ALBEA Demand Driven Case study

Demand Driven World 2018

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ALBEA
ALBEA is at the heart of cosmetics and beauty markets

At a glance

- **WE PROVIDE**
  - Packaging & Solutions

- **WE SERVE**
  - Beauty
  - Personal Care
  & More

- **WE LOVE OUR CUSTOMERS**
  - Heritage & Indie
  - Big & Small
  - Global & Local

- **WE OPERATE**
  - 39 Sites
  in 16 countries

- **WE ARE COMMITTED**
  - Corporate Social Responsibility

- **WE ARE**
  - 15,000 People
  in a Dynamic Ecosystem

- **WE ACHIEVED**
  - $1.5 Billion
  Sales in 2017

- **OUR VISION**
  - We want to be the best company for all our stakeholders
ALBEA is at the heart of cosmetics and beauty markets

We serve the world’s dynamic brands, big and small, local and international
ALBEA is at the heart of cosmetics and beauty markets

We contribute to our customers’ success
ALBÉA is at the heart of cosmetics and beauty markets

We operate 39 facilities in 16 countries: global reach, local presence
Business trends pose a challenge to every actor of the chain

Faster product renewal rate 25% + Higher Demand Volatility > 50%

Shorter Lead Times Up to 1wk + Smaller Lot sizes >
Albéa combines Lean and Demand Driven to build an agile Supply Chain

- These projects give some insight on how to adapt Demand Driven Methods to different business contexts
- ...and shed light on a few challenges to overcome
Focus on Le Tréport, France

*Le Tréport is Albéa’s center of excellence for fragrance and lotion pumps*

- Lead-Time reduction objective
- Pilot on lotion pumps in 2015
- Extension to all lotion and fragrance pumps in 2018
Le Tréport

Manufacturing a pump is not as easy at it seems!

Injection molding
Plastic components

Pump engine assembly
High speed assembly and quality control

Finishing & Tubing
High speed assembly and quality control

Injected parts
- 484 SKU’s

Semi Finished parts
- 62 Lotion engines
- 10 Fine Mist engines

Purchased Items
- 572 SKU’s

Finished parts
- Lotion > 174 SKUs
- Fine Mist > 483 SKUs
Le Tréport

Complete redesign of Lotion production unit according to Lean principles...

BEFORE

...No visible and optimized Flow
Le Tréport

Complete redesign of Lotion production unit according to Lean principles...
Le Tréport

...with Demand Driven MRP to reduce Lead-times further

AFTER

Engines assembly

SP3 / SP2 pumps flow

NEA pumps Flow

Finishing

Injection

...Buffer Positioning based on Demand recurrence
Le Tréport

Staggering results right after go live

- LT from 8 to 3 weeks helped to catch new business
- Inventories reduced by 35% within 6 months
- No more missing components when releasing Work Orders
- Customer Satisfaction from 50-60% to 95%, OTIF up to 98%

CS evolution of NEA pumps

CS evolution of SP3 pumps

1. Delivery vs Required dates
Le Tréport
3 years later: lasting benefits and a few attention points

- Benefits are there:
  - ‘Satisfaction’ is sustained despite ups and downs
  - Inventory level is under control
  - No missing components when releasing work orders

- Lower performance from time to time:
  - Metal Supply
  - Difficulty to anticipate mix and volume changes
Le Tréport

The journey is ongoing to cope with volume growth and change of product mix

Volume growth during last 3 years

Tight metal market

New initiatives to become even more agile

1. Value Stream within Autonomous Production Units
2. Governance of transformation using Multiple A3
3. Cells by type of pump
4. Internal Milk runs to streamline flows
5. VMI for purchased parts using DDMRP (122 SKU)
6. Move from Excel to DDMRP solution
Le Tréport

A new layout for increased agility - with 245 Buffers over the 1200 components used on 2 months demand
Focus on Bottanuco, Italy

Bottanuco is our center of excellence for mascara brushes and bottles

- Lead-Time reduction imperative from major customer
- Pilot on customer’s ‘A-class’ parts throughout 2018
Bottanuco

Workshop layout: injection, surface treatment, decoration and assembly operations
**Bottanuco**

*Lead-Time reduction journey combining Demand Driven MRP with SMED and capacity increase*

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- **DDMRP simulation**
- **Go live on purchased parts**
- **Go live on Semi Finished parts**

- **IM presses +10%**
- **Metallization +70%**
- **Additional shifts**
- **New quality org. impacting change over time**
- **+ Continuous improvement (SMED)**

