DATA WAREHOUSING FOR RETAILERS

WHITE PAPER

This whitepaper aims to provide valuable insights on the following topics:

- Utilising data and information to increase confidence in decision-making processes
- Leveraging analysis tools to explore and find answers to complex business questions
- Identifying the key steps and common challenges when initiating a data warehouse project

www.sempreanalytics.com

Data Warehousing for Retailers

The ability to make informed decisions based on accurate data analysis is a crucial capability for successful retail organisations to outperform their competitors. While better decisions alone can boost business performance, the speed at which they're made is equally important.

However, according to a "Analytics Advantage" survey conducted by Deloitte, 32% of organisations lack a centralised approach for collecting and analysing data, and 42% lack the necessary resources or expertise to establish such a system.

In this whitepaper, we will explore the challenges that retail businesses are currently facing and delve into how a data warehouse platform can provide the necessary analytics for making informed decisions. This document covers all scenarios, whether you're considering implementing a new data warehouse, expanding an existing one, or monitoring its overall health.

Introduction

Unlock the full potential of your business with a comprehensive data warehouse solution.

Consolidate multiple data sources
Consolidate multiple data sources and enable cross-analysis for unprecedented profit-generating benefits

Automate real-time reporting
Automate real-time reporting on KPIs and P&L information by branch, department, and cost center levels.

Gain deep insights into customer satisfaction
Gain deep insights into customer satisfaction, buying behaviors, and preferences.

Optimise your product mix
Optimise your product mix and analyse market baskets to increase sales and profits.

Improve inventory management
Improve inventory management, warehouse layout, and route efficiency for cost savings and streamlined operations.
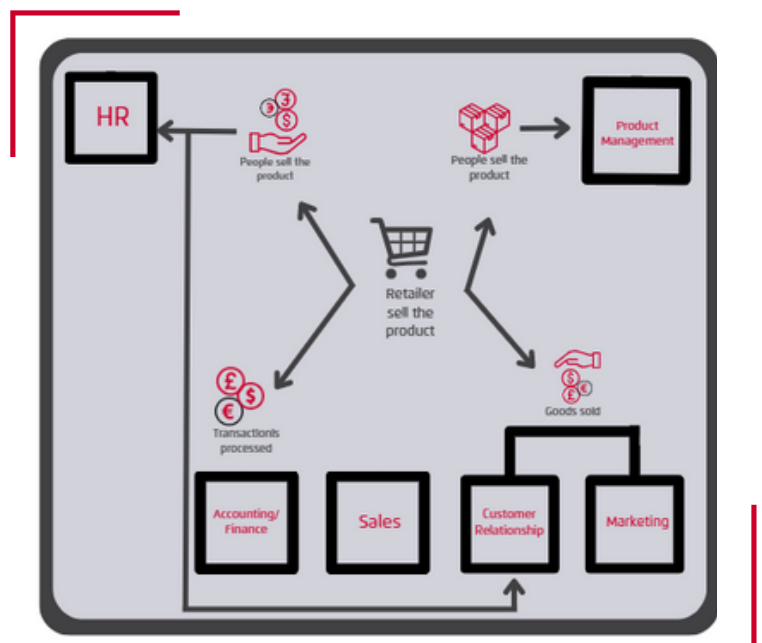
Make data-driven decisions
Make data-driven decisions on product pricing, clearance, and promotions to maximise revenue.

Improve supplier management
Improve supplier management with accurate returns and on-time delivery performance data.

The diagram illustrates the variety of data generated by a simple sales process.

Data needs to be effectively managed and maintained to realise its full potential.

Data plays a pivotal role in driving success, it is increasingly important for organisations to recognise the value of their data. When used correctly, data can provide valuable insights that drive better decision-making, improve operational efficiency, and increase cost-effectiveness. By investing in the proper management and utilisation of your data, you can unlock its true value and gain a competitive advantage in your industry.

SALES CHANNELS

The last 20+ years of technological development has led to retailers evolving rapidly. Those that failed to evolve, failed to survive. This rapid evolutionhas resulted in established retailers running multiple, disparate systems and data sources in relation to each sale.

CONSUMER EXPECTATIONS

Added to these changes in the sales channel, retailers are experiencing a well-documented sea change in consumer expectation. Consumers expect transparency in pricing and product quality with a growing trend focused on the ecological and ethical provenance of the materials in products. An ability to analyse the additional cost of sales or changes to the supply chain, is something that can only be achieved with data.

