Kerry North America S&OP Implementation
SUMMARY

• Kerry
• Starting Point / Challenges
• Defining S&OP for Kerry
• Laying out the process & structure
• Current Status / focus areas
• Examples of information presented at executive review
• Questions
Kerry - The Taste & Nutrition Co.

Our heritage, knowledge and expertise enable us to deliver better taste, health and wellbeing globally.

- Food & Beverage Heritage
- Insights & Innovation
- Science & Technology
- Applications & Culinary Excellence
- Unmatched Taste & Nutrition Solutions
Our Global Technology Innovation Centres bring the best of us to our customers, serving as Customer Centres for collaborative innovation.

Kerry’s North American Technology and Innovation Centre is located in Beloit, WI.

Located in Naas, Ireland the Global Technology and Innovation Centre opened in May 2015.

The Asia Pacific Technology and Innovation Centre is located in Singapore.
Kerry in Latin America

San Juan del Río, QRO
Seasonings, tomato kosher, Chocolate products and Coffee, Naturetones, Non dairy Creamers, Sugar Substitute, dehydrated fruits, honey powder, Yoghurt powder, Whirlfloc

Irapuato, GTO.
Cheese & Dairy Flavors; Dairy Proteins; Dry Cheese & Dairy; dairy Creamers, Fermented Ingredients; Lipid Powders; Emulsifiers, Enzimatics, culinary sauces Shortening powders, Cheese cubes, Baked and Dough Products, Clouding agents, clusters, panning.

Pachuca, HGO.
Beverage Flavors, Sweet Flavors, Flavored Syrups, Savory Flavors

Guatemala City, Guatemala
Meat seasonings, Savory seasonings Condiments

Bogotá, Colombia
San Juan del Río, QRO
Seasonings, tomato kosher, Chocolate products and Coffee, Naturetones, Non dairy Creamers, Sugar Substitute, dehydrated fruits, honey powder, Yoghurt powder, Whirlfloc

Santiago, Chile
Meat seasonings, Savory seasonings Condiments

Buenos Aires, Argentina
Cheese & Dairy Flavors; Dairy Proteins; Dry Cheese & Dairy; Fermented Ingredients; Lipid Powders; Emulsifiers; Meat Systems, Confectionery, Bakery

San José, Costa Rica
Meat seasonings, Savory seasonings Condiments

Panamá, City, Panamá
Meat seasonings, Savory seasonings Condiments

Manaus, AM.
Beverages flavours

Três Corações, MG
Cheese & Dairy Flavors; Dairy Proteins; Dry Cheese & Dairy, Fermented Ingredients; Lipid Powders; Emulsifiers; Meat Systems, Confectionery, Bakery

Cotia, SP
Sauces & Condiments, Packaging Capabilities

Barueri, SP
Flavours, Natural Flavours, Concentrated Citrics Oils

Campinas, S.P.
Confections, Sweet coated products, chocolate/compound products, flavor & color particulates

* Offices
All Kerry Technologies
Global Credibility

Quoted on the London & Dublin Stock Exchanges

Corporate headquarters
- Tralee, Ireland

2016 Revenue

€6.1 BN Kerry Group Global Revenue

- 23k Employees
- 800+ Scientists
- 140+ Sales to Countries
- 130+ Production Facilities
- 15k+ Products
- 28 Countries of Operation
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Starting point

• Initial State
  – No formal Forecasting process
  – No standard capacity planning
  – Decisions based on history
  – Functional silos
  – Competing objectives
  – Reacting / Expediting oriented
  – Significant overtime/idle time
  – Quick scale up/scale down at co-manufacturers
  – Aging inventory
  – Low forecast accuracy
  – Misalignment
Initial Failures

• “Text book” S&OP process roll out as a supply chain initiative.
• Lack of standard data and processes
• Lack of persistence
• Organizational silos
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We had to define S&OP for our organization by starting with what it is NOT.

- It is not something one person can do
- It is not a software
- It is not an immediate fix
- It is not easy
- It is not a “cookie cutter” solution
- It is not a supply chain initiative...
What is S&OP to Kerry?

- S&OP is a regular, reoccurring conversation around demand, ability to supply that demand and plans to overcome any obstacles in the way.
- Insert flexibility in the process
- Cater to your organization
- Use what you have
  - Technology
  - Resources
- Refine
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Sales & Operations Planning: The Cycle

- Demand
- Supply
- Executive Review
- Balance
Demand

- Goal
  - Gain consensus on the demand for the business

- Who?
  - Demand Planners, Sales team, Account Managers, Corporate Supply Chain, Commercialization Manager, finance, marketing

- KPI’s
  - Forecast Accuracy (Data Source)
  - Forecast Bias (Data Source)

- Output
  - Consensus Demand Plan
Goal
- Strategy as to how we deliver demand

Who?
- Corporate Supply Chain, Plant Supply Chain, Plant Accountant, Master Scheduler

Inputs
- Demand Plan
- Inventory

KPI’s
- On Time and In full to Request (Data Source)
- On Time and in Full to Promise (Data Source)
- Fill Rate (Data Source)
- Schedule Attainment (Data Source)
- Aged Inventory (Data Source)
- Inventory Days of Supply (Data Source)

Outputs
- Recommendations to overcome any constraints
- Key Risk in the plan
- Projected inventory
- Escalation points
Partnership or Demand / Supply Balancing

– Goal
  • Resolve any imbalance between demand / supply

– Who?
  • Sales, Plant operations, demand planning, finance, central supply chain, plant supply chain,

– Inputs
  • Demand Plan
  • Supply Plan
  • Escalation points requiring collaboration / verification from sales, demand planners, etc.

