

**A BEST PRACTICE GUIDE FOR THE DEVELOPMENT
& IMPLEMENTATION OF SALES BASED
REPLENISHMENT FOR MAGAZINES**

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Best Practice for the development and Implementation of Sales Based Replenishment for Magazines

1. Purpose

The purpose of this document is to provide guidance and advice for those in the industry seeking to develop Sales Based Replenishment systems and associated processes for magazines. This best practice is derived from the extensive test and prototype work undertaken as part of the Joint Industry Group initiative during 2001 - 2002, whose primary focus is to deliver a more efficient and consumer focused supply chain for magazines and newspapers.

This document has been made available to encourage the ongoing development of Sales Based Replenishment between parties, and to ensure common standards and operating practices are adopted in order to maximise the opportunities across the industry as cost effectively as possible.

2. Sales Based Replenishment Objectives

Sales Based Replenishment, when operated effectively, is an enhancement to current magazine supply management systems, and its overall aim is to deliver a process that is more responsive to consumer demand, satisfying sales opportunities where they exist, and reducing unsolds and supply chain cost by more efficient use of supplies.

In broad terms, this is achieved by 'drip feeding' magazine supplies into retail outlets throughout the on sale period in response to consumer demand, rather than delivering all copies on the first day of sale. Typically, these are larger volume outlets and titles. Retailer epos data is utilised to monitor demand thereby triggering replenishment. Residual stock held at each wholesale location can be made available to other retail outlets where there is a demand for sales (Replenishment). It is important that systems and processes recognise the different needs of players in the chain and that solutions are economically viable to each participant.

A more responsive process provides the opportunity to increase sales as demand is met. Results of trials undertaken by The Supply Chain Group to date indicates potential sales improvements across those retail outlets in the process – this will vary by title. Further sales may be generated by making residual stock available to other lower volume outlets to satisfy additional demand through the on sale period. This has been a key feature of the work undertaken to date providing independent retailers access to stock, that otherwise would not have been available, to satisfy sales demand.

It is vital that systems, processes and disciplines at all levels in the chain are robust as sales opportunities may be missed, and potentially sales lost, if the replenishment process does not work optimally. Sales must be protected and this is a key challenge in the development of Sales Based Replenishment.

The more effective use of supplies through the chain provides the opportunity to reduce unsolds and therefore costs. This is apparent at a number of levels:

- Supply Chain unsolds for the top selling magazines are c30% of total copies printed. SBR provides the potential opportunity to attack these unsolds through more effective targeting of supplies during the on sale period by either redistributing copies to meet demand or removing unsolds from the chain altogether by reducing supplies to the marketplace. Work to date indicates that the opportunity for unsold savings will vary by title and the level of replenishment activity. Taking unsolds out of the system without damaging sales is a key challenge for wholesalers and publishers. The high level of sales volatility for some titles is a key factor to take into account if unsolds are to be taken out of the system.
- Reduced stockholding for retailers and “straight to shelf” replenishment provides the opportunity to reduce costs at a retailer level. Less stockholding will potentially reduce shrinkage and SBR will bring magazines much closer to supply management process operated across the majority of product categories. A key challenge is to understand and quantify these benefits.
- Additional picking and packing is likely to increase wholesaler cost as will increasing stockholding at the wholesaler level. An element of this will be potentially offset by cost savings as a result of less unsolds handling if copies are taken out of the system. A key challenge is to quantify and understand these costs and benefits.

A key objective is to gain a greater understanding of demand and availability at retail level as this is a key driver of replenishment and, therefore, sales and efficiency. Current availability measurements utilising wholesaler supply and returns data are crude and ineffective. A key objective has been to establish lifecycle availability as the new industry standard. This measurement, indicating when, during the on sale period of a magazine (its lifecycle), copies were available at store level, is a more accurate reflection of availability and is a standard measurement used across the majority of product categories.

