

UNIVERSITY OF LJUBLJANA  
FACULTY OF ECONOMICS

MASTER'S THESIS  
**DIGITAL MARKETING IN BUSINESS-TO-BUSINESS MARKETS:  
CASE OF DANFOSS MICRO PLATE TECHNOLOGY**

Ljubljana, May 2015

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The undersigned Ivan Temovski, a student at the University of Ljubljana, Faculty of Economics, (hereinafter: FELU), declare that I am the author of the master's thesis entitled "Digital marketing in business-to-business markets: case of Danfoss Micro Plate technology", written under supervision of prof. dr. Barbara Čater.

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I would like to express my deepest gratitude to my family, my lovely wife Tamara, my brother, my parents and my mentor, prof. dr. Barbara Čater, for their full support and understanding, enduring this research quest journey with me.

Special thanks to my dear friend Lidija Mitoska – Gjorgjievska.

Big thanks to my dear friend and colleague Ender Yalciner for his contribution as well as to Mojca Bricelj for her support.

Thank you all, you're the best!

Ivan



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## INTRODUCTION

Advancements in technology during the last century have enabled the creation of the 3 big media channels - TV, radio and print. These were the backbone on which marketing communication had been functioning for the better part of the last century, and to a large extent, it still does now. Today these are known as traditional media channels and we refer to the model of marketing communication applied over them as traditional marketing communications. The emergence of IMC – integrated marketing communications concept has indicated that the days of mass media marketing approach and one message fits all are over. People do not want to be exposed to intrusion tactics and the one message fits all model is not providing effective results (Schultz, Tannenbaum, & Lauterborn, 1994).

Embracing Digital Marketing is not a novelty but a necessity in order to cope with the changes in media and communication landscape. Within business-to-business (hereinafter: B2B) markets digital marketing communication does not replace the traditional marketing communications, but integrate and use the synergy to provide the maximum impact on awareness, preference building and (lead generation, nurturing) marketing automation.

It is very important for B2B organizations, especially manufacturing companies based in a more conservative slow paced industry as the case of Danfoss District Energy, to adjust to the changes in the marketing communication landscape that is now a reality. Danfoss has developed a new and patented technology of plate design for its heat exchangers products called “Micro Plate”. The result is a huge competitive advantage over its competitors. But it will only be possible if the benefits which this new technology brings have reached and are understood by one of the key stakeholders, that is the design engineers that are designing the heating system and specifying the products to be used. Due to the digital world we live in today, traditional marketing communications can have only limited impact in creating awareness and lead generation with limited investment costs, on the contrary they have high investment costs. On the other hand, in today’s digital world, we are all connected and so are the Danfoss customers. In order to achieve its business and marketing objectives in this new connected environment, Danfoss needs to use Digital Marketing as the answer, through the concepts of engagement and content marketing applied over the various digital media channels. Therefore **the purpose of this thesis** is to help Danfoss respond to Digital Marketing Trends on the case of Micro Plate technology.

The **main goal** of the thesis is to recommend a Digital Marketing Approach to Danfoss for the case of Micro Plate Technology. The Digital Marketing Approach should provide direction and specific recommendation for Danfoss to respond to the Digital Marketing Trends.

In order to achieve the main objective, additional sub goals and objectives are needed. These include:

- Making a literature review on latest findings regarding Digital Marketing and its concepts, as well as the best practice examples in B2B industry.

- Understanding the Danfoss micro plate technology for heat exchangers, its impact throughout the heat exchanger components, and on energy efficiency of district heating system.
- Researching the digital media behavior of key customer stakeholders across selected markets. This will include their online search approach, the devices they use, their frequency and location of use, their most visited social media and websites, their research journey when they have a new project that includes heat exchangers.
- Identifying the relevant digital media channels for reaching and interacting with the key stakeholders, including social media and websites for micro plate technology industry (blogs, forums, portal websites, and company websites).

In our methodology approach, both primary and secondary data sources are used. The author is active employee of the Danfoss therefore also own insights and observations are used as insight and input for the research. Primary data is collected from external customer stakeholders, and internal Danfoss Micro Plate technology stakeholders. To obtain primary data, qualitative (in-depth interviews) and quantitative methods (survey) are used. Here the focus is on collecting the insight regarding the digital media behavior of the customers and understanding of Micro Plate technology and its business objectives. The survey research is conducted internationally including countries such as Slovenia, Romania, Austria, China, Russia and others if possible. Regarding secondary data sources, literature and best practice review are conducted on the following topics: Web research, Current Danfoss micro plate heat exchangers marketing material & communication channels as well as customer insight.

This master thesis consists of four chapters. The first chapter is focused on literature review and presentation of the current state of digital marketing, with digital marketing concepts, media channels, analytics and automation as key segments. In the second chapter, the microplate technology is introduced along with key input on business objectives, customer groups and current marketing communication approach, and content analysis. The third chapter comprises the results and methodology of the customer insight survey. In the last fourth chapter, the recommended digital marketing framework approach for Danfoss micro plate technology is elaborated and presented.

## **1 DIGITAL MARKETING**

### **1.1 Changed world of marketing communications**

The arrival of digital media has fundamentally changed the way companies communicate with customers, changing forever the rules of the game for marketers. It started with the introduction of the internet in 1989, that had kick started the emergence of various digital media channels. Since then, the number of different digital media types and channels is increasing every year (Chaffey & Ellis-Chadwick, 2012). The emergence of the so called Web 2.0, further referred to as Social Media, has made the fundamental change in the way that

customers interact and communicate with the companies, but also between themselves. The emergence of this new media is much more about technology and networks, managing the connections between information and people as opposed to the traditional marketing communication, which is more about delivering messages through media channels. Companies today are media outlets, publishing and interacting directly with customers without the need to buy media or involve an agency (Mullhern, 2009).

We are also seeing another split of media, previously we only referred to paid media. Today we recognize, along paid media that companies pay to get their message across, also earned media where customers share the content from the company with their peers and in that manner the company earns the attention and media exposure. Additionally we see that today companies are media outlets themselves and have their own media. Enabled by technology, Social media introduced the format of forums, blogs, social media networks, and enabled customers to interact with themselves and with the companies. Here not only we have two way communication but also communication which is no longer controlled by companies and the established media channels, but customers take ownership (Edelman & Salsberg, 2010).

This has brought changes on the way customer behaves in the new digitally connected world. Nowadays, customers have more power and decide when and how they interact with companies. The online word of mouth and peer consultation has massive effects; customers are sharing experiences and influencing each other. The communication now is one on one company and a single customer as opposed to the old mass communication model, so customers expect that companies personalize and interact with them. Conversations happen with or without the companies being involved. The communication between customers happens on / various forums, blogs, user reviews, social media networks, where companies have lost the control over the media channels and marketing communication message. Today if not present, the conversation will happen even without them, or if decided to join, companies need to directly communicate and respond to customers one on one (Solis, 2010). Today's young generation is born as so called digital natives. They are starting their teenage life with PC, internet and social media. They cannot imagine a world without the ability to find information and communicate over web (Digital natives and digital immigrants, 2013).

## **1.2 Digital marketing introduction**

The funnel metaphor has been used as the classic example of the customer journey from awareness to buying. Starting with many brand choices, then narrowing down the choice to one, and at the end making the purchase decision. Marketers need only to target the customer at the various stages of the funnel. But as the emergence of the internet and social media has changed the game for marketers, the funnel as we used to know it no longer reflects the behavior of customers in the digital world. Now the customer's decision journey is totally different, where customers read user reviews from their peers, their comments, they interact in discussion on forums and write blog posts on their experiences with products and companies. They can go on a loyalty loop or change the selection of brands they are considering multiple

times throughout the journey. Additionally the number of touch points has exploded, including the vast number of digital media channels (Edelman & Salsberg, 2010).

The emergence of social media and digitalization of our lives is happening with very fast pace, and has made it hard for many academics and practitioners to keep up with the changing environment and new trends. Changed environment for marketers has called for new terminology and concepts to be able to answer to the challenges for achieving marketing objectives in the now digital and connected world. Therefore, a new marketing practice has emerged to come with the guidelines of using digital media to engage customers and achieve marketing objectives (Ryan & Jones, 2009).

### **1.3 Definition and role of digital marketing**

Before the Digital and Social media era, the world of traditional marketing communication in B2B included placing ads in print magazines in the selected industry, organizing customers' events, participating in large scale exhibitions and sending out print mailings. The only way for a customer to learn about the products and services of the B2B company was visiting some of these events or obtaining a print copy of their material, on the other hand for the company it was an expensive way of direct mailing print material. The internet and research has changed this forever, so now the companies and their offers are accessible via the internet and their websites (Hutt & Speh, 2013). Social media has expanded this to create a new environment for B2B companies where customers start to exchange experiences, talk to their industry peers, and look for relevant content online. For B2B the concept of content marketing is of utmost relevance, because having the right content reaching customers can have a halo effect and spread across the social media (Pulizzi & Barrett, 2009). There is a considerable range of different terminology that explains the practice of utilizing digital media to support marketing and business objectives; this includes the terms of Digital Marketing, Internet Marketing, Online Marketing, and Social Media Marketing. In this research, we will use the term Digital Marketing to describe this going forward.

We understand Digital Marketing as applying digital technology with purpose to achieve marketing and business objectives. There are number of digital media channels available such as search engine marketing, online PR, display advertising options in email marketing and most importantly social media marketing. Following these channels, Chaffey and Ellis Chadwick (2012) also point out to the 3 main concepts of Digital Marketing that is engagement, content marketing and permission marketing. Today digital marketing is on the rise and it is of great importance for companies.

This is evident with the share of budgets allocated to digital marketing. In their interactive Marketing Forecast 2011-2016 Forrester state that by 2016 interactive marketing, yet another terminology for Digital Marketing will match TV with budget spending and investment in display advertising search, email and social media marketing will bring the investment to almost 77 Billion US dollars or approximately 35 % of all advertising. The prediction is based

on the trend of gaining legitimacy of interactive digital channels in the marketing mix (Van Boskirk, 2011).

Today as reported in the study, buyers contact the potential suppliers B2B after almost 50% of their decision making process is done. Their first step includes vast online research about potential suppliers, their products and the experience others had with them. Therefore, whether we talk about B2B or B2C, it is widely accepted that the new era is here, and that Digital Marketing can be the answer to cope with the dynamic digital environment and the new digital native customer. This calls for companies to adopt the new practices and change their traditional marketing approach (The Digital evolution in B2B Marketing, 2013).

The role of Marketing communication overall in B2B content is to support the personal selling function and in such a way, to assist in achieving the end goal, that is – to make the sales. Here especially in industry manufacturing companies selling manufactured components and products, customers will always like a personal contact and hand on with the product. For a B2B company, it is not economically possible to have enough sales people to address all potential and current customers, therefore digital marketing can play a significant role in raising awareness, generating leads and through marketing automation transferring them to sales. This applies to Danfoss Microplate technology and the heat exchanger products, that is – it applies as the buying process is complex and requires involvement of the sales engineer (Hutt & Speh, 2013).

## **1.4 Digital marketing concepts**

As a result of the dynamically changing nature of the digital marketing environment and the online world, various concepts and communication directions have been developed, as a way in which marketers and companies can address the new challenges, and produce efficient and effective marketing practices. With digital marketing's rapid development and new concepts as well as terminology adoption on daily basis, in this research paper we will address selected key communication concepts that are largely defining digital marketing today. These as previously mentioned are content marketing, engagement and permission marketing (Chaffey & Ellis-Chadwick, 2012).

