

The Profit Impact of ECR

AUSTRALASIA

ECR Australasia — Working together for total customer satisfaction

Efficient Consumer Response or ECR is a business concept aimed at delivering superior business results in a competitive environment by reducing costs at all stages throughout the supply chain to achieve efficiency and streamlining of processes. ECR is also aimed at delivering improved range, price, service and convenience to satisfy the needs of the consumer.

ECR Australasia reflects a renewed commitment to take costs out of the grocery supply chain and better satisfy consumer demands through the adoption of world's best practices. In an increasingly global food and grocery industry and retail environment subject to rapid change, the future for Australian and New Zealand suppliers, retailers and wholesalers depends on increased efficiencies, reduced costs and added value for consumers. Influences such as global sourcing, new retail formats and channels, international retailers, competing products and services, technological innovation and the spread of e-commerce, have all contributed to the pressure for change.

ECR Australasia is an initiative of manufacturers, wholesalers and retailers with the Australian and New Zealand food and grocery industry and its national associations, Australian Food and Grocery Council, Australian Supermarket Institute, New Zealand Grocery Marketers' Association, Inc and New Zealand Retail and Wholesale Merchants Association. Launched in November 1999 and directed by a Board of nine industry chief executives, ECR Australasia seeks to build on earlier collaborative work in the industry in Australia and New Zealand, particularly by the Grocery Industry Supply Chain Committee, and to access the outcomes of ECR related activities in more than 40 countries and globally through the Global Commerce Initiative. As elsewhere, the ambitious work program set by ECR Australasia is undertaken by project teams drawn from manufacturers and retailers with valuable support from consultants committed to the food and grocery industry.

The potential benefits for trading partners are substantial. In a landmark 1999 study for the Australian grocery industry, PricewaterhouseCoopers identified possible annual cost savings in excess of \$A1 billion and inventory savings of \$A750 million.

The ECR Australasia Board recognises that since the first concepts of ECR were introduced there has been a substantial opportunity in calculating the benefit of initiatives in a true profit fashion. Activity Based Costing was previously seen as the best practice for the calculation of these benefits, but the potential advantage in assessing the profit impact of ECR initiatives in a faster more cost effective manner has now been recognised.

The Profit Impact of ECR project is intended to provide a validation, within the Australasian food and grocery industry, of the methodology developed by the ECR Europe Profit Impact of ECR Task Force (PIETF). The project also demonstrates local application of the methodology through case studies. The methodology is accordingly endorsed by ECR Australasia.

Acknowledgments

The validation of the methodology and the production of the report on the Profit Impact of ECR within the six months timeframe set by the ECR Australasia Board reflects the enthusiastic involvement of the Project Team, the membership of which is drawn from suppliers, retailers and wholesalers in Australasia. The time and work freely given by these individuals have ensured that the guide will have practical application within the operations of trading partners throughout the Australasian food and grocery industry.

The timely completion of the guide is also due in large part to the valuable contributions by the consultants from Focus Information Logistics, the Australian associate of PAP Consulting Ltd, which led the ECR Europe work.

ECR Australasia thanks the following for their contribution:

<i>Project Team</i>	Judy Quirk (Team Leader)	Lever Rexona
	Jill Connell	Franklins Ltd
	Brian Haldane	Cussons Ltd
	Steve Newton	Davids Ltd
	Radi Soemarjono	Procter & Gamble Australia Pty Ltd
	Daniel Kochanowicz	Woolworths Ltd
<i>Consultants</i>	Garry O'Sullivan	Focus Information Logistics
	Michael Kuipers	Focus Information Logistics
<i>Secretariat</i>	Paul Middleton	Australian Food and Grocery Council

ECR Australasia also thanks Franklins Ltd and Lever Rexona Pty Ltd for participating in and sharing the results of the case studies which demonstrate the operational relevance and validity of the Profit Impact of ECR methodology for the Australasian Market.



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Introduction

Introduction

To quote from the 1999 Grocery Industry Tracking Study, *“The role of activity-based costing in ECR is to understand the likely cost impacts of new ways of doing business. However, the results of that study indicate that there has been relatively little progress with activity-based costing”*. The study report recommends that an industry body provide a focal point for solving common industry issues, such as the use of activity-based costing (ABC) to support joint decision making.

Intent

In view of the lack of progress in Activity-Based Costing across the Australian Grocery industry, the intent of this project was to evaluate and trial a methodology, developed by ECR Europe, for the pre- and post-implementation analysis of the cost and profit impact of ECR initiatives. To be of significant relevance to the industry as a whole, the methodology must be suitable for joint use by manufacturers and retailers/wholesalers, as well as for internal use. It must provide manufacturers, wholesalers and retailers with a mutually trusted, sufficiently accurate, cost effective means of assessing proposed joint ECR initiatives, so that initiatives can be entered into jointly by trading partners with substantially increased confidence in the expected costs and benefits to each party and in the expected net benefit potential to the consumer.

The methodology and supporting tools to be evaluated have been developed by the European Profit Impact of ECR Task Force and supporting consultants and published as a Guidebook in May 1999, following extensive trialling. The publication is called *Assessing the Profit Impact of ECR*. Significant extracts from this Guidebook are included with this report, with permission from ECR Europe. The methodology and tools are applicable along the supply chain, from post-production to check-out and support analysis in all four aspects of ECR, Efficient Assortment, Efficient Promotion, Efficient New Product Introduction and Efficient Replenishment.

The methodology is supported by a dictionary of activity descriptions, which are to be found on pages 63–73 of the Guidebook extract. The Activity List is supported by a simple software utility for selection of appropriate activities, called The Activity Wizard. The Wizard software can be downloaded, free of charge, from the Focus Information Logistics website: www.fil.com.au.

The project utilised the same modelling tool as was used in all European trials of the methodology, the ECR Profit Model (EPM), developed by PAP Consulting in the UK. EPM is a full grocery industry model, allowing the rapid creation of modelling scenarios, without the need to make model-building decisions. EPM is proprietary software and is not to be confused with the downloadable Activity Wizard software, also created by PAP.



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About this project

About this project

In 1997, ECR Europe identified two major barriers to the adoption of ECR practices.

- Inability to fairly measure the benefits to each party,
- Lack of trust in projected benefit numbers and who would get the benefits.

European retailers had nominated measurement as their main roadblock to implementing ECR initiatives.

Therefore, establishing a trusted measurement system was considered necessary to achieve ECR penetration, to increase awareness of ECR and to change the way performance is measured and rewarded in the grocery industry. True profit, which takes into account direct costs along the supply chain, was seen as the key to a trusted measurement system.

To establish a common framework for profit measurement, ECR Europe established a Task Force in 1997 — The Profit Impact of ECR Taskforce (PIETF). The brief of the PIETF was to “develop a methodology and test a tool to measure the profit impact of an ECR application across the whole supply chain”.

The PIETF comprised 5 retailers/wholesalers and 7 manufacturers from across Europe. These companies and their consultants worked intensively for 7 months to produce an industry-wide approach to breaking down the barriers identified. The Group committed to having a solution developed and tested in time for the 1998 ECR Conference in Hamburg.

The first deliverables from the PIETF were a 6-Step Approach to allow ECR partners to jointly focus on the critical drivers of cost and profit and an extensive list of activities which occur along the supply chain, together designed to be used throughout the supply chain, from manufacturer to the supermarket checkout.

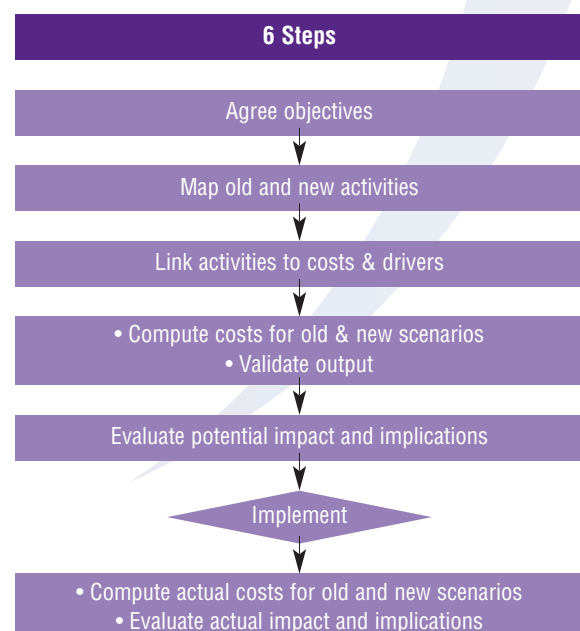
The 6 Step Approach and Activity List were subjected to rigorous testing in joint retailer/supplier pilots, over a period of 18 months. All of the pilots were supported by use of a common Grocery model, the ECR Profit Model, developed in conjunction with the PIETF by PAP Consulting in the UK.

The Methodology, Activity List and the results of Pilots were formally released at ECR Europe 1999 in Paris in the Assessing the Profit Impact of ECR Guidebook.

The Methodology is, in essence, a statement of good planning and execution techniques, applied to joint project work. Refer to Section 5, *Extract from “Assessing the Profit Impact of ECR”*, where the approach is explained in detail. The Australian pilots used this approach without modification.

Using Focus Information Logistics (Focus) as the project manager and facilitator, Franklins and Lever Rexona have followed the first 5 Steps of the 6 Step process in the pilot project. The PIETF Activity List was used, unmodified, as the starting point for the projects, described further below. The Activity List provided a “quick start” method to focus on the key costs and drivers for the business processes studied.

Following implementation, which is underway, Step 6 will be undertaken, using results from the implementation to measure the effectiveness of the decisions taken, using the Profit Impact approach to drive commercial decision making.



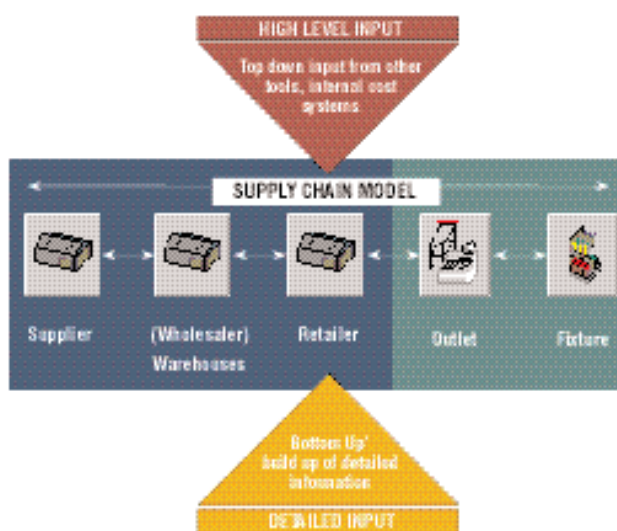
The Model

The same PAP ECR Profit Model (EPM), which was used in all European pilots of the Profit Impact Methodology, has been used in the two Franklins — Lever Rexona pilot projects.

EPM is a full Grocery Industry model, capable of modelling from finished goods at the supplier factory through to retail items in the supermarket fixture. The model can be used at a high level or a very detailed level, to provide results as accurate as the quality and quantity of available data will allow. In this project, all modelling was done by Focus.

The model can accept data, such as planograms, from other applications to simplify the data capture process and also allows the entry of highly detailed, or summary, information manually or through data loading utilities.

Of critical importance to the use of EPM in the Australian pilot, the model has been extensively validated against other benchmark models in Europe.



European Pilot Projects

To fully test the Methodology, the Activity List and the supporting Model (EPM), two supply side and two demand side projects were conducted by ECR Europe.

Supply side

- Usego/Nestlé — quantification of a leaner flow of goods. The pilot showed that *“costs and benefits resulting from process re-engineering occurred asymmetrically in the value-chain but resulted in overall net savings”*. A commonly defined procedure for picking and checking loads significantly reduced resources devoted to checking incoming goods which was only marginally offset by increased time spent checking outgoing goods.
- Albert Heijn/Lever/Procter & Gamble — quantification of pallet labelling improvement. The pilot *“focused on optimising and integrating the logistics chain between supplier and retailer by increasing the reliability of data and processes”* ... through ... *“an accepted (international) standard for using the EDI advanced shipping notification in combination with the EAN 128 communication for pallet coding”*.

Demand side

- ICA/Procter & Gamble — leveraging net profit data in assortment decision-making. *“Significant lessons were learned regarding the impact that both effective space management and different logistics techniques have on the net profitability of SKUs and the category as a whole. One key learning was the power of activity-based costing”* and the role of the EPM in significantly simplifying the process.

