Managing Master Data in the Food Supply Chain

Inaccurate or bad data adds risk and cost

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Content

• The value of trusted product data
• The master data problem
• Global Data Synchronisation as an integral part of the overall solution to the master data problem
• A word about data quality
• Product classification in the Food Supply Chain & the role of the GS1 Global Product Classification (GPC) standard
The value of trusted product data
Data needs to be trusted to be used
When trusted data is used

• Greater efficiencies
• Lower costs
• Improved productivity
Trusted data improves processes

- Global Location Numbers (GLNs), GS1 EDI, and the unique Global Trade Item Number (GTIN) to identify products supports a **fully automated** order-to-cash process

- **Accurate product data** (weight, dimensions and packaging) exchanged through GS1 Global Data Synchronisation Network saves valuable space
Trusted data means better collaboration and lowers costs

• Publishing product catalogues only once in the **GS1 Global Data Synchronisation Network (GDSN)** instead of using multiple formats, improves **accuracy of data** and **collaboration**

**Collaboration**

**Lower costs**
‘Trusted data’

• Suppliers collect, cleanse and manage their product data before publishing in the GDSN.

• Suppliers work only with their chosen certified GS1 data pool.

• Retailers trust this data and use it to deliver value for all.

“Data is not ‘trusted’ until you start transacting with it!”
Lessons along the way

1. **Data is a powerful asset** for your business.
2. **Quality of the product data** → quality of the product itself and quality of the manufacturer.
3. **Automate the order-to-cash process** for better product recall, inventory management and asset tracking.
4. **Collaborate with suppliers** for mutual benefits. Sharing trusted data → shared responsibilities and shared benefits.
5. **Attention to details** by breaking it up into manageable pieces and using a cross-functional governance body.
6. **Communication** with internal stakeholders, executives and suppliers. Share improvements and progress.
7. **Remember the Benefits** → time, cost and productivity.
8. **Take a long-term approach with a sense of urgency** - determination and patience are key when changing systems and how people work.
The master data problem
The master data problem

Every company has a database filled with master data about the products they make, sell, or buy.

But when one company needs to change any bit of information in their database or add a new item, another database becomes outdated!
What happened to “Master Data”

- Systems have evolved in “silos” over the last 40 years
- The link between “process” and data was broken (remains so in many cases)
- Numerous efforts to “unify” data and process, or views of data – one use at a time
- **So what?** Business success still happened anyway
- Only when the costs increase, profits fall, does the real impact of bad data become known

Source origin: Gartner
Reality today!
The Australian data crunch report puts a cost to the problem!

By conservative estimates, more than $100 million in potential savings can be achieved by addressing product data quality issues by making only minor adjustments to existing processes.

Synchronization—

The Next Generation of Business Partnering

How Leading Companies are Delivering Actual Results

Figure A — Summary of Benefits

<table>
<thead>
<tr>
<th>Value Impact</th>
<th>Functional Impact</th>
<th>Performance Metrics (Process Area)</th>
<th>Source Of Benefits 1</th>
<th>% Improvement Over Current State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase Profitability</td>
<td>Value Chain</td>
<td>Reduced Inbound And Outbound Freight Costs (Transportation)</td>
<td>Retailer 2</td>
<td>6.5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improved Productivity Within Distribution Network (Distribution)</td>
<td></td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td>Administration</td>
<td>Improved DSD Receiving Capabilities (Store Operations)</td>
<td></td>
<td>9%</td>
</tr>
<tr>
<td></td>
<td>Reduce Costs</td>
<td>Improved Productivity Within Order And Item Administration (Order Administration)</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>(Improve Operations)</td>
<td>Reduced Out-Of Period Adjustments And Reconciliation Of Invoice And Coupon Discrepancies (Accounting Administration)</td>
<td></td>
<td>8%</td>
</tr>
<tr>
<td></td>
<td>Increase Revenue</td>
<td>New Product Introduction</td>
<td></td>
<td>Not Available</td>
</tr>
<tr>
<td></td>
<td>(Grow Business)</td>
<td>Reduced Time From Item Entry To Shelf (Speed To Market)</td>
<td></td>
<td>23%</td>
</tr>
<tr>
<td></td>
<td>Customer Service</td>
<td>Reduced Instances Of Coupon Rejections At Store Check-Out (Customer Service)</td>
<td></td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>Sales</td>
<td>Reduced Time Spent Addressing Item Data Issues (Sales)</td>
<td></td>
<td>Not Available</td>
</tr>
</tbody>
</table>

The Global Language of Business
Without Data Synchronization...

