



Case Study:

Lay-by Services Australia

SAP Business Warehouse and Data Mining implementation



UNWRAPPING HAMPERS OF INTELLIGENCE

Summary: Lodestone delivers Business Intelligence to Lay-by Services Australia

SAP Business Warehouse (BW) was successfully implemented at Lay-by Services Australia (Lay-by) within a ten week timeframe. It gives them an analytical reporting capability over their SAP ERP and CRM systems focusing on Finance, Sales and Distribution, Lead Management and Activity Analysis.

The project included a Knowledge Discovery component using BW data mining tools. Association and cluster models based on historic sales data enabled Lay-by to discover information on consumer buying behaviour. The intelligence gained from this information combined with analytical reports has allowed Lay-by to realise a rapid return on investment.

The Company: A\$2 billion industry has just few players vying for market share

Lay-by is a private equity backed entity that purchased the Hamper King brand from Innovations in August, 2008. Hamper King delivers a stress-free, fabulous Christmas for thousands of Australian families by providing a great range of quality hampers and products, all on easy weekly payments.

Project Outline: Laying down a framework for Knowledge Discovery

The second phase of Lay-by's system implementations involved the establishment of an Enterprise Data Warehouse (EDW). This data warehouse provides a single repository for Lay-by to store and report organisational information. The project was divided into two stages:

1. Establishment of an EDW with analytical reporting including daily operational dashboards
2. Knowledge Discovery to mine past sales history for hidden patterns of consumer buying behaviour.

Background and Challenges:

Lay-by had just completed the first phase of their Enterprise Resource Planning (ERP) and Customer Relationship Management (CRM) systems and only vital real-time operational reports were implemented. The strategy early on was to develop the majority of reports in BW, so Lay-by were eager to start with the second phase.

Lay-by's unique business model presented challenges early on with the majority of standard BI reports not suited to the businesses requirements. Customisations to modify or develop new cubes and tables were performed to overcome any gaps between content. The most demanding aspect of the project was the tight ten week timeframe set for the implementation which would include the building of the EDW, delivery of a range of custom reports, dashboards and data mining models.

Project Objective: Provide transparency across the organisation

The objective of this implementation was to provide flexible reporting with "slice and dice" capability, making information easily accessible from a single source, then utilise this data to discover knowledge about the organisation.

Solution: Increase knowledge to increase sales

The BI solution provides intelligence on product combinations by region and customer allowing Lay-by to accurately target segments of the market for campaigns and advertising. The analytical reporting capability also lets them answer business questions of who buys what, when, how often, and how much they spend. The solution also incorporates external data captured around Mosaic codes, a customer demographic grouping, and catalogue page details. This data and capability gives Lay-by the ability to respond to ad-hoc business queries in a more accurate and timely manner.



The Knowledge Discovery component utilises the standard SAP BW mining models and tools. This was where most of the benefits of the data warehouse were gained. Data mining is the process of finding correlations or patterns hidden among large amounts of data. The 'association mining models' were used to execute algorithms over historic sales transactions and we were able to obtain previously unknown patterns and relationships on product combinations. A monthly report with updated associations assists sales staff in offering customers related products to effectively increase sales.

Data Mining Sample Result Set:

Lead Product	Kings Hamper
Dependant Product	Thirst Quenchers
Support	5.0 %
Confidence	10.12 %
Lift	2.0

When a customer buys a Kings Hamper they are 2.0 times more likely to purchase the Thirst Quenchers package as well.

Outcome: Rapid Return on Investment

In just ten weeks a fully functional web-based BI solution providing sales, marketing and financial analysis was successfully delivered. The data mining component provides knowledge that is vital to supporting business decisions across the organisation from marketing and advertising to product development. Lay-by believes it has allowed itself a huge competitive advantage with revenue already doubling after just six months in business in a market that is contracting in economically challenging times.

Feedback:

"Ultimately, BI helps us keep our finger on the pulse of the business and achieve the best return on our marketing investment through campaign analysis and greater customer segmentation."

Toby Poulson, CFO Lay-by Services Australia

