



AUSTRALIAN
FOOD AND GROCERY
COUNCIL

*A Guide to Using Cost to Serve to Enable
Effective Customer Engagement*



The Australian Food and Grocery Council

The Australian Food and Grocery Council (AFGC) is the national body representing the nation's food and grocery products manufacturers. The food and grocery products industry is Australia's largest manufacturing sector, employing more than 200,000 Australians and contributing 2.5 per cent to gross domestic product.

The role of the Council is to help shape a business environment that encourages the food and grocery products industry to grow and remain profitable.

The Council provides food and grocery products manufacturers with a platform from which they can voice their views on a range of issues.

For further information on the activities of the AFGC refer to www.afgc.org.au



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Focus Information Logistics

Focus Information Logistics Pty Ltd is a grocery industry advisory company, providing strategy guidance and modelling support to manufacturers and retailers in achieving mutually profitable outcomes, through fact-based collaboration.



Focus provides the expertise, experience and modelling tools to enable suppliers to engage effectively with their major customers, in the radical transformation now underway in the industry. Focus personnel continue to promote the adoption of true profit as the key financial performance indicator for the industry. Focus is pleased to be a contributor to this publication, which we hope will foster a rigorous, proactive approach to customer engagement.

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EXECUTIVE SUMMARY

In the context of the unprecedented breadth and pace of change in the Australian FMCG Industry, it is appropriate that all stakeholders understand and measure their underlying Cost to Serve (C2S). For this to happen, retailers and suppliers must move from traditional accounting measures of cost and profitability to a more logistics focused measure of the true cost and profitability of service. This Guide attempts to build a foundation methodology and framework for such on-going analysis.

C2S is a generic label for a robust methodology to determine the likely financial outcomes of supply chain investment and collaborative engagement. It is a process and activity focused methodology. It moves beyond the broad measures of costs collected through the General Ledger and standard accounting practices. It focuses on sustainable decision support and builds a foundation for fact-based collaborative engagement. C2S is about being approximately right as opposed to being precisely wrong. It is a methodology which forces attention upon the key drivers of cost (and waste) through rigorous process mapping. As a result, it can often result in re-appraisal of existing processes. Its applicability is as suitable for Primary Freight/Factory Gate Pricing considerations as it is for Efficient Assortment and Ranging Analyses.

The dimension of time is a critical part of any C2S undertaking. As the Australian supply chain "metamorphosis" gathers momentum, all stakeholders must appreciate the current ("As Is"), transitional ("Near Term") and final ("End State") financial impacts of evolving business practices. Analyses and decisions need to be cognisant of these time states.

The end focus of the C2S methodology must be the supermarket shelf. Depending upon the level of trust (and hence collaboration) between stakeholders, outcomes will be richer and more sustainable if the focus is on the end-to-end supply chain. For the purpose of this Guide, the supply chain flows from finished retail item, through to the supermarket shelf.

In all C2S work, there are four Guiding Principles:

- Consistency
- Scalability
- Transparency
- Results Focus

This Guide will build upon these principles and demonstrate the C2S methodology through the following dimensions:

- As an enabler of change in the context of the Australian Grocery Industry business transformation (the "how" as opposed to the "what").
- As a consistent end-to-end supply chain model identifying broad processes and cost elements. This model should be scalable depending on the maturity of the trading relationship.
- As a refresher on the applications described in the existing ECR Australasia toolkit (*"Profit Impact of ECR"*).
- As a "how-to" guide, for those wanting to apply the methodology, drawing on first hand experience of the authors in the application of the methodology.

This Guide is offered as a contribution towards building an environment which fosters deeper collaboration between retailers and suppliers. For this to happen, C2S must be both consumer focused and cost conscious. It all starts and ends at the supermarket shelf.

1 – THE AUSTRALIAN CONTEXT

Purpose of this Guide

The major retailers in the Australian market are independently leading significant changes in the grocery supply chains. This change is part of a broader business transformation which will inevitably be pursued by the smaller players in the market. The scale and speed of change being driven by these retailers is unique in Australian experience.

Much of the thinking behind these transformational initiatives has been drawn from similar change in the UK, Europe and to a lesser extent the USA. However, the rate of change being sought here is far greater than that which has occurred overseas. The time compression will cause considerable pressure to be applied by retailers to engage on a range of supply chain initiatives concurrently. Many of these initiatives will reduce the retailers' internal supply chain cost, while adding to your cost-to-serve. This immediately raises three questions:

1. What will be the change in our cost to serve individual customers?
2. Will our customers' savings exceed our cost increase?
3. How will we recover at least our cost increase from our customers?

There is an increasing imperative for suppliers to understand the nature of the impending changes and the operational and financial impacts they will have. Gaining a sound understanding of the cost implications of each initiative and the financial and operational interaction between initiatives, will provide suppliers with a clearer understanding of the outcomes which constitute their "win" in the collaborative "win-win" environment promised by Efficient Consumer Response (ECR).

This Guide has been written primarily to provide a framework for suppliers to answer the first of the questions above. It offers a "quick start" handbook, to support you as you consider the financial impacts of these business changes and prepare for the planning and negotiation which will be required to embrace the changes as they occur, without losing control of the margins which drive business profitability. To discover the financial impacts, it is essential to understand the current and future business processes involved.

The Guide builds on two existing industry "blue books", included as Appendices on the CD inside the back cover:

- The Profit Impact of ECR (ECR Australasia, 2000)
- Efficient Product Movement (ECR Australasia, 2003)

The Profit Impact Methodology is an approach to supply chain cost and profit impact analysis, originally developed by ECR Europe. The methodology is simple, results focussed and as applicable to joint supply chain analysis with trading partners as it is to internal analysis.

The Efficient Product Movement blue book provides practical guidance on approaches to reducing the cost of moving product along the supply chain.

Readers could also usefully refer to the AFGC's publications on primary distribution, Factory Gate Pricing (FGP), Shelf Ready Packaging (SRP) and Returnable Transport Items (RTI) for a comprehensive coverage of the specific operational, commercial and legal issues to consider in regard to these particular retailer initiatives. www.afgc.org.au

It is hoped that this Guide will prove a useful tool for suppliers who realise the importance of understanding the impact of supply chain and other business process costs on the net profitability of their sales, but are unsure how to tackle the task, in a focussed and structured way, to enable rigorous internal analysis and constructive engagement with customers.

Radical change in the Australian grocery Industry

Supply chain transformation is just the beginning of a broader business transformation agenda for Australian retailers. As part of that broader agenda, major retailers have begun to develop visibility of the real cost of moving products from suppliers' despatch docks to the store shelf. This focus on cost, at the individual SKU level, represents a major shift in the cost-awareness of the retailer. It is the beginning of the journey to the use of "true profit" as a measure of the real profit contribution of products to the retailers' financial performance.

True profit takes into account the relevant cost elements which erode product margin along the supply chain. In the hands of buyers, true profit visibility can lead to behaviour that drives end-to-end efficiency, by recognising that it is net margin, not gross margin, which makes the retailer profitable.

Applied end-to-end, the true profit measure provides a robust KPI of financial performance for collaborative engagement between suppliers and their customers. However, even applied within the customers’ supply chain, it represents good news for suppliers willing to engage in the transformational journey ahead, in that it allows the cost-saving contributions of individual suppliers to be attributed to their products’ profitability.

Refer to The Profit Impact of ECR for a more detailed discussion of “True Profit” as a performance measure.

Similar shape, different content

The retailer supply chain strategies are similar in scale and in most of the “best practice” approaches they embody. However, individually, they are significantly different in terms of priorities and hence timing. Importantly, in some aspects, they also differ in intent. These differences significantly impact suppliers in the business processes which have to be implemented and the commercial negotiation which will be required.

The clearest example of differing operational and commercial approaches and apparent intent is seen in the Primary Freight initiatives of the major retailers. The models are outlined briefly in the definitions below.

Primary Freight – When a retailer takes operational and financial responsibility for in-bound distribution, including the co-ordination, collection and movement of goods from a supplier consolidation point. Freight rates are agreed based on a rate per unit of measure (e.g. Tonnes) for each route and deducted from the remittance.

Factory Gate Rebate- When a retailer takes operational and financial responsibility for in-bound distribution, including the co-ordination, collection and movement from the supplier consolidation point. Factory Gate Rebates are agreed based on a national rate per SKU and deducted from the remittance .

Factory Gate Price- When a retailer takes responsibility for in-bound distribution, including the coordination, collection and costs of goods movements from a supplier consolidation point. The retailer expects list pricing that excludes supplier distribution related costs.

	Retailer Intent	Operational Approach	Commercial Approach
Primary Freight	The underlying intent of the Primary Freight initiative appears to be to take control of inbound freight in order to improve receiving efficiency and ensure timely availability of stock in a Just-in-Time supply chain	Operationally, primary freight has focussed on using the planned new DC network to capture stock into the network at the earliest feasible point, then using the retailers controlled transport and DC network to reticulate stock around the country. Wherever possible, stock will be collected from suppliers at the first practicable point in the supply chain, either supplier’s warehouse or factory. Use of national DCs as transshipment points for fast-moving lines, as well as a warehousing point for slower lines, is likely.	The commercial model for primary freight currently sees the retailer acting as a transport provider, charging suppliers for tonnage, cubic capacity or pallets/pallet spaces carried.

