

Upstream Integration in Australasia



What's GS1 Upstream Integration?



The market has changed: there are more products available for consumers but also often in smaller quantities. The time between design and delivery to final consumer is expected to be shorter. This puts pressure on the upstream part of the chain and explains the need for integration, more reliability of the information flow and visibility of the physical flow.

This is specifically true in the Fast Moving Consumer Goods (FMCG) sector. The Global Upstream Supply Initiative (GUSI) was formed to address these challenges.

GUSI is the GS1 solution to address the challenges in the integration of the supply chain between manufactures and their suppliers. Upstream Integration is about improving the processes by sharing information and improving visibility of demand, demand changes and inventory. This will increase responsiveness to the manufacturing requirements and ultimately to the final consumers.

How GUSI was created

In 2003, a group of manufacturers of Consumer Packaged Goods and their suppliers decided to define a common way to provide tighter integration of their supply chains. Their objective was to avoid costly and time-consuming IT integration projects with every manufacturer or supplier. At the end of 2004, the Global Commerce Initiative (GCI) initiated a new working group which incorporated the already-active GUSI members. The GUSI Working Group was born. It has developed and maintains the Upstream Integration Model (UIM) – the standardised processes and data interchanges underpinning upstream integration.

Progress with GUSI

GS1 Australia in collaboration with the Australian Food and Grocery Council (AFGC) has lead an active working group comprising of key FMCG manufacturers and their packaging and raw materials suppliers. The aim of this work has been to review the outputs from the GUSI Working Group and determine the scope and implementation approach in Australia. This Initiative is the result of this work and follows the endorsement of GUSI as the basis for Upstream Supply Chain Integration in the Australian FMCG sector

Industry Recommendation

Following the endorsement of GUSI as the standard for Upstream Integration, the Australian and New Zealand FMCG sector encourages GUSI adoption and implementation. To register your company for GUSI please visit www.gs1au.org/registrations/gusi

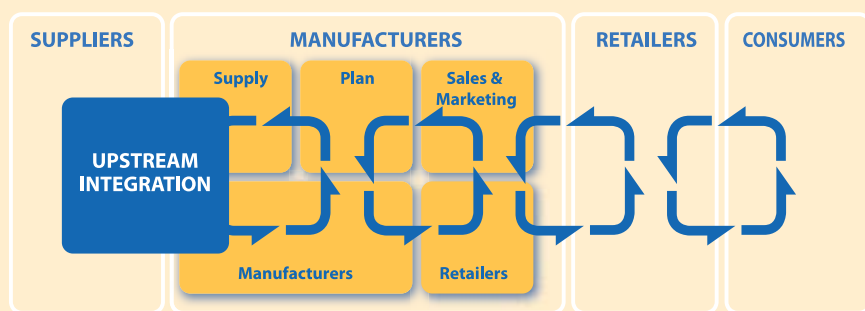


Figure 1: The Upstream Integration (Source: GCI)

The benefits of implementing GS1 Standards in combination with GUSI



Some of the world's largest consumer packaged goods manufacturers and their suppliers have identified significant benefits in using standard solutions.

The companies reported:

- **Faster integration:**
 - up 75% reduction in the time taken to connect to new partners
- **Reduced IT costs:**
 - Set-up: reduced development and training costs (both IT and business staff)
 - Maintenance: due to phasing out of multiple non-standard interfaces
- **Larger scope:**
 - increased ROI by being able to implement across a larger scope of factories and suppliers. GUSI is for large and small companies.

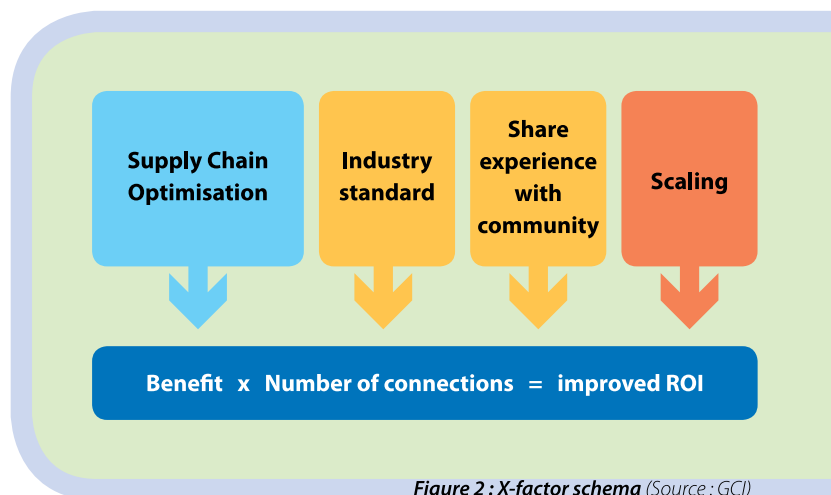


Figure 2 : X-factor schema (Source : GCI)

Therefore, GUSI works as a multiplier to help achieve collaboration benefits in the following areas:

- Service (product availability, lead time)
- Administration (forecasting, order processing, financial settlement, data management)
- Operation (physical receipt, manufacturing, change-over, truck fill-rate,...)
- Financial (working capital, inventory)

The adoption of the Upstream Integration Model allows companies to translate their internal processes and approaches into a common language that all other parties can use. The overall benefits rise as more companies adopt GUSI GS1 standards (Figure 2).