### **1.4.1 Content marketing**

Content marketing is not a new concept, but has been around for quite some time; many companies have been producing and publishing content for many years. An example of first content marketing practices is the John Deere Furrow magazine. However the introduction of the digital media brought the ability of every company to be its own media outlet. Possessing own media opened a lot of opportunities to companies to produce and publish much more of their own content, combined with the ability to directly interact with customers over social media channels. These new opportunities have shaped the concept of content marketing in the digital age (Pulizzi, 2014).

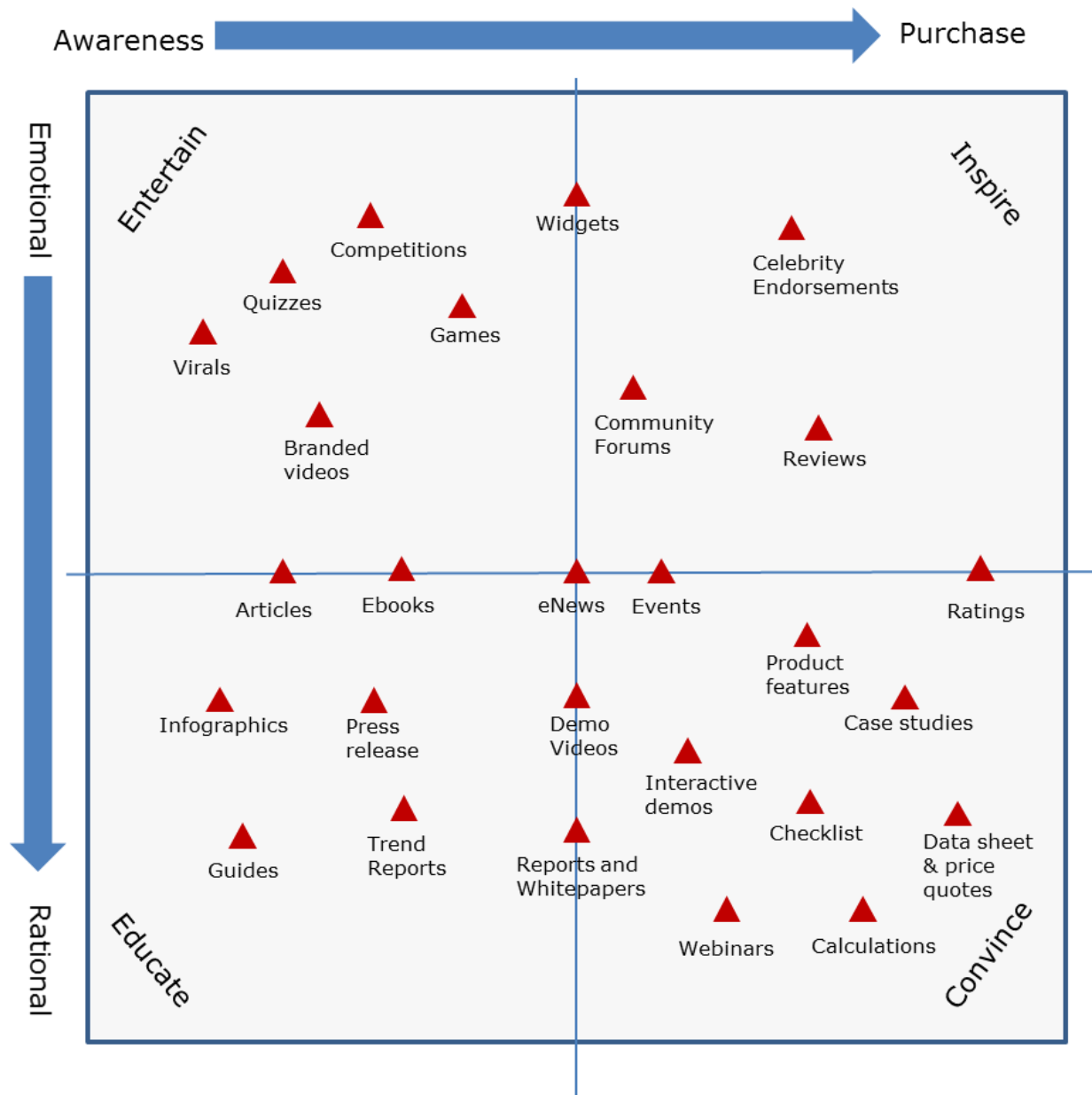
It also presented a big challenge, many companies did not have - or still don't know, how to address it in most effective way, as the traditional way of content development is too poor in quantity and too costly. Content marketing concept, in digital marketing form, emerged out of this new found opportunity and need, as a structured way to address the new opportunities and develop best practice approaches. Content Marketing as well as the trends of terminology fragmentation, has many names, such as content strategy, branded content, content publishing, and branded media (Lieb, 2012).

According to a definition by Joe Pulizzi (2014), content marketing is “the marketing and business process for creating and distributing valuable and compelling content to attract, acquire and engage a clearly defined and understood target audience - with objective of driving profitable customer action”. In other terms – developing quality based, informative and education content, does not need to be pushed to customers or to interrupt them, but is compelling with its value, in way that customers are willing to invest time to find it, and are engaging with the brand over it. The difference in content marketing in the digital age versus the same in the traditional marketing and advertising is that it uses content as a pull element attracting customers rather than shouting at them with selling arguments. It uses relevant and quality information that customers seek out to get their interest and turn them into leads rather than pushing the message at them. Under in digital manner we understand rich media content that requires interaction, such as whitepapers, articles, blog posts, case stories, videos, user generated content as comments and opinions, photo uploads, assist tools as interactive product selectors, newsletters and many more (Pulizzi & Barrett, 2009). Figure 1 represents an overview of the different content marketing formats, arranged by their purpose and customer impact.

Engaged customers are willing to give information on their business needs and are more easily identifiable as leads. The quality content has characteristics of virality as it is easily shared over social media and other digital channels by customers with their peers, creating free promotion for the companies. Content marketing provides a means to present customers free and useful information, and in return gain customers attention, preference and loyalty (Oden, 2012).

Content marketing is of significant importance among companies that sell products that are not easy off the self-purchase, more evident in B2B industries where a sales person needs to elaborate, and multiple stakeholders and decision makers are involved. In B2B, the emotional advertising effect is lower and we have multiple decision makers and influencers, who are making decisions based on rational rather than emotional. Here content marketing plays a role by bringing educational and useful information to the decision process, where it supports the buyer's process, rather than the traditional southing of marketing sales arguments (Pulizzi, 2014).

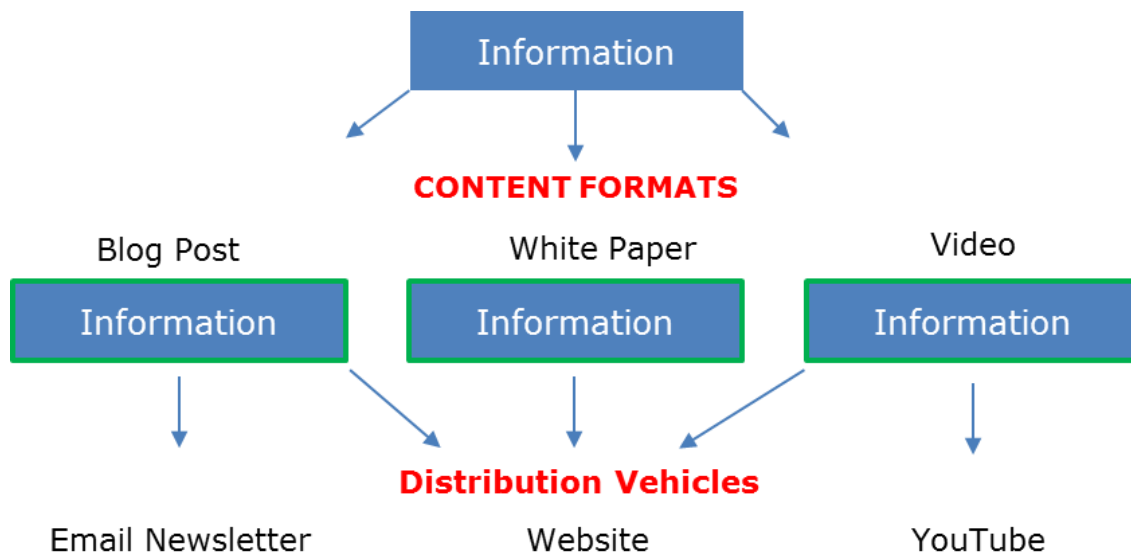
Figure 1. Content marketing matrix, types and formats with their purpose of use



Source: D. Bosomworth, *The content marketing matrix*, 2014.

In understanding content, we need to make difference between information, the content format and the distribution element of content. Information element covers the topic of communication, or what we want to engage the customers with. The second element of content formats covers the way we present, or showcase information to customers, while the third element is representing the platforms and various channels, though witch the content is shared with customers over the internet (Leibtag, 2014). On figure 2 we can see an overview of the content process structure.

Figure 2. Content process structure overview



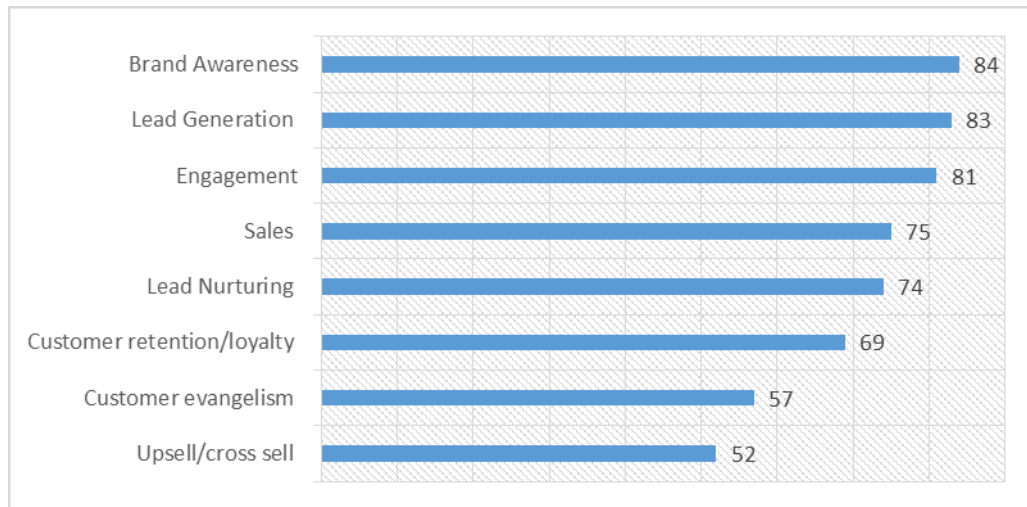
Source: A. Leibtag, *The Digital Crown: winning at content on the web*, 2014.

Social media and other digital marketing channels are used to share and make content available for discovery and engagement by customers. Search engine optimization is of utmost importance if content is about to be discovered by customers. Value for business from content marketing is manifested in achieving higher and more cost effective brand awareness levels, as well as more and more quality lead generation and nurturing (Meerman, 2010).

On figure 3, we can see the importance rating of different organizational goals that content marketing supports, based on the content marketing trends research study (Content marketing institute, 2014). Here the brand awareness scores the highest importance with 84%. On figure 4, we can see the various content marketing tactics/formats and their usage ranking in the same study. The study has revealed that B2B marketers use typically 13 content marketing tactics, with social media content (other than blogs) being most popular followed by newsletters and articles on their website.

