trading partner
forum
AFGC

SUPPLY CHAIN MASTER DATA INTEGRITY AND ALIGNMENT GUIDE

NEW PRODUCTS OR PRODUCT CHANGES

Retailers in Scope

This Guide has been developed in conjunction with Coles, Metcash and Woolworths as members of the Trading Partner Forum (a forum of the AFGC).

Whilst much of the content will be applicable for use with other retailers in Australia, readers should check with retailers other than Coles, Metcash and Woolworths in relation to the content herein.

coles Metcash Woolworths

AUSTRALIAN FOOD & GROCERY COUNCIL

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TABLE OF CONTENTS

1. INTRODUCTION

Welcome to the **Supply Chain Master Data Integrity and Alignment Guide** (hereafter the 'Guide').

The Guide delivers information developed 'by industry, for industry'. It aims to help suppliers and their retailer trading partners achieve improved outcomes in the level of accuracy (i.e. data integrity) and alignment within and between their businesses, for several commonly used product master data points for trade and logistics unit level dimensions and related aspects.

It is intended that the Guide becomes the first in a series of modular support documents for the FMCG/Retail industry from the **Trading Partner Forum (TPF)** across a broader array of **product master data (PMD)** points. Future modules will focus on **new product introduction (NPI)** or product change process where businesses have the opportunity to get data integrity and alignment to a high quality prior to launch. This Guide can also be used for retrospective reviews where required.

The Scope of this Guide includes:

- Foundational product information:
  - Whether Inners are used
  - Whether Shelf Ready Packaging (SRP) is used
  - The Pack-count of consumer units per Inner/Shipper
- Shipper/Inner/SRP Dimensions (height, width, depth)
- Shipper/Inner/SRP Weight
- Pallet Ti-Hi
- Pallet Height
- Pallet Weight
- Support Information for Industry

While these might be considered rudimentary data points, studies have repeatedly found extensive levels of data inaccuracy, and misalignment within and across supplier and retailer systems.

Essentially, this Guide helps suppliers and retailers achieve higher levels of accuracy and alignment for PMD throughout the NPI/product change process. This will reduce costs, complexities, inefficiencies and risks, and in turn, enhance availability as our industry moves into a more automated, channel-diverse future.

TERMINOLOGIES: PACK TYPES

Shipper: the package in which the product is shipped between supplier and retailer – commonly a cardboard carton or shrink wrapped tray, but with several variations. Also commonly known as Trade Unit, Carton, Outer, Vendor Pack.

Inner: where two or more sub-packs are included in the shipper which might be separated and sent to stores in this sub-pack format (think of 4 six-pack 'inners' in a 'shipper' 24 pack carton of beer). Also known as Order Multiples.

Shelf Ready Packaging (SRP): where an inner or a shipper is/can be placed on a retailer's shelf to display the product from which the shopper can directly remove items. Also known as Shelf Friendly Packaging.

WHY DATA INTEGRITY AND ALIGNMENT MATTERS

The complexity of managing data integrity and alignment between trading partners within the FMCG and retail supply chains often results in significant inefficiency and risk for retailers and suppliers, across operational and cost considerations. This issue will accelerate in importance as the supply chain becomes more automated and complex through advanced automated distribution centres (DCs) and new routes to market in an omni-channel environment.

Shoppers, consumers, and regulators are demanding ever-more transparent product and value chain information in a digital format, underpinned by data in real-time context, at more granular levels than previously considered. It's imperative that the information is correct and consistent at all times and throughout the many sources of access available to these stakeholders.
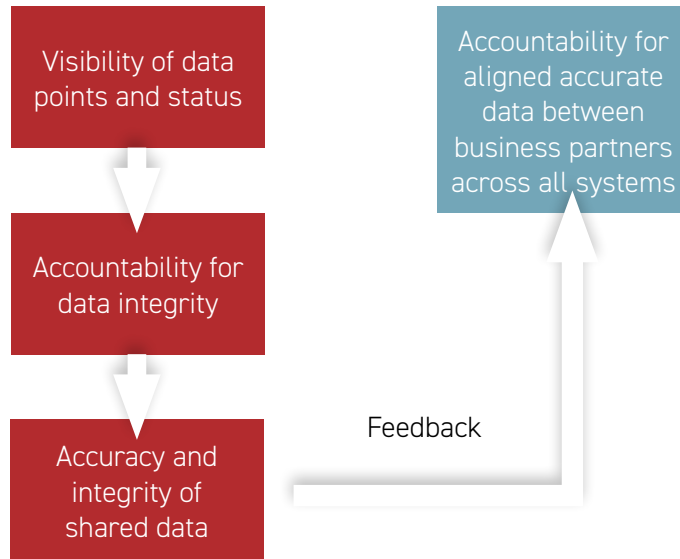
HOW TO USE THIS GUIDE

Throughout this Guide information and support relating to the data points in scope provide the reader with insights on:

- Accountabilities across suppliers and retailers
- Functions within retailers who use the data points, how they are used, when they are required, level of accuracy required, and implications of inaccurate data
- Challenges faced by suppliers in providing accurate data and achieving data alignment internally and with customers
- Challenges faced by retailers to ensure data points are accurate and aligned internally, and with suppliers in order to support new product launches or product changes
- How the specific data points in scope are defined
- How the specific data points in scope should be measured or calculated
- Measurement challenges, and tolerances relating to the data points

NOTE It is also useful to reference the Common Delivery Guidelines for Industry document developed by the Trading Partner Forum's Perfect Delivery Project. These Guidelines cover related aspects including maximum shipper weights, pallet weights and heights (including impact of column stacking), requisite markings on cartons for operational and OHS requirements and other guidance. Access the Guidelines **here.**

The premise underpinning this Guide is that **VISIBILITY** drives **ACCOUNTABILITY**, which in turn drives **INTEGRITY**, which then benefits from **FEEDBACK** to ensure **ALIGNMENT** for **SUCCESS**!