What is available?



A business process model: The Upstream Integration Model

For the Consumer Packaged Goods industry, the GUSI working group supported by GS1 has successfully designed a business model known as the Upstream Integration Model (UIM), and decided to adopt the GS1 XML message standards to exchange information between the trading partners in support of these supply chain processes. The UIM creates a common approach and language for the business processes and data interchanges between manufacturers and their suppliers. It has been designed to cover the following business areas: Procurement, Material forecasting, Inventory management, Dispatch, Receipt, Consumption of Materials and Financial Settlement.

The UIM is a modular solution which covers the “plan to cash” process for the two most used procurement scenarios:

- “Traditional Order Management (TOM)” is the “manufacturer-driven” scenario. The demand line is initiated by the manufacturer and sent to the supplier.
- “Supplier Managed Inventory (SMI)” is the “supplier-driven” scenario. The supplier recommends or establishes the deliveries to the manufacturer based on the manufacturer inventory data and or consumption forecast.



In Australia, one of the aims of the working group was to identify what building blocks would be in-scope for Australia across both TOM and SMI models. The objective was to agree on a subset of the GUSI Model to facilitate implementation by focusing on the areas of greatest business benefit for Australia FMCG manufacturers and their packaging and raw materials suppliers.

As shown in Figure 3, the UIM establishes clear links between each group of business processes and the interchange of the relevant data for these processes.

GS1 Standards

GS1 standards for identification (GTIN, GLN, SSCC, GS1 Logistic Label) support the model. From the eCom Standards only the XML syntax is supported in the exchange of information between the trading partners in support of these supply chain processes.

To cover all upstream transactions, 15 messages have been selected from the GS1 XML standards (Figure 4).

To help implementation of the standards, supporting guidelines are available:

- GTIN allocation rules including specific rules for ingredients, raw materials and packaging,
- UIM implementation guidelines per building block including Message Implementation Guides (MIG's).





Building Blocks	Manufacturer Process	Transactions	Supplier Process
Integration Agreement	Agree on Business Rules	Integration Agreement	Agree on Business Rules
Data Alignment	Maintain Master Data	Item Master Data	Maintain Master Data
Purchasing Conditions	Agree Purchasing Conditions	Purchase Conditions	Agree Purchasing Conditions
Demand & Supply Signals	Report Inventory	Inventory	Report Inventory
	Gather Material Requirements	Purchase Order Net Requirements Consumption Forecast Replenishment Forecast	Plan Production & Supply
	Integrate Information	PO/Net Requirements Confirmation Delivery Plan	Confirm Delivery
Despatch Receipt & Consumption	Await Shipment	Despatch Notification	Pick & Pack goods
	Receipt of Goods	Physical shipment of goods	Shipment
	Check Goods	Receipt Notification	Goods Receipt Notification
	Consume Goods	Consumption Report	Consumption Notification
Financial Settlement	Invoice Receipt	Invoice	Create Invoice
	Create Self-Billing Invoice	Self-Billing Invoice	Invoice Receipt
	Invoice Confirmation	Invoice Confirmation	Invoice Confirmation
	Create Remittance Advice	Remittance Notification	Payment Notification
	Initiate Payment	Physical Payment	Payment Receipt

Figure 3: The UIM (Source: The "UIM" version 3.0)

Supporting GS1 XML Messages for GUSI	
Master Data Alignment	Item Data Notification
Purchase Conditions	Purchase conditions
Demand & Supply Signals	Inventory Activity or Inventory Status Multishipment Order Order Response Goods Requirements Goods Requirements Response Replenishment Request Replenishment Proposal
Despatch, Receipt & Consumption	Despatch Advice Receipt Advice Consumption Report
Financial Settlement	Invoice Invoice Response Settlement

Figure 4: Building blocks and GUSI XML messages association



GS1 documentation and Services

Many manufacturers with their main suppliers have already implemented the UIM and its associated GS1 standards, but now they need the support of GS1 to speed-up the roll-out. In this context GS1 is committed to support companies in their implementation.

To help implementation of the standards, the Australian GUSI project team has developed an Implementation Toolkit containing supporting guidelines, including :

- GUSI overview presentation
- GUSI Implementation Checklist
- GUSI Integration Agreement Guidelines; and
- Technical Fact Sheets.