High quality epos data provides the opportunity to deliver this new measure and work to date shows that current lifecycle availability for many magazines is above 90% and that SBR could enable improvements up to 98% availability where this is acceptable to participating parties. A key challenge is to move the industry to a new measurement system using epos data and to understand the economics relating to availability, sales and unsolds to maximise supplies through the chain.

3. Process

The current industry distribution process allocates and delivers a retail store's full supply for an issue on day 1 of the on sale period. The retailer then returns any unsold stock at the end of the selling period, which is credited. If the retailer sells out during the selling period, they can contact their wholesaler for extra copy if this is available. As the vast majority of copies are supplied on the first day of sale, there is little available stock available during the on sale period of a magazine. The SBR process as outlined in Appendix I, differs from the current supply management operation in that supplies are 'drip fed' into participating stores to meet demand.

The aim of SBR is to distribute a percentage of the available supplies on day 1 leaving a balance secured within a ring fenced area at the supplying wholesaler. Tracking of EPoS data during the on sale period determines the level that further copy is replenished into each store. All retailers who supply EPoS data are then able to draw from this pool of copy. Theoretically, this should enable a greater degree of availability for less unsold copy.

The initial supply quantity, and subsequent replenishments, can be varied to suit the needs of the retailer as follows:

Level 1 – the retailer receives the full allocated order quantity on day 1 and EPoS data is monitored and where necessary replenishments are generated. Generally this will be most appropriate for outlets that have sufficient display space for the full initial allocation.

Level 2 – the retailer receives an initial supply equivalent to their expected net sale. EPoS sales data is monitored and where necessary replenishment requests are generated. This is likely to be appropriate for outlets that require volumes greater than available display space. Some stockholding will be apparent at outlet level.

Level 3 – the retailer receives an initial supply that is significantly less than their expected sale, this may generally be 50% of their original allocated supply. EPoS sales data is monitored and where necessary replenishment requests are generated. This is likely to be appropriate for outlets that require volumes greater than available shelf space. Stockholding is unlikely to be apparent at outlet level and therefore replenishments are more likely to be 'straight to shelf'.

The SBR process is similar whatever level is adopted with operating parameters varied to an individual retailer needs. The key stages are as follows:

Sales Based Replenishment Process				
	Process Step	Description	Data In	Data Out
1	SBR Customer Allocation	Normal marketing allocation for full sale of title for customer. The total allocation qty is then reduced by a fixed amount (x%) using 'standard' distribution functionality.		
2	Reserve SBR Stock	Create stock reservations for qty held back for each title. Advise to staff before packing commences.		
3	Transfer Ring-fenced stock	Following the main pack of the title, the reserved stock is moved into the SBR area and the system updated with quantities.		
4	Forecast sales for customers	The EPOS/SBR system takes in the current sales information and compares actual on-sale data to a forecasted average for the day. An estimate for the future cumulated sales is produced.	Daily EPOS data	Daily cumulative sales reports
5	Calculate Replenishment Qtys	Using the estimated future sales figure and the existing stock at the retailer, the replenishment quantity can be calculated.	Actual Quantity delivered	Required Quantity reports
6	Allocate Stock	The total requirement for a title is compared to the remaining ring-fenced stock and allocated.	SBR stock levels	Replenishment Qty Reports
7	Adjust and Notify replenishment	Replenishment figures are viewed, manual adjustments are made where required and then released to the order book.	Allocated Qty reports	Sales Orders
8	Identify and notify house of potential sell-outs	A pre-defined report highlights customers who have had at least 5 consecutive days with zero sales. Replenishments are then made as per their original allocation.	Daily EPOS data	Sell-out report

Management of Promotions, Multi facings and Launches

When a title is promoted and an increase in supply is agreed between the publisher and a retailer, extra supplies should be included in the original allocation to a store and is effectively secured. The level of promoted stock distributed on the first day of sale will be determined by the level of SBR operated for that store. For example, for a store operating at Level 1, the initial supply will include the normal expected sale plus additional promotional supplies. Balancing stock should be held for replenishment purposes.

