Leveraging Digital Asset Management (DAM) in a Finnish retail corporation

A case study on the current state and future vision of Kesko Corporations' marketing and content production.

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Degree Thesis
Masters' degree in Media Management
2017

DEGREE THESIS	
Arcada University of Applied Sciences	
Degree Programme:	Master's Degree Programme in Media Management
Identification number:	
Author:	Sandra Leppänen
Title:	**Leveraging Digital Asset Management (DAM) in a Finnish retail corporation:** A case study on the current state and future vision of Kesko Corporations' marketing and content production.
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Commissioned by:	Kesko Oyj

Abstract:
This case study analyses how rich media content (digital assets) is created, stored, shared and managed at a Finnish retail company – Kesko Corporation. The study aims to identify the benefits and possible disadvantages of centralizing management and production of these digital assets into a Digital Asset Management (DAM) system. My main research question is: *Are there achievable content enhancements that the introduction of a centralized DAM system might bring to Kesko Corporation's marketing operations?* I have chosen to conduct a case study. I have studied Kesko Corporation with its different trade divisions. I decided to remove the K-retailer field of independent retailers since they are not using digital assets in the same manner as the chain units. This allows me to focus more specifically on affected parties within the group. The study relies on a qualitative method. Data was collected through semi-structured interviews with management in the digital development- and marketing departments at Kesko, and a survey on how digital asset management currently is executed in the different business units. The survey was sent to all of the operative marketing staff at Kesko Corporation. This research demonstrates that the lack of a central asset repository, and metadata enriched assets, in part creates heavy and manual operations, which frustrate marketers. It also seems to prohibit Kesko from fully utilizing automated marketing operations. Kesko's vision of a customer centric marketing seems clear, but the challenges they face, lie in building the foundation for such activities. While DAM cannot resolve this problem alone, it most certainly is seen to be one key enabler for achieving these strategic visions.

Keywords:	digital asset management, dam, Kesko, digitization, content management, production management, customer oriented marketing,
Number of pages:	38
Language:	English
Date of acceptance:	

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FOREWORD

This thesis has been written with the permission of my current employer, Kesko's K Digital unit. As many companies, Kesko is in the midst of building new structures in order to be able to efficiently operate in a digitizing world and diversifying customer behavior, which disrupts old structures and ways of working. The thesis is proof of the forward thinking, trusting and renewing culture, which Kesko's leadership aims to establish throughout the company. By expressing their high interest in this topic and in mapping out the current state of asset management in Kesko, I am convinced that Kesko is committed in finding new possible solutions on how to enhance operations in the company.

Firstly I want to thank the managers and interviewees for placing their trust in me to conduct this study, and for providing me with sufficient material and freedom for doing so in the way I best saw fit. It has absolutely given me a fantastic opportunity to learn, understand and relate to Kesko's structures and processes in a whole new way.

I also I want to thank my family for the support and endurance they have shown throughout this process. I would not have had the possibility to finish, would I not have been able to use my time writing and researching the subject for all those long hours.

Finally, a thank you also goes out to my supervisor Dr. Nathalie Hyde-Clarke who kept me on track and focused, and also pushed me to do my utmost best.

Thank you all!

Helsinki, February 2017

Sandra Leppänen

1 INTRODUCTION

It has been estimated that the amount of digital assets[1] created and replicated in the world will increase from 0,8 in 2009, to 35 trillion gigabytes by 2020. This means that in 2020, the digital asset space will be 44 times larger than in 2009 (Slawsky, 2010).

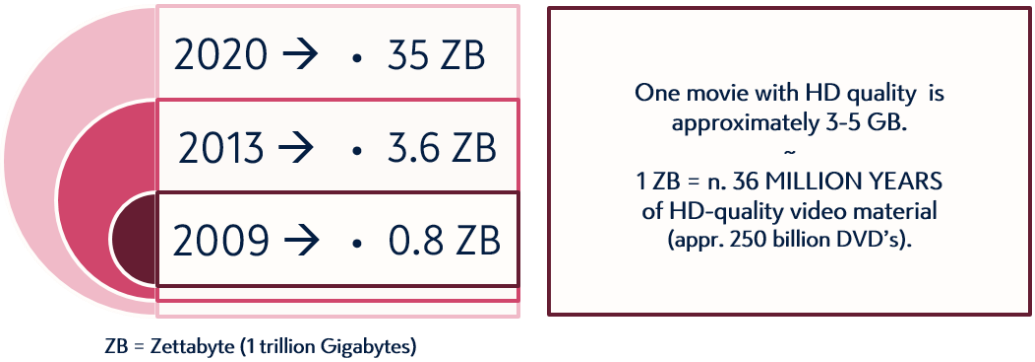

*Figure 1. Estimate of the amount of digital assets in the world, by 2020. (*Gantz, Reinsel, 2010*).*

Businesses are creating their media assets in many different formats, and traditionally each department manages its own assets with some sort of a filing structure. These media assets (content) are also being shared and distributed over countless different channels: There are the electronic channels (television, internet, e-mail, smart phones, tablets), and then there are the more traditional print-based channels (catalogues, brochures, and direct mail), to name a few. Re-purposing these assets, to offer a captivating viewing experience in all of these channels, can be an enormous challenge to content creators (Lamont 2011, Joshi & Tabib 2013).

The ever increasing amount of content can also be confusing to the businesses' customers (content consumers). As the interaction between content creators and content consumers

[1] For the purpose of this study, the word *asset* refers to digital media content: The word asset is usually related with property; it implies 'owning' something. This association also applies to digital media content. If you have the property rights to a certain media content, then that content becomes your asset. Content to which you do not have the usage rights, is not an asset. In short: Content + rights = assets. Digital content + rights = digital assets. (Austerberry, 2004).

in the online environment increases, the need to understand and manage both the creation cycles of content production *and* the impact of content overload on consumers becomes important. Such an understanding will assist marketers in deciding how best to organize and optimize their production lifecycle in order to fully manage the customer experience they create. In information management, the organizational perspective is often the most dominant. Information (in this case, asset-) management refers to the management and control over the full lifecycle of processes – ranging from *creation* to *usage* of assets (Byung-Kwan, Wei-Na 2004). Companies will therefore have to rethink both their operational- *and* cost structures, to be able to adapt into the new digitized era with both new digital tools and the high demands on content production (Joshi & Tabib 2013, Kane, Palmer, Phillips & Kiron 2015).

This case study analyses how media content (digital assets) is currently being created, stored, shared and managed at a Finnish retail company – Kesko Corporation. The study also aims to identify the possible benefits and disadvantages of centralizing digital asset management at Kesko.

My main research question is: *Are there achievable content related enhancements that the introduction of a centralized DAM system might bring to Kesko Corporation's marketing operations?*

2 BACKGROUND

2.1 The disruption of content creation processes

The somewhat heavy project-based linear production methods used in producing content (as illustrated in Fig. 2) are now shifting towards a more cooperative and agile way of working. This may be described as a production cycle (Fig. 3), where more and more content is created by a pool of different professionals – each contributing to a more organic creative process cycle with their own role, talent and area of expertise. However, such a system needs to make provision for the effect of an accelerating pace of production, the vast amounts of files and file formats worked on *and* channels of distribution. It is thus accepted that the margin of error may be relatively large (Austerberry, 2004).

Figure 2. A project based, linear production process in content creation (Leppänen, S. 2016).