Factory Gate Rebate/ Factory Gate Price	The Factory Gate Rebate initiative has a significant focus on “doing it cheaper” through efficiencies of scale. Inbound control is important, but the driver is cost reduction.	Factory Gate Rebate appears to be focussed operationally on taking over existing road transport legs and driving higher vehicle efficiency through optimised transport utilisation. Under this model, national DCs will receive only slow moving lines, while fast moving lines will continue to be trucked to the regional DCs where the stock is needed, regardless of whether the supplier or retailer handles the primary freight.	The removal of the transport component from the product price, at the individual SKU level, initially via an SKU level rebate, but by true Factory Gate Price in the longer term, as trading terms can be adjusted.
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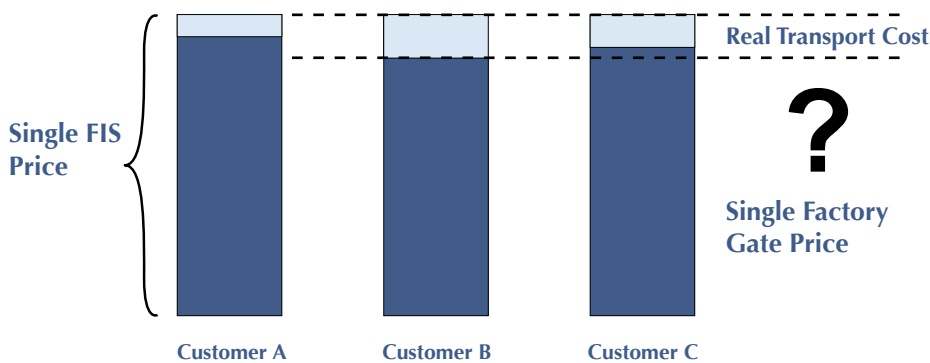
These differing commercial approaches by retailers to the handling of inbound stock illustrate the pressure which suppliers will experience in order to understand their true “cost to serve” various customers and the differing ways in which the information will need to be used to negotiate new charges, rebates and prices.

- In the case of the Primary Freight approach it will require understanding of tonnages and pallets shipped on a lane-by-lane basis without the need to attribute the cost at the SKU level. The focus of analysis of this model must be on understanding the average cost of transporting a unit quantity (tonne/pallet/cubic metre) for each “ship-from/ship-to” combination relevant to the retailer.
- The Factory Gate Rebate and Factory Gate Price approaches will require an understanding of the average embedded cost of transport for each SKU sold nationally. This will require detailed analysis of historical delivered quantities, prices and transport costs for each SKU sold. Here the focus must be on allocating per-load transport charges back to the SKUs in the load, aggregating to national level and allocating a transport component to the national delivered price of the SKU.

Financially, Primary Freight is the simplest of the many retailer initiatives to understand, because the transport activity and most of the cost of the activity move together, from supplier to retailer.

In theory, at least, the Factory Gate price approach means suppliers can negotiate out the freight component on a once-off basis and have no interest in transport costs thereafter. The Primary Freight approach, on the other hand, involves constant monitoring of the competitiveness of the retailer’s transport offer, on a lane-by-lane basis and significant administrative effort to reconcile transport charges with off-remittance deductions. The complexity in the Factory Gate Rebate approach lies in the fact that negotiating out the cost to deliver from the delivered (FIS) price does not leave the supplier with a viable universal Factory Gate Price, available to any customer. Getting to a universal Factory Gate price structure, supported by appropriate logistics terms, is a significantly larger task, requiring an understanding of the cost to serve your entire customer base for each SKU. This is illustrated in the accompanying simplified diagram.

The Factory Gate Price Challenge



How will you recognise a win-win outcome?

In undertaking cost to serve analysis, it will be beneficial for suppliers to maintain focus on the cost to serve the consumer as well as the cost to serve the customer. Unless you know what savings your customer is making, as well as what cost you are incurring, how will you know what constitutes a “win-win” outcome? Establishing a focus on each customer’s supply chain has significant implications for the way in which you establish your C2S modelling capability. It requires the ability to model through to your customer’s selling shelf, using industry benchmark data for costs, unless you are able to undertake collaborative analysis.

It is not the intent of this Guide to explain the nature of the coming supply chain and business changes. That is properly the subject of discussion between individual suppliers and their retail and wholesale customers. However, to illustrate the issues faced by suppliers, the final section of this chapter provides some insight into the operational and financial upheaval which may be faced by suppliers, so as to underscore the need for a thorough understanding of the cost to serve your consumers, through the various retail (and foodservice) channels. Chapter 2 addresses the question “How will this affect my business?” Chapter 3 endeavours to provide practical advice on the planning and conduct of cost to serve analysis.

To gain an idea of the complexity ahead, consider the following realistic multi-stage scenario. If you are not a Direct Store Delivery (DSD) supplier, start at point 3.

1. You currently deliver direct to store.
2. Some customers move to state DC delivery and expect to take a rebate for the transport difference, between DSD and DC (a new warehouse allowance).
3. You now deliver to state DCs for some customers (and possibly DSD for others)
4. Some customers ask you to deliver slower moving lines to National DCs and expect to take a rebate for the transport difference.
5. You now deliver both to state DCs and national DCs for some customers (and possibly DSD for others)
6. The retailer asks to collect your stock at your DC/factory and expects to take a rebate for the transport difference.
7. You now deliver to national DCs, to state DCs, possibly to stores and have stock collected.
8. Some customers want some lines packed in merchandisable units (returnable transport items). Other customers want those same lines in conventional packaging.
9. Some customers want lines in shelf ready trays, with quantities matched to their business requirements. A pack of 12, packed shelf ready as 3x4 units is not equivalent to a shelf ready pack of 6x2 units. You are now faced with more pack sizes, increasing your manufacturing costs, your inventory holding costs to maintain service and the complexity of your inventory and order management system.
10. Your larger customers begin to reduce the size of their orders, to better match supply to demand. Can your pricing reflect the higher administrative cost per order processed and the higher cost of picking part pallet orders?
11. Your primary freight customers want to collect stock outside normal service times, to allow “milk run” collection efficiency for their transport operations. Have you factored in 24/7 operating costs to your pricing?
12. One of your customers moves to true EDLP, significantly increasing forecast accuracy for your products. Other customers continue to drive demand through a range of promotional activities, which cause wide and sometimes unpredictable fluctuations in demand. Yet other customers significantly improve promotional forecast accuracy through collaborative forecasting initiatives.

Notwithstanding the increased complexity foreshadowed by this example, there is an opportunity for suppliers to negotiate win-win outcomes, by taking an holistic view of the trading relationship and an end-to-end view of the supply chain. Understanding your cost to serve is the foundation for this opportunity.

2 – WHAT’S THIS GOT TO DO WITH MY BUSINESS?

Revolution or evolution?

It’s important to have an holistic appreciation of the extent of the end-to-end revolution in Australian retailing. Equally, it’s important for all suppliers to establish their engagement strategy in the context of this accelerated and dynamic change. A firm strategy needs to be formulated. There would seem to be little room for equivocation. It is not the purpose of this Guide to make recommendations on strategic intent or engagement. However, an externally focussed strategic view of the connected supply chain should clearly be at the foundation of any customer engagement, bring to market or go to market strategy.

To formulate, assess, articulate and communicate such a view, an understanding of real and probable near term activity and its’ potential impact upon business performance, process and culture is paramount (both “As Is” and “To Be”). This Chapter attempts to provide a structured template of building/re-affirming such an understanding.

In this regard, there are two important pre-cursors:

- The change is happening; the pace is rapid and is accelerating.
- All stakeholders must have a fact-based view of the likely impacts of such change.

Formulate a point of view

A simple grid, built upon the three ECR dimensions of;

- Efficient Assortment
- Efficient Product Handling & Replenishment and
- Efficient Business Processes

may assist in confirming/developing this understanding.

It is acknowledged that there are other dimensions, but in context of the revolution, this seems to be a good starting point.

Efficient Assortment

Critical Dimension	Retailer Activity	Potential Impact
Range rationalization True profit measures	SKU categorisation	Potential changes in products ranged. Net profit contribution of SKU's will become visible.
	SKU reduction within categories	Underperforming SKU's are vulnerable to deletion New compliance criteria for ranging Share of shelf versus share of market gaps widen Store specific planograms Severe consequences for supply failure Need for more efficient new product introductions
	Private label	Encroachment on shelf space available to suppliers Consumer loyalty and true innovation determinants of success Category insight/management considerations Blurring of customer/competition distinction
	EDLP/Hi-Lo	Differing revenue & profit models for suppliers, by retailer
	Global Sourcing	Private label costs will fall, raising retailer profit Increased visibility of prices for supplier branded products.
	Broadening of offer	More categories in store, less space per supplier
	Focus on SKU-level costs in retailer SC Customer specific retail packaging	Full costs must be allocated to specific customers

Efficient Handling & Replenishment

Critical Dimension	Retailer Activity	Potential Impact
Forecasting	Automated Replenishment System	Less buffer stock; smaller, more frequent orders Trust; danger of OOS on shelf More focus on shelf availability versus case fill Increased use of JIT supply for low volatility SKU's Upward pressure of supplier inventory holdings.
Inbound Management	Collaborative Replenishment Planning	Investment in data & process integration
Network Optimisation	Primary freight/ Secondary freight	New technologies; perseverance needed Need for contractual arrangements Major changes in stock volumes, by lane Reduced control/visibility of dispatched goods Supplier network strains, impact on balance of business
	Factory Gate Pricing	Renegotiation of trade price/trading terms
Product Configuration	Shelf Friendly Packaging Shelf Ready Packaging	Increased cost, vendor pack configuration Customisation, varying shelf layouts
Outbound Replenishment	DSD Reduction Returnable Transport Items	Redesign of distribution network(s) Increased cost in return path