Visibility of data points and status

Accountability for data integrity

Accuracy and integrity of shared data

Accountability for aligned accurate data between business partners across all systems

Feedback

TERMINOLOGIES: DATA ACCURACY STAGES

Initial Data: a situation where product, configuration or packaging is still under development and the supplier needs to supply data to meet retail requirements (e.g. to initiate a workflow process). The data entered would be assumed to be incorrect by the supplier, who is not yet in a position to even provide a solid estimate for the data. This is commonly referred to as 'Dummy Data'.

Estimate Data: represents a situation where product, configuration or packaging has not been finalised and the supplier needs to supply data to meet retail requirements. The data entered would be considered at risk of being incorrect by the supplier, but represents a best estimate which may still be useful for the retailer to plan against in some applications. This might be considered to be 'Interim Data' and may have multiple iterations.

Final Data: a situation where product, configuration and packaging has been finalised and the supplier is completely confident that it can now be applied by the retailer to meet all retailer requirements. The supplier has full faith in the data's accuracy.

KEY ACCOUNTABILITIES – SUPPLIER

- Ensure that retailers are provided finalised, verified, accurate data prior to launch in line with required timings for various retailer functions to perform their duties.

- Ensure that all impacted retailer functions are aware of the current accuracy status of all data points impacting their duties at all times, that they have visibility to (and are made aware of) updates to the data points and their status, and are specifically aware when each final correct data point is confirmed.

- Ensure all systems under supplier control (internal) or supplier direction (3PL, central data repositories e.g. GS1 NPC, etc) hold only the most current iteration of data, and as far as practical make efforts to ensure this is also the case at the retailer across retailer systems – particularly in relation to confirmed final data pre-launch

KEY ACCOUNTABILITIES - RETAILER

- Ensure supplier is aware of critical dates for functions to execute their tasks pre-launch and hold supplier to account to meet those timings whilst working collaboratively around issues.

- Ensure current data from supplier is the only data being held across retailer systems and its status is confirmed with supplier, captured internally, and that data is then used appropriately.

- Ensure that once confirmed final data is received from supplier that this is the ONLY data held across all retailer systems, and is the only data used for tasks/confirmations pre-launch (or if any concerns with data accuracy – follow up with supplier immediately).

RETAILER FUNCTIONS REQUIRING THE DATA POINTS

The data points covered in the scope of this Guide are critical to several retailer functions. The following table outlines these functions, how they use the data points and timings for finalised correct data. It also highlights issues that may arise if the data is incorrect or not provided by the required time.

NOTE Time horizons prior to launch shown in the timing column are provided as a guide to needs of specific functions listed. Suppliers should refer to this in a broad sense to understand the needs of these retailer functions, but must liaise with retailers in relation to specific timing requirements. The ideal is that retailers are provided with absolute final data as early as practical in order to facilitate speed to market and minimise issues that may impact launch.

RETAILER FUNCTIONS REQUIRING THE DATA POINTS

Function	Data Required	Key Tasks	Timing*	Issues Faced
Data Entry/ Management	For Shipper, Inner, SRP • Height • Width • Length/Depth • Weight For Pallet • Height • Weight • Ti-Hi	Data entry team enter and update data in retailer central system as advised by supplier to establish the product at the retailer.	Data is required early per ranging confirmation. Initial data can be used where final data not yet available	Impact of incorrect and misaligned data is not specifically felt here. However there will be flow on impacts elsewhere in the process, including the need for rework to re-enter the correct data once issues are identified elsewhere. The result is a limited opportunity to then check data is aligned either internally across various retailer systems or with the supplier.
Space Management / Planogram Design	For SRP • Height • Width • Length/Depth • Weight For Shipper, Inner, SRP • Pack-count	Develop layouts for ranging of products on shelf in stores which fit within the limitations of the available shelf space dedicated to the category and any shelving restrictions. Look to optimise efficient use of space versus pack size and sales volume.	Correct and final data is required approximately 8 weeks prior to launch.	Impact of incorrect data include: • Rework/loss of productivity to revise planogram • Planogram delays • Potential launch delay
DC Ranging and Slotting	For Shipper • Height • Weight For Pallet • Height • Weight • Ti-Hi	Determine: • Which DCs to range product in • Where within the DCs to slot the product for optimum productivity • Inbound planning requirements for receipting the new line.	Correct and final data is required at least 4 weeks prior to product launch.	Impacts of incorrect data include: • Product may not be accepted into range • Ranging of product in inappropriate DCs • Sub optimisation of logistics network • Suboptimal productivity
DC Operations	For Shipper • Height • Weight For Pallet • Height • Weight • Ti-Hi	Use carton and pallet height and weight data from the Ranging and Slotting team to confirm/ accept the recommended ranging and location.	Correct and final data is required at least 4 weeks prior to product launch.	Impacts of incorrect data include: • Safety issues in the DC • DC productivity/efficiency • Product rejection leading to loss/waste/rework
Supply Planning	For Shipper, Inner • Pack-count For Pallet • Ti-Hi	Use Shipper/Inner pack-counts and pallet Ti-His to order product volumes efficiently.	Correct and final data is required at least 4 weeks prior to product launch.	Impacts of incorrect data include: • Inefficient orders to suppliers • Inefficient space use in DCs • Suboptimal productivity

* See Note on previous page.

