

On-Time In-Full (OTIF) Score Prediction



Business Overview

One of the major operational challenge for CPG industries worldwide is to achieve high levels of on-shelf availability, while keeping supply chain costs down and inventories under control.

The US food retail industry loses an estimated **\$15–20 billion** in sales every year, because items are either out of stock or otherwise unsaleable.

In its effort to optimize its supply chains, the consumer industry has evolved in a way to measures its delivery performance, by adopting “On-Time In-Full” (OTIF) delivery metric.

Identifying late, incomplete deliveries & reasons for the same and then taking timely corrective action to ensure meeting the **OTIF (On-Time-In-Full) targets** is mission critical for CPG industries, as the fines/penalties imposed by Retailers are quite hefty and negatively impact the margins.



Current Scenario



The current Planning & Fulfilment solution, that the clients have, are mostly Reactive type

While Planning solution provides some visibility, additional insights are needed to take proactive actions to prevent partial & missed deliveries



Low Reaction Time

By the time Logistics Managers come to know of an upcoming delay, or lack of full-deliveries, its too late to react



No Flexibility and Scalability

In Traditional supply chains there is no scope to reorient supply chain assets to cater to customer's need in real time



Infosys Solution

Infosys Solution uses **Machine Learning** to generate insights into historical trends and predicts OTIF scores for upcoming weeks. This solution can work as an extension of existing planning systems (e.g. IBP)

The solution provides corrective action opportunity at 2 stages :

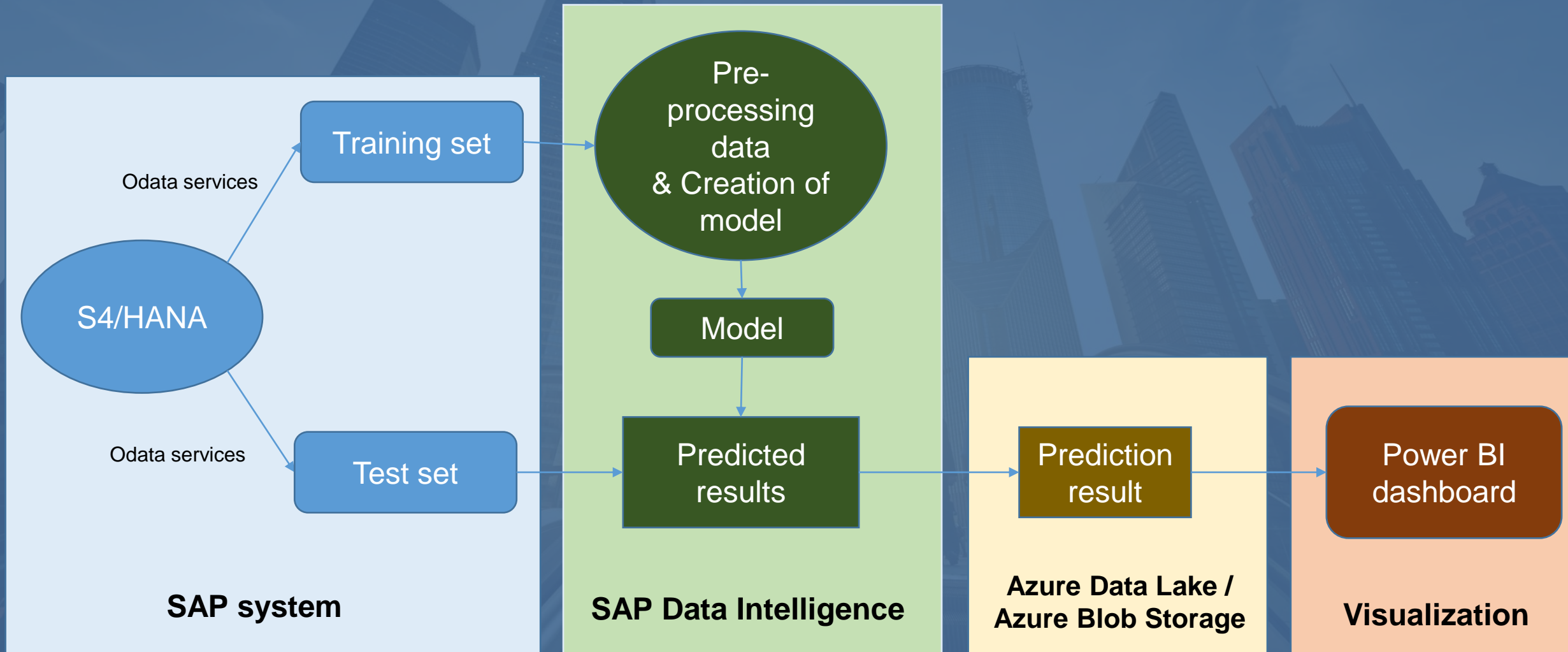
- **At the time of Order creation** - Solution predicts whether the order will be fulfilled In full.
- **At the time of Shipment creation** – Solution predicts if the shipment will be On-time