Where a magazine has multi-facing, or is situated on a checkout, the title will require sufficient initial stock to meet its display requirements. This quantity should be agreed as a key supply parameter.

Industry trials have to date included the top 100 selling monthly titles; however, a full SBR offer potentially involves all titles that have a qualifying volume of sales in any particular store. This needs to be agreed between participants.

Whilst there has been no historical testing, there is also an opportunity to apply SBR for new launches and one - shots. Substitution sales curves for similar products could be used in the absence of historical sales data, with EPOS sales data monitored and replenishments generated where necessary.

Challenges to the supply chain

Supply Management - It is acknowledged that a high level of availability with a reduced supply can be maintained through the application of SBR. However, removing stock that is not required from the supply chain is far from straightforward as the volatility in the marketplace varies stock levels on a monthly basis. Publishers need to develop forecasting models that will allow circulation planning and retail promotional activity to account for any SBR process.

EPOS Quality - Accurate EPOS data is essential to running an efficient SBR operation; missing data will result in forecasting systems over-estimating remaining stock at store level resulting in under supply and potential lost sales. It is critical, therefore, that the highest standards of data integrity are maintained from all members of the supply chain from publisher barcode validity, wholesalers data storage and tight operational disciplines at retailer level.

Stock holding - Reducing the initial stock into a retailer places increased storage on the wholesaler and (potentially) distributor level. Wholesalers, carriers and printers have not traditionally been required to store large amounts of stock after the on sale date and space is at a premium. Addressing this issue will be a pre requisite to establishing an SBR offer with any significant scale.

Commercial Issues – There are cost and benefits arising from the application of SBR across the supply chain. These need to be considered by participating parties prior to SBR development.

4. Systems

It is important that the industry is able to provide a consistent offer where a retail group has more than one supplying wholesaler. Whilst wholesalers are likely to operate in way that is integral to internal distribution systems to maintain efficiency, each will be required to adhere to common practices and parameters. In this way, best practice will be maintained.

Industry trials have generated a number of parameters required to drive SBR and there is some understanding of how settings effect performance, but it is expected these will be further refined as work between participating parties progresses. Listed below are the business parameters currently being used.

Retailer/title qualification

The agreed sales volume that qualifies a retailer or a title for Level 1 SBR

SBR Reserved Stock

The percentage of the initial allocation held back in the SBR stock location.

Forecasting Start Day

The day sales forecasting commences following on sale.

Replenishment Lead Time

The number of days to look ahead to determine the likelihood of selling out. The system checks to ensure that there is sufficient stock in the store to satisfy predicted sales for the agreed sale period. If title is forecasted to sell out within this period replenishment is made.

Number Of Days To Look Ahead

Determines the number of days the system looks forward to determine the replenishment quantity. This quantity is based on the forecast sales for the issue on sale.

History Used For Forecasting:

The data used to calculate the sales trend against which the current sale is compared and replenishments are forecast.

Minimum Replenishment Quantity

Specifies the minimum number of copies to be replenished.

Forecast Uplift %

This option will increase the forecast sale by a percentage. This is in place to overcome deficiency levels in the data and ensure that retailers return copy at the end of the sale period. It is a cushion to soften the impact of imperfect data.

Stop SBR

The number of days before the magazine issue's off sale date when replenishments will be stopped.

SBR override

The number of days that no EPOS is received after which copies up to the original allocation will be supplied.

5. EPOS data

Key to the whole process is the EPOS data. This data represents the volume of each title sold by each retail outlet and when provided to the SBR stockholder triggers subsequent replenishment of magazines to the retail outlet.

EPOS data comprises volume sales by title by retail outlet by day. Data for all outlets needs to be collected, collated and communicated to the SBR stockholder by the retailer on a daily basis.