**Demand Driven World 2018**

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**Bottanuco**

*From 11 weeks to 5 weeks average lead-time, while maintaining service and inventory level*

**Lead-time evolution on project scope**

- **nominal LT 11 weeks**
  - **LT prior to go live**
    - **14 weeks**
  - **+ 3 weeks due to saturation**
  - **- 2 weeks with buffers on procured parts**
  - **- 2 weeks Due to saturation reduction**
  - **- 4 to 6 weeks With buffers on semi-finished parts**
  - **After DDMRP Step 2**
    - **4 to 6 weeks**
  - **After capacity alignment with demand (w/c allocation + capacity investment)**
    - **10 weeks**
  - **Today**
    - **Demand Driven Purchased parts**
    - **Align capacity with demand**
    - **Demand Driven Semi-finished**
Bottanuco

A few challenges to overcome to improve performance further

Demand variability on semi-finished parts can be very high

Positioning buffers downstream on finished parts will reduce variability, cost vs. benefits allowing

Running buffered and non buffered parts on the same work centers is not easy

Reviewing work center allocation and enlarging the scope of products will make this issue less acute

Portfolio renewal may challenge the model

Strengthening Demand Driven S&OP routine is becoming even more necessary
Focus on Argonne, France

Argonne is our center of excellence for cosmetic tubes

- High expectations from both Albéa and a major customer
- Vendor Managed Inventory on hair dye product range
Argonne

A common challenge in a context of close cooperation with customer

Albéa Argonne

Laminate tubes to replace aluminum tubes

Flexible and dedicated productions lines

Customer

From 3 to 1 week lead-time
No shortages at customer’s filling lines
Lower inventory liability
100% Customer Satisfaction
Argonne

Several initiatives, of which Demand Driven MRP

From 3 to 1 week lead-time
No shortages at customer’s filling lines
Lower inventory liability
100% Customer Satisfaction

Albéa Argonne

Customer

DDMRP  SMED  Quality

Logistics contract on buffer sizing
EDI
Weekly to daily order frequency
Argonne

DDMRP as a way to synchronize tube manufacturing with tube filling

Hair Dye - DDMRP

- Securing Printing web process Campaign once each 2 weeks
- Securing Tube The 2 ais's are currently enough flexible
- No Stock @ Customer Facility
- Call off day D Delivery D+1
- Buffers sized on 2 future months demand - calculated on daily basis

- 140 buffers
- Customer commitment decrease vs. previous contract
- 1Wk LT – 100% Customer Satisfaction
Argonne

Lead-Time reduction journey combining Demand Driven MRP with SMED and capacity flexibility

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In parallel, further lead-time reduction through:

- SMED to reduce setup time on Tube lines
- Quicker batch quality release (Quality + Production + Customer)
System wise good partnership with Bevolta

To support its initiatives, Albéa has chosen a DDMRP package from our excel based application

- Specific developments for Albéa
  - Tag for demand recurrence ➔ this is the “heart” of our buffer positioning analysis and validation system
  - New feature to calculate Projected Net flow in future ➔ To give visibility of DDMRP load beyond 1LT ➔ 1-2 Cumulative LT
Lessons from Albéa’s Demand Driven journey

- A **lean layout** eases buffer positioning as it allows simpler flows and dedicated work centers for buffered parts.

- But is it not a prerequisite: starting a DDMRP pilot is perfectly fine and gives good results.

- Applying Lean principles such as **SMED** is a sure way to improve the model further.

- DDMRP can be the cornerstone of an **extended supply chain** with customers and suppliers.

- In a volatile environment, **adapting the model regularly is necessary** to ensure lasting results (Demand Driven S$t$OP and Adaptive S$t$OP).
Challenges to overcome

- DDMRP sounds simple, but fully understanding the method requires time and commitment
  - Invest in initial training of sponsors, project leaders, team members, etc. and stay committed!

- Onboarding Executives takes more than case studies, you need to deliver
  - Find an opportunity to pilot and deliver results

- Even delivering may not be sufficient to ensure lasting success
  - Make sure to create a guiding coalition of executives and operational teams

- Sooner than later a DDMRP application will be needed
  - Plan for it: onboard IT, choose a package and work on integration with your ERP

- Shorter Lead-Time means shorter Planning Horizon (4/5 Days for injection and Assembly)
  - Make sure to get visibility on future load, including for buffered parts