



Case Studies

A PHARMACEUTICAL MAJOR

Advanced Planning and Scheduling with Replenishment Implementation

Unichem Laboratories

Problem Scope and Deliverables



SOLUTIONS

Demand
Forecasting

Capacity
Planning

Inventory
Planning

Network
Optimisation

Aggregate
Planning

Production
Scheduling

Logistic Planning

Background

Unichem Laboratories is one of the most respected pharmaceutical companies in India that manufactures both Active Pharmaceutical Ingredient (API) and Formulations and is recognized for their high quality and effectiveness.

The project was undertaken to atomization of Unichem Sales & Operations Planning (S&OP) Process using a Supply Chain tool.

Before the implementation of our tool, the entire S&OP process was done using Excel Spreadsheets which meant the following:

- There was no sync between Demand forecasting, Production Planning and Dispatch Plan
- Excel spreadsheet was used for Data Capture, Data Analysis and Data Communication.
- Production Planning and Capacity Planning was done manually using excel spreadsheets
- Dispatch Plan was done manually on basis of average sales as demand for distributor, CA & C&FA level

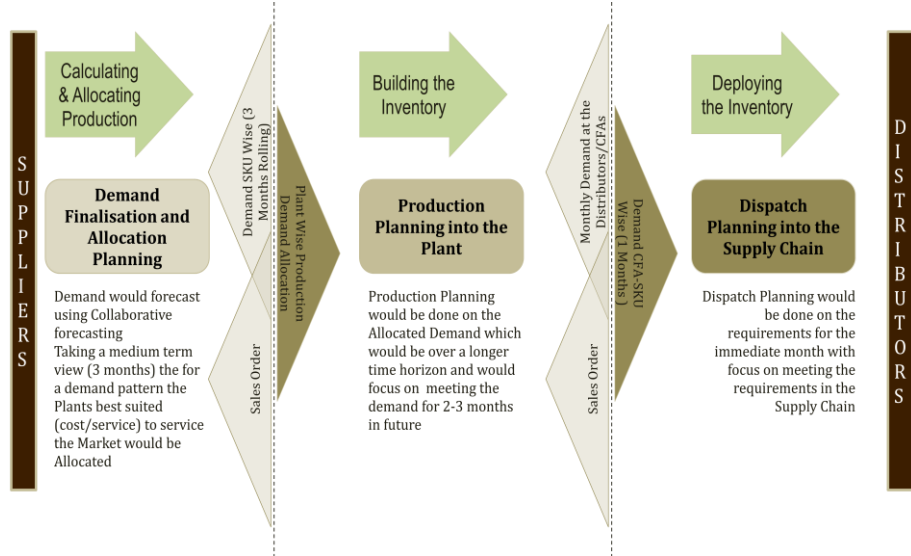
As a result, there were significant challenges with respect to data sanctity and reliability, planning of activities, promises made to customers etc.

Model for automation of the S&OP process:

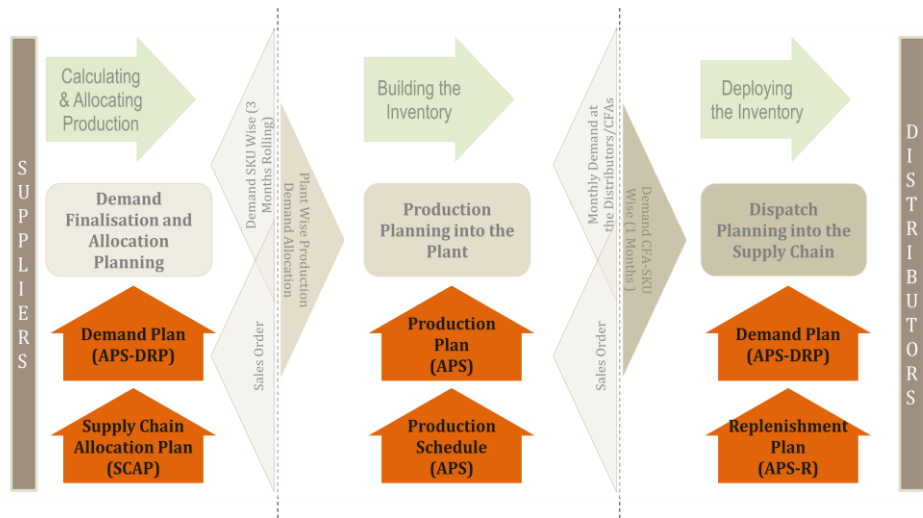
We had proposed a single S&OP tool that would model the S&OP processes and activities to perform the following basic action:

Business Process Details

The Process covered in the overall project is end to end that is from Demand Forecast, Material and Capacity Planning with Finite Scheduling and Replenishment Planning using APS-DR (Advanced Planning and Scheduling with Demand and Replenishment) SCM tool.



