Stream Three: Operations Management (Session 1) Thursday

Supply Chain Transformation: Delivering financial benefits and increased capabilities in a globalised manufacturer

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Supply Chain Transformation:
Delivering financial benefits and increased capabilities in a globalised manufacturer

Nuplex & Supply Chain Innovation

From Business Case to Benefits Realisation

8 Critical Success Factors
Highly complex manufacturing environment

<table>
<thead>
<tr>
<th>BUSINESS UNIT</th>
<th>ACTIVITY</th>
<th>LOCATION</th>
<th>MARKETS &amp; END PRODUCTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>COATING RESINS</td>
<td>Manufactures resins used in architectural, industrial &amp; protective coatings.</td>
<td>All 4 regions - ANZ, Asia, EMEA (Europe, Middle East &amp; Africa), Americas</td>
<td>Markets; building &amp; construction, automotive, vehicle refinish, transport, infrastructure, marine &amp; protective, furniture.</td>
</tr>
<tr>
<td>COMPOSITE RESINS</td>
<td>Manufactures resins &amp; coatings used in fibreglass, &amp; distributes products used in fibreglass production.</td>
<td>ANZ &amp; S.E. Asia</td>
<td>Markets; building &amp; construction, manufacturing. End products; marine &amp; leisure craft, transport.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Markets; residential, commercial &amp; industrial building &amp; construction.</td>
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</tbody>
</table>

1950s & 60s - From Flooring To Resins Production
1970s - Broadening The Product Range
1980s & 1990s - Building A Leading Position In Australia
2000s - Moving Onto The Global Stage
2010s - Dedicated Global Resins Business
2015 - Expanding In Emerging Markets & Supply Chain Transformation
2016 – Merged with Allnex to become one of the
Competitive Advantage for Nuplex exists in its Chemistry and R&D...
Supply chain innovation...

From cost centre  Cost competitive advantage  Customer competitive advantage

Taylorism  The Ford Assembly Line  Electronic Data Exchange  Universal Product Code  Integrated Business Planning


Ocean Shipping Container  MRP  DRP  ERP  Transport Load Consolidation  FedEx Tracking System  P&G Continuous Replenishment  Walmart X-Dock  Amazon Order and Deliver

Dell Direct Orders  Toyota Production System  RFID Track & Trace  Same Day Delivery  P2P Networks  Car Drops  Big Data  Demand Sensing  Predictive Analytics  Omnichannel Retail  Automation  Drones  Pickup Points  3D Printing

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It's all about the Customer…

Customer competitive advantage

Customer Experience

Sustainable Customer Competitive Advantage in Reliability

+1 Over-deliver

Customer Expectations

Customer Value Proposition

Availability

Responsive - ness

Range

Stocking Strategy

-2 Under-deliver

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6
Balancing Responsibilities

Supply Chain Responsibilities were embedded in Commercial and Production

Commercial Team
- Sales
- Account Management
- Marketing
- Customer Service
- Product Management
- New Product Development
- Warehouses & Transport Providers
- Air Freight
- Inventory
- Export Management
- Warehouse Transfers
- Inbound / Outbound Freight
- Replenishment

Production Team
- Production Planning
- Picking / Put-away
- Despatch
- Inventory Control
- Stock-takes
- Site Management
- Production
- Re-blending (TBB)
- Maintenance of Machinery
- Quality Controls

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In 2014, this changed... Nuplex’s structure introduced a dedicated Supply Chain team to tackle specific tasks related to this subject area.

Diagram:
- Warehouses & Transport Providers
  - Inventory
  - Air Freight
  - Export Management
  - Inbound Freight
  - Outbound Freight
  - Warehouse Transfers
  - Picking / Put-away
  - Despatch
  - Inventory Control
  - Replenishment
  - Production Planning
  - Supply Chain Team
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Nuplex Project Overview – Timeline of milestones and activities

February 2014

Customer feedback & DIFOT data

Highlighted the need to improve customer experience

May 2014

Attempted tactical initiatives...

October 2014

GRA engaged to improve Supply Chain performance

A Project was commissioned in 2 phases:
- Phase 1: Development of a business case
- Phase 2: Implementation

December 2014

Diagnostic confirmed significant gap between current supply chain performance & industry

February 2015

Business Case proposal approved by the Board

The transformation program specifically targeted inventory optimisation as well as transport cost and warehouse cost savings
Quantified Benefits of Program:
1. Bottom up build
2. External benchmarks and;
3. Transformation benchmarks

Program of works design to deliver targeted benefits

Large scale supply chain transformation program

A view on current state vs. desired state

A fully costed program of works

A view on risks to be managed throughout the program

Qualitative Benefits of Program
Supply Chain Transformation Program was born...

To build a supply chain that is...

- Demand-driven
- Time-phased (MRP)
- Integrated

• All with a view to **increase our service to customers**, ensuring we have the right product, in the right place at the right time – **ensuring we are** sustainably profitable as a business.
## Supply Chain Transformation Program

Large scale program with aggressive benefit targets from ‘quick wins’ in transport and inventory reduction

**February 2015 –**
- This business case included the benefits, costs, an NPV analysis, the detailed program design and timelines for the work streams listed below.