As a part of this solution, an Insights dashboard is created, which provide clear over all picture of ON-TIME and IN-FULL shipments and a comparison of Predicted vs Actual Results to verify accuracy of Solution.

The model learns with every new data point provided to it and prediction accuracy keeps on improving over time.



OTIF Architecture



S4/HANA is used as a system of records, for fetching input data e.g. Open Order Data, Delivery & Shipment Data, Retailer OTIF metrics

Infosys OTIF Dashboard

Infosys *Navigate your next*

Predictive On Time In Full Performance

Created on: 4/16/2020 - 4/30/2020

In Full: All

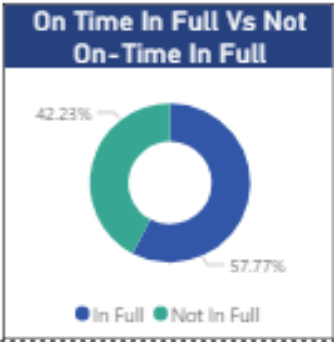
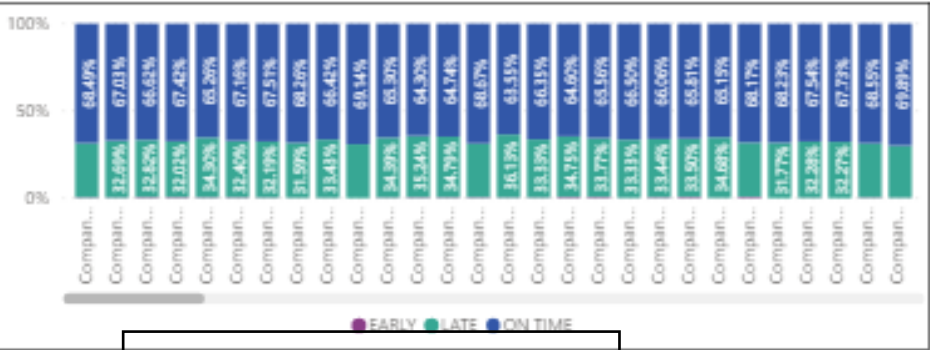
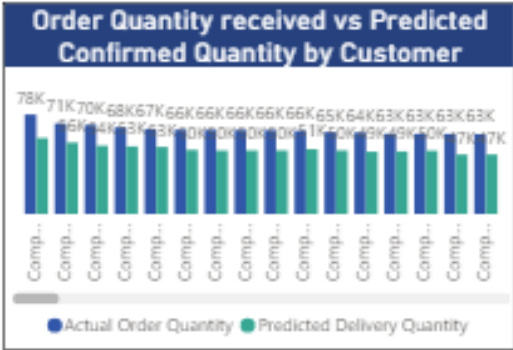
On Time: All

Customer: All

Orders received: 3471K

Orders confirmed: 3470K

On time shipments: 1882K



Sales Order	Shipment Number	Customer	Material Number	Plant	Created On	Predicted In Full	Actual In Full	Predicted OTD	Actual OTD	Actual Quantity
9153519	104083308N	Company DC 6042	2700042023	2103	Monday, April 27, 2020	●	●	●	●	
9153520	104052982N	Company DC 7015	6414486804	2100	Monday, April 20, 2020	●	●	●	●	
9153520	104063534N	Company	6414464147	2107	Friday, April	●	●	●	●	

