

A Guide to CPFR

Implementation

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1. Introduction & Acknowledgements

Introduction

When ECR (Efficient Consumer Response) Europe first began to develop ECR principles and best practices, the focus lay on supply chain management and the corresponding enabling technologies, both areas that clearly showed benefits to retailers and manufacturers. The more complex aspects of demand management then followed after the first ECR Europe conference in Geneva.

A lot of valuable best practices have been developed, and most important incorporated by many companies across Europe. Without doubt these activities have been very beneficial, however there is still a lot of room for improvement.

Considering that today supply side and demand side are being regarded separately, it becomes obvious that there are still potential synergies which can best be achieved by collaboration.

Based on the following four major reasons the ECR Europe Executive Board initiated the European project on Collaborative Planning, Forecasting and Replenishment:

- The focus of ECR Europe lay on downstream applications of improvement concepts
- Still some reluctance in sharing critical data, such as POS (Point of Sale) or other consumer data
- Improvable efficiency in joint processes, such as promotions and product introductions
- Varying planning approaches and non-harmonised application of information exchange standards

With such a brief in mind, this document outlines guidelines that companies may apply when initiating CPFR (Collaborative Planning, Forecasting and Replenishment) implementation. It includes:

- a comprehensive understanding of the collaborative practices in the supply chain
- a description and evaluation of the various focus areas that determine how to define new ways to collaborate within the FMCG (Fast Moving Consumer Goods) markets
- a review of the main processes that will achieve the greatest impact and maximise collaborative efforts
- a practical guide for CPFR implementation that will drive companies from the early stages of collaboration toward the definition of joint business processes
- concrete examples of pilot experiences which evaluate and identify the potential benefits of CPFR implementation in a variety of «real life» business situations

This implementation guide is intended to bridge the gaps that still exist, demonstrating that CPFR is one of the key integrators for ECR activities. It seeks to provide companies with a pragmatic approach to CPFR, irrespective of their starting point or size.

For all these reasons, we anticipate that this report will act as an invaluable reference guide for CPFR implementation, offering companies a smooth and seamless transition.

Above all, we trust that the information contained in this guide will drive all companies toward improved levels of collaborative practice and excellence.

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Pilot Companies

In addition to the team members mentioned above, several companies contributed to this publication by involving the ECR Europe project team in their pilots and sharing key lessons learned from their experiences:

UNILEVER – J. SAINSBURY PLC – GNX
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KRAFT EUROPE – J. SAINSBURY PLC – GNX
EUROPA CARTON – SCHÖLLER
VANDEMOORTELE – DELHAIZE – WWRE

2. Executive Summary

Collaborative Planning, Forecasting and Replenishment (CPFR)

CPFR is a cross-industry initiative designed to improve the supplier/manufacturer/retailer relationship through *co-managed planning processes and shared information*.

CPFR in Europe

Although many retailers and manufacturers are familiar with the concept of CPFR and may be aware of the value potential, uptake of CPFR in Europe has been slow. Few companies have implemented CPFR beyond pilot stage. However, during the first quarter of 2001, Europe has seen a significant increase in CPFR activities: four major eExchanges named CPFR as a priority service offering and pilot initiatives are underway. Lessons learned from five pilots are documented in this publication.

A survey among key players in the European FMCG (Fast Moving Consumer Goods) and retail industry revealed that companies expect to realise benefits from CPFR in the short to medium term. Technology is no longer seen as a major barrier to success. Despite the fact that the majority of companies consider themselves ready to collaborate, their trading partners doubt the willingness of these companies to exchange information. However, it appears to be the case that as competitive pressure increases, so does the willingness to collaborate among supply chain partners.

CPFR – Universally Accessible

Until now, CPFR appeared to be a concept accessible only to major FMCG manufacturers and retailers. This easy-to-use manual, "A Guide to CPFR Implementation", aims to dispel this myth, opening up the CPFR opportunity to smaller companies and extending the scope to include all supply chain partners. The document offers guidelines on commencing CPFR and defines three implementation models that are sufficiently flexible to accommodate every company's requirements. This guide will lead companies through the preparation for CPFR, the implementation, evaluation of its success and the definition of a company's CPFR strategy to achieve critical mass.

CPFR for Europe

Analysis of the original VICS (Voluntary Interindustry Commerce Standards) nine-step CPFR process from a European point-of-view reveals that no major adjustments are necessary to adapt it to European market characteristics, although Promotion Planning has been identified as a key process for Europe and is described in greater detail in this publication. In addition, CPFR had only been applied in a manufacturer-retailer relationship up to this point in time. ECR recognised that there is a significant potential

benefit in integrating all supply chain partners and, as a first step, this publication addresses the integration of upstream suppliers.

GCI (Global Commerce Initiative): Collaboration between VICS and ECR Europe – “Recommendation for One Global Standard”

Currently, a VICS-team in collaboration with ECR-Europe and further members of the worldwide ECR community are striving to define a recommendation for a single global standard for CPFR under the umbrella of GCI. The GCI work focuses on interoperability guidelines, common metrics, integration along the supply chain (n-Tier), data exchange standards and towards further detailing the processes. This recommendation will also accelerate the adoption of CPFR as a best practice around the globe.

3. Introduction

to CPFR

C PFR – Collaborative Planning, Forecasting and Replenishment – is a cross-industry initiative designed to improve the supplier/manufacturer/retailer relationship through *co-managed planning processes and shared information*.

It is an integrated supply chain method to improve efficiency through direct collaboration between all trading partners with the ultimate focus on the consumer.

“The goal of Collaborative Planning, Forecasting and Replenishment is total supply chain collaboration among all trading partners who touch, or have an effect on, the value of the product to the end consumer”
 [Source: Supply Chain Management Review]

In the past, inventory strategies such as Vendor Managed Inventory (VMI), Supplier Managed Inventory (SMI) or Continuous Replenishment Program (CRP) focused on collaboration for efficient replenishment. However, these strategies only addressed one aspect of the supply chain, neglecting other considerations such as planning and forecasting. The focus of CPFR is wider and its objectives more ambitious. The differences are explained in the following diagram of current supply chain methods (e.g. CRP) vs. CPFR. Of course, the objective behind CPFR extends considerably beyond simply enhancing existing replenishment strategies. As its name suggests, it offers further integration of the processes of planning and forecasting.

Current Supply Chain Methods (e.g. CRP)	CPFR
Separate plans for Supplier, Manufacturer and Retailer	Shared plans developed jointly for Supplier and Manufacturer, Manufacturer and Retailer, and Supplier, Manufacturer and Retailer in a three-way implementation
Order Generation based in history (Shipments, DC level sales, or POS data)	Order Generation based in forecast, using DC/POS data, promotion planning and other marketing activities
Reactive	Proactive
Focused on execution	Focused on planning
Limited to Inventory and Logistics point of view	Includes Inventory, Logistics, Sales, Marketing, Procurement and Planning point of view
Goal is to cut company costs	Goal is trading partners' revenue growth
Related to inventory management	More related to category management
Works on efficient inventory replenishment only	Works on promotion, product introduction, inventory levels and replenishment all the way to the shelf effectiveness
Several forecasts for Supplier, Manufacturer and Retailer	Single shared sales forecast based on collaborative process

Figure 1. Key Differences between current supply chain methods (e.g. CRP) and CPFR. Source: Project Team.

Worthwhile CPFR results may be achieved by focusing on added value areas of potential such as promotions, new product introductions and critical items (items that are directly affected by changes in consumer demand).

A key factor for excellence in CPFR is the ability and willingness to share data. Shared data enables CPFR participants to act on opportunities, issues and misunderstandings. It facilitates also a fast and thorough understanding of the challenges amongst partners. Based on the arrangements chosen between trading partners, the following information may be exchanged:

- Business plan
- Promotion plan
- New product introduction information

- Inventory data
- POS data and forecast
- Production and capacity plan
- Lead-time information

In 1998, VICS published the first CPFR Guidelines, which are based on the ECR principles. The CPFR Generic Model consists of the three stages: Planning, Forecasting and Replenishment. Associated steps are illustrated in the diagram and explained in Table 1.

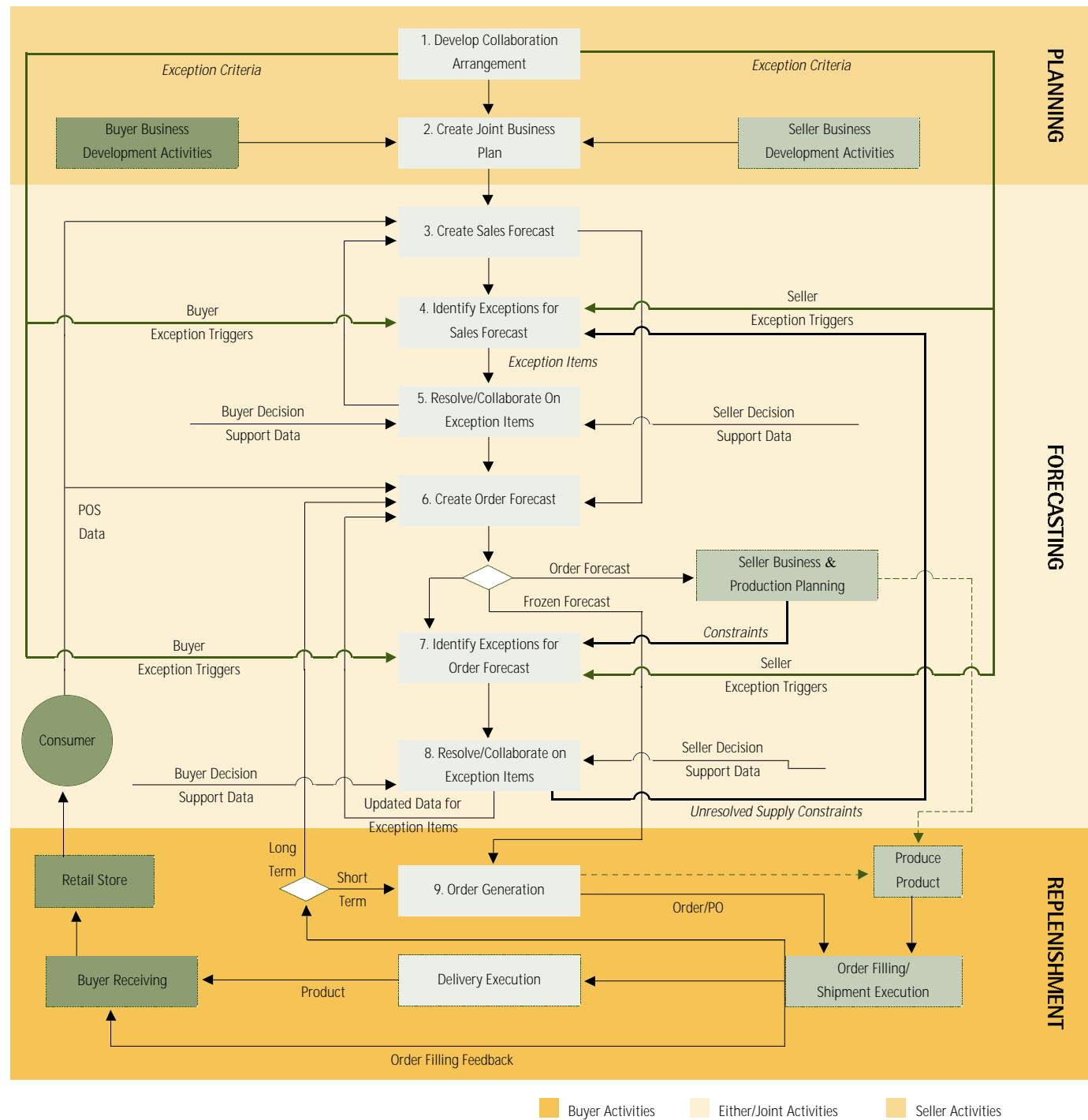


Figure 2. CPFR Process Steps - adapted from VICS - CPFR Generic Model.

Stage	Step	Description	Data Shared	Hints
Planning	1) Develop Collaboration Arrangement	<ul style="list-style-type: none"> • Definition of collaboration areas • Description of collaboration mission, objectives and framework • Definition of responsibilities 	<ul style="list-style-type: none"> • Business plan • Organisational information • Items • Category information, such as definition, roles, strategies, tactics • Framework for events • Seasonal events/plans 	<ul style="list-style-type: none"> • Senior management Buy-In needed • Define clear roles and responsibilities
	2) Create Joint Business Plan			
Forecasting	3) Create Sales Forecast	<ul style="list-style-type: none"> • Create and share sales forecast • Identify and resolve exceptions to agree on the sales forecast 	<ul style="list-style-type: none"> • Events • Promotion plan • New product information • Individual forecast • Forecast constraints 	<ul style="list-style-type: none"> • Focus on promotional items • Define critical items • Distinguish standard and promotional sales
	4) Identify Exceptions for Sales Forecast			
	5) Resolve/Collaborate on Exception Items			
	6) Create Order Forecast			
Replenishment	7) Identify Exceptions for Order Forecast	<ul style="list-style-type: none"> • Create and share order forecast • Identify and resolve exceptions to agree on the order forecast 	<ul style="list-style-type: none"> • Lead time • Logistics data • Location changes (outlet's and distribution centres) • Current inventory • Inventory in transit • POS data • Inventory strategies 	
	8) Resolve/Collaborate on Exception Items			
	9) Order Generation			
		<ul style="list-style-type: none"> • Generate committed order from agreed order forecast 	<ul style="list-style-type: none"> • Order data 	

Table 1. 9-Step Overview. Source: Accenture

3.1 ECR and CPFR

CPFR acts as an integrator for all ECR Improvement Concepts e.g. Category Management, Integrated Suppliers, Transport Optimisation, Promotion Tactics and Efficient Replenishment.

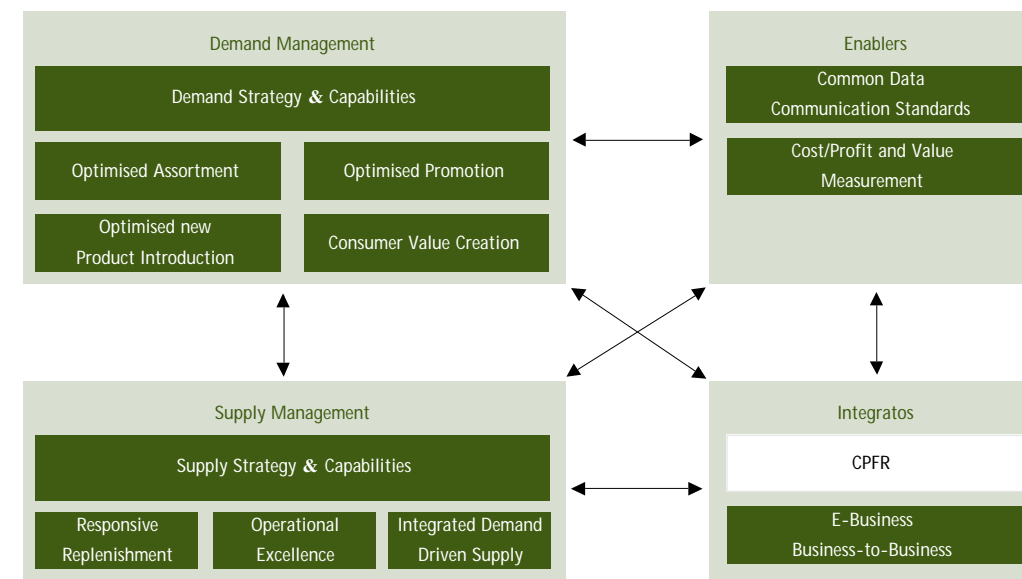


Figure 3. ECR Global Scorecard Footprint. Source: ECR Global Scorecard

CPFR Integrates Current Initiatives Focusing on the Final Consumer

In the map of ECR improvement concepts, CPFR is characterised as an integrator. The following diagram illustrates this role as integrator along the supply chain.

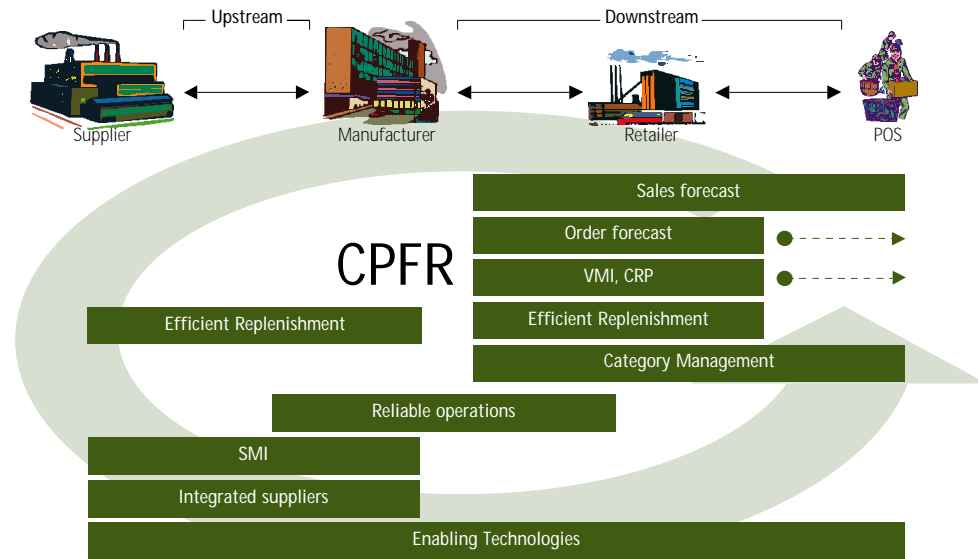


Figure 4. CPFR Overview. Source: Accenture.

3.2 Benefits

In today's supply chains, numerous inefficiencies exist in the collaboration with trading partners. CPFR addresses many of them.

Inefficiencies in Supply Chains

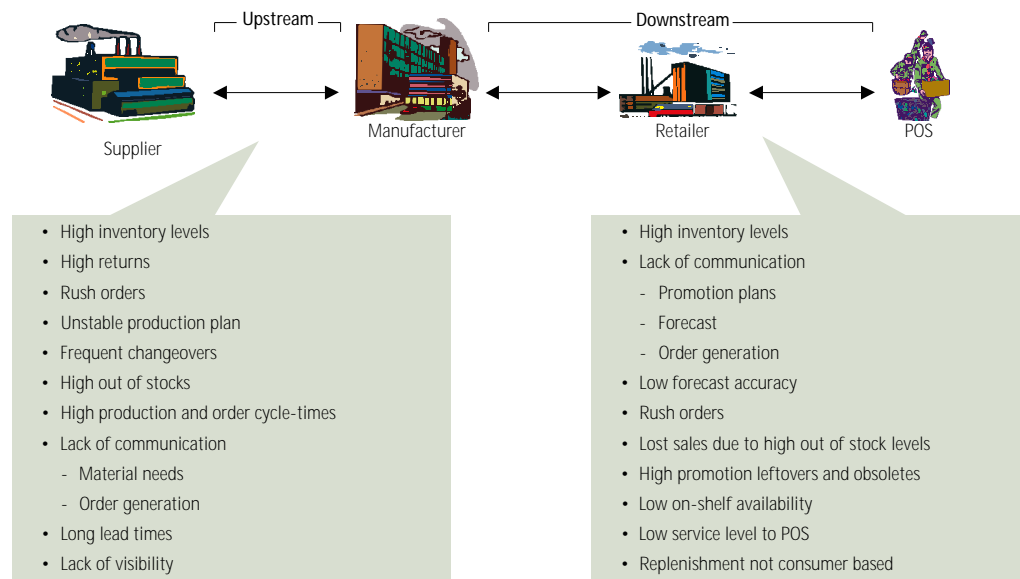


Figure 5. Inefficiencies in Supply Chains. Source: Accenture.

Typical CPFR Benefits Include:



Figure 6. Typical CPFR Benefits. Source: Project team.

Improved responsiveness to consumer demand

The reduction of out-of-stocks and shorter cycle times leads to a more responsive and reliable supply chain, thereby improving on-shelf availability and increasing consumer satisfaction. CPFR helps put the right product in the right place at the right time.

Greater forecast accuracy with single shared forecast

Sharing a single forecast along the supply chain enables participants to benefit from potential synergies and brings together trading partners' efforts. Depending on their position in the supply chain and supply chain activities, trading partners may have different views of the market and information, as well as varying consumer data, experiences and research data. Combining this knowledge is the foundation for greater forecast accuracy. Once planning processes are aligned, time horizons may be broadened in order to increase visibility and reaction time.

Improved relationship between the trading partners

The relationship will improve when collaboration takes place. Trading partners will gain a better understanding of their respective businesses by regularly exchanging information and establishing direct communication channels. Overall, the greatest benefits are to be gained from creating a 'win-win' situation.

Increase in sales

Collaboration on planning and forecasting potentially reduces out-of-stocks, lost sales and increases on-shelf availability, i.e. putting the right product in the right place at the right time. These improvements lead to an increase in sales to the consumer, which consequently means increased sales for all supply chain partners.

Inventory reduction

One reason for maintaining inventory is to compensate forecasting inaccuracy. Increased forecast accuracy facilitates a decrease in the safety stock, reducing inventory levels and increasing on-shelf availability.

Cost reduction

By aligning the production schedule with the agreed forecast, costs can potentially be reduced by decreasing set-up times, effort duplications and variations. Reduction in inventory will subsequently reduce capital costs, handling and administration costs.

Improved production capacity utilisation

A more accurate forecast leads to more efficient production capacity utilisation as planning information is more reliable.

3.3 Opportunities

Based on existing experience, it can be said that CPFR offers significant opportunities to all supply chain partners involved. As outlined previously, CPFR aims to eliminate inefficiencies in the supply chain. It is recommended that CPFR initiatives focus on and are tailored toward areas where the greatest benefits are to be realised. The main opportunities exist in trading relationships with one or many of the following characteristics, where:

- Demand is hard to predict
- Promotional activities play an important role
- New product introductions are frequent
- Lead-times for production and/or replenishment are long
- Product life cycles are short (e.g. fashion)
- Forecast accuracy is low
- High levels of inventory exist in the supply chains
- Consumer expectations are frequently not met
- Seasonal demand variances are significant
- Trading relationships are collaborative

3.4 Challenges

Many of the challenges around implementing CPFR are similar to those faced by companies wishing to implement ECR. The principles established by ECR around developing trading partnerships also apply to CPFR implementation.

Selection of CPFR Partners

Trading partners who wish to collaborate with each other need to assess the potential relationship according to anticipated, realistic benefits, pertinent to common business goals, organisational and cultural issues. For a successful relationship, a 'close fit' on these aspects is preferred, or some indication that the potential exists to develop a relationship with joint objectives and goals.

Senior Management Buy In

Senior management must assume the role of CPFR sponsor for each of the trading partners to ensure that the necessary resources (Human Resources, Technical Infrastructure, Time and Project Budget) are prioritised and dedicated to the project.

Trust Based Relationship

CPFR involves sharing sensitive information. To take full advantage of the benefits of CPFR, trading partners need to create a relationship founded on trust. Sharing sensitive

data and close collaboration demands reliability. CPFR should not be seen as a tool to develop a good relationship; rather, it can help to enhance a good, existing trading partner relationship.

Confidentiality

Sharing sensitive data reinforces the need to define rules around confidentiality. Confidentiality agreements should document common understanding around areas where confidentiality is paramount between the trading partners. Companies should also be aware of their responsibilities regarding competition law at a national, European and global level.

Detailed Definition of Systems' Capabilities

For the success of CPFR it is key to collaborate at the same data level. In particular, best practice would be to collaborate at the lowest data level; sharing promotional plans, forecasts and replenishment orders per trading unit and per point of sales.

Internal Reward Structure

The reward structure within each organisation needs to be aligned with the objectives of the CPFR initiatives in order to ensure the desired behaviours of all involved parties.

Cultural Change

Internal and external collaboration requires a mindset change. Traditional trading partner relationships which have grown over a period of time must prove themselves capable of flexibility in order to adapt to the collaborative approach.

Further challenges that are also addressed and published by GCI include:

- Industry standards for data exchange
- Interoperability between eExchanges
- Technology as an enabler.

Although CPFR is about business processes, it is clear that significant levels of technology will facilitate the smooth implementation of CPFR. Furthermore, technology becomes a key enabler in the process of reaching critical mass with CPFR.

4. Collaboration Status

**in European
Supply Chains**

4.1 Supply Chain Characteristics

Introduction

Over the past few years, the European Retail and FMCG manufacturing industries have faced sustained business consolidation, increased market competition with the arrival of new foreign entrants into national markets and rapidly evolving consumer expectations.