- Tesco/Procter & Gamble — using net profit data to improve category decision-making. This project sought to understand the profitability of SKUs in a category and the profit impact of the changes to the category. It identified changes which reflected opportunities for the allocation of space and for logistics for the category.

A fifth case study examined the implications for Anchor Foods Ltd, a dairy product manufacturer, of moving to daily deliveries on a 24 hour order 'pick by line' basis for a major retail customer. It demonstrated that the only feasible means of moving to 'pick by line' was within the principles of ECR of *"taking costs out of the supply chain ... not merely passing them on to suppliers"*. The result was to establish an agreed least cost route for order processing and delivery.

In addition to these projects which are reported in the *"Assessing the Profit Impact of ECR"* Guidebook, the following projects were also undertaken prior to the publication of the document:

- Ahold and Douwe Egbert integrated joint category profit measurement into day-to-day business, in the Rice category.
- PAM (Italy) and Colgate-Palmolive evaluated the commercial effectiveness of the introduction of a new shower gel, in terms of total cost of introduction.
- 4 retailers and 3 suppliers used the methodology and model to evaluate alternative standard pallet heights.
- Sonae (Portugal) and Procter&Gamble evaluated Cross Docking as an alternative method and concluded there was no net benefit. Therefore joint decision not to change was made.
- Albert Heijn/Lever/Procter&Gamble quantified the benefits of EAN128 pallet labelling to improve goods flow.



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Australian Case Studies

Australian Case Studies

The underlying motivation for Franklins and Lever Rexona to undertake this project was that the two trading partners wanted to move to the best available qualitative and quantitative measures of performance to develop the value of their business relationship. A key quantitative measure of performance is true profit. True profit takes into account all direct costs associated with sales, including the costs associated with maintaining the business relationship. It allows trading partners to move away from gross profit and promotional income as primary quantitative measures of performance.

To allow Franklins and Lever Rexona to move to true profit as a key quantitative measure, it was necessary for the partners to develop the mechanisms to measure and report on true profit. The project was proposed to provide the process framework to enable true profit measures to be adopted by Franklins and Lever Rexona. The project was expected to deliver true profit information on the selected Category/sub-categories and identify the issues associated with undertaking true profit measurement.

Confidence and Confidentiality

Franklins and Lever Rexona have a mature, strategically focussed business relationship. Even in this environment, there is a need to take an approach to joint projects of this nature which ensures that:

- a) both parties have confidence in the results,
- b) the confidentiality of information relating to other suppliers in the analysed category is preserved.

Involvement of the project consultants, Focus, enabled the parties to achieve confidence in the impartiality of the results and to preserve the necessary confidentiality. Focus executed confidentiality agreements with each of the project partners separately. To ensure full confidentiality, other vendors' performance information and the underlying data were only shared between Franklins and Focus. Lever Rexona has been able to compare its performance to category and sub-category averages.

Cost-to-Serve Analysis

Category Analysis

Case Study Scope, Timeframe and Resources

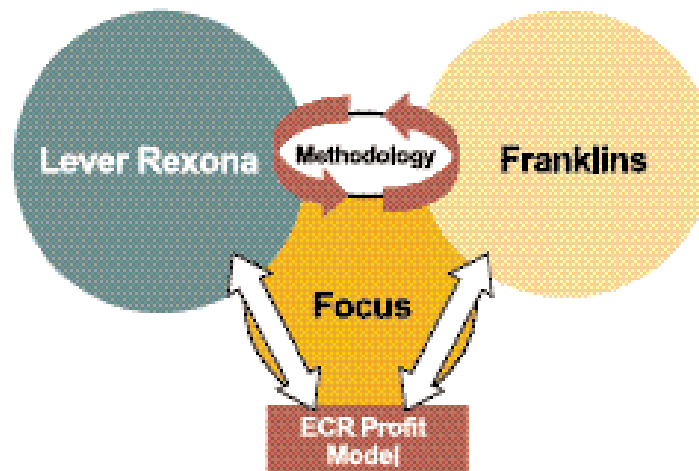
The initiative undertaken by Lever Rexona and Franklins had as its specific objectives:

- to assess the true profit ranking of all products in the Franklins Laundry category, taking into account costs from Franklins' DC receiving dock to fixture in store.
- to establish, for Lever Rexona and Franklins jointly, the true cost to serve, from finished goods at Lever Rexona's factories to fixture in store.
- through use, to evaluate the methodology and the Model as tools to enable Franklins and Lever Rexona to create more valuable relationships with each other and with other trading partners.

The analysis took into account:

- activity costs, such as receive, pick, replenish to shelf
- storage costs, in DCs and in-store
- finance costs, associated with stock in the supply chain
- relationship costs, such as sales administration and account management.

The project was completed in 10 weeks, from first project meeting to delivery of all draft results. The project involved approximately 2 man-weeks of a senior consultant and 8 man-weeks of a senior analyst. Involvement of business and information personnel from both trading partners was limited and did not significantly interfere with the 'day jobs' of those personnel.



Process and Results

The Franklins and Lever Rexona initiative was sponsored by top executives in both businesses, committed to achieving a valuable business outcome from the project. The project team members were senior managers of each company, each directly involved in the subject matter of the projects.

The key activities of the business teams were to clearly identify the scope of the project, in terms of desired outcomes and boundaries and to make decisions on all key assumptions proposed by the project consultants.

The project team followed steps 1-5 of the PIETF methodology rigorously and used the Activity Wizard to filter the ~200 available activities down to the set which provided good common ground for detailed activity definition, cost assignment and identification of the key drivers of those costs. This 'quick start' is the primary benefit from using the PIETF Activity List. It provides a structure for the definition of activities, allowing the two parties to establish a sufficient framework of information on which to build with their detailed knowledge of the specific scenario. The availability of a ready-made list of activities has the potential to save weeks of elapsed time in Step 2 of the Approach, since it allows the participants to add and subtract from a common base, to meet their needs, rather than each party bringing its own definitions to the table.

In this project, the availability of the Activity List and the ready-built ECR Profit Model allowed a very rapid transition from project definition to data collection and processing. As with all data-based projects, data consistency and data validation were of critical importance. It was vital to correlate Franklins and Lever Rexona corresponding data, to ensure periods, cost structures and units of measure were consistent. Where accurate data could not be obtained, assumptions were agreed between both companies and, where appropriate, sensitivity analysis was conducted to validate the assumptions.

All graphs shown in this report (Charts 1-4) are illustrative only. They are not based on the actual results derived during the project. They are, however, actual outputs from EPM demonstration data.

Using the ECR Profit Model, the project consultants delivered the following classes of results:

Supply Chain Analysis

- Full distribution cost breakdown from factory to shelf
- Manufacturer Sub-category performance
- Manufacturer return on inventory
- Manufacturer financial performance per unit and per week, by SKU

The Supply Chain Analysis reflected in Chart 1 is useful in identifying the costs associated with each step in the supply chain and demonstrating which areas need to be addressed. It clearly identifies specific cost areas, thereby allowing companies to examine steps that are 'non value-adding'. It can aid in a 'before and after' analysis to ascertain whether changes in processes have resulted in cost savings or merely a shifting of costs. Such analysis can involve trade-offs between broader detail which provides ease of analysis but inhibits specific decisions and analyses at the micro level which facilitate the latter at the cost of simplicity in decision-making. The chart is a specific example of the need for participants to agree the basis for assessing each step at the outset to ensure consistency of results down the supply chain.

Chart 1

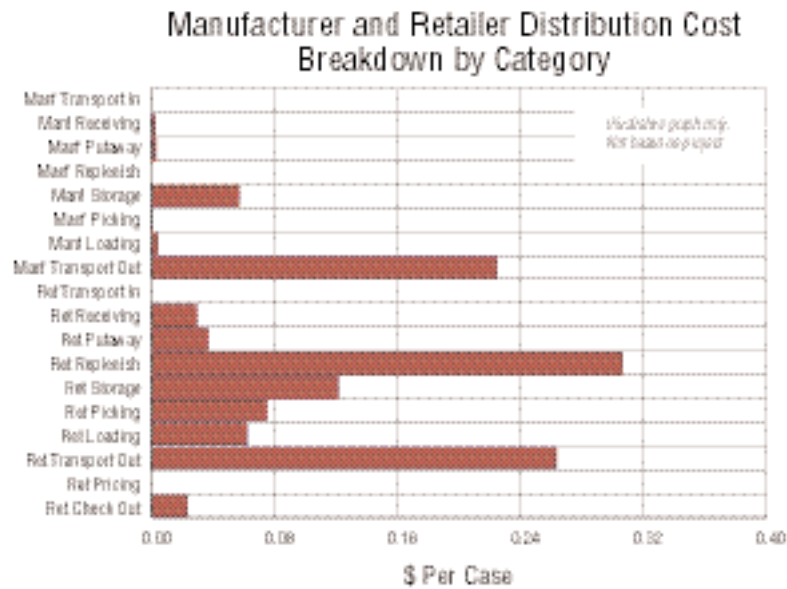
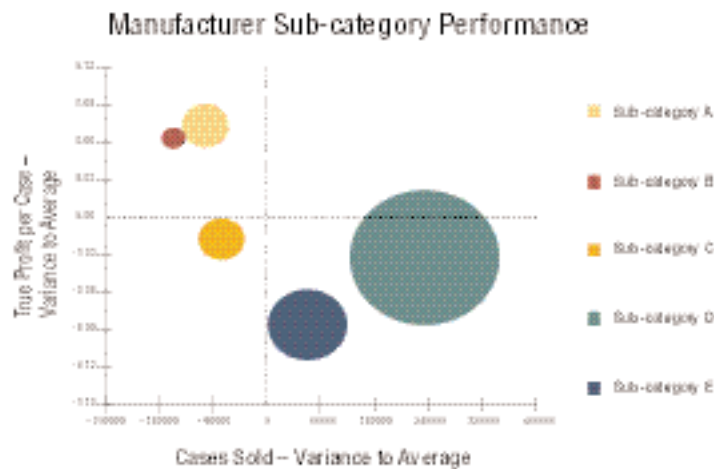


Chart 2



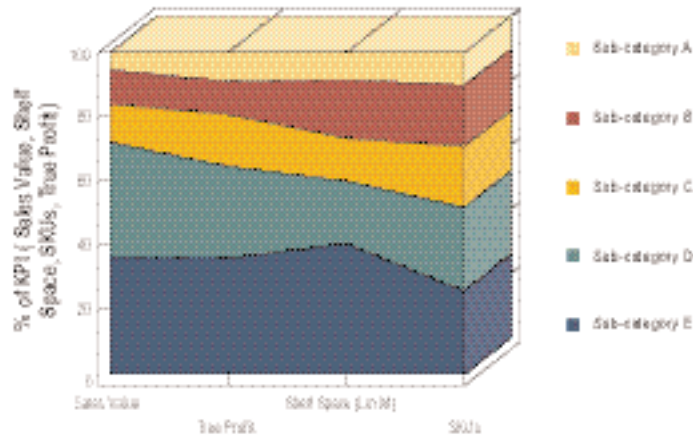
Category Analysis

- Financial performance by SKU, per unit and per week

Chart 2 depicts the units sold vs true profit per unit variance to average. The matrix is useful in viewing the volume and profitability of products or sub-categories in a category and will identify products or sub-categories that are under-performing or may need to 'delete or show cause'. The limitation of such analysis is that further qualitative information may be needed in making practical ranging decisions. Although a product may be a small volume, below average profit product, there may be a specific consumer need that is uniquely covered by that product. The product may add to the total value of the category as distinct from a 'me too' product which captures volume only through cannibalisation.

Chart 3

Retailer Resource Share Analysis by Sub-category

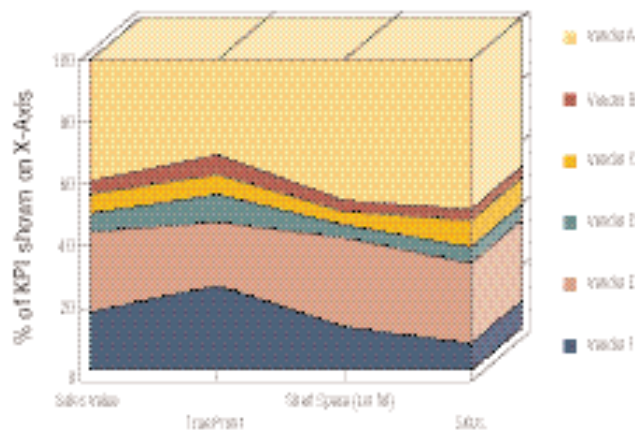


- Relative performance of sub-categories, in terms of:
 - Return on Inventory and return per linear metre of shelf space occupied
 - True Profit per unit sold in sub-category
 - Within selected subcategories, relative performance by pack size

In Chart 3, the analysis of the relative performance of sub-categories of product can demonstrate that although some products have very high volume and gross profit, there may be excessive retailer resources used to achieve that position, thereby reducing the products' true profitability. The corollary is that a product with low volume and low gross margin may require almost no effort to sustain it, the net effect of which is a high true profit for that product.