Efficient Business Processes

Critical Dimension	Retailer Activity	Potential Impact
Product Identification	Bar Code Quality Compliance All Levels	Capital investment in technology & process Incremental costs End to end scan process execution
Data Synchronisation	EANnet Ready Scan Based Receiving & Settlement	Investment in master data management processes Consistent application of B2B standards Integrated processes Clear understanding of business processes (As-Is and To-Be)
Process Alignment	One Number Driving Demand	Forward planning Collaborative engagement Data connectivity (avoidance of redundancy & duplication) Process driven cultures
	Transport Management Processes & Systems	Data integrity standards ASN capabilities Purchase Order Acknowledgements (POA's) Available to Promise capability (ATP) Potential Distribution Efficiencies
	Security Tagging	RFID capability Industry standards Fact based analysis

Finally, once the impacts upon your business are documented and understood, a template, such as shown below, that addresses issues of complexity, resource requirements, change management implications, inter-dependencies and value chain benefits/costs, will assist in prioritisation and communication.

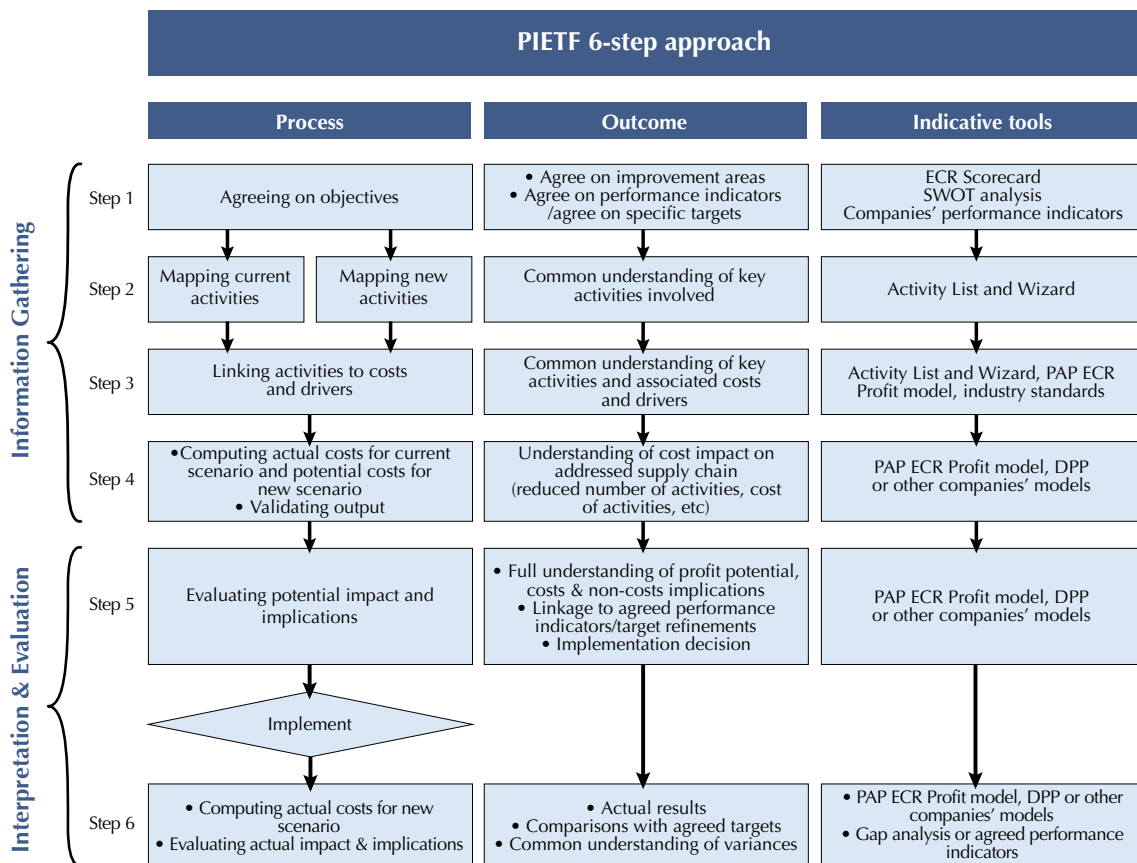
	Initiative	Complexity	Development Time	Trial Time	Change Management	Inter Dependencies	Value Chain Benefit
Efficient Assortment	<ul style="list-style-type: none"> • SKU Categorisation • SKU Reduction • Private Label • etc 						
Efficient Handling & Replenishment	<ul style="list-style-type: none"> • Automated Replenishment Systems • Collaborative Replenishment Planning • Primary/Secondary Freight • etc 						
Efficient Business Process	<ul style="list-style-type: none"> • Bar Code Quality Compliance • One number driving demand • Transport Management Systems • etc 						

3 - PLANNING & UNDERTAKING COST-TO-SERVE ANALYSIS

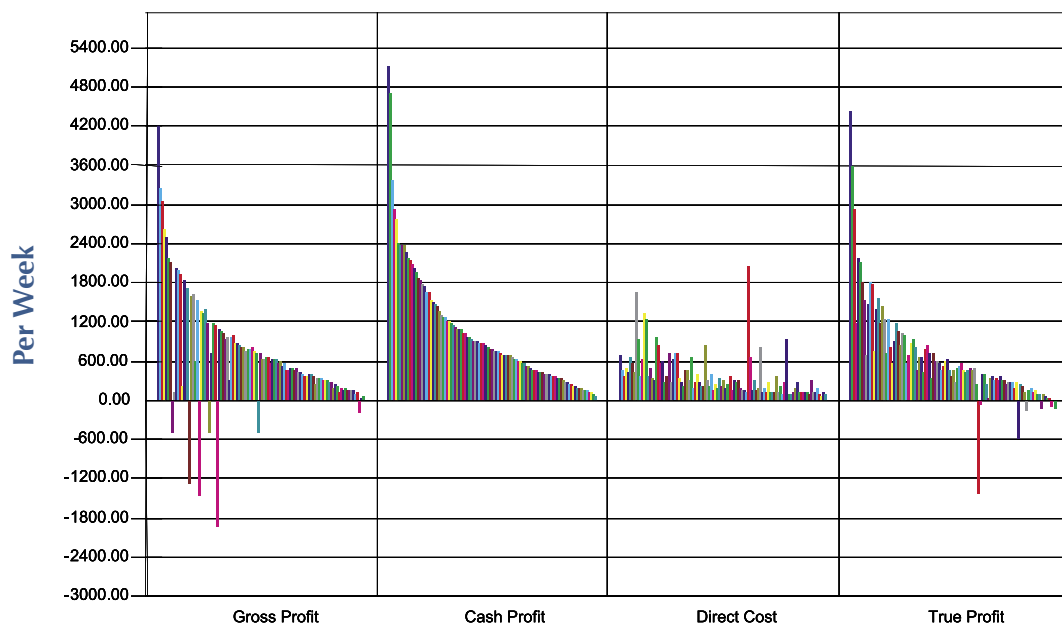
Overview

This chapter provides an overview of the assessment methodology, developed by the Profit Impact of ECR Taskforce (PIETF) and its application to both internal and joint analysis of supply chain cost impacts.

The PIETF methodology was developed by a joint supplier/retailer industry taskforce of ECR Europe over a 2 year period and was published in the ECR Europe Blue Book - *Assessing the Profit Impact of ECR*, in 1998. In early 1999, a project was established under the auspices of the newly formed ECR Australasia, to validate the use of the methodology in the Australian industry. Following successful completion of a pilot project involving Franklins Limited and Unilever Australasia, the methodology was endorsed as representing a best practice approach to cost and profit impact analysis in the Australian environment. The pilot project and the supporting methodology are described in the ECR Australasia publication *The Profit Impact of ECR*, which is included as Appendix A of this Guide. The 6 steps of the methodology are shown below.



The focus of both the European and Australian blue books is the concept of True Profit, rather than cost, per se. Costs erode margin. It is ultimately the profit contribution of a product which sustains both retailers and suppliers. Traditional practice has been to treat physical logistics costs as average costs, to be applied equally to all apparently similar units moving through the supply chain, eg "\$1.00 per case for logistics costs" or "4% on cost for logistics", regardless of the nature of the product, the path it may have taken from factory to shelf or the ordering behaviour of the customers.



The graph above shows the dollar value of four relevant metrics for an entire category of products, shown at the individual SKU level, for total retail chain sales. The category comprises some 200+ SKUs. The measure "Direct Costs" takes into account costs such as picking, transport, storage at retailer warehouse and store (backroom and on selling shelf), working capital tied up in the stock and product ordering and administration costs. Very clearly, direct costs are not equal, in dollar terms, across the category. The dollar cost per unit varies widely.