– KPI’s
  • Same as Demand / Supply

– Outputs
  • Sales & Operations Plan
  • Any key business decisions that need to be escalated to the executive team
Executive Review

– Who?
  • Business President, Business VP/GM’s, VP Operations, Quality Director, RDA Director, SC Director, Sr. Ops Controller, Finance Director, Optional : CEO, CFO, VP Supply Chain, VP Sales

– Inputs
  • Business performance – Presentation of KPI’s and commentary of drivers
  • High level review of demand assumptions
  • High level review of supply plan
  • Escalation points needing management decision

– Goal
  • Keep management team in the loop on all moving parts of the business
  • Sign off on any capex, impacts to KPI’s as a result of the plan
    – IE:
      » Approvals for inventory builds that may not be aligned to targets
      » Approvals to take service hits if we need to prioritize
  • Decision on escalation issues

– Present State
  • Partial Deployment D&C (85%), Sweet (100%)

– Outputs
  • Approved S&OP plan with key actions / decisions on escalation points
S&OP Structure – What is needed to be successful?

- Executive / Leadership Support
- Demand Planning
- Business Strategy
- Technology
- Supply Planning
- Process
- People & Training
- Data
- Executive / Leadership Support
Bad Data

USE THE CRS DATABASE TO SIZE THE MARKET. THAT DATA IS WRONG.

THEN USE THE SIBS DATABASE. THAT DATA IS ALSO WRONG.

CAN YOU AVERAGE THEM? SURE. I CAN MULTIPLY THEM TOO.
People

I THOUGHT YOU’D DO IT!!
Process – Task Related

- No Standardization = Inconsistent results
- Standardization = People using standard approach to get results
Common Mistake
Supply Planning

Demand or Demand Forecast → Planning

Production Schedule → Purchasing Schedule
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Sweet & Cereal Technology Strategy

• Start with constrained work center
  – Constantly staffing up/down, expediting
• Layout demand view for 12+ months
  – What do we think we are going to sell?
  – Who do we think we will sell it to?
  – When do we think we will sell it?
• Capacity based on that plan
• High level supply plan to support demand, level load work center
• Actions and next steps
• Repeat
• Success breeds success…
Dairy & Culinary

• Choose a technology that crosses multiple facilities
  – Spray drying
    • Dairy, Culinary, Flavors, and more...

• Needed to be a value added process to all businesses
  – 7 plants
  – Complex capacity management

• Had to be flexible since all components of S&OP were not available
  – No sales plan at a technology level

• Resourced appropriately
  – Assigned owners
  – Filled open roles, created some
Current State

• **Used in 2017 Budget**
  – Sales, Staffing, Plant Expense, Capacity, Capital, Inventory Strategy

• **Different approaches**
  – By Technology – D&C
    • Dry Blend
    • Spray Dry
  – By Work center – Sweet & Cereal
    • Fully implemented as of Q3 - 2016

• **Regular cycle**
  – Different technologies don’t need to be aligned, as long as the cycle happens each month
Next Steps

Continued focus on:

People

Process

Technology
Focus - People

- Executive support

- Get the right people in the right roles
  - Demand Planners
  - Master Schedulers
  - Materials Managers

- Proper training
  - Focus on plant level supply chain teams
  - Cascading of objectives cross-functionally
Focus - Process

• **Data**
  – Master data accuracy
  – Utilization of standard reporting for KPI’s – one version of the truth
  – Implementation of standard processes
    • Supply planning

• **Customized/flexible approach**
  – Implement at levels appropriate to drive confidence in process (individual work center, technology, plant or business unit)

• **Persistence / Cadence**
Focus – Process Demand Planning

Consensus forecasting is about ensuring we are all working off the same set of assumptions.
Focus - Technology

• Execution
  – Scheduling / Planning

• Strategy
  – S&OP

• Analytics
  – Real time
  – Intuitive / visual
  – Prescriptive / Predictive
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### Capacity Analysis – RAG

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<th>0 - 3 months</th>
<th>4 - 6 months</th>
<th>6 - 12 months</th>
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**Current State**

**Desired State**

**Tasks to meet Desired State**
• Current capacity based on 20/5 work center
  • Will work on some Saturdays if needed
• Downtime on work center for installation of new equipment
  • Rate is expected to be at XXXLBS/OLH after new XXX installation
• Inventory prebuild plan is in place prior to shutdown

• Planned Downtime Example
• Example of New Business
## Consolidated Capacity Model

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<tr>
<td>Planned Capacity</td>
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### Historical and Forecasted Demand

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### Opportunities

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<td>Actual Capacity Utilization</td>
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<tr>
<td>Planned Capacity Utilization With Opportunities</td>
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<tr>
<td>Planned Capacity Days</td>
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