Chart 4

Retailer Resource Share Analysis by Vendor



- Relative performance by supplier in terms of
 - Return on Inventory
 - True Profit per unit sold and per week
 - Return per linear metre of shelf space occupied

Examining the same data aggregated by supplier Chart 4 can give retailers an estimate of profit by supplier so that they can determine where efficiency is high and where it needs to be improved by comparison with other suppliers to the category.

Outcomes Achieved

As a direct result of the Pilot Projects, Franklins and Lever Rexona have obtained a clear picture of the performance of sub-categories within the Laundry category and the performance of each Lever Rexona product in the range. In addition, Franklins has obtained a clear picture of the performance of every SKU in the range. As a result of this knowledge, the Franklins Laundry Category Manager has been able to bring previously unavailable commercial information to bear on a range review and to identify initiatives with Lever Rexona to enhance joint profitability.

On the supply side, the two companies have, for the first time, a picture of where costs are falling along their total supply chain, enabling them to focus on the biggest cost reduction and process improvement areas. These outcomes have been achieved in less than three elapsed months and have involved relatively small amounts of management time.

Next Steps

This report addresses only the joint Franklins and Lever Rexona Pilot Projects. The projects were undertaken by the project partners to meet specific business objectives.

The critical next steps for them is to implement decisions taken as a result of the information and insights gained through the project and then to measure, using the same model, the outcomes of the decisions taken. The final test of the efficacy of the Methodology, Activity List and Model will come when this final step, Step 6 of the PIETF Methodology, is undertaken later in calendar 2000, once the relevant data is available.



4

Conclusions and Recommendations

Conclusions and Recommendations

Through working together on this initiative, Franklins and Lever Rexona have achieved a new level of understanding of their joint business and of each other's organisations. Building on an initial high level of trust, the two teams have worked on a totally 'open book' basis to identify the true value of their business relationship. By using a common methodology, a common activity set, a common validated model and a trusted third party as project manager and facilitator, the project partners have avoided any risk of mistrust of results.

Most importantly, the partners have identified a trusted mechanism to assist them in quickly identifying the true profit impact of initiatives they may take together or with their other trading partners.

Based on the results of this project, the participants endorse the approach to True Profit measurement set out in the Guidebook, *Assessing the Profit Impact of ECR*, for use in the Australian environment. Based on this project, there is no indication of any need for structural alteration to the process described in the Guidebook.

The Activity List is intended purely as a 'starter kit', to provide common ground to commence discussions. In this project, the Activity List, as published, proved entirely adequate to describe the processes to be modelled. However, where trading partners find the need to extend the List, there is no impact whatever on the approach set out in the Guidebook.

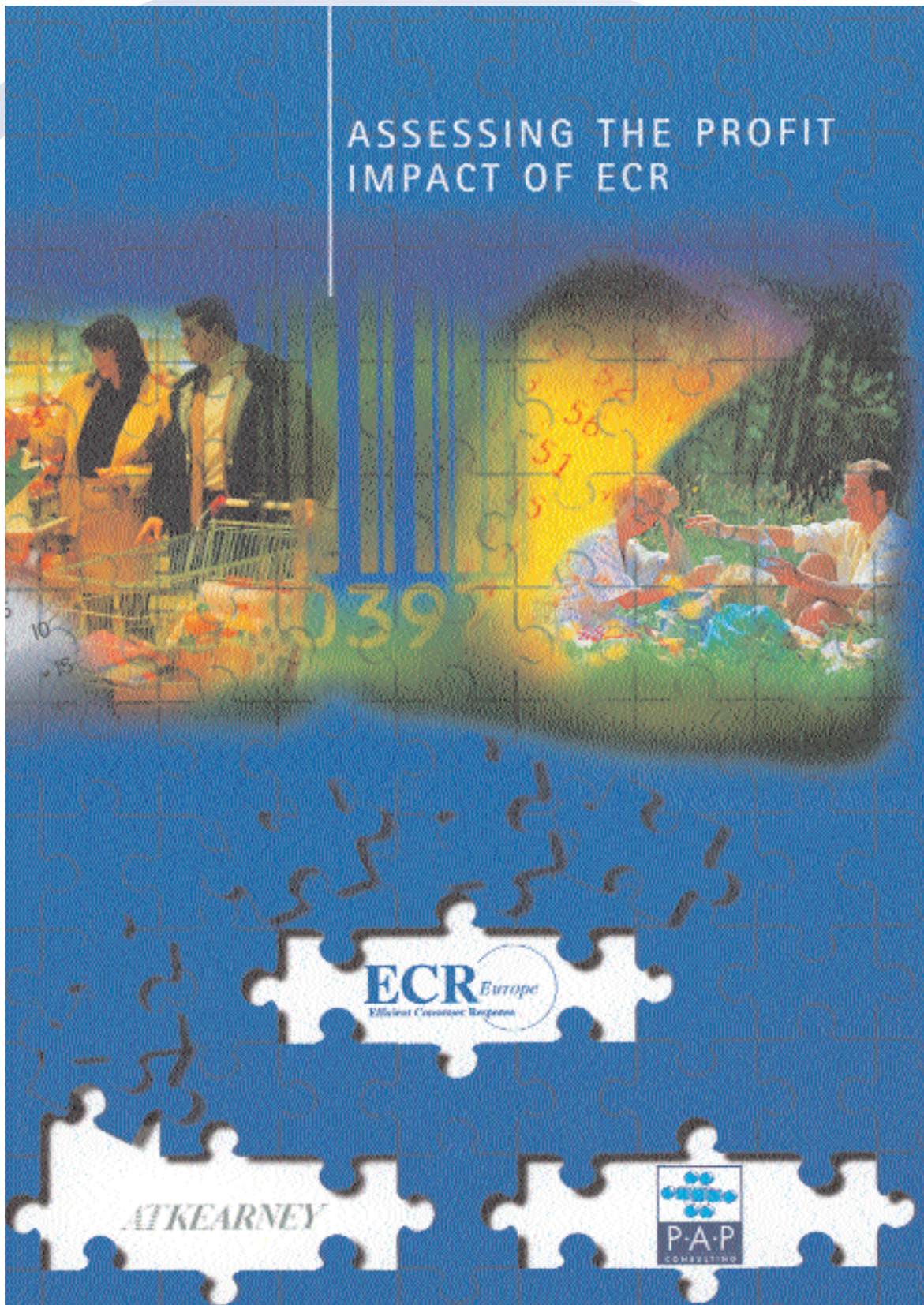
A key conclusion from the ECR Europe Guidebook was that "*small steps lead toward common goals*".

"None of the steps described in the 6 Step approach are spectacular or particularly scientific. Rather, they represent the basic work that has to be done to achieve further evaluation and reporting improvements in common projects. It is only the improvements that are spectacular."

5

**Extract from
“Assessing the Profit Impact of ECR”**

Extract from “Assessing the Profit Impact of ECR”



The following extensive extract is reprinted by kind permission of:

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Scope and objectives of the guidebook

The first objective of the guidebook is to help ECR partners assess the impact of their ECR Supply or Demand side project on operating cost and profits, both internally and for the whole supply chain.

Some projects may not be mutually beneficial. They are nevertheless worthwhile since they remove unnecessary costs from the whole chain. This is the second objective of the book: to provide both partners with a global, in-depth view of the activities and related costs along the chain.

The third objective is to assist partners in understanding how their costs vary and the underlying causes of costs variation, in order to identify opportunities for improving supply chain performance.

This book is intended to be a practical, easy-to-use guide for people from different backgrounds and at different levels in the partners' organization.

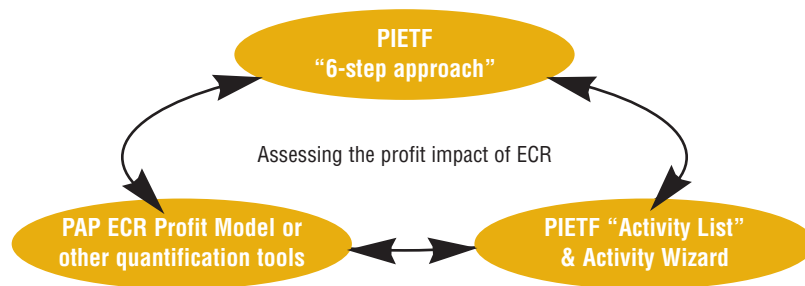
To this end, our group has developed a simple and logical 6-step methodology and an "Activity Wizard" and has successfully used a quantification tool, the PAP ECR Profit Model. By using a common tool and methodology, with proven ability to perform well in various European countries and business environments, the parties will be able to develop a common language and common understanding of both individual and joint activities.

The 6-step approach will be detailed in the following chapters. To keep it lively and practical, each step of the methodology has an introduction, outlines the detailed process and the expected outcome of the step, and is illustrated by pilot experience or business cases.

The "Activity List" and the "Activity Wizard" will facilitate the mapping of activities, which is a key step in the measurement process. The "Activity List" and "Activity Wizard" can be found at the back of the book. More details on those tools developed by our group can also be found in the appendices.

The Profit Impact of ECR Task Force has used the PAP ECR Profit Model in their pilot projects to link costs to activities and to quantify the impact on cost and profits of different ECR improvement concepts. This tool has proven very effective — however, we would like to invite other tool developers and suppliers to support this important aspect of ECR with appropriate tools. A list of key methodology and functionality requirements that an advanced quantification tool should fulfill is included in the appendix to this guidebook.

To make it clear and to get expectations right, none of the above tools can do the quantification on its own. To successfully assess the impact ECR projects have on operating cost and profits requires leveraging all 3 components in combination. The guidebook describes the process and when and how to use which tool.



To note, this approach was designed to assess the cost and profit impact of both demand and supply side projects. However, this methodology is not designed to help partners evaluate the additional revenues arising from such projects: this point has to be taken into consideration when running simulations.

The 6-step approach

Costs and profits linked to ECR projects can be a sensitive subject and a matter of controversy between those who do believe that serious gains and better consumer satisfaction can be achieved through ECR projects and those who do not. It is also a subject of controversy between partners who would like to assess their respective investment. For this reason, the ECR Board entrusted the PEITF with the task of developing a standard approach to assess the profit impact of ECR projects.