The PIETF methodology, shown here, comprises 6 simple steps to identify both the business processes and the associated costs for both the "as-is" and the "to-be" processes being considered. Steps 1-4 address the preparation for and execution of analysis; Step 5 addresses the evaluation of the analysis prior to action and Step 6 addresses the need for post implementation review. The aim of Step 6 is to evaluate the actual new costs against predictions, following any implementation of new business processes. By following the steps of the methodology, you will not only gain an understanding of the processes and costs, but equally importantly, you will gain insight into what is driving those costs and of the relative scale of cost impact amongst activities along the supply chain. This insight can provide you with powerful pointers to the areas of highest potential process improvement and cost saving.

Steps 1-4 are concerned with deriving cost and impact information, while Steps 5 & 6 are concerned with using the information and evaluating the impact of change, after implementation.

The PIETF methodology is equally applicable to projects within a single organisation (supplier or retailer) as it is to projects undertaken jointly to assess the end-to-impact of change in the supply chain. It is important to understand that the focus of the methodology is on achieving usable, quality information quickly, not on "boiling the ocean" to achieve perfect answers. More often than not, projects which focus on perfection in the numbers fail, because the time taken to get the answers renders the answers irrelevant to addressing the issue which gave rise to the analysis. For this reason, Step 1 of the methodology – "Agreeing on Objectives" is critical to framing the analysis and focussing the effort.

Is this just A-BC in disguise?

Before outlining the approach to each step of the PIETF methodology, it is worth explaining the relationship between the PIETF methodology and Activity Based Costing (ABC).

Traditionally, Activity-Based Costing (ABC) has focussed on the bottom-up build up of cost elements, from actions, to tasks, to processes. ABC techniques are central to rigorous cost accounting and allow the reconciliation of general ledger costs to the activities which created those costs. Where ABC usually struggles, is in creating a view along the supply chain of what costs are affecting a unit (SKU, case, pallet, etc) moving through the processes.

Cost-to-serve, in the context of the current Australian industry environment, is about understanding the cost of supplying particular products, to particular customers (or customer types) along particular channels of distribution, using particular supply chain processes.

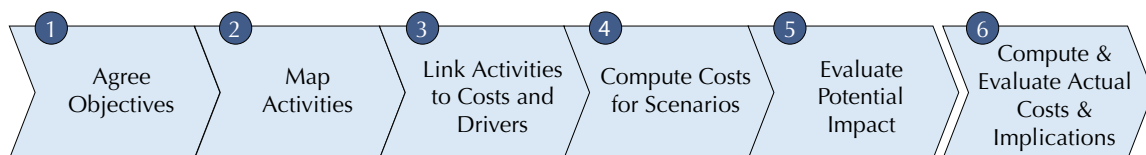
In simple terms, the PIETF Methodology is a “top-down” approach to analysis along the supply chain, which can be made more accurate by the application of “bottom-up” ABC techniques. The methodology can be applied using whatever cost information is available for processes and activities under consideration. The approach tends to focus on high level activities, to which a unique cost can be applied.

For example, a typical activity in a PIETF project involving warehouse storage would be “Move pallet to storage area”. In fact, what is needed for the PIETF project is an average or typical cost of this activity for certain unique activity characteristics, “eg the typical cost for moving a pallet by forklift, from manufacturing endpoint, to racked storage”. This high level activity would be made up of many individual lower level activities, with individual pallet movement costs varying by distance travelled, etc. The provision of an accurate value for “move pallet to storage area”, built up from these lower level activities requires an ABC approach.

Apply the 80:20 rule

However, the absence of an accurate, measured, value for this activity need not and should not stop a PIETF project. Use of an industry standard value for this metric may well serve as a first approximation to the activity cost. If, through the course of the analysis, it becomes clear that this activity is pivotal to decision making, work can be done to “drill-down” to get more accurate information (inside-out modelling).

The following sections provide commentary and notes on the PIETF Methodology. They are intended to be read in conjunction with the document *The Profit Impact of ECR* (Appendix A). The commentary is based on first hand experience using the methodology.



Process

- | | | | | | |
|--|--|---|---|---|---|
| <ul style="list-style-type: none"> • Identify opportunities • Agree on project objectives • Identify performance measures | <ul style="list-style-type: none"> • Develop Map old activities • Map new activities | <ul style="list-style-type: none"> • List activity cost drivers • Calculate activity costs • Make simplifying assumption | <ul style="list-style-type: none"> • Construct model • Collect & load data • Compute costs for scenarios | <ul style="list-style-type: none"> • Perform gap analysis • Develop recommendations | <ul style="list-style-type: none"> • Collect & load data from implicated scenario • Compute costs for implemented scenario • Perform gap analysis • Develop recommendations |
|--|--|---|---|---|---|

Outcomes

- | | | | | | |
|---|--|--|--|---|---|
| <ul style="list-style-type: none"> • Objectives • Scope of work • Define set of required results • An agreed plan of action | <ul style="list-style-type: none"> • Activity list • Model outline | <ul style="list-style-type: none"> • Data map • Data load schedule • List of agreed assumptions | <ul style="list-style-type: none"> • Results of old process • Results with new process | <ul style="list-style-type: none"> • Gap analysis • Implications of the new scenario • recommendations for implication | <ul style="list-style-type: none"> • Gap analysis • Explanation of variances • Implications for further rollout • Recommendation for further progress changes |
|---|--|--|--|---|---|

Step 1: Agreeing on objectives

Step 1 Agreeing on objectives	Step 2 Mapping current & new activities	Step 3 Linking activities to costs & drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact & implications	Step 6 Computing & evaluating actual costs & implications
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Process	Outcome	Indicative tools
Agreeing on objectives	<ul style="list-style-type: none"> • Agree on improvement areas • Agree on performance indicators /agree on specific targets 	ECR Scorecard SWOT analysis Companies' performance indicators

Be clear on objectives

As with any project, gaining agreement amongst all stakeholders on the Objectives, Scope and expected Outcomes/Deliverables/Actions is essential to the successful execution of cost-to-serve analysis.

Cost to serve analysis can serve many purposes within a business, from tackling a specific issue, such as understanding and quantifying the true cost of transport at the customer level, through to providing the necessary information to establish a menu-pricing regime, which matches price to service at the SKU level across the whole business. It is essential to be clear on why cost to serve analysis is being undertaken – the nature, complexity and timeframe of the analysis will be significantly affected by the answer. To establish the platform to move forward, consider the following questions:

Questions to ask

- Why are we undertaking this work?
- To what specific use will we put the outputs from this project? If you cannot identify what you intend to do with the output, you probably cannot justify doing the work.
- What will we do differently as a result of gaining the knowledge? Ensure there is a strong action focus in the objectives.
- What makes this work more important now than all the other projects which will compete for the same resources? Discuss the resource implications.
- Are we building a Cost to Serve model of our whole business or are we addressing a “point” issue, eg negotiation of Primary Freight/Factory Gate Pricing?
- Are we undertaking “one-off” analysis or are we establishing a standing capability for the business.
- Is the analysis historical only, to understand the “As-Is”, or will we use it to undertake “what-if” Analysis, i.e. “To-Be”?
- If the focus is on To-Be, do we understand the to-be environment well enough to identify our objectives? For example, do we understand the proposed “To-Be” business processes?
- Are we undertaking the work for internal purposes or will we use/extend it to engage in joint analysis with our customers?
- Who in the organisation(s) will be affected by this work, who will benefit, who needs to have input? Who are the stakeholders?
- Do we understand the change implications within our business and for our business relationship with our customers and service providers?

Get the scope right

The key to success in getting maximum value from cost to serve is to find the right balance between scoping the project broadly enough to meet expected near term and future information requirements and bounding the immediate activity tightly enough to reach useful conclusions in the timeframe in which they are needed. To achieve this balance, it is appropriate to ask the following questions, for both the near term and the longer term. The longer term answers provide the scope, the near term answers set the priorities.

Questions to ask

- To meet the agreed objectives, what do we need to model and, equally importantly, what don't we need to model. Be certain to match the scope of the analysis to the agreed objectives.
- What is the functional scope of the analysis? Which business processes are in and which are out. This may be guided by the question "Which activities vary according to customer or consumer group?" For the current Australian scene, comprehensive cost-to-serve analysis leading to an informed negotiating position for known retailer supply chain initiatives, will require analysis which commences no later in the supply chain than "finished retail item, prior to secondary packaging". This allows for analysis of the impact of shelf-ready packaging changes.
- Are we establishing a total cost model, or is the focus on the changes in cost from the As-Is. If the focus of the analysis is on change from the As-Is, there are many factors which do not need to be included in the analysis, because they will be invariant between the As-Is and the "To-Be". Recognising what is important at this point will have a major bearing on time and complexity.
- What is the geographic scope of the analysis? Regional, State, National, International?
- What is the customer set for which the analysis will be undertaken? Retail, Foodservice/ Industrial Distribution?
- What is the longitudinal scope of the analysis?
 - o From factory, from warehouse
 - o To DC, to store, to shelf.
- What is the timeframe for any historical analysis? 12 months is often the best minimum, as it allows for seasonal variations.
- What is the required granularity of analysis in time units – daily, weekly, monthly?
- What is the lowest unit you intend to analyse: Order, truckload, pallet, case, retail unit?
- What accuracy is required from the analysis?
- Can the accuracy of the delivered information be reliably verified?

Outcomes & Deliverables

Be clear on the change you want to drive through the business. The outcomes from a cost to serve analysis may go far beyond the delivery of new information about costs within the business. If the right stakeholders are engaged, a key outcome from the project should be a new awareness by the business of what is driving cost and customer profitability. It is almost inevitable that the analysis will shed new light on three questions:

- Who are our most/least profitable customers?
- What are our most/least profitable products?
- Where are the best opportunities to remove cost and improve performance in our supply chain?

