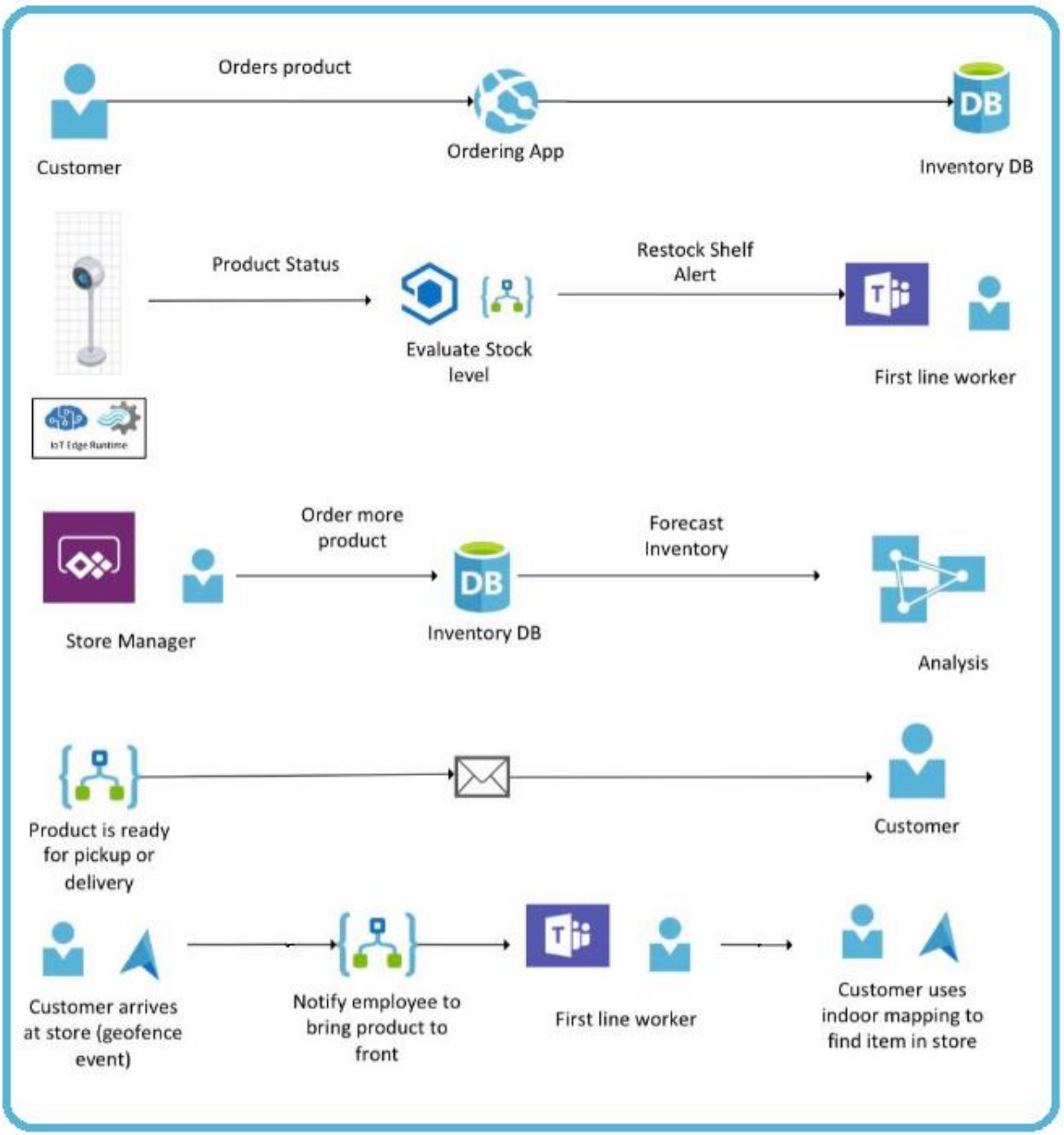
Retail Demo Overview

Imagine as a customer, you go to the retail outlet to purchase your favorite product, only to find it empty. Customers are flicker and would go to another retailer to get what they are looking for.

Retailers do their best to have products in stock and on the shelf. In this demo, we are showcasing a retailer's process to restock the shelve and automate the ordering from the suppliers.

An overview of the demo scenario is shown below.



Persona Description

- **Customer: Shopper** that purchases the products from retailer.
- **First line worker (FLW):** Store associates whose primary role is to work directly with customers or the general public providing services and support.
- **Store Manager:** Manages a retail store and ensure that daily operations are going on.
- **Supply Chain Analyst:** Performs forecasting and analysis of the products' supply and demand.

Customer ordering products causing low stocks

Step 1: Open Contoso Market Web Application to make a purchase and activate low stock level alert for store associate.

As a **customer**, you would like to buy canned beans to make burritos for a party. You decided to buy online with Contoso application and pick up in store (BOPIS) so that you have time to prepare the other ingredients.

a) Open Contoso **Market Web Application.**
b) Click on **Canned Beans**.
c) Click on **Buy**.
d) Click on **Cart**.
e) Click on **Proceed to Checkout**.
f) Click on **Procced to Pay.**

Contoso retail outlet recently installed a new video analytics solution which identifies shelf void situation. Contoso also deploys a pick off shelf system when online orders are placed. As this happens the video analytics solution will trigger an alert if it detects that the shelf is going to be empty. This can be configured to various degree of emptiness.

