NRWC Abstract

Fashion Retail Master Data Model and Business Development

Harald Hovmøller, Torben Tambo

To navigate and develop the retail business it should be expected that a consistent insight in the data of the business would be of strong importance. Insight in retail data includes a persistent and sufficient abstraction of the operating model into the logical model of the data generated by the business. Much too often retail data models are at risk of become obscure when data models no longer can follow the dynamics of the business. Or operating models suffer from lack of support from general enterprise resource planning (ERP) systems. In fashion retail data would be expected to be significantly more complex than in general retailing as products are seasonal, unique to a brand or a chain, must support a short-lived production, customers are not attracted by need but by desire, and multi-channel retailing requires both adaptation but also consistency across channels.

Traditionally enterprise information systems (EIS) have been addressing business data as either static (master data) or dynamic (transactions). Master data is therefore concerned with permanency and adequate and sufficient data of standardized representations. Transactions are derived from business processes and combine master data.

In operating the retail business, especially fashion retail, the master data model (MDM) has often been generic from standard EIS. Generic MDM’s rule out product specific characteristics presented that In turn normally has been expected to be handled in e.g. a product data management (PDM) or product life-cycle management (PLM) system. As PDM/PLM in many cases only are loosely connected to the EIS (ERP) there is a many risk of loss of connectivity between the systems and the MDM is therefore simply not

A number of industrial standard propositions have been suggested to improve MDM in the fashion retail industry notably NRF ARTS and CEN CWA 16667:2013. Both ARTS and CWA16667 express specifically that the data model must be derived from the business and operating model. The propositions provide good opportunities for efficient interorganisational transaction exchange. The data models however need more analysis for actual implementation in the form of ability to

- Integrate into existing ERP systems
- Support rich media in especially B2C contexts
- Support concurrent channels i.e. convergence to omni-channel retailing

The problem statement can thus be formulated as:

What are the key characteristics of design and governance processes related to enhance the master data model in the fashion retail industry?
Theory for this paper is consisting of theory for fashion retail operations, and for the supply and information exchange within retailing. The accuracy and dynamics of data related to the operating models is provided by the theory of MDM. The theory on data modelling and master data is rich, but the actual requirements for the fashion retailing are less discussed. A general perception is frequently that fashion retail can’t differ that much from general retailing and could use generic data models. This view is in most systems replaced with a “minimal subset” of fashion retail related data models. CEN 16667 is a major breakthrough although it still needs maturing and company-specific implementations.

Case study

TexBrand is a leading European company in fashion wholesale and retail. TexBrand is privately held and operates around 2000 stores under five primary brands and several specialisations or affiliations of these brands. The stores are partially operated and owned by TexBrand and partially by a network of partners. Beside the stores, about 50% of the turnover is generated from wholesale activities to department stores, general chain stores and online retailers. Common to the stores are that they exclusively are selling TexBrand brands and that they are using point-of-sales (POS) systems supplied by TexBrand. The POS system enables fast and concise data to the stores and also facilitates retrieval of data for the central datawarehouse reporting system. TexBrand has since 2007 had increasing success with online retailing. Originally, online retailing was organized in a separate entity. Gradually some multi-channel retailing features has been introduced, but not omni-channel retailing.

The organizational separation of the online activities, and organizational distance to some retail partners have led to the identification on insufficiencies in the current master data model. The model was designing to support season and product creation, purchasing and support supply chain management from the manufacturers to the stores. The model was not designed to support high quality marketing material, photos, post-warehouse product lifecycle, and a multi-channel retail business model. Furthermore, the different primary brands have different cultures of data management ranging from loosely structured processes to processes with a high level of governance. Adding to this is that the existing data model has been tree-structured from brands to seasons and categories where the business considers to aim for a more dynamic structure of products combined across seasons and categories to suit the need of more specialised retailers, wholesalers and e-commerce operators.

TexBrand is now aiming for redesigning the operating master data model.

Important positions in the redesign are

- Extending the data model from supply chain management and in to marketing adding characteristics of PDM/PLM
- Recognising the dynamic character of the sales process ranging from one-off orders for short seasons and up to never-of-out-stock concepts
- Improved support of mixed channel structures
- More distinctive preservation of product history in the in-store phases
Late phases of the product life cycle is seen as ideal for increasing the sales to wholesale customers, online retailers and partner owned stores.

The case highlights the shortcoming of the traditional ERP-inspired master data model mostly servicing the supply chain management needs and to a lesser extent the commercial needs. Commercial needs require a broader understanding, especially considering the rapid growth in the digital channels and an expected slow decline of the physical retailing. Products are distributed and sold differently on the different platforms and this business model must be embedded into the MDM. Images, marketing material, rich media, references to external product referrals, and localisations (country/language adaptations) in the MDM will improve the overall efficiency of the sales process.

Main findings of this paper are related to the case-based character of the fashion retail MDM, the considerations of the distributed type of master data, the aiming at consolidating distributed data, and the necessary adaptation to the omni-channel future on both the B2B and the B2C level.

List of references


HEILER, 2010. Solved Product data challenged with apparel (White paper).


Klena (2013) From transactions to relationships - Connecting with a transitioning shopper. IBM


RUSSOM, P., 2006. Taking data quality to the enterprise through data governance. The Data Warehousing Institute, Seattle, .


SARSFIELD, S., 2009. The data governance imperative. IT Governance Ltd.


SMYTH, G., 2013. Transforming an organization from fragile to agile with EA, SOA & BPM.


Tambo (2011) Enterprise architecture. IGI Global
Tambo, Gabel, Bækgaard, Olsen (2012)

Tambo (2014a) Innovation in Retail. Journal of Retailing and Consumer Services


THOMAS, G., 2006. The DGI data governance framework. The Data Governance Institute, Orlando, FL (USA).