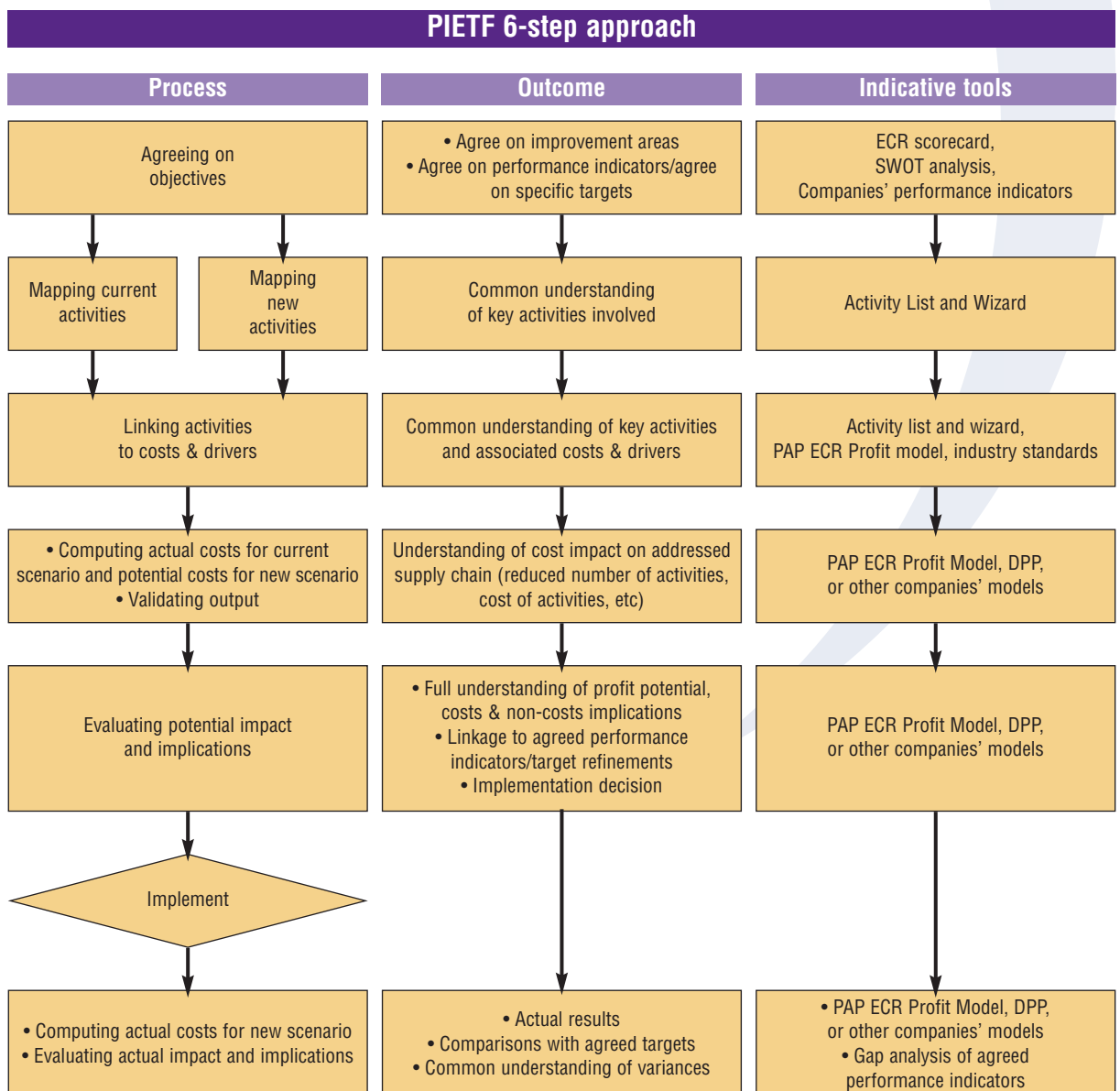
This 6-step approach is very straightforward and combines a sequence of simple steps that will enable partners to detail what they do at present, what they want to do as ECR partners in the future and how much it is going to cost them.

The benefits of using this standard and simple methodology are numerous. Among them, working as partners within a common framework will develop a common language, understanding and approach to the supply chain for trading partners.

This approach has also been designed to serve as a simulation tool. Partners will be able to assess the potential implications of their pilot work before actually implementing it.

A map of the methodology is given hereafter. A clear outcome is expected at the end of each step. Certain tools such as the "Activity Wizard" are suggested for each step of the methodology to facilitate the work of the partners.

This methodology was successfully tested on four different pilots and in different European countries. Therefore, the PIETF is confident that it will meet the measurement requirements of any conceivable ECR project.



Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Step 1: Agreeing on objectives

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

In order to obtain common objectives for the ECR relationship, suitable objectives must be set. This is the most crucial part of any project.

At the outset, both partners must consider existing internal, external and joint strategies. Objectives should be **Specific, Measurable, Achievable, Relevant and Timebound (SMART)**.

<ul style="list-style-type: none"> • Specific: Objectives must relate to identifiable, clearly defined results for the project, be they quantitative or qualitative in nature. • Measurable: There should be an agreed set of performance indicators against which the projected results or improvements can be measured; these can be financial or may be ECR scorecard, or benchmark comparisons. In addition, any investments and rates of return should be considered. • Achievable: Many objectives are over or under ambitious. A demanding but realistic assessment of capabilities will lead the setting of achievable objectives. • Relevant: Objectives should be aligned with the overall corporate strategies of both partners but also support the objectives of the disciplines involved. • Timebound: Projects tend to suffer from over or under management of time. Expected elapsed times are often shorter than those experienced in reality. At the outset, an emphasis on concurrent rather than sequential management when setting time lines is important. Without a firm timetable, nothing will be completed.

The parties should be realistic about their capabilities. The state of their relationship and rules of engagement must be clearly set out and agreed upon before the start.

Resources committed to the project and the expected outcome also need to be clearly defined in this phase.

While the overall objectives may be cost reduction or process improvement oriented, partners should clarify the appropriate level of detail required.

Process

To achieve agreed upon objectives each partner should formalise the approach and define expectations. Having done this, partners should, where necessary and appropriate, harmonise their goals.

Internal preparation of each partner	Joint activities of both partners
<ul style="list-style-type: none"> • Undertake ECR maturity profiling and assess overall strategy and qualitative areas of poor performance (consider long-term issues) • Identify areas of opportunity (relate to the qualitative and quantitative issues identified to the high level/ECR strategy) • Establish return on investment measures and criteria • Assess timescale, skills, learning, data, modelling and implementation issues (ensure adequate project championing at an appropriate level) 	<ul style="list-style-type: none"> • Establish contacts with relevant people at trading partner and establish level of interest • Consider the rules of engagement under which you might proceed and complete and joint ECR Maturity profile • Establish what you want to achieve and what the issues and questions you need to answer are • Seek commitment to proceed and develop agreement on rules of engagement • Assess the maturity profile and agree what actions and level of information are required for desired improvements • Seek clarification of any issues or concerns relating to the areas highlighted in the exercise to date • Finalise agreement on rules of engagement • Identify areas for mutual improvement • Agree on level of information to be utilised • Agree on specific, achievable, measurable, relevant, and timebound objectives • Agree on timetable, resources required • Identify the project controllers • Develop data formats for data collection

Tools to be applied: ECR scorecard, SWOT analysis, companies' performance indicators

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Outcome

At the end of this step, improvement areas, performance indicators, targets and resources have been jointly agreed and specified.

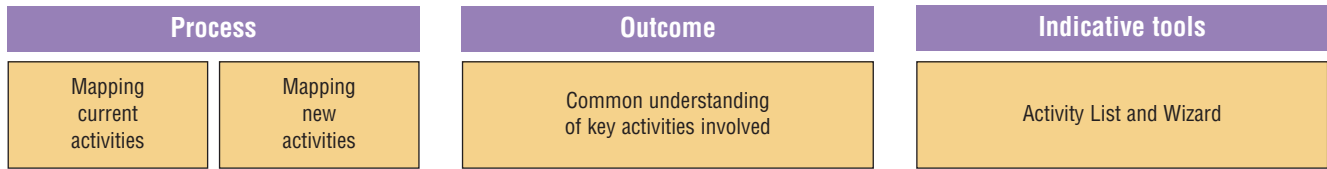


- From bulk to cross-docking
 - From paper to EDI
 - From manual to automated store ordering
 - Balancing “traffic builders” and “sleepers”
-
- % full truck loads
 - % perfect orders
 - % errors
 - Category movement
 - True Profit
-
- 30% increase in FTLs, 10% decrease in picking activity
 - 90% EDI penetration
 - 95% perfect orders
 - 1.5% True Profit improvement
-
- 30% of logistic management time for three months
 - 35% of category management time for 4 months
 - ...

Example

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Step 2: Mapping current and new activities



The next stage of the process is to map or identify what activities are occurring and their place in the value/supply chain.

This process is a critical point in the whole project as both partners develop a mutual understanding of what is being done and by whom. It is also critical for establishing the base against which to measure the quantitative impact of projects and assess the potential qualitative implications.

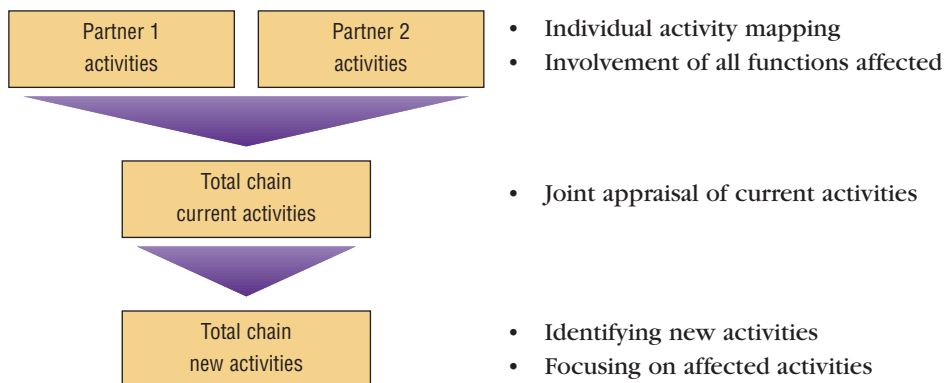
To assist readers in this work, a standard list of activities has been created by the PIETF. It lists many activities undertaken on both supply and demand side management, from high to individual level. These activities are structured and organised by the PIETF “Activity Wizard” to facilitate their selection and mapping. The reader will find a chapter describing capabilities of the “Activity Wizard” in the appendix.

However, mapping the activities can also be achieved by simply listing in numeric sequence the existing activities. In essence, the objective is to flow map or sequentially record what is being done and by whom in an agreed way.

One of the most important findings of the group was that by using a common platform, like the “Activity List”, the effectiveness and efficiency of the joint task is significantly enhanced.

Process

The relevant activities are first mapped by each individual partner and then individually examined. By this means, each partner gains a full understanding of the whole process. The “Activity Wizard” facilitates and accelerates this process.



Care should be taken to involve all the departments concerned in this step. As explained later in the pilot findings, consensus on the current and new activities within each organisation and between partners must be reached before measurement begins.

Outcome

Based on the intensive screening process which is jointly performed by the functional experts of both partners, an in-depth understanding of the key activities affected by the new process is gained. This is critical for the success of the project, since these activities form the basis for determining cost drivers. These in turn are an integral, defining part of the model.

More detail on the “Activity List and Wizard” can be obtained from the appendix.

Tools to be applied: “Activity List and Wizard” (see appendix)

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Pilot experience

The process of mapping activities in the Albert Heijn/Lever/Procter & Gamble pilot was an iterative process involving various functions of the companies. It enabled partners to develop a consensus both within each organisation and between the three partners, to successfully map activities, hence facilitating the following steps.

What was intended?

Quantification of the benefits from pallet coding, used to simplify the supply chain by eliminating control tasks.

What was done?

The major time components for the current and new activities were mapped:

- Preparation of papers/picking orders
- Preparation of documents and loading orders
- Waiting time for truck unloading
- Reception and control
- Booking and control
- Putting away received goods

At that point the activity list counted nearly 200 activities. The various disciplines were asked to use the “Wizard” and mark the activities affected by this pilot, which left 93 activities. From those only 44 activities were marked by two or more members of the team; this indicates the variance in understanding and perception.

What was achieved?

Important potential time savings were identified and quantified: after analysis and discussion, there was consensus that 25 activities were recognisable, measurable and affected by execution of the pilot. This fact resulted in the sharpening of the project definition and scope.

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Step 3: Linking activities to costs and drivers

Process	Outcome	Indicative tools
Linking activities to costs & drivers	Common understanding of key activities and associated costs & drivers	“Activity List and Wizard”, PAP ECR Profit model, industry standards

The participants have now mapped the activities. The next stage is to understand process costs before and after implementation.

To enable partners to do this, a thorough understanding of what the costs are, and what makes them vary, is required. Parties must then calculate the variances of the new resource set.