Replenishment systems should be capable of monitoring the receipt and quality of epos data and should provide users with sufficient warning of poor quality information in order that alternative supply management actions can be taken. The potential benefits of SBR are unlikely to be forthcoming if the data obtained from the scanning of each product in each retail outlet is of poor quality. This is a key issue for the industry.

Industry SBR trials have shown that EPOS data must be within 5% of the wholesale calculated sale to be of practical use for supply management purposes. One objective of any SBR implementation must be to improve the quality of the data and tighten the quality threshold. This will help to deliver the potential benefits.

Approaches to improving data quality include the eradication of dumpcodes, greater discipline behind in-store stock movements, complete and accurate product files and discipline improvements in relation to in-store scanning processes. The collation and transmission of electronic files is also a potential point of failure. Therefore, sound protocols are also required in these areas. Good practice in this regard includes consistent transmission cycles.

To mirror retail efforts, wholesalers need to provide accurate packing, delivery and returns processing services. Publishers need to ensure quality of their barcode creation and usage practices. Wholesalers and retailers need to make effective use of these identifiers.

Participants in SBR activity will need to monitor the quality of EPOS data on an ongoing basis in order to avoid erroneous stock movements. Any variation away from a useful quality of data will have to be investigated, explained and rectified.

6. Reporting requirements & KPI's

A common agreed set of KPI's and measures is required to enable all the major stakeholders i.e. publishers, wholesalers and retailers, to have a shared and transparent view of sales based replenishment performance.

KPI's and measures can be split into two broad categories of performance and process.

- The performance measures enable key indicators such as sales, availability and efficiency to be tracked.
- The process measures enable operational performance shortfalls to be investigated and rectified.

All Key Performance Indicators should be available at the highest level, i.e. wholesale house level, with the ability to drill down into individual title and outlet performance. The following performance and process indicators are recommended as the core measures for any SBR initiative.

Sales

Any sales based replenishment approach requires the need to quantify the impact on sales.

- Extra sales specifically derived from replenishment can be calculated as follows - (Final outlet net sale - initial customer allocation = additional net sales [when positive])
- Sales specifically lost as a result of any replenishment process can be calculated as follows;
Number of days off sale applied to the standard sales curve. I.e. 9 days lost sale = 10% of normal sale.

Availability

- Total lifecycle availability of the sales based replenishment titles calculated from retail Epos data and tracked over time.
- The number of retail outlets selling out before the end of the on sale period (crude availability) providing a barometer of the effectiveness of the sales based replenishment process compared to those not managed by the SBR process.

There is a strong correlation between crude availability and lifecycle availability performance. This can be demonstrated in the table below.

Crude vs Lifecycle Availability	
Crude Measurement	Lifecycle Equivalent
10%	53%
30%	70%
50%	83%
90%	98%

Source: Denham Nash 2002

Process Measures

The SBR process needs to be auditable to enable historical performance problems to be identified. A system of agreed alert mechanisms based on individual process agreements and criteria (as detailed in the process section of this document), should be developed within the process measures to provide operators with information about process problems. These alerts will enable problems or weaknesses in the process to be identified and rectified quickly. Minimum requirements are listed as follows:

Epos Data

- Accuracy – The difference between the total Epos sales for an issue compared with the net sales figure calculated by the wholesaler, expressed as a percentage.
- Consistency – The analysis of the spread of Epos data accuracy. The proportion of data within pre-determined accuracy banding. For example the proportion of data that is more or less than 10% inaccurate.
- Completeness – The percentage of outlets and titles available to the SBR system over time.

Where there are discrepancies identified there is the requirement for a process for corrective action. This information should be shared with JIG in order that trends are identified. Where information standards are insufficient, sales based replenishment will be suspended until a resolution is found.

Replenishment

The proportion of the estimated supply requirement initially delivered and the number, frequency and timing of subsequent replenishments compared to agreed parameters. (It is acknowledged that due to the requirement of transactional data storage, current system limitations may result in this information not being available initially. As systems develop beyond test status, this capability should be catered for).