CHALLENGES FACED BY SUPPLIERS AND RETAILERS

Suppliers and retailers face a wide variety of challenges to achieve the accountabilities noted in the previous table. The following sections of this Guide address some of the specific challenges relating to the respective data points in scope. However, there are also many 'general' challenges faced by both parties (and their third-party providers) when finalising and locking-in data points during the NPI pre-launch horizon.

The following points highlight these challenges so that they might be considered, discussed and addressed by businesses prior to issues occurring in the NPI process internally and with trading partners.

CHALLENGES - SUPPLIERS

Challenges driven by **lack of finalised data/certainty** of data include:

- Determining the case pack count where internal (e.g. marketing) and external parties (e.g. buyers) may influence
- Packaging requirements to ensure 'fit for purpose' (including through transport trials) can change throughout the development period pre-launch
- Global decision making overriding local proposals
- Packaging being contracted but not yet seen/measured
- Confirmation of retailer ranging decisions and any required changes to planned product
- Production trials – unearthing unforeseen issues and requiring changes to be made
- Upstream supplier capability (e.g. to deliver appropriate packaging)
- Misaligned timelines/expectations with upstream suppliers and/or with customers
- Late decisions where multiple options/choices for NPI may exist
- Initial data being used purely to achieve to workflow process requirement – increasing error risks and the need to ensure revision as estimate/final (correct) data becomes available
- Where internal/stakeholder systems are not fully integrated - no single 'source of truth'

Challenges driven by **errors or misinterpretation** include:

- Misunderstanding on how to interpret data points (e.g. Height v Depth v Width of shipper/inner)
- Keying errors when entering data into own, intermediary, or retailer systems
- Lack of notification regarding product or packaging changes 'upstream' in the value chain
- Lack of awareness (or follow up) where initial data entered is Initial vs Estimate vs Final
- Weight measurement errors – for example where:
  - Scales not correctly calibrated
  - Physical pallet included/not included in weight
  - Misunderstanding gross vs net weight and what data is required for 3PL or retailer
  - Incorrect measurement/metrics used
- Shipper artwork error (consumer unit count, pallet pattern, etc)
- Confusion whether product data for inner vs shipper is being utilised
- Interpretation of measurement guidelines (e.g. for bagged product)
- Where 3PLs might override data in their DC systems
- General capability and experience issues – i.e. human error

Recognising, considering, and discussing the challenges faced by trading partners is a first step towards retailers and suppliers raising awareness and levels of collaboration required to bring new products or product changes through the supply chain effectively, and to mitigate risks during this process.

CHALLENGES - SUPPLIERS (cont)

Challenges driven by lack of visibility into the current specific data in retailer or other stakeholders systems include:

- Lack of visibility to data in retailer systems e.g. central data systems/ planogram systems/centralised or local DC systems etc, to understand if retailer is holding current data
- Lack of feedback mechanisms to confirm data changes provided have been received and uploaded by retailer

- Lack of visibility to check if iterative updates to data as provided by supplier have flowed through to all retailer systems so that impacted functions have latest data and are aware of its status re correctness (i.e. Initial vs Estimate vs Final)
- Lack of visibility to see how retailers are using data and whether this is appropriate given status of current data (i.e. Initial vs Estimate vs Final)
- Lack of visibility to data in 3PL systems to check if loaded, updated and/or correct
- Lack of visibility to data should a retailer, 3PL or third party override data points

CHALLENGES - RETAILERS

The challenges for suppliers listed previously clearly also impact retailers. The following challenges faced by retailers are also significant, as they relate to the retailer needing to perform a variety of important tasks to which the data points are critical. They rely on suppliers to provide necessary advice to the status of the data points, and their own internal functions to maintain alignment across a variety of data repositories which can be amended by various parties.

- The retailer generally has no visibility or access to the product until it is shipped by the supplier. They are vastly reliant on the supplier to provide data which is final and correct, or has its status clearly advised (i.e. Initial, Estimate) with appropriate caveats as to how the data must then be used/not used.
- The retailer has time-bound activities which must be achieved at appropriate points pre-launch by a variety of functions, and is reliant on suppliers to ensure correct data is locked in, communicated and verified as being final in line with these timing requirements.

- The retailer may have a central data system, but this does not mean that the data in all retailer systems is centrally controlled and aligned. In fact, there's often limited opportunity for any given person or function within the retailer to check that data is aligned either internally across various retailer systems or with the supplier.
- This is compounded by the fact that various parties within the retailer are able to (or required to) override data in their local systems where they see fit – for example when a new product first arrives at a DC, it might be remeasured and weighed under local interpretation.