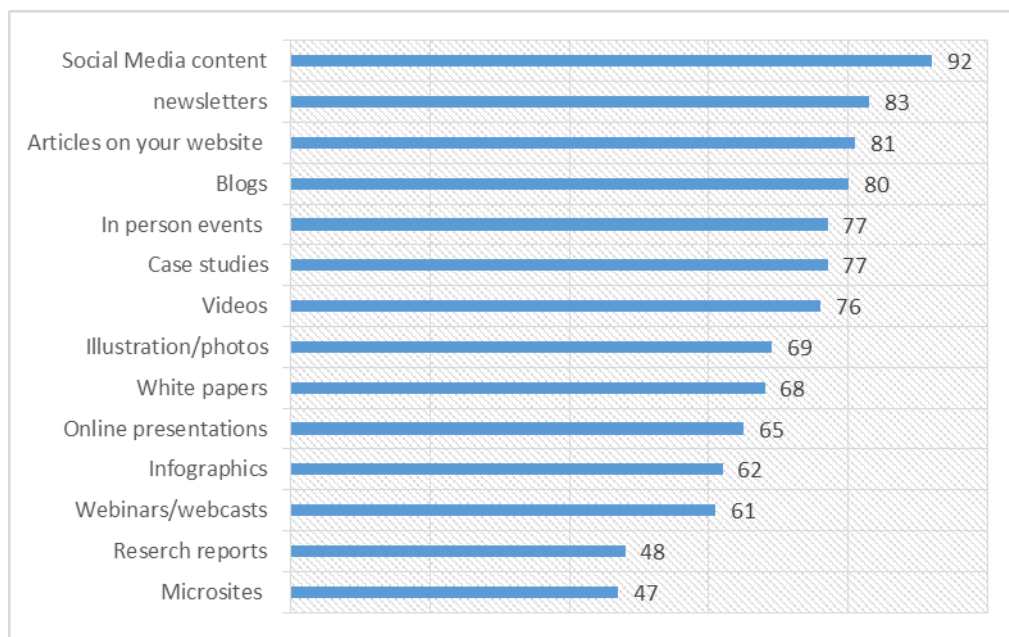


*Figure 3. Content marketing objectives in %*



Source: J. Pulizzi, *New B2B Content Marketing Research: Focus on Documenting Your Strategy*, 2014.

*Figure 4. Usage of various content marketing formats in %*

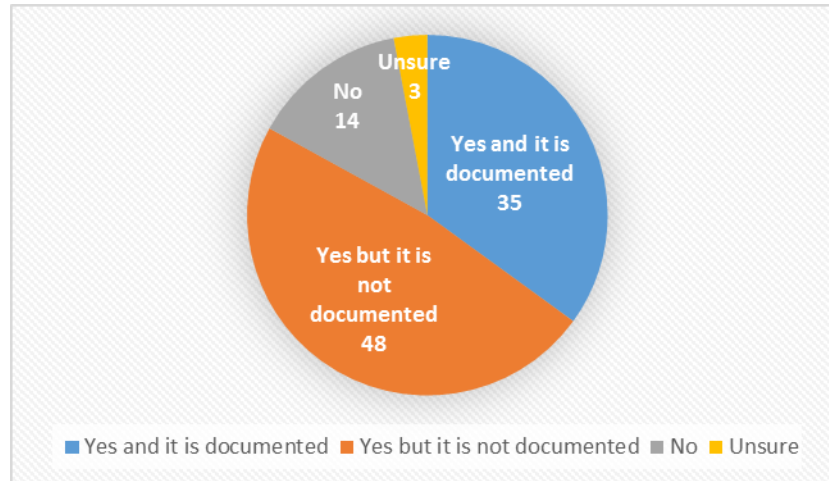


Source: J. Pulizzi, *New B2B Content Marketing Research: Focus on Documenting Your Strategy*, 2014.

A key to success in content marketing efforts for a company is having a content marketing strategy in the first place, and secondly – having it documented along with measuring the effect of execution. Since the whole field of content marketing in the digital age is new, this is not always the case as many marketers are struggling with the implosion of digital customer touch points and formats combined with the need to ramp up content production. On figure 5 below, we can see the feedback on the recent study by content marketing institute, where only

35% of marketers have a content marketing strategy and is also documented (Smith & Zook, 2011).

*Figure 5. Content Marketing Strategy implementation in %*



Source: J. Pulizzi, *New B2B Content Marketing Research: Focus on Documenting Your Strategy*, 2014.

### 1.4.2 Engagement

The fragmentation and growth of media channels in addition to increase of quantity of information and content online, presents a challenge for marketers in the digital age. This challenge was manifested in being very tough to get customers' attention online. With digital there has also been shift in the control of the marketing mix, where in the traditional marketing approach, the marketers controlled the channels and the conversation, which is no longer the case. Now social media has changed the way in which customers and sellers interact, and enabled the customers to co-create value and influence marketing strategies, by not only communication with marketers but also with other customers and non-customers being able to influence each other's decisions (Gillin & Schwartzman, 2011).

The concept of engagement emerged out of this newly established digital environment, in line with the emergence of the web 2.0, social media and other digital technologies enabling the connected world. Here marketers and companies are leading the approach in practice to understand, define and develop the engagement concept (Vivek, Beatty & Morgan, 2012).

Haven (2007), defined engagement as a new marketing metric that represents: "The level of involvement, interaction, intimacy, and influence an individual has with a brand over time". Forrester research based on a research study conducted with 200 stakeholders who are decision makers in various industries further defines it as: "Creating deep connections with customers that drive purchase decisions, interaction, and participation over time". Chaffey (2008) provides a definition focused more on digital, as Haven includes also offline interaction: "The customer engagement concept is intended to increase the time or attention a

customer or prospect gives to a brand on the web or across multiple channels”. And Chaffey & Ellis - Chadwick (2012) in another context further define it as: “Repeated interactions that strengthen the emotional and psychological or physical investment a customer has in a brand”. Within all of the definitions, we see a pattern of a two way interaction with customers, strong bond that creates value for both customers as well as companies. Confirming that higher level of engagement with customers is more valuable for both at the end. In digital, engagement, it is a metrics concept rather than a purely communicational one. It can help marketers define and measure the effectiveness and efficiency on return of investment of their digital marketing activities. Moreover, it can also include the integration and interaction between offline and online engagement activities with customers in the measurements.

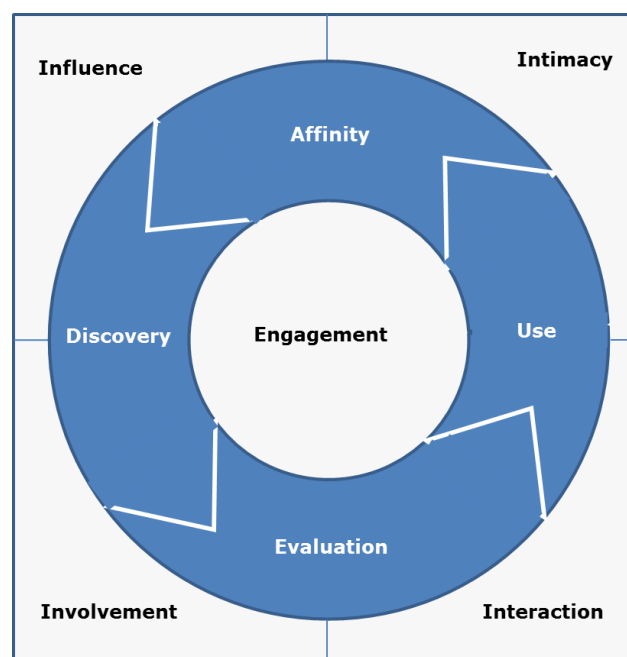
There are four recommended areas for measurement for Engagement, these are the levels of customer, involvement, interaction, intimacy, and influence of a company. These components enable Engagement to measure beyond reach and frequency to measure the real feelings people hold for brands. It includes both their relationship with a brand but also the relationship they have with other customers over that brand. As the customers participation with the brand extends from site visiting and purchase to affinity and advocacy, being able to measure and act on this engagement insight is of critical value to understanding customers’ intentions (Haven, 2007).

The component of involvement is capturing the basic measurement elements of engagement, reflecting the measurable aspects of a customer’s relationship with a brand. It contains customer actions, such as time spent on a website, visit to a website, number of pages viewed, and time spent on a specific page. These metrics by themselves are not sufficient, usually these activities are the first interactions that customers have with a brand, and so they become the foundation for connecting the other metrics. The web analytics platforms, like Google Analytics, can measure and track these metrics. The interaction components provide the depth that is lacking in interaction metrics by measuring the events in which individual customers contribute with content, ask for more information, provide their own information, purchase products or services of a specific brand. A difference between the interaction and involvement metrics is in the focus, where the first focuses on the touch points, and the latter is measuring the actions. The actions include, clicks troughs, social network connections, uploaded videos and photos, comments on forums and blogs, download of documents etc. In this case, especially social media interactions play a significant role in determining the customer value and tracking the trending customer behaviours (Haven & Vittal, 2008).

Intimacy component is going beyond the mere interaction to capture the affection and sentiment a customer has for a brand. Intimacy represents a critical new component that is explaining how and what kinds of feelings customers hold about a brand, both positive and negative. While with new technologies and services, activities can be tracked in real time, giving the ability to seize an emerging opportunity or take action to correct a problem before the option disappears. Measurable actions here include customer’s option, passion or perspective for brand or product represented by the content they create and the words used

when expressing their opinions online. The fourth component – Influence, goes beyond sentiment to measure the likelihood that a customer would inspire a fellow peer to take in consideration or buy a specific brand, product or service. From a qualitative perspective it includes, repeated purchasing possibility, brand loyalty, and awareness. From a quantitative metrics area it includes metrics like net promoter score, measurement of customer’s likelihood to make recommendation to a friend. The Influence components can be measured also through phone and customer service surveys, opt in survey or online questionnaires (Haven, 2007). On figure 6, we can see the four engagement measurement areas in relation to the buying process of customers.

*Figure 6. Engagement areas of measurement with customer buying process*



Source: B. Haven & S. Vittal, *Measuring Engagement*, 2008.

Gallup consulting recognizes four levels of customer engagement: fully engaged, engaged, disengaged, and actively disengaged. And it recognizes a difference of an average 23% premium for fully engaged customers, and a 13 percent discount relative to average customers on an index based on share of wallet, profitability, revenue, and relationship growth. Many new developments in digital business models and new digital media touch points are exploiting the opportunities customer segments to fulfill their business subjective; here we refer to the trends of crowd funding website companies like Kickstarter, crowd sourcing of ideas for new products by companies and the big impact of the connected devices, and data trends known as “internet of things” (Sashi, 2012). Due to its novelty and fast dynamic change of digital media landscape and digital customer behavior, it is difficult for both practitioners and academics to follow the development and due to that, we still have a lack of deeper understanding of the engagement concept within both marketers and academics (Gambetti & Graffigna, 2010).

### **1.4.3 Permission marketing**

The interruption nature to customers of traditional advertising was also carried over in the digital marketing environment. Here click ads, spam emails, represent common examples. The permission marketing concept was born as an opposite of the interruption behavior. It states that every marketer who wants to send information via email, newsletter direct marketing should first obtain its permission from customers to do so (Weber, 2009).