The measurement of these key characteristics of the process will increase understanding of the cause of sell-outs or a lack of availability during the on sale period e.g. is lifecycle availability being impacted on due to insufficient replenishments?

Stock

The measurement of SBR ring fenced stock holding within the wholesale depot and the utilisation of that stock are both important characteristics of the efficiency of the process i.e. should there be insufficient stock, availability will suffer, should stock holding be excessive opportunities for lower supply levels will become apparent.

A measure of replenished stock and extra copies supplied to non-SBR outlets will enable stock utilisation to be monitored and controlled. The JIG Supply Management Group will require a top-line view of performance in all these key areas to drive common standards and best practice across the industry.

7. Summary

The guidance given in this report is the output from a series of trials across the industry designed to better understand the dynamics of Sales Based Replenishment for magazines. It has been compiled to serve as a Best Practice reference for those participants wishing to further develop and implement Sales Based Replenishment systems and processes.

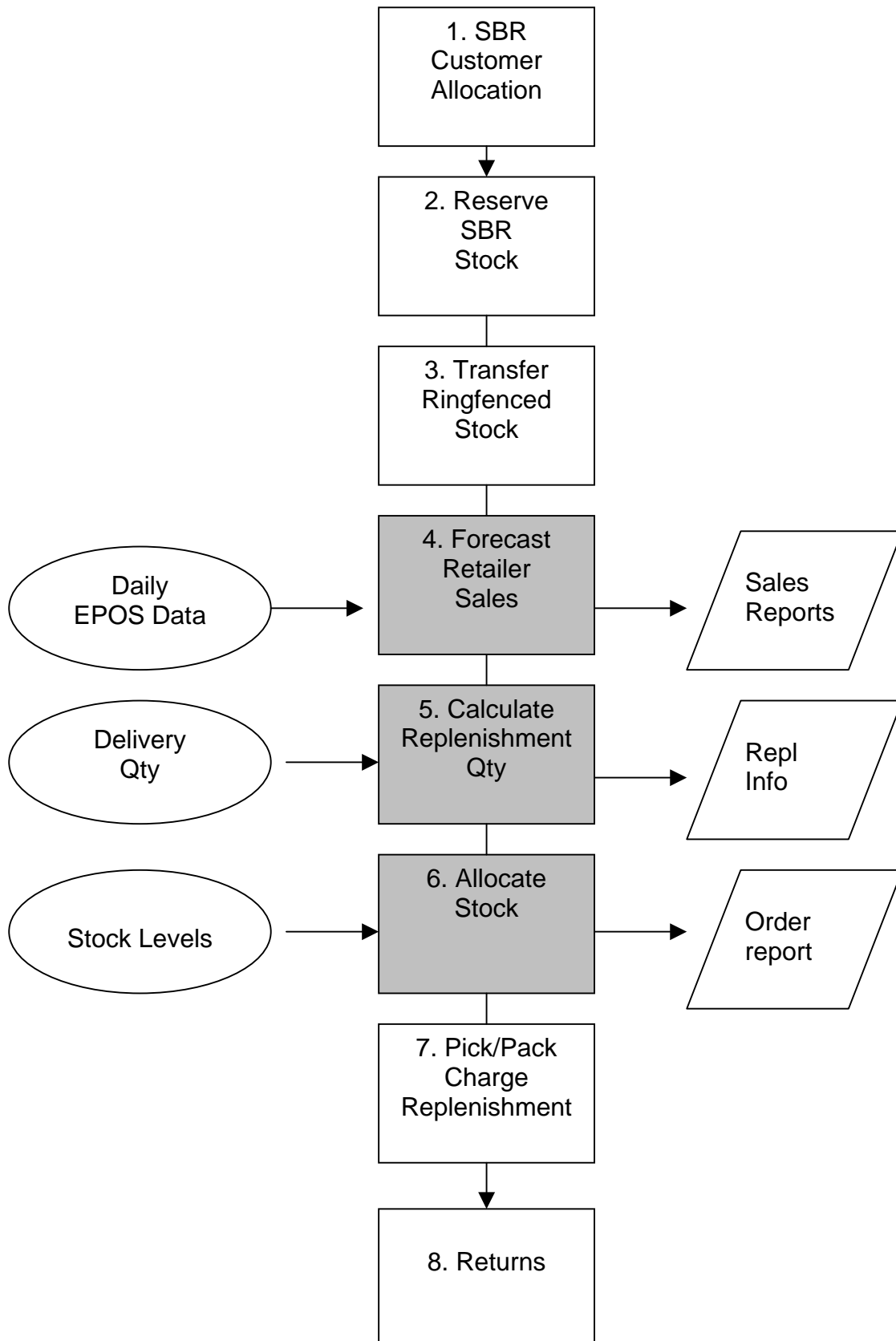
Sales Based Replenishment provides the opportunity to further improve the magazine supply management process, by potentially reducing unsolds and improving sales where demand is not being currently met.