2. FOUNDATIONAL PRODUCT INFORMATION

This Guide now looks at the specific data points and their management in more detail. Links to further information are also provided.

Before investigating the specific data points relating to weights and dimensions of product supplied to retailers, there are several 'foundational' aspects which must be established early on in the NPI/change process as they have flow-on impacts to the data points.

Three of these foundational aspects are core to the subsequent data points in this Guide, with the key questions being:

1. Will Inners be used within Shippers?

2. Will the Inners/Shippers be using Shelf Ready Packaging (SRP)?

3. What will be the Pack-count (i.e. consumer units per…) for the Inners/Shipper?

NOTE Refer to the Pack Type definitions on page 3 of this Guide.

WILL INNERS BE USED WITHIN SHIPPERS?

This information will be critical for retailers as it impacts the following retailer functions:

• Planogram Design in determining space requirements on shelf, and possibly dual ranging (e.g. if selling beer in carton of 24 as well as in 6-pack inners)
• DC Ranging/Slotting to determine what DCs to store the product in and what particular location in DCs - as well as the picking process to be employed in automated DCs
• DC Operations in relation to picking and despatch to store requirements
• Supply Planning to ensure correct and appropriate order quantities identified

The challenges in achieving data accuracy and alignment within and across trading partner systems is significantly increased where inners are employed as there is additional potential for confusion and misunderstanding as to what data refers to what level of product pack.

WILL THE INNERS/SHIPPERS USE SHELF READY PACKAGING (SRP)?

This information is critical for retailers as it impacts the following retailer function:

• Planogram Design in determining space requirements on shelf. This needs to be in line with lateral dimensions of given facings provided in the SRP plus packaging material width of the SRP or inners placed on shelf.

The information is required with the dimensions data for Inners/Shippers as noted in Section 3 below. We suggest that the information is provided to retailers early, in line with range confirmation dates as there may be ranging decisions which either support or negate the use of SRP to avoid costly, and potentially launch-impacting revisions closer to launch.

WHAT WILL BE THE PACK-COUNT (I.E. CONSUMER UNITS PER...) FOR THE INNERS/SHIPPER?

This information is critical as it impacts all dimensions for inners, shippers and pallets. It also impacts all functions within retailers, and needs to be determined as soon as practical in the process in line with required confirmation dates.

The challenges to suppliers are both internal and external. Internally there may be constraints driven by international sourcing of the product, marketing and commercial strategies, and physical operational considerations. Externally, various customers may have views in relation to what appropriate pack-counts may be, which in turn may influence breath of ranging, and thereby require reconsideration and submission of proposals.

Clearly these challenges need to be overcome early in the NPI process and prior to submission of any data which might later require wholesale change and significantly increase the likelihood of inaccuracy and misalignment across all systems.

3. SHIPPER / INNER / SRP DIMENSIONS

NOTE Refer to the Pack Type definitions on page 3 of this Guide.

THE DATA POINTS DEFINED

Depending on the specifics of the product, there may be one, two, or three levels of data points required by retailers. These might be considered as follows:

Shipper - To Distribution Centre
- Height in millimetres of shipper
- Width in millimetres of shipper
- Depth/Length in millimetres of shipper

Inner (if used) – To Store
- Height in millimetres of inner
- Width in millimetres of inner
- Depth/Length in millimetres of inner

Shelf Ready Packaging – To Shelf
- Height in millimetres of SRP
- Width in millimetres of SRP
- Depth/Length in millimetres of SRP

(Note: If SRP can be used for multi-directional display on shelf, highlight this to retailers in relation to options for planogram design.)

INNER
(NOTE: May also be cartons, or shrink-wrapped or other.)
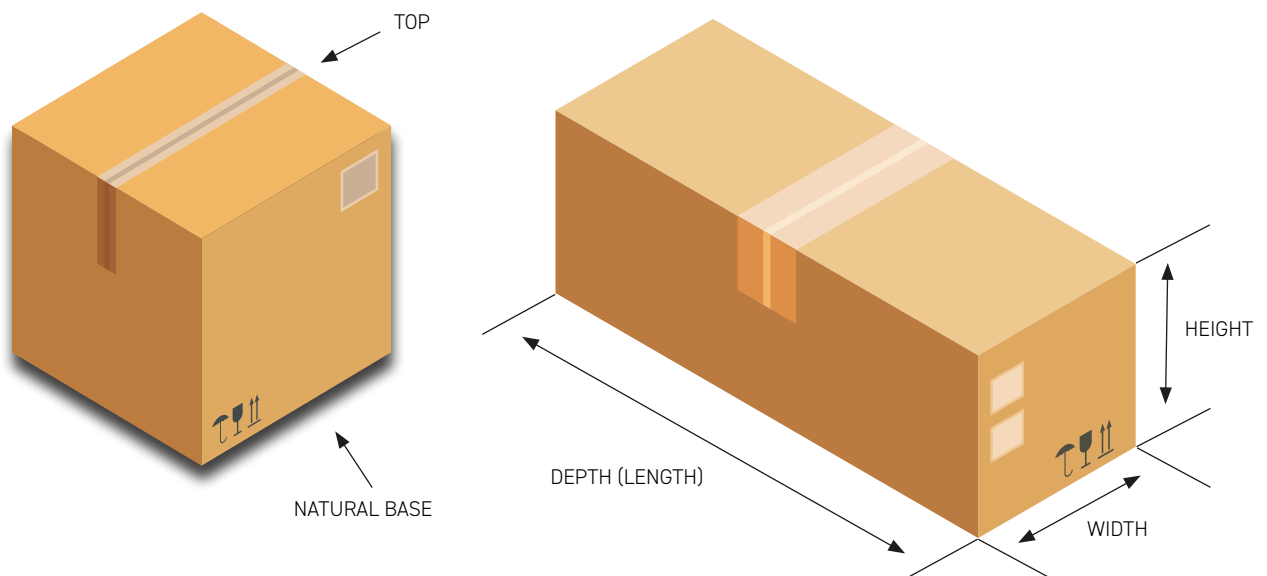
SHIPPER