Such developments have had an impact on the organisational complexity of businesses. FMCG companies need to respond to a sophisticated mix of local, regional, European or even global market needs while creating shareholder value through economies of scale and asset optimisation.

To deliver improved performance companies can either deliver sales or profit gains or cut costs. In flat markets however, it can be difficult to deliver enhanced sales and companies have often focused on cutting costs. The industry has turned its attention to supply chain optimisation as a means to reduce operational complexity and serve consumer needs. Much progress has been achieved throughout Europe; in particular, in the areas of inter-company logistics optimisation and supply chain performance measurement. However, collaborative initiatives between manufacturers and retailers have so far remained cautious.

Closer integration between the operations of trading partners enables the total supply chain to be more agile and responsive to consumer demand. In particular, CPFR helps to optimise the total supply chain and can at the same time create additional sales.

Supply Chain Status in Europe – Differences & Commonalities

In Europe, there is a wide variety of supply chain scenarios. In some countries, supply chains are more advanced than in others as a result of better national communication infrastructures or improved warehousing and transportation conditions. More work may have been undertaken in optimising supply chain operations in some countries than in others. Such situations are often related to the nature of the local industry structure and to the degree of upstream and downstream fragmentation in a particular country. Suppliers, manufacturers and retailers may be more culturally inclined toward collaboration throughout the supply chain for data exchange or product co-design.

Major European countries face a concentration of large retail outlets (>2000sqm), while at the same time the overall number of outlets decreases. This results in increased competitive pressure on prices and forces the industry to save costs. Increasing supply chain performance is a key lever to achieve a reduction in distribution costs.

Number of Retail Outlets

The overall number of retail outlets is decreasing.

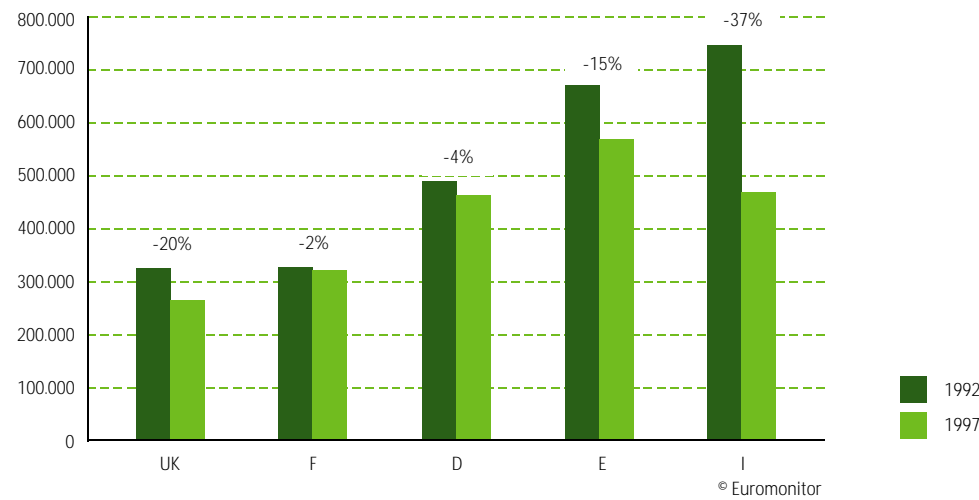


Figure 7. Number of Retail Outlets. Source: ELA Study, 1999.

Number of large Retail Outlets

At the same time, the number of large retail outlets (>2000 sqm) is increasing.

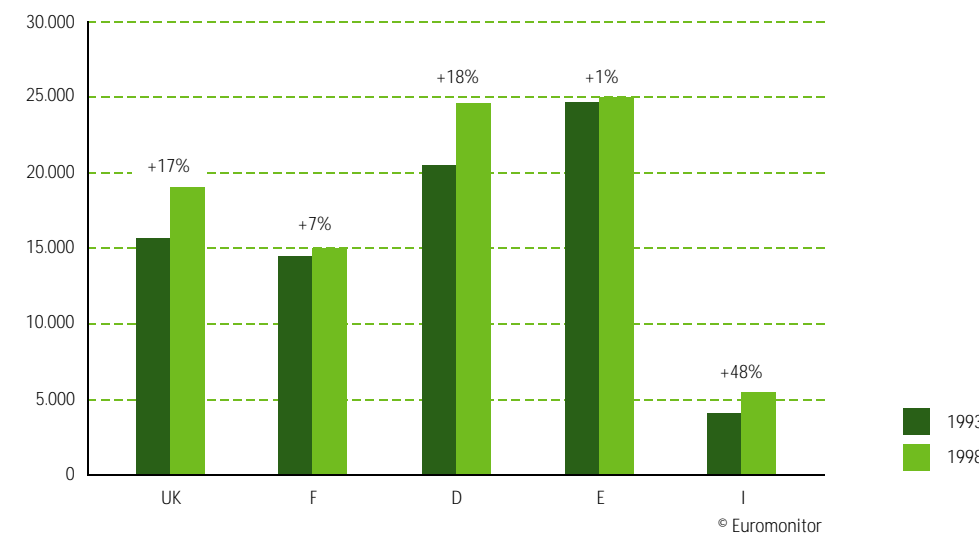


Figure 8. Number of large Retail Outlets (>2,000 sqm). Source: ELA Study, 1999.

Another European feature is the relative weakness of inter-company supply chain collaboration. This is well illustrated throughout European supply chains with inefficiencies being typically found in the forecasting and replenishment processes: (see also Figure 5 in Chapter 3.2 Benefits).

Low demand forecast accuracy	Trading partners often use increased inventory levels to address unpredictable demand, resulting in increased supply chain costs
High supply variability	Supply variability is a consequence of unstable process cycle times and is often compensated through time, inventory and capacity buffers
Limited visibility of the supply chain	Disconnected systems, limited collaboration among trading partners and reduced information sharing leads to low visibility of supply chains for partners involved. This is particularly true for the management of promotional events
Inefficient use of consumer data	Replenishment is typically based on estimations at distribution centre level and not driven by true consumer demand data. Opportunities to change from a "Make to Stock" to "Make to Order" environment are not realised

Table 2. Inefficiencies in the Forecast and Replenishment Process. Source: Project Team.

4.2 European and North American Supply Chain Characteristics

Differences between the European and North American Supply Chain characteristics are analysed in Table 3 to illustrate specific requirements related to CPFR.

	European Supply Chains	North American Supply Chains
Geographic	<ul style="list-style-type: none"> Limited geographic area Consumers equally distributed throughout the area Shorter delivery distances 	<ul style="list-style-type: none"> Large geographic area Consumers are fragmented throughout the area Longer delivery distances
Marketplace	<ul style="list-style-type: none"> Heterogeneous, based on the cultural orientation in each country Wide variety of store formats 	<ul style="list-style-type: none"> Homogeneous Limited amount of store formats
Promotions	<ul style="list-style-type: none"> High level of promotional activities; multiple promotions within one outlet 	<ul style="list-style-type: none"> Every Day Low Price Strategy (EDLP) and therefore lower level of promotional activities
Technology	<ul style="list-style-type: none"> Average utilisation of technology 	<ul style="list-style-type: none"> Sophisticated utilisation of technology
Cultural Habits	<ul style="list-style-type: none"> Reserved willingness to collaborate Conservative orientation 	<ul style="list-style-type: none"> Moderate willingness to collaborate

Table 3. Supply Chain Characteristics. Source: Accenture.

4.3 Differences in Europe

Aside from Promotion Planning which will be discussed in Chapter 5.1, there are some significant differences in Europe in terms of:

- the economic status of the retail industry
- the culture of inter-industry collaboration
- the implementation of ECR
- the structure of supply chain operations

The retail industry across Europe applies different business strategies to achieve profitable growth. Some retailers succeeded in building strong private label brands and became more independent of brand manufacturers, which resulted in a positive impact on their margin. Others entered into fierce negotiations with their manufacturers to improve terms of business.

One outcome is the acceptance and implementation of ECR initiatives; for example Category Management principles at retailing companies and manufacturers, which builds on mutual trust and understanding to openly share information as well as cooperate in business operations. Acceptance of the ECR concept is higher in North America compared to Europe. Retailers and manufacturers in North America successfully overcame conflicts and implemented ECR, to their advantage, by focusing on common goals and pragmatic business improvements from which they benefit.

Category Management is one of the best practices that supports the successful implementation of CPFR between retailers and manufacturers. CPFR assumes that category roles and strategies have been assigned and agreed upon by retailers and manufacturers in order to determine the level of attention and planning by category and SKU (Stock Keeping Unit) respectively. This effort, amongst others, enables economic collaboration and planning participants' CPFR resources to be allocated accordingly. A clear understanding of all participants in the CPFR process will assist in setting the right priorities and providing the correct level of detail in the planning process; a factor which becomes even more important for promotion items. If the role of promotion items is well known to retailers, manufacturers and suppliers, they will be able to forecast demand shifts during promotion periods and take the necessary precautions to deal with that situation.

European retail companies have different structures for supply chain operations than their American counterparts. Compared to the vast US market which demands warehousing and cross-docking, companies in Europe prefer either direct delivery by manufacturers to supply outlets with merchandise, or structuring their supply chain to rely on centralised distribution structures supplying stores which may also utilise concepts such as cross-docking. As a result, there are a larger number of applied systems in Europe that CPFR must take into consideration and address.

In the case of the absence of central warehousing or cross-docking, the need for comprehensive and efficient planning and forecasting is even more pertinent. Direct deliveries from manufacturers to outlets risk a situation of limited or even no buffer in the supply chain to react to an increased demand at the outlet. To reduce the likelihood of being 'out of stock' the entire supply chain needs to be considered in the planning process. This may lead to extended order lead time, since there is no inventory in central warehouses or cross-docking facilities to bridge potential gaps. As the 'out of stock' situation in the outlet demands immediate action, it is most likely that delivery and handling costs will increase and affect the profitability.

Conclusion:

CPFR can support the integration of various ECR concepts and increase the extent of their implementation across Europe. CPFR increases supply chain efficiency independent of the underlying supply chain models, such as the North American or the European.

4.4 From Traditional to CPFR-Supply Chains

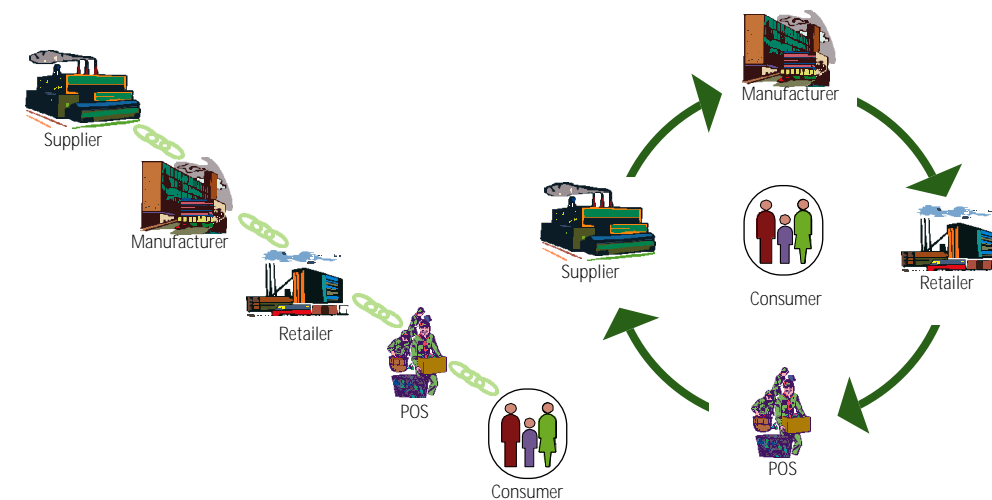


Figure 9. Current Supply Chain vs. Optimised Supply Chain (Generic). Source: Accenture.

Current supply chains are often based on a peer-to-peer relationship between direct trading partners. Information is exchanged between these two parties and passed on to the next supply chain member. This procedure results in limited supply chain visibility, a lack of responsiveness and is error-prone.

An optimised supply chain facilitates information exchange throughout the supply chain. This access to information enables improved visibility of supply chain events and thereby increases efficiency in the ability to respond to consumer demand. CPFR can be a key building block towards an optimised supply chain.

4.5 Key Requirements for Collaboration

Successful collaboration initiatives require the following key ingredients:

- *Senior management commitment:* Senior management support is essential to increase awareness of the current situation and identify support within the organisation. Senior management must operate as a sponsor, ensuring that the necessary resources are available and the project receives the required level of attention.
- *Clearly defined roles and responsibilities:* Within the collaborative processes, it is essential that resources be allocated to maximise value. Clearly defined roles and responsibilities result in a smooth workflow and the achievement of results.
- *Project viewed as "strategic imperative":* The project's strategic relevance must be recognised; this is primarily influenced by senior management in their alignment of the activity with the corporate business strategy.
- *Willingness to collaborate:* Common understanding between trading partners is essential. Based on this common understanding, the parties must declare their willingness and prove this willingness by allocating adequate resources to the project. Willingness includes sharing data as agreed in the Collaboration Arrangement.

- *Readiness for a real “win-win” situation:* Within a “win-win” situation trading partners receive equal benefits for equal efforts. Trust between the trading partners is a key enabler of collaborative success.
- *Technical infrastructure in accordance with the goals of the collaboration (CPFR requires a technical facility):* The availability of new technology can simplify and enhance the speed and flexibility of supply chain collaboration. Based on the degree of collaboration, various tools can support CPFR; from simple spreadsheet programs to applications included in the ERP (Enterprise Resource Planning) software or specific CPFR solutions.
- *Trading partners’ ability to share forecasts and anticipate demand:* Forecast sharing is an enabler of CPFR. Trading partners should aim to generate a forecast in an appropriate way, based on the agreed defaults during the planning stage.
- *Inter-company Collaboration:* Previous internal collaboration initiatives prepare the organisation for external collaboration by creating an understanding of the requirements of collaborative processes.

4.6 Current Status of CPFR in Europe

After the early success stories of CPFR in the USA, CPFR began to gain popularity and interest in Europe. At present, there are approximately 30 CPFR initiatives in progress in Europe, all at varying stages of implementation and scope. The majority of these initiatives are currently still in pilot phase and few companies have reached critical mass.

Initially, European companies were sceptical about the tremendous benefits achieved by the early collaborative initiatives in the USA. However, all published European initiatives fulfilled or exceeded the initial expectations with respect to business results. The most frequently referenced drawback is that it takes more time than anticipated to start collaborating. However, this is accepted as part of the learning process and did not generally hinder results being attained.

Table 4 lists the collaboration initiatives in Europe that have been made public up to March 2001.

Collaboration Partners	Involved eExchanges	Country	Technology Solution
Ahold	WWRE		I2
Boots – Johnson & Johnson		UK	Syncra
Carrefour – Kimberly Clark		France	Syncra
Condis – Henkel – Cartisa		Spain	
Dansk Supermarked – Procter & Gamble	None	Denmark	Syncra
Delhaize – Vandemoortele	WWRE	Belgium	I2
Eroski – Henkel	None	Spain	Manugistics
Londes – 16 manufacturers	None	UK	
Marks & Spencer	WWRE		I2
Marks & Spencer – Gunstones		UK	Syncra
Marks & Spencer – Telfer Foods		UK	Syncra
Metro – Procter & Gamble	GNX	Germany	
Sainsbury’s – Kimberly Clark		UK	
Sainsbury’s – Kraft Europe	GNX	UK	Manugistics
Sainsbury’s – Unilever	GNX	UK	Manugistics
Schöller – Europa Carton	None	Germany	Logility and Pipechain
Superdrug – Johnson & Johnson		UK	Syncra
Systeme U – Lesieur	None	France	
Tesco	WWRE	UK	I2

Table 4. CPFR Initiatives in Europe. Source: Accenture.

In addition to the above, several other CPFR projects are in progress in Europe, but have requested anonymity. These companies wish to focus initially on internal learning and ensure the success of their pilot prior to promoting CPFR to others.

The level and focus of collaboration varies from initiative to initiative. In general, the initiatives in the United Kingdom appear to be the most advanced in terms of reaching critical mass; in addition, the willingness to share data tends to be higher in the UK than in continental Europe. In Southern Europe, retailers are hesitant to commence CPFR projects due to a general reluctance to share sensitive data. As CPFR remains a fairly new concept in Europe, the existing projects tend to cover a limited number of products and collaboration efforts. However, the majority of large companies are convinced of the merits of CPFR and are committed to expanding its reach. Further emphasis on CPFR in Europe is anticipated through the initiatives of the four eExchanges, that potentially facilitate CPFR for smaller companies, the publication of the results of current projects and, finally, the recommendations driven by GCI.

Collaboration Survey

A benchmark study among nine European countries showed that the willingness to participate and offer information concerning CPFR and collaboration was the highest in the United Kingdom. From the benchmark study, it can be concluded that the FMCG industry prioritised the following as the most critical reasons for undertaking CPFR:

1. Service as a key driver for consumer satisfaction, market share and profitability
2. Value in demand and supply chain management requires collaboration

3. Slow growth in consumer goods steers focus toward service improvement and increased asset productivity
4. Its role as an instrument to ensure consumer or supplier loyalty.

For further details please refer to Appendix A – Important Reasons for CPFR

Willingness to Collaborate

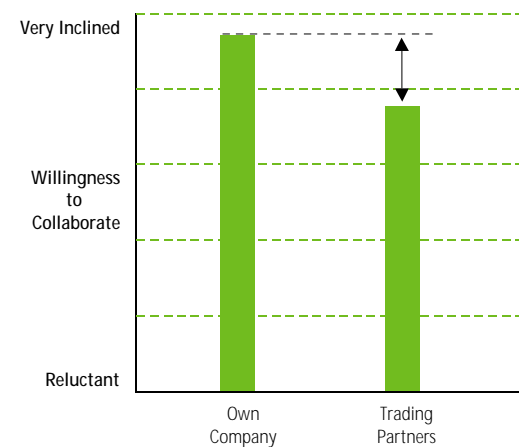


Figure 10. Willingness to Collaborate. Source: Accenture.

Most companies show an interest and willingness in supply chain collaboration, but the willingness of the trading partners is often perceived as less than their own. As a general observation, it can be concluded that between industries, willingness remains at the same level, whilst overall across Europe, awareness toward collaboration has increased. Also, when queried on the key success factors for CPFR, willingness was rated highest.

Key Success Factors identified by the industry for CPFR:

- Willingness to collaborate
- Senior management support
- Multi-functional teams
- Aligned objectives
- Measurable KPI's (Key Performance Indicators)

For further details, please refer to Appendix A – Key Success Factors for CPFR.

Ironically, willingness to collaborate was also rated as the biggest barrier to CPFR success. Other barriers with a high rating included:

- Organisational readiness
- Clear benefit sharing agreements
- Data quality
- Unclear stated value

At the same time, the companies surveyed showed confidence in the technological capabilities of their own organisations and solution providers by perceiving technology issues to be a low barrier to CPFR success. Detailed information is available in Appendix A – Barriers for CPFR Success.

Perceived potential benefits of CPFR.

Within the whole industry “Reduced out of stock levels at POS” and “Improved promotional effectiveness (to consumers)” are seen as delivering the greatest benefits for CPFR. Both of these benefits are directly related to today's existing inefficiencies in responding to consumer demand. For further details please refer to the Appendix A – CPFR Potential Benefits.

Conclusion

Without doubt, willingness to collaborate is the most critical success factor and, if absent, remains the most obstructive barrier to effective CPFR implementation and realisation of the potential benefits. In addition, clarifying the differences between countries can be necessary for multi-national companies when defining their implementation and roll-out plan for CPFR, to ensure that the project begins in countries where the willingness to collaborate is the highest.

5. European

Focus Areas

As CPFR was first developed by VICS and, therefore, focused on the USA and its business characteristics, specific European business structures and characteristics were not taken into consideration. As a result, ECR Europe has taken the initiative at a European level to map the VICS processes onto the European FMCG and retail industry landscape.

To fully reflect the nature of European structures and characteristics, several adaptations to the US model are required. The European FMCG and retail industries are not homogeneous, but rather a diverse conglomerate of country-specific business structures. According to independently developed national structures and cultural habits, planning and forecasting processes differ widely from country to country, even while maintaining the same rationale for economies of scale in their relevant businesses. This is not to suggest further barriers to implement CPFR, but to stress the need for efforts toward harmonisation, which must be a critical consideration for all participants involved within Europe.

ECR Europe is developing CPFR best practices at a European level to contribute toward standardising processes across the globe, an objective currently pursued by GCI. By fully understanding this European initiative, an integrated European point of view can be offered to GCI along with a set of comprehensive European CPFR models. This can be accomplished by integrating European business characteristics, the essential promotion aspects and upstream suppliers within the CPFR framework.

The following sections serve to highlight and outline European thinking on these areas.

5.1 Promotion Planning

One of the key differences between Europe and the US is the high level of promotional activity. In Europe, promotion planning plays an important role in the relationship between retailers and manufacturers as, according to an industry benchmark, the average number of promotional activities during a year ranges from 25 to 150.

The high frequency of promotions in the European marketplace requires more frequent and detailed planning than a yearly review. The current version of the GCI recommendation for CPFR does not reflect this, although work is being completed under the GCI umbrella to encompass the differences between Europe and the US.

This higher frequency requirement is covered by this chapter in a detailed description of an additional process step "Promotion Planning" between Step 2 "Create Joint Business Plan" and Step 3 "Create Sales Forecast". It was included to offer collaboration on a monthly, weekly or daily basis by agreeing on a joint promotion plan with a maximum time horizon. The time horizon needs to be agreed on a case-by-case basis, as there are various circumstances that can restrict that horizon or extend it by several months. The key here is to make the correct promotion information available to all players within the supply chain as soon as possible. Promotion information should be shared among trading partners as well as within each company (e.g. between marketing/sales and production, purchasing, planning, etc.).

The accuracy of the promotion plan drives the overall forecast accuracy. Promotion information that is inaccurate or not shared in advance prevents accurate planning of the subsequent process steps and negatively impacts overall business results through potential obsolesces, out-of-stocks and inefficiencies. In consideration of the characteristics in various European markets, frequent collaboration on promotion planning is important to respond efficiently to consumer demand. A rolling, weekly promotion planning cycle is recommended for markets with high promotional activities.

Furthermore, the replenishment of promotions will be affected, depending on the type of promotion and its objectives. Therefore, it is frequently necessary to adjust the replenishment specifically for promotions.

A process for new product introductions and changes in the assortment has been specifically defined in previous ECR working groups. With respect to collaboration, these can follow the same logic as the promotion planning process defined in this chapter.¹

On the following pages, the processes for collaboration in promotion planning are explained. The process definition follows the same template as the GCI recommendation for CPFR, for an easy implementation and integration with the remaining processes.

Creating a Promotion Plan

Purpose

In this step, information and evaluation of previous promotions, market trends, consumer behaviour, total category impact and so on are used to create a promotion plan to support the joint business plan.

Output

A promotional plan is initially generated by one or all parties, communicated to the other parties and then used as input for the creation of the sales forecast.

Process and Data Inputs

Key elements of this step are as follows:

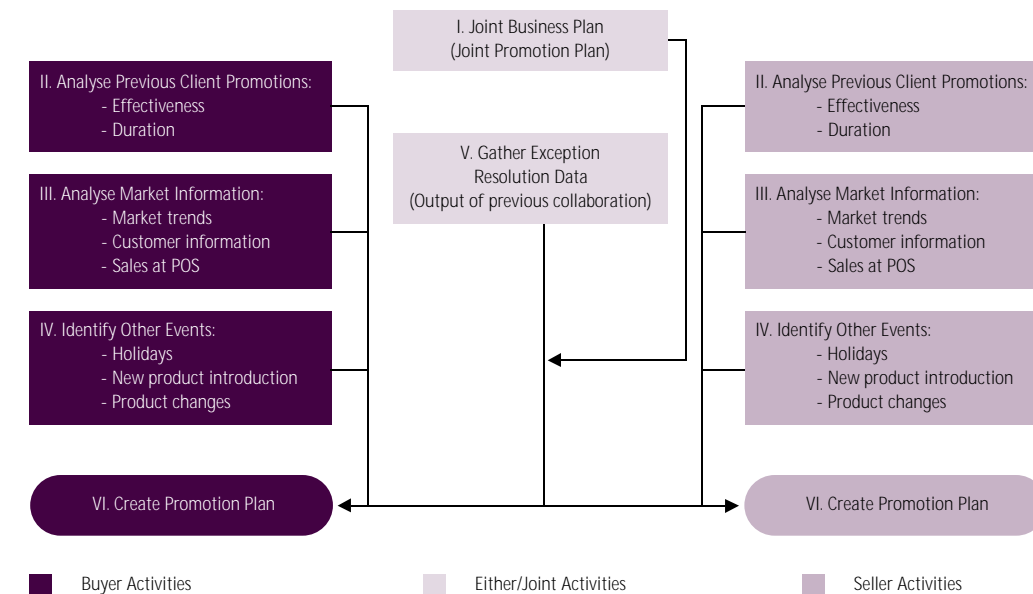


Figure 11. Promotion Plan. Source: Accenture.