The Sales Based Replenishment process, designed to be more responsive to consumer demand, is more complex than current practices and requires a high degree of data quality and process efficiency to work effectively. Establishing these processes and disciplines across the supply chain and protecting current sales will be a key challenge for participants.

Whilst there are costs in delivering new systems and processes, there are also benefits to be won at all levels of the supply chain – for both large and small players. Ultimately this will be to the benefit of consumers as supply management for magazines becomes even more responsive to consumer demand.

Appendix I

The Sales Based Replenishment Process



Appendix II

Glossary of Terms

- **Sales based replenishment** – The act of supplying copies after EPOS analysis that current stock will not satisfy future demand.
- **Crude availability** – A measurement of when returns are received, or not, from an outlet.
- **Lifecycle availability** – A measurement of the number of days on sale as a percentage of the total number of days available for sale.
- **Consumer availability** – A measurement of the number of copy sales lost (after a sell out) as a percentage of the total number of copies sold.
- **Retailer / title qualification** - The number of copy sales a retailer needs to achieve before they qualify to have their original allocation reduced and the excess copy to go into the ring fenced area.
- **SBR customer allocation** – The initial allocation given to each retailer for a particular title/issue.
- **SBR Reserved stock** – The percentage amount of the initial allocation held back in the SBR stock location.
- **Ring fenced stock period** – The period of time that the reserved stock is unavailable for general distribution.
- **Replenishment lead time** - The number of days to look ahead to see if titles are likely to sell out. The system checks to ensure that there is enough stock in the store to satisfy predicted sales for the number of days the variable is set at. If not and the title is expected to sell out within this period, the replenishment process is triggered and the replenishment is made.
- **Forecasting Start Day** - This parameter means that the SBR process will not start until it reaches the day number specified on a particular issue/title from the on sale date. This allows the sales of a title to settle down, and make the replenishments more accurate.
- **Number Of Days To Look Ahead** - If the replenishment process is triggered, then the system will look ahead this number of days from the current day number to determine how many copies of a title need to be sent. This quantity is based on the forecast sales for the issue on sale.

- **History Used For Forecasting** - The data used to calculate the sales trend against which the current sale is compared and replenishments are forecast.
- **Minimum Replenishment Quantity** - This parameter specifies the minimum number of copies, which SBR will allocate for a single replenishment to each customer.
- **Forecast Uplift %** - This option will increase the forecast sale by a percentage. This is in place to overcome deficiency levels in the data and ensure that retailers return copy at the end of the sale period. If everything were perfect, this percentage would equal the returns percentage.
- **SBR Override** - This is the number of days before the magazine issue's recall date to stop calculating replenishments.
- **Dumpcodes** – The “cover all” codes used by retail systems to effect a sale when their scanning software fails to detect the correct title file data.