SHELF READY PACKAGING
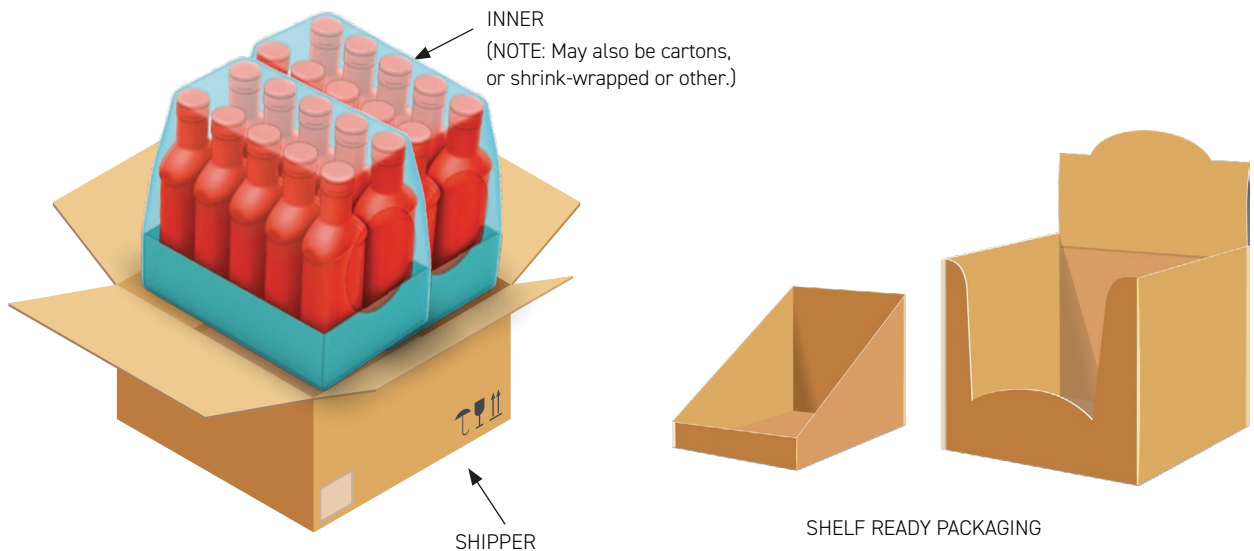
HOW TO MEASURE THE DATA POINTS

While packaging formats may be quite varied (carton, bag, tray and shrink-wrap, etc), the GDSN Package Measurement Rules (see Section 8 of this Guide) provide detailed information and common global guidelines for measuring packages which can be applied to Shippers, Inners and SRP.

In reality, for the **majority** of instances, the measurements process is:

1. Establish the 'Natural Base' of the packaging – i.e. the base as it sits during transport/ storage (Shipper, Inner) or on the shelf (SRP). Some packaging will have arrows advice to this effect.

2. With the packaging sitting on its natural base, the HEIGHT is measured as the distance in mm from the base to the highest point (top).

3. The WIDTH is then the shorter side of the natural base.

4. The DEPTH/LENGTH is the longer side of the natural base.

All measurements must relate to packaging (shipper/inner/SRP) which is in 'pristine' condition per exact specifications as it would be intended to ship – i.e. do NOT use averages or account for any potential variation, compression, conditional impacts etc when assigning measurements.

MEASUREMENT CHALLENGES AND TOLERANCES

While many products will be shipped in packaging that is relatively simple to measure (at least in theory), the reality is that there are a variety of conditions which impact the accuracy of dimension measurement. In an environment where automation is increasing and measurement of dimensions is becoming more critical to operational effectiveness, there is an increased risk that interpretation and re-measuring by various functions might even lead to further misalignment.

Dimensions can easily be impacted by issues such as crushability of packaging in transit, variability in specifications/dimensions supplied by upstream contractor (including internationally), and even the weather and air moisture content. It is therefore necessary to introduce tolerances to avoid bringing processes to a halt every time a slight variation to a dimension occurs on any given package. See Section 8 of this Guide re GDSN Packaging Measurement Rules for a link to more information regarding tolerances for packaging measurement.

Even with the benefit of global guidance, it is vital that suppliers engage retailer trading partners in discussion early where some specific products inevitably will be particularly prone to issues in consistency of dimensions. They can determine an agreed approach to measurement and implement plans to ensure that agreed dimensions data is executed throughout supplier, retailer and intermediary systems accordingly.

