

Problem Statement

One of the world's largest alcohol companies is looking for Tracking solutions across its entire supply chain process. The objective is to track the product at each step of product lifecycle and trace the history right from raw material to end consumer. Due to industry nuance, there are two sub parts to this journey.

Forward traceability – from raw material till finished alcohol bottles where the journey is within the company supply chain

Reverse traceability – where the bottles from the finished goods stage traverse to end consumers with no information flowing back. However, w.r.t consumer led interactions or audits we can get sampled data in.

Integrating Data

The desired system should be able to generate and integrate relevant data from various sources-

- Raw material details (batch number/supplier details/Source details/Incoming quality data/shelf-life details/Shelf life at the time of use/date of receipt /storage condition data)
- Manufacturing (Manufacturing Batch no, mfd date/Component Batch/FG & Semi finished goods quality analysis/In process data of FG and Semi finished goods/Defect rate of shift/In process inspection data viz., batch fill level, quality checks etc./Mfg. details viz., shift, Tank, line, supervisor, etc./Qty of BOM consumed)
- Finished product details (Batch no./Lot no./Date/Prechecks and Records/Storage details viz. Pallet, Box, Tanker, warehouse & conditions)
- Order Details (Order info & date/Batch no, date no./Dispatch or transfer details/Prechecks and records/Truck/ tanker details/Customer or receiver details/Permit details)
- Consumer data (Brand protection and Consumer data/ Product & Portfolio/Location details/Age Segment/Personal Data/Product data to display)

Data Visualization and Persona Experience

The project has various persona, and each persona has a different use case

Persona	Use Case	Remarks
Consumer	To give the personalized experience to the end consumer - Source of grain / Maturation Age & Process/ Blend information / Flavors / Blender - Brand Ambassador	Part 2 of project
Consumer	Personal Touch - Gifting/special occasion - Activate gifting experience to the presenter and consumers / Offers + Promotions Try your luck etc.	Part 2 of project
Govt Authority	To verify the authenticity of the product along with manufacturing location and date	
Investigator	To verify the authenticity of the product along with manufacturing location and date	
Investigator	To verify other BP tech (Genuineness of the product) - Physical Features (Cap/bottle) - Wrapper on taggant/markers/labels	
Supply Use cases	To verify the authenticity of the product along with manufacturing location and date	
	To establish supply chain traceability of the product Grain to Bottling - Locations/Date/Packing & related document details	
	To figure traceability of product and process quality - PPM/Raw material/Machine process/temp/Humidity/Process parameters/Shelf Life	
Supply Use cases	To figure ageing of Inventory (raw materials/finished products/in progress)/ Shelf life	
Retailers	To establish authenticity of product / grain information - off premise shelf planning / Product knowledge / Marketing communications (e.g., Whisky from Scotland/ Whisky from Punjab / vodka from Kerala)	

Requirement

1. Digital Solution should connect to internal systems (e.g., ERP) and collect required data
2. Solution should collect real-time data from the source if the data is not already available in internal systems e.g., temperature, pressure and information shared by customers
3. Smart labelling solutions such as QR code, NFC (Input triggers), any other relevant tech
4. Data visualization solutions and channels to deliver the required information to consumers (e.g., AR/VR/MR)
5. Should provide a secure chain layer at the backend
6. Have modular services and API
7. Facility for data cataloguing / rules / actors
8. Integration with MDM (Data and analytics)
9. Connect to consumer experience module (AR/VR/CMS etc)

- In case of any queries on the project, please contact Sandeep.Gyanchandani@diageo.com
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