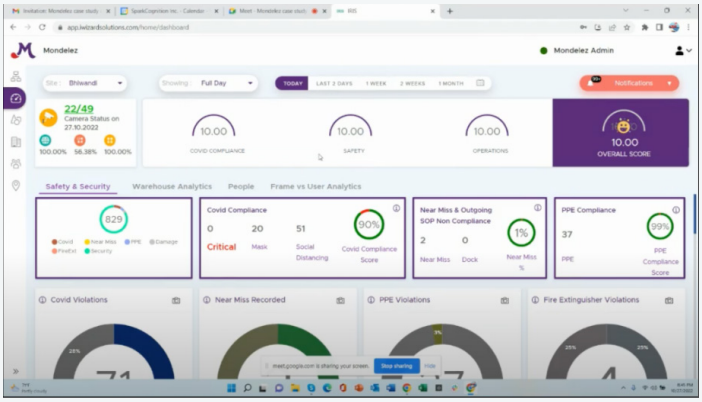
Avathon Industrial AI platform allows customers to configure and deploy computer vision-based applications using a low-code/no-code integration framework. It leverages proprietary visual AI technology to autonomously understand and react to complex scenes and multi-frame activities like those commonly seen in warehouse and logistics facilities.

Mondelez had three top-priority areas it wanted to monitor and a need to evolve beyond manually tracked KPIs recorded on whiteboards pegged to various monthly or quarterly goals:

- Safety: appropriate stacking of pallets, use of protective equipment, Covid-related health precautions, and detections of near misses with equipment
- Warehouse Analytics: time and labor utilization of docks, average turnaround times for cargo vehicles, labor utilization, equipment utilization
- Attendance: total work hours, employees present on site

From those three categories, Mondelez was able to use Industrial AI platform to analyze dozens of use cases and scenarios associated with specific KPIs, including the number of trips per vehicle or vehicle type, average wait times, amount of cargo space used in trucks, and labor time needed for loading and unloading.


*Cameras running Industrial AI platform track each vehicle on-premises, monitoring factors related to turnaround time and labor time required for loading and unloading.*




*The customer's Industrial AI platform dashboard offers detailed views of data on safety and security, warehouse analytics, and people/attendance.*

## USING VISUAL AI TECHNOLOGY TO TRACK REAL-TIME PERFORMANCE AND PROGRESS

Industrial AI platform's customizable dashboard allows on-site company leadership to look at performance metrics such as:

- Throughput for unit type: number of pallets handled/number of labor hours
- Throughput for space usage: total cubic meters of cargo handled/number of labor hours
- Total labor utilization: labor hours per person/total working hours for selected dates

For example, visual tracking of cargo checkpoints and movement to and from bay areas allows for real-time monitoring and data collection related to turnaround time, alerting managers if a vehicle has been inactive for more than 15 minutes. Likewise, if a bay is inactive despite an expected arrival, or if the cargo loaded into the vehicle is packed inefficiently with too much "void space"—i.e. the packages could shift and get damaged—managers would be notified to take corrective measures.

The company also uses Industrial AI platform to track the use of its forklifts more closely, detecting unsafe near misses as well as usage (distance traveled with and without materials, total empty time, number of pallets moved), which helps determine the productive life of equipment when considering a replacement or additional purchases.

These insights have allowed Mondelez to know far more than previously possible about how its logistics contractor is performing and what areas within the main points of focus (safety, warehouse analytics, attendance) require action to be taken. Rigorous KPI measurement also allows for performance goal setting and competitions between different logistics depots, with the data measured based on criteria easily managed and customized using Industrial AI platform's user-friendly dashboard interface.

The highly versatile capabilities of Avathon Industrial AI platform helped Mondelez achieve significant productivity improvements in managing its logistics operations and ensuring that labor and equipment are performing at the highest possible level. Industrial AI platform brings new value to existing closed-circuit television cameras within industrial manufacturing or warehouse settings, allowing companies like Mondelez International, Inc. to detect safety issues, problems related to inefficient storage or retrieval of goods, and improper operational steps related to the turnaround time for the loading or unloading of vehicles.

## ABOUT AVATHON

Avathon, a leader in Industrial AI, extends the life of critical infrastructure while advancing the journey toward full autonomy. Avathon's Industrial AI platform empowers commercial and government customers with scalable, secure, and value-driven solutions that enhance efficiency and resilience across heavy industry.