4. SHIPPER / INNER / SRP WEIGHT

THE DATA POINTS DEFINED

Depending on the specifics of the product, there may be one, two, or three levels of data points required by retailers. These might be considered as follows:

Shipper - To Distribution Centre
Weight in grams/kilograms of shipper as transported to and stored in DC

Inner (if used) – To Store
Weight in grams/kilograms of inner as transported to store

Shelf Ready Packaging – To Shelf
Weight in grams/kilograms of SRP as deployed on shelf

HOW TO MEASURE THE DATA POINTS

There are no specific requirements in relation to rounding of weights or the number of decimal places required of suppliers when submitting weight data. However in the Australian market Woolworths, Coles and Metcash typically will utilise 3 decimal places for Shippers/Inners/SRP in terms of kilogram weight.

Where suppliers provide less specific decimal places the retailers will 'pad out' their data with zeros.

For example:

Product A Shipper actually weighs 3.685 kg
• If supplier advises 3.685 kg, retailer applies 3.685 kg
• If supplier advises 3.7 kg, retailer applies 3.700 kg

Product B Inner actually weighs 918 g
• If supplier advises 918 g, retailer applies 0.918 kg
• If Supplier advises 0.92 kg, retailer applies 0.920 kg

It's therefore considered good practice for suppliers to provide data to 3 decimal places of a kilogram, where practical, to align product weight with retailer systems. (Note: Weight can only be stated in grams or kilograms. Millilitres is not acceptable as a measure of weight).

For reference, the GDSN Package Measurement Rules Standards allows up to three decimal places for population of dimensions, but the level of precision is left to the discretion of the supplier and to applicable local laws. If rounding is required, all weight measurements are to be rounded up to match the local level of determined precision. Further, the GS1 National Product Catalogue facilitates up to 15 characters in its weight fields.

For international product where imperial measurements are originally used, conversions are made using the following conversion ratios:
• 1.000 Pound (avoirdupois) = 0.454 Kilograms
• 1.000 Kilogram = 2.205 Pounds (avoirdupois)

NOTE Specific maximum limits and safety markings exist. These requirements must be followed as they relate to staff safety and OH&S Guidelines. More information in the Common Delivery Guidelines for Industry **here**.

MEASUREMENT CHALLENGES AND TOLERANCES

Weight measurements can easily be impacted by issues such as scales not being correctly calibrated, or user's misunderstanding of gross vs net weight and what is required for data. Also, a number of products are by their nature variable in weight (particularly in the chilled and fresh food categories). It is therefore necessary to introduce tolerances to avoid bringing processes to a halt every time a slight variation to a product's weight occurs.

See Section 8 of this Guide re GDSN Packaging Measurement Rules for a link to more information regarding globally developed information and standards for weight tolerances.

Even with the benefit of global guidance, it is vital that suppliers engage retailer trading partners in discussion early where any specific products inevitably will be particularly prone to issues in variability of weight due to the nature of the product. They can determine an agreed approach to measurement and implement plans to ensure that agreed weight data and associated considerations are executed throughout supplier, retailer and intermediary systems accordingly.

5. PALLET TI AND HI

THE DATA POINTS DEFINED

Pallet Ti and Hi reflects the number of shippers that will be stacked on each layer (the "Ti", an abbreviation of tiers) and the number of layers that will be stacked on each pallet (the "Hi" an abbreviation of high).

Often these 2 data points are used in concert as "Ti-Hi", however they are each important in their own right as:

- the Ti quantity is important for ordering, picking and transporting efficient sub-pallet loads, and may have ramifications in automated DCs

- the Hi is important for retailers in determining ranging and slotting of products, particularly in relation to space limitations and racking layouts as stored in Warehouse Management Systems (and, in turn, safety considerations).

It should be noted that there may be instances in which a retailer will require a lower 'Hi' (i.e. a shorter pallet) than in the standard pallet configuration if a specific DC in their network cannot accommodate a pallet at the full Ti x Hi. A retailer may even accept a taller than standard pallet for operational efficiency. Any such exceptions will be communicated to the supplier as necessary, but for the data points a standard pallet is assumed.

HOW TO MEASURE THE DATA POINTS

- Once the pallet layer pattern is defined, count the number of shippers contained on a single layer = Ti

- Once total pallet height optimisation/limitation has been determined, and thereby the number of layers which will be placed on a standard pallet defined, count the number of layers = Hi

The Ti multiplied by the Hi provides the total number of shippers on a standard full pallet = Ti-Hi

NOTE Some product shipped to retailers may have specific characteristics which lie outside the usual use of Shippers and Inners. These include large bagged products (potting mix, bulk dry dog food, etc.) or 'Pallecons'. Specific retailer advice should be sought in these relatively rare instances.

MEASUREMENT CHALLENGES AND TOLERANCES

Whilst Ti and Hi (and thereby Ti-Hi) are simple counts and calculations. The key challenge is that the calculations can only be performed once the shipper dimensions and ideal layer patterns have been established and any limitations on the number of layers high (such as overall pallet weight, DC network height limitations etc) have been defined and confirmed.