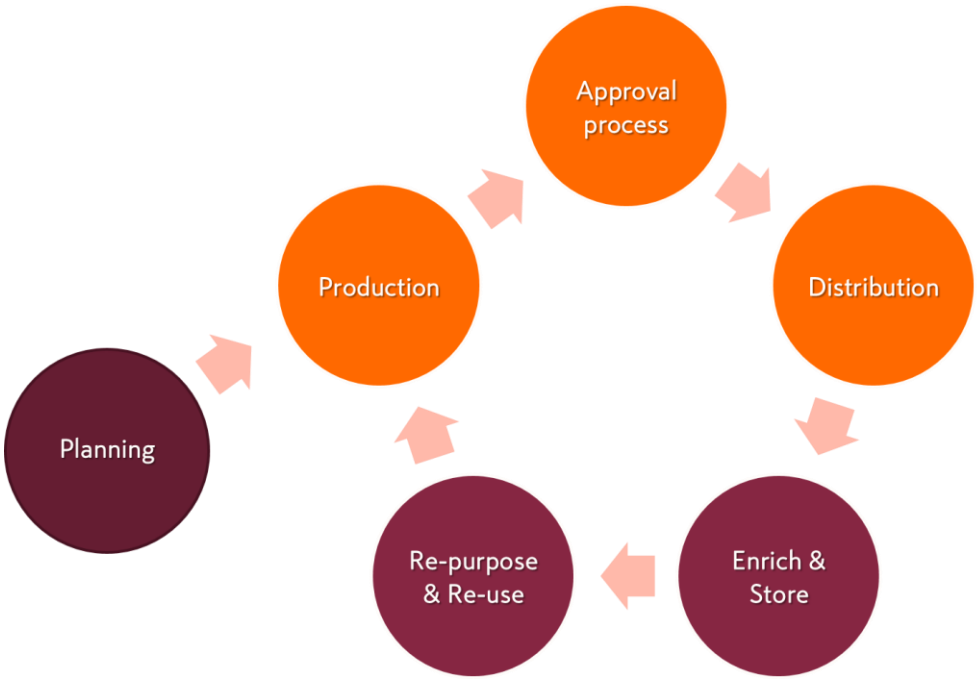

Figure 3. A production process cycle (Leppänen, S. 2016).

So, in order to be able to manage with the rapid production pace, in terms of both the growing amount of content, the evolution of digital assets *and* expansion of distribution channels, companies have been forced to rethink their ways of approaching digital asset production (Lamont 2011, Joshi & Tabib 2013). Companies must build a variety of different digital technologies that integrate people, processes and functions. By doing that, they can achieve operational efficiency gains and important business advantages (Kane, Palmer, Phillips & Kiron 2015).

Fortunately, there are a lot of efficiency enhancement- and cost saving possibilities in incorporating new digital tools within a company's existing IT infrastructure. For instance, for the streamlining of operative marketing and advertisement production processes, a Digital Asset Management (DAM) solution could be a valuable long-term investment (Lamont 2011, Kane, Palmer, Phillips & Kiron 2015). This model forms the focus of the thesis, and its potential is considered through the use of an actual case study.

2.2 Kesko Corporation

This study uses Kesko, a Finnish listed retail company, as its case study. Kesko operates in the grocery-, building-, & technical-, and car trade. Its chains work in close cooperation

with the K-retailers (entrepreneurs who run the K-stores) and other partner networks. Kesko has over 1,500 stores in Finland, Sweden, Norway, Estonia, Latvia, Lithuania, Poland, Russia and Belarus. Together, sales from Kesko and the K-retailers form the K-Group totaled about €11 billion (VAT 0%) in 2015. All in all, the K-Group is the third largest retailer in northern Europe, and it employs approximately 50,000 people. Kesko's shares are listed on Nasdaq Helsinki and the company's home and headquarters are located in Helsinki, Finland (Kesko Corporation, 2016).

2.3 Kesko's divisions

2.3.1 The grocery trade division

The K-food stores provide customers with both low-priced and high-quality food. The aim is to have the best-quality food stores in Finland, and to serve customers through a wide network of about 900 K-retailers, who run their locally tailored grocery stores. Kesko's grocery trade and K-food stores cooperate under a chain business model. Brands operating under the Kesko grocery trade sector are ***K-citymarket*** *(hyper market concept),* ***K-market*** *(local market concept),* ***K-supermarket*** *(super market concept)* and ***Kespro***. Kespro is the leading wholesaler in the Finnish Hotel, Restaurant and Catering (HoReCa) business.

K-Group also produces its own product brands (private labels), for the mid-, and lower price ranges. In the grocery trade, the private label brands in 2015 included Pirkka (with approximately 2,700 products), Pirkka Organic (117 products), and K-Menu for (291 products) (Kesko Corporation, 2016).

Figure 4. The brands operated by the grocery trade division (Kesko Corporation, 2016).

As shown in the chart below, K-Group was the second largest operator in the Finnish grocery trade with a market share of approximately 33%, in 2015 (Kesko Corporation, 2016).

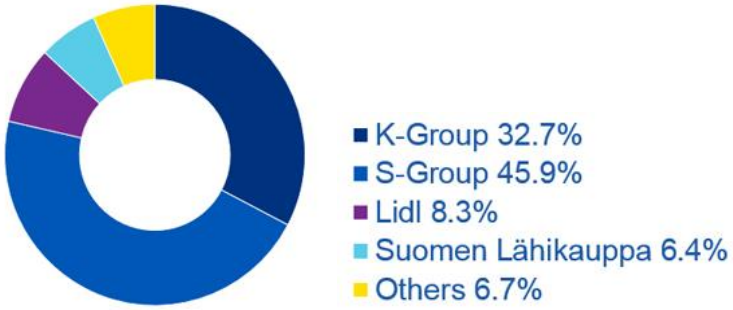

Figure 5. The market shares of the Finnish grocery trade, in 2015. Kesko has since acquired Suomen Lähikauppa in 2016, to be a part of the local market concept. (Kesko Corporation 2016).

2.3.2 The building and technical trade division

The building and technical trade division offers its customers a variety of building and home improvement products, and electrical products. Trade occurs through a wide store network, e-commerce and various digital services.

The brands operated under the building and technical trade division are ***K-rauta***, (***Rautia***, which will merge with K-rauta during 2017), ***Onninen*** (operating mainly in the B2B field), ***Rautakesko B2B Service, Byggmakker*** in Norway, ***Senukai*** in Lithuania, and ***OMA*** in Belarus. Kesko is the fifth largest operator in the European building and home improvement trade market.

The building and technical trade division also includes the interior decoration items and furniture trade with the brands ***Asko*** and ***Sotka***, the leisure trade with the brands ***Intersport***, ***Budget Sport*** and ***Kookenkä***, and the agricultural and machinery trade with ***K-maatalous*** and ***Konekesko***. The building and technical trade occurs in Finland, Norway, Sweden, Estonia, Latvia, Lithuania, Poland, Russia and Belarus employing a workforce of over 15,000 (Kesko Corporation, 2016).

Figure 6. The brands operated by the building and technical trade division (Kesko Corporation, 2016).

2.3.3 The car trade division

VV-Auto is Kesko's car company which operates in importing and retailing cars manufactured by the Volkswagen Group. VV-Auto also provides after-sales service for these car brands (Kesko Corporation, 2016).

The brands that VV-Auto imports are ***Volkswagen***, ***Audi***, ***SEAT, MAN trucks*** and ***Porsche*** (acquired in November 2016)**.** In addition to the Finnish market, VV-Auto also imports and markets SEAT passenger cars in Estonia and Latvia. At the end of 2015, the total number of employees at VV-Auto was 783 (Kesko Corporation, 2016).