- I. *Joint Business Plan (Joint Promotion Plan)*. Analyse the long-term promotion plan as agreed in the joint business plan.
- II. *Analyse Previous Trading Partner Promotions*. Collect all the information from previous promotions and check the results achieved.
- III. *Analyse Market Information*. Analyse the actual market information available to define a promotional plan that will affect future sales or consumption.
- IV. *Identify Other Events*. Identify other events that could affect the effectiveness of a promotion (e.g. special holiday openings, etc).
- V. *Gather Exception Resolution Data*. Gather exception resolution data generated from previous promotion plans.
- VI. *Create Promotion Plan*. Generate a promotion plan for a set period of time with a clear definition of the type of promotion, the dates when the promotion will take place, the length of the promotion, the SKU, the expected impact on standard sales, and so on. In the complete Promotion Plan the promotion objectives are determined, the appropriate promotion tactics are selected alongside the process to measure the results. These results are evaluated against objectives and the findings incorporated into future promotions.

Identify Exceptions

Purpose

Differences between the promotion plans and changes on the agreed aspects defined in this plan.

Output

Identified differences between promotion plans and changes affecting collaboration between trading partners are identified in this step.

Process and Data Inputs

Key inputs are as follows:

¹ For further information about Efficient Product Introduction, Efficient Assortment and Promotion Planning please refer to the relevant ECR-Europe publications.

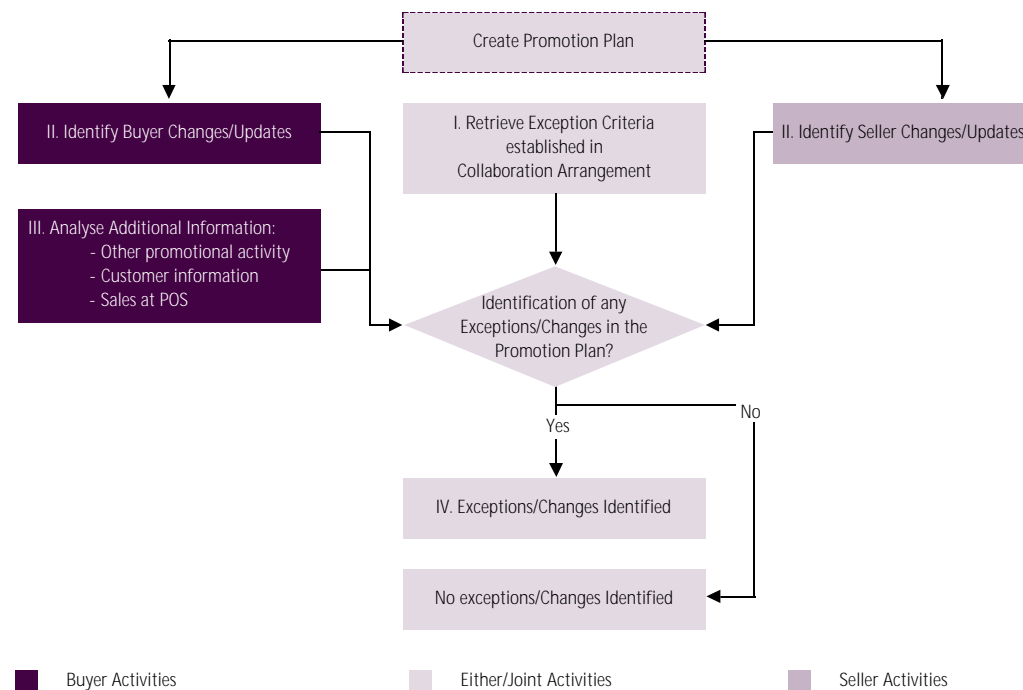


Figure 12. Identify Exceptions. Source: Accenture.

- I. *Retrieve Exception Criteria established in Collaboration Arrangement.* Retrieve the promotion plan exception criteria (such as change in a promotion during frozen period)
- II. *Identify Buyer and Seller Changes/Updates.* Check the promotion plan proposed by the trading partner and identify the changes or updates to achieve following agreement of a joint plan.
- III. *Analyse Additional Information.* Use the additional information that cannot be shared with the trading partner to decide further changes/updates to the promotion plan (such as the promotional activity of other competitors).
- IV. *Exceptions/Changes Identified.* Identify the promotions proposed as exceptions/changes and decide if there is a need for negotiation.

Collaborate/Resolve Exceptions

Purpose

In this step the trading partners get together to collaborate, negotiate and resolve the changes to the proposed promotion plan.

Output

Determine a unique promotion plan for all trading partners that will feed the Forecasting steps. This step is key for the reliability of the forecasting process.

Process and Data Inputs

This step begins with the exceptions identified in the previous step. Other key inputs to this process are as follows:

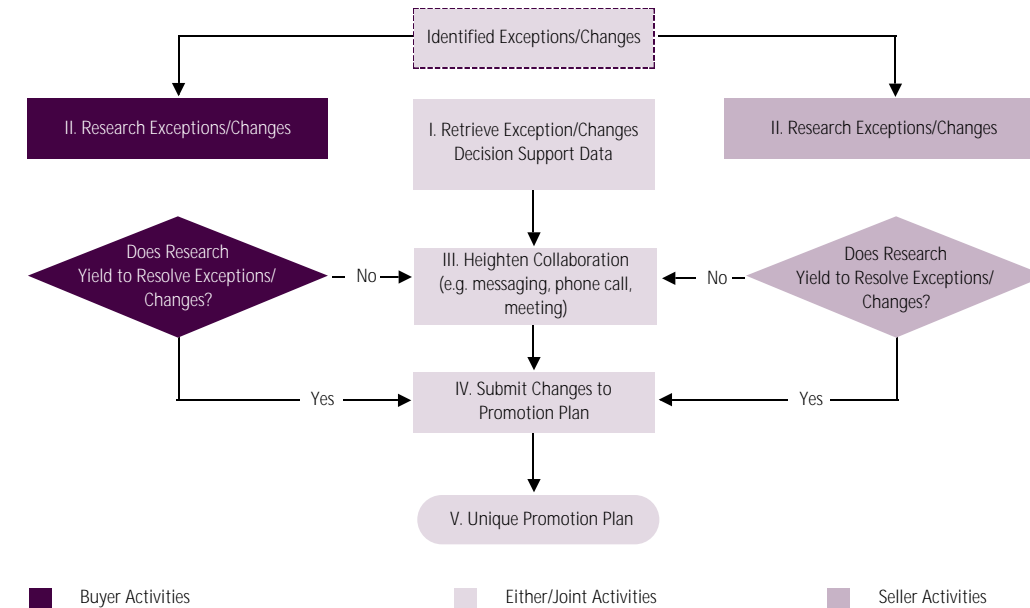


Figure 13. Collaborate/Resolve Exceptions. Source: Accenture.

- I. *Retrieve Exception/Changes Decision Support Data.* Retrieve supporting data from trading partners. The data used is defined in the collaboration arrangement and includes time-series data (such as historical sales) and non-time-series data (such as different types of promotion effectiveness).
- II. *Research Exceptions/Changes.* Research exceptions/changes proposed by the trading partner with any supporting information available.
- III. *Heighten Collaboration.* If research does not resolve the exception/changes, then either partner can raise the level of the collaboration. In this step there is a compelling need to negotiate with trading partners (e.g. the buyer could be interested in a proposed promotion on a different product; the collaboration must be enhanced to identify the problems with the seller and gain agreement).
- IV. *Submit Changes to Promotion Plan.* If collaboration/negotiation implies changes in the promotion plan, submit the changes to the promotion plan.
- V. *Unique Promotion Plan.* Use the output of this step as a unique promotion plan to integrate within company systems and use with other trading partners.

5.2 Integration of Upstream Suppliers

The project team addressed the integration of upstream suppliers based on the necessity to optimise the whole supply chain rather than just handle single trading relationships. Therefore, the project team considered all supply chain partners from the retailer, via the manufacturer, to the supplier. This supports the perspective that the availability of merchandise -at the right time, in the right place, with the right quality and quantity- is also dependent on suppliers. If manufacturers suffer from supply shortage, they are unlikely to provide the retailers with the necessary merchandise. In order to avoid supply shortage by the manufacturer, timely and sufficient information about suppliers is crucial, allowing preparation time for potential demand shifts.

The project team's CPFR model adaptation and pilots include all supply chain partners and, therefore, demand solutions which do not rest simply with the manufacturer. To fully integrate suppliers in CPFR, similar agreements and processes, such as those between retailers and manufacturers, must also be established between manufacturers and suppliers. In addition, planning, forecasting and replenishment processes between retailers and manufacturers must be synchronised with those between manufacturers and suppliers. This synchronisation will lead to enhanced predictability of demand and production times at manufacturers and, consequently, more seamless merchandise and information flow upstream.

Upstream integration includes collaboration agreements, which form the basis of joint planning, forecasting and replenishment, as well as detailed definition of the information to be exchanged, the exact information required, at which level of detail, for whom, when and where. The earlier and more accurate provision of supply information, the greater the likelihood that shortages will be avoided and manufacturers will deliver the right supplies in a timely way to meet retailers' orders. A first step in this direction is the ECR project "Integrated Suppliers" as well as SMI initiatives that can be considered building blocks to CPFR.

As CPFR gains in complexity through the integration of suppliers, roles and responsibilities become more critical. CPFR is not about involving everybody in anything within supply chain operations, but about involving the right organisation and people at an essential point in time. It is very important, therefore, that the roles and responsibilities of CPFR participants are clearly defined, assigned and mutually agreed upon.

Although it is recognised that there is a need to include upstream suppliers in CPFR initiatives, few demonstrable experiences are available and the necessity to prove the concept through actual experience remains.

The integration of upstream suppliers is addressed in the Guide to CPFR implementation and recommendations are further identified in the CPFR project under the umbrella of GCI.

5.3 eExchanges

Increasingly, eExchanges play an important role in the FMCG and retail industry and CPFR is at the top of their agenda. Four major eExchanges (GNX, WWRE, CPGmarket and Transora) launched CPFR initiatives at the beginning of 2001. All of them recognised the importance of CPFR to its members and have been striving to offer a fully integrated service as quickly as possible. eExchanges are well-placed to take a leadership role in spreading the adoption of CPFR by facilitating implementation amongst their members.

The critical success factors for these eExchanges are process and communication standards. GCI has recognised these requirements and is currently collaborating closely with the eExchanges to recommend standards.

It is anticipated that these eExchange initiatives will lead to widespread adoption of CPFR, not simply for the large multinational companies, but by opening up the opportunity to smaller companies.

6. A Guide to CPFR

Implementation

The objective of this guide is to offer recommendations to companies considering or running CPFR initiatives. It builds upon the nine-step-CPFR-Voluntary Guidelines published by VICS and offers guidance in a variety of situations. As with all strategic implementation projects, certain factors are critical to ensure successful results. This section of the document aims to outline the essential components for effective CPFR implementation. We begin by detailing the key stages:

- *Preparation*: understanding the necessary steps to evaluate a company's internal requirements and capabilities;
 - *Internal Readiness*: analysing the internal requirements and capabilities in order to determine a company's readiness for CPFR;
 - *Trading Partner Segmentation*: assessing a company's customers and/or suppliers in order to identify those with the greatest potential;
 - *CPFR Implementation Strategy*: establishing a framework to decide which is the most appropriate CPFR implementation strategy with respect to each of the company's trading partners. Once the implementation strategy has been defined, the company can then begin to implement the CPFR models with the selected trading partners.
- *Implementation Models*: three distinctive implementation options varying in scope, company requirements and impact that aim to facilitate the implementation of CPFR in different situations.
- *CPFR Development Plan*: guidelines that support companies in defining the next steps following the first phase of a CPFR initiative.
- *Assessment of Collaborative Results*: the final step in the process is to fully assess the results of the collaboration initiatives and to re-evaluate the previously defined CPFR implementation strategy. The following figure illustrates this process.

Each of these stages is examined below.

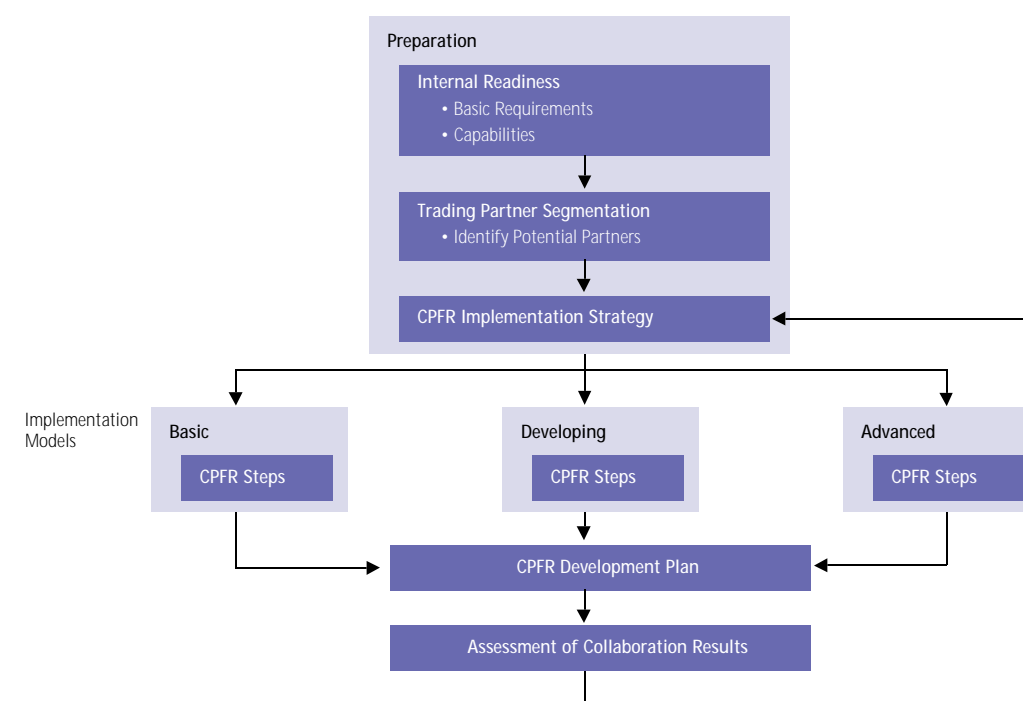


Figure 14. Guide to CPFR Implementation. Source: Accenture

6.1 Preparation

During the preparatory phase, companies are required to assess their own and their trading partners readiness to begin CPFR activities. Companies need to address the following questions:

- Is my company ready to implement CPFR?
- Are my trading partners ready to implement CPFR?
- With whom should I begin to implement CPFR?
- Which step/s of the CPFR processes should I initiate first?
- Will I be able to undertake CPFR if my trading partners are not ready or willing to collaborate?

6.1.1 Internal Readiness Assessment

Is my company ready to implement CPFR?

There are three fundamental internal requirements that need to be satisfied to commence CPFR initiatives:

- *Senior management buy-in:* The support of senior management is vital in taking action on CPFR initiatives to ensure the assignment of the necessary dedicated resources and drive the changes within the organisation.
- *Organisational willingness to collaborate:* It is essential that the organisation believes in the benefits of collaboration. It must be willing to collaborate both internally and with trading partners.
- *Willingness to change current internal processes:* CPFR will require a considerable change in internal processes and workflows. People within the organisation must be prepared to change their working habits.

Once these requirements are satisfied, CPFR has an opportunity to create impact and add value across the enterprise.

CPFR demands various capabilities from an organisation. These capabilities can be divided in two groups:

- *Basic Capabilities:* The minimum capabilities an organisation is required to possess in order to begin implementing CPFR. These capabilities could be gained with limited effort if they do not currently exist in the company.
- *Advanced Capabilities:* These capabilities would ease the implementation of CPFR but are not essential. They may be developed alongside the CPFR initiatives.

The following table indicates a list of basic and advanced capabilities.

LIST OF CAPABILITIES	
Basic Capabilities	Promotion planning at trading partner/DC/POS level
	Ability to forecast sales and/or orders at trading partner level (with or without special tools)
	Internal and external communication means (e-mail, fax, etc.)
Advanced Capabilities	Ability to forecast sales and orders at trading partner/DC/POS level and SKU (trading unit) level
	Ability to receive and integrate trading partners sales /deliveries data (DC/POS data, etc)
	Ability to update systems with a weekly/daily/hourly frequency
	Possibility of having long, medium and short term planning and forecasting horizons
	Automated tools for forecasting and collaboration
	Integration of collaboration tools with the organisation's back-end systems (ERP, forecasting, production planing, etc)

Table 5. List of Capabilities. Source: Accenture

6.1.2 Trading Partners Segmentation

Are my trading partners ready to implement CPFR? With whom should I begin to implement CPFR?

The trading partner segmentation is necessary for assessing a company's most important trading partners in order to identify where collaboration is most attractive and rewarding. This process also involves establishing guidelines around the level and extent of CPFR that may be potentially achieved. The segmentation activity should consider:

- the evaluation of the company's most important trading partners (customers or suppliers), i.e. trading partners representing approximately 75% of sales/spend.
- encouraging participation amongst all relevant departments (e.g. Demand Planning, Sales, Purchasing, Customer Support, Marketing, Logistics and/or Production) ensures the broadest possible knowledge base and also facilitates "buy-in" from these departments.

Segmentation is based on evaluating each trading partner from two perspectives:

- Potential business benefits to be obtained through collaboration with the trading partner
- Willingness and ability of the trading partner to collaborate

Details on the capability assessment to run a segmentation exercise may be found in Appendix B Toolkit. Matrixes to map the results are documented on the following pages. The assessment form for the willingness and ability to collaborate is based on a simplified version of the Capability Assessment published in "VICS CPFR Roadmap". If there is a preference to use the extended version of VICS, the resultant matrixes need to be adjusted accordingly.

The following figure illustrates an example of potential trading partners segmentation.

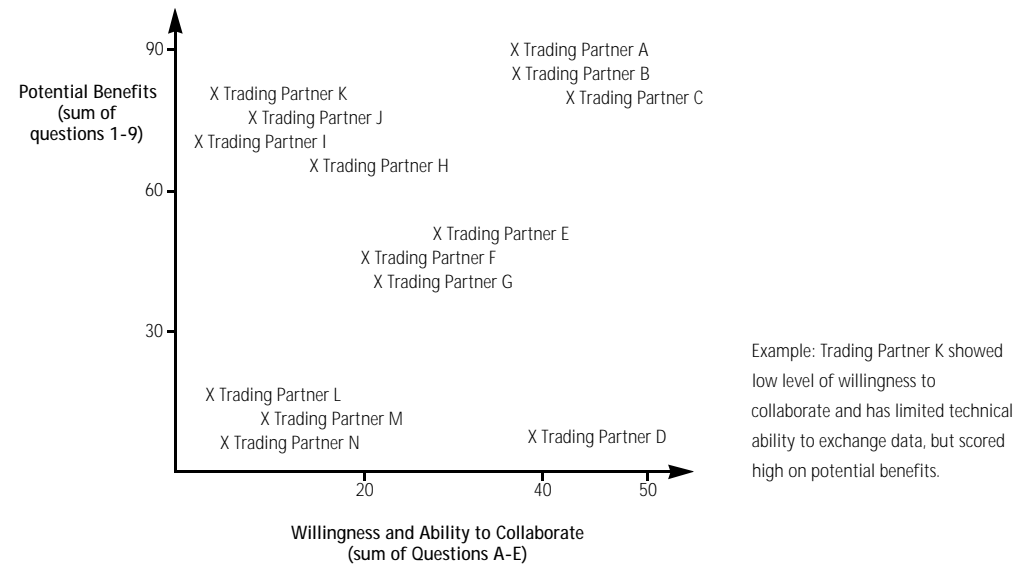


Figure 15. Trading Partners Segmentation.

Apart from the criteria used in the segmentation above, a company also needs to consider the following additional aspects when identifying trading partners for a potential collaboration.

- Status of present relationship with each of the potential trading partners
- The trading partner's potential to commit resources

6.1.3 CPFR Implementation Strategy

Having completed the evaluation and identification of potential trading partners, the company's strategy toward CPFR implementation requires definition. The objective here is to determine a prioritised list of the most attractive and rewarding trading partners.

The following areas require analysis in order to define the CPFR strategy:

- *CPFR model the company is able to implement*
The company's internal capabilities as assessed in step one (Internal Readiness Assessment) need to be matched against the CPFR models to determine whether the company is prepared to implement less sophisticated, Developing and/or Advanced CPFR (see chapter 6.2 Implementation Models).
- *Number of CPFR projects which may be implemented*
The resources available to support CPFR initiatives need to be identified. Experience in this area dictates that typical CPFR initiatives require:
 - A project leader assigned full time to the project. This person can potentially coordinate various CPFR initiatives.

- A representative from each department (depending on the type of trading partner relationship, this may be Demand Planning, Marketing, Sales, Purchasing, Logistics, etc.) prepared to dedicate approximately 50% of their time.
- IT Support: In the initial phase of CPFR projects, greater support is required from IT than in the later stages. The amount of IT support varies depending on the collaboration tool chosen, the level of integration and the data quality in the company's existing systems.

- *CPFR model potential trading partners are ready to implement*
Identify the CPFR model applicable to each trading partner based on the information obtained from the capability assessment, the required capabilities and the definition of the CPFR models.

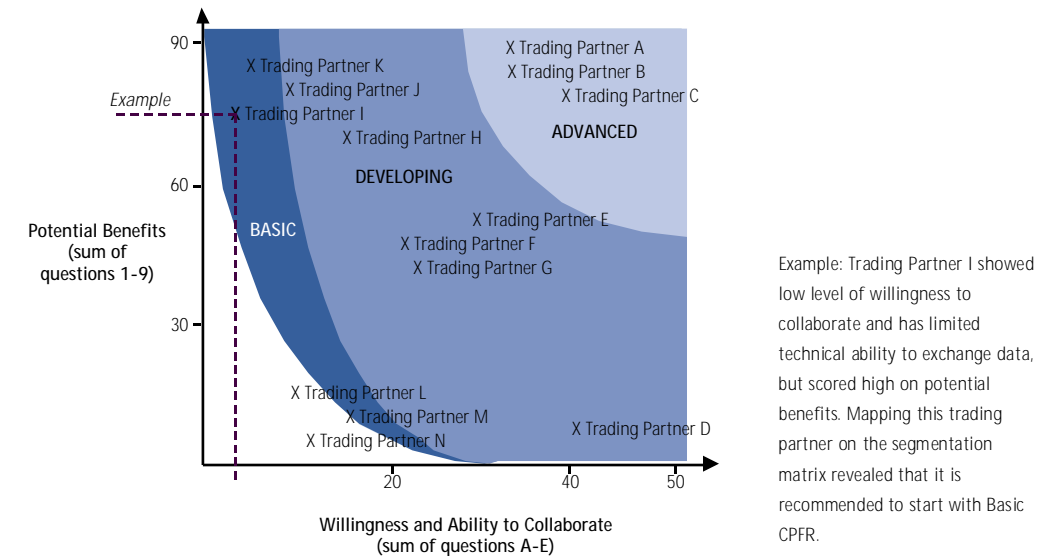


Figure 16. Segmentation Basic, Developing and Advanced CPFR.

Once these factors have been fully considered, it is important to prioritise the initiatives based on the following criteria:

- Requirement to evidence the CPFR concept to the company and/or to a potential trading partner
- Current trading partner relationship
- Availability of resources
- The need for internal preparation

It is recommended that the company begins with a less sophisticated level of CPFR initiatives (which we identify as Developing CPFR – see below), aiming to bring trading partners on board as the project progresses. Furthermore, it is not necessary to wait until all systems have been fully integrated to make progress with CPFR initiatives, since some of the processes and the integration requirements will be fairly straightforward once collaboration is established. A further recommendation: for customers/suppliers offering strong potential benefits to the company but unwilling to collaborate, the

Basic CPFR model can be implemented and will result in substantial benefits. At the same time, the company will be able to improve systems integration and adapt collaboration and forecasting tools functionality to the upcoming processes.