Just so happen everyone in town is making burritos. As the FLW picks the canned beans off the shelf for our customer, the shelf void algorithm is activated for a **Low Stock Alert.**

Low stock alerts are sent to FLW for immediate action

Step 2: Open Microsoft Teams to see Low Stock Alert for restock

Contoso has embraced the use of Microsoft Teams as a solution for FLW. This is used for scheduling and staying connected with the Walkie Talkie feature. It also serves as an alerting mechanism for immediate action required.

When the video analytics solution detects that shelf void has gone past the threshold, as a **FLW,** you will get an alert on the Front Line Worker channel on Microsoft Teams in near real time. You see a **Low Stock Alert** which informs you that canned beans are low and there is a need to restock the shelf.

a) Open Microsoft Teams – **Front Line Worker Channel**

b) See the **Low Stock Alert** notification**.**

With Teams, it is possible to leverage the scheduling feature to set a task for the store associates. This allows for FLW to pick up the task to perform.

Ordering more stocks from the suppliers

Step 3: Store Manager orders low inventory items to restock supply.

(The order is important as this step will trigger the email for the step 4)

A day in life as a **store manager,** you perform inventory orders from suppliers at the end of each day to maximize the delivery cost for multiple products. In order to do your routine supply ordering, you leverage on the business application that you have created with **PowerApps.** You created this because the internal Contoso systems are not user friendly and requires you to go to multiple systems to achieve this task.

PowerApps is a low code platform to create applications. If you know how to create slides on PowerPoint, you can build an application on PowerApps. In fact, this app is so popular that the corporate has deployed it to other Contoso retail outlet too.

a) Open **PowerApps.**
b) Click on **Apps.**
c) Open **Inventory** application.
d) At the end of **Canned Beans** row, click to make an order.
e) Select the **Quantity** required.
f) Click on **Make Order**. Observe the new order being made.

Customer receives a notification email that the order is ready

Step 4: Customer is informed that the product is ready for pick up.

Once the FLW has finished picking the order, they will close this process in the system. When that happen, as a **customer,** you receive an email notification that your order is now ready to be picked up.
(Note that this happens in parallel of the previous steps whereby the store manager is ordering to restock supply)

a) Check **email** for notification that product is ready.

Customer arrives in mall and gets direction to the store with the app

Step 5: Customer arrives at retail outlet and uses app to find the direction to the store for pickup

As a **customer,** you want to get your order and get back home to prepare your burritos. Contoso's differentiates with the ability to go to a locker to pick up your order so that you do not have to wait queue to be served.

a) Open Contoso **Market Web Application.**
b) Click on **Account** in the navigation. *(This is a hidden trigger for geofence alert)*
c) Click on **Notification** to get directions to retail store.
d) Click on **Floor Map** to gain focus (Click twice if required). You will see floor levels in the top right.
e) Contoso Market at store 252 is highlighted.

Azure Maps provides the ability to do indoor mapping which powers the wayfinding experience.

FLW prepares the order only when customer arrives

Step 6: Customer arrives at retail outlet and store associate is notified to get ready the order for pick up.

As a **FLW,** you get a **Customer Has Arrived Alert** on your Front Line Worker channel on Microsoft Teams when the customer is near the retail outlet. The FLW would use the OrderID to prepare the order and place it in the locker box. This is needed as there are some produce that needs to be kept in a temperature control environment till pick up.

a) Open Microsoft Teams – **Front Line Worker Channel.**
b) See the **Customer Has Arrived Alert** notification**.**

If you are wondering how the alert was triggered, the customer's Contoso application has a geofence rule that is created in Azure Maps. It automatically triggers the alert so that the FLW can prepare the order.

Other scenarios that this platform enables

Step 7: View telemetry in IoT Central

As a **store manager**, you try to use innovative solutions to make operations smoother. The video analytics solution is built with IoT Central. It is a fully managed IoT platform which allows other devices to be connected to it. Contoso has started also started to monitor the fridge temperature to ensure that it is operating at optimal condition for food safety and energy savings.

a) Open **IoT Central.**

b) See the telemetry and show case IoT Central.

Using machine learning to forecast inventory requirements

Step 8 (optional): Contoso HQ working on Inventory forecasting

As a **supply chain analyst,** you are working on inventory forecasting for Contoso to ensure the supply meets the demand of the market.

- Go to Azure Portal.
- Go to your **Machine Learning service** that you provisioned.
- Click **Launch Now**
- Click on **Notebooks**
- Click the rote-forecast.ipynb in the **My files** navigation
- Go through the steps to explain what is done

Partners

If you are interested in such a solution, we have multiple solutions that we can offer.

End to end solution:

- Microsoft - Dynamics Connected Store
- Avanade – Intelligent Store

Retail video analytics:

- Malong
- Neal Anlaytics

First Line Worker solution:

- Turnpike

Intelligent digital signage

- Ombori

Intelligent Queue system

- Ombori

Reset demo

In a browser, navigate to **http://<webapp-url>/reset**. This will do the following updates:

1. Reset the database into its original state.
2. If you are using the video, it will put it back to the stocked shelf state.
3. Reset the users Geofence location.

It is recommended to refresh the web application after this step before running through the demo again.