The concept and term was introduced by Seth Godin (1999), who defines it as: “The privilege (not the right) of delivering anticipated, personal and relevant messages to people who actually want to get them”. Marketers need first to get people to opt in and confirm their permissions. But companies need to earn this privilege by providing promise in value back and clear rules. If you promise real deals or relevant information, they need to really deliver on their promise, because as companies offer opt in for permissions there is always a possibility for opt out, and customers can leave and never be open to new deals. Permission marketing is mostly used by online marketers, notably email marketers and search marketers, as well as certain direct marketers who send a catalog in response to a request (Godin, 1999).

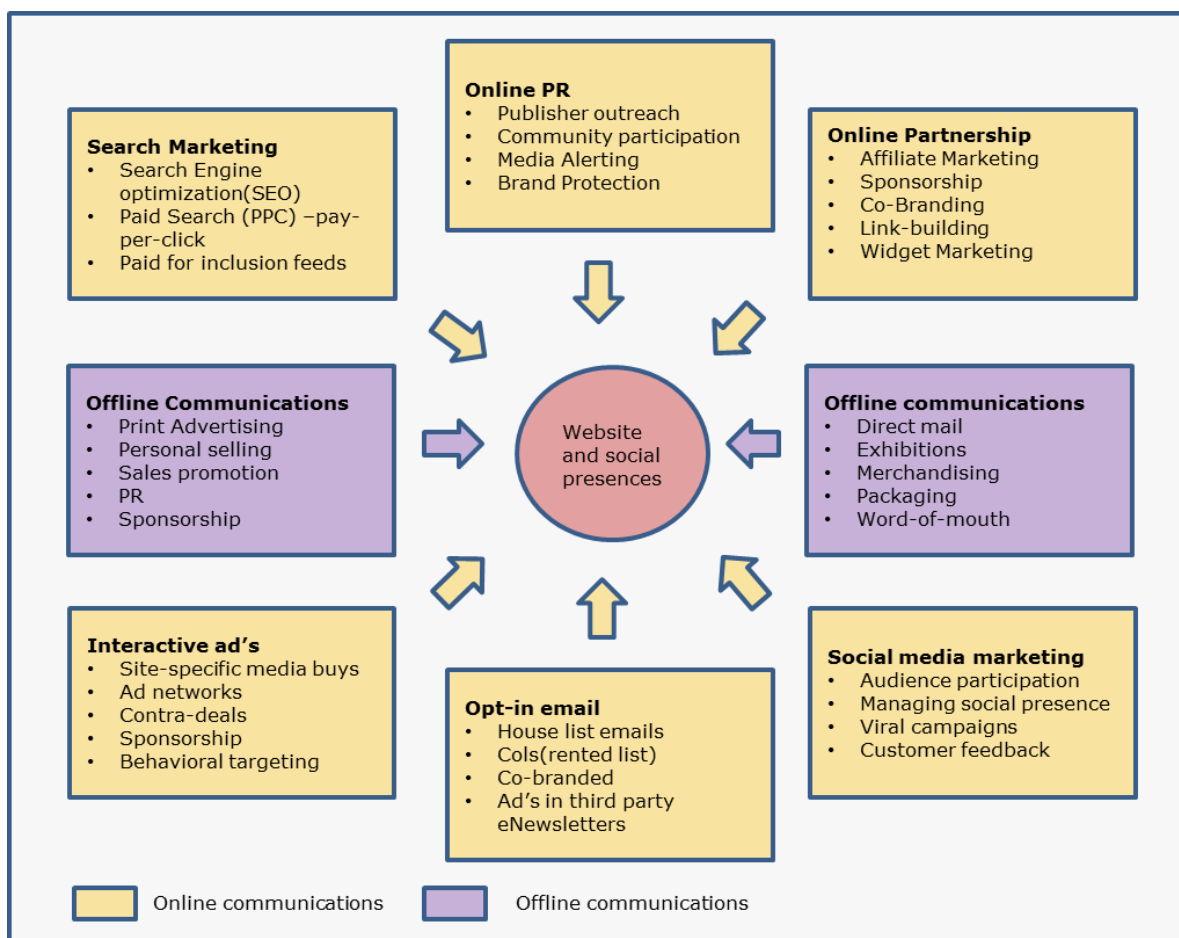
According to Godin (1999), there are five different levels or types of permission. The first is situational permissions in which the supplier is allowed to assist the customer by supplying information or helping during transaction. The second one focuses on brand trust, where the customer allows the company to be its preferred supplier, with minimal other suppliers used, due to trust in the brand. The third type is based on personal relationship that the customer has with an employee of the company and therefore based on this personal relationship grant the permission. The fourth level is based on point's permission, where customers give the permission to a company to sell to them or collect their data, because they get incentives; in this case, two variants are identified. The first one is when the points have real value and can be changed for goods or money, and the second one - where it is more of a chance to win something. The last and most extreme level is named intravenous level of permission, where the company or organization has been given the right to move into the consumer's organization and take over the supply of a specific product or service. This five level framework does not apply to every organization. It depends on the organization's values and if it fits to them. They certainly can be applied in strengthening the customer/supplier relationship.

The permission gathering process must be open and transparent; earning permissions is not cloaking the info in the small text in the bottom of the page. And in order to obtain customer permissions, companies need to provide something of value like info content and other relevant value content. Permission marketing is today considered as something that is expected as granted from customers and that their privacy and interested are not abused. For marketers is a principle and approach that needs to be incorporated in all activities and that can bring more value and more loyal customers (Meerman, 2010).

## 1.5 Digital marketing channels

Digital marketers today, have a plethora of digital media channels and tactics at their disposal, and their number is continuously growing. The terminology used, is very fragmented and ever changing, as reflection of the dynamic change and vast fragmentation within the field. There are many different names used, such as platforms, tactics and channels. For this research we will use the terminology of digital media channels. Under digital media channels we understand the digital equivalents of the traditional media channels. On figure 7, we can see the 6 main groups of online marketing channels (Chaffey & Ellis-Chadwick, 2012).

Figure 7. Main groups of Digital Marketing Channels

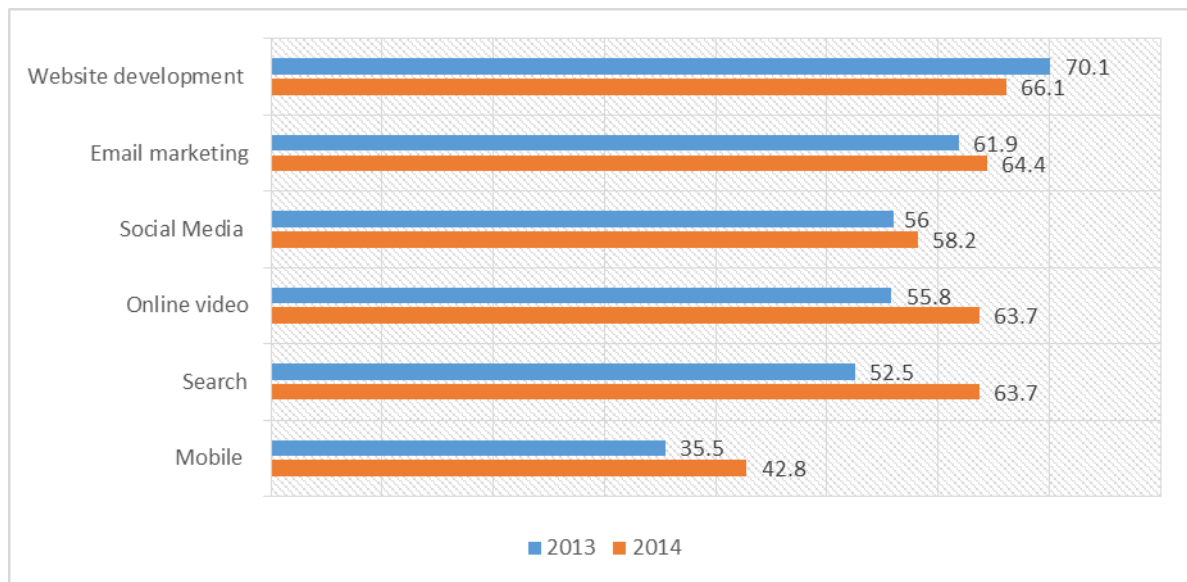


Source: D. Chaffey & F. Ellis-Chadwick, *Digital Marketing: Strategy, Implementation and Practice*, 2012.

All of this different channels and online marketing tools are not used in isolation of one another, on the contrary we see, the integration of digital but also offline media channels in a digital marketing strategy. The term of multichannel strategy, represents usage of more than one channels or tactic to achieve the goal of the strategy, where we have one offline and minimum one online channel, involved in completing the final transaction. While the omnichannel strategy approach represents, using all available channels for creating a unified

customer experience and end goal achievement. This means that we are looking at a complex structure where channels are linked in between and customer journey spans over multiple channels (Gurau, 2008). On figure 8, we can see the spending across different digital marketing channels of B2B markets in 2013 and 2014.

*Figure 8. Digital marketing tactics used by US B2B marketers, and on which they plan to increase spending 2013 & 2014 in %*



Source: *B2B Outlook: marketing priorities and plans, 2015.*

For this research we will focus on selected key digital media channels and tactics. This include Social Media Marketing, Search Engine Marketing, Display Advertising, Email Marketing , digital mobile and video marketing.

### **1.5.1 Social media marketing**

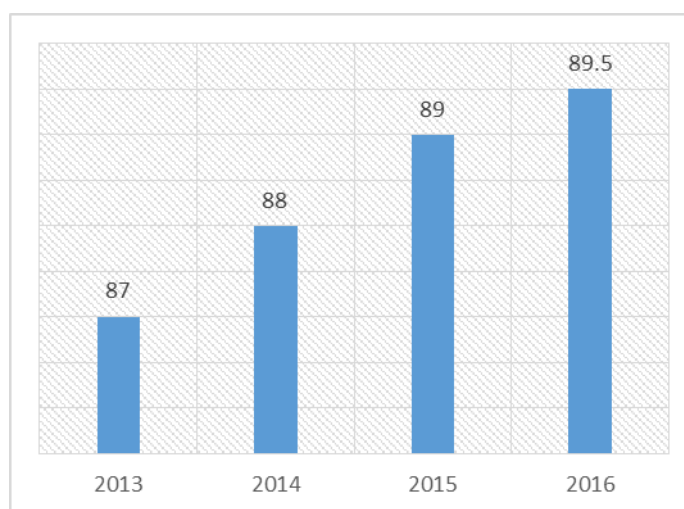
Emergence of the social media platforms has made a significant disruption in the way media has worked online. The beginning of the internet has copied the traditional advertising in the way of media space with display advertising, and the communication was one way, where the company guided the customer to their landing page to check the offer or get more information. Social media has enabled two way conversation, between the company and its customers, also enabling a personal one to one conversation. The other more significant impact is the enabling of massive communication and sharing of information between customers, where also companies can participate and share their messages. Nowadays, social media is not something that is on its way; it is already here and has a significant impact. Marketers must adapt and develop corresponding strategies to answer the new communication rules of social media. Here especially social media marketing is developing as a category, where practitioners lead the way in establishing best practices, and explore the most effective



and efficient ways to achieve business and marketing objectives by utilizing the opportunities social media offers (Barger, 2012).

There is no longer a question or choice, to participate or not, because social media has enabled customers to have a conversation with or without the companies. The recommendation is that companies take the opportunity to engage and directly communicate with customers enabled via social media networks. And as seen on the figure 9 from the eMarketer survey, almost 90% of companies in US are adopting using social media marketing to addressing this new environment and the connected customer.

*Figure 9. Social Media Marketing adoption by US companies, outlook 2013 – 2016, in %*



Source: *Social Marketing 2015: The Key to ROI Will Come from Within*, 2015.