6.2 Implementation Models

6.2.1 Introduction

The following CPFR models have been developed to accommodate a variety of different situations and company characteristics. The models aim to facilitate the implementation of CPFR in any situation by giving three distinctive implementation options that vary in scope, company requirements and impact. They provide a framework to guide project teams through the implementation of CPFR, but do not promise to deliver a perfect solution in every situation; rather they intend to encourage a flexible application depending on the specific scenario within the company involved. These models can be adapted or expanded in line with the scope of any particular trading partner relationship. The three predefined models are Basic CPFR, Developing CPFR and Advanced CPFR.

6.2.2 Basic CPFR

The objective of Basic CPFR is to enhance collaboration within the organisation and provide a CPFR implementation framework for the relationship with those trading partners that are unwilling to collaborate, not ready to collaborate or, as a result of their characteristics, will offer limited potential from collaboration, but collaboration within the own company may generate benefits. At the same time, in some cases, it may be used to prepare the company for future CPFR implementation with trading partners. It aims to foster the collaboration between departments within one company. For example, Basic CPFR brings together the Sales, Demand Planning, Marketing, Production, Purchasing, Logistics and Customer Support departments. Basic CPFR can focus on a few or all areas for collaborative processes. The potential benefits are significant, but limited, since no trading partners are involved.

6.2.3 Developing CPFR

The objective of Developing CPFR is to evidence the CPFR concept and assist companies with an easy to implement CPFR initiative that may realise benefits. It will also enable companies wishing to focus on supply chain integration to prepare the organisation for an Advanced CPFR implementation. Developing CPFR implies generally limited collaboration with a trading partner. It is often restricted to a collaborative promotion plan and sales or order forecast collaboration or to a reduced number of SKUs. It may also be used as 'easy to implement' CPFR that embraces all the CPFR processes and all the company SKUs and delivery points. However, there are limited potential benefits, as it does not integrate the whole supply chain. Developing CPFR can also be seen as a key entry level with trading partners (e.g. pilot phase).

6.2.4 Advanced CPFR

The objective of Advanced CPFR is to roll-out CPFR, reach critical mass and achieve the full potential benefits. Advanced CPFR implies collaborating in promotion planning and sales and order forecasting through the development and maintenance of a close relationship with trading partners. Complete integration of all processes may be effected gradually, beginning initially with a limited scope. The collaboration process is usually automated through an advanced IT solution that is integrated with the company's back-office systems (ERP, Production Planning, etc). Advanced CPFR includes the use of orders, POS and inventory data and it may also include collaboration through one or many eExchanges.

6.2.5 Implementation Model Definition

The objective of the Implementation Model Definition is to provide companies with clear guidance on each of the models and clarify the differences between them.

The details of each CPFR model are described in the tables 8 to 10. High-level requirements are defined for trading partners in the case of Developing and Advanced CPFR and for within the company if applying Basic CPFR.

Table 6 defines the requirements of each CPFR model with respect to the company departments involved, the collaboration scope (collaborative processes) and the required data. Table 6 is applicable to Manufacturers and Suppliers, whereas Table 7 shows the definitions applicable to Retailers.

	BASIC	DEVELOPING	ADVANCED
General Trading Partner Features			
Willingness to Collaborate	No	Yes	Yes
Departments Involved			
	Company	Trading Partner	Company
Sales/Purchasing	Yes	Yes	No
Logistics	Yes	No	No
Marketing	Yes	Yes	No
Production	Yes	No	No
Demand/Materials Planning	Yes	Yes	Yes
Collaboration Scope			
Promotion Planning	Yes	Yes	Yes
Sales Forecast	One of the two	One of the two	Yes
Order Forecast			Yes
Replenishment	Optional	Optional	Yes
Exchanged Data			
Inventory	Optional	No/DC level	DC/POS level
Shipments to DC	Yes	Yes	Yes
Shipments from DC to store	Optional	Yes	Yes
Sales at DC level	Optional	Optional	Yes
POS data	Optional	No	Yes

Table 6. Requirements for Manufacturer and Supplier for CPFR Implementation.

	BASIC	DEVELOPING	ADVANCED
General Trading Partner Features			
Willingness to Collaborate	No	Yes	Yes
Departments Involved			
	Company	Trading Partner	Company
Purchasing	Yes	Yes	Yes
Logistics	Yes	No	No
Marketing / Sales	Yes	Yes	Yes
Production	Yes	-	No
Demand Planning	Yes	Yes	Yes
Collaboration Scope			
Promotion Planning	Yes	Yes	Yes
Sales Forecast	One of the two	One of the two	Yes
Order Forecast			Yes
Replenishment	Optional	Optional	Yes
Exchanged Data			
Inventory	Optional	No/DC level	DC / POS level
Shipments to DC	-	Yes	Yes
Shipments from DC to store	Yes	Yes	Yes
Sales at DC level	Yes	Optional	Yes
POS data	Optional	No	Yes

Table 7. Requirements for Retailer for CPFR Implementation.

Tables 8 to 10 provide greater detail on defining the requirements for the implementation of each of the CPFR models. These tables aim to assist companies in the CPFR implementation strategy (see section 6.1.3 CPFR Implementation Strategy). The definitions are organised along the CPFR process, including an additional step around collaboration on Promotion Planning, outlined in the “European Focus Area”, chapter 5. The requirements are arranged according to the following subjects:

- *Scope*: Definition of the volume of information implied by each of the models for the different CPFR steps (e.g. limited number of SKUs vs. all trading partner SKUs).
- *IT*: Defines where a specific tool is needed and the required integration level with back-end systems (e.g. ERPs)
- *Organisational*: Defines the departments involved in the collaboration for each of the CPFR steps.
- *Data*: Definition of the data required for the implementation of the different CPFR models in each of the CPFR steps.
- *KPI*: Recommendation for the KPIs to be measured in each of the CPFR steps (see Appendix C: Key Performance Measurement Definition)

For the Developing CPFR model, only the requirements for promotion planning and sales forecast collaboration are defined, indicating that benefits can be achieved through a limited collaboration effort. It should be noted, that the sales forecast collaboration can also be substituted by order forecast collaboration.

CPFR	1 Collaboration Arrangement	2 Joint Business Plan	3a Promotion Collaboration ¹	3b Create Sales Forecast	4 Identify Exceptions	5 Resolve/ Collaborate on Exceptions	6 Create Order Forecast	7 Identify Exceptions	8 Resolve/ Collaborate on Exceptions	9 Generate Order
Scope	Basic	Limited number of organisation departments	All company products and DCs							
	Developing	Customer Support, Commercial	Promotional Products and limited number of DCs							
	Advanced	All trading partners departments	All trading partner products and DCs							
IT	Basic		Simple Tool (e.g. spreadsheet)	Manual or Sales Forecasting Tool (FG/Mat)	Simple Tool (e.g. spreadsheet)		Manual or Order Forecasting Tool	Simple Tool (e.g. spreadsheet)	Telephone or e-mail	Manual or Automated
	Developing		Simple Tool (e.g. spreadsheet)	Simple Tool (e.g. spreadsheet)	Simple Tool (e.g. spreadsheet)	Telephone or e-mail				
	Advanced		Special Promotion Planning Collaboration Tool	Demand/ Material Forecast Tool	Automated Collaboration Tool (integrated with back office systems)		Order Forecast Tool	Automated Collaboration Tool (integrated with back office systems)	Telephone or e-mail	Automated Order Generation Tool (integrated with ERP)

1. Promotion Planning does not apply to most Suppliers, so this step should not be considered by relationships including suppliers that are not affected by promotional actions.

Table 8. CPFR Implementation Requirements: Scope and IT. Source: Accenture.

CPFR	1 Collaboration Arrangement	2 Joint Business Plan	3a Promotion Collaboration ¹	3b Create Sales Forecast	4 Identify Exceptions	5 Resolve/Collaborate on Exceptions	6 Create Order Forecast	7 Identify Exceptions	8 Resolve/Collaborate on Exceptions	9 Generate Order
Organisational	Basic	Senior Management, Project Sponsors/Managers, Marketing, Sales, Demand Planner, Purchasing, Commercial	Sales, Demand Planner	Demand Planner	Sales, Marketing, Purchasing, Demand Planner, Production		Sales	Sales, Production, Purchasing		Sales
	Developing				Demand Planner	Demand Planner, Commercial Purchasing				
	Advanced	Senior Management, Project Sponsors/Managers, Marketing, Sales, Business Planner, Purchasing, Commercial	Marketing, Sales, Commercial	Demand Planner, Purchasing		Demand Planner, Purchasing, Production, Marketing, Sales, Commercial	Demand Planner, Purchasing, Sales, Commercial		Demand Planner, Purchasing, Sales, Commercial, Production Logistics	

1. Promotion Planning does not apply to most Suppliers, so this step should not be considered by relationships including suppliers that are not affected by promotional actions. Table 9. CPFR Implementation Requirements: Organisational. Source: Accenture.

CPFR	1 Collaboration Arrangement	2 Joint Business Plan	3a Promotion Collaboration ¹	3b Create Sales Forecast	4 Identify Exceptions	5 Resolve/Collaborate on Exceptions	6 Create Order Forecast	7 Identify Exceptions	8 Resolve/Collaborate on Exceptions	9 Generate Order
Data Availability	Basic			MDC Shipments to and from partners	Sales/Material Forecast		Sales/Material Forecast	Order Forecast	Exception items identified	Frozen period order forecast and actual orders
	Developing	Business Plan	Promotion Plan	MDC or RDC to and from partners	One Sales/Material Forecast value per product	Exception Items identified				
	Advanced			Supplier shipments, RDC / POS Data	Multiple Sales/Material Forecast at product level		Unique Sales/Material Forecast, Inventory	One or multiple Order Forecast	Exception items identified	Frozen period of unique Order Forecast, Inventory
KPI	Basic			Forecast Accuracy, Inventory, Service Level Sales			Planning, Lead-time, Unplanned changeovers			Distribution, Service Level
	Developing		Unplanned changeovers, Planning	Forecast Accuracy, Inventory Sales						
	Advanced			Forecast Accuracy, Inventory, Service Level Sales			Planning, Lead-time, Unplanned changeovers			Distribution, Service Level

1. Promotion Planning does not apply to most Suppliers, so this step should not be considered by relationships including suppliers that are not affected by promotional actions. Table 10. CPFR Implementation Requirements: Data Availability and KPI. Source: Accenture.

6.2.6 CPFR Steps

The CPFR steps section aims to provide companies with guidelines on collaborating in line with CPFR processes. Recommendations will be made for successful CPFR implementation. Key concepts and inputs for each of the collaboration processes are defined herein.

CPFR steps are based on the nine-step process model developed by VICS and the GCI Recommendation on CPFR, with the addition of the Promotion Planning collaboration from chapter 5 "European Focus Areas". All parties involved (company departments and trading partners where applicable) need to agree, for each CPFR initiative, on the processes on which they wish to collaborate and, consequently, which of the CPFR steps they wish to include. In the following diagram, the VICS CPFR steps are illustrated.

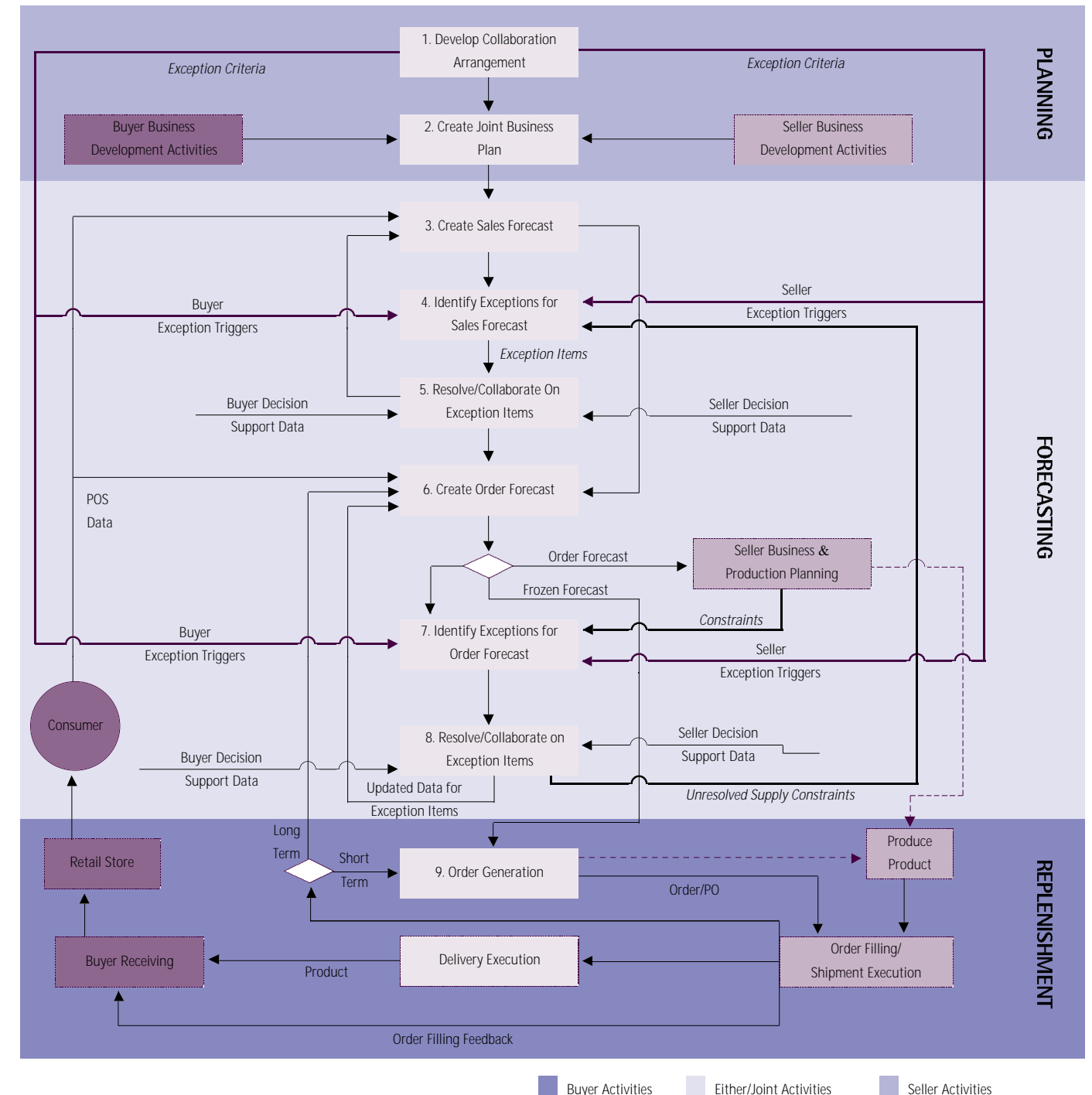


Figure 17. CPFR Process Steps - adapted from VICS - CPFR Generic Model.

■ Buyer Activities ■ Either/Joint Activities ■ Seller Activities

A company initiating their first CPFR initiative may question: *Which Steps do I implement first?* ECR Europe recommends beginning with collaboration for one process; within Europe, often the greatest benefits can be achieved with collaboration on Promotion Planning. If additional resources are available, collaboration on either the Sales or Order Forecast would be the most logical choice. A firm recommendation from the experience of ECR pilots is to select a series of steps rather than attempt to collaborate across them all from the outset. Collaboration scope can then be extended gradually.

Hints for successful implementation

VALUABLE ADVICE AROUND CPFR IMPLEMENTATION FOR COMPANIES COMMENCING INITIATIVES WITH ANY OF THE CPFR MODELS:

- Ensure the project objectives, scope and responsibilities are clearly defined
- Assign a full-time project leader with senior management support and the appropriate 'know-how' to ensure project success and overall project coordination
- Assign sufficient resources to the project, particularly during the time-consuming initial stages. Once the collaboration is underway and the team is familiar with the requirements, the time required decreases
- Define a realistic timescale, objectives and plan for the appropriate resources
- Ensure that the communication systems are ready to cooperate and support the effort
- Continuously track the collaboration results
- Maintain focus on the overall project objectives

ECR EUROPE ALSO DEFINES A NUMBER OF KEY LESSONS IN OVERCOMING THE BARRIERS TO SUCCESS:

- Senior management support is vital to secure the necessary involvement and commitment of key resources as well as eliminate any existing organisational barriers
- Focus the collaboration processes on the business objectives
- Work on strengthening relationships with desirable trading partners
- Solve problems jointly; remember CPFR is about collaborating in a 'win-win' situation, not simply data exchange with unrelated processes
- Ensure commitment is assured before expanding the scope or number of CPFR initiatives

6.3 CPFR Development Plan

A Development Plan assists companies on the appropriate steps following the first phase in a CPFR initiative. It aims to offer support on the means to expand the reach of existing CPFR initiatives through increasing the scope, level of collaboration or integration of IT systems. These guidelines should be considered in each individual situation. They are not intended as a panacea, but rather to offer ideas and suggestions for a means to attain business goals.

The CPFR Development Plan consists of two aspects:

6.3.1 Evaluation of CPFR initiative results

After each phase of a CPFR initiative all parties involved need to reflect on the success of the collaboration, in relation to the business results attained. A review of the evolution of the KPIs during the period of the CPFR initiative and evaluation of the objectives agreed upon in the Collaboration Arrangement will offer a clear assessment of the

success of the collaboration. This evaluation is required for all CPFR models; for the Basic model only internal departments will need to participate; in the Developing and Advanced model, representatives from all trading partners should participate.

6.3.2 Extending the CPFR initiative

Once the interim results of a CPFR initiative have been analysed, decisions need to be taken on how to extend this collaboration in order to obtain maximum business benefits. There are various options for extending the scope of CPFR depending on previous results, the relationship with the trading partner, business requirements and company priorities. Options applicable to all implementation models are listed below:

- Increase the collaboration scope:
 - Increase the number of SKUs under collaboration
 - Increase the number of distribution points affected by the collaboration
 - Extend geographic reach to other areas
 - Expand collaboration to additional CPFR processes
- Increase automation of collaboration process through use of sophisticated IT solutions or standardised interfaces
- In the Developing and Advanced models, heighten the collaboration with the trading partner
 - Increase information sharing (e.g. POS-data or inventory at store level)
 - Jointly initiate further collaborative processes

6.4 Assessment of Collaboration Results

The objective of the Assessment of Collaboration Results is to ensure that the portfolio of CPFR initiatives realise the maximum benefits, are in line with the company's strategy and ensure a focused approach for the future. This chapter aims to help companies who have already conducted some collaborative initiatives to choose the next steps toward optimum use of CPFR in their environment. The result of this periodic review process is to offer a guideline for setting the direction of the CPFR efforts within the organisation.

Once you have implemented various CPFR initiatives using different CPFR models, it is important to analyse the results generated within the organisation. Depending on the ratio of costs versus benefits, the company needs to adjust its approach to CPFR. This may result, for example, in a decision to roll-out CPFR to the top twenty suppliers as quickly as possible or restrict your CPFR initiatives to highly promotional products. Again, this document offers guidelines on which aspects need to be considered.

A comparison between the various initiatives implemented (different models, collaboration processes and scope) could offer valuable support on decisions around a future approach. This comparison would most likely impact the direction of all CPFR initiatives in relation to the CPFR models applied, the scope and collaboration processes.

Once the results have been assessed, the company should close the loop and reconsider the CPFR Implementation Strategy. The lessons learned from the assessment plus the experience gained from the CPFR initiatives will provide a fresh starting position for the company. For example, the company and its trading partner may score differently on the assessment of ability and willingness to collaborate. This may imply that the optimal CPFR model for the relationship with a specific trading partner would be the Advanced CPFR whereas during the previous phase of collaboration the optimal solution was the Developing model.

This cycle - from defining and refining the CPFR Implementation Strategy up to the Assessment of Collaboration results - should be repeated periodically. It is recommended to nominate the review period before setting out to implement various CPFR initiatives. Furthermore, the Assessment of Collaboration Results provides an excellent opportunity to report on the progress of the CPFR initiative to the internal sponsor and ensure the continued support of senior management.

7. Business

Architecture

7.1 Models and Scenarios

The objective of this chapter is to understand the current business trends in order to identify the potential for CPFR implementation. This examination requires a definition of the models and scenarios for CPFR implementation.

Due to the latest business trends (e.g. eExchanges, multiple software developments, and so on), companies have many options available for different CPFR infrastructure scenarios. GCI has already undertaken work around definition that is reflected in this chapter. For a detailed definition of the work process implications for each scenario, please refer to the GCI Recommendations on CPFR.

The different CPFR scenarios are as follows¹:

- *Extranet*: A company offers their CPFR solution as an extranet application with customer-level access to its trading partners.
- *Application Service Provider (ASP)*: A company chooses a third party to host its CPFR solution, giving customer-level access to its trading partners and itself.
- *eExchange*: A company partners with one of the eExchanges in its industry to use their CPFR services. The company will not need to own a CPFR solution.
- *Company-to-Company*: A company can use its local CPFR solution and exchange the information with other companies' CPFR solutions.
- *Company-to-eExchange*: A company can use its local CPFR solution and exchange information with one or more eExchange's CPFR solutions.
- *eExchange-to-eExchange*: Two or more eExchanges exchange data between their different CPFR solutions for use by their respective member companies.

The following diagram, taken from the GCI Recommendation for CPFR, illustrates the different scenarios grouped as shared and peer-to-peer. The shared group is the simplest group, and includes the scenarios in which trading partners use the same collaboration tool; this tool may be owned by one of the trading partners, by an eExchange or simply a third party. The peer-to-peer group will apply to all those CPFR relationships in which communication between different collaboration tools takes place. Regardless of the scenario, aligned master data and communication standards are key success factors to reach critical mass

¹. Source: GCI Recommendations for VICS CPFR®.

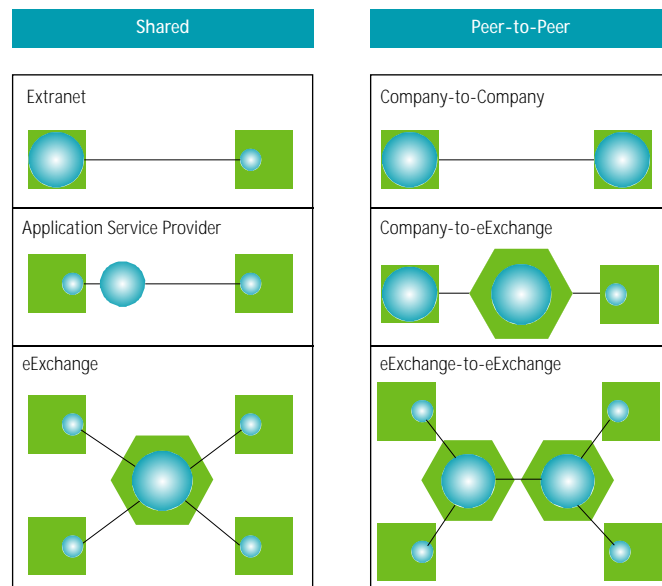


Figure 18. CPFR Scenarios. Source: GCI.

7.2 Technology

The objective of this section is to help companies understand the systems and technological requirements for a simple and completely integrated CPFR implementation.

Technological needs toward implementing CPFR can vary greatly, depending on the level of sophistication applied.

CPFR may be conducted without any special tool; as a simple method using spreadsheets and sending data between trading partners via e-mail or fax; or more thoroughly integrating CPFR throughout the company by using forecasting tools, special interfaces for data transfer and integrating the collaboration data into other company systems. CPFR covering a significant percentage of sales volume (reaching critical mass) usually implies a specific CPFR solution preferably integrated with other company systems.

All different levels of implementation of CPFR will return varied benefits to the company.

If the decision is taken to work on the systems in the company and integrate CPFR with all the other company back-end systems, there is a more pressing need to understand the full functional architecture requirements.

For a limited number of trading partners, an interface converting the different codes can be created; however, CPFR with a critical mass, implying different collaboration tools, involves work with communication standards (EANCOM®, XML) and alignment of the master data. It is essential in collaboration practices that both trading partners are collaborating on the same data.

Communication standards and master data alignment is not covered in this ECR publication since they are defined by the corresponding standard bodies. For further information on these concepts, please refer to the EAN•UCC.