6. PALLET HEIGHT

THE DATA POINT DEFINED

Pallet height in the context of PMD relates to a standard Full Pallet of product as specified by the supplier. Some retailer/wholesaler trading partners may have particular arrangements in place for certain delivery points (e.g. Distribution Centres) based on storage space capacity at those delivery points, or have arrangements for certain products (e.g. those using 'column stacking') based on safety and other concerns, which may be over or under the standard pallet height, however pallet height in relation to this data point refers to a standard pallet.

In this context, pallet height refers to the sum total of the vertical height of product stacked on the pallet and the physical pallet – generally a CHEP or Loscam wooden standard sized Australian pallet in the Australian retail industry.

HOW TO MEASURE THE DATA POINT

Complete the following calculations:

- Identify the height of each shipper (see section 3 above) = **A (mm)**

- Identify the number of layers on a standard pallet = 'Hi' (see section 5 above) = **B**

- Add the height of the physical pallet as **150 mm** (nominal industry pallet height is 150mm noting that slight variations (e.g. 15mm +/-) in height of the wooden pallet may exists due to the variable nature of moisture, age, timber characteristics, etc of the specific wood)

Calculate as **(A x B) + 150** = Pallet Height in millimetres

NOTE Specific maximum limits and pallet requirements relating to quality and condition exist. For example, board condition, nail protrusion and cleanliness. More information in the Common Delivery Guidelines for Industry **here**.

MEASUREMENT CHALLENGES AND TOLERANCES

See section 3 of this Guide for advice in relation to challenges specific to shipper height and section 5 in relation to Pallet Hi measurements.

Pallet height is one of the critical concerns for retailer DC Operations in relation to safety, and will therefore be scrutinised throughout the on-boarding process for new products.

Suppliers should familiarise themselves with retailer and industry guidelines relating to maximum pallet heights for various DC and category limitations (e.g. cold storage) and consider these limitations to identify any close tolerance levels and discuss any concerns with retailers early in the NPI process. Refer also to the Common Delivery Guidelines noted above.

7. PALLET WEIGHT

THE DATA POINT DEFINED

Pallet weight in the context of PMD relates to a standard Full Pallet of product as specified by the supplier. Some retailer/wholesaler trading partners may have particular arrangements in place for certain delivery points (e.g. DCs). These could be based on storage space capacity, which may be over or under the standard pallet dimensions - typically in regards to the number of layers, and therefore height. Pallet weight in relation to this data point, however, refers to a standard pallet.

In this context in the Australian retail industry, pallet weight refers to the sum total of product and the physical pallet – generally a CHEP or Loscam wooden, standard sized, Australian pallet - as wrapped and assembled for shipment to a retailer DC. This is also known as the Gross Pallet Weight. (NOTE specifically excluded are display pallets, half-pallets, plastic pallets etc.)

HOW TO MEASURE THE DATA POINTS

Complete the following calculations:

- Identify the gross weight of each shipper (see section 4 above) = **A (kg)**

- Identify the number of shippers on a standard pallet layer = 'Ti' (see section 5 above) **= B**

- Identify the number of layers on a standard pallet = 'Hi' (see section 5 above) **= C**

- Add the weight of the physical pallet as **50kg** (nominal tare weight is 38.5kg for CHEP and 34kg for Loscam, but this is impacted by a number of factors including but not limited to moisture, age, timber characteristics, etc. The 50kgs also provides sufficient tolerance to cover the weight of pallet wrapping, corner posts, layer pads etc.)

Calculate as **(A x B x C) + 50** = Pallet Weight in kilograms

NOTE Specific maximum limits and pallet requirements relating to quality and condition exist. For example, board condition, nail protrusion and cleanliness. More information in the Common Delivery Guidelines for Industry **here**.

MEASUREMENT CHALLENGES AND TOLERANCES

See section 4 of this Guide for advice about challenges specific to shipper weight measurements. These include scales not being correctly calibrated, user misunderstanding of gross vs net weight and what is required for data, or variability in product weight.

8. SUPPORT INFORMATION

GETTING STARTED: GTIN ASSIGNMENT AND ASSOCIATED NEW PRODUCT/ PRODUCT CHANGE PREWORK

A separate unique GTIN (Global Trade Item Number) is required whenever a new product is being introduced, or for product changes when any of a range of pre-defined characteristics of an item change beyond industry parameter rules.

For more information regarding requirements and the processes associated with establishing separate unique GTINs, or for assistance with related technical aspects, users can contact GS1 Australia as follows:

- New Item GTIN/Barcode allocation process: https://www.gs1au.org/how-to-get-a-barcode
- Product Change GTIN Management (Decision Support Tool): https://www.gs1.org/1/gtinrules/en/decision-support
- General enquiries: https://www.gs1au.org/

GDSN PACKAGING MEASUREMENT RULES

Global measuring guidelines (as ratified in May 2019) via collaboration between standards association GS1 and industry. This document contains information regarding measurements and tolerances for product at consumer and traded item levels. Read the **guidelines**.

It's also useful to reference the COMMON DELIVERY GUIDELINES FOR INDUSTRY developed by the Trading Partner Forum's Perfect Delivery Project. The Common Delivery Guidelines covers related aspects including maximum shipper weights, pallet weights and heights (including impact of column stacking), requisite markings on cartons for operational and OHS requirements and other related guidance. Access the Guidelines **here**.

GLOSSARY OF ACRONYMS

DC – Distribution Centre
Premise where retailer will receive product from supplier prior to storage and on-shipment to stores. Also commonly referred to as a warehouse.