Figure 7. The brands operated by the car trade division (Kesko Corporation, 2016).

3 METHOD AND DATA COLLECTION

3.1 Method

For the purpose of this study, I have chosen to conduct a case study, and I will study Kesko Corporation with its different trade divisions. I will not be studying the K-retailer field, since they are not using digital assets in the same manner as the chain units do, and it would widen the focus of the study too much.

Conducting a case study refers to studying a defined area of human activity that occurs in everyday life. A case study can only be studied or understood through understanding the context of the research (Gillham 2010). A case study can be performed either on an *individual*, a *group* (such as a company or organization), an *institution* (school or daycare for children), or a *community* (such as a town or a profession) (Gillham 2010). It is also possible to study multiple cases for comparison purposes. However, the focus of this study is on the digital assets of one Finnish company, Kesko.

I have chosen to approach this study through a qualitative method. I have conducted semi-structured interviews with the *Chief Digital Officer* at Kesko Corp. **Anni Ronkainen**, *Marketing Director* at Kesko Grocery Trade, **Mia Ropponen**, *Customer Relations Director* at Kesko Corp., **Outi Nylund,** and the *Customer Loyalty Marketing Manager* at Kesko Corp., **Sirpa Vesamäki-Koivisto**. All participants have agreed to be named in this research.

To gain some perspective between the current state of digital asset management and the strategic vision for the future, I also conducted data collection on how digital asset management currently is being executed in the different business units at Kesko. This information was collected during September 2016 through the use of a survey (*Current state of digital asset management at Kesko*) distributed to all of the operative marketing staff at Kesko Corporation (87 people, at the time of the study). The response rate was 58,62% (N=51).

In order to create a comparable context to the answers given by Kesko marketers and the future visions of the interviewees, I will analyze the survey and the interviews with consideration of a qualitative text analysis on relevant articles and earlier research on the same topic area.

3.2 Ethical Considerations

When conducting the interviews, participants were asked if their names and titles could be mentioned in the Thesis. All four interviewees agreed and gave permission. They also approved the use of Kesko's name in the study. All interviews have been audio recorded with permission.

As described in the method section, I will be using information sources both from within Kesko and external sources of written material regarding DAM (books, articles and research). These sources will give me the tools I need in order to build a more objective overview of the status of asset management at Kesko now, and how they relate to asset management best practices around the world.

The data I collect and the research I analyze will be used to outline what enhancements and benefits Kesko might – or might not - get from centralizing all the businesses digital assets in one place, and by streamlining their processes into a digitized and centralized model. A SWOT (*Strengths, Weaknesses, Opportunities and Threats*) analysis of the general concept of Digital Asset Management will also indicate these aspects of implementing DAM environments.

4 LITERATURE REVIEW

4.1 What is Digital Asset Management (DAM)?

Digital Asset Management (DAM) refers to the management and governance of digital content (assets). These assets can be manipulated in the same way as any computer file. Media assets include files such as photos, music, videos, animations, podcasts, creative work-in-progress (*wip*) documents and other multimedia content. This content can be shared between networks, copied, backed up and edited by several users. The ability of

centralizing and networking media assets means that anyone (if properly authorized) can access and edit material from their own workstation (Austerberry 2004).

Digital Asset Management software provides a solution for centralizing and organizing all rich media assets. It includes an efficient search engine that uses the assets metadata (enriched information of the asset itself) for retrieving searched assets. DAMs also enable production workflow management between all stakeholders that are part of the creative process (Ferguson Keathley 2015). In short, DAMs are centralized systems that provide organizations with a powerful solution for:

- centrally organizing and managing,
- processing,
- quickly locating,
- safe sharing and tracking of their digital assets

Added benefits of DAM include: simple production workflow enhancements; easy distribution; and secure protection of large amounts of digital assets (Smith 2010, Diamond 2012).

However, as Skiff Wager states in his article "Digital asset management, media asset management, and content management: From confusion to clarity": Digital asset management is a business strategy to increase revenues while reducing workflow and process cycle times (Wager 2005). This line emphasizes the fact that Digital Asset Management should not only be considered as a technology for reorganizing a company's media assets, but should also be considered as a multi-phased strategy for a company's effectiveness in production and outreach to customers.

4.1.1 How does a DAM system work?

All assets within a DAM are safely stored in a "one-level-sea" of assets (as opposed to a file structure), and can be found through a powerful search-tool within the system. Assets are identified with a variety of enriched information (tags and metadata), which makes it easy to locate a specific asset, or groups of assets. A DAM will also assist users to maintain, process and edit the assets themselves and their metadata (Ferguson Keathley 2015).

4.1.2 The 10 core characteristics of Digital Asset Management systems

There are 10 core characteristics that generally describe DAM systems. These 10 characteristics have been defined by the DAM foundation[2] and are based on the work of Ferguson Keathley (2015) and Regli (2016). They include:

1. **Assets can be ingested both individually and in mass sets into the system**. DAM also allows the manipulation of those assets and their metadata (individually or with mass actions). This is accomplished in part by assigning a unique identifier to each asset on ingest into the system.

2. **Assets within DAM are secured.** Security in a DAM is created by defining access control lists (ACLs) for assets and defining different roles for users who are using the system. Only permitted users can access assets from within the DAM.

3. **Assets are stored both as binaries and metadata.** A DAM system can store many different file types, and it allows the users to customize both metadata fields themselves *and* the metadata within those fields (which are attached to the stored files).

4. **DAM systems render (transform) assets on ingest into new forms**, such as thumbnails for previewing or proxy files for editing. The new forms generated on asset ingest should all be stored as asset parts of the original file that has been uploaded.

5. **Assets are enriched through the extension of metadata (data about the file)** and metrics regarding the use and *reuse* of the asset throughout its lifecycle.

[2] The DAM foundation is an online community where industry experts have gathered their forces to bring standards and best practices to the digital asset management industry. http://damfoundation.org/

6. **DAM systems can "relate assets"** by tracking the relationships between and among an original asset and other versions of that original asset. Versioning and version control tools are central to an assets life in a DAM system.

7. **The management, creation, and review of assets follows a structured process with the help of workflow tools.** Via programmed workflows, DAMs allow for a decentralized work force to collaborate together in a centralized system.

8. **DAM users can find and retrieve assets, by facilitating search through created metadata, collections, workflows, and the restrictions set up by access control tools.** By increasing the discovery of assets that may not have been easily accessible before ingest, a DAM assists workers in leveraging existing content for maximum work potential.

9. **A preview function allows users to view assets before downloading or opening a file on their own device.** By allowing users to take a look at searched assets quickly, without download, DAM systems reduce the amount of time users must spend with the search phases of the production flow.

10. **DAM systems can publish content by providing methods which allows assets to be shared, linked to, or otherwise be distributed outside the system.** This function in DAM may be as simple as generating an URL on ingest or as complex as allowing users to build collections of items for sharing with a work group.

4.1.3 Deployment

DAM solutions can be deployed either "in the cloud" or on-premises, and the service can be bought either as a whole package (Saas – Software as a service), or as a hybrid model, where DAM vendor and customer operate specific areas of the service in their own chosen environments. These variations allow companies to choose the best possible, and most cost effective solution for their specific needs. (Ferguson Keathley 2015, Regli 2016).

On-Premise is DAM solution hardware that is set up in the corporate's own IT-infrastructure. The hardware can be managed by the corporate's own IT department, or by a third

party service provider. The advantage of having on-premise hardware is that the owner can customize, expand and upgrade the system as needed. The disadvantage however is the possible inadequacy of such an installation in today's rapidly changing digital landscape, where technology needs to keep up to evolve and scale up in a fast pace. For instance, there are no virtualization possibilities unless you set it up yourself. This is time consuming. Also, the support for everyday DAM maintenance is the owner's own responsibility (Regli, 2016).

Cloud-based DAM solutions give companies the possibility to deploy DAM without the expansion of their own IT resources. This is possible by setting up the DAM in a public (or private) cloud environment which is hosted by the cloud service provider, and accessed by the customer through the internet. (Regli 2016). The expansion of cloud-based DAM solutions has encouraged vendors to focus on providing cloud based products, which enables them to grow their market reach among diverse industry verticals. Many industry verticals such as media and entertainment, retail, government, healthcare, and consumer goods have started using DAM solutions and services exponentially (MarketsandMarkets 2015)[3].

4.2 SWOT analysis on Digital Asset Management

4.2.1 Strengths

DAM allows companies to centralize all their digital assets into one single repository (a single source of truth), and enables new ways of working in a more collaborative production cycle, as opposed to the older and heavier project based linear production method (Ferguson Keathley 2015). Another strength with DAMs is the fact that they are very versatile and can be customized. The DAM providers offer diverse implementation possibilities to their customers, with possibilities like different deployment options (on-premise / cloud), multiple integrations into the customers' existing IT-infrastructure, and good scalability to fit the customers' needs in the best possible ways (Regli 2016). There are many and varying competitors in the DAM service provider industry, but in my opinion

[3] According to a press release in 2015, of a study on the DAM market, which was made by the USA/UK based market research company MarketsandMarkets.

they are also the driving force that makes the DAM industry a continuously growing and evolving industry.

4.2.2 Weaknesses

DAMs are complex tools. Understanding that it is not only a new technology put in place, but a part of a wider strategic plan, can be challenging without truly understanding what the technology in the core enables (Wager 2005). Since the industry is large and somewhat scattered, finding the right provider can be a challenging task for the customer. Even though there is a DAM solution for all kinds of customer sizes, a DAM investment can also grow to become very costly. Also, if the customer has many IT-solutions of their own it can be very time consuming to build integration with all the systems wanted (Diamond 2012, Regli 2016).

4.2.3 Opportunities

The new technologies that are created with a rapid pace will be a good opportunity for DAM providers, if they are alert, and respond to these possibilities in the front line of providers. Also, customers might have digitally savvy employees, who can be used as an important information source for product development (Kane, Palmer, Phillips, & Kiron 2015). Carefully listening to the changes in media technologies and the questions or demands new (or old) customers ask, can be a key to success within this industry (Hess 2015).

4.2.4 Threats

During this study I have noticed that, for some reason, the general knowledge about digital asset management is quite poor. People might not recognize a need for having a DAM, or might not understand why it could be a valuable investment for them, and why they should spend money on one. Research shows that the organizational culture plays an essential role in the effective adaption of new digital technologies in the workplace (Kane, Palmer, Phillips & Kiron 2015). Maintaining an open communication, and taking the end

users into account whilst planning the ideal DAM solution should naturally lead employees to use the system with a more open mindset. If the planning and education is not successful, it is likely that employees will not feel interest, or even understand the importance of the solution, which then can lead to problems in user adaption and content management (Hess 2015, Kane, Palmer, Phillips & Kiron 2015). It is therefore critical that every user levels' needs are considered in terms of how they will interact with the system (Ferguson Keathley 2015. Regli 2016). This is also the providers' responsibility, as high level of user adaptation will help them spread the word, maintain customers and build their reference list (Hess 2015, Kane, Palmer, Phillips & Kiron 2015).

4.3 The DAM market and vendor landscape

The Digital Asset Management industry is at its growing stage, and is expected to grow considerably due to the rapid enhancements and innovations in technology. Both the enterprise- and the small/medium sized business sector are demanding DAM solutions that can help them centralize and manage their digital assets and creative production cycles (MarketsandMarkets, 2015). DAM end users on the other hand want solutions that are based on real-time optimization, so that they can finish their tasks without any delay (Diamond 2012).

There are many service providers in the area of digital asset management but, according to Real Story Group (2015) the industry can roughly be parted in five different categories:

1. Purely Cloud Based DAM providers
2. Purely On-Premise DAM providers
3. Enterprise DAM services (either on-premise or cloud based).
4. Broadcasting Media Management specific systems (includes video editing, archiving, ad-id support etc.)
5. Open source DAM systems

Although with different deployment model focuses, all of these compete for their customers, more or less in the same landscape. For the purpose of this study, I will be discussing the vendor landscape with focus on categories 1-3. What makes this industry unique is the fact that there are various companies who offer the same end product, but

still obtain different focal points in their service road maps. Even if these companies deploy their service in somewhat different ways (cloud/on-premise), the end result of the product still might be the same (as shown in Fig. 8 below). A purely cloud based DAM system might be so customizable and scalable that it could fit the needs of an enterprise sized customer, just as well as an on-premise categorized DAM would (Regli, 2016). On the other hand, an on premise or enterprise categorized DAM might not meet the specific demands the customer company could have listed for themselves (Diamond 2012).

The focus on how each service provider wants to differentiate themselves and build both their tool stack and the products roadmap, can further be categorized in three main areas (Yakkundi, Powers, Geoffroy & Harrison 2016):

1. **Enterprise focus**. Enterprise DAM solutions focus on supporting the rich media management needs. While marketing may be an important stakeholder, it is not the only group creating and editing customer-facing content, as supply chain, sales, and partner networks, may also use the system either direct or through an integration to another system.

2. **Marketing**. Marketing-focused DAM solutions focus on managing content specific for marketing production. These solutions focus on marketing-based functionalities, such as brand asset management (BAM), creative collaboration and campaign management (in-house and with external partners). Many of these vendors also blend marketing resource management (MRM) functionalities with the core DAM.

3. **Media and production.** Many vendors still focus on supporting high-end, production-oriented content specifically for media, entertainment, broadcasting, and the publishing industry verticals. Also traditional advertising groups may find this area of focus most suitable for their needs. These solutions specialize in video production processes and support load balancing and other unique large scale storage needs. (Yakkundi, Powers, Geoffroy & Harrison 2016).

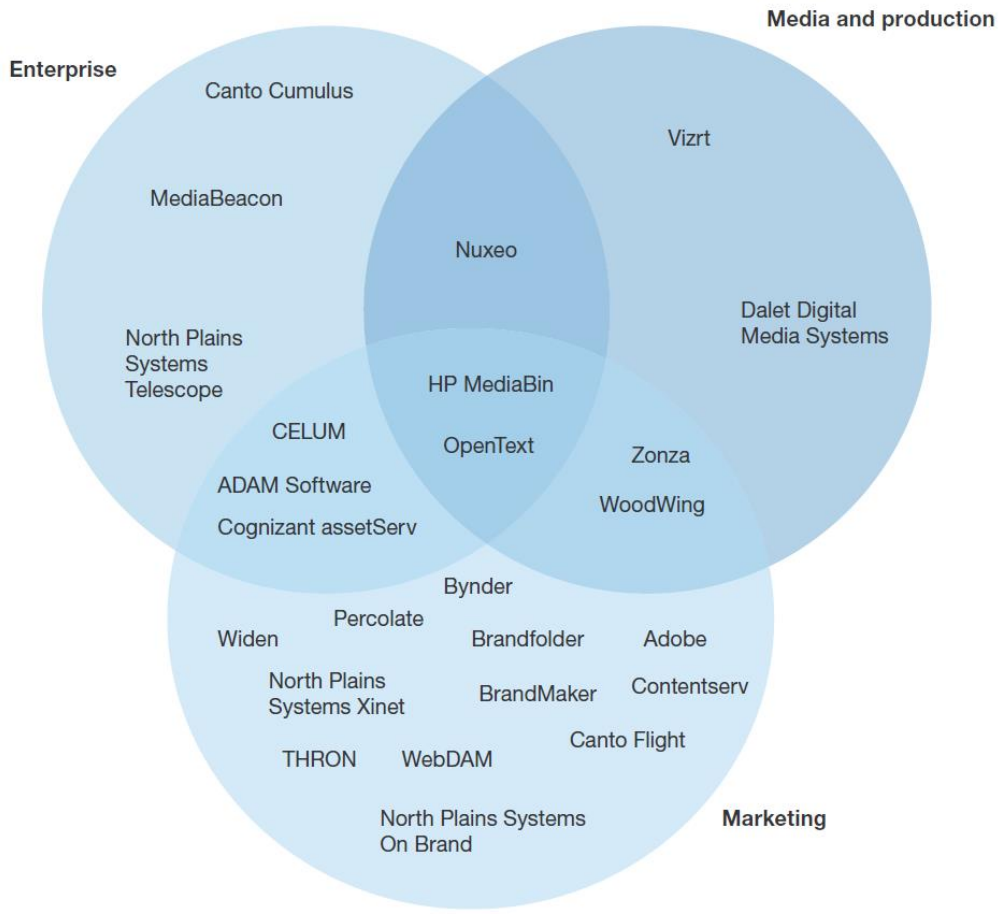

Figure 8. The DAM vendor landscape divided in three major focus areas of differentiation (Yakkundi, Powers, Geoffroy & Harrison 2016).

This research will now consider the perceived potential of DAM for the chosen case study, Kesko.

5 CASE SUDY: KESKO

5.1 Current state assessment of Kesko's digital asset management

As discussed earlier, there are around 30 different brands, which are operating under the Kesko Corporation umbrella. Currently all these brands and/or business units have stored, managed and shared their digital assets (rich media files) in their own systems and processes (Leppänen, Tuomarmäki, 2016).

For the purposes of this study, in September 2016, I conducted a survey with all marketing operatives working in the different trade divisions at Kesko. The "*Current state of digital asset management at Kesko*" survey was sent out to approximately 85 marketing professionals in all Kesko business units, and the response rate was 58%. The answers were given by a broad mix of advertisement-, marketing-, communication-, and online or e-commerce professionals:

- 5 of the respondents work in visual design and content creation (art directors, graphic designers, web designers)
- 5 respondents reported working in pure e-commerce operations & production (e-commerce assistants, web-specialists, web content producers)
- 10 of the respondents work in management or director positions (communication managers, e-commerce managers, channel directors, marketing managers, and account managers)
- More than 30 of the respondents are working with marketing operations and production tasks (content producers, marketing planners, and production planners).

According to the survey, most respondents handle digital assets in their daily work. Only people working in management reported that they do not work with digital media content production. The overall findings are presented below.

5.1.1 Silos cause an overall state of incoherency

According to my own research and the documentation written by Tuomarmäki and myself (2016), the vast majority of digital assets at Kesko are being stored on a combination of media banks and shared servers. In fact there are 21 separate media banks that are used on a daily basis, and are Kesko's property (or property of brands that Kesko imports and sells). All of these media banks are managed in the business units' own organisations and no centralized Kesko-level overview of these media banks or their assets exists. Together, these media banks include a total of ~500.000 files which sums up to approximately 6 Terabytes (Tb) of data. The shared servers used by the teams reported a sum of ***1.6 million*** files, and approximately 5 Tb of data. In addition, there are around 100+ "outside Kesko" media banks that Kesko's marketers use. These are owned by suppliers, photographers,

advertising agencies or other possible third party stakeholders. A shocking 63% of respondents reported assets are being stored on people's personal computers.

When asked how much time is spent on searching assets from the various source systems, the answers varied from less than 2 hours to 9+ hours per person on a weekly basis. The amount of time spent on searching assets varies a lot throughout organizations. Smaller, more agile teams (such as Kookenkä and Sotka for instance) know their asset repositories by heart, so they tend to use less time for searching assets. The larger teams (such as K Digital and the Grocery trades units) reported that finding assets can be very time consuming and annoying. These respondents also noted that it is difficult to find information to go with the assets: By this they mean such information as product information, usage rights, validity etc.

Even though assets in most cases seem to be named by a common process, it does not ensure searches returning the right, valid or even re-usable assets. The lack of metadata-enriched assets and poor search functions in existing media banks creates a lack of knowledge, and makes people "play it safe". Playing it safe leads to a situation where many tasks are done repeatedly and overlapping with other team members. For instance, overlapping editing of images occurs due to lack of knowledge if an already edited, re-usable version of that specific image exists somewhere else. At times, even the same person creates or edits content that he/she oneself already *has* created before – because it is faster than searching for the originally edited or created asset.

5.1.2 Most common 'pain' points across the divisions

In the survey, respondents were able to describe the most frustrating and/or time consuming features are in their daily work (often referred to as bringing 'pain' to the user). Below I have summed up the most repeated and common opinions that were reported:

1. ***Finding and using assets and related processes:*** Missing or incorrect assets *and* product information slows down operational processes. The technical solutions and tools the respondents use today are slow, and search functions are found to be

poor. In total, a vast majority (79%) stated that finding assets in general is problematic and time consuming. About 43% said that they, at times, have to search and/or edit the same asset over and over again, for each new campaign created. The respondents recognized the difficulty of finding new and accurate assets, partially being due to nonlinear processes in asset management: Almost all organizations reported having multiple processes of handling, sharing, commenting and managing assets. There are almost as many processes and ways of working with assets, as there are team members and partners.

As demonstrated in the chart below, 10% stated that assets never find their way to a common shared storage of any kind (stored on personal computers). 16% reported that assets are stored on a shared server for general use, but without common naming principles. 28% answered that assets are not uploaded to any media bank, but are stored on a shared server for everyone to be used, and are named with common principals. 38% of users state that assets are both named by common principals and stored in a media bank, but are not enriched with metadata tags. Only 6% reported that assets *are* both named, enriched with metadata and uploaded to chosen media banks for other users to be found and used. Also, no integration between marketing systems make it time consuming to manage the production process.

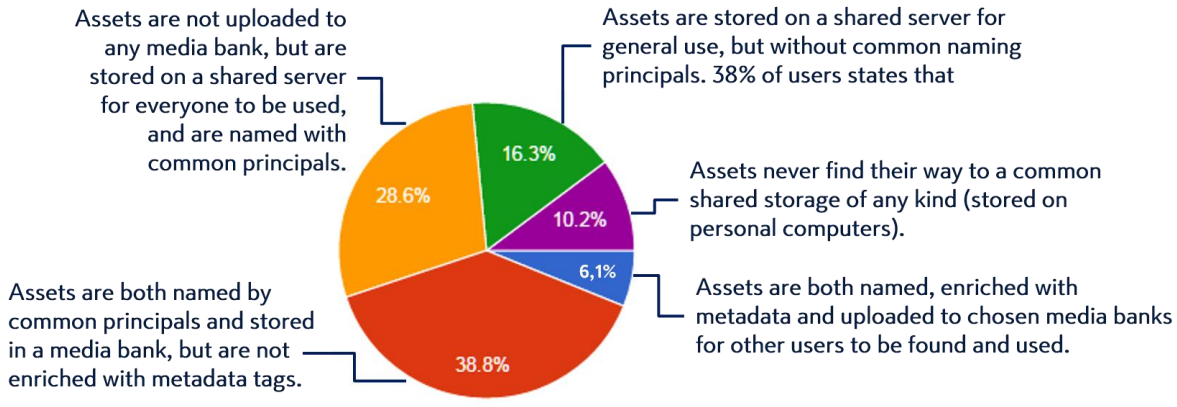

Figure 9. How assets are explained as being stored and managed at Kesko.

2. ***Reviewing, versioning and re-using assets:*** Generally no version history is available, and re-using of previous asset versions is almost non-existent. Editing and reproduction of images, together with nonlinear commenting/reviewing process of assets is found to be cumbersome. A majority (59%) reported using multiple processes and systems where assets are being reviewed, commented and approved. 41% use 1-2 commenting processes, which includes commenting on e-mail and paper remarks. 73,5% said that assets *partially* can be re-used – if they know where and how to find the assets. When asked about re-using assets created by another team member, 14,3% found it *impossible* to re-use these assets, due to lack of knowledge where the latest creations can be found. The remaining 12,2% found their team being up-to-date on what assets team mates have created and where they can be found. I find this interesting, because at the same time 10,2% answered they *always* have to repeat editing of the same asset, for each campaign. The majority (42,9%) partially re-edits the same assets, while 36,7% report they do not always need to re-edit. The remaining 10,2% answered they do not edit assets at all. These respondents were from the management level.

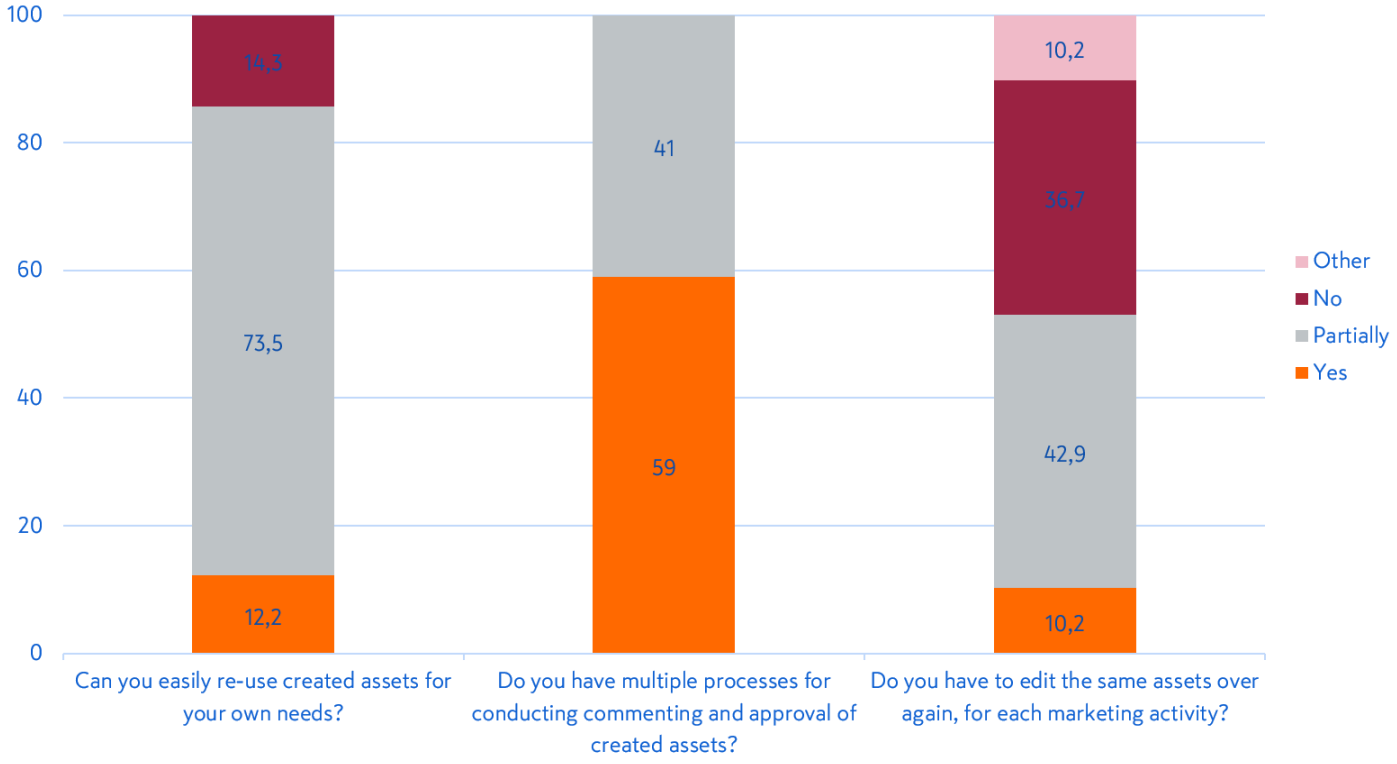

Figure 10. How finding, re-purposing and commenting assets is perceived between Kesko marketers.

3. ***Usage rights and asset validity:*** Mainly, users do not know which usage right assets have, and they are therefore unsure if they may use found assets or not. The validity of assets is not stated in asset metadata, either. According to the survey, assets are stored in many different places, sometimes even overlapping with each other: The majority (65%) reported that outdated and old assets are stored on shared servers. 61% answered old assets are stored in the media bank (but not archived), and 40% also stores old assets on their own computers. A staggering 26% did not have a clue where old assets are stored. This raises the question if they at all know which assets indeed *are* outdated and which are still valid.

Kesko's marketers are not battling with these challenges alone. It seems marketers in different industry verticals often battle with the very same issues. The heavy, linear and manual production models are not suitable for the fast paced production needs of today, and silos can be found everywhere between organizations, systems and processes. For example in March 2016, the UK based research and consultation company Ovum conducted a survey ordered by Adobe, on what the leading digital challenges are for marketing departments in the Telecom industry. As illustrated in figure 11, 51% of the Ovum survey's respondents reported that digital marketing systems are not fully integrated, and 33% reported that DAM is not a part of the platforms that are being used. This appears to be a trend in the market.

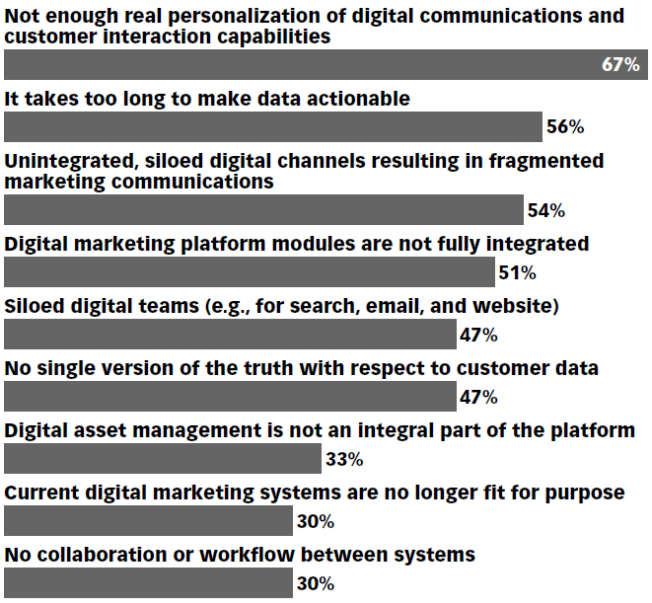

Figure 11. Leading Digital Challenges, Marketing Departments Face in the Telecom Industry (eMarketer, 2016).

5.2 DAM supporting Kesko's strategy, vision and values

At the core of Kesko's strategy is the aim to generate profitable growth in three strategic sectors: the grocery trade, the building and technical trade, and the car trade. Kesko's vision is to differentiate itself from the competition in terms of *quality* and *customer orientation* (Kesko Corporation, 2016).

Kesko is reshaping its structures, so that it can operate more strongly as a unified K-Group in the future. This will enable the company to offer customers ever better services than before, and to operate in an efficient manner. One of the main strategic objectives is to strengthen the customer experience for consumers *and* businesses both in stores and on digital channels.

Strategic objectives:

1. Growth in the Finnish grocery trade
2. Increasing the building and technical trade in Europe
3. Strengthening market leadership in the Finnish car trade
4. The best omnichannel customer experience of the trading sector
5. One unified Kesko, seeking synergies

(Kesko Corporation, 2016).

5.2.1 What are the benefits and challenges in centralizing DAM at Kesko?

To gain a higher-end perspective of the possible benefits and challenges of DAM, I interviewed people in leadership and management in the digital- and marketing organizations at Kesko. I used a semi-structured interview technique that used a set of the same question, while allowing for some deviation, depending on where the focus of their work lies. Interviewees agreed on the fact that the shift from printed to digital marketing will continue to gain foothold, and what differentiates companies from all the digital noise is in *how* customer data is used and how content production is executed.

5.2.2 How does DAM meet Kesko's strategic objectives?

When asked how a centralized DAM could support Kesko's strategy and vision for the future, both Ropponen and Ronkainen shared the same view of DAM being a necessary strategic investment:

> The vision is to have the best customer experience in the European trading sector. Together with our brands' that vision can be fulfilled by offering our customers as personal and unified experience as possible, through all our trades. This cannot be accomplished unless we have a unified platform to build it on (Ropponen 2015).
>
> Kesko wants to consider each customer as an individual. DAM is a key enabler for such a customer approach (Ronkainen 2015).

In addition to the strategic values, centralizing Digital Asset Management could also bring many tactical benefits to Kesko:

> Bringing asset management and production into one interface would allow us to create more efficient processes with a smaller margin for errors. That would create a faster time-to market. (Ronkainen 2015).

Building on this idea, Ropponen points out that it would be possible to minimize a lot of manual work, and to put resources efforts into where they are at their best – creative thinking. It would also be possible to reduce unnecessary repetition and overlapping tasks that marketers now often do, because they lack a common view into what already has been created and what could be re-used for their own purposes. When marketers can focus on creating compelling content, the attractiveness and relevancy of that content increases which in turn increases the brand preference of the customer. This supports the concerns raised during the survey.

The benefits of a centralized platform has not gone unnoticed in the customer loyalty organization K Digital either. Kesko aims to create more targeted and relevant marketing to every customer across all channels possible. The challenge is how to keep up with the growing production paces and the increasing amount of distribution channels, when technology does not support workflow or automation:

> We won't be able to reach our customers dynamically with the right message, at the right time unless we centralize content management, automate some repeated processes and focus our marketing attempts from mass segments to smaller segments. (Vesamäki-Koivisto, 2015).

To this Nylund adds, that the usage of customer data (which is needed to create relevant content to the customers) could be turned into a competitive advantage when DAM (together with other systems) enables real-time interaction with customers.

When *challenges* are discussed, there are more variations in the answers than when I asked about the advantages of centralizing DAM. It becomes clear that the challenges in setting up a centralized DAM system are different, depending on what perspective you use to examine the issues. In Ronkainens' view the main challenges are mostly cultural, rather than technical: The decision making, creation of unified governance and metadata –processes might be challenging in a company where all units have traditionally been used to develop their technologies and make decisions "only for themselves" (Ronkainen, 2016). The silo effect of the business units is also a thing that concerns Ropponen. There are countless development programs going on throughout Kesko's divisions, and how to prioritize a centralized DAM for all of these organizations might be difficult. It might also be complicated to be able to take into account all varying needs and requirements of each department.

Nylund on the other hand finds the main challenges lying in the automation of content publishing, due to the vast amount of information source systems. Many different systems master different information and data, that is crucial for the true utilization of marketing automation (product information, customer data, price information, store specific information and imagery is all stored in designated systems). So, DAM cannot solve this issue by itself, but it partially enables marketing automation, by centralizing imagery and related metadata.

Vesamäki-Koivisto in turn reflects over the enormity of the endeavor itself:

> Centralizing all media banks at Kesko will be a huge undertaking, and it needs to be fractioned into functional pieces. It will require a lot of time, recourse and effort to build up such an environment. Technology or strategic values might evolve

during the implementation and in that case the project would need to be able to adapt and take a new course rapidly.

5.2.3 Reflections on the future of DAM and Kesko

What about the future? What could Kesko's centralized DAM look like in the years to come? DAM is sensitive: "It is subject to change" says Ronkainen. By that, she means that the DAM environment will probably evolve as technology evolves, and as the general understanding and utilization of DAM evolves. Also, the challenges Kesko faces today, might be very different tomorrow – and DAM needs to adapt.

Ropponen envisions DAM being the heart – a central hub for all marketing activities. DAM should enable the automation of content, whether it is produced by Kesko's own staff or an outside partner. DAM would enable digitizing in-store marketing, with central distribution from within the system to the digital signs that the stores are putting in use more and more.

Nylund and Vesamäki-Koivisto see DAM as a possibility to break organizational silos:

> As the acquisition of Adobe Campaign brought Target group planners and Marketing designers working closer together, DAM will enable many organization verticals to work in a more cooperative manner with unified and streamlined processes (Vesamäki-Koivisto 2016).

She also sees the DAM technology evolving into a more intelligent system (through machine learning) that is capable of collecting, organizing, deleting and editing information by using business analytics, resembling IBMs' Watson (artificial intelligence system).

Both Nylund and Ronkainen point out that the system has to be scalable and future proof. The development cannot stop in the acquisition of the system, and the system needs to be built and developed through substance, rather than technology or IT. Both augmented- and virtual reality will soon be everyday business and the system has to be capable of handling such content in different manners as well.

6 ANALYSIS

This research has showed that the majority of Kesko's marketing professionals, working in marketing operations find it time-consuming and frustrating to search for assets and related information from various different repositories. In addition, they conduct many repeated and manual tasks that could either be eliminated or automated, if the technology and process setup would allow it. The channels where marketers have to create content are ever increasing, and the processes being heavily based on manual production does not support Kesko's strategy of having the best channel independent customer experience in the retail industry.

The lack of a central asset repository and metadata enriched assets in fact also prohibits automated marketing operations such as Programmatic Marketing and database layout (automatic layout). This was made very clear in all the interviews for this study. While DAM cannot resolve this problem alone, it most certainly is of the essence to bring all imagery content into one source system before any centrally managed marketing automation can be achieved. To truly create content automation for dynamic and real-time marketing, DAM has to connect with a variety of other source information systems.

So, how can Kesko work toward any of these strategic priorities, without effectively being able to control, re-purpose, and measure - what is the of the utmost value of all the Kesko brands and their marketing – their digital media content and assets?

Fortunately, the need for centralizing digital asset management has been recognized in Kesko's management, and both the benefits and value of DAM is understood by decision makers. While the vision of a customer centric and automated marketing seems clear, the challenges for reaching this vision lies in building the foundation for such activities.

7 CONCLUSION

By centralizing the creation, management and sharing of digital assets into a DAM system, it is possible to bring many enhancements into marketing and creative content production for Kesko. Also collaboration between all stakeholders (in-house and outside partners) can be more efficient and focus on the creative, when time is not wasted working through a process jungle. The time that marketers now use in searching, re-editing and sharing assets in and between silos (with nonlinear processes) could be reduced and marketers could have the possibility to focus on creating more compelling content.

By connecting DAM to other enterprise systems, DAM could grow into an organic ecosystem that could enable marketers to find, use, version, manage and publish the latest and valid assets. As an example, by connecting Adobe[4] InDesign with DAM, marketers would not have to leave InDesigns' user interface when searching assets from DAM. It could all be done from InDesign itself. Also uploading assets (e.g. new or versioned) back into DAM, could be done in the same way. Working like this, marketers would be able to save time in not having to jump around between different user interfaces, and they would be more efficient.

To name another example, by connecting a Product Information Management system (PIM), it is also possible to enrich the product related assets that DAM withholds with descriptive information (metadata). When product information for a product is applied and managed in PIM, DAM could be able to "find" this information, and connect it with an asset in DAM (thus creating metadata to the asset in question). Utilizing information that is created in a PIM system, through DAM, again would make it faster and more reliable to create valid content and to even automate the publishing of that content. This is due to information which flows freely (yet in a controlled manner) between different organizations systems – without silos or miscommunication creating heaviness and frustration.

Through these examples, I aim to demonstrate that the more enterprise systems (business enablers) are connected to, or used alongside DAM, the more advantages DAM has to

[4] Adobes' Creative –toolset is one of the most common creative tools that marketers use in creative operations. Not utilizing these tools to their full potential and using them separately from other production resources also creates its' own silo effect.

offer. Dynamically delivering relevant content to each customer, in every channel, becomes a reality when processes are taken in control and both the technology landscape and people support the execution of these processes. This may be demonstrated in the following manner:

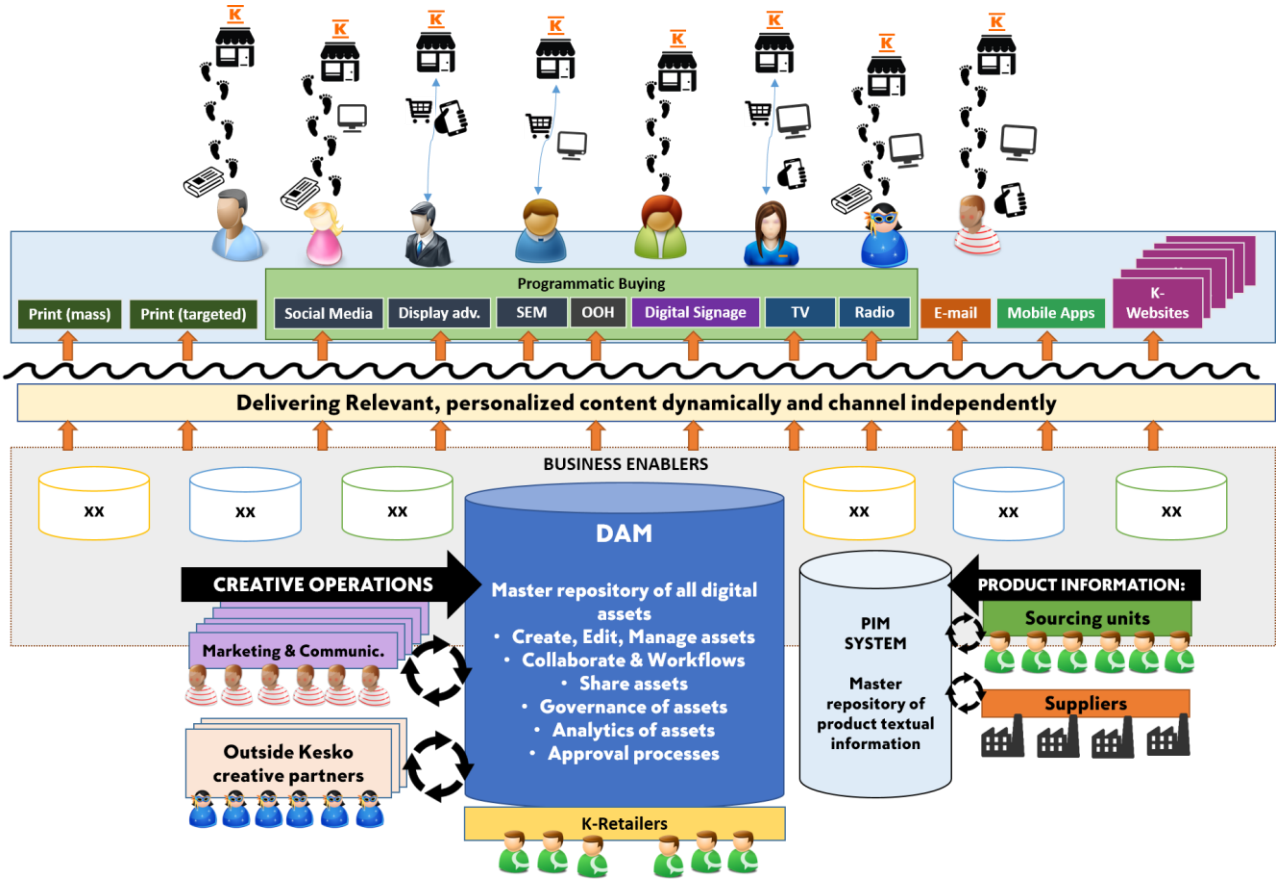

Figure 12. A vision of how DAM – together with other systems, could enable a base for creating a truly dynamic, customer oriented marketing content (Leppänen, S. 2016).

As I see it – only by connecting both people, processes and technologies together with each other, it is possible to truly achieve the vision of the best customer experience in the European trading sector. Only when everybody is working towards the same end goal, with the same set of tools and resources, will the result be visible to the customers as well.

For DAM to bring the most benefits and value to Kesko, all organizations need to find a common ground on the implementation and development of a centralized digital asset management system. New ways of working, collaboration between all organizations (both inside and outside Kesko – from marketing to sales and IT), and a technologically oriented mindset needs to take place. All organizations' stakeholders must also realize

that the acquisition of new technologies truly does create new ways of working, and should be able to adapt their processes accordingly.

A centralized DAM is only one enabler for achieving Kesko's set of strategic objectives; ***but it is a crucial one.*** When a foundation is thoroughly built– nothing should be impossible.

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FIGURES

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Figure 9. How assets are being stored and managed at Kesko – current state 2016. (Leppänen, S. 2016).

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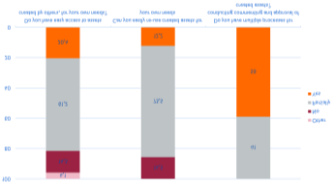

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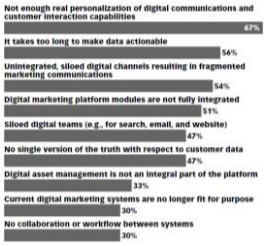

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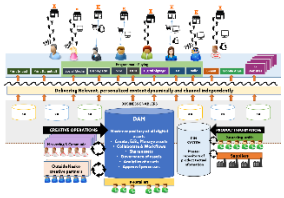

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