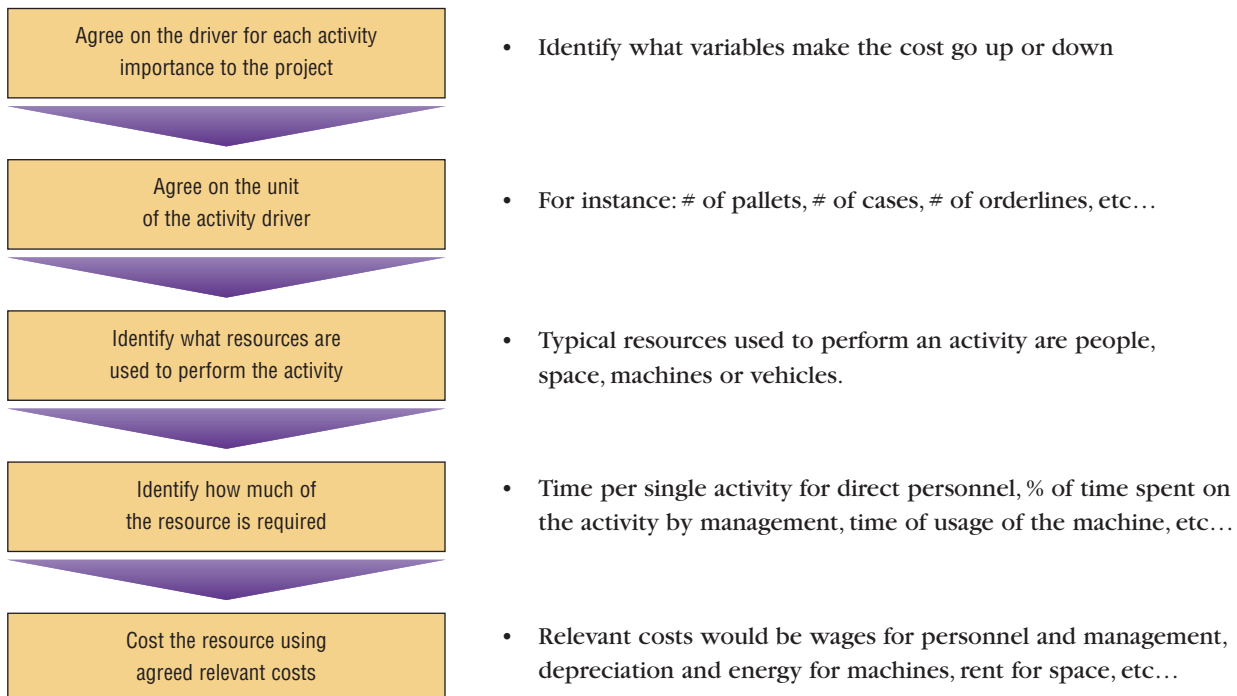
For example, if an activity takes a certain amount of time now, will it take a longer or shorter time in the future? The variance will hence be the amount of time taken. Other costs such as wages, may remain the same. It is crucial to understand what resources are being applied to each activity.

At this stage, the focus shifts to understanding how the activities utilise resources such as labour, space and equipment and how the utilisation and costs will change under the new circumstances.

The “Activity List and Wizard” have helped to identify what activities are being undertaken. It also provides some guidance on the type of costs and the behaviour associated with them. The “Activity List” is in the appendix. However, unless an Activity Based Costing tool has been developed, the task of linking activities to costs and drivers must be performed.

Process

There is no need to be an ABC expert to link activities to the relevant costs and drivers. Common sense is sufficient. However, the reader should be aware of certain general principles:



Here again, the “Activity List” may be of a great help, as drivers are indicated for each activity performed. However, if the default drivers suggested do not fit the project, partners can easily adapt the driver list to their specific situation.

Tools to be applied: “Activity List and Wizard” (see appendix), PAP ECR Profit Model, industry standards

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Outcome

The common understanding of key activities and associated costs and drivers achieved in this step is a major prerequisite for further cost assessment. It encompasses a number of significant benefits:

- mutually accepted cost definitions
- upfront alignment prior to physical piloting
- ability to model complex distribution pathways at the SKU level

Example

Company process	Activities	Drivers	Related costs
Replenish	Prepare picking papers or data	# of orderlines per customer	Wages
Replenish	Pick orders and move to loading area	# of units moved	Wages
Replenish	Refill picking location from buffer	# of units refilled	Wages, machine amortisation
Replenish	Plan delivery routes and stops	# of orders	Wages

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Step 4: Computing actual costs for current scenario and potential costs for new scenario

Process	Outcome	Indicative tools
<ul style="list-style-type: none"> Computing actual costs for current scenario and potential costs for new scenario <ul style="list-style-type: none"> 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 more detailed the Activity Based Costing model, the more difficult it is to share data. One of the advantages of building costs up by activity is that relatively low level costs such as wage rates and time taken can be used to accurately represent the changes in cost. This approach does not require the trading partners to unveil high levels of cost information.

It is critical for the participants in the study to use a consistent model: to agree on the format, the computation and the inputs; otherwise disputes over the accuracy and treatment of costs will arise. This applies particularly where cost increments or declines are likely to arise for trading partners or where there is an agreement to share cost benefits and to charge increased costs. Alignment on any common method (be it a spreadsheet or a more advanced Activity Based Costing tool) should be a part of the initial framework. Too many projects fail because each trading partner uses a different model to assess the cost changes. A great deal of time is also wasted in trying to align the understanding of these models, the way they handle costs, and in the trust and confidence building process.

Adapting a simple model through the various stages of the project to incorporate additional details is far easier than starting with a complex model.

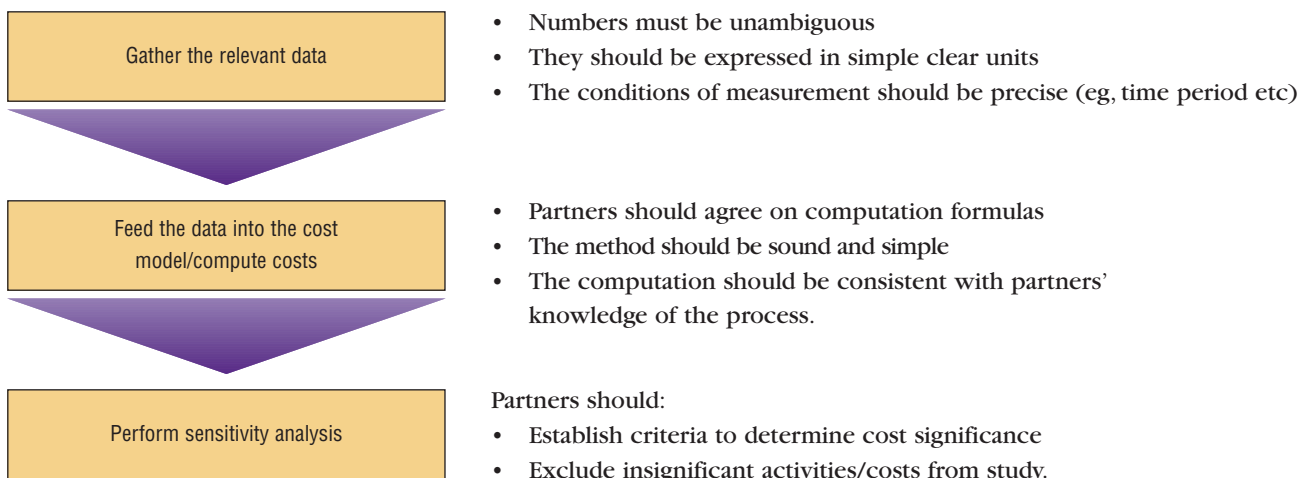
Validation can also be demanding if a very complex methodology is used. However, if the number of base costs and drivers are simple and clearly understood and the mathematics are straightforward, the validation process can be significantly simplified.

One additional element that should be considered in the outcome is the format of the required information. Information can be displayed in many ways (for example, level of total costs, costs per load, per case, per consumer unit). Equivalent costs can be used such as costs per litre or costs per cubic metre or costs per kilo. In selecting these different levels, partners must compare like with like.

Once partners have addressed these issues, they must ensure that they have considered both high cost/low frequency activities and low cost/high frequency activities as centres of focus.

Variance charts as well as ranking charts can also be useful in this exercise. It is worthwhile to consider looking at how partners can understand what the drivers are in relation to the high cost levels identified.

Process



Tools to be applied: PAP ECR Profit Model, DPP or other companies' models

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Top-down vs. bottom-up calculation

When cost data from the General Ledger are allocated to the various activities and cost objects, we call this a top-down method. But costs can also be defined bottom-up, by measuring the activities and relating them to a rate.

Example of a top-down calculation

The total salary cost for the activity order picking in a Distribution Centre is Euro 3.25m, or Euro 62,500 per week. The weekly order production is 250,00 units. The cost per package is $62,500/250,000 = \text{Euro } 0.25$ per unit.

Example of a bottom-up calculation

The cost price of the hourly wage for order picking is Euro 36.00 per hour. From time measurement, the order picker picks an average of 150 units per hour. The cost per unit is $36/150 = \text{Euro } 0.24$ per unit.

In the following cases, bottom up calculations may be useful:

- When top-down data is unavailable or difficult to obtain at the required level of detail;
- When there are differences between cost objects that can only be defined in this way (when calculating totals, the general level can serve as a check);
- When the required or desired level of detail for the calculation of the actual activity is relatively high;
- When the top-down calculations are related to norms and it is not certain whether these norms can actually be achieved.

An advantage of the bottom-up calculation is that standard rates can often be used.

Outcome

Partners now have a comprehensive understanding of the cost dimension and their interrelationships. These may involve:

- changes in time
- changes in base costs
- changes in utilisation of resources.

These may have implications for revenues, profits, credit terms, inventory levels, etc, providing a detailed understanding of the activities and costs under review.

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Step 5: Evaluating potential impact and implications

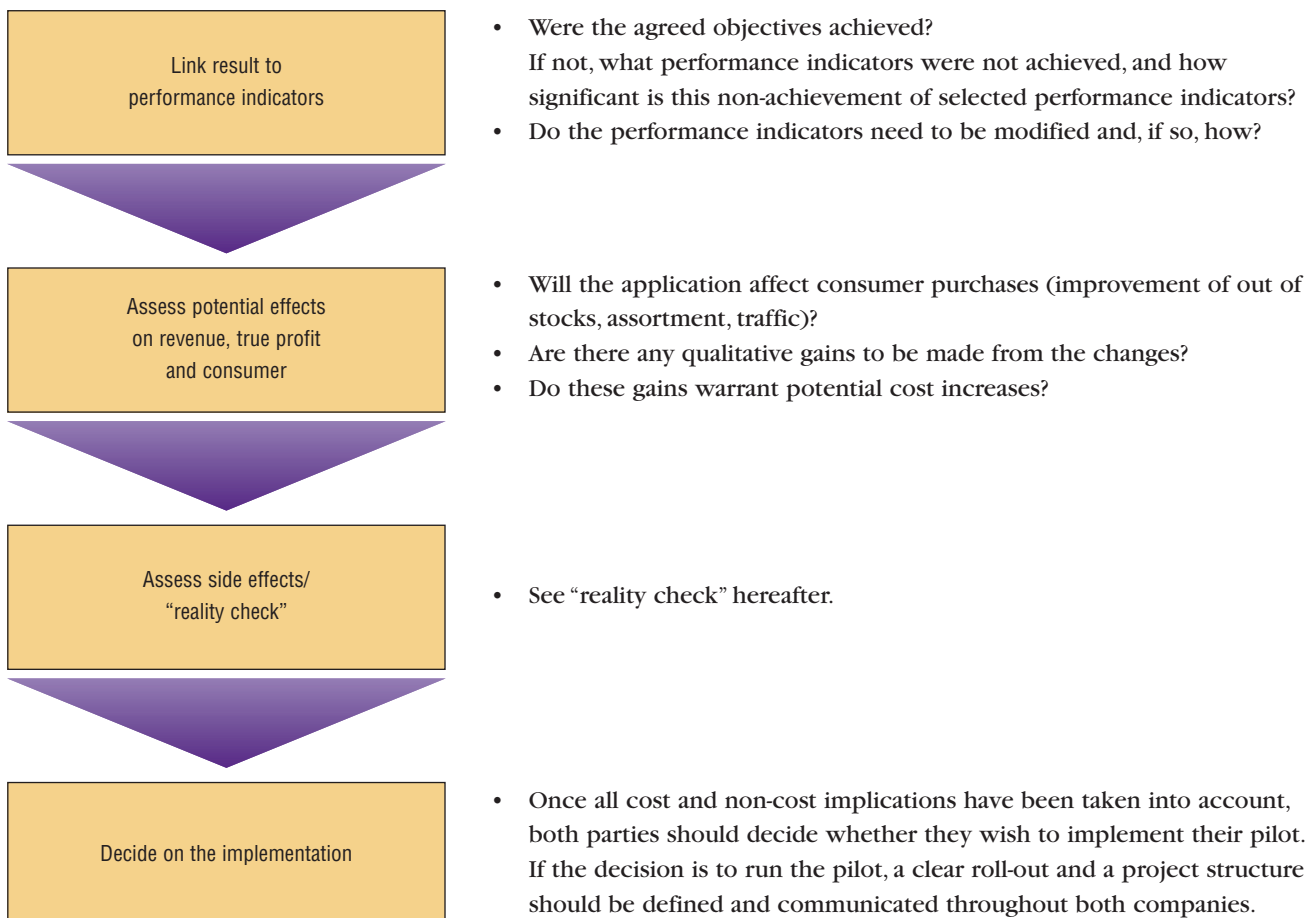
Process	Outcome	Indicative tools
Evaluating potential impact and implications	<ul style="list-style-type: none"> • Full understanding of profit potential, costs & non-costs implications • Linkage to agreed performance indicators/target refinements • Implementation decision 	PAP ECR Profit Model, DPP, or other companies' models

With the computed and validated results generated in step 4, it is now possible to look at the overall levels of cost and profitability. Potential investments should be reviewed, as well as changes in processes, and the implications for training, knowledge and human resources.