7.3 Links to other Enterprise Systems/Processes

The objective of this chapter is to identify the relationship between a CPFR implementation and the other enterprise systems and processes affected by the activity. The chapter will detail a functional architecture, indicating the interaction between the company systems and the collaboration processes, and recommend changes to the current company systems in order to implement the Advanced CPFR model.

If a company is willing to focus their efforts on attaining all the potential CPFR benefits, distributed throughout the company and the supply chain, at least one of the trading partners must have each of the following processes and systems:

- Promotion Planning
- Forecasting
 - Sales (Demand Planning)
 - Orders (Distribution Planning)
- Transportation Planning
- Production Planning (when applicable (Supplier/Manufacturer))
- Collaboration Processes

For the Advanced CPFR Model to implement all the CPFR steps, full integration between the company's systems is essential.

The following diagram (Figure 18) illustrates the functional architecture required within a company embracing all the processes/systems referenced. It should be noted that Category Management and Promotion Planning may not be applicable for suppliers, Production Planning will not apply to retailers and Sales Forecast may apply to Finished Goods (FG) or Material (Mat).

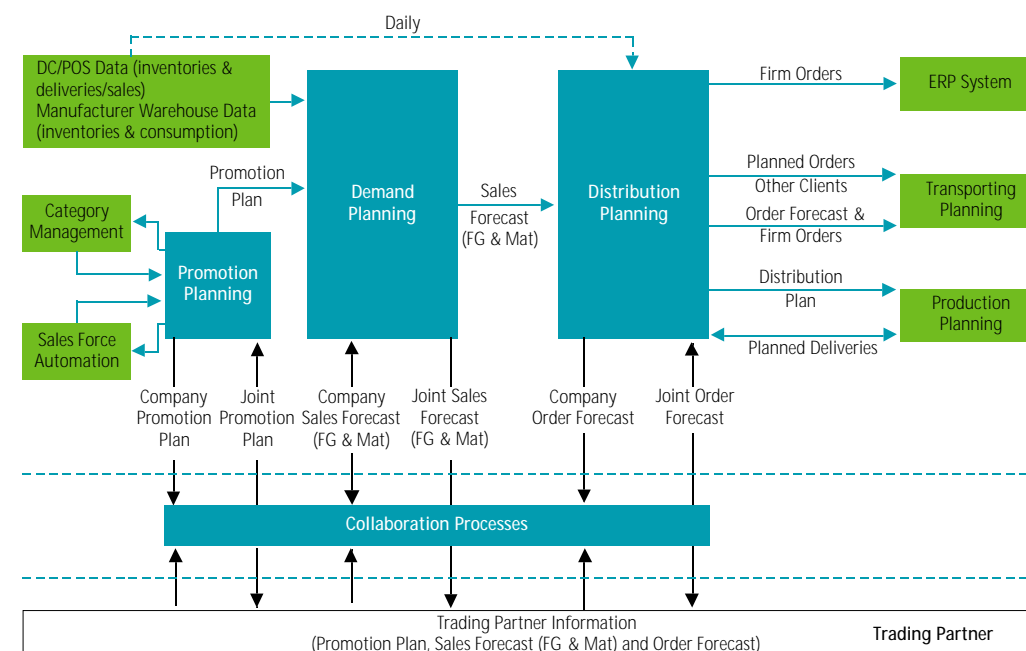


Figure 19. Manufacturers, suppliers or retailers functional architecture. Source: Accenture.

Integration of a company's systems/processes will require the redefinition of multiple systems/processes affected by collaboration:

- **Production Planning**
The production department will need to closely collaborate with the demand planning department in order to achieve a more reliable production plan (e.g. without unplanned changeovers).
- **Transportation Planning**
Targeting a broader horizon for all the processes will require the production of a longer-term transportation plan. Transportation personnel will need to collaborate with those responsible for demand planning and production.
- **ERP functionalities**
Rather than being responsive to short-term orders, those responsible for replenishment will have improved visibility of future demand, allowing them to achieve greater accuracy in the order forecast. The ERP system will convert the frozen order forecast directly into a firm order at the agreed point in time, so the replenishment area will need to collaborate with all the other departments to ensure that the order forecast is correct, that everything is available and that the trading partner is aware that the order will be sent.

There are high potential benefits to be gained from Advanced CPFR implementation which fully justify the effort (see chapter 3.2 Benefits). As previously mentioned, with CPFR integration across the whole supply chain, companies can significantly improve their ability-to-promise, service level and capacity limitations.

In the following table, the principal characteristics for promotion planning and collaboration tools and requisites for other company systems are presented.

Elements of Functional Architecture						
Promotion Planning	Demand Planning	Distribution Planning	Collaboration Tool	ERP	Transportation Planning	Production Planning
<ul style="list-style-type: none"> • Need to register all the negotiation and/or changes in the promotion plan • Ability to generate promotion plan at customer/DC/POS level • Allows visibility of promotion plan within all company areas implicated and for trading partners when applicable • Ability to communicate changes in any of the promotion plans • Optional functionalities: analysis of promotion effectiveness and promotion plan recommendations 	<ul style="list-style-type: none"> • Ability to forecast sales at customer level or for a better implementation at DC or POS level • Ability to forecast sales at SKU level • Possibility of changing the forecast sales values • Possibility of integrating special events (promotions, holidays, etc) • Ability to send forecast sales data to other systems (spreadsheets, distribution tool, collaboration tool, etc) • Ability to forecast sales at short, medium and long term • Ability to forecast sales daily/weekly 	<ul style="list-style-type: none"> • Ability to forecast orders at DC or POS level • Ability to forecast orders at SKU level • Possibility of changing the order forecast • Possibility to define different lead-times, stock covers, minimum loads, etc, at customer/ DC/POS and SKU level • Ability to generate the Master Plan Schedule for production needs with unlimited capacity • This tool is related to the other existing replenishment initiatives in the industry as CRP, VMI, SMI, etc 	<ul style="list-style-type: none"> • Control user access • Maintain all trading partners collaboration data: <ul style="list-style-type: none"> – Promotion Plan – Sales Forecast (Mat & FG) – Order Forecast • Compare trading partners data • Send alert messages to responsible parties for each of the trading partners • Set different views for each of the trading partners' needs • Permit data visualisation from different locations 	<ul style="list-style-type: none"> • Possibility of receiving order generation instructions from customers, distribution planning tools and collaboration tools 	<ul style="list-style-type: none"> • Ability to implement order forecast in the tool • Ability to plan transportation at short, medium and long term 	<ul style="list-style-type: none"> • Ability to implement distribution plan from distribution planning tool • Ability to plan at short, medium and long term • Ability to send planned orders to distribution planning tool, after checking capacities • Possibility of splitting production plan at customer/DC/POS level

Table 11. Elements of Functional Architecture. Source: Accenture.

7.4 Key Performance Indicators

When discussing the scope of the project, the need for a common understanding of detailed Key Performance Indicators (KPIs) addressing the requirements of CPFR was identified among the members of the ECR Europe CPFR project team. At the same time, it was considered that the Global Scorecard released by the Global Commerce Initiative (GCI) should be the basis for any additional or more detailed KPI. The definitions and descriptions are intended to be compatible with the Global Scorecard.

The main purpose of using Key Performance Indicators is to measure the overall performance of the relationship between supplier/manufacturer and manufacturer/retailer and to track development. To ensure the success of CPFR initiatives, it is recommended that trading partners share objectives (i.e. agree on the KPI values to be achieved) and then compare the reality with these objectives whilst undertaking the initiative.

A second role of the KPIs is to be found in sharing them regularly with key trading partners. They may be used for intra- and inter-company wide benchmarking and provide a clear definition for setting common improvement targets. It is critical that the trading partners agree and fully understand the composition and calculation of each single KPI. People will not trust or use them for measuring and learning if they do not fully comprehend their meaning. ECR Europe recognises that the overall objective for any

company initiative is Profit Growth. This measure is not included in this document, since it is characteristically a generic goal for any activity and is presently addressed by the PIETF (Profit Impact of ECR Task Force) initiative.

The following figure provides a high-level listing of KPIs. The KPIs most relevant to the current relationship of the trading partners should be chosen and agreed upon. Only a limited number need to be selected for each relationship in order to facilitate implementation of CPFR. Detailed KPI specifications are available in Appendix C.

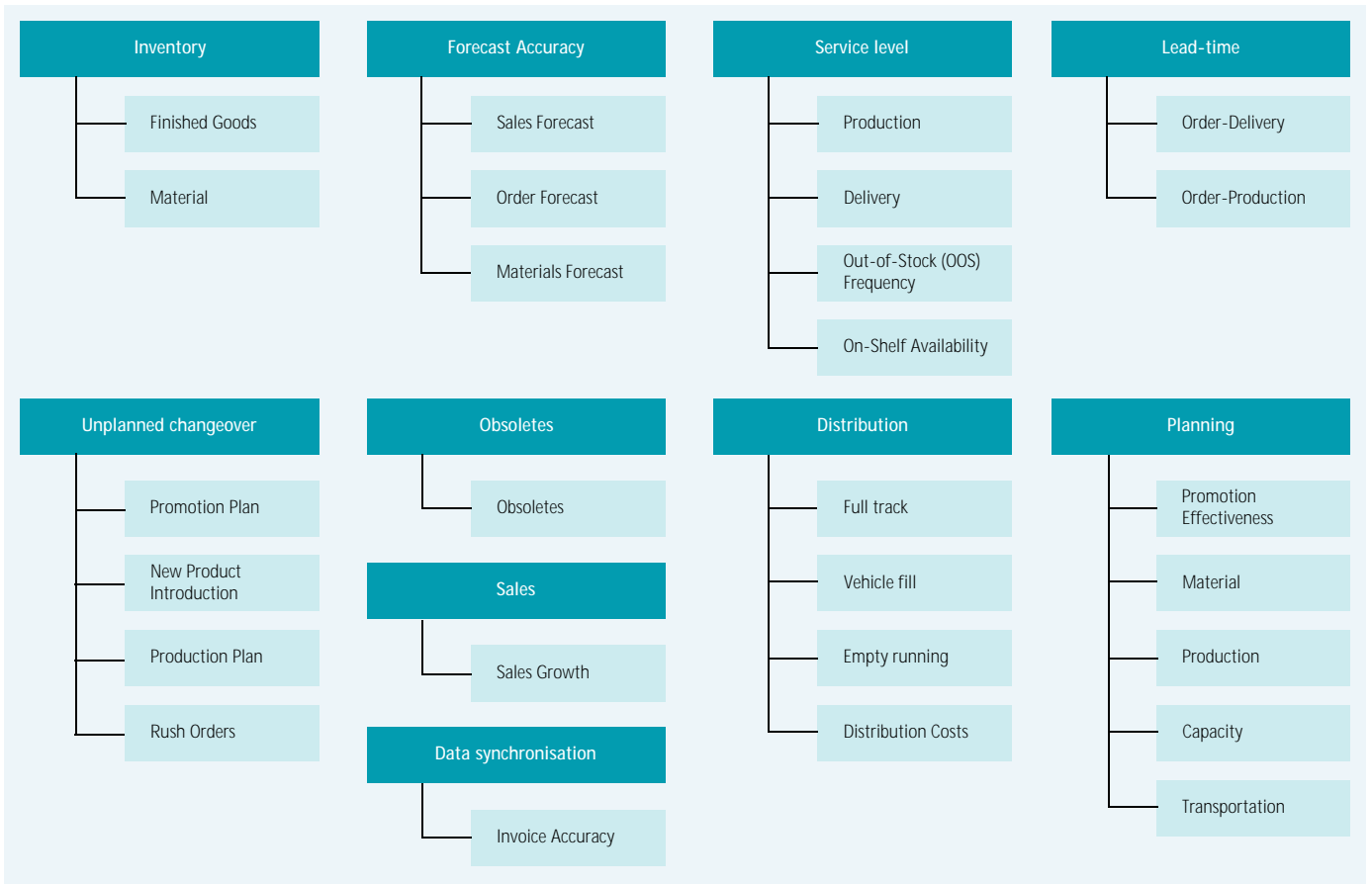


Figure 20. Key Performance Indicators for CPFR. Source: Project Team.

8. CPFR

in Action

Due to the time frame of the ECR Europe CPFR project, pilots have commenced at varying intervals within the project's lifecycle. As a result, this publication, which includes CPFR implementation tips and qualitative results gathered from ongoing pilots, will be complemented by a supplementary publication, featuring CPFR case studies, that is intended to be published once critical mass of results has been achieved. This allows the pilots to be operational for a longer period and therefore offer improved quantitative results.

Within the ECR Europe project, five separate pilots have been initiated, all with different scope and scale. The following diagram illustrates the companies involved in each of the pilots and their individual scope.



Additional companies have contributed toward this publication, but they or their trading partners have expressed a desire to remain anonymous.

The following pages outline a high-level definition of the status of the pilots prior to publication.

8.1 Pilot: Unilever (Lever Fabergé) – Sainsbury’s – GNX

Introduction

- Lever Fabergé is the home and personal care arm of Unilever in the UK. Unilever is a multinational manufacturer of food and home and personal care products operating in 150 countries and employing around 250,000 people. In 2000, sales were 27.3 billion pound's sterling, with spending more than 130 million in e-business initiatives.

- J. Sainsbury PLC is one of the world's leading retailers and includes Sainsbury's supermarkets and Sainsbury's banks. This company serves more than 15 million customers in the UK and US, offering fresh food and a wide choice of products for the home.
- GNX is one of the leading global business-to-business online eExchange for the retail industry. Some of the largest retail companies, such as Carrefour SA, Kroger CO, Metro AG, J. Sainsbury PLC, are among GNX equity partners.

Scope

A meeting took place on December 1st 2000 to initiate the pilot with Lever Fabergé and Sainsbury's. Following a series of reviews, the scope was defined on February 12th 2001 to include the full category of fabric conditioners and promotional lines for powder and tablets. A weekly process between Lever Fabergé and Sainsbury's via GNX has been agreed with a focus on collaborating on an order forecast spanning a 6-week horizon.

Pilot Objectives

The objectives set for the pilot are:

- Assess the CPFR process in the context of the UK supply chain business model
- Assess the value of working with an eExchange to implement CPFR
- Eliminate supply chain inefficiencies through collaboration between trading partners
- Generate a better service to match consumer needs due to enhanced visibility of the whole supply chain, allowing manufacturer and retailer to focus on the consumer
- Improve business profitability from the reduction of inventory levels, stock-out reduction, on-shelf availability and increased sales
- Simplify the planning process, driving processes and systems from a single joint order forecast
- Strengthen the trading partner relationship

Metrics

A key element of the pilot preparation was the agreement of Key Performance Indicators (KPIs) that measure the overall performance of the relationship between Lever Fabergé and Sainsbury's. There are three areas of measurement: forecast convergence, service levels and reduction in supply chain stock.

Convergence of order forecast is measured by the following KPIs:

- Supplier forecast vs. retailer forecast
- Actual orders placed vs. agreed forecast

The service level is measured using four KPIs:

- Actual deliveries vs. agreed forecast
- On-shelf-availability
- In store availability
- Reduction in lost sales due to out-of-stocks

Reduction in supply chain stock is measured by:

- Reduction in depot inventory

Lever Fabergé and Sainsbury's have agreed to the definition of KPIs, measurement tools, format and content of data in order to enable collaboration to take place.

IT Solutions

The pilot uses an Internet environment using GNX as a platform to enable the communication and collaboration between the two companies. Manugistics provides the network collaboration software, including the hosted exception engine.

Results and Lessons Learned

The first results are expected after a collaboration process of a minimum 6 weeks, which according to the current work plan will conclude in May. More detailed analysis will be undertaken at the conclusion of the pilot in July. There are some initial lessons derived from this pilot implementation that might be useful for other companies considering CPFR:

- Need to map current processes as an initial stage and compare to the chosen model
- Need to establish process/system constraints early
- Team should include dedicated resources from logistics, commercial, IT, data analyst and CPFR process expert from both retailer and supplier
- Begin by training everyone as users – add superuser training later
- Agree acceptable service level and performance with software supplier and/or eExchange
- Assess data availability to fulfill process and measurement requirements
- Allow sufficient testing and data reconciliation time into the plan

Next Steps

The collaboration began in March and involves weekly reviews of forecasts between both parties to reach an agreement on forward volumes. The process is reviewed by the team on a bi-weekly basis.

An interim set of results will be available during May; a full evaluation will be undertaken at the end of the pilot period in August.

8.2 Pilot: Condis - Henkel – Cartisa

Introduction

- Condis is a Spanish regional retailer based in Catalonia. The company was established in 1961 and today manages 330 outlets, making it the largest supermarket network in Catalonia, and the second largest supermarket in terms of sales volume. Condis operates under the brand names of Condis Supermercats and

Distop. In 2000, Condis introduced CONDISLINE, a successful and innovative business initiative.

- Henkel is an internationally operating Company with a widely diversified product portfolio that includes among other adhesives, household cleaners, body care products, products for surface treatment and industrial cleaning, and chemical products. The Henkel Group is managed by Henkel KGaA in Düsseldorf, Germany. At the end of 2000 Henkel employed more than 61,000 people worldwide and accounted for turnover of € 12,8 bn.
- Cartisa is a Spanish packaging company, part of the multinational group International Paper. It manufactures packages for all kinds of industrial products, with packaging plants in Barcelona, Basque Country, Valladolid and the Canary Islands. The company exports to South America, Africa, Asia and Europe.

Scope

This pilot involves the integration of the whole supply chain: Supplier – Manufacturer – Retailer, and aims to identify the benefits of integrating information from one end of the supply chain to the other.

The scope of the project, from the perspective of the relationship with the retailer, is focused on the detergents category, with a particular emphasis on promotional SKUs. The collaboration will involve the Promotion Planning and Order Forecast processes.

Within Henkel, the internal forecast, replenishment, purchasing, promotion planning and production planning processes will be adapted to processes that are more suitable for collaboration.

The upstream scope is split in two stages: the first stage will be a simulation that keeps track of the supplier's production plan, production changeovers, rush orders, returns, etc, and extrapolates downstream improvements all the way to the supplier; the second stage will be operating in a real environment where the retailer will send a daily forecast to Cartisa with an 8 week horizon. Cartisa will identify this retailer data as a completely new customer and define its own production plan, deliveries and so on to identify any problems generated and make comparisons with current problems experienced from the standard information received from Henkel.

Pilots Objectives

The first objective is to prove the CPFR concept and validate the model as defined by ECR Europe. An additional objective is to generate stable delivery plans which will move the pilot toward more quantifiable objectives such as:

- Reduction of Out-of-Stock at point of sale
- Increased Sales Growth
- Improved Forecast Accuracy
- Reduction of Inventories
- Increased Promotion Plan horizon

Metrics

The KPIs measured during the pilot are:

- Service level
- Rush orders
- Percentage of returns
- Stock levels
- Promotion plan changes
- Forecast accuracy
- Production plan fulfillment
- Delivery plan fulfillment

IT Solutions

In this pilot, no specialised tool will be used. The collaboration data will be shared using specifically defined spreadsheets for each of the processes, and collaboration will be conducted through e-mail messages and phone calls.

Results and Lessons Learned

First results showed a 15% improvement in forecast accuracy and an improvement in the joint planning (anticipation and event communication) of the promotional activity.

Better knowledge of the promotional impact from two aspects:

- Number of references involved in each promotion
- Volume of the references involved in each promotion (no overstock neither out-of-stock)

Although the communication is acceptable there is need for better and more reliable data (e.g. communication of promotional changes in advance).

Present status

Condis and Henkel have agreed the scope of the project and they are working on the process definition, data transfer and methods for collaboration. Since November 2000 they have been collaborating through the process of forecasting, exchanging the forecast and measuring the forecast accuracy. Since January 2001, the replenishment of the two Condis RDC's (Regional Distribution Centre) is based on the forecast (N.B. forecast drives the replenishment). The business plan is defined jointly.

For the downstream part of the pilot, the first measurements have been taken and the internal processes for information exchange are currently redefined.

Next Steps

The next step is to continue measuring the forecast accuracy between Henkel and Condis RDC. Whilst continuing to measure the changes in the promotion activity and other aspects that can influence forecast accuracy. Once we have the results of the OOS in the POS survey, we will be able to identify the causes of the OOS and redefine the procedures and the processes of replenishment from the RDC to the POS involving shop managers. Once this stage is finalised, it will be possible to send forecast and sales from retailer to supplier on a daily basis.

In addition, a further step in the upstream relationship is to analyse data from Cartisa to identify further potential benefits for CPFR.

8.3 Pilot: Kraft – Sainsbury's – GNX

Introduction

- Kraft is a food manufacturer with more than 70 brands such as Kraft cheeses. The company employs around 36,000 people in North America. 1999 sales were € 19 billion.
- J. Sainsbury PLC is one of the world's leading retailers and includes Sainsbury's supermarkets and Sainsbury's banks. This company serves more than 15 million customers in the UK and US, offering fresh food and a wide choice of products for the home.
- GNX is one of the leading global business-to-business online eExchange for the retail industry. Some of the largest retail companies, such as Carrefour SA, Kroger CO, Metro AG, J. Sainsbury PLC, are among GNX equity partners.

Scope

Twenty branded and own label coffee SKUs were selected for the pilot in the United Kingdom. The pilot involves 10 regional distribution centres from Sainsbury's and one distribution centre for Kraft. The pilot includes standard and promotional lines for these twenty coffee SKUs. The relationship focuses on a weekly collaboration, where Sainsbury's and Kraft share promotional plans and four-week time horizon forecasts.

Pilot Objectives

The primary objectives of this pilot are:

- A reduction in 'lost' sales due to reducing the 'out of stocks' scenario
- Reduced inventory across the total Kraft and Sainsbury's supply chain

The intention of the project is to broaden the scope of collaborative planning to include best practice events management and identify additional opportunities to improve collaboration.

Metrics

The result of the pilot is based on the following KPIs that measure the overall performance of the relationship between Kraft and Sainsbury's:

- On-shelf availability
- Store sales
- Forecast accuracy
- Kraft inventory
- Own label inventory
- Sainsbury's inventory at store and distribution centre level
- Service level from Kraft to Sainsbury's DCs and from Sainsbury's DCs to store
- Obsoletes (promotion leftovers) from major promotions

IT Solutions

The pilot uses an Internet environment using GNX as a platform to enable the communication and collaboration between the two companies. Manugistics provides the network collaboration software, including the hosted exception engine.

Present status

The SKUs and objectives were defined in the initial meeting on January 12th, 2001. A second meeting between the three parties (Sainsbury's, Kraft and GNX) took place on February 1st 2001. Roles and responsibilities have been defined. The Collaboration Arrangement and the data transfer method have yet to be finalised.

Next Steps

Kraft and Sainsbury's project leaders will continue to hold regular planning meetings in order to oversee and manage the pilot. The collaboration process will begin in April and the pilot end date is scheduled for July.

8.4 Pilot: Europa Carton – Schöller

Introduction

- Europa Carton AG is a German company, affiliated to Smurfit Stone, a worldwide market leader in corrugated transit packaging and paperboard. Europa Carton operates from Hamburg and produces corrugated transit packaging in ten plants, employing 1,700 people and with sales revenue of \$ 600 million.
- Schöller Holding is also a German company, part of Südzucker AG, which has over 40 plants in Europe, employing 29,600 people and with sales revenue of \$4,500 million. Schöller Holding manufactures ice cream and frozen food.

Scope

The pilot is being undertaken in Germany and the first meeting took place on 8th March 2001. It is an Upstream SMI pilot with the addition of Demand Planning conducted through a sensitivity analysis. The collaboration agreement is based on 21 SKUs and the pilot will be based on a weekly collaboration and 8-week horizon forecast.

Pilot Objectives

The main objectives of the pilot are as follows:

- Forecast accuracy improvement up to 80% within 8-weeks of the forecast and an improvement up to 100% within 10 days of forecast.
- Inventory reduction of 25-30% with a CPFR collaboration model
- Increase full truck rate
- Reduce administration costs
- Strengthen the partner relationship

Metrics

The KPIs used during the pilot project are:

- Forecast accuracy, order forecast and material sales forecast
- Unplanned changeovers: production plan and rush orders
- Inventory of packaging materials
- Service level of delivery (on time and in full)

IT Solutions

During the pilot the data exchange will be through internet technology. PipeChain software will be used for SMI and Logility software for Demand Planning.

Results and Lessons Learned

- No results to date
- All parties wish to be involved in the pilot project and as a consequence there will be no local project without the involvement/commitment of their head office
- Putting the right team together is challenging
- It takes a considerable time to initiate a pilot project

Present status

Europa Carton AG maintains 50% of the Schöller transit packaging requirements. After the first meeting on 8th March 2001, agreement has been reached on the scope, the means of data communication and the software to be used. At this point in time, the lead time is three weeks, call-offs are not automated and there is no transparency. On both sides, there is a strong conviction that collaboration will deliver bottom-line results.