If the analysis is extended to the customer end of the supply chain, deep insights into two further questions can be delivered:

- How profitable are my products to my customers?
- Where are the best opportunities to remove cost and improve performance from our joint supply chain?

This latter question, when asked in the context of the end-to-end supply chain, may produce quite different answers from the answer to the same question posed for your internal supply chain. Visibility of the end-to-end supply chain costs and drivers opens up the opportunity to take action in one camp to address cost issues in the other. This is the essence of most of the retailers' current supply chain initiatives – driving cost out of the store, through actions initiated further up the supply chain.

The nature of the deliverables from a Cost to Serve analysis will depend totally on answers to the questions posed in the Objectives and Scope sections above.

In its simplest form, deliverables will include:

- A report on the findings of the analysis
- A list of key assumptions
- Supporting analysis

To be of lasting value to the business, cost to serve analysis needs to be embedded in a repeatable process within the business. In most cases, this will involve the building or acquisition of a supportable model, linked to a range of relevant data sources within the business and fully documented. Discussion of the detailed approach to modelling lies outside the scope of this Guide.

Output from step 1

This first step in the process should result in a Plan which documents Objectives, Scope, High Level Assumptions, Outcomes, Resources, Costs, Timelines and Risks.

Step 2: Mapping current and new activities

Step 1 Agreeing on objectives	Step 2 Mapping current & new activities	Step 3 Linking activities to costs & drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact & implications	Step 6 Computing & evaluating actual costs & implications
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Process		Outcome	Indicative tools
Mapping current activities	Mapping new activities	Common understanding of key activities involved	Activity List and Wizard

For many projects, Step 2 is the most valuable step, as it forces participants to think about the activities which are eroding product margin. If you cannot get senior business personnel from all affected departments involved in this step – STOP NOW.

Few organisations have even high-level activity diagrams for processes which extend beyond their own loading docks. Many lack them, even for internal processes. By involving senior business personnel in this step, all the key personnel develop an understanding of the many elements of cost which can be affected by differing customer behaviour and requirements and the potential complexity of allocating costs to products, to channels of distribution and to customers.

Although described separately, Steps 2 & 3 of the methodology are usually undertaken together. Identifying the cost elements within an activity provides the test of whether the activity is defined at a low enough level to enable a unique cost path to be defined through the map, for every process. Step 3, described in the next section, is really about adding the detailed information about cost units and the factors which influence those costs.

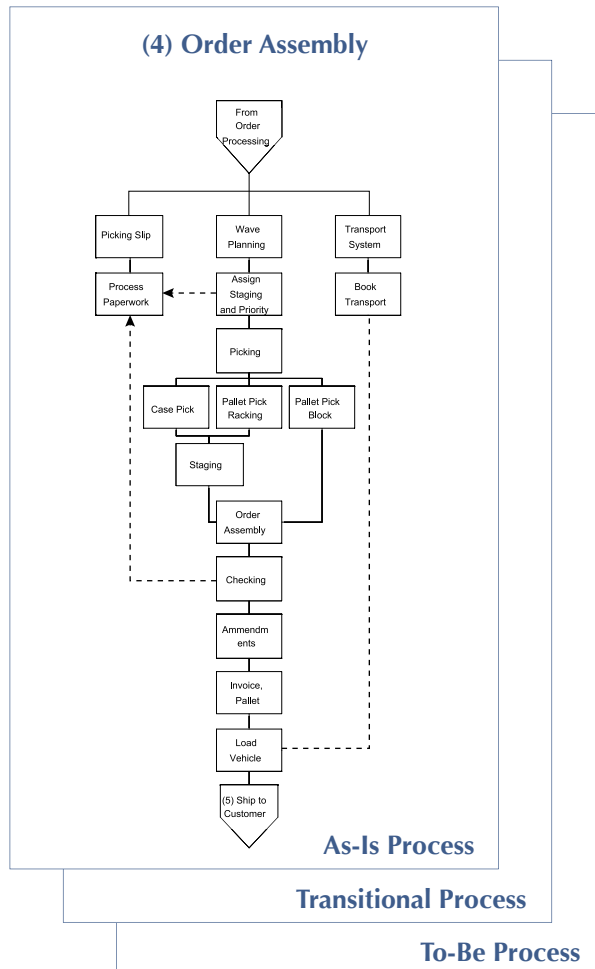
What do we mean by Activity Mapping?

Activity mapping involves identifying the discrete high level activities which occur along the supply chain, for the “in-scope” processes and linking those activities together to create a picture of all the relevant steps which contribute to the cost of completing the process. The Activity Maps produced, along with the Costs and Drivers identified in Step 3 will be used to build whatever model is to be constructed in Step 4 – Compute Costs for Old and New Scenarios.

It is important to understand the difference between “activity mapping” as used here and “process mapping” as might be used in an IT project to document the processes which have to be supported through an ERP system. Activity mapping is a much higher level task, focussing on gross level activities, such as “let down pallet to pickface”. In an IT process map, this activity may explode to dozens of steps, including updating of system records, etc. For the purposes of cost to serve, it will typically remain a single, undissected activity, with an average cost, to be applied to all processes which involve “Let down pallet to pick face”

The baseline for any mapping activity should be to map the “As-Is”. If the objective is to identify how costs will change with the introduction of new processes (eg use of returnable transport items) or changed customer behaviour (eg change to order size and frequency), it will also be necessary to develop maps for the “To-Be”. Importantly, there may be several “To-Be” states. It may be that change will be progressive and involve distinct process changes along the way. These As-Is and To-Be maps form the basis for analysis of the changes in cost which will accompany the change in process or behaviour, giving you a basis to develop a financial negotiating position.

In developing a model to analyse costs and changes in costs, it is important to identify which parameters will be subject to potential change and ensure that these parameters can be easily “flexed” in the model, to allow scenario analysis. In the example, a change in the order pattern does not involve a process change, but will require a change in allocation of order cost and potentially transport costs to products sold.



For comprehensive cost to serve analysis, it is essential that the basis of analysis be the retail selling unit. Many organisations tend to undertake analysis at the case level, on the basis that products move through the supply chain at the case level or higher (pallet, truck). This is not true at store level; many of the cost reduction initiatives of the retailers focus on reducing per-retail-item level handling costs by changing packaging and handling at the case and pallet level.

Anchor your analysis on the retail selling unit

It is essential to understand the cost impact of changes at the retail item level, for two reasons:

- You need to be able to relate all costs back to the retail item in order to maintain an invariant cost unit. A number of the retailers’ initiatives will involve changes in packaging type and changes to the number of retail units per shipping unit (case, tray, etc)
- You will need the ability to compare your customers’ per-item benefits with your per-item costs, if you are to negotiate for a win-win outcome, based on facts.

Activity		Type	Cost HML	Cost drivers	Exceptions
MFP1	Produce product	Auto	H	Raw materials cost Packaging cost Conversion cost Production cycle Demand volatility Forecast accuracy Foreign exchange	Unplanned changes in promotional calendars can cause significant added costs - overtime, non-optimal product movement, expedited materials, etc
MFP2	Pack product (produce secondary unit load)	Auto	M	Packaging cost Conversion cost Units/case	May involve significant re-packing cost for imported product
MFP3	Palletise product (produce tertiary unit load)	Auto	M	Case volume Maintenance cost Labour costs (where manual)	This is automated for 90% of products - less so for slow moving products
MFP4	Move pallet to storage area (non-direct ship only)	Manual	L	Pallet volume (smaller pallets cost more per case)	Cost H if demand peaks cause off-site storage and multiple handling
MFP5	Move pallet to marshalling area	Manual	L	Pallet volume (smaller pallets cost more per case)	Most product is shipped direct from production line to MDC. Automated conveyor systems used in 20% of large MDCs
MFP6	Despatch admin (check stock)	Manual	L	# of despatches Complexity of load (more complex for slow moving) Labour cost	Despatch admin costs generally higher for slow moving products. Scan to load - SSCC attached to pallet. Used as basis for ASN and electronic invoice
MFP7	Load truck	Manual	M	Cases/pallet Vehicle capacity (weight or volume) Handling costs (FLT) Labour cost Equipment cost	Automated chain conveyors used in 20% of large MDCs for truck loading for fast moving products
MFP8	Transport to MDC (in truck)	Manual	M	Distribution network design Vehicle capacity Vehicle utilisation Labour cost	Some product sent by seafreight or airfreight - particularly imports with long lead times
MMD1	Queue to unload (in truck)	None	L	MDC layout MDC labour practices Vehicle waiting time Labour cost	Problems occur in minority of MDCs due to combined loading/unloading docks. Despatches take precedence over receipts - particularly slow movers
MMD2	Unload truck	Manual	M	Pallets/vehicle Cases/pallet Double stacking capability Labour cost	Automated chain conveyors used in 20% of large MDCs for truck unloading for fast moving products
MMD3	Receiving admin (check stock)	Manual	L	Process capability	
MMD4	Put away in MDC (non-cross-dock only)	Manual	L	Labour cost Cases/pallet MDC configuration	
MMD5	Storage in MDC (non-cross-dock only)	None	H	Inventory holding costs MDC operating costs Racking type Forecast accuracy Manufacturing flexibility	For very bulky fast moving products, MDC is holding stock to make room in the RDC. Generally higher stock holding cover for slower moving products
MMD6	Let down pallet (non-cross-dock only)	Manual	L	Labour cost # of pallets Product racked vs bulk stacked	
MMD7	Replenish MDC pick-face (picking only)	Manual	M	Labour cost # of pallets Product racked vs bulk stacked	
MMD8	Assemble order (picking only)	Manual	M	Labour cost Cases picked Complexity (eg different pallet heights for different customers)	Significant variation in picked vs full pallet volumes. Slow moving products and smaller size products more often less than full pallets. Products generally handstacked for export. Cost can be H for slow moving, or L for fast moving
MMD9	Load conveyor (sortation only)	Manual	M	Labour cost	
MMD10	Sortation (sortation only)	Auto	M	Equipment maintenance cost	Sortation used where majority of products are sub pallet quantities, product are small and product value is high
MMD11	Unload decline onto pallet (sortation only)	Manual	L	Labour cost	

The table shows the highest level at which Activity Mapping is usually undertaken.