All these implications should then be balanced by the potential cost savings and improvements in profit and sales. This will determine whether to proceed with the pilot or not.

If the view is that the improvements will meet or exceed the set target, or are valuable enough to consider undertaking pilot work, the partners should consider who will have to make investments and changes, where the profit improvements will come from and where any cost decreases or increases will apply.

Process



Tools to be applied: PAP ECR Profit Model, DPP or other companies' models

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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The “reality check”

Before implementing the pilot, partners should go through a “reality check”. The following questions are examples of issues that should be checked prior to implementation of the pilot.

Are all conditions for implementation present?

- Are there any barriers to the short-term implementation of the changes (for example, learning process, contracts,...)?
- Are there any barriers specific to the company situation (collective labour agreements, location, etc)?
- Are there preparatory activities that need to be executed first (planning model, EDI, etc)?
- Are there any necessary changes that need to be made outside the project (administrative system, commercial conditions, etc)?
- Have all those who are involved or may be involved within the organisation been informed?
- Will sufficient economies of scale be achieved?

Are there any risks during the implementation?

- Does complexity increase with more participants?
- Will the complexity be manageable?
- Are there trade-offs between cost and quality?
- What is the impact in the long term?

Are there strong cultural barriers?

- Are the business relationships between partners strong enough?
- Is the ECR concept sufficiently spread across partners' organisations?
- Is there full support from the company top management?

Outcome

By this time, partners will have a full understanding of profit potential, cost and non-cost implications. If achievements conform to agreed performance indicators, the way is then open for the formal implementation decision.

Case study

Case: reality check on a cross-docking initiative by a fashion manufacturer and a retailer

Are the cost savings realistic?

Yes, sufficient volume is generated because the retailer is introducing cross-docking with several producers simultaneously.

Are the conditions present for implementation?

- The manufacturer supplies exactly the right volume just in time. If not, the control costs would get out of hand. In this case study 64 deliveries arrive at the DC instead of one.
- Both partners can process EDI
- There are enough joint quantitative and qualitative advantages
- Qualitative advantages do indeed appear in practice.

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Example of a “reality check”

	Short term savings	Medium term savings	Long term savings
Manufacturer <ul style="list-style-type: none"> • Pick orders • Deliver products 	✓ ✓		
DC retailer <ul style="list-style-type: none"> • Procure finished products • Receive/store products • Manage customer orders • Pick orders • Deliver products • Handle returnables • Manage invoices 	✓ ✓ ✓ ✓	✓ ✓ ✓	✓
Store <ul style="list-style-type: none"> • Receive/store products 	✓	✓	
Boundary conditions	<ul style="list-style-type: none"> • Adaptation of retailer’s administrative system • Commercial conditions need to be matched • Long term: expansion of transshipment area 		
Risks	<ul style="list-style-type: none"> • Magnitude of scale plays a limited role: amount of products/number of suppliers related to complexity/risks (the more participants, the higher the risk of something going wrong) 		

Step 1 Agreeing on objectives	Step 2 Mapping current and new activities	Step 3 Linking activities to costs and drivers	Step 4 Computing costs Validating output	Step 5 Evaluating potential impact and implications	Step 6 Computing and evaluating actual costs and implications
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Step 6: Computing and validating actual costs and evaluating implications for new scenario

Process	Outcome	Indicative tools
<ul style="list-style-type: none"> • Computing actual costs for new scenario • Evaluating actual impact and 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 of agreed performance indicators

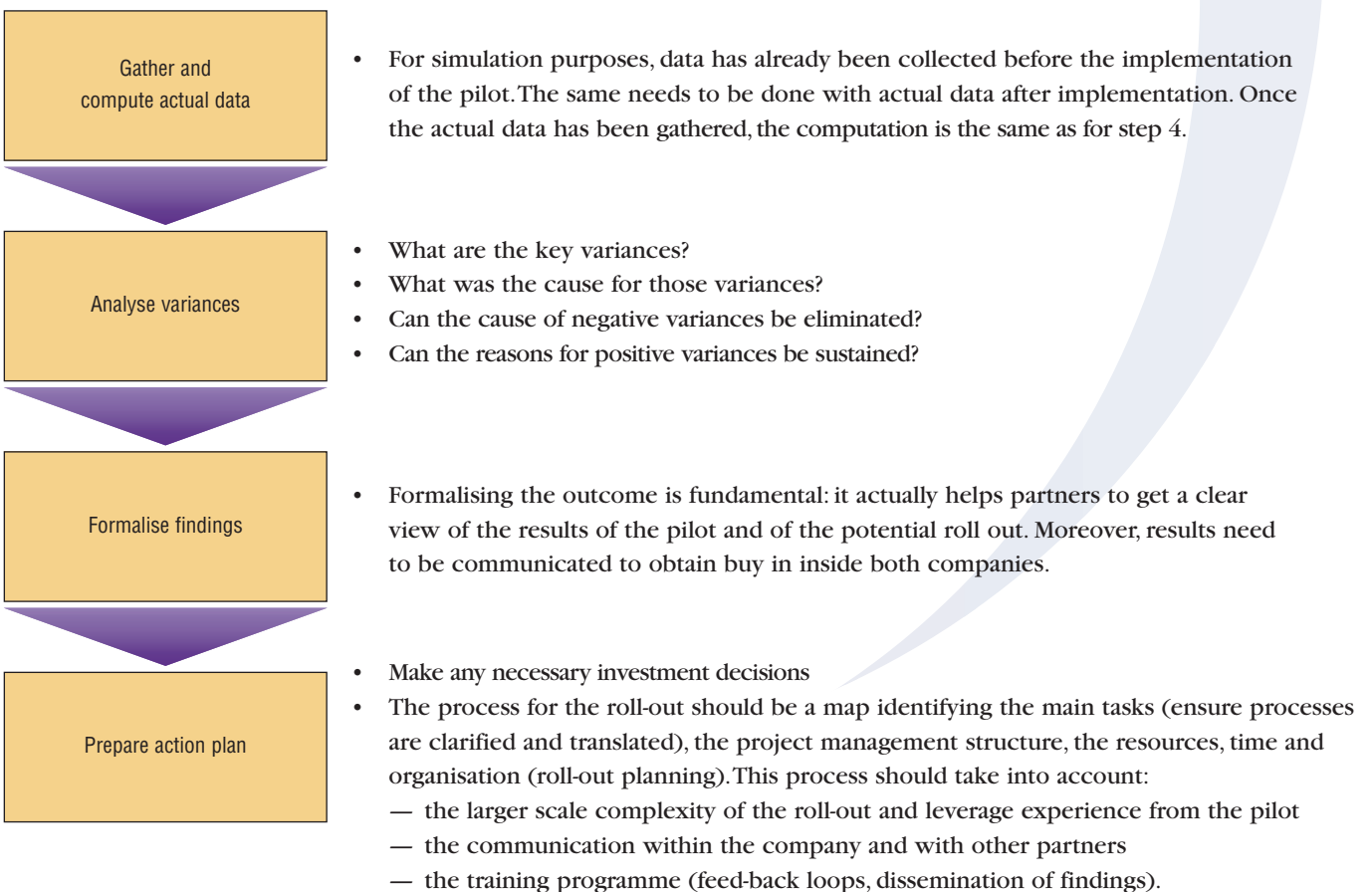
The final step in the overall process is to compute the actual costs arising in the new scenario and to evaluate the impact and implications of what has been achieved in both qualitative and quantitative terms.

Of course, it is vital to understand the reasons for the variance between what was predicted and what actually happened. It is also vital to balance this by using strategic conversion methods such as the Balanced Scorecard to consider what improvement in processes might be required to bridge any gap between expectation and reality.

If results exceeded expectations, partners should try to understand the positive aspects so that those things that contributed to over-achievement can be replicated.

The model used to compute the results should be robust enough to feed in the actual data and to provide a rapid comparison between projection and reality. It is crucially important to understand why differences occurred, what assumptions were inaccurate, and why, so that this can be fed back into the process. This facilitates continuous learning and process improvement.

Process



Tools to be applied: PAP ECR Profit Model, DPP or other companies' models, gap analysis of agreed performance indicators

Appendix: The Activity List

In Activity Based Costing, activities are described using one or more verbs followed by an attached object, for example “replenish store shelves”, “checking incoming goods” or “planning a promotion”.

As a rule of thumb, those activities described account for more than 5% of a person’s time or 5% of the capacity of a cost carrier. Activities can be grouped into major activities or business processes.

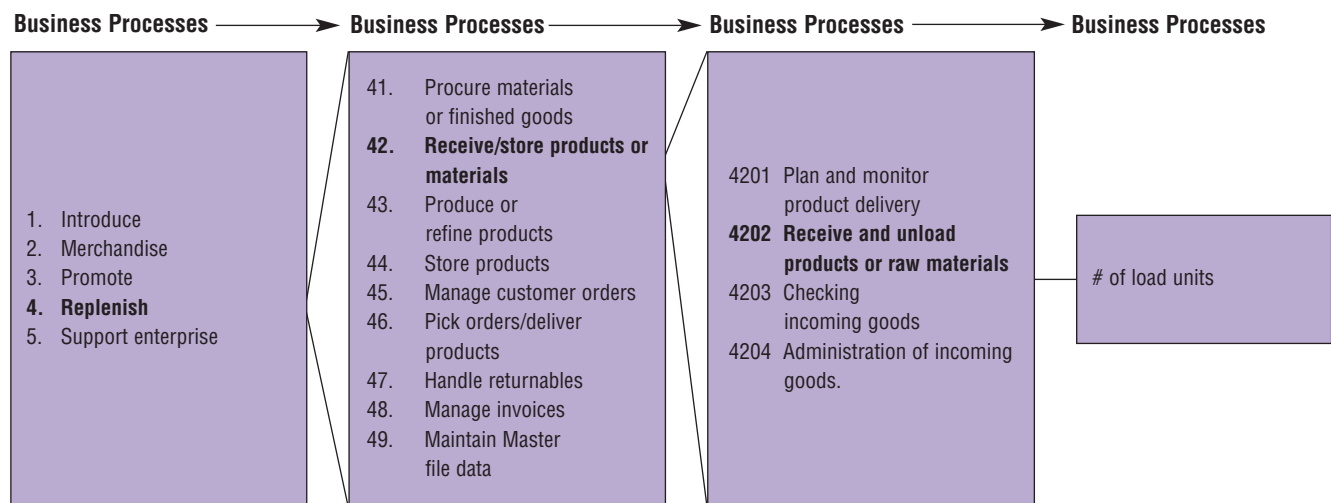
A standard “Activity List” has been developed to provide rapid insight into activities. This list was composed within the context of ECR Europe and contains a large number of activities that appear in the value chain. They are numbered and described in unambiguous terms to ensure that partners in the chain use the same definitions.

The “Activity List” can serve as a basis for discussion between partners where activities are reviewed by different disciplines. The desired outcome of such a discussion is a list of the activities that will probably be influenced by the initiative.

The activity list is composed as follows:

- Activities (eg, “Scrap returned products”)
- Major activities (eg, “Handle returnables”)
- Business processes (eg, “Replenish”)

Set-up of the standard activity list



The “Activity List” is generic for the whole chain. For each activity, an indication is made whether it is applicable to Manufacturers (Mfct), Wholesalers (Whol) or Retailers (Ret). These indications refer to the partners in the supply chain (the “parties around the table”), not to physical locations. An example of physical locations (eg, a retailer) are “Headquarters”, “Regional DC”, “Store” etc, (see also appendix on “Wizard”).

For most activities an activity driver is assigned. It is impossible to define activity drivers which are generic for all partners and situations. Therefore this should be seen as a “likely” activity driver, a suggestion which can help identifying activity drivers in a specific case. The activity drivers, or “clients of the activity”, are broken down into SKU related drivers and non-SKU related drivers. This way activity drivers can be identified which are directly linked to SKU characteristics and those which are related to other variables, like consumer or account related drivers. For certain activities activity drivers are described as “multi-dimensional”. This means that in practice not one single activity driver can be defined. Finally, all “overhead” related activities have no driver assigned.

The activity list also indicates cost types. This is a general way of calculating the cost per activity as described below. This is intended to be a “first help” in calculating the costs per activity on the object level. Generally, 7 cost types can be distinguished.

Generic ABC Methodology/types of costs

Think of Activity Based Costing, the ECR Activity Wizard, this Guidebook and the PAP ECR Profit Model’s Cost Types as parts of a toolkit.