DELIVERY CHANNELS

As consumer's expectations on the product changes, so do their requirements on the services offered by retailers. Retailers have introduced Click-and-Collect, Online Order In-Store, Deliver to Store, and other services to attract customers. However, these services are both reliant on the integration of data as well as generating their own datasets. The demand for a service; the revenue generated, or costs incurred; being able to access accurate stock levels and availability - all of these processes demand or generate data.

SOCIAL MEDIA

Since the rise of theLoyalty Card, retailers have been generators, collectors and users of "big data". The rise of social media, mobile traffic and marketingautomation has meant the amount of information that canbe scraped about customers and prospects is growing exponentially.

WORKFORCE

As a cost to anorganisation, marketing is overshadowed by a company's biggest asset - its people. Store-based retailers face the on-goingchallenge of balancing their labour costs against their sales/services bandwidth. Being reliant on temporary, part-time and seasonal staff means the challenge of analysing and predicting demand can be fundamental to the successof a store.

FINANCE

Beyond all of this,there is one department that collates data and can measure the monetary pulse of the company: Finance. Finance needs to be able to question estimates and forecasts on costs and revenue; only withconsolidated data are they ableto validate proposals set out in front of them and reconcile actuals as they happen. Finance's data offers a wealth of information; however, it cannot offer the full story without the other systems adding complementary data.

ACTIVITY-BASED COSTING

A common challenge in the Retail industry is devising an Activity-Based Costing (ABC) methodology around sales - only by combining information from indirect costs, such as marketing, with direct cost of the sale can cost drivers be determined and analysed. Relying on traditional metrics such as Gross Margin of transaction is rudimental. A true ABC model will consider all the cost drivers associated with each sale: labour costs, marketing cost, supply chain cost and so on.

WHERE TO START?

An effective data warehouse will serve all the corporate functions from head office to distribution, stores and filled based groups. This will include store managers., every managers, Regional managers, logistics, merchandisers, Buyers and executives. However, They should also feed information to the supply chain, customers, auditors, franchisees, and back into corporate systems.
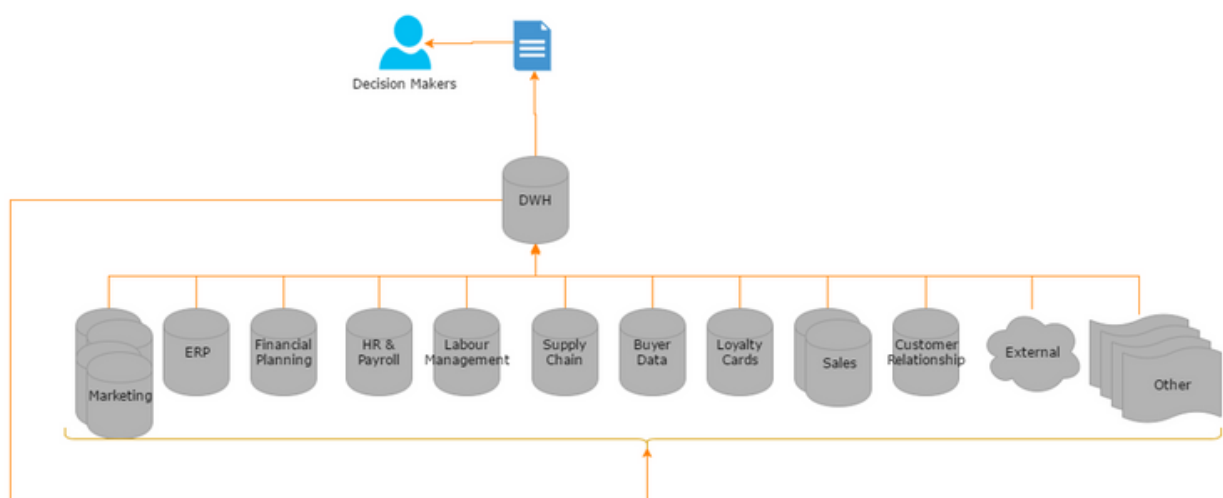

Fig 1. Typical retail data warehouse feeds

Consider Consider the following questions with regards to your current reporting process:

- *Are you reliant on manually intensive processes for reporting?*
- *Is the time lapse between asking and answering a question too great?*
- *Do different areas of the company appears to be extracting the same data from the same sources?*

Answering yes to any of these questions either means that the organisation does not have an enterprise wide data warehouse or that data warehouse has not grown with the business.