It is an extract from Appendix A of the ECR (A) publication Efficient Product Movement. The Appendix lists some 50 activities which occur in moving a product from production line to store shelf.

The Appendix focuses on the physical movement of product and does not identify the complementary activities which occur, such as order processing, booking vehicles and timeslots and handling claims.

These costs all contribute to the cost to serve a customer; they should be carefully considered in agreeing the scope of the analysis. (A more generic listing of activities for many grocery chain activities is contained on pages 38-43 of The Profit Impact of ECR). As an example of the importance of these administrative activities, consider a change in the order pattern by a customer, from 2 to 4 orders per week, for the same total weekly stock volume. It may be that the picking cost remains largely unchanged and that transport cost may also remain unchanged, if already at LTL tonnage rates; what will most certainly change is the administrative cost per dollar of sold product.

When defining activities, it is useful to think forward to Steps 3 & 4 of the process. To successfully compute costs for activities and be able to link those costs together to provide a complete picture of the cost build-up through the supply chain, it is highly advisable to keep activities at the level where a single type of unit is being handled. This is what we call a Cost Object. Let us use as an example the activity MMD8 from the table – Assemble Order (Picking Only).

This activity relates to the picking of stock either at the case level, or in full pallets. Because pallet picking involves only labour per pallet picked, whereas case picking involves both labour per case picked and labour per pallet picked, each of these activity variants will need to appear separately on an Activity Map, with a further segregation of pallets picked from block stack and those picked from racking, as illustrated on page 20. Even further segregation may be needed if special equipment is needed for high racking, since equipment utilisation may need to be included in costs.

Questions to ask

- What are the physical and administrative elements of the chain being considered (e.g. warehouses, transport vehicles, etc.)?
- What are the activities that occur within each element that need to be considered? If activities are truly invariant for all supply chain scenarios, it may not be necessary to map the activity, if the focus of analysis is on changes in cost. When in doubt, leave the element in. It is easier to build cost elements in to a model at the outset, than to add them later.
- What variations occur within these activities (e.g. pick by case vs. pick by pallet)? These variations need to show as distinct paths through the activity map.
- What are the processes that link the elements in the value chain?
- Which costs are truly variable and which are really fixed costs?
- Which costs need to be allocated?
- How do we plan to allocate the cost of fixed assets and equipment to activities?
- What are the costs that need to be considered? Typical costs include:
 - o Labour costs, which will vary by skill and by shift
 - o Equipment costs – how will you allocate to activities?
 - o Storage costs – how will you allocate to products?
 - o Stock costs (i.e. cost of capital for finished goods)
- Do we need to allocate fixed overheads, such as depreciation, rent, etc.? If so, how?
- Are there any simplifying assumptions that can be applied?

Output from step 2

The output of this step should be a block diagram of every unique flow path through the process being mapped, for both the physical and the administrative flows, considered to be relevant.

Step 3: Linking activities to costs and drivers

Step 1 Agreeing on objectives	Step 2 Mapping current & new activities	Step 3 Linking activities to costs & drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact & implications	Step 6 Computing & evaluating actual costs & implications
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Process	Outcome	Indicative tools
Linking activities to costs and drivers	Common understanding of key activities and associated costs and drivers	Activity List and Wizard, PAP ECR Profit model, industry standards

To state the obvious, activities are only relevant in C2S analysis because they create costs. Step 3 of the PIETF Methodology requires the identification of the cost elements associated with each mapped activity and the factors which cause those costs to rise or fall, called cost drivers. Cost elements relate to labour, to equipment usage, to storage, to cost of inventory, to services consumed, such as transport, and to relevant fixed costs.

Within a defined activity, costs and cost drivers are applied to cost objects.

In the case of the activity “Let down Pallet to Pickface”,

- The cost object is “Pallet”
- The cost elements are typically labour cost per time unit and allocated forklift cost per time unit
- The cost driver is time to complete the task.

Some prefer to think of the inverse of this measure as the driver, i.e. pallets per hour, however for consistency it is preferable to define drivers such that an increase in the value of the driver increases the cost of the activity.

As there is likely to be more than one labour cost rate involved, this Activity may be mapped as two or more Activities, each reflecting a different labour rate, such as normal and overtime, or weekend. By this means, it is possible to track the impact of a change in the proportion of stock handled at normal vs. overtime rates. If a customer wishes to collect orders on a 24/7 basis, this ability to separate costs according to labour rates, becomes very important in understanding the effects of customer behaviour.

In this example, it is also necessary to know, for each SKU, the number of cases per pallet and the number of SKUs (retail items) per case, to allow the allocation of this pallet level activity to the retail item.

As a further example of the need to track at the retail item level, consider Activity MFP2 –“Pack Product”, from the *Efficient Product Movement* list. Where packing is manual, this activity has a labour component per retail item, a labour component per case and a resource cost per case (the cardboard box). Here it is important to be able to maintain the relationship between these costs, as the underlying cost of one element may change, while others remain constant. For example, the brown cardboard box may be replaced by a full colour shelf ready tray, for one customer.

It is only through the ability to relate every activity in the supply chain back to the retail item level, that a consistent end to end model can be created, since the unit of handling moves from retail item (at point of manufacture), through case and pallet, up to truckload and back down to retail item at the end point (selling shelf) of the chain.

Questions to ask

- What are the cost elements involved in the activity?
- Is each activity performed in the same way for all SKUs? If not, then distinct activities should be defined for each unique method. For example, for soft drinks, packing into cases would be a distinct activity from packing into returnable trays
- What are the drivers for each activity? (e.g. time, cases per pallet)

- What are the units of the activity driver? (minutes per case, cases per pallet, labour cost per hour, etc)
- What resources are used to perform the activity? (e.g. people, equipment etc?)
- How much of the resource is used? (Packaging, Equipment, etc)
- What is the source for each element of information required?
- What are the information gaps and what will be the impact on the validity of the analysis? Where it is established that a significant element of unit-cost information is not available, it may be possible to use industry benchmark information and undertake sensitivity analysis on that element in Step 4, to establish the impact of this parameter on the overall result.
- Are there any simplifying assumptions which can be applied?

Output from step 3

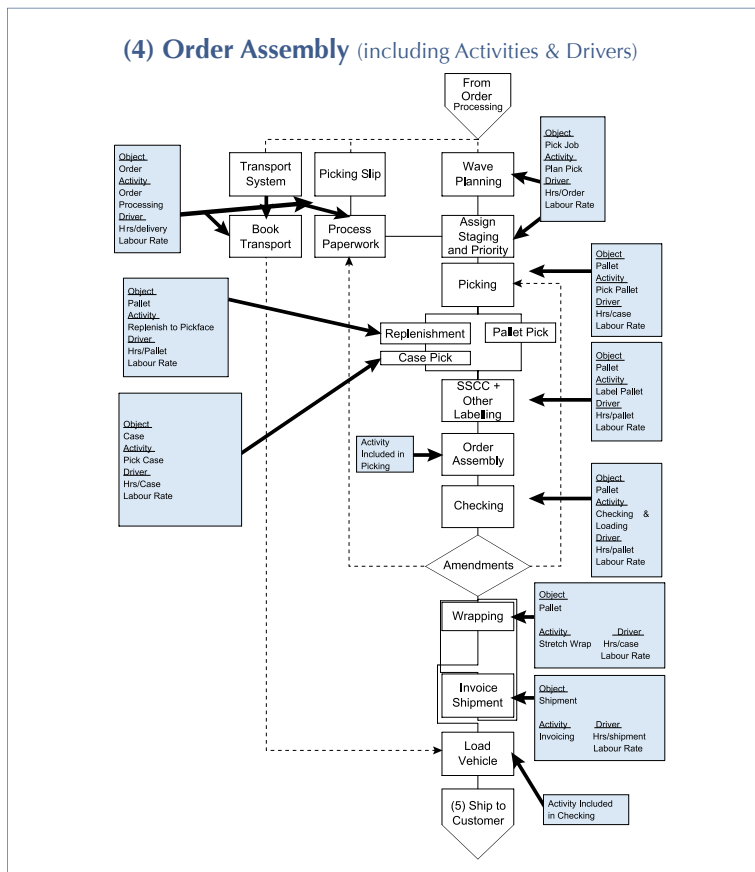
The output of this step should be the enhanced Activity Maps, identifying, for each activity:

- cost object(s)
- cost elements
- cost drivers

as shown in the diagram below.