Activity-Based Costing is a tool bag. It holds a number of tools; some of these may be typical activity types, typical resource types, typical cost types. The PIETF's Guidebook and ECR Activity Wizard give many examples of these.

The PAP ECR Profit Model's Cost Types are like a set of screwdrivers in the tool bag. Each screwdriver is used to tighten screws; each screwdriver is designed for a size and type of screw. But those screws can be tightened by the appropriate screwdriver whatever the screw's length and wherever the screw is used.

The list below (numbers 1 to 7) helps you to decide which screwdriver to use on which screw, wherever it is used.

- 1. Overhead cost** is a cost type which is incurred through an activity which is not directly linked to a SKU. For example, Activity Number 2101 Monitor Consumer Satisfaction [Business Process 2: Merchandise; Major Activity 21: Manage Product Categories:] is an example of **Cost type 1: overhead cost**.

Overhead costs calculation: total cost x the percentage of the overhead that is related to the activity/the required cost unit*. For example, you monitor consumer satisfaction through syndicated or "Omnibus" Market Research, and this costs 150,000 Euros annually. Forty percent of this cost can be attributed to existing Product Categories. The overhead cost attributed to Activity Number 2101 would be 150,000 Euros multiplied by 0.4 (or 40 percent of 150,000 Euros), or 60,000 Euros.

- 2. Cube-related cost** is a cost type which is incurred according to the cubic space taken by the product eg, in storage or in transport. For example, Activity Number 4410 Storage of Products on Store Shelf [Business Process 4: Replenish; Major Activity 44: Store Products:] is an example of **Cost type 2: cube-related cost**.

Cube related costs calculation: total cost [eg, Storage]/total cubic metre [storage] space available x cubic metre dimensions of the stored object x length of time in store/the required cost unit*. For example, the cost of storage in the warehouse is 1,000,000 Euros each year, and the warehouse has 100,000 cubic metres available for storage — the resulting cost is then 10 Euros per cubic metre per year.

If the product is stored on a pallet 100 cm wide, 120 cm deep and 180cm high (including the pallet), the stored volume of the product is 2.16 cubic metres. If the product is in store for 2 weeks the cubic related storage costs are 10 Euros per cubic metre x 2.16 cubic metres x (2 weeks/52 weeks) = 0.83 Euros (or divide by the appropriate figure if your cost unit is not the Euro).

- 3. Object-related cost** is a cost type which is incurred by a unit when resource activity is applied to it. For example, Activity Number 4409 Put Away Products in Back Room [Business Process 4: Replenish; Major Activity 44: Store Products:] is an example of **Cost type 3: object related cost**.

Object related costs calculation: resource cost during a time period x working time taken/the required cost unit*. For example, a person's labour during a work shift cost 10 Euros per hour or 0.167 Euros per minute, and putting the product away in the back room (of the Outlet or Store: Activity Number 4409) takes 2 minutes. The Object-related cost is calculated: 2 minutes x 0.167 Euros per minute = 0.333 Euros for this activity (or divide by the appropriate figure if your cost unit is not the Euro).

- 4. Financial inventory cost** is a cost type which is incurred by stock in its passage through the supply chain. For example, Activity 4411 Inventory Cost of Products on Store Shelf [Business Process 4: Replenish; Major Activity 44: Store Products:] is an example of **Cost type 4: financial inventory cost**.

Financial Inventory costs calculation: value of inventory x interest rate in percent/the time period required. For example, at any one time in the warehouse there is 2 weeks inventory of the product: 4 cases. The cost per case is 30 Euros, and our cost unit is a case. The interest rate for borrowed money during the period would be 10 percent. The Financial Inventory cost is calculated by multiplying the value of the inventory with the interest rate for the period in stock, ie, 4 cases x 30 Euros per case x 10% x (2 weeks/52 weeks) = 0.462 Euros (or divide by the appropriate figure if your cost unit is not the Euro).

Note that this calculation could return a "positive" figure representing [potential] interest earned [ie, a Benefit, instead of a Cost]. **Note also** that Cost type 4: **Financial Inventory Cost**, like Cost type 7, is often multi-dimensional.

- 5. Time-related administrative cost** is a cost type which is incurred as an element of time within the overall time taken for an activity. For example, Activity Number 4605 Prepare Shipping Documents [Business Process 4: Replenish; Major Activity 46: Pick Orders and Deliver Products:] is an example of **Cost type 5: time-related administrative cost**.

Time-related administrative costs calculation: total cost of activity/number of objects actioned (eg, Cost of preparing shipping documents/number of sets of shipping documents prepared = cost per order).

6. **Event-related cost** is a cost type which is incurred when a specific event occurs. For example, Activity Number 4901 Maintain Product Bill of Materials [Business Process 4: Replenish; Major Activity 49: Maintain Masterfile data:] is an example of **Cost type 6: event-related cost**.

Event-related costs calculation: costs per event x number of events/the cost unit required*. For example, if the masterfile record for the product costs 5 Euros to update, and the masterfile needs updating with new data once during the study period, the Event-related cost calculation will be 5 Euros (or divide by the appropriate figure if your cost unit is not the Euro).

7. **Multi-dimensional cost** is a cost type used where two or more circumstances may be appropriate. An example would be where Transport costs may be calculated either using Cost type 2 (Cube-related cost) OR a unit-related fee (ie, cost per case or per pallet). Activity Number 4609 Transport to Customer [Business Process 4: Replenish; Major Activity 46: Pick Orders and Deliver] is an example of multi-dimensional cost.

Multi-dimensional costs are calculated according to the elements that make up the costs under the appropriate circumstances. For example, if Transport Costs are incurred both for handling the pallet in loading and unloading (Cost type 3, Object-Related) and for the Transport, according to distance and cube, a pallet of 100 cases could cost 2 Euros for Handling, 0.1 Euro per km over 100 km (10 Euros in total) and 3 Euros for insurance. The total of these multi-dimensional costs would be 15 Euros.

These ECR cost types are generic. In other words, the calculations will work in the same way for each cost type wherever it is used — by manufacturers, by transport companies, by wholesalers, by retailers.

The cost types can be used within an Activity-Based Costing structure, and are the same cost types as those employed by partners in the same supply chain using PAP's ECR Profit Model.

* *Required cost unit is the unit in which the results are to be expressed. Examples of required cost units are Pallet/Case/ Outer.*

ActNo	Activity	Major ActNo	Major Activity	Proc No	Business Process	Mfct	Whol	Ret	Activity Driver SKU related	Activity Driver not SKU related	Cost type Indic.
1101	Manage basic research projects	11	Conduct research	1	Introduce	X		X			1
1102	Monitor industry trends	11	Conduct research	1	Introduce	X		X			1
1103	Monitor consumer requirements	11	Conduct research	1	Introduce	X		X			1
1104	Conceive new or extended form. or tech. constr.	11	Conduct research	1	Introduce	X		X	# of SKU's under development		6
1105	Conceive new or extended packaging	11	Conduct research	1	Introduce	X		X	# of SKU's under development		6
1106	Conceive new process technologies	11	Conduct research	1	Introduce	X		X	# of SKU's under development		6
1201	Manage development projects	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1202	Develop new or extended formulations incl. own label	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1203	Develop new or extended packaging incl. own label	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1204	Develop new process technologies	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1205	Execute prototype and sample testing	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1206	Consumer test new or extended products	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1207	Protect proprietary products and technologies	12	Develop new products	1	Introduce	X		X	# of SKU's under development		6
1208	Manage product launch	12	Develop new products	1	Introduce	X	X	X	# of SKU's under development		6
1209	Monitor product launch	12	Develop new products	1	Introduce	X	X	X	# of SKU's under development		6
2101	Monitor consumer satisfaction	21	Manage product categories	2	Merchandise	X		X			1
2102	Monitor profitability of products	21	Manage product categories	2	Merchandise	X	X	X	# of SKU's		6
2103	Develop assortment	21	Manage product categories	2	Merchandise	X	X	X	# of categories		6
2104	Select assortment	21	Manage product categories	2	Merchandise	X		X	# of categories		6
2105	Allocate and manage shelf space	21	Manage product categories	2	Merchandise	X		X	# of SKU's		6
2106	Plan merchandising strategies	21	Manage product categories	2	Merchandise	X	X	X	# of SKU's		6
2107	Execute merchandising strategies	21	Manage product categories	2	Merchandise	X	X	X	# of SKU's		6
2108	Survey shopper behaviour	21	Manage product categories	2	Merchandise			X	# of surveys		6
2201	Maintain shopping ambience and atmosphere	22	Manage store operations	2	Merchandise			X			1
2202	Assist shoppers	22	Manage store operations	2	Merchandise			X			1
2203	Provide customer or consumer service	22	Manage store operations	2	Merchandise	X	X	X	# of consumers		1
2204	Manage check out service	22	Manage store operations	2	Merchandise			X	# of consumers		1
2205	Manage product age	22	Manage store operations	2	Merchandise	X		X	# of SKU's		6
2206	Manage store space	22	Manage store operations	2	Merchandise			X			1
2207	Modify store layout or store remodelling	22	Manage store operations	2	Merchandise			X			1
2301	Develop own label concept and profile	23	Manage brands	2	Merchandise	X	X	X	# of SKU's own label		6
2302	Create or licence product	23	Manage brands	2	Merchandise	X	X	X	# of SKU's		6

ActNo	Activity	Major ActNo	Major Activity	Proc No	Business Process	Mfct	Whol	Ret	Activity Driver SKU related	Activity Driver not SKU related	Cost type Indic.
2303	Define features, attributes and benefits	23	Manage brands	2	Merchandise	x	x	x	x		6
2304	Establish product positioning	23	Manage brands	2	Merchandise	x	x	x	x		6
2305	Define promotion strategy	23	Manage brands	2	Merchandise	x	x	x			1
2401	Define distribution channel strategies	24	Manage channel strategies	2	Merchandise	x	x	x			1
2402	Define store format strategies	24	Manage channel strategies	2	Merchandise				x		1
2501	Monitor trade customer requirements	25	Manage trade sales	2	Merchandise	x	x				1
2502	Define and manage key accounts	25	Manage trade sales	2	Merchandise	x	x			# of accounts	6
2503	Define and manage sales territories	25	Manage trade sales	2	Merchandise	x	x			# sales territories	6
2504	Define and manage sales incentives programmes	25	Manage trade sales	2	Merchandise	x	x			# sales incentives programmes	6
2505	Monitor sales performance	25	Manage trade sales	2	Merchandise	x	x		# of SKU's		6
2506	Monitor account performance	25	Manage trade sales	2	Merchandise	x	x			# of accounts	6
2507	Manage trade customer complaints	25	Manage trade sales	2	Merchandise	x	x			# of complaints	6
3101	Plan product advertising campaigns	31	Manage advertising	3	Promote	x	x	x	x	# of product advertising campaigns	6
3102	Execute product advertising campaigns	31	Manage advertising	3	Promote	x	x	x	x	# of product advertising campaigns	6
3103	Plan retail advertising campaigns	31	Manage advertising	3	Promote	x	x	x	x	# of retail advertising campaigns	6
3104	Execute retail advertising campaigns	31	Manage advertising	3	Promote	x	x	x	x	# of retail advertising campaigns	6
3105	Monitor product advertising effectiveness	31	Manage advertising	3	Promote	x	x	x	x	# of product advertising campaigns	6
3106	Monitor retail advertising effectiveness	31	Manage advertising	3	Promote	x	x	x	x	# of retail advertising campaigns	6
3201	Plan consumer promotion programmes	32	Manage consumer prom.	3	Promote	x	x	x	x	# of consumer promotions	6
3202	Develop consumer promotion materials	32	Manage consumer prom.	3	Promote	x	x	x	x	# of consumer promotions	6
3203	Execute consumer promotion programmes	32	Manage consumer prom.	3	Promote	x	x	x	x	# of consumer promotions	6
3204	Sponsor events	32	Manage consumer prom.	3	Promote	x				# of sponsored events	6
3205	Plan in-store consumer promotion events	32	Manage consumer prom.	3	Promote		x	x	x	# of consumer promotions	6
3206	Execute in-store consumer promotion events	32	Manage consumer prom.	3	Promote		x	x	x	# of consumer promotions	6
3207	Administer consumer promotions	32	Manage consumer prom.	3	Promote	x	x	x	x	# of consumer promotions	6
3208	Monitor consumer promotions	32	Manage consumer prom.	3	Promote	x	x	x	x	# of consumer promotions	6
3301	Negotiate and agree trade deals	33	Manage special trade deals	3	Promote	x	x	x		# of accounts	6
3302	Plan and execute deal events	33	Manage special trade deals	3	Promote	x	x	x		# of accounts	6
3303	Administer trade deals	33	Manage special trade deals	3	Promote	x	x	x		# of accounts	6
3304	Monitor effectiveness of trade deals	33	Manage special trade deals	3	Promote	x				# of accounts	6
4101	Negotiate basic supplier agreement	41	Procure materials or fin.goods	4	Replenish	x	x	x		# of suppliers	6
4102	Manage supplier relations	41	Procure materials or fin.goods	4	Replenish	x	x	x		# of suppliers	6