There are a growing number of technologies available for creating data warehouses; everything from small on-premise databases, to dedicated appliances or cloud offerings, such as IBM's PureData and Dash DB respectively. However, The fundamental building blocks of what data is captured, how it is captured and how it is stored, determine the success of the warehouse. When built the correct way, a warehouse can start small as a team-based datamart and provide results within just a handful of days, but expand and scale with the business into a large enterprise warehouse overtime.

If you're at the beginning of the data warehouse journey and unsure where to start, then the following programme describes a successful implementation of a data warehouse solution:

Create a roadmap

Identify reporting and analysis needs, then prioritise these based on business need and ROI in order to create a long-term plan.

Source system analysis

Review the available source systems, including social media and cloud-based tools to identify key items and shared business attributes such as stores, products or customers.

Decide on technology for extraction and storage

Ensure the toolset is future proofed against changing data structures, locations, throughput and business needs.

Begin to build, test and amend

Ensure the business is involved from the start to conduct testing and highlight any gaps. Issues can be found during the development phase and creating innovative solutions to these problems will ensure the platform is built for an organisation's needs.

Work iteratively

The initial delivery can often be thelongest as it includes many data sources which underpin the warehouse. Once this is underway, review the business requirements to encompass any recent changes and then start work on the next area of data.Keep repeating this to ensure a constant delivery of business benefits, whilst keeping up with the changing needs of the business.

If you're struggling with an underperforming or poorly understood warehouse, try taking the following approach

Capture and log the problems

A key activity is to capture feedback. Understanding the issues and problems that users face will be used as a baseline for determining whether any development was successful.

Categorise the issues into areas

Some examples:

- Missing data
- Latency problems between data source and warehouse
- Poor speed of queries in analysis
- Data quality

Prioritise and investigate solutions

- Review existing and new source systems for missing data
- Develop extraction techniques for frequent delta loads of data
- Review the model and architecture for improved querying
- Creating additional schemas, attributes and calculations for simplified analysis
- Develop exception reports and error-handling logic in the extraction process

Conclusion

In today's data-driven business landscape, data warehouses play a critical role in providing insights that drive business success!

Whether you're starting a new data warehouse project or seeking to improve an existing solution, partnering with industry experts can help you achieve your goals more efficiently and effectively. At Sempre Analytics, we have extensive experience working with customers to design, deliver, and maintain successful data warehouse implementations.

Our team of experts can help you navigate the complex process of product and vendor selection, conduct assurance services on existing implementations, and provide ongoing support to ensure that your solution meets your evolving business needs.

By working with us, you can optimise your data warehouse's performance, reduce costs, and gain a competitive edge in your industry.

Ready to take your data warehouse to the next level? Contact us today to schedule a consultation with our team of experts and learn how we can help you achieve your data warehouse goals.

About the Authors

Neil Harvie is the CEO and co-founder of Sempre Analytics, with over 20 years of experience helping organisations unlock the power of their data to drive better business outcomes. In 2011, Neil co-founded Sempre Analytics with a vision to provide customers with a highly skilled team that combines technical knowledge with industry expertise. Today, Sempre Analytics is a trusted partner for organisations of all sizes, helping them capture and utilise their data in ways that drive better decision-making and business outcomes.

Neil and his team work closely with customers to understand their unique needs and develop customised solutions that address their specific data challenges. With a deep understanding of a wide range of industries, including retail, finance, housebuilding, construction, manufacturing, and more, Neil and the Sempre Analytics team are equipped to help customers across a broad spectrum of sectors.

Thanks to Neil's vision and leadership, Sempre Analytics has become a go-to partner for organisations looking to unlock the full potential of their data. Whether it's improving operations, enhancing customer experiences, or driving revenue growth, Neil and his team are committed to helping their customers succeed.

Paul Scales is the Industry Lead for Housebuilding & Construction and Managing Consultant at Sempre Analytics, helping customers integrate, model, and surface their data. With his expertise, he has helped teams across various functions, including Finance, Commercial, SHE, QAQC, Production, Sales, Customer Service, and HR, to deliver projects on time, within budget, and up to quality and safety standards.

Paul's vision of a "Connected Data" organisation is where data flows seamlessly between functions and teams, empowering them to make better decisions and drive business change.

With experience working with a range of source/target systems such as Anaplan, COINS, Dynamics for 365 F&O, Dynamics 365 for CE, Field View, and Viewpoint for Projects, Paul is a versatile and adaptable professional ready to tackle any data challenge.

sempre | analytics

Sempre Analytics
Oriel House
26 The Quadrant
Richmond
TW9 1DL

020 3137 9944

info@sempreanalytics.com