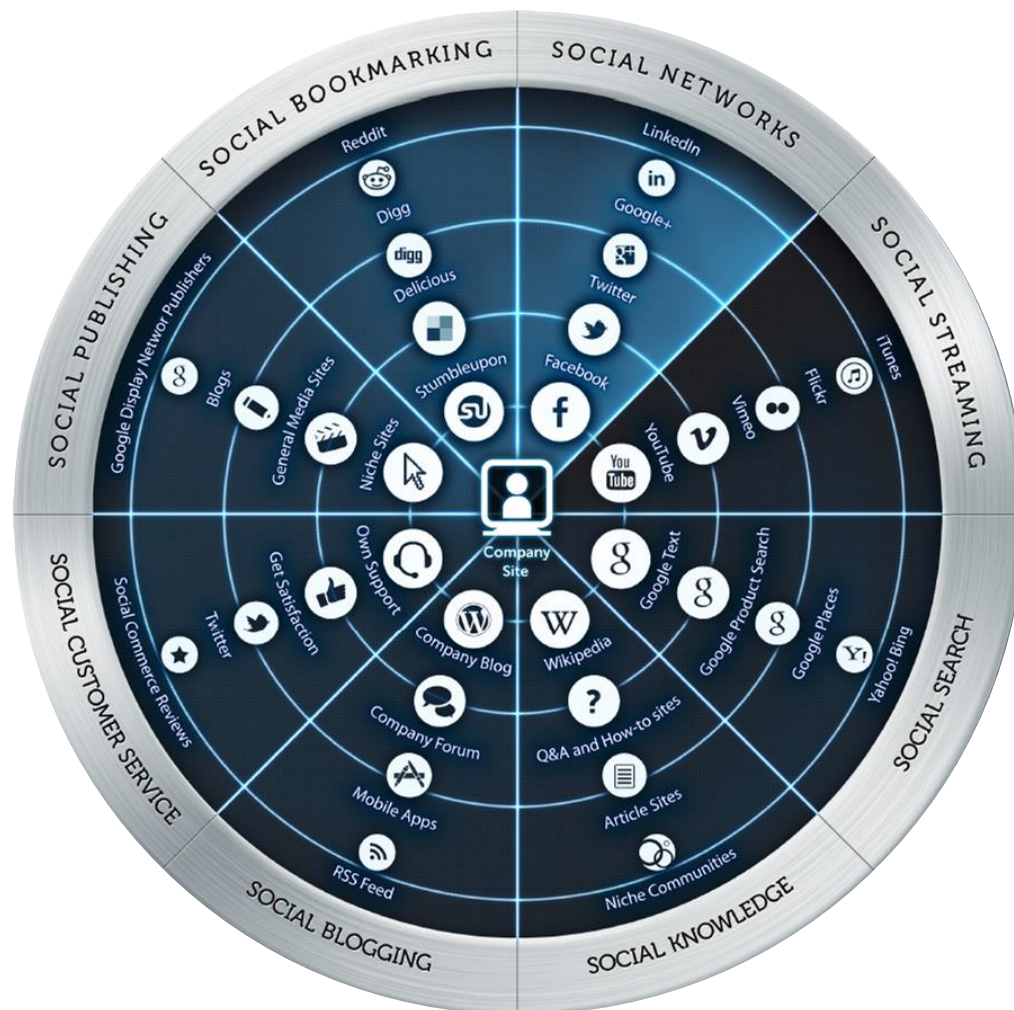
Social media marketing represents the possibility to monitor and facilitate customer to customer interaction through participation on the web, in order to encourage positive engagement, inspire advocacy and increase influence, of the relationship the customer has with the company and its brands. The engagement can happen on a company website, social media networks or other digital media channels. Marketers engage the users on this platforms by being active and present with company profiles attracting followers and publishing content, while directly communicating with interested customers (Chaffey, & Ellis-Chadwick, 2012).

The engagement of customers with social media marketing is happening and being enabled on the large number of social media networks and web platforms. The biggest and most important are Facebook, Twitter, LinkedIn, YouTube and Google+, who are also the main platforms, additionally we have a high number of specialized platforms, like Instagram for photo sharing and others like Tumblr, Flickr, Pinterest etc. The number of social media networks, media variations and platforms is vast and increasing with rapid speed. Social media platforms also differ in their purpose and role they have. Here we recognize several



main areas of application, from social networking between peers and sharing content, to social search, blogging, bookmarking sharing of images, social information and others. (Bodnar, & Cohen, 2012). On figure 10, we can see the social media marketing radar, presenting the social media marketing mix of application areas and available platforms, organized by importance to company, being closest to the center and syndication of content importance being in the opposite direction.

Figure 10. Social media marketing radar



Source: D. Bosomworth, (2015). *The Social Media Marketing Radar*, 2015.

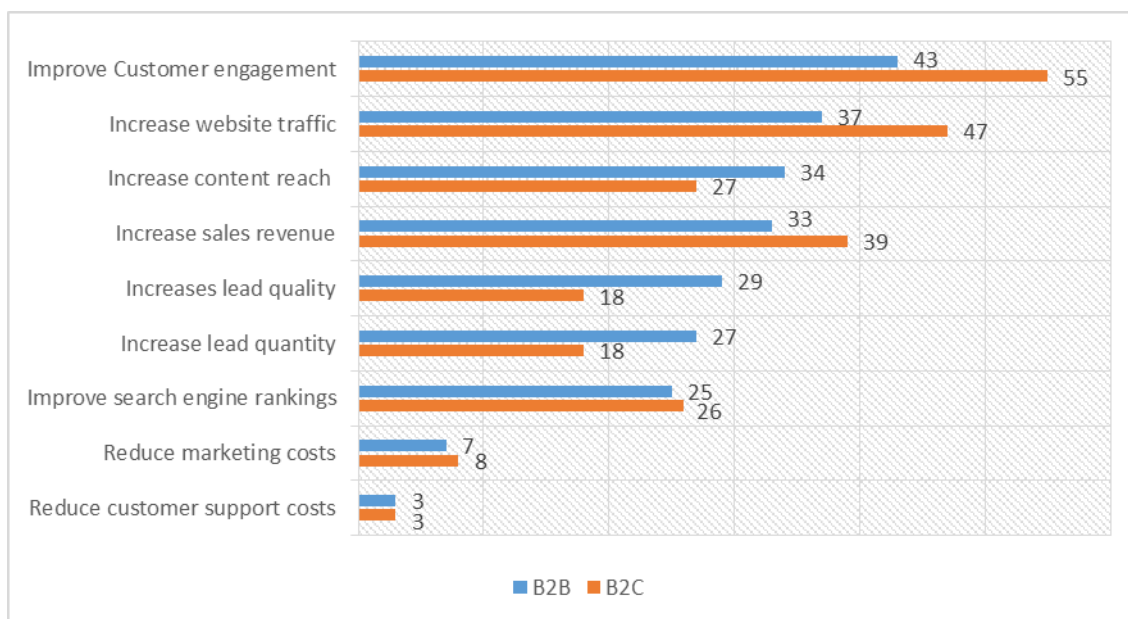
Today, companies utilize a plethora of new marketing positions that deal with the social media marketing and customer engagement on them, like the dedicated social media community managers who interact directly one on one with the customers and are representing the company. To achieve higher reach and engage more customers they can use the advertising and promotion options for content that almost all of the social media platforms provide. While at start companies had almost free reach with the ability to communicate and engage the customers with their content on social media to customers, aside the investment in own community managers and resources. Today big social media networks like Facebook

slowly limit the reach of company's content on their network even within followers of the company pages, without investment in promotion. Companies do sponsoring of its own content and achieve higher reach, by using the immense options of targeting and advertising offered by all of the social media networks to promote their posts or increase the number of followers on the company's platform (Järvinen, Tollinen, Karjaluo, & Jayawardhena, 2012).

B2B companies utilize Social Media in multiple ways, one as a monitoring and listening platform of what are the customers saying and commenting about the company, especially any prospects discussing the potential interests in the company's products and services. Here, direct one to one communication is established and also any customer support needed is provided via answering questions and providing information. Another important way is to execute specifically targeted campaigns and engage customers on social media platforms, with goal of achieving the business and marketing objectives. In this research the focus is more on latter, where Social Media marketing can be used as part of the recommended digital marketing framework for microplate technology specifically, and not as overall social media strategy for Danfoss. B2B companies increase their efforts and investment in social media marketing as more and more organizational buyers spend time online and on social media doing research and obtaining information from their peers directly (Hutt, & Speh, 2013).

On figure 11, we can see the ranking of most important objectives for social media marketing strategy according to both B2B and business-to-customer (hereinafter: B2C) professionals, with worldwide coverage.

*Figure 11. Most important objectives of social media marketing strategy, according to B2B and B2C professionals worldwide, in %*



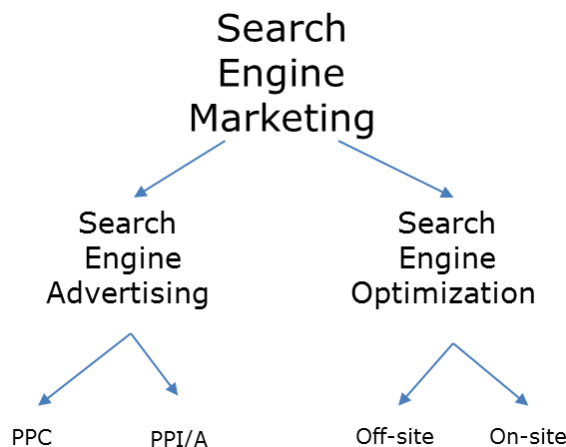
Source: *Marketing Strategy Report: Social Media, 2014.*

The role of Social Media marketing is supporting and enabling organizational objectives and actions. Here Social Media can be used for monitoring listening or research purposes as insight, and major impact can be achieved in brand and product awareness achievement through engagement, especially with content marketing. Further enabling achievement of advocacy effect from engaged customers and last and most important is integral part of the marketing automation process, where it generates leads and also supports the lead nurturing process (Blanchard, 2011).

### 1.5.2 Search engine marketing

Search engine marketing (hereinafter: SEM) is the activity of promoting the companies' online presence, websites, blogs etc, by achieving high ranking in search engine providers like Google, Bing and others. The effect is gained when customers, searching specific information, find the companies listings in the similar context. SEM consists of two main areas, one is Search engine optimization (hereinafter: SEO) and the second is the pay-per-click PPC (hereinafter: PPC). On figure 12, we have an overview of the search engine marketing areas.

*Figure 12. Search Engine marketing areas*



SEM is the method of systematical approach towards achieving higher ranking and position in search engine organic results for specific keywords or phrases for websites of a company. All of world's websites are indexed and listed by search engine provider, and the methods of discovering and identifying websites is called crawling. It is performed by robots-bots, who access the web pages and collect information for them and the website. This information is then indexed and structured to provide the search engine with the needed info, for later listing of the page in the right context. Another important method that search engines use is the usage of the retrieved information and their advanced algorithm to provide the organic ranking and scoring on a specific word or a phrase. There are a number of ranking factors that the algorithms use to determine the listing rankings, Google states that it uses more than 200 factors, in determining the ranking of keywords. The most important and influential factors include: the matching between the website text and the keywords and phrases search by the

user, links into the page or other pager link to the specific page giving it relevance, quality of content and authority of website, social media sharing frequency and latest extremely important factor is mobile compatibility of the website, like responsive design and other factors. The techniques for improvement and achieving high success in organized search page listing include page optimization, ensuring both copy and content wise as well as technical optimization according to Google and other search engine standards. Additionally includes external off site optimization, like link building or connection to other relevant websites that link to the pages on the website (Chaffey, & Ellis-Chadwick, 2012).