ActNo	Activity	Major ActNo	Major Activity	Proc No	Business Process	Mfct	Whol	Ret	Activity Driver SKU related	Activity Driver not SKU related	Cost type Indic.
4103	Forecast stock requirements	41	Procure materials or fin. goods	4	Replenish	x	x	x	# of SKU's		6
4104	Manage reclamation and aged products	41	Procure materials or fin. goods	4	Replenish	x	x	x	# of returned products		6
4105	Determine available delivery size	41	Procure materials or fin. goods	4	Replenish	x	x	x	# of order lines		5
4106	Place replenishment orders and specify order delivery	41	Procure materials or fin. goods	4	Replenish	x	x	x	# of order lines		5
4107	Place raw materials orders and specify order delivery	41	Procure materials or fin. goods	4	Replenish	x	x	x	# of order lines		5
4201	Plan and monitor product delivery	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of order lines		5
4202	Receive and unload products or raw materials	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of load units		3
4203	Checking incoming goods	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of load units		3
4204	Administration of incoming goods	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of order lines		5
4205	Downsizing for storing	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of units packed		3
4206	Repack or packout for storing	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of units packed		3
4207	Put away products or materials in warehouse	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of load units		3
4208	Storage of products or materials in warehouse	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of slot days		2
4209	Inventory cost of products or materials in warehouse	42	Receive and store prod. or mat.	4	Replenish	x	x	x	Mult-dimensional		4
4210	Move products across dock	42	Receive and store prod. or mat.	4	Replenish	x	x	x	# of load units		3
4301	Formulate products	43	Produce or refine products	4	Replenish	x	x	x			1
4302	Plan, schedule and control production	43	Produce or refine products	4	Replenish	x	x	x	# of production runs		6
4303	Plan and issue orders for production	43	Produce or refine products	4	Replenish	x	x	x	# of production runs		6
4304	Produce product	43	Produce or refine products	4	Replenish	x	x	x			3
4305	Package product	43	Produce or refine products	4	Replenish	x	x	x			3
4306	Prepare special packings eg, duo packs	43	Produce or refine products	4	Replenish	x	x	x	# of units special packed		3
4307	Manipulate or label products eg, promotions	43	Produce or refine products	4	Replenish	x	x	x	# of units manipulated or labeled		3
4308	Test or inspect products	43	Produce or refine products	4	Replenish	x	x	x	# of SKU's		3
4309	Store products from production	43	Produce or refine products	4	Replenish	x	x	x	# of loads or dm ³ in stock		3
4310	Refine or assemble finished product	43	Produce or refine products	4	Replenish	x	x	x	# of units assembled		3
4401	Maintain inventory policies and levels	44	Store products	4	Replenish	x	x	x			1
4402	Manage inventory levels including stock reconciliations	44	Store products	4	Replenish	x	x	x	# of SKU's		5
4403	Backroom product handling	44	Store products	4	Replenish	x	x	x	# of cases		3
4404	Storage of products in backroom	44	Store products	4	Replenish	x	x	x	# of dm ³ in stock		2
4405	Inventory cost of products in backroom	44	Store products	4	Replenish	x	x	x	Multi-dimensional		4
4406	Open case	44	Store products	4	Replenish	x	x	x	# of cases to be opened		3
4407	Price product	44	Store products	4	Replenish	x	x	x	# of units priced		3

ActNo	Activity	Major ActNo	Major Activity	Proc No	Business Process	Mfct	Whol	Ret	Activity Driver SKU related	Activity Driver not SKU related	Cost type Indic.
4408	Price shelf ends	44	Store products	4	Replenish			X	# of SKU's		3
4409	Putaway products in backroom	44	Store products	4	Replenish			X	# of units		3
4410	Storage of products on store shelf	44	Store products	4	Replenish			X	# of dm ³ of shelf space taken		2
4411	Inventory cost of products on store shelf	44	Store products	4	Replenish			X	Multi-dimensional		4
4412	Refill store shelf	44	Store products	4	Replenish			X	# of cases		3
4413	Clean up packing materials	44	Store products	4	Replenish			X	# of cases to be cleaned up		3
4414	Condition shelves	44	Store products	4	Replenish			X	# of events		3
4415	Retail store ordering	44	Store products	4	Replenish			X		# order lines store	5
4501	Receive customer orders	45	Manage customer orders	4	Replenish	X	X	X	# of order lines customer		5
4502	Consolidate and send delayed customer orders	45	Manage customer orders	4	Replenish	X	X	X	# of order lines customer		5
4503	Consolidate salesmen customer orders	45	Manage customer orders	4	Replenish	X	X	X	# of order lines customer via salesmen		5
4504	Override orders for known variations	45	Manage customer orders	4	Replenish	X	X	X	# of order lines customer overridden		5
4505	Manage customer orders, queries or reclamations	45	Manage customer orders	4	Replenish	X	X	X		# of complaints	5
4601	Prepare picking papers or data	46	Pick orders and deliver prod	4	Replenish	X	X	X	# of order lines customer		3
4602	Pick orders and move to loading area	46	Pick orders and deliver prod	4	Replenish	X	X	X	# of units moved		3
4603	Refill picking location from buffer	46	Pick orders and deliver prod	4	Replenish	X	X	X	# of units moved		3
4604	Plan delivery routes and stops	46	Pick orders and deliver prod	4	Replenish	X	X	X		# of orders	5
4605	Prepare shipping documents	46	Pick orders and deliver prod	4	Replenish	X	X	X	# of order lines customer		5
4606	Prepare load for despatch	46	Pick orders and deliver prod	4	Replenish	X	X	X	# of loads		3
4607	Load vehicle	46	Pick orders and deliver prod	4	Replenish	X	X	X	# of loads		3
4608	Move product between warehouse locations	46	Pick orders and deliver prod	4	Replenish	X	X	X	Multi-dimensional		7
4609	Transport to customer	46	Pick orders and deliver prod	4	Replenish	X	X	X	Multi-dimensional		7
4701	Receive empties	47	Handle returnables	4	Replenish	X	X	X	# of units of empties		3
4702	Clean or repair empties	47	Handle returnables	4	Replenish	X	X	X	# of units of empties		3
4703	Sort empties	47	Handle returnables	4	Replenish	X	X	X	# of units of empties		3
4704	Put away empties	47	Handle returnables	4	Replenish	X	X	X	# of units of empties		3
4705	Storage of empties	47	Handle returnables	4	Replenish	X	X	X	# of dm ³ of empties in stock		2
4706	Inventory cost of empties	47	Handle returnables	4	Replenish	X	X	X	Multi-dimensional		4
4707	Prepare empties for despatch	47	Handle returnables	4	Replenish	X	X	X	# of units of empties		3
4708	Load empties vehicle	47	Handle returnables	4	Replenish	X	X	X	# of loads of empties		3
4709	Transport empties	47	Handle returnables	4	Replenish	X	X	X	Multi-dimensional		7
4710	Administer empties	47	Handle returnables	4	Replenish	X	X	X	# of returned load units		5

ActNo	Activity	Major ActNo	Major Activity	Proc No	Business Process	Mfct	Whol	Ret	Activity Driver SKU related	Activity Driver not SKU related	Cost type Indic.
4711	Scrap returned products	47	Handle returnables	4	Replenish	x			# of scrapped units		3
4712	Handle recyclables	47	Handle returnables	4	Replenish	x	x	x	# of units		3
4801	Assemble payables information	48	Manage invoices	4	Replenish	x	x	x	# of invoice lines		5
4802	Check against order and delivery documents	48	Manage invoices	4	Replenish	x	x	x	# of invoice lines		5
4803	Resolve disputes with suppliers	48	Manage invoices	4	Replenish	x	x	x	# of invoice lines		5
4804	Issue payments for products or services	48	Manage invoices	4	Replenish	x	x	x	# of invoices		5
4805	Assemble receivables information	48	Manage invoices	4	Replenish	x	x	x	# of invoice lines		5
4806	Issue invoices to customers	48	Manage invoices	4	Replenish	x	x	x	# of invoices		5
4807	Resolve disputes with customers	48	Manage invoices	4	Replenish	x	x	x	# of disputes		5
4901	Maintain product bills of material	49	Maintain masterfile data	4	Replenish	x		x	# of changes		6
4902	Maintain product processing records	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4903	Maintain product cost data	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4904	Maintain product price records	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4905	Maintain product inventory records	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4906	Maintain scan data or EAN codes	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4907	Maintain product testing records	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4908	Maintain product logistics records	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
4909	Maintain customer records	49	Maintain masterfile data	4	Replenish	x	x	x	# of changes		6
5101	Establish vision and strategy	51	Manage the business	5	Support enterprise	x	x	x			1
5102	Set company policies	51	Manage the business	5	Support enterprise	x	x	x			1
5103	Monitor performance	51	Manage the business	5	Support enterprise	x	x	x			1
5104	Increase organisational effectiveness	51	Manage the business	5	Support enterprise	x	x	x			1
5105	Execute general business activities	51	Manage the business	5	Support enterprise	x	x	x			1
5201	Manage cash and treasury	52	Provide financial support	5	Support enterprise	x	x	x			1
5202	Provide tax services	52	Provide financial support	5	Support enterprise	x	x	x			1
5203	Provide general accounting services	52	Provide financial support	5	Support enterprise	x	x	x			1
5204	Control fixed assets and leasehold	52	Provide financial support	5	Support enterprise	x	x	x			1
5301	Operate current systems	53	Provide systems support	5	Support enterprise	x	x	x			1
5302	Develop new systems	53	Provide systems support	5	Support enterprise	x	x	x			1
5401	Provide payroll services	54	Provide HR support services	5	Support enterprise	x	x	x			1
5402	Provide benefits services	54	Provide HR support services	5	Support enterprise	x	x	x			1
5403	Provide retiree services	54	Provide HR support services	5	Support enterprise	x	x	x			1

ActNo	Activity	Major ActNo	Major Activity	Proc No	Business Process	Mfct	Whol	Ret	Activity Driver SKU related	Activity Driver not SKU related	Cost type Indic.
5404	Maintain employee records	54	Provide HR support services	5	Support enterprise	x	x	x	x		1
5405	Administer employee activities	54	Provide HR support services	5	Support enterprise	x	x	x	x		1
5406	Administer union contracts	54	Provide HR support services	5	Support enterprise	x	x	x	x		1
5407	Counsel employees	54	Provide HR support services	5	Support enterprise	x	x	x	x		1
5501	Provide legal advice	55	Provide legal counsel	5	Support enterprise	x	x	x	x		1
5502	Provide prosecution or suit services	55	Provide legal counsel	5	Support enterprise	x	x	x	x		1
5503	Defend legal claims	55	Provide legal counsel	5	Support enterprise	x	x	x	x		1
5504	Control legal documents	55	Provide legal counsel	5	Support enterprise	x	x	x	x		1
5601	Manage public or community affairs	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5602	Manage legislative or government affairs	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5603	Manage industry relations	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5604	Manage regulatory affairs	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5605	Manage professional or association affairs	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5606	Manage investor relations	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5607	Manage media relations	56	Manage public affairs	5	Support enterprise	x	x	x	x		1
5701	Provide or operate real estate	57	Provide administrative services	5	Support enterprise	x	x	x	x		1
5702	Provide or operate fleet	57	Provide administrative services	5	Support enterprise	x	x	x	x		1
5703	Provide or operate administrative equipment	57	Provide administrative services	5	Support enterprise	x	x	x	x		1
5704	Provide publication services	57	Provide administrative services	5	Support enterprise	x	x	x	x		1
5705	Provide clerical or secretarial services	57	Provide administrative services	5	Support enterprise	x	x	x	x		1
5706	Provide facility services	57	Provide administrative services	5	Support enterprise	x	x	x	x		1
5801	Manage corporate advertising	58	Manage corporate image	5	Support enterprise	x	x	x	x		1
5802	Manage corporate sponsorship	58	Manage corporate image	5	Support enterprise	x	x	x	x		1



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