Catalog Disparities
Incorrect Item Data: 30%
Costs: $60-$80/error to correct
Time Lost: 25 minutes/SKU/year

Invoice Errors
60% invoices with errors, of which
43% have deduction costs
To Correct: $40-$400 to reconcile

Lost Business Opportunities
Product Roll-in: About 4 weeks
Lost Sales: 3.5% due to
inaccurate data

Source: Supply Chain Management Review May 2005  Synchronization: a cure for bad data. (INNOVATIONS: New ways of thinking about supply chain management)

Link to GDSN cases studies: http://www.gs1.org/standards/gdsn/case-studies
# Order-to-cash before data synchronisation

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Product Info sent</td>
</tr>
<tr>
<td>2.</td>
<td>Product Info entered</td>
</tr>
<tr>
<td>3.</td>
<td>Purchase Order</td>
</tr>
<tr>
<td>4.</td>
<td>Query Order Errors</td>
</tr>
<tr>
<td>5.</td>
<td>Adjusted Purchase Order</td>
</tr>
<tr>
<td>6.</td>
<td>Despatch Advice</td>
</tr>
<tr>
<td>7.</td>
<td>Goods Delivered</td>
</tr>
<tr>
<td>8.</td>
<td>Query Delivery Errors / Claim for credit</td>
</tr>
<tr>
<td>9.</td>
<td>Return Incorrect Goods</td>
</tr>
<tr>
<td>10.</td>
<td>Adjusted Delivery</td>
</tr>
<tr>
<td>11.</td>
<td>Delayed Settlement</td>
</tr>
</tbody>
</table>

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The Global Language of Business
What information could be standardised?

Product Master Data:
• unique and unambiguous identifiers
• harmonised descriptions
• supporting regulatory requirements implementation (e.g. EC 1169)
• facilitating exchange of logistics information

Purchasing Information:
• Shipping locations
• Logistics identifiers
• Pricing information
Global Data Synchronisation as an integral part of the overall solution to the master data problem
GDSN for the food supply chain vision

All product information for every item is current, correct, and available via a single globally-accessible network.
How the GS1 Global Data Synchronisation Network works

1. Load Data
2. Register Data
3. Subscription Request
4. Publish Data
5. Recipient Confirmation
Order-to-cash after data synchronisation

1. Populates
2. Publishes
3. Purchase Order
4. Query Order Errors
5. Adjusted Purchase Order
6. Despatch Advice
7. Goods Delivered
8. Query Delivery Errors / Claim for credit
9. Return Incorrect Goods
10. Adjusted Delivery
11. Delayed Settlement
A word about data quality
Without accurate data, Global Data Synchronisation only enables the rapid, seamless exchange... of bad data!
What is data quality?

*Operational - Dimensions*

- **Complete**
  - Is data missing?

- **Consistent**
  - Is data consistent across systems for the same field? (zip code - 5 or 9)?

- **Accurate & Timely**
  - Is data precise, correct, and current?

- **Standards Based**
  - Have formatting rules and global standards been applied?

- **Logical**
  - Is data valid or conflicting across data sets? (Does L x W x H = Cube?)

- **Integrated**
  - Are there appropriate data linkages between systems?

- **Unique**
  - Are there unnecessary representations of the same data?

*Without enterprise-level controls on data, the information generated will not provide reliable support for business decisions.*
What data quality is not

- DQ is not a tactical “IT task”
- DQ is not a one-time solution
- DQ is not linear
- DQ is not technology specific
- DQ is not a “thing” – like a program or application - it’s a perception
The data must be fit for the intended purpose

*Data are of high quality "if they are fit for their intended uses in operations, decision making, and planning" (J. M. Juran).*  
Product classification in the Food Supply Chain & the role of the GS1 Global Product Classification (GPC) standard
What is GPC?

- A GS1 controlled Global Product Classification
- Gives buyers and sellers a common language for grouping (or categorizing) products in the same way, everywhere in the world
- Rules-based, four-tier classification system for grouping products: Segment, Family, Class, and Brick (with attributes and attribute values)
- Improves the GDSN data accuracy and integrity, speeds up the supply chain's ability to react to consumer needs, and contributes to breaking down language barriers
GPC Fresh produce status

At this moment:

• Fruits: 14 Classes
  114 Bricks

• Vegetables: 33 Classes
  228 Bricks

• Many attributes and attribute values

And ... Now only maintenance
GPC Horticulture status

At this moment:
- Cut flowers: 59 Bricks
- Cut greens: 41 Bricks
- Live plants: 164 Bricks
- Bouquets: 9 Bricks

- Several attributes and attribute values

Now starting with: Bulbs

To be done:
- Trees and Shrubs
- Seeds
Background:

- United Nations started a project for a Global Sustainability Network: a unique ID for each agricultural producer (GLN)
  
  That is: **who** is the producer of the product/commodity?

- For completeness, the type of product/commodity must be identified (GPC)
  
  That is: **what** is produced?

- A new GPC segment is needed, because:
  
  - Agriculture crops and livestock are different from the products and by-products that are harvested from them
  
  - Cultivated plants and livestock products are different from what you can buy in a retail store or nursery.
GPC: Agriculture status (2)

**Benefits for the industry:**
- Suitable for the Global Sustainability Network
- Suitable for messages UN/CEFACT eCrop and eLab (GS1 Keys)
- Suitable for usage of GPC in GDSN (mainly plant products)

**Project Schedule:**
- **Phase 1:** cultivated crops, classes fibres and latex  
  December 2016
- **Phase 2:** cultivated crops (other classes) and harvested produce  
  June 2017 (tentative)
- **Phase 3:** livestock  
  December 2017 (tentative)
Merci and Thank you

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