FMCG – Fast Moving Consumer Goods (i.e Consumer products)
Generally referring to manufactured packaged food, beverages and non-food (such as health and beauty products or household cleaning products) grocery items, which may be ambient, air conditioned, chilled or frozen. In the context of this document it excludes fresh produce.

GDSN – Global Design Synchronisation Network
An internet-based, interconnected network of interoperable data pools and a global registry known as the GS1 Global Registry, which enables companies around the globe to exchange standardised and synchronised supply chain data with their trading partners using a standardised Global Product Classification.

GTIN – Global Trade Item Number
Global Trade Item Number is an identifier for trade items, developed by GS1. Commonly known as a Barcode number and related directly to the actual machine scannable barcode. GTINs are used to look up product information in a database.

NPC – National Product Catalogue (previously GS1net)
The National Product Catalogue is a GS1 operated central repository of product, pricing and data, populated and managed by registered suppliers from which registered retailers can download data according to supplier controlled access rights.

NPI – New Product Introduction
When an item is introduced for sale to an individual retailer for the first time, with a unique GTIN. Similarly a Product Change is where a product has undergone one or more characteristic changes deemed sufficient to require a new GTIN under industry requirements.

OH&S – Occupational Health & Safety
Also commonly referred workplace health and safety (WHS), OH&S is a multidisciplinary field concerned with fostering practices which support the safety, health, and welfare of people at work.

GLOSSARY OF ACRONYMS *(cont..)*

PMD - Product Master Data
Data fields containing information pertaining to specific products. In the Supply Chain area this includes product weight and dimensions at various levels as discussed in each section of this Guide among other data points.

SRP – Shelf Ready Packaging (also known as Shelf friendly packaging or SFP)
Shelf Ready Packaging refers to the way a product is provided by a to a retailer in a shelf merchandisable unit, which can be placed for consumer item selection on a shelf by store staff, without the need for unpacking the consumer item units therein.

TPF – Trading Partner Forum
The Trading Partner Forum is a forum of Australian and New Zealand FMCG suppliers and supermarket retailers focusing on delivering end-to-end value chain efficiency. The TPF works to deliver efficiency and improved availability across the shared end-to-end value chain, to enhance outcomes for shoppers.

3PL – Third Party Logistics Provider
Third-party logistics providers in logistics and supply chain management are organisations to whom companies outsource elements of their distribution, warehousing, and fulfilment services. For example, a supplier may engage a 3PL carrier to transport its products to a retailer's premises, rather than use its own fleet of trucks.

QUICK REFERENCE GUIDE - COMMUNICATION

	Post First Delivery, Pre On-Sale Date	Pre First Order	From Ranging Confirmation to Pre First Order	ASAP Post Ranging Confirmation
WHEN	Post First Delivery, Pre On-Sale Date	Pre First Order	From Ranging Confirmation to Pre First Order	ASAP Post Ranging Confirmation

SUPPLIER

Iterative until all data points are at 'Final' status

RETAILER

WHAT

Post First Delivery, Pre On-Sale Date
- Resolve any misalignment driven by DC changes ASAP.
- DCs to advise HO of any proposed/executed changes to data at DC. HO to advise supplier of details.

Pre First Order
- Confirm all systems only hold Final data*.
- Double check and confirm that all retailer functions/systems now ONLY hold the Final, verified data.

From Ranging Confirmation to Pre First Order
- All systems to only hold Final, correct data points*.
- All Final verified correct data points provided. Retailer advised to overwrite any previous iterations of data in all systems.
- Data point (and status) update acknowledged*. Internal functions to update systems accordingly
- Updated data points and updated status for each data point: Initial, Estimate or Final.
- Data confirmation timing requirements.

ASAP Post Ranging Confirmation
- All systems now contain only final information*.
- Finalised, confirmed information (ASAP).
- Information received and status noted*.
- Pack Count, if Inners &/or SRP used, and if these decisions are pending or final.

WHY

Post First Delivery, Pre On-Sale Date
- Occasionally, despite all prior efforts, when a new item physically ships a retailer may have reason to query the accuracy of data versus the physical product. If this happens it is critical for parties to resolve, agree if any change is required and update all systems immediately.

Pre First Order
- Pre first order is the perfect opportunity to check that no data has been changed, or updates missed so that both parties can confidently move to 'go-live' on the product.

From Ranging Confirmation to Pre First Order
- It is vital that final data is correct, flagged as Final and then all Estimate data cleared and replaced with Final data and for supplier to know this has been completed.
- Retailers may act on data they are provided prior to first order placement, so it is critical they know if the data is now Final or if it is still work in progress as potentially expensive or dangerous results may occur. Both parties should confirm they are on the same page re data status!
- Certain retailer functions may need specific data points Finalised earlier than other functions so it important to plan to schedules and communicate early if any concerns.

ASAP Post Ranging Confirmation
- Case Pack Counts, as well as decisions regarding the use of Inners are also critical to determining appropriate order and resupply quantities for both stores and DCs.
- Decisions regarding the use of Inners and/or SRP have significant ramifications for planogram design as well as for DC Operations in determining where to store the product and how it would be picked and despatched.

*NOTE: Retailer data information/confirmation may be available via supplier portal/other access to systems

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