fractal

Case Study

Smart Order Product Recommendation System for a Global CPG Giant

Client's Journey with Fractal

Fractal collaborated with a CPG giant to impact the lives of over 3,500 sales representatives by:

- Increasing order sizes
- Enhancing execution efficiency
- Empowering sales reps to become change agents through solution adoption

Objective

Empower sales teams to :

Target the right store with a defined action plan.

Sell the right SKUs in each store, considering price tier constraints, SKU performance, and other relevant factors.

Sell the optimal quantity of each SKU to every store to maximize store-level profits and revenue

Challenges

Sales Attrition

Continuity in store service disrupted due to seller's attrition

Ineffective Time Utilization

Sellers unable to use their In-store time effectively

Ad-hoc Decision Making

A data driven approach for better range selling needed

Sub-Optimal NPD Placement

Minimal guidance available on correct placement of NPD

Post-Facto Review

Pre-facto analysis needed to take corrective actions in time

What is needed? Store level guidance system for the sellers to utilize their 'in store' time and deliver business objectives effectively.

STORY:

GLOBAL CONFECTIONERY MAJOR

TRADITIONAL

SALES REPRESENTATIVE

Preserving Value

1. **MSL based** Order taking: **Limited cross sell** opportunities
2. **Difficulty complying with Business aspirations** for existing & new programs
3. **Manual communication & overlays** for new campaigns/initiatives in field
4. **Instinct-based decision making** to meet monthly targets
5. **Minimal performing mgt reports** that lacked actionability

MODERN DAY

SALES REPRESENTATIVES EQUIPPED WITH **DATA & AI**

Creating Value

1. **Changed a day in life of an SR,** now infused with AI powered on field actions with focus on quality of execution and order personalisation at an outlet level
2. **Interventions across:** SFA | AI & Engineering | Design | Change Management
3. Outputs integrated with **SFA**
4. **Implementation** of feedback **from Market Visits & Trainings**
5. AI Interventions through Store Propensity | Cross Sell Models | ULS Capacity Setting | Store Sales Potential | Store Personalization

Fractal's Solution Framework

01
Data Discovery & Feature Engineering

- Identify the internal and external data sources:
  1. Historical sales
  2. Product, Store masters
  3. Store demographics & POI
- Data pre-processing, exploratory data analysis and Feature Engineering

02
Store Clustering

- Clustering of stores basis store specific attributes
- Stores belonging to each cluster are similar in multiple dimensions
- Segmenting the stores basis performance and potential

03
Store SKU Propensity Model

- Purchase likelihood of each Store-SKU combination using Deep Learning AI techniques
- DL recommender systems predict the likelihood of purchase taking into consideration:
  1. Store's own purchase pattern of the SKUs
  2. Cluster purchase behavior
  3. Marketing activities, Seasonality, Sales drives

04
Cross-Sell Models

- Identifies top similar stores for Cross-Sell using collaborative filtering and other approach
- Recommends products popular in similar stores but not yet stocked in the target store.
- Increases cross-sell opportunities by leveraging sales trends and store similarities.

05
Store ULS (Unique Lines Sold) Capacity Setting:

- AI models to determine what is the unique assortment count that the store is likely to buy in the upcoming month given seasonality, purchase cyclicity, store appetite and other factors.
- Buffer lines are added on top of store ULS capacities and these capacities vary for each store month over month.
- Store achieving these capacities / ULS Targets are then part of the sales rep incentivization framework.

06
Suggested Order Quantity

Generalized predictive models and Multiple time series models are used to get the suggested order quantity

- Model to predict for weekly visit level store SKU quantities based on recency, seasonality, purchase cyclicity, overstocking, promo and other factors
- Both local and global SKU purchase behavioral patterns are taken into consideration to understand cyclicity, velocity and other trends

07
Product Ranking

- Rank and classify SKUs based on certain performance measures.
- Based on key SKU features, cumulative SKU ranking is determined.
- Based on ranking, SKUs are classified in these categories. Must Have, Good to Have, Other and Poor.