Next steps

After finalising the pilot project, the next step is to move the project into the CPGmarket eExchange.

8.5 Pilot: Vandemoortele – Delhaize – WWRE

Introduction

- Vandemoortele is a Belgian producer of edible oils, margarines, spreads, frying fats, mayonnaises and sauces. Vandemoortele is active across two continents, USA and Europe, and is represented in 15 countries with 25 individual locations. In 2000, sales were in the region of € 780 million.
- Delhaize Group is an international supermarket specialist in food retail, known for quality products and innovative distribution concepts. Delhaize has more than 2,360 stores across three continents (USA-Europe-Asia) and is represented in 10 countries. In 2000, sales were € 18,2 billion.
- WWRE aims to be the premier integrated worldwide exchange community for retailers and their suppliers to fulfill all their commercial interactions. In practice, the WWRE has more than 53 retail members.

Scope

The Delhaize-Vandemoortele pilot was initiated in December 2000. The scope has been defined and includes all promotional and regular lines in the margarines and fats category. A weekly collaboration and review process has been operating since the end of February 2001, using the i2 TradeMatrix tool. Both parties forecast a horizon of 60 daily buckets in the future. The pilot includes branded products and private label goods.

Pilot Objectives

The pilot has set the following objectives:

- Assess the impact of the nine steps of the VICS-CPFR process within a real business environment
- Improve sales, reduce out-of-stocks, reduce inventory, improve forecast accuracy
- Test the ease of use of the i2 tool: ensure that it offers the correct mapping and data input, minimum additional workload, timeliness toward updates, collaboration support, the anticipated response times for different functionalities and has good navigability
- Assess the business and functional fit
- Determine whether the generation of exceptions is correct (with respect to reliability)
- Strengthen the trading partner relationship
- Reduce fire fighting

Metrics

The following KPI's are measured:

- Sales forecast accuracy
- Order forecast accuracy
- Fill rate (service level)
- Reduction in lost sales due to out-of-stocks during promotions
- Reduction of inventory at DC Delhaize
- Reduction of inventory at DC Vandemoortele for private label

For each metric, Vandemoortele and Delhaize complied with the WWRE definitions as set out by the WWRE CPFR Project Team.

IT Solutions

The pilot is using the i2 TradeMatrix tool.

Results and Lessons Learned

The first tangible business results are expected following a collaboration process of four to five months. However, initial factors are already apparent:

- The need for senior management support
- The need to define resources and for time to be allocated by the IT department
- The importance of clear product mapping
- The importance of a simple chart to explain to the end users their specific role and contribution in the process (*who, what, when*)
- The need to select and focus on a homogeneous group of SKUs (of the same category)
- The importance of setting realistic goals for the exception criteria in the early stages
- Planning the Collaboration Arrangement and the Joint Business Plan takes more time than initially estimated
- The i2 TradeMatrix tool is easy to use; the most challenging aspect is to have the right figures to use within the tool
- Working with POS data is a new experience for most of us and can be both a rich and rewarding one

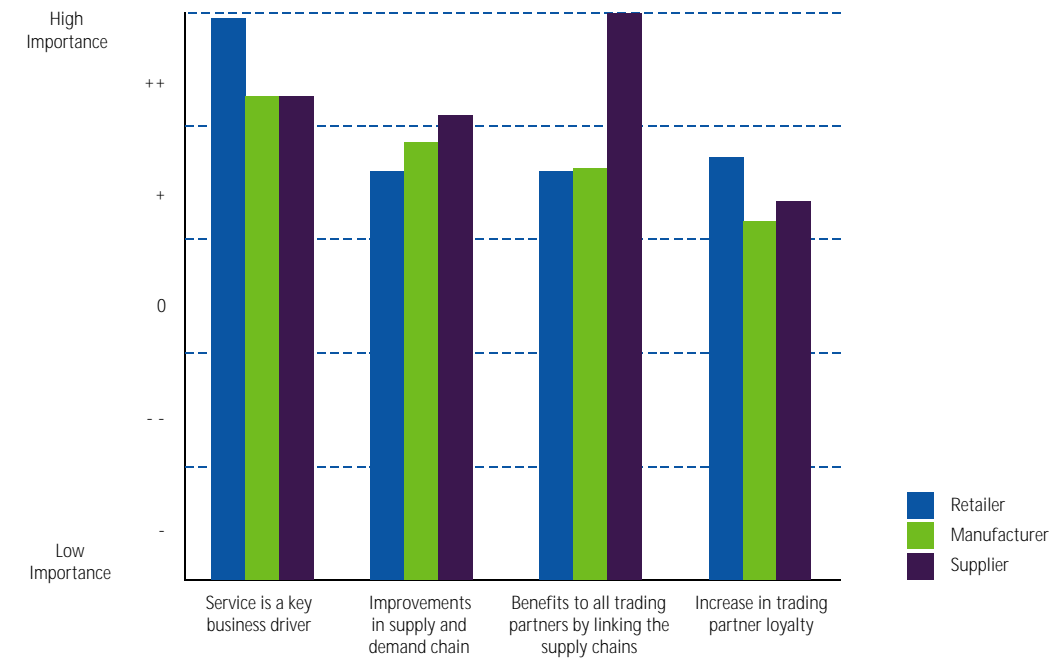
Next Steps

Based on the lessons learned from the first pilot, WWRE and i2 are developing a new release of the i2 TradeMatrix tool that will have a closer fit to the business needs of all pilot participants. The intention is to better align internal business processes to real consumer demand. A second pilot with Master Foods commences in May and a complete roll-out has been planned with all the major suppliers.

Appendices

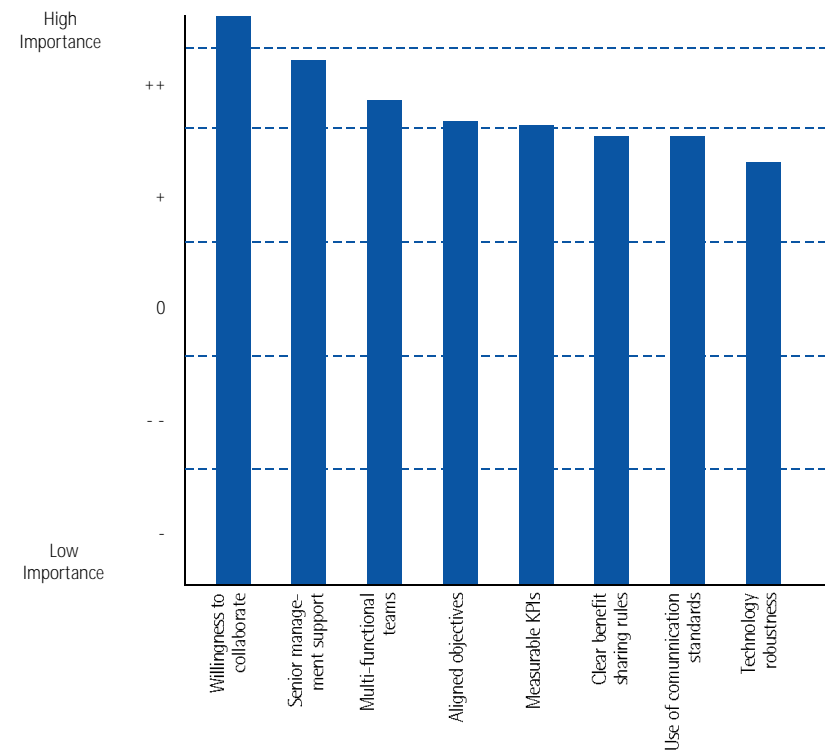
Appendix A. Collaboration Status in Europe

The following charts illustrate the key results from a survey conducted during the project about the collaboration status in Europe.



Reasons for CPFR

Figure 21. Reasons for CPFR according to their importance. Source: Accenture Survey.



Key Success Factors for CPFR

Figure 22. Key Success Factors for CPFR. Source: Accenture Survey.

General agreement was reached on the fact that "Technology robustness" and "Use of communication standards" are no longer seen as the most critical factors (vs. ELA Study, 1999).

Barriers to CPFR Success

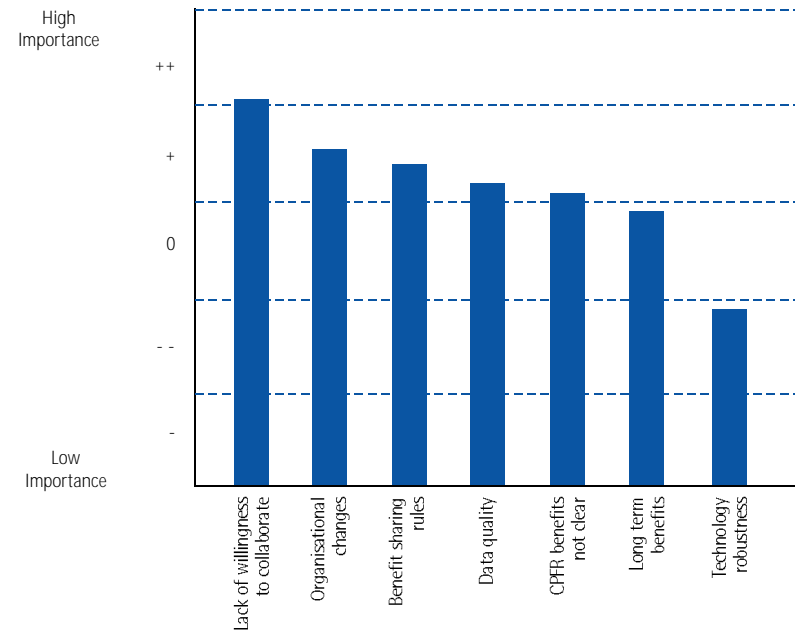


Figure 23. Barriers to CPFR Success. Source: Accenture Survey.

Even though willingness is seen as the key success factor for CPFR success, it remains the biggest barrier to CPFR implementation.

CPFR Potential Benefits

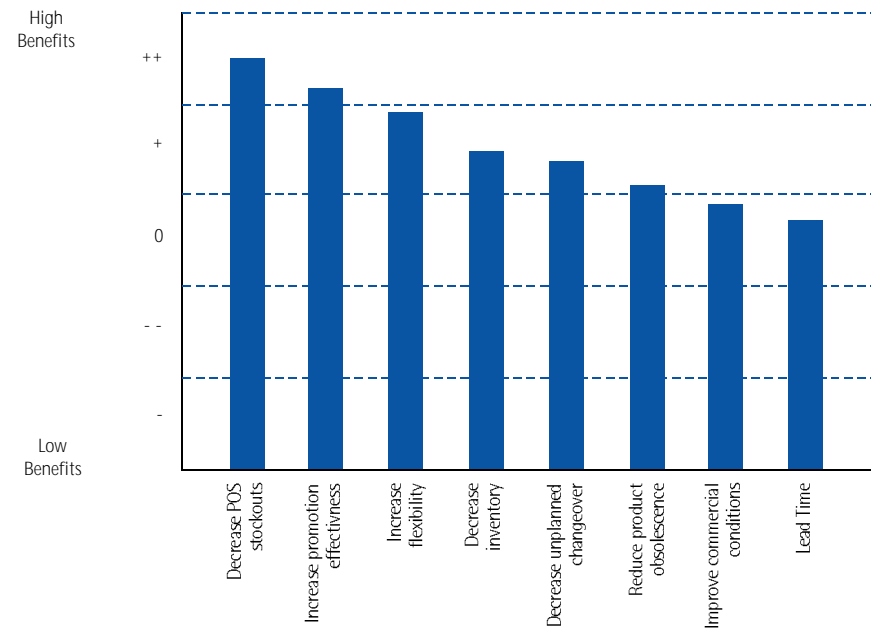


Figure 24. CPFR Potential Benefits. Source: Accenture Survey.

Appendix B. Toolkit¹

A toolkit has been developed to facilitate the implementation and measurement of the benefits achieved with a CPFR project. The toolkit is divided in two parts:

- Capability Assessment
- Implementation Templates

Capability Assessment

The following capability assessment has been defined to segment the company's customers and identify trading partners with the highest potential benefits.

There are two sections to consider:

- *Willingness and Ability to Collaborate*: Evaluates the willingness of each of the potential trading partners to collaborate and their technological readiness at a high level
- *Potential Benefits Evaluation*: Evaluates the potential economic benefits from implementing CPFR with each of the potential trading partners

To facilitate evaluation, those responsible for the departments involved in each of the trading partners must meet to define answers to the questions within the Capability Assessment.

The answers are converted to values according to the scale determined. In the "Potential Benefits Evaluation" questions are sectioned under nine groups. There must be one value for each of the groups to add up to a maximum score of 90 points. To evaluate groups with more than one answer, the average value will be taken (e.g. group one: Inventory in an upstream relationship contains answers for supplier warehouses and manufacturer warehouses; the group one value would be, therefore, the sum of both evaluation values divided by two).

Questions featuring the "willingness and ability to collaborate" are divided in three levels of readiness and subsequent value levels, in order for a customer to sit between the different levels (e.g. In question B, if the customer has strong market knowledge, but does not conduct any promotional forecast, the answer will be six – rated between three and ten). Maximum number of points is 50.

¹ This Toolkit was developed with fast moving consumer goods in mind and needs to be adjusted for product categories with different supply chain characteristics.

Willingness and Ability to Collaborate*

Trading partner: _____
 Company responsible: _____

A. Can your Trade Partner relationships be characterised as open and trusting?			
The trading a partner never shares any information that isn't strictly needed for our regular deals. They always see our relationship as a win/lose environment.	In some cases they tried to collaborate with us in preparing promotions or analysing abnormal behaviour of demand, sharing knowledge and/or data.	The trading a partner trusts in collaboration with suppliers as an easy way to optimise and save in the supply chain. In many occasions they have collaborated openly to resolve any exception that we have found.	
Score ¹			
B. Do you and your Trade Partner have complementary strengths and weaknesses?			
The trading a partner has very limited market knowledge or information related to our products that could provide us with added value.	They are able to provide information for base and seasonal forecast, and limited market knowledge. Forecast of promotional effects are not reliable.	They have a strong market knowledge that may be of interest to us and provide reliable forecasts of promotional effects.	
Score ¹			
C. Does your Trade Partner have the appropriate capabilities (personal and systems) to make CPFR successful?			
Internally, they don't rely on data or have dedicated resources to analyse it. They don't forecast. Unable to send sales or inventory data, at POS or DC level.	Internally, they work with data from DC's but not with POS data. No automated forecast tool is used. Sales and inventory data available via EDI, e-mail or fax.	Internally, they are managing POS data, analysing information about promotional effects, forecast accuracy, etc. Automated forecast tool is used. EDI or other electronic data exchange systems are the usual way to exchange data with other companies.	
Score ¹			
D. Can your Trade Partner quantify the potential internal and external benefits?			
They don't use or are not interested in thorough cost/benefit analysis to study the impact of promotional initiatives.	They assess and understand the costs/benefits of promotional actions.	In the past, they have assessed and promoted different win-win actions, with a detailed study of costs and benefits for both parties.	
Score ¹			
E. Does your trading partner conduct other collaborative initiatives with your or with other companies?			
They don't have any collaborative initiative with you or with other companies.	They have collaborative initiatives with other companies, such as CRP, VMI, JMI, SMI, CM...	They are already working with you in some collaborative initiatives such as CRP, VMI, JMI, SMI...	
Score ¹			

1. Please tick the appropriate level.
 * Based on VICS Roadmap.

Potential Benefits Evaluation

Trading Partner: _____
 Company Responsible: _____

KPIs for potential trading partners (use only KPIs that are applicable)									
KPI category	KPI	Units	Description	0	1	3	6	10	Average (answered questions)
1. Inventory	Supplier Warehouse	Days	Number of days demand could be satisfied based on the current inventory and previous demand.	1-3	3-5	5-10	10-20	≥ 20	
	Manufacturer Warehouse	Days		1-3	3-5	5-10	10-20	≥ 20	
	Manufacturer DCs	Days		1-3	3-5	5-10	10-20	≥ 20	
	Retailer DCs	Days		1-3	3-5	5-10	10-20	≥ 20	
	POS	Days		≤1	1-3	3-5	5-10	≥ 10	
2. Forecast Accuracy	Sales Forecast Accuracy	% Forecast accuracy	It's the average sales/orders forecast deviation between actual sales/orders and sales/orders forecasted a defined period of time in advance.	≥90%	80-90%	70-80%	50-70%	≤50%	
	Order Forecast Accuracy	% Forecast accuracy		≥90%	80-90%	70-80%	50-70%	≤50%	
3. Service level	Delivery on time and in full	% Perfect orders	Supplier's ability to deliver goods as agreed in terms of time and quantity, and % of Stock-outs and on-shelf availability in POS when evaluating Retailers.	≥95%	85-95%	75-85%	50-75%	≤50%	
	Out of Stock frequency	% Out to stock		≤2%	2-3%	3-5%	5-10%	≥10%	
	On-shelf availability	% On shelf availability		≥98%	95-98%	90-95%	85-90%	≤85%	
4. Promotional Sales	Promotional vs Standard Sales	% of sales on promotion	Sales volume during promotions as percentage of total sales (per year) and number of changes in the promotion plan during an established frozen period.	≤5%	5-15%	15-25%	25-50%	≥50%	
	Changes in Promotion Plan	Number		≤1	1-2	2-3	3-5	≥5	
5. Cycle time	Production Orders	Days	Time from order date to receipt date.	≤2	2-7	7-10	10-14	≥14	
	Delivery Orders	Days		≤1	1-2	2-3	3-5	≥5	
6. Unplanned Changeovers	Changes in Production Plan	Number	Number of changes in the production plan during an established frozen period and the percentage of orders issued during a shorter than normal agreed lead-time.	≤3	3-5	5-7	7-10	≥10	
	Rush Orders	% Rush Orders		≤2%	2-5%	5-10%	10-15%	≥15%	

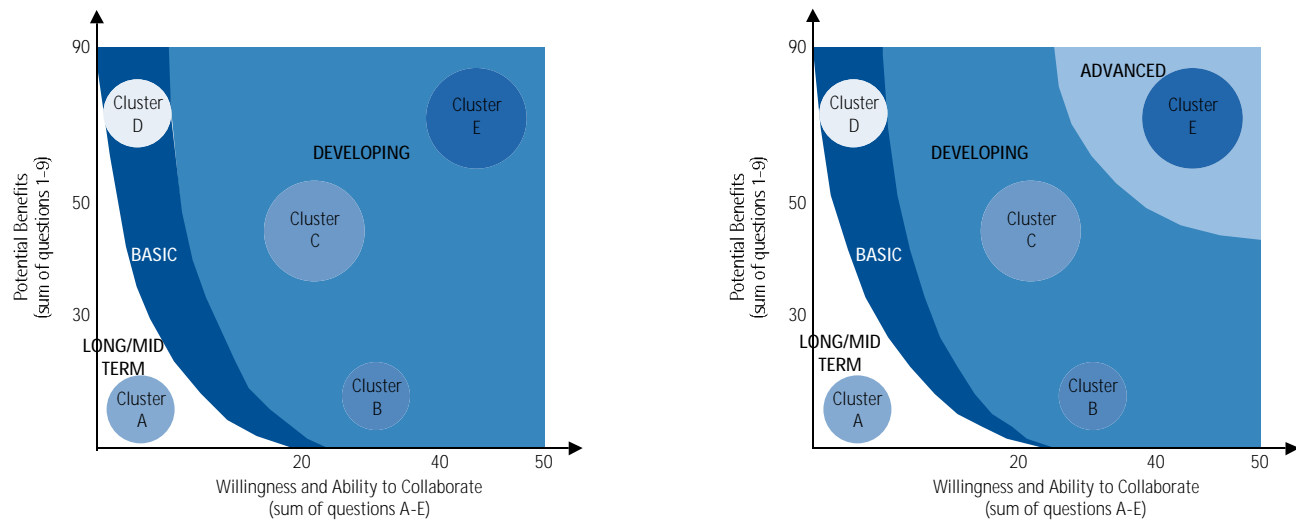
* Tick the appropriate box with your best estimate.

Additional Important Information

KPI category	Description	0	1	3	6	10	Average (answered questions)
7. Sales volume	Percentage of Sales volume this trading partner represents	0-1%	1-3%	3-5%	5-15%	≥15%	
8. Type of Replenishment	Indicates if the trading partner has a Pull or Push replenishment method	Mainly PUSH				Mainly PULL	
9. Replenishment	% of orders delivered to store/DC	Mainly DC				Mainly Store	

Other KPIs could be measured but this capabilities assessment tries to keep simple enough to ease the client segmentation and at the same time check the most important aspects.

The first of the following diagrams illustrates trading partner segmentation for a defined CPFR Implementation Strategy in a company that is only capable of running Basic and Developing CPFR initiatives. The second diagram shows the segmentation for a company capable of managing CPFR initiatives across all levels.



Implementation Templates

There are four different sets of templates to help companies clearly define the scope of the project, the team and their responsibilities, the collaboration schedule and a detailed work-plan for CPFR implementation:

- *Scope templates:* There are two different templates depending on whether the CPFR implementation is focused upstream or downstream. If it is a three-way implementation, both templates must be completed. The templates contain information on the companies collaborating, the leader's name and distribution points involved for each of the companies, as well as the SKUs on which collaboration is going to take place.

Pilot Scope Upstream

Trading Partners			
Trading Partner 1		Trading Partner 2	
Company Name	<input type="text"/>	Company Name	<input type="text"/>
Team Leader	<input type="text"/>	Team Leader	<input type="text"/>
Location			
Please name the company locations involved in the pilot			
Trading Partner 1		Trading Partner 2	
Supplier Manufacturing Plant	<input type="text"/>	Manufacturer Production Plant	<input type="text"/>
Supplier DC	<input type="text"/>	Manufacturer DC	<input type="text"/>
SKUs			
Please identify the SKUs covered			
Product Categories	<input type="text"/>		
Number of SKUs	<input type="text"/>		
Product Name	EAN Code	Reference Number (Trading Partner 1)	Reference Number (Trading Partner 2)
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____

Recommendation: Restricted number of SKUs and product categories (<20 fast turning, highly promotional references, <3 product categories, limited "push" promotions)

Pilot Scope Downstream

Trading Partners			
Trading Partner 1		Trading Partner 2	
Company Name	<input type="text"/>	Company Name	<input type="text"/>
Team Leader	<input type="text"/>	Team Leader	<input type="text"/>

Location			
Please name the company locations involved in the pilot			
Trading Partner 1		Trading Partner 2	
Manufacturer Production Plant	<input type="text"/>	Retailer DC	<input type="text"/>
Manufacturer DC	<input type="text"/>	Retailer POS	<input type="text"/>

SKUs	
Please identify the SKUs covered	
Product Categories	<input type="text"/>
Number of SKUs	<input type="text"/>

Product Name	EAN Code	Reference Number (Trading Partner 1)	Reference Number (Trading Partner 2)
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____
11. _____	_____	_____	_____
12. _____	_____	_____	_____
13. _____	_____	_____	_____
14. _____	_____	_____	_____
15. _____	_____	_____	_____
16. _____	_____	_____	_____
17. _____	_____	_____	_____
18. _____	_____	_____	_____
19. _____	_____	_____	_____
20. _____	_____	_____	_____

Recommendation: Restricted number of SKUs and product categories (<20 fast turning, highly promotional references, <3 product categories, limited "push" promotions)

- *Team members:* This templates details information regarding the personnel involved in the collaboration from each of the companies. It is important that each of the companies assigns a person who is responsible for each of the processes and that those responsibilities are clearly defined.