There have been many misuses, especially in the early days of SEO, where individuals and companies used fake pages filled with keywords or many fake websites to link to one to achieve higher rankings. Particularly google, as a dominant force in the search engine world, has punished this behavior severely and launched a number of improvement and upgrades to its algorithms to battle such practices. Most significant updates are given codenames penguin and panda. Panda has set a number of guidelines to what is high quality and relevant content on the websites, it was designed to battle the practice of producing a high number of websites that have lot of content lightly written on a given topic with sole purpose to achieve higher ranking through keywords inclusion. Penguin on the other hand has delivered a set of guidelines and improvement in addressing the area of link building. It has penalized websites in ranking that have previously obtained lots of links from low quality sources. It also provided guidelines on what an earned and not self-made link should look like, something not available before. Google has also announced it would include a high impact factor for mobile compatibility of websites, and severely punish websites in the rankings that do not offer a good mobile optimized websites experience to customers (WSI, 2013).

There are many different opinions by practitioners and theorists on the advantages and disadvantages of SEO, as well as directions on strategy. Some of the opportunities and value added by SEO is a boost on driving traffic to websites, and highly targeted by being possible to link to specific content. Also by performing optimization there is not cost in media spend, so they are potentially low cost in comparison with high media spend of other channels. The fast response process, considering the time it takes to have the website recognized and listed is relatively short. On the other hand, it also has some challenges, as its uncertainty and difficulty in predicting return on the invested time in optimization compared to other media, the time until the results are implemented, where it sometimes needs months to see the results especially for new websites. Dynamic changes to the guidelines and factors that influence the ranking and consequently optimization efforts, are making the process complex and very dynamic, with other words very challenging. The recommendation of best practice include state that you cannot and should not try to beat the system, but instead, build quality website with quality content, and focus on the optimization in making the quality and quantity of the offering better instead of optimizing only for higher rankings (Oden, 2012).

Paid search marketing known as PPC or pay per click, based on the method of charging, represents an advertising format for textual ads, next to listings of search results. The ad is

labeled as sponsored link so that the user can differentiate it from organic and advertised results. The possibility is offered as advertising option by the search engine providers like Google. Companies pay based on number of clicks on the promoted link, and similar as in SEO, Google uses a quality score method that is determining the price of an ad. The quality score is determined based on keywords click through rate, ad text relevance, keyword relevance, the relevance of the landing page where the ad points, and other assessment methods. The positioning on the page is a combination of bid amount and the quality score. Some of the benefits of PPC are that marketer's pay per action and not only per impression, that is, they don't pay for only displaying of the ads. PPC includes a high level of targeting options and is focused on a specific target context; moreover, it enables good tracking and return of investment analysis. It is possible with own investment to do remarketing or target the visitors of a company's own website. It is more predictable and less technically demanding than SEO, and it can also have a more instant impact. The challenges are that the paid search environment is very competitive in some areas, making it not cost effective for smaller companies. In order to achieve full potential it needs knowledge, focus and time allocation, and ongoing optimization that not all companies pose or allocate enough resources and investments. If done properly, SEM offers significant competitive advantage in meeting customers in their customer decision journey when they search for information and presentation of the company's value proposition. This at the end generates new leads and contributes significantly to the process of marketing automation (Smith & Zook, 2011).

### **1.5.3 Display advertising**

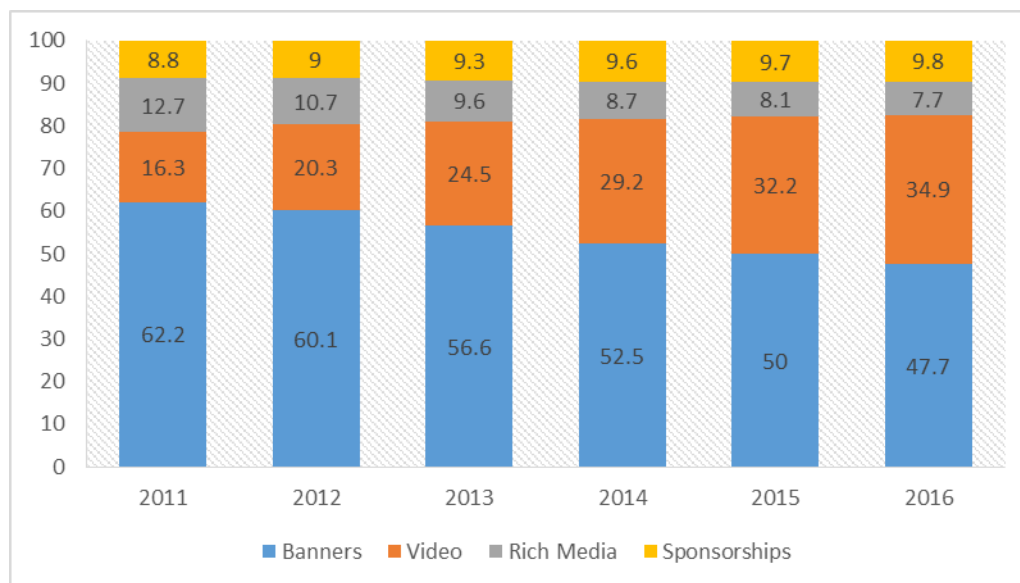
Under the term display advertising in digital marketing and web, we understand the possibility for a company to advertise a placement on third party websites such as publishers, social media and others. Display ads represent paid ad locations designed as rich media or graphical elements placed within a web page with goals of delivering brand awareness, calling to action and inspiring purchase intent. These ads inspire and encourage interaction through options like rollover video, complete a form, or click next to reveal further info. This process is typically delivered and operated by advanced ad serving network supported by ad servers. Google offers its free Google ad management platform, providing website owners to sell their media space and do the optimization and planning of the revenues they get from the ad serving network (Chaffey & Ellis-Chadwick, 2012).

Display advertising, also referred to as banner advertising, is practiced on a number of websites with purpose to drive traffic to a company's end website or microsite. The destination page is usually created to support the proposition or an offer presented with the placement ad. Media purchases can be done either directly for the specific website where marketers want to advertise, or they can buy a space across several sites through what is known as ad network. When purchasing across several sites, ad networks usually offer companies targeting and filtering options based on customer types, industry relevance and other factors. When display ads are purchased, they run for a specific time period, and can be placed within

the whole website, a section of the website or according to relevance of keywords searched on search engine (Ryan & Jones, 2011).

The funnel phases covered by display advertising include awareness of a need, consideration of purchase and buy immediately. Display advertising is having most impact and provides most benefit cost wise in the awareness and consideration phases. It helps elevate the company's brand and offering to potential customers top of mind, while they are researching the internet for information on the products they are intending to buy. Display advertising offers a set of targeting options and formats that markets can use to reach the customer segment they have specified in the digital marketing strategy. Some of these options include, geo tagging, specific website targeting, behavioral targeting, demographic targeting, and as additional options, there are remarketing and retargeting for display advertising purposes (WSI, 2013). Figure 13, presents an overview of display ad spending share in US 2011-2016 outlook, between different ad formats. Here we can see that video ads have a significant share increase coming mostly by decrease of banner ads.

*Figure 13. Display advertising, ad formats and spending share in US 2011-2016, in %*



Source: *US Digital Ad Spending to Top \$37 Billion in 2012 as Market Consolidates, 2013.*

#### **1.5.4 Email marketing**

The effort of creating business value with the practices of lead generation/customer acquisition and customer retention has a significant impact. Companies need to make sure that new leads are flowing in the sales pipeline and current customers are staying engaged with the brand and bring value to the company. It is one of the first and very well established digital and online ways to generate new leads and maintain current customers in email marketing. Two different types of email marketing are outbound email marketing and inbound email marketing. Outbound email is when company creates an email campaign and sends targeted



email message to a customer group, to raise awareness of sales promotion, gather customers or encourage trial and purchases as part of a customer relationship process. Outbound email marketing is similar to classic direct marketing. Inbound email marketing covers the activities where companies process and manage emails from customers such as request for service, requests for offers and others. In our case study we are more focused on the outbound and collection of insight, while the inbound is more an internal CRM process (Hutt & Speh, 2013).

Email marketing activities usually support two key areas of customer acquisition and retention, and other supported activities include lead generation, sales promotion, brand awareness and gathering customer data. Specific tactics used for customer acquisition by opt in email include cold email campaign, co-branded email, and third party newsletter. Cold email campaign represents the case when a customer receives an opt in email from a company that has rented an email list from customer email list provider. A co-branded email case is when a company that customer has connection with, partners with another company to provide an offer. A credit card company can partner with a mobile phone provider. A third party newsletter is used for acquisition of customers by publishing news and promotional articles or PR articles, in newsletter sent by another company or media news portal site. The types of tactics used in customer retention and prospect conversion to a customer group who has given a permission to be contacted by email to a company include conversion email, regular eNewsletter, house list campaign, event trigger email, and sequence based mail campaign. A conversion email is usually sent out after interested customers opt in to receive information about a product service or event. This conversion emails can be predefined and set up to be sent on automated basis. Regular e - newsletters are sent out on a pre-determined sequence, weekly monthly or less often and inform on latest news about products solution or events. The house list campaign is a type where emails are sent out to support a specific objective as onetime campaign or launch of a new product, reactivation of customers and similar. Event triggered mail are less regular and are sent out before or after and event to trigger participation or deliver and offer after the event. Sequence campaign is used when a set of email is pre-defined to deliver the outcome by a couple of steps, each offering a specific value and having specific objective (Chaffey & Ellis-Chadwick, 2012).

### **1.5.5 Video marketing**

Even though YouTube is essentially a social media platform, and video marketing is closely integrated with the social media marketing, its significance today requires more attention and presentation. Companies have made videos about their products since it is technically possible. But before the internet and especially the appearance of YouTube, their only opportunities to engage customers with these videos and transfer the message was over paid airtime on traditional TV or on events, also videos tended to be either a short TV advertising video or a longer corporate video presentation of the company. Everything changed with occurrence of the internet where it became possible to place videos on company's website, and where interested customers visiting the site could watch the video. But it was not that easy,

and it required investment to develop high level of tv ready videos and host them so they can be displayed on the websites. Therefore the number of videos and companies putting them on the web was limited. The emergence of YouTube has made a significant change to all of this, making a huge change in the way people and companies develop, share and consume video material. YouTube and additional similar platforms have added the social media element to videos, making it easy for each person or company to publish its own videos, while it made them instantly accessible to the users of the World Wide Web. Suddenly videos were searchable and today they are an integrated part of the way people research and get information on products and companies (WSI, 2013).

YouTube is the biggest video platform owned by Google and its impact is also recognizable by the statistics it holds. Each month 1 billion unique users visit YouTube to search and watch videos. We can understand the importance of video as content format and its sharing, by considering the fact that 4 billion hours of video material are uploaded on YouTube each month. Not only is YouTube a global platform, it is also localized in 53 countries including 63 languages. Additional significant fact for marketers is that second biggest search engine after Google is YouTube, where people search for videos on multiple areas of internet, from entertainment, to product reviews educational content etc. Customers also upload a significant number of own video materials. People consume videos on multiple devices such as PC, smartphone, tablet etc., with the trend shifting towards mobile devices. It offers the possibility to markets to have their own channel to upload videos for free, while also offering the opportunity for branded business channels and support to bigger businesses.