Sales Transformation Journey for

2018

POC – India Smart Order Initiated & Crux Intelligence roll out

- Pilot Dev & Go-Live of **15k stores**
- Test & Learn validation in India market
- AI powered Sales tracking tool (**Crux Intelligence**) roll out to India

2019

Enhancements & Scale

- Added new enhancements basis market feedback
- Scale and **Live on 250K Stores**
- **SO Incentivization Program**

2020

Commercialization of India Smart Order & Pilots in new markets

- Commercialized Smart Order on Azure HDI | **Go-Live on 500K stores**
- Pilot Development for **NA DSD Market & France**
- **Crux Intelligence roll out to PH and Indo**

2021

Launch in SEA markets, Targets 1Mn Stores in FY21

- Pilot SO Live in Vietnam & Philippines - 25k Stores
- India SO scale up to 700k stores
- Distortive schemes Roll out in India

2022

Explore & Launch new Potential Markets

- DMS & Data Hubs roll-out in 20+ markets in MENAP such as Egypt, Gulf, KSA, etc.
- Smart Order roll out in Egypt
- Countywide scaleup of SO in Vietnam and Philippines
- India SO scaled up to 900k stores
- Big bet Roll out in India across 800k stores
- ULB annual target setting framework
- Assisted Sales Executive Insights recommender in India

2023

Further Expansion of Smart Order in MENAP and SEA, and focus on Improvising existing products

- Launch Smart Order in Pakistan, Indonesia
- Integration of competition intelligence with core SO engine for India market
- ULB Target setting Model Improvements

2024

Expansion and Innovations

- Brazil and Argentina pilot SO development
- SO Quantity version 1 launch in India market

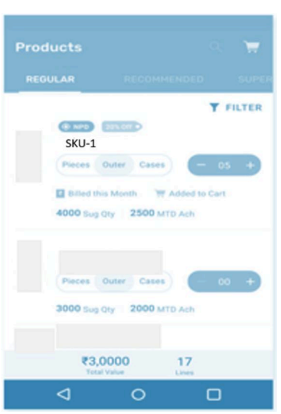
Executive Smart Order Dashboard

For illustrative purpose only

Last Mile Integration of Smart Order Outputs in to SFA Applications

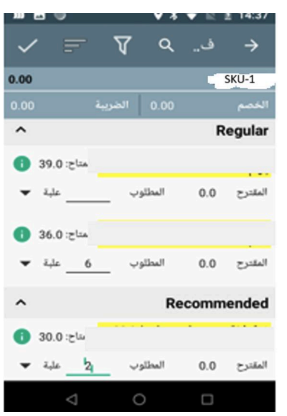
For illustrative purpose only

India



Vietnam

Egypt



Indonesia

What Goes Into The Success Of These Programs?

We believe that AI & Algorithms is just 1/3rd of the success of what drives Smart Order...

DIFFERENTIATOR – NOT a one-time platform deployment

Right Tech and AI Models

- State of the art AI algorithms with domain thinking
- Automated Engineering pipelines, etc.

+

Design to Drive Adoption

- Design changes on SFA for easy consumption
- User Immersions, Adoption tracking & Trainings, etc.

+

Partnership & Continuous Improvement

- Long term journey
- Product Evolution, Adhoc Analysis & Ongoing Support
- Right Engagement model & Partnership

Continuous Evolution Of The Product Is Absolutely Necessary With Changing Market Dynamics...

Our 5-pronged strategy to help evolve current Sales Applications:

Enhanced INSIGHTS Generation

- Field Sales Insights and Adoption Drivers
- Smart Basket
- Smart order Co-Pilot
- Image Recognition Data Integration into SO
- Alternate Market Potential Data

NEW DATA Experimentations

- Distortive Personalized Schemes
- Micro-surveys
- Asset deployment
- Schemes Adoption & Integration
- Sales Value Target Dis-aggregation & Linkage to SO

SMART ORDER ADJACENCY Use Cases

- Improvements in ULS Target Setting models
- Improvements in SO Qty recommendation models
- Improvement in product propensity and product filling models
- Improvement in Cross Sell models

NOVEL AI Algorithms

IMPROVED SFA Design

- Feedback incorporation
- Selling Stories
- Color coding
- Many others.....

Impact Created

As of 2023:

Outlet Adoption to Smart Order	Assortment Growth	SKU Effectiveness	Value Growth	Cross Sell Line Adopted Outlets
61%	**3.3**	**92%**	**15%**	**77%**
vs **24%** in 2019	vs **-1.7** in 2019	vs **71%** in 2019	vs **5%** in 2019	vs **58%** in 2019

Today Smart Order is a scaled product live in **10 markets covering 1.5 Mn Stores**