Legend Description

- ▲ Early
- On time
- ◆ Late

Legend Description

- Full
- Not Full

Prediction Vs Actuals On-Time and In-Full status

Business Benefits

Win Battle of Financial Penalties

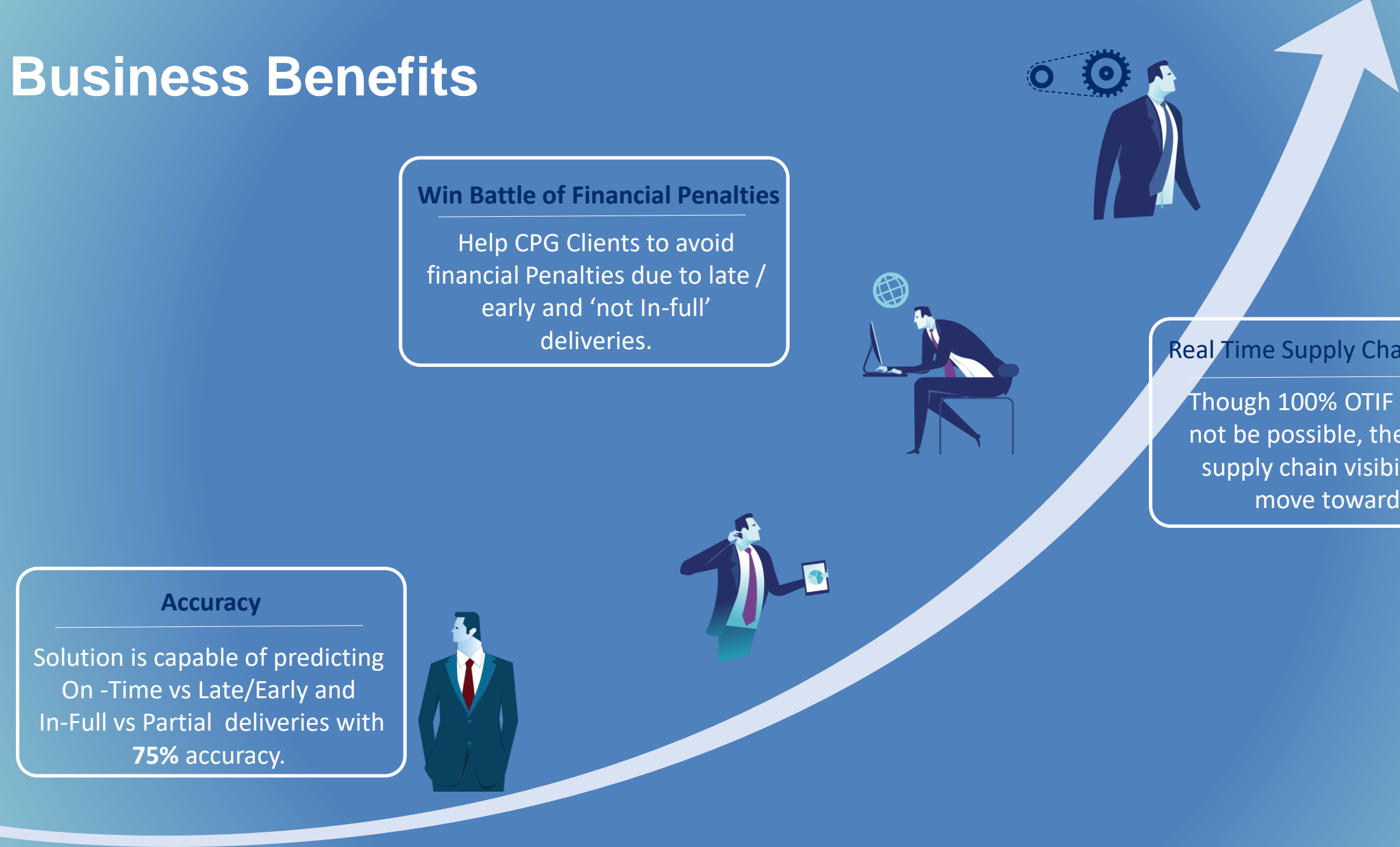
Help CPG Clients to avoid financial Penalties due to late / early and 'not In-full' deliveries.

Real Time Supply Chain Visibility

Though 100% OTIF score may not be possible, the real time supply chain visibility helps move towards it .

Accuracy

Solution is capable of predicting On -Time vs Late/Early and In-Full vs Partial deliveries with **75%** accuracy.





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THANK YOU.