Usually companies work on these distinct planning stages without interaction or data / information capture and using simple tools. Our APS-DR tool gives a seamless data capture and intelligent processing that aid in decision making across Sales, Production and Logistics.



Data Collection and Modelling

The inputs to the model include:

- Historical Sales Data
- Supply Chain Link and Masters
- Factory Capacity, Item, Bom and Routing Masters
- Stock and Inventory data
- Parameters for forecasting and dispatch plan
- Rate Master

The model was to run on different modules to sync, end to end automation



of sales and operations.

Demand Forecasting

- Earlier excel based demand forecasting was done by Sales and Marketing team as their Rolling Sales Plan
- This Rolling Sales Plan has no collaboration with demand planning for production planning
- Several Parameters has been considered for forecasting such as average sales, new production, growth factor etc.
- Using APS-DR tool & based on the parameters a demand forecast is generated for three months
- A manual intervention is provided to correct system generated forecast

Production Planning

Production planning module of APS-DR tool is implemented in both API & Formulation plant

- *Demand Planning for Production*

Based on the Finalised Rolling Sales Plan for three months, inventory and WIP, demand planning for production is made available for three months.

Demand planning is corrected every month based on the Rolling Sales Plan.

A manual intervention is provided to check the demand planning as per urgency and seasonality

- *Material & Capacity Planning*

Based on the demand quantity, material requirement and available inventory, raw material purchase requisition is generated

- *Finite Scheduling*

Based on the available capacity of shop floor & inventory manufacturing schedule of semi-finished and finished products is done

Dispatch Planning

- **Supply Chain Network**

Manufacturing Units (Plants) -> Central Warehouse -> Distributor, CA & C&F



- *Dispatch Planning for Distributor, CA & C&F SKU Wise*

Based on the projected sales, inventory & safety stock, demand is generated for Distributors, CA & C&F on SKU wise, Based on SKU wise demand dispatch plan from various mother warehouses to different Distributor, CA & C&F is done twice on monthly basis

A manual intervention is provided to check the dispatch quantity based on the priority and sales history

- *Mother Warehouse Replenishment Planning SKU Wise*

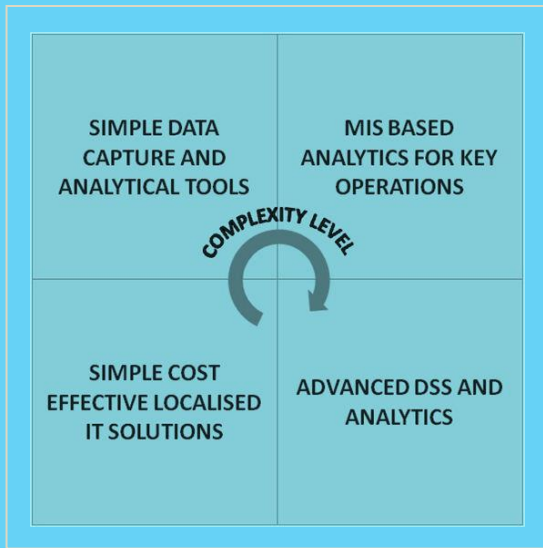
Based on the demand at different distributors, CA & C&F level. A cumulative demand for mother house SKU wise is generated and is to be replenished by Plants or Central Warehouses.

A manual intervention is provided to check the dispatch quantity based on the priority, stock and sales history

Results:

- Automation of the Sales & Operations Planning Process.
- Better Capacity and Material utilization
- Sync between Rolling Sales Plan & Demand Planning
- Sync between Inventory and Dispatch Plan thereby reducing Lost Sales and reducing Inventory Levels

The project also sync all the model through a single tool and end user communication by completely stopping usage of excel spreadsheet for S&OP



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Indus Momentus Business Solutions (IMBS) focuses on the Technology Enablement of the Sales and Operations Planning process. IMBS works with Partners as Solutions Service Integrator, offering Business Analytics tools and solutions across the entire Sales and Operations process.