Recently YouTube has added the possibility to place an ad in front of popular videos that user can skip after 4, 5 second or watch the full ad. This has opened a totally new creative way of developing video ads with goal for mimicking the style of the YouTube users in order to appeal to customers and make an impact, as was proven that traditional TV video ads don't work on YouTube. Customers search either for entertainment, or educational useful content in videos that marketers develop. Another phenomenon of video marketing and YouTube platform is the viral nature of some videos, giving birth to the term viral marketing or viral video marketing. Viral marketing represent the possibility of a video or piece of content to be shared with millions of views in a matter of days or sometimes hours. Usually this is the case of customer generated videos or music and entertainment videos, but advertisers have also been successful in changing the creation of their videos in order to appeal to audience and activate a viral sharing effect on YouTube. Having a viral hit video has significant impact in raising awareness for the brand on such a scale that would be impossible and enormously expensive with traditional TV media. IT is very significant for B2B brands (Chaffey & Ellis-Chadwick, 2012).

### **1.5.6 Mobile marketing**

Mobile marketing has been around since the occurrence of the mobile phones and text messaging. It largely consisted of promotional messages, call to action or prize contents, and



it was delivered through the SMS messages option. IT was seen mostly as an extension of direct marketing practices. With the emergence of the so called smartphones and tablets, as well as the massive introduction of the iPhone and iPad, mobile marketing has gained significant relevance and impact. The rate of usage and adoption of smartphones and tables has grown at a staggering rate, overshadowing and even overtaking the PC as the main medium of online surfing and media consumption. In mobile context, the media consumption is of different nature as well as possibility of interaction and interactivity offered by apps. Since the introduction of the original iPhone and iPad, the market has grown to accommodate new mobile software systems like android and windows mobile while a significant number of manufactures and business are strongly innovative in the field of mobile devices, including smart technologies and the latest trends in internet of things (WSI, 2013).

Apple brought innovation and disruption to the market with its devices and the model of apps and app store that is the norm today, where customers not only use mobile browsers, but utilize these interactive platforms to engage with brands. The shift has meant both search engine providers, social media platforms and a company's need to adapt their approach and develop strategies and technologies to address the new opportunities, as people spend more and more time with their mobile devices as opposite to desktop PCs. For marketers, mobile marketing is covering the opportunities that arise from the today's mainstream mobile platforms. Companies can advertise trough pay per click on mobile search, websites, as well as in apps. Additionally, they can develop their own app and use it for promotion or also e-commerce and support tools to its products and offers. QR codes offer a new way of discovering the company and integration of online and offline practices, a most common latest usage is scanning QR code on product packaging to take you to installation instruction or description or scanning for business card details. Mobile devices are used for myriad of different activities from fitness, to entertainment, communications, information search, health etc., thus providing markets with a wealth of options and customer outpoints for mobile marketing activities. In the meanwhile, social media usage, i.e. opportunities for marketers are increasing every day due to the shift in usage to mobile devices. Mobile optimized websites are already turning into norm, the standard today is responsive design and mergence between website and app experience on mobile devices. We are recognizing a shift in digital marketing strategy and web media development, where the principle to single out the importance of mobile is mobile first optimized and then followed for desktop and web (Oden, 2012).

## **1.6 Digital marketing analytics and metrics**

A significant differentiation and value of digital marketing versus traditional marketing is its ability for measurement of return on investment. As the famous guess goes that previously, 50% of marketing budget was wasted, but marketers don't know witch, digital technology provides exact data with measurement and analysis made, to determine exactly what is spend and where, and is it working and contributing. This enables continuous optimization and improvement of activities and increases the return on investment, because it shows real-time data and provides the ability to act and correct immediately. The skill and competences in

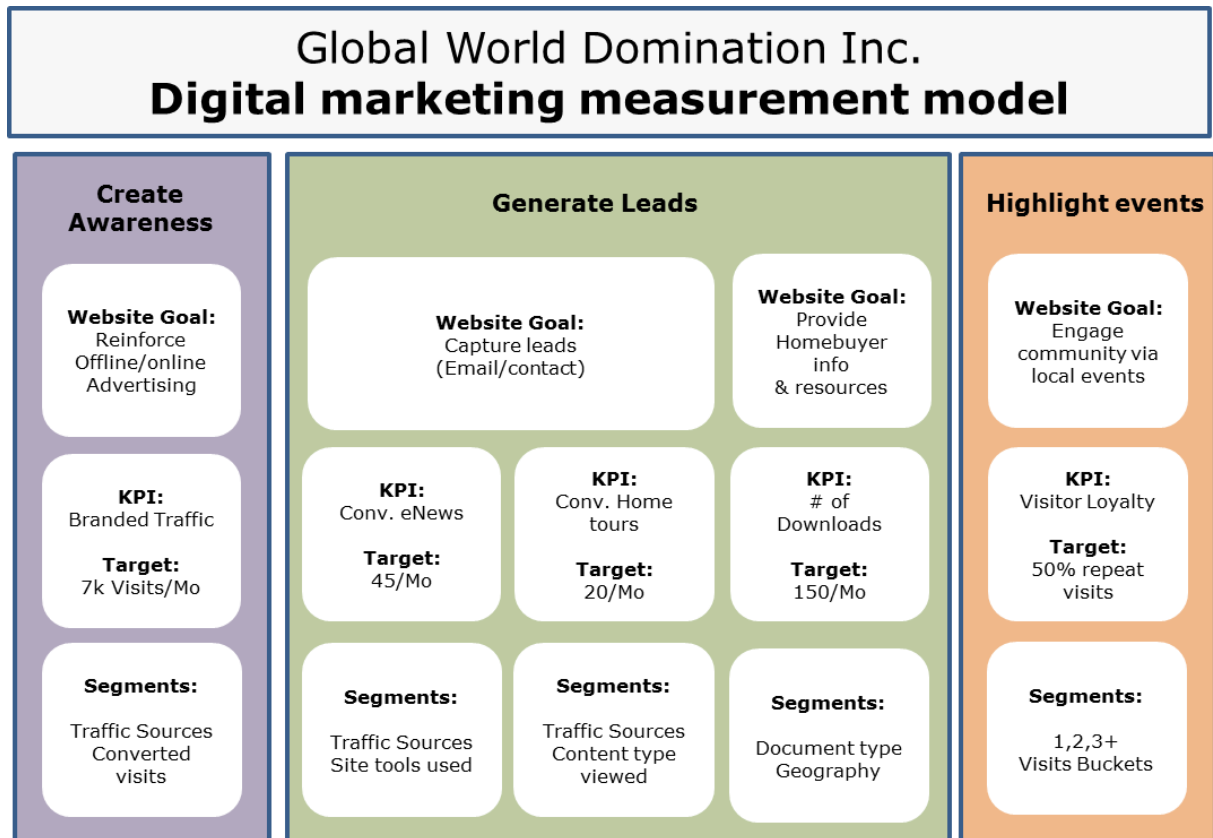
digital marketing analytics are of critical value to any company that is actively engaging its customers in the digital environment. Under Digital Marketing Analytics we understand the practice of evaluating the contribution of digital marketing to business objectives through evaluation of the performance of the digital marketing activities and their ongoing improvement. Evaluation of performance includes review of website traffic, referrals, click streams, online data, customer satisfaction surveys, lead generation and other relevant activities. The process of digital marketing analytics involves definition of a measurement model, data collection, data processing, reporting and actionable recommendations, based on defined business and digital objectives within a digital marketing strategy (Chaffey & Ellis-Chadwick, 2012).

Through technological breakthroughs, we see today multiple new and efficient ways of measuring marketing performance. Even though we have these new ways and tools, B2B companies with fewer customers, less number of transactions and longer decision cycles in purchasing, have typically struggled in their attempt to demonstrate and prove the resulting impact of marketing (Webster, Malter & Ganesan, 2005).

The general description of digital marketing metrics and analytics includes the key areas of data collection from the various tools, and platforms followed by a data processing step where the data is structured and prepared for the next step. The following step after data processing is data analysis, where a dedicated analysis is performed by an analyst, drawing out the key insights that in the final step can be turned into actions. In most cases it serves to improve the performance of the activities. Many tools today provide a readymade analysis on pre-defined parameters. There are many digital marketing measurement tools for free and paid subscription usage, and many of the social media networks provide their own metrics and analytics tools for free. The big data trends and many web analytics tools have provided a plethora of data available and many reports. The challenge is finding the less is more principle and right analysis approach to extract key insight and performance indicators. For this purpose a model and tailored approach is needed to address the challenges that arise from the fragmentation and proliferations, in vast number of tracking options and overwhelming data (Kaushik, 2008).

According to Kaushik (2012), Building the model takes five steps and focuses on three key areas. The first step includes identifying the business objectives and establishing a broad perspective on the model. The second step involves defining clear goals for each business objective. The third step is to document down the key performance indicator for each goal. The fourth step takes the challenging task of defining and setting clear targets for the key performance indicators, that later will be benchmarked to. The final step is to identify the segments of customers behaviors and expected outcomes we will use in our analysis to determine the success of our marketing efforts. On the figure 14 we have an example of digital marketing measurement model, developed by Avinash Kaushik, a Google digital marketing evangelist.

Figure 14. Example model of digital marketing measurement



Source: A. Kaushik, *Digital marketing measurement model*, 2014.

While this model is defined predominantly with the website as a central content hub in mind it can be extended to include the various digital marketing channels as email marketing, social media marketing and display advertising and their contribution to the website content hub engagement.

## 1.7 Marketing automation

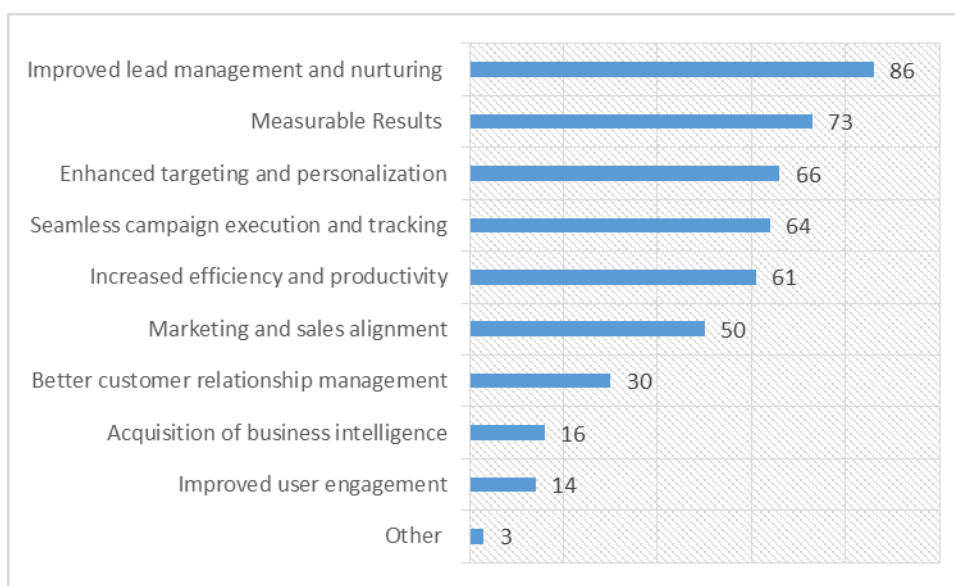
Marketing automation at its best represents the tactics supported by software that is enabling companies to nurture prospects with personalized, educational and relevant content that is acting in leads generation, out of those prospects and at the end conversion to customers. Executed in this way, marketing automation provides significant added value and concrete return on investment. However the marketing automation has also become a buzz word for many types of software that automatize only a selected part of the customer journey. If not applied properly, marketing automation leaves marketers with many tools to manage and automate the middle part of the funnel, while the solution for generating new leads for nurturing is missing (What is marketing automation?, 2015).