Pilot Team Members

Pilot Focus			
Upstream	<input type="text"/>	Downstream	<input type="text"/>

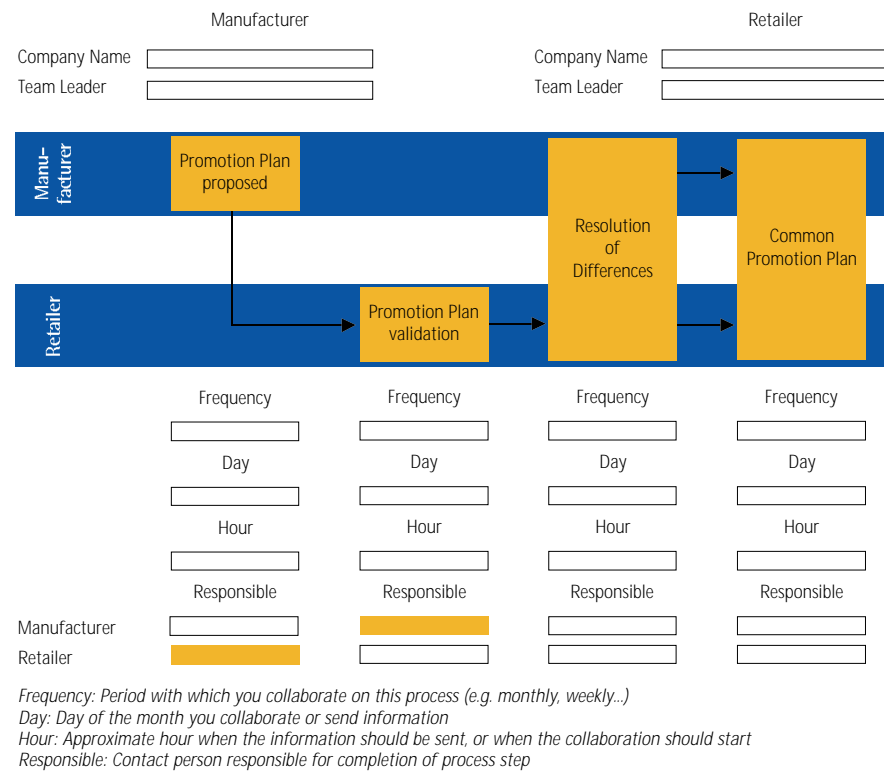
Trading Partners			
Trading Partner 1		Trading Partner 2	
Company Name	<input type="text"/>	Company Name	<input type="text"/>
Address	<input type="text"/>	Address	<input type="text"/>
Country	<input type="text"/>	Country	<input type="text"/>

Team			
Trading Partner 1		Trading Partner 2	
Team Leader			
Name	<input type="text"/>	<input type="text"/>	<input type="text"/>
Position	<input type="text"/>	<input type="text"/>	<input type="text"/>
Phone number	<input type="text"/>	<input type="text"/>	<input type="text"/>
E-mail address	<input type="text"/>	<input type="text"/>	<input type="text"/>
Member of Supply Chain/Logistics Dept			
Name	<input type="text"/>	<input type="text"/>	<input type="text"/>
Position	<input type="text"/>	<input type="text"/>	<input type="text"/>
Phone number	<input type="text"/>	<input type="text"/>	<input type="text"/>
E-mail address	<input type="text"/>	<input type="text"/>	<input type="text"/>
Member of Sales and Marketing/Purchasing Dept			
Name	<input type="text"/>	<input type="text"/>	<input type="text"/>
Position	<input type="text"/>	<input type="text"/>	<input type="text"/>
Phone number	<input type="text"/>	<input type="text"/>	<input type="text"/>
E-mail address	<input type="text"/>	<input type="text"/>	<input type="text"/>
IT Support			
Name	<input type="text"/>	<input type="text"/>	<input type="text"/>
Position	<input type="text"/>	<input type="text"/>	<input type="text"/>
Phone number	<input type="text"/>	<input type="text"/>	<input type="text"/>
E-mail address	<input type="text"/>	<input type="text"/>	<input type="text"/>

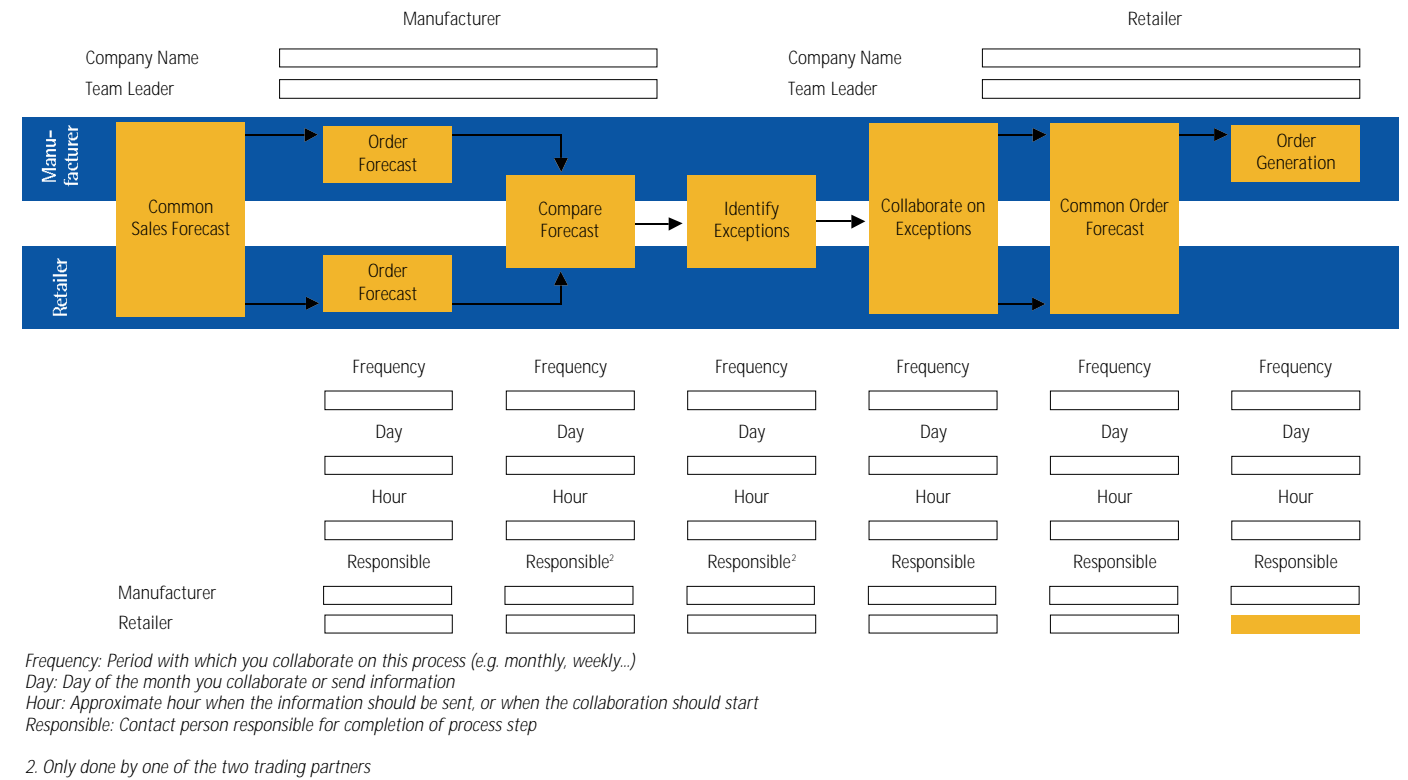
Collaboration Schedule and Work Plan

- *Collaboration Schedule:* A series of templates for each of the collaboration processes, assigning the tasks for which each of the trading partners is responsible, task frequency and time frame for completion.
- *Work Plan:* A detailed weekly work plan for a CPFR implementation. It begins with the company preparation and ends with an assessment of collaboration results.

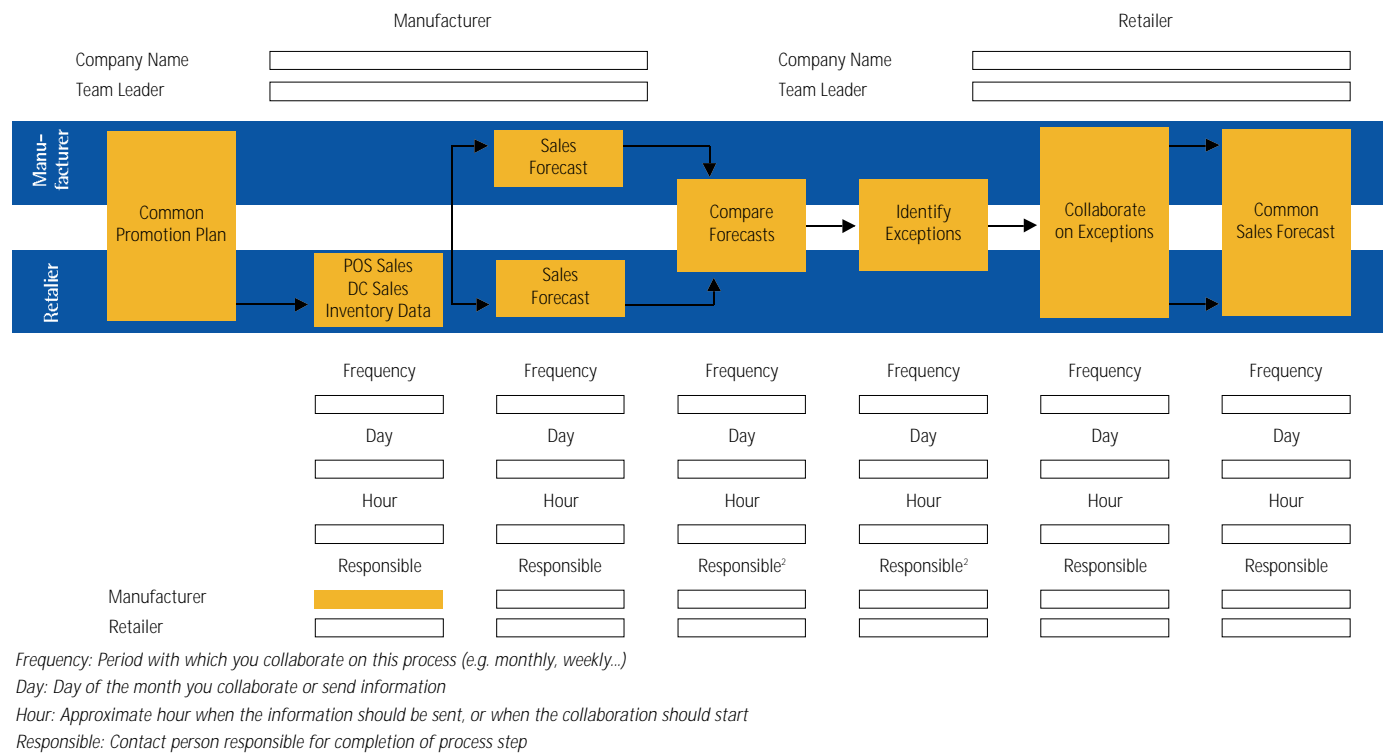
Promotion Planning Downstream Collaboration Process



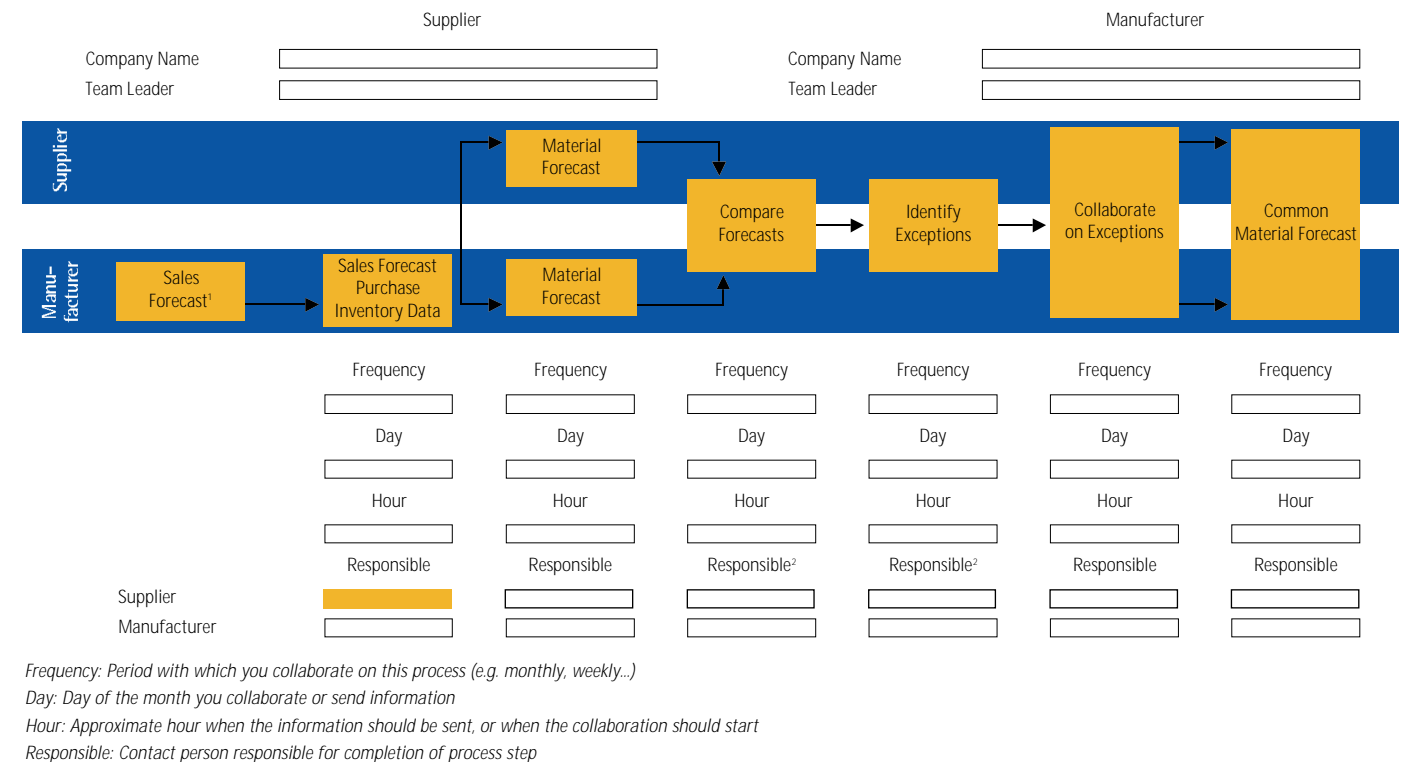
Order Forecast Downstream Collaboration Process



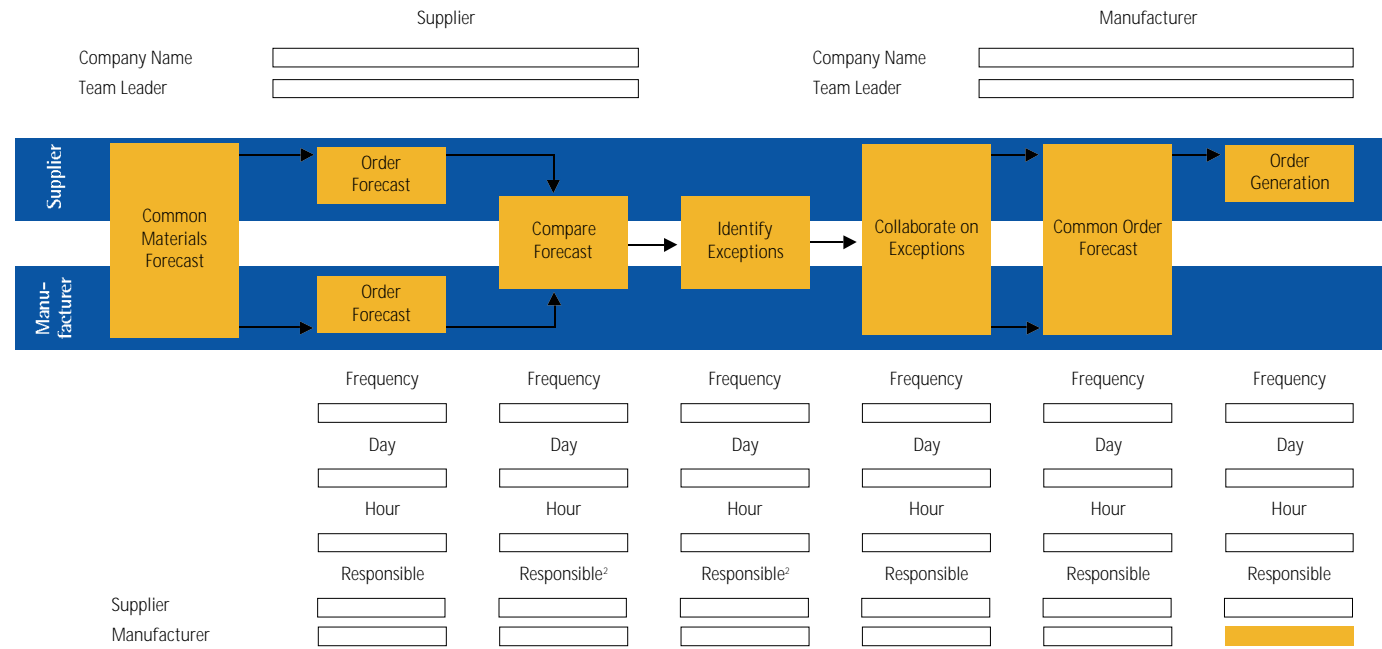
Sales Forecast Downstream Collaboration Process



Material Forecast Upstream Collaboration Process

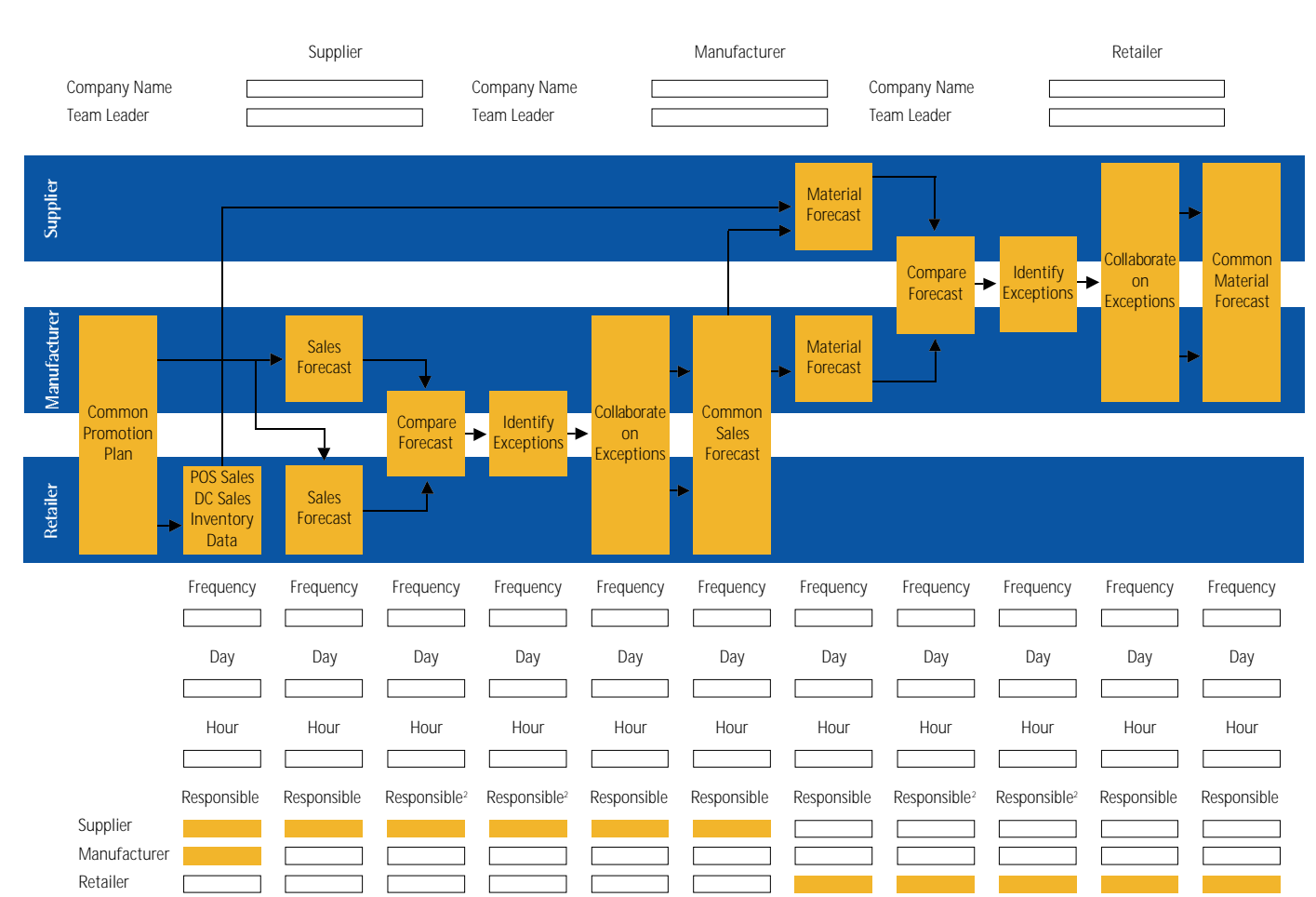


Order Forecast Upstream Collaboration Process



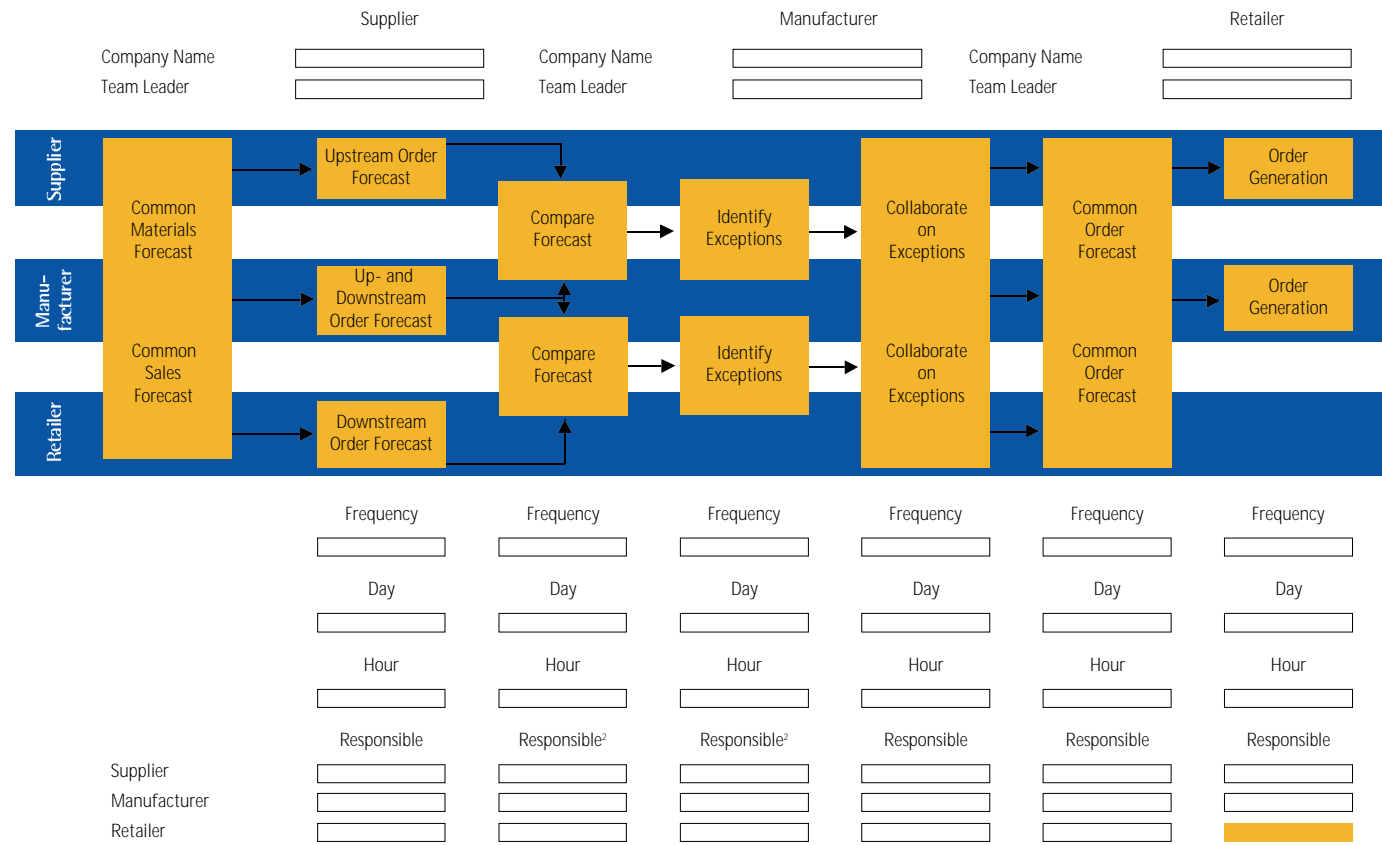
Frequency: Period with which you collaborate on this process (e.g. monthly, weekly...)
 Day: Day of the month you collaborate or send information
 Hour: Approximate hour when the information should be sent, or when the collaboration should start
 Responsible: Contact person responsible for completion of process step
 2. Only done by one of the two trading partners.