The following additional data should be gathered and documented following this Step:

- A data map listing data required for the project, the format in which the data is required to be delivered and the person responsible for providing the data
- An updated list of agreed assumptions



Step 4: Computing actual costs for current scenario and potential costs for new scenario

Step 1 Agreeing on objectives	Step 2 Mapping current & new activities	Step 3 Linking activities to costs & drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact & implications	Step 6 Computing & evaluating actual costs & implications
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Process	Outcome	Indicative tools
<ul style="list-style-type: none"> • Computing actual costs for current scenario and potential costs for new scenario • Validating output 	Understanding of cost impact on addressed supply chain (reduced number of activities, cost of activities, etc)	PAP ECR Profit model, DPP or other companies' models

The work to be undertaken under this step depends on the objectives established and the breadth and depth of the Activity Maps developed.

The particular technique to be used to compute costs lies outside the scope of this document. The guidance in this section focuses on the broad activities needed to undertake this step and the issues to consider in designing a financial model to support the required analysis.

Steps involved:

1. Clearly define the outputs the model is required to provide, in terms of content and form.
2. Ensure you have a mechanism to defend the credibility of analysis results, with all stakeholders, internal and external.
3. Decide whether the model is for one-off use or is to be a standing capability within the business. The answer to this question will have enormous bearing on type of model required.

If the analysis is to be one-off, a spreadsheet model designed to answer specific questions will usually be adequate.

If a longer term tool is required, with the capability to answer questions which have not yet been formulated, plan to invest in a more structured, robust, supportable model. Spend time clearly articulating the short and medium term functional requirements of the model. If the model is to be built in-house, expect considerable lead time to move from functional requirements to a functioning model – 6 to 9 months is not unrealistic.

To illustrate the potential complexity of a cost-to-serve model and hence the need for careful design and data management, consider the following simplified example:

A manufacturer sells 200 retail SKUs, to 5 retail customers, delivered from a single distribution location to 30 ship-to locations.

The costs to be considered in the analysis are

- o Pick, by pallet or by case at normal or overtime rates (at least 4 combinations)
- o Load trucks, either side load or rear load at normal or overtime rates (4 combinations). This element becomes particularly relevant, where a retailer wishes to use its secondary fleet of Pantechicans to collect stock.
- o Transport to one of 30 ship-to locations, at one of 5 transport rates per lane, based on tonnage shipped per load (up to150 combinations)

The manufacturer wishes to determine the right allocation of transport costs at SKU level to enable calculation of the right Factory Gate Rebate/Price, based on the previous 12 months transactions.

Typically, analysis would be performed on “monthly buckets” of cases shipped, to allow both annual average and trend information to be gathered. It will be clear that the example above produces a very large set of data to be processed. It is the task of properly aggregating costs across the very large number of cost combinations shown above, which produces the complexity in modelling. Keeping control of this complexity during scenario analysis requires

a very structured, robust model, with minimal opportunity to corrupt data through inadvertent changes (as can happen with spreadsheets).

4. Whether an in-house or pre-built modeling tool/system is selected, ensure that a clear functional requirements document is prepared.
5. Ensure that the requirements for data from other business systems, such as WMS, TMS, Order Management, are clearly defined.
6. Design a financial model which supports analysis of costs, consistent with the objectives defined in Step 1 and the Activity Maps and cost structures developed in Steps 2 & 3.
7. Initiate collection of data in a form suitable for input to the model.
8. Validate the model, using known data, for which results can be readily checked.
9. Undertake extensive integrity and consistency checking on the collected data, to ensure alignment of data sets throughout the model. For example, ensure that all input data relates to the same periods, is in the correct units and is complete.
10. Apply “reasonableness” checks to ensure that business owners are comfortable with input data. Simple questions, such as “do shipped volumes look right?” can often expose gross errors.
11. Where appropriate, obtain validation of your data from your trading partners.
12. Run data through the model.

Typical questions your analysis must answer

1. *For Factory Gate Rebate/Price - What was the average transport cost per case, of each SKU shipped, over the last 12 months, aggregated across all Ship-To locations?*

This question needs to be answered as a first step in preparing for a dialogue on Factory Gate Pricing and Factory Gate rebates. It provides insight into your actual cost of transport, at the SKU level, from which you have a starting point to discuss the Factory Gate Price of each SKU. Bear in mind, however, that the determination of a single Factory Gate Price for each product is considerably more complex than simply deducting the average cost of transport for one customer. The embedded cost of transport in your FIS (delivered) price will vary by customer. To establish a universal Factory Gate Price, for a given service offering (e.g. full pallets, collected 8-4, Mon-Fri), you will need to consider your whole customer base for each product.
2. *For Primary Freight - What is the average transport cost, per pallet, per tonne and per cubic metre by Ship-To location, shipped, over the last 12 months, aggregated across all products?*

This question needs to be answered to prepare to engage in a discussion of Primary Freight. It provides information on the average transport rate for deliveries, on a leg-by-leg basis.
3. *What would be the per Retail Item cost impact of shipping 600 ML XYZ Sauce in Shelf-ready packs of 8 retail items, compared with the current cost per-SKU, for non-shelf ready packs of 12 retail items, while maintaining the non-shelf ready packaging for remaining customers?*
4. *What would be the end to end cost impact per delivered case of reducing our standard pallet of 600 ML XYZ Sauce from 5 layers to 4 layers?*
5. *What is the difference in average order picking cost, between full pallet picks and case pick, measured at the cost per case level, by SKU, based on last 12 months picking records?*
6. *What would be the impact of reducing your order multiple to comply with retailer in-store replenishment systems?*

Output from step 4

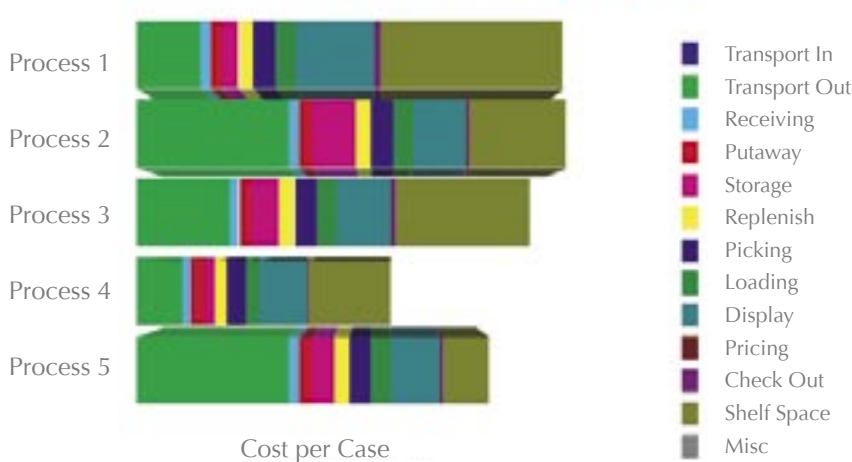
Output from the computation step must be structured to provide decision makers with clear guidance on the decisions being sought. The form of the output will vary depending on the purpose of the analysis.

In the case of analysis to identify the minimum feasible end-to-end process cost from among a range of competing options, a graphical presentation, such as the one below, may be the most effective approach, supported by tabular presentation of the figures and assumptions.

In undertaking analysis for Primary Freight and Factory Gate Pricing, it is likely that simple spreadsheet presentation of figures will be most effective.

Analysis for Primary Freight does not require consideration of individual SKUs and therefore one might simply present for each lane, the average cost of transport per tonne, per cubic metre and/or per pallet, for each month over a 12 month period. The value of analysing in monthly buckets is that any trends in transport costs become visible and can be taken into account when considering rates offered by the customer.

Select opportunities for best feasible joint outcome



Analysis for the Transport/Factory Gate Rebate/Price does require consideration at the SKU level. In this case, the analysis would need to present the national average embedded cost of transport per case, for each SKU, again by month or quarter to identify any trends. While this analysis shows the embedded cost of transport, it does not provide the necessary information to establish a robust, universal Factory Gate Price.

This latter step requires the analysis of transport costs for all customers buying each SKU. From this complete analysis, it is possible to identify the range of transport costs for the SKU. It is then a matter of internal pricing and trading terms strategy as to where the Factory Gate Price will be set and how each customer's trading terms will be adjusted to compensate for the fact that each individual customer's transport cost will be different from the transport component removed from your FIS price to establish a universal Factory Gate Price.

Step 5: Evaluating potential impact and implications

Step 1 Agreeing on objectives	Step 2 Mapping current & new activities	Step 3 Linking activities to costs & drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact & implications	Step 6 Computing & evaluating actual costs & implications
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Process	Outcome	Indicative tools
Evaluating potential impact and implications	<ul style="list-style-type: none"> • Full understanding of profit potential, costs & non-costs implications • Linkage to agreed performance indicators/target refinements • Implementation decision 	PAP ECR Profit model, DPP or other companies' models

Step 5 is about judgement and decision making. Step 5 tests the quality of the work done in Step 1 – Agreeing on Objectives. If Step 1 is carefully executed, the information derived in Steps 2-4 will enable informed decision making in Step 5.

In the current Australian industry environment, this step will comprise three key components:

- Understanding and interpretation of the facts developed in previous steps
- Assessment of the implications of the facts for your business
- Development of an engagement strategy, to allow you to bring your knowledge to bear on engagement with major retail customers.