<table>
<thead>
<tr>
<th>Inventory Reduction</th>
<th>Transport cost savings</th>
<th>Warehouse cost savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Inventory Reduction</td>
<td>□ Reduction in Air freight</td>
<td>□ Targeted 3PL Reduction</td>
</tr>
<tr>
<td>□ Carrying cost savings</td>
<td>□ Reduction in container detention</td>
<td>□ Reduction in Overtime expense</td>
</tr>
<tr>
<td></td>
<td>□ Consolidation of packaged freight – daily and weekly</td>
<td>□ Weighbridge</td>
</tr>
<tr>
<td></td>
<td>□ Increased utilisation of bulk freight</td>
<td>□ Dedicated Trailers</td>
</tr>
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</table>

**Benefits linked to operational excellence strategy**

*From Annual Report*
Supply Chain Transformation Program

- **Six Streams of Work** to be implemented over a 18 month period

  1. Foundation Activities
  2. Demand Planning
  3. Materials Requirements Planning
  4. Transport Management
  5. Warehousing (Phase 1)
  6. Decision-making frameworks (S&OP)

A competitive advantage for Nuplex ANZ

- Informed management & decision making
- Utilised system capability - Exception management
- Transparency across functional groups
- Global centre of supply chain excellence
- Enabler to operational excellence

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Supply Chain Transformation Program ...

Given the sense of urgency it was an aggressive timeline and roll-out, often being described as a staged ‘big bang’ approach:

<table>
<thead>
<tr>
<th>Stream</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
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<tbody>
<tr>
<td>a. Supply Chain Diagnostic</td>
<td>Oct Nov</td>
<td>May Jun</td>
<td>Nov Dec</td>
</tr>
<tr>
<td>b. Business Case development</td>
<td></td>
<td>Jun Aug</td>
<td>Dec Jan</td>
</tr>
<tr>
<td>c. Approval, Resourcing &amp; PMO Establishment</td>
<td></td>
<td>Jan Feb</td>
<td>Mar Apr</td>
</tr>
<tr>
<td>1. Foundations Stream</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Demand Planning Stream</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Materials Requirements Planning</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Transport Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Warehousing</td>
<td></td>
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</tbody>
</table>

Key Elements:

A sophisticated SKUL based forecast drives the supply chain and focuses all activities on customer demand.

Inventory levels are set to achieve desired customer service levels at optimal cost.

A management process (S&OP) controls trade-offs and 'operationalizes strategy'. Supported by appropriate planning tools and analysis.

Manufacturing and procurement activities are all aligned to the single agreed forecast signal (via MRP).

Physical logistics activities (warehousing & transport) can be planned and made more efficient.
Supply Chain Transformation Program paid for itself within 18 months and led to the following:

✓ Service level benefits across all business groups
✓ Nuplex winning Supplier of the Year from one of its largest customers in 2016
✓ Significant operating savings
✓ Improved working capital through reduction in inventory (particularly slow moving lines)
The ‘Real’ Streams of Work

A significant amount of work in the program was focussed on enabling the core work streams.

DEMAND PLANNING
MATERIALS REQUIREMENTS PLANNING
TRANSPORT MANAGEMENT
WAREHOUSING
SALES & OPERATIONS PLANNING

Supply Chain Diagnostic
Business Case development
Resourcing & PMO Establishment
Program Management
Organisational Change Management
FOUNDATIONS
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An Inside Look Into Supply Chain Transformation Program....

As this was a holistic program of works, there was significant degrees of scale, risk and complexity involved...
Start by understanding the need...

- Invest in a diagnostic and develop a business case. Take the emotion out and be objective.

Diagnostic – engage independent/external expertise

Build the Business Case – determine the cost/benefit of the project

Engaged external party to perform diagnostic, benchmark and assist with business case development
Communicate the vision and gain executive buy-in (air-support)

- Seek feedback on the vision, refine and create a sense of urgency to act

Refine the vision and align to business direction

Establish executive buy-in

Presented business case to board and refined for approval, held regularly workshops at director level
Choose the right partners

- Know your teams strengths and where they will need help. Ensure every team member has a role.

Engage external expertise  
Consulting support  
IT Solutions
Set expectations in terms of project governance

- Establish a Project Management Office to objectively monitor and support work streams, work through issues/risk registers and who are accountable for on-time/on-budget delivery.

Establish clear discipline and transparency in project management

Project Plan

Issues/Risks – escalate where required

Project Management Office created, roles clearly defined, Program structure Stream Leads → PMO → Steering Committee
Project Plan signed off prior to commencement
Establish accountability in outcomes

- Structure the work streams so that ownership of outcomes is clear and transparent...

Stream leads to own outcome
Track progress weekly to plan
Provide dedicated support where required (e.g. Consulting partner)

Stream Leads developed project charter and were involved from project planning stage. Tough calls were made early re: resource management.
Set up the structure and systems to manage the change

- Take the organisation on the change journey. Create awareness, build willingness and train ability to support the change.

Communicate the vision, project plan and support required
Establish change champions
Build in structured and regular communications
Invest in training as required
Celebrate key milestones and project wins

- Remember the project’s success is dependent on the team’s success, so do everything one can to maintain motivation and prevent project fatigue.

Establish a quick-win initiative program early on
Agree tracking method / monitor progress
Celebrate successes within the team (go-live dates, savings, etc.)
Communicate benefits to come

Designed a benefits tracker to measure progress against business case, share success of the project team via communications (e.g. newsletter). Social events on milestones.
Be prepared for the unexpected... and be flexible where required...

- The operating environment can change during large scale projects, keep this in mind and always look to move forward rather than resist change.

Look to steering committee for guidance during uncertain times
Stay true to the vision
Adapt to add value
Questions?