Also, a range of documents are available from GCI, which include:

- GUSI Business Case Document
- Upstream Integration Model
- Implementation Guidelines
- GS1 XML Messages
- GTIN allocation rules

All of these documents are available from the GS1 Australia web site at: www.gs1au.org/industry/upstream/index.asp



GUSI working group member statements

LION NATHAN, Neil SCHIFF

(Environmental Systems and Project Manager):

"GUSI is an Industry Integration Solution built on common processes and standards that will enable scaled benefits for trading partners."

SUGAR AUSTRALIA, Suzanne POOLEY

(Business Analyst - IT):

"It is important to note that the benefits of the robust GUSI set of standards do not only occur in the upstream, they also flow to the downstream where customers and consumers are also beneficiaries."

UNILEVER, Alison COOK

(Supply Chain Development Manager):

"GUSI is about simplifying the connections of Supply Chain between manufacturers and suppliers. This improves service and reduces cost by eliminating the non-added value- the ultimate basis for sustainable profitable growth."

SIMPLOT AUSTRALIA, Nikhil TANDON

(Key Projects & Indirect Spend Manager):

"The business benefits of Upstream Supply Chain Integration are evident to all supply chain participants. GUSI enables a standards-based approach for integration which enables rapid program expansion and significantly reduces integration costs for Manufactures and Suppliers"



Training Sessions

Two different training sessions (1/2 day per seminar) are offered:

- Introduction to the UIM and to the GS1 XML standard.
- How to understand the GS1 XML message testing. Study of the GS1 XML message structure and case studies.

• **Target audience:**

Manufacturers and suppliers with a business process orientation (first seminar) or a technical orientation (second seminar) and IT services providers.

For a detailed schedule of planned sessions visit our website.

Online Implementation Toolkit

This toolkit has been developed to assist manufactures and their suppliers to efficiently manage an GUSI implementation project. It contains materials to enable:

- 1) Development of a business case and project commitment
- 2) Project planning
- 3) Implementation activities
- 4) Further project assistance via GS1 Australia

The toolkit is available at: www.gs1au.org/industry/upstream

Online Support

For support, please visit GS1 Australia's GUSI website at: www.gs1au.org/industry/Upstream

E-mail address dedicated to the project at GS1 Australia is gusi@gs1au.org

To provide communications means to users for technical support (technical questions on processes, messages implementation) or for messages and labels testing and approval.

GS1 Documentation & Services

GUSI Implementation Assistance

GS1 Professional Services, the implementation arm of GS1 Australia, has assisted Australian members integrate Supply Chain processes with their upstream trading partners.

The *Raw Materials Management Review Service* has been designed to introduce process efficiencies in the management and use of raw materials based on GUSI principles. For further about this service and how GS1 Professional Services on 1300 366 033



The following companies are GUSI supporters in Australasia:

AFGC/GS1 GUSI Work Group Members: Lion Nathan Australia, Simplot Australia, Sugar Australia, Unilever Australasia, AFGC and GS1 Australia.

AFGC/GS1 GUSI Reference Group Members: AMCOR Closures and AMCOR Flexibles, Arnotts, Coca Cola Amatil, Colgate-Palmolive Pty Ltd, Dairy Farmers, Danone, Fonterra, Foodstuffs (South Island) Ltd, Fosters Group, George Weston Foods, HJ Heinz, Kellogg (Aust) Pty Ltd, Kimberly Clark, Lion Nathan, Mars Food Australia, Metcash Trading Ltd, Nestle Australia Ltd, Pemara Labels, Procter & Gamble, PZ Cussons, SCA Hygiene, Scalzo Food Industries, Simplot, Smiths Snackfoods, Sugar Australia, Unilever, Visy Industries, AFGC, GS1 Australia and GS1 New Zealand.

The following companies are GUSI members or supporters (Source: GCI, 2007) Ajinomoto, Alcan Food, Alcan Packaging, Avebe, Augustin, BASF, Coca-Cola Company, Constantia Flexibles Holding GmbH, Crown Europe, Danisco, Darégál, Dow Corning, DSM, Elpack S.A, Euroma, Firmenich, Georgia Pacific Corporation, Givaudan, Groupe Danone, GundLach Verpackung, GundLach Verpackung, H.J. Heinz, Heineken, Henkel, Huhtamaki, International Flavours&Fragrances (IFF), IOI Group, J.M. Smucker Company, Jokey plastic GmbH, Kellogg's, Kimberly-Clark Europe, Kraft Foods, L'Oréal, Mayr-Melnhof Karton GmbH & Co Kg, National Starch, Nestlé, Novozymes, Philips Lighting BV, Procter & Gamble, Quest International, Royal Sens, RPC Bebo Plastic, SaaleMühle Alsleben GmbH, Sara Lee/De, SCA Packaging, Smurfit Kappa Group, Symrise, Tetra Pak International SA, The Dow Chemical Company, Unilever, Van Genechten Packaging, Wart, Zentis.

GCI, the Global Commerce Initiative, is a global organisation that brings manufacturers and retailers together to identify opportunities for improvement, to develop best practices, to endorse global standards and to drive adoption throughout the industry.



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