At a minimum, the following points should be considered:

- Carefully review all significant assumptions made during the analysis, to ensure they are still valid.
- Use all available data sources to ensure quality of data. For example use retailer receipts data to cross check your sales data. Ensure time period and master data consistency between sources.
- Review the validation techniques used, to ensure that the analysis is not only plausible, but correct. Major compensating errors can and do occur. Don't dismiss minor discrepancies as inevitable – convince yourself that the discrepancy can be accounted for. You may be betting your business on the outcome of the analysis.
- Look beyond your own business. Understand the financial implications of change on your customer. If you are looking to achieve a win-win outcome, make sure you can dimension your customers' benefits. It is unlikely that your customers will tell you.

Step 6: Computing and validating actual costs and evaluating implications for new scenario

Step 1 Agreeing on objectives	Step 2 Mapping current & new activities	Step 3 Linking activities to costs & drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact & implications	Step 6 Computing & evaluating actual costs & implications
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Process	Outcome	Indicative tools
<ul style="list-style-type: none"> • Computing actual costs for new scenario • Evaluating actual impact & implications 	<ul style="list-style-type: none"> • Actual results • Comparisons with agreed targets • Common understanding of variances 	<ul style="list-style-type: none"> • PAP ECR Profit model, DPP or other companies' models • Gap analysis or agreed performance indicators

For Step 6, there is little to add to the remarks in The Profit Impact of ECR (Appendix A). There is real value in measuring the actual costs associated with any new process implemented. Most commonly, organisations do not do this. Having completed the project to implement change, organisations move on to focus on the next challenge. In order that a rigorous approach to Cost-to-Serve becomes a credible management tool within an organisation, it is essential that actual results are compared with predicted results and reasons identified for any discrepancies.

4 – CONCLUDING REMARKS

To achieve sustainable benefit from engagement with customers, a structured approach to establishing and maintaining consistent end to end cost to serve knowledge is critical, for a number of reasons:

- Understanding the cost to serve the consumer is central to developing a “going-in” position with your customers.
- Being able to use that understanding in negotiations will be critical to achieving a profitable outcome.
- A clearly defined customer engagement strategy will provide the framework for your organisation to plan.
- The business model will need to be underpinned by a clear understanding of the cost to serve your consumers through your various retail channels.
- The business model will need to include a mechanism to reflect that cost to serve in your pricing and service delivery

The previous chapters have sought to provide practical guidance on the planning and execution of cost to serve analysis, However, no amount of analysis will prepare your business for the coming change, unless you have a well developed, clearly articulated Customer Engagement Strategy, for each of your major customers. It is the customer-specific engagement strategy which will enable you to use the facts to negotiate an outcome which is beneficial to you.

The Profit Impact methodology is applicable for both joint and internal analysis. The principles are the same, whether working with a team from your own organisation or working on a joint retailer-supplier project. A key benefit of undertaking joint analysis is the unique insight it can deliver into the end-to-end financial dynamics of your joint supply chain. Developed and endorsed by a joint taskforce, the Profit Impact methodology offers a “neutral”, common sense, approach to analysis, which can be easily adopted in C2S analysis by both partners in the trading relationship.

C2S is a key enabler for the successful execution of any engagement strategy. The checklist below is provided to ensure that C2S analysis is undertaken in structured, sequential framework, which enables informed engagement.

20 Should Do's for Cost to Serve

1. Identify the business issue – it is not C2S for its own sake.
2. Identify the stakeholders.
3. Identify objectives, scope deliverables and timeframe.
4. Be clear on resource commitment.
5. Get top management buy-in. The journey will have major implications for your business.
6. Involve process owners, not just IT and Finance people.
7. Develop a high level end-to-end map of the physical and information flows.
8. Understand interdependencies to avoid sub-optimising and reworks.
9. Map activities for current business issues.
10. Identify costs and assign drivers.
11. Develop scenarios to address business issues.
12. Specify model requirements to support scenario analysis.
13. Undertake build vs. buy decision for the model.
14. Procure/build and validate the model using test data.
15. Prepare and issue data specifications to support scenario analysis.
16. Clean and test input data.
17. Undertake analysis and perform sanity checks on results.
18. Use results to address business issues.
19. Develop a Communications Plan, for all stakeholders, both internal and external.
20. Develop a negotiation strategy, using the knowledge you have gained through analysis.

This document describes a methodology which has been proven in both internal and joint projects. It also attempts to describe how this methodology can be applied in the current dynamic retail environment. It does not attempt to prescribe the details of model design, the required core executional competencies or to address the many organisational issues you will confront in moving forward.

Cost to Serve is not a back room task. It is central to the future profitability of your business and must be endorsed from the top of the organisation. Do not necessarily expect Cost to Serve analysis to reinforce the conventional wisdom of the organisation. You will be most likely be forced to challenge existing business practices, based on what you learn through fact based analysis.

APPENDICES:

- Appendix A: The Profit Impact of ECR (2000)
Refer to CD located inside back cover
- Appendix B: Efficient Product Movement, Improving product transport and handling through the supply chain (2002)
Refer to CD located inside back cover

The following AFGC publications available to members on the website (www.afgc.org.au) may be of assistance in fully appreciating current supply chain initiatives;

- Primary Distribution and Factory Gate Pricing (August 2003)
- Primary Distribution and Factory Gate Pricing Status Report (August 2004)
- Principles of Engagement for Factory Gate Price/Rebate and Primary Distribution (November 2004)
- Shelf Ready Packaging Guide for Suppliers (October 2004)
- SWOT Analysis of Primary Freight Initiatives in Australia (February 2005)
- Shelf Ready Packaging Industry Checklist. (January 2005)

GLOSSARY

- ABC Activity Based Costing is an accounting method that enables a business to understand more clearly how and where it makes a profit. All major activities within the cost centre are identified and the costs of performing each one are calculated, including costs that cross functional boundaries. The resulting costs are then charged to the product, product line, customer or supplier that caused the activity to be performed.
- ASN Advance Shipping Notification refers to a message, usually sent through EDI, from a vendor to a customer at the time of the vendor shipment that notifies the customer of the order, item and quantity information.
- ATP Available to Promise are items that can be promised to customer order requirements for a given period based on an uncommitted or available status, calculated as: on-hand inventory, less booked customer orders, plus expected master schedule receipts for the period. Cumulative ATP includes past due orders and indicated total availability for successive periods.
- B2B Business to Business
- Cross Docking
Cross docking is the method used in which the goods are received in a distribution centre are not stored but directly allocated to the customer and prepared for shipment.
- CPFR Collaborative Planning Forecasting and Replenishment is the data and process model standards developed for collaboration between suppliers and an enterprise with proscribed methods for planning (agreement between the trading partners to conduct business in a certain way); forecasting (agreed-to methods, technology and timing for sales, promotions, and order forecasting); and replenishment (order generation and order fulfillment).
- C2S Cost to Serve
- DC Distribution Centre is a post-production warehouse for finished goods.
- DSD Direct Store Delivery
- EANnet EANnet is a Data Synchronisation and Product Registry service. Through the use of EANnet, trading partners are able to continuously and automatically synchronise item master data.
- ECR Efficient Consumer Response or ECR is a business concept aimed at better satisfying consumer needs, through businesses and trading partners working together.
- EDLP Every Day Low Price

Flow Through

Flow-Through Distribution is a process in which products from multiple locations are brought into a central facility (sometimes called a cross-dock), re-sorted by delivery destination and shipped on the same day. This eliminates warehousing, reduces inventory levels and speeds order turn-around time.

- ERP Enterprise Resource Planning is an enterprise-wide system that extends manufacturing resource planning (MRP II) by incorporating all system and organisational functions required to plan and support manufacturing, finance, distribution/logistics and additional areas such as engineering, maintenance, etc. It serves as the base repository for cross-functional data and defines a common usage of technology.
- FGP Factory Gate Price is when a retailer takes responsibility for in-bound distribution, including the co-ordination, collection and cost of goods movements from a supplier consolidation point. List pricing excludes all transportation elements.
- FIS Free in Store
- FOB Free on Board refers to trade contract terms that specify when title passes to the buyer, typically either when the shipment is initiated or when it is received.
- KPI Key Performance Indicators refers to general performance measure indicator for the performance of a specific activity.
- LTL Less-Than-Truckload refers to carriers trucking companies that consolidate and transport small shipments of freight by utilising a network of terminals and relay points.
- JIT Just in Time minimises inventory investment by providing timely, sequential deliveries of product exactly where and when it is needed, from a multitude of suppliers. Traditionally an automotive strategy, it is being introduced into many other industries.
- PIETF Profit Impact of ECR Taskforce
- POA Purchase Order Acknowledgements
- RFID Radio frequency Identification is a method of uniquely identifying items using radio waves contained in either active or passive tags fixed to objects.
- RTI Returnable Transport Item is the generic term that refers to all types of handling media used to transport goods within the supply chain that is returned and reused many times.
- SKU Stock Keeping Unit refers to an individual colour, flavour, size or pack of a product that requires a separate code number to distinguish it from other items.
- SRP Shelf Ready Packaging combines elements of secondary and tertiary packaging and provides a vehicle for multiple products to be placed directly onto retailer's shelves without the requirement of stacking individual items, without impacting on the visibility or access to the consumer units.







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