Sales Forecast Collaboration Process



Frequency: Period with which you collaborate on this process (e.g. monthly, weekly...)
 Day: Day of the month you collaborate or send information
 Hour: Approximate hour when the information should be sent, or when the collaboration should start
 Responsible: Contact person responsible for completion of process step
 2. Only done by one of the two trading partners.

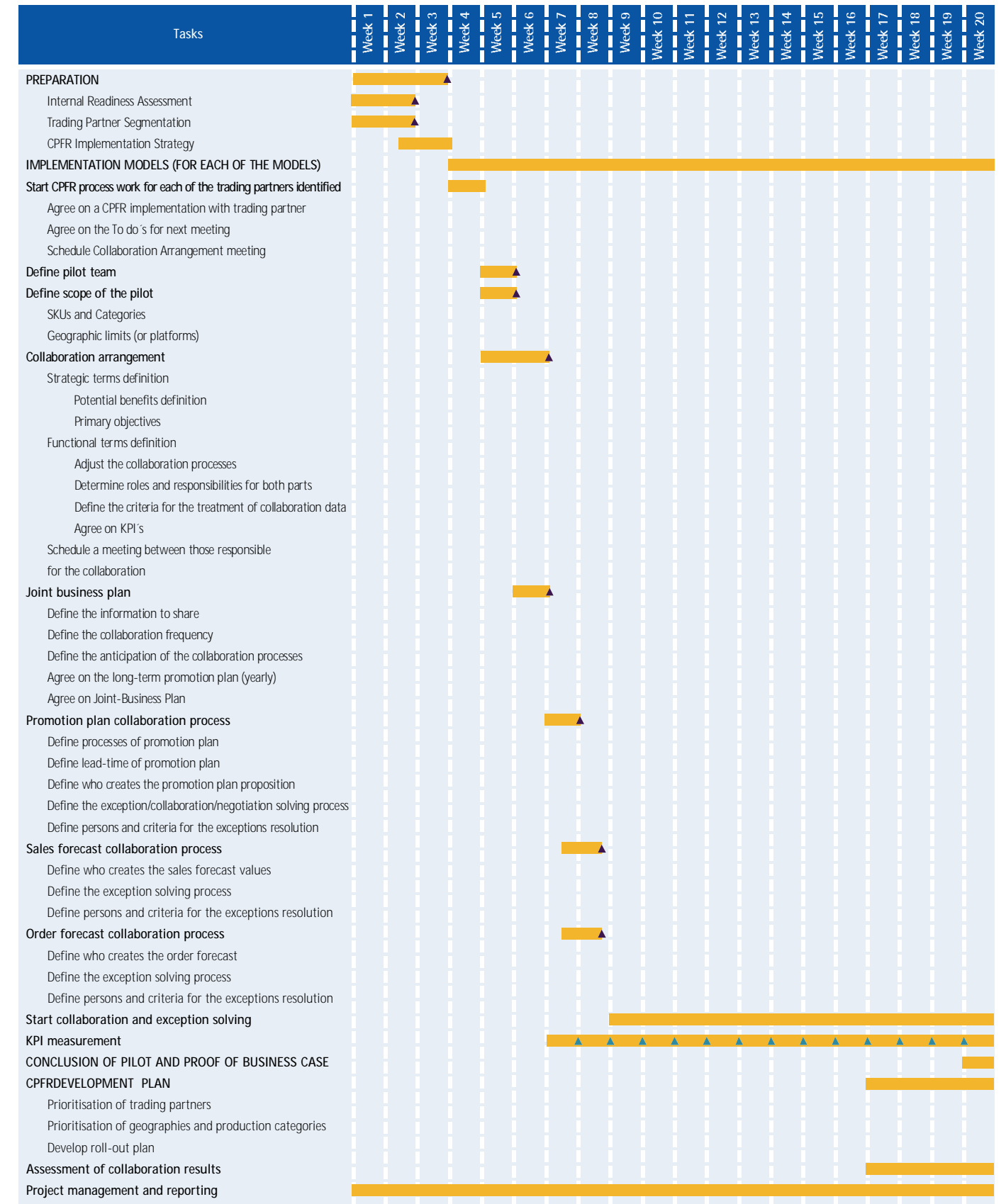
Order Forecast Collaboration Process



Frequency: Period with which you collaborate on this process (e.g. monthly, weekly...)
 Day: Day of the month you collaborate or send information
 Hour: Approximate hour when the information should be sent, or when the collaboration should start
 Responsible: Contact person responsible for completion of process step

2. Only done by one of the two trading partners.

Generic Work Plan



Appendix C. Key Performance Indicators

The KPIs listed in the following figure outline components of the goal measures that will allow trading partners to assess their progress. A CPFR project may not require all these KPIs to be measured. Ideally, trading partners should include all metrics relevant to their CPFR relationship. Responsibilities for measuring each metric should be assigned prior to launching the initiative, relative to each partner's business processes and ability to measure the results. The parties must agree on the following specifics for each metric:

- The data source (where does the data reside?)
- Level of measure (e.g. SKU, category, department, consumer, etc)
- Specific SKUs to be included in the CPFR process
- Agreement on the definition of each measure and the method of calculation
- Agreement on the frequency and time frames for each measure (e.g. monthly, weekly, daily, hourly, etc)

CPFR implementations should not intend to measure all KPIs within this extensive list, rather act as a guide for trading partners for the large selection of KPIs available which may be relevant in a CPFR initiative. Trading partners should select the KPIs most relevant for their particular situation. ECR Europe has prioritised the KPIs based on implementation experiences. Agreement on the KPIs is essential for successful tracking of the progress of the collaboration and in order to measure the benefits achieved through CPFR. The list offers common definitions for the KPIs, but also leaves enough scope to adjust them according to specific situations (e.g. different forecasting periods).

A solution to the question of what CPFR has contributed (versus the impact of other activities) could be to index the actual results of each metric against the general growth of the category within the retailer or the industry.

The following figure illustrates all KPIs that can be measured in a CPFR roll-out, including examples of each of the measurements to facilitate a common understanding. Furthermore, core KPIs are highlighted.

KPI	Measure	Definition	Example	Where/How Measured				
				Supplier	Manufacturer	Retailer	Joint Scorecard	
Inventory	Finished Goods Inventory	Days	Value/units of inventory (cost of goods) divided by the value/units of average daily sales (calculation based on past 6 months history or on forecast for next 6 months) of these products.	Avg. Value of Inventory= 5.000 € Avg. daily sales= 400 Inventory= 12.5 days (5000/400)		Manufacturer DC	Retailer DC and POS	Retailer POS
	Material Inventory	Days	Value/units of inventory (cost of material) divided by the value/units of average daily sales or usage (calculation based on past 6 months history or on forecast for next 6 months of this material).	Avg. Value of Inventory= 1.000 € Avg. daily sales= 75 € Inventory= 13,3 days (1000/75)	Supplier DC	Manufacturer DC		Manufacturer DC
Forecast Accuracy	Sales Forecast	% Forecast Accuracy	Sales Forecast value/units (a defined time before actual sale) divided by the actual sale value/units. (It can be differentiated in Promotional, Non-Promotional and New Product Introduction).	Sales Fcst for May= 160 € Actual Sales during May= 200 € Sales Fcst Error= -20% Fcst Accuracy= 80%		Manufacturer DC to Retailer DC and Manufacturer DC to Retailer POS	Manufacturer DC to Retailer DC or POS and Retailer DC to POS	Manufacturer DC to Retailer DC (POS if possible)
	Order Forecast	% Order Forecast Accuracy	Order Forecast value/units (for Materials or for finished goods) a defined time before actual order divided by the actual order value/units.	Order Fcst for May= 120 € Product A Actual Orders= 100 € Product A Order Fcst Error= +20% Order Fcst Acc.= 80%	Supplier DC to Manufacturer DC	Supplier DC to Manufacturer DC and Manufacturer DC to Retailer DC	Manufacturer DC to Retailer DC and Retailer DC to POS	Supplier DC to Manufacturer DC and Manufacturer DC to Retailer DC (POS if possible)
	Materials Sales Forecast	% Forecast Accuracy	Material Sales Forecast value/units (a defined time before actual sale) divided by the actual sale value/units.	Material sales Fcst for May= 75 € Actual sales during May= 100 € Material Sales Fcst Error= -25% Fcst Accuracy= 75%	Supplier to Manufacturer	Supplier to Manufacturer		Supplier to Manufacturer
Service Level	Production Service Level	% Perfect Production Orders	Number of production orders completed on time and in full (lines or cases) divided by the total number of production orders during a defined period of time.	# of production orders= 10 # of production orders in time= 9 # of production orders in full= 8 # of production orders on time & in full= 7 % Perfect Production Orders= 70%	Supplier Production Plant	Manufacturer ProductionPlant		Supplier and Manufacturer Production Plant
	Delivery (on time)	% Orders on time	Number of order lines/cases/SKUs delivered on time divided by the total number of line/cases/SKUs ordered.	Ordered: product A= 100 cases; product B= 60 cases Delivered: product A= 100 cases; product B= 50 cases on time; 10 cases one day later % Orders in full for lines= 50% (1 out of 2) % Orders on time for cases= 87,5% (140 of 160)	Supplier DC to Manufacturer DC	Supplier DC to Manufacturer DC and Manufacturer to Retailer DC or POS	Manufacturer DC to Retailer DC or POS and Retailer DC to POS	Supplier DC to Manufacturer DC and Manufacturer DC to Retailer DC (POS if possible)
	Delivery (in full)	% Orders in full	Number of order lines/cases/SKUs delivered in full by the total number of lines/cases/SKUs ordered.	Ordered: product A= 100 cases; product B= 60 cases Delivered: product A= 100 cases; product B= 50 cases on time; 10 cases one day later % Orders in full for lines= 50% (1 out of 2); % Orders in full for cases= 93,75% (150 of 160)	Supplier DC to Manufacturer DC	Supplier DC to Manufacturer DC and Manufacturer to Retailer DC or POS	Manufacturer DC to Retailer DC or POS and Retailer DC to POS	Supplier DC to Manufacturer DC and Manufacturer DC to Retailer DC (POS if possible)

	KPI	Measure	Definition	Example	Where/How Measured			
					Supplier	Manufacturer	Retailer	Joint Scorecard
Service Level (cont.)	Delivery (on time and in full)	% Perfect Orders	Number order lines/cases/SKUs delivered on time and full divided by the total number of lines/cases/SKUs ordered.	Ordered product A= 100 cases; product B= 60 cases Delivered on time: product A= 100 cases; product B= 50 cases % Perfect Orders for lines= 50% (1 out of 2) % Perfect Orders for cases= 93,75% (150 out of 160)	Supplier DC to Manufacturer DC	Supplier DC to Manufacturer DC and Manufacturer to Retailer DC or POS	Manufacturer DC to Retailer DC or POS and Retailer DC to POS	Supplier DC to Manufacturer DC and Manufacturer DC to Retailer DC (POS if possible)
	Out of Stock frequency-Material	% OOS	Number of materials not available divided by the number of materials.	OOS should be measured as frequently as capabilities allow. The target is a systemic approach to daily measurement. However key is to measure OOS based on whatever capability exists (daily, weekly, audit)	Supplier DC	Manufacturer DC		Manufacturer DC
	Out of Stock frequency-Finished Goods	% OOS	Number of items not available divided by the number of items.	OOS should be measured as frequently as capabilities allow. The target is a systemic approach to daily measurement. However key is to measure OOS based on whatever capability exists (daily, weekly, audit)		Manufacturer DC	Retailer DC and Retailer POS	Retailer POS
	On-Shelf Availability	% On-Shelf Availability	Number of days/hours the product is available on the shelf divided by a defined period of time.	There's a wide range of measurement methods. It is recommended to agree on the measurement among the trading partners including the time of measurement			Retailer POS	Retailer POS
Lead-time	Material Order Lead-time	Days/Hours	Number of days/hours it takes from material order generation to order receipt.	Order sent to DC at noon. Picked and shipped at 17:00 the next day. 6 hour transit time. Mtl Lead-time= 35 h (1,4 days)	Supplier DC to Manufacturer DC	Supplier DC to Manufacturer DC		Supplier DC to Manufacturer DC
	Finished Goods Order Lead-time	Days/Hours	Number of days/hours it takes from finished goods order generation to order receipt.	Order sent at noon. Picked and shipped at 17:00 the next day. 6 hour transit time. Finished Goods Other Lead-time= 35 h (1,4 days)		Manufacturer DC to Retailer DC or POS	Retailer DC to Retailer POS	Manufacturer DC to Retailer DC to Retailer POS
	Material Production Lead-time	Days/Hours	Number of days/hours it takes from material production order generation to order receipt.	Order to sent to Plant at noon. Planned at 17:00 the next day. 24-hour production time. Mtl Lead-time= 53 h (2,2 days)	Supplier Production Plant			Supplier Production Plant
	Finished Goods Production Lead-time	Days/Hours	Number of days/hours it takes from finished goods production order generation to order receipt.	Order to sent to Plant at noon. Planned at 17:00 the next day. 24-hour production time. Finished Goods Production Lead-time= 53 h (2,2 days)		Manufacturer Production Plant		Manufacturer Production Plant

	KPI	Measure	Definition	Example	Where/How Measured			
					Supplier	Manufacturer	Retailer	Joint Scorecard
Unplanned Changeovers	Promotion Plan Changes	Number	Number of unplanned changes (type of promotion, dates of promotion, products involved, etc) in the promotion plan during the frozen period.	Promotion planned for the first week of March for product A. During the end of February (during the frozen period) the manufacturer decides to change the promotion to product B and run it the second week of March. Promotion changes= 2		Manufacturer Promotion Plan	Retailer Promotion Plan	Joint Promotion Plan
	New Product Introduction	Number	Number of unplanned changes (introduction dates, products introduced, etc) in the new product introduction plan during the frozen period.	New product introduction for the first week of March for product A. During the frozen period the manufacturer decides to change the date of the introduction to the second week of March. New Product Introduction change= 1		Manufacturer New Product Introduction Plan	Retailer New Product Introduction Plan	Joint New Product Introduction Plan
	Production Plan Changeovers	Number	Number of unplanned changeovers in production during the frozen period (frozen period length has to be defined among trading partners).	The Production plan has been defined and closed for the next month. The following week a promotion changes and this implies 4 changes in the production plan. Unplanned changeovers = 4	Supplier Production Plant	Manufacturer Production Plant		Supplier and Manufacturer Production Plant
	Rush Orders	% Rush Orders	Number of orders issued during a shorter than normal agreed lead-time divided by the total number of orders.	# Total orders = 100 # Orders during frozen period = 5 % Rush Orders = 5%	Supplier Production Plant	Manufacturer Production Plant		Supplier and Manufacturer Production Plant
Obsoletes	Obsoletes	% Obsoletes	Sales value of obsolete products divided by the total product sales.	Sales value of product A = 7,5 # of obsoletes of product A = 10 Total product A sales = 1000 % Obsoletes = 7,5 %	Supplier	Manufacturer	Retailer DC and POS	Retailer POS Supplier
Sales	Sales Growth	% Sales Growth	Value of sales during a defined period divided by the value of sales during the same period a year before.	Sales March year 01 = 10.000 Sales march year 02 = 12.500 % Sales Growth = 25%	Supplier	Manufacturer	Retailer	POS
Planning	Promotion Effectiveness	% Promotion Effectiveness	Valuation of the impact of a promotion once it has been done.	It can be measured in a wide range of ways. For the calculation you need to consider other KPIs as: Obsoletes, Fcst Accuracy, On-Shelf Availability, etc.		Manufacturer	Retailer POS	Retailer POS
	Material Planning	Days	Number of days between fixed material plan and material receipt.	Manufacturer sends a material order with 3 weeks lead-time and doesn't change it before reception. KPI = 21 days	Supplier DC to Manufacturer DC	Supplier DC to Manufacturer DC		Supplier DC to Manufacturer DC
	Production Planning	Days	Number of days for production plan frozen period.	Supplier A plans the production one week in advance and does not change it afterwards. KPI 7 days	Supplier Production Plant	Manufacturer Production Plant		Supplier and Manufacturer Production Plant
	Capacity Planning	Days	Number of days for frozen period of capacity plan.	A manufacturer plans its capacity two months in advance and does not change the plans. KPI = 60 days	Supplier Production Plant	Manufacturer Production Plant		Supplier and Manufacturer Production Plant
	Transportation Planning	Days	Number of days for frozen period for transportation plan.	A supplier has scheduled three trucks two weeks in advance and does not change the plans. KPI = 14 days.	Supplier DC to Manufacturer DC	Manufacturer DC to Retailer DC and POS	Retailer DC to Retailer POS	Supplier DC to Manufacturer DC to Retailer DC and POS

KPI	Measure	Definition	Example	Where/How Measured				
				Supplier	Manufacturer	Retailer	Joint Scorecard	
Distribution	Full Truck	% Full Truck	Number of trucks with over 95% of volume fill divided by the total number of trucks shipped.	# of full trucks during May = 20 # of trucks filled less than 95% of their capacity during May = 10 % Full Truck = 66.6% (20 out of 30)	Supplier DC to Manufacturer DC	Manufacturer DC to Retailer DC and POS	Retailer DC to Retailer POS	Supplier DC to Manufacturer DC to Retailer DC and POS
	Vehicle Fill	% Vehicle Fill	Avg. volume of vehicle used divided by total volume of vehicle.	# of full trucks = 20 # of trucks filled with 80% = 10 % Vehicle Fill = 93.3%	Supplier DC to Manufacturer DC	Manufacturer DC to Retailer DC and POS	Retailer DC to Retailer POS	Supplier DC to Manufacturer DC to Retailer DC and POS
	Empty Running	% Empty running	Number of kilometres driven empty divided by the total number of kilometres driven.	# Km driven empty = 300 total Km driven = 6.000 % Empty running = 5% (300/6000)	Supplier DC to Manufacturer DC	Manufacturer DC to Retailer DC and POS	Retailer DC to Retailer POS	Supplier DC to Manufacturer DC to Retailer DC and POS
	Distribution Costs	% of Sales	Total distribution cost of products (warehousing, transport, people, etc) divided by value of total sales of products.	Total Dist. costs = 750 total sales = 2.000 KPI % of Sales = 37.5% (750/2000)	Supplier DC to Manufacturer DC	Manufacturer DC to Retailer DC and POS	Retailer DC to Retailer POS	Supplier DC to Manufacturer DC to Retailer DC and POS
Data Synchronisation	Invoice Accuracy	% Invoice Accuracy	Number of lines with matching data (specifications and price) divided by total number of lines.	16 lines ordered 10 had a 100% match % Invoice Accuracy = 62.5% (10/16)	Supplier to Manufacturer	Supplier to Manufacturer and Manufacturer to Retailer	Manufacturer to Retailer	Supplier to Manufacturer and Manufacturer to Retailer

The following table presents a guide to prioritise the KPIs depending on the collaboration process on which a company wishes to focus and its position within the supply chain.

Collaboration Process	KPI Category	Downstream	Upstream
Planning	Unplanned Changeovers	Promotion Plan New Product Introduction	Materials
	Planning	Promotion Effectiveness	N/A
	Lead-time	N/A	Material Goods
Forecasting	Forecast Accuracy	Sales Forecast Order Forecast	Materials Sales Forecast
	Unplanned Changeovers	Production Plan Rush Orders	Rush Orders
	Planning	Production	N/A
Replenishment	Inventory	Finished Goods	Materials
	Service level	Delivery on time/in full Out-of-stock Finished Goods On-shelf Availability	Delivery on time/in full

Appendix D. Other Sources of Interest

For further information please refer to the following documents and websites:

- Collaborative Planning Forecasting and Replenishment –Voluntary Guidelines– VICS, 1998
- Roadmap to CPFR: The Case Studies VICS, 1999
- GCI Recommendation on CPFR 2001
- Integrated Suppliers ECR Europe, 2000
- The Essential Guide to Day-to-Day Category Management ECR Europe, 2000
- Category Management Best Practice Report ECR Europe, 1997
- Joint Forecasting ECR Germany, 2001
- Efficient Product Introduction ECR Europe, 1999
- Efficient Assortment - Best Practice Report ECR Europe, 1998
- Promotion Tactics Adding Focus, Adding Value ECR Europe, 1999
- Planning des échéances communes et prévisions concertées des promotions - Enjeux logistiques et économiques ECR France, 2000
- Plan, prévisions et approvisionnements concertés - Manual de mise en oeuvre du CPFR ECR France / EAN France, 2001
- GCI n-Tier CPFR Interim Report GCI, 2001
- ECR Europe Homepage: www.ecrnet.org
- CPFR Homepage: www.cpfr.org
- VICS Homepage: www.vics.org
- UCC Homepage: www.uc-council.org
- GCI-Homepage: www.globalcommerceinitiative.com

Appendix E. Glossary of Terms

B2B (Business to Business)

Exchange of products, services and information between businesses.

Category Management

Category Management is a retailer/supplier process of managing categories as strategic business units, producing enhanced business results by focusing on delivering consumer value.

CPFR (Collaborative Planning, Forecasting and Replenishment)

CPFR is a cross-industry initiative designed to improve the supplier/manufacturer/retailer relationship through co-managed planning processes and shared information.

CPG

Consumer Packaged Goods.

CRP (Continuous Replenishment Program)

The concept of continuous supply of goods between supplier and trade partner based on automated exchange of current demand, inventory and stock management information, within the framework of an agreed supply policy. The aim of CRP is to achieve a responsive and precise flow of product to the store, with minimum stock holding and handling.

DC (Distribution Centre)

A warehouse that receives merchandise from multiple vendors and distributes it to multiple stores.

Downstream

Flow of goods and services from the manufacturer to the final user or consumer.

E2E (eExchange-to-eExchange)

Business between eExchanges.

EAN (European Article Numbering)

International association which object is to establish global multi industry system of identification and communication for products and services based on internationally accepted and business led standards.

ECR (Efficient Consumer Response)

A joint initiative by members of the supply chain to work to improve and optimise aspects of the supply chain to create benefits for the consumer e.g. lower prices, more choice variety, better product availability.

EDI (Electronic Data Interchange)

The computer to computer transmission of information between partners in the supply chain. The data is usually organised into specific standards for case of transmission and validation.

ELA (European Logistics Association)

Federation of 36 national organisations formulating logistics education standards.

ERP (Enterprise Resource Planning)

Packaged software systems using database technology and a single interface to control all the information related to a company's business-including customer, product, employee, and financial data.

FG

Finished Goods.

FMCG

Fast Moving Consumer Goods.

GCI (Global Commerce Initiative)

Initiative of retailers, manufacturers and suppliers with the objective of building a collaborative inter-business process that will endorse a set of recommended standards, enabling technologies and best practices with worldwide application. This will provide benefits to all users, large and small, wherever they operate, as well as facilitating global supply chain efficiency and effectiveness and consumer value through co-operation.

Key Performance Indicator (KPI)

Measures that are deemed essential in monitoring the performance of a business e.g. service level, profitability.

POS (Point of Sale)

POS (Point of Sale)", "Place where the purchase is made at the checkstand or scanning terminals in a retail store. The acronym POS frequently is used to describe the sales data generated at the check-out scanners.

SKU (Stock Keeping Unit)

SKU (Stock Keeping Unit", "A SKU is any trading unit (e.g. case, tray, promotional shipper, pallet), that can be ordered by customers and handled in the supply chain. It is labelled with a uniquely identifiable trade number. It may internally consist of consumer units (product package size as sold to consumers) or other trading units.

SMI (Supplier Managed Inventory)

See VMI.

UCC (Uniform Code Council)

A non-profit organisation dedicated to the establishment and promotion of multi-industry standards for product identification and related electronic communication. The organisation's goal is to enhance supply chain management and add value to the consumer.

Upstream

Flow of goods and services from the manufacturer to its suppliers. The opposite of downstream.

VICS (Volunteer Inter-industry Commerce Standards)

A non-profit organisation focusing on the improvement of product and information flow throughout the supply chain.

VMI (Vendor Managed Inventory)

In VMI the vendor (supplier) manages the stock levels and availability in his customer's warehouse, based on forecast demand.

XML (Extensible Markup Language)

XML is the universal format for structured documents and data on the Web. XML is a flexible way to create common information formats and share both the format and the data on the World Wide Web, intranets, and elsewhere.

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