Marketing automation is not the magic solution to all of marketing problems; it rather focuses on selected part of the customer engagement. There are several stages in the customer

journey, starting from converting stranger to visitor, then from visitor into a lead, followed by lead to qualified lead, further from qualified lead to customers and finally from customer to delighted customer. Marketing automation is excelling mostly into managing the lead ranking and turning the qualified lead into a paying customer (Halligan, 2013).

From the survey of B2B marketers on benefits using marketing automation, the improved lead management and nurturing is singled out as the most important benefit. On the figure 15 we can see the different benefits ranked in the survey.

*Figure 15. Benefits of marketing automation, according to B2B marketers worldwide in %*



Source: *The State of Marketing Automation 2014*, 2014.

Even though marketing automation is new and complex enough event, the providers to the platforms are having challenges in maximizing the application and effect of the application. Despite that, marketing automation is popular method and platform for improving efficiency in marketing and adding more value from marketing. Therefore the implementation of systems and processes is fairly rapid and widespread. Danfoss as a global company is also utilizing the powers of marketing automation system that add value to its marketing efforts (What are the benefits of marketing automation, 2015).

## **2 DANFOSS MICRO PLATE TECHNOLOGY**

### **2.1 Methodology of qualitative research**

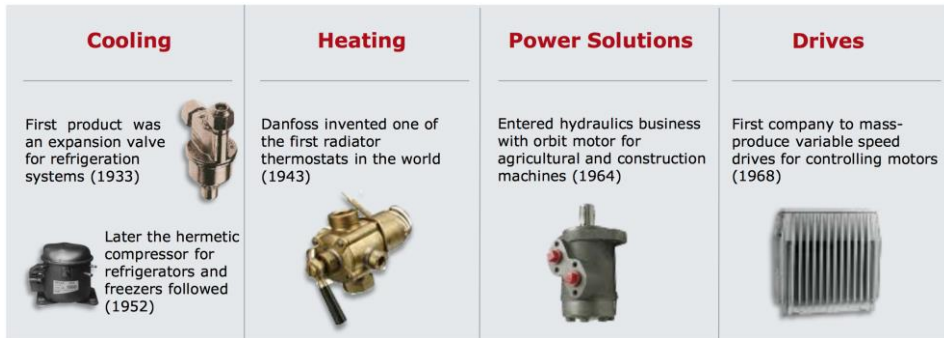
The interview method is used with purpose to extend the knowledge about persons, feelings, thoughts combined with behaviors, meanings and interpretations. The interview is conducted, by the interviewer collecting this information in one on one situations by using oral questions. There are different types of interviews, like brief survey, extensive survey, in-depth interviews, monologue, narrative, case study and others. Alongside types, we differentiate between categories of interviews as structured interview, semi structured interview and pre interview. The key feature of semi structured interview category, is the pre planning of a set of questions, to be used as direction setting during the interview. The advantages of semi structured and in depth interviews is that they provide much more detailed information, that can be obtained by other research means and collection methods. Interviews, particularly in the category of semi structured or structured offer a considerable flexibility to the researched allowing for more suitability in obtaining results and insight that is otherwise not possible (Horvat, Heron, Agbenyega & Bergey, 2012).

For the purpose of obtaining insight on the business background, customer group, business objectives and better preparation for later conducted survey with customers, a qualitative semi structured, in depth interview is conducted with representative from Danfoss business unit that covers the business of heat exchangers, Mr. Ender Yalciner, product portfolio manager for Brazed and Gasketed heat exchanger product portfolio in District Energy business unit within Danfoss Heating Segment. The interview was done with the company's representative as key input for this research on the view of the business and its key business objectives and environment around micro plate technology and heat exchangers market. The interview was conducted on 30.4.2014 and lasted 60 min (Appendix A), with a set of pre prepared questions used as direction setting. However, based on the responses, additional sub questions were asked.

### **2.2 Danfoss and micro plate technology introduction**

Danfoss group is a Danish company established in 1933, by Mads Clausen in Nordborg, Denmark and produces components and systems for heating and cooling as well electronic drives and hydraulic components. Danfoss has established itself from a solo enterprise to a global market leader in the industry it operates. Danfoss has achieved this status by innovative engineering and early entering into emerging markets. Today Danfoss is present in more than 100 countries and employs 24.000 people, with net sales in 2014 of 34.375m DKK with 12.7% of sales in EBIT operating profit. Danfoss operates in four business areas, cooling, heating, drives and power solutions. On figure 16, we can see the four business areas of Danfoss.

Figure 16. Danfoss business areas

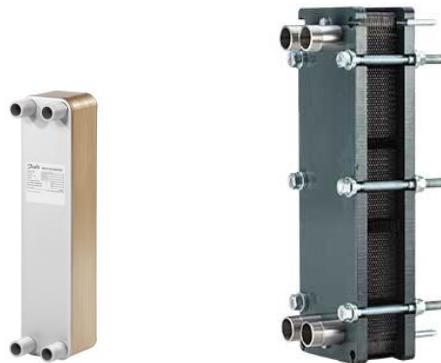


Source: *About Danfoss*, 2015.

Danfoss District Energy is a business unit within Danfoss Heating Segment of Danfoss Group, producing and selling components and systems for district heating and cooling. The components product portfolio of District Energy division among other types of components also include heat exchangers, which are components that enable heat transfer from the district-heating network to the building (About Danfoss, 2015).

Heat exchangers are used in many heating applications across both residential and commercial buildings. They are made of combination of number of plates with a plate pattern, joined together with connections for heated water intake and outtake. Plate heat exchangers have better performance than traditional tube or shell share by achieving higher heat transfer to pressure drop ratio while having a more compact size, making them convenient to use in modern substations. Plate heat exchangers can be categorized in two groups: brazed and gasketed. Gasketed are typically used in applications where they need to be disassembled for cleaning while the brazed are used in applications where their compact design combined with their lower weight and higher resistance make are the main qualities. On figure 17, we can see the examples of the two different types, gasketed and brazed heat exchangers.

Figure 17. Examples of brazed (left) and gasketed (right) plate heat exchangers



Source: *Campaign Microplate Heat exchangers*, 2015.

While it has a number of benefits like cost efficiency in production and its design principles are widely known, as a conventional solution it is not enough to address the increasing efficiency demands and initiative towards sustainable development. The main objective in design of the heat exchanger and with that the technology that enables it is to maximize the heat transfer and to minimize the pressure loss that as an after effect occurs. Therefore the plate surface design is of essential importance and represents a key issue, due to its ability to affect both the pressure drop and the overall thermal capacity. The knowledge of the efficiency of the design as a geometric parameters function is of most important aspect in designs the heat exchangers themselves (Hämäläinen, Lyytikäinen & Persson, 2010).

To address the need for bigger efficiency in heat transfer and provide means for lowering the temperature difference ( $\Delta T$ ) of heat exchangers, Danfoss has innovated and developed a new plate design for heat exchangers, called Micro Plate pattern and the design technology is called Micro Plate technology. With this worldwide patented technology for heat exchangers plate design, it has achieved a higher heat transfer, lower pressure loss and lowered material consumption with transferred energy unit. The change in performance is largely a result of speed variation reduction for the micro plate technology pattern compared to the traditional chevron pattern. Flow lines for micro plate technology have less speed variation compared to the chevron pattern. This enables a more efficient and even flow through the profile which results in lower flow speed variations. The lower speed variation for the microplate technology pattern results in an average better heat transfer and pressure loss per unit. This is since the high speed spots only result in partial increase in heat convection but significant increase in pressure drop. By higher heat convection/pressure drop relation, bigger well defined brazing points can be afforded, leading to a stronger plate, which again enables a reduced plate thickness (Thorsen, 2012). In figure 18, we can see a close up difference of the traditional fishbone pattern, and the new microplate technology designed dimple pattern of heat exchanger plate design.

*Figure 18. Micro Plate – dimple (left) and fishbone (right) plate design*



Source: *Next generation heat exchangers for your district energy applications, 2014.*

Micro plate technology enables the opportunity to choose the brazing pattern, making it possible for brazing points to be applied in areas where higher forces are present. This advantage makes the heat exchanger stronger and more resilient to the pressure blows that sometimes occur in processes. Equal distribution of the fluid flow, can be secured by careful design of the port hole area, an optimal usage of the heat transfer area can be enabled by micro plate technology design, with improved manufacturing and thinner design thermal resistance is reduced and heat transfer improved. Due to ability to set the height of the channel smaller as opposed to traditional design, while keeping the pressure loss the same, it enables smaller size of the heat exchanger that can be convenient to substation designers (Thorsen, Gudmundsson & Brand, 2014). Figure 19, shows the difference in brazing surface and flow between Danfoss microplate technology designed plate having better distribution along the plate to cover more area

*Figure 19.* Brazing surfaces in brazed heat exchanges, Competitor alternative narrow (left) Danfoss Micro plate broad (right)



Source: Next generation heat exchangers for your district energy applications, 2014.

Brazed plate heat exchangers only have a narrow brazing surface where the two peaks of the plates touch while Micro Plate Heat Exchangers have a broad, flat brazing surface which adds stability to the construction. In its promotional material, Danfoss summarizes the benefits and advantages of micro plate technology over traditional design in up to 10% enhanced heat transfer, up to 35% lower pressure loss and longer life of the products. The up to 10% better heat transfer is achieved by more even flow distribution, where fluids are dispersed and mixed better and therefore the heat transfer rate is enhanced. The unique plate design provides the conditions where less energy is need to drive the water round the system which reduced pressure loss, of up to 35% as Danfoss claims and additionally also lower running costs. The last major benefit pointed out in the promotional material is a longer heat exchanger product lifespan due to the higher amount of brazing points that further reduces the scaling and fouling due to the improved flow throughout the plate and with that provides a more robust heat exchanger (Next generation heat exchangers for your district energy applications, 2014).



## 2.3 Customer group for Danfoss micro plate technology

In the presentation of the relevant customer group and specific customer types, authors own knowledge and experience as being a stakeholder in marketing, and the input received from the interview with the company representative are key sources of information. The customer landscape in the case of microplate technology and at the end, the heat exchanger products that are applied is complex B2B one, with many stakeholders with influencing and decision making power. Heat exchangers with Microplate technology are being applied in various heating and cooling applications, usually as a part of a system in new build or renovation project, or a district heating distribution network, but also as a components of a system build by OEM manufacturer.

The company representative in the interview identified 7 types of customers, however this varies from country to country and specific projects. The 7 most important customer types, according to the company representative, are: investors, designers/consultants, original equipment manufacturing companies (hereinafter: OEM companies), district heating utilities (hereafter: DHU), contractors/distributors, installers, and maintenance companies.

Investors:

- Provide money for new construction/renovation,
- Benefits they are interested in: energy saving, innovative solution, lower CO2 footprint, longer lifespan, reduce waste energy, shorter payback time.

Designers/consultants:

- Make investors' concepts turn into design project; they write the specification for heat transfer in the system, that is later performed by a heat exchanger (hereinafter: HEX), and can recommend a specific technology.
- Benefits they are interested in: system efficiency, compact design of the engineering system, innovative solutions.

OEM companies:

- Build in the HEX components into their originally manufactured equipment and systems, like stations and then sell them to their customers.
- Benefits they are interested in: product efficiency, new technology, price, size compactness, durability

DHU,

- Is the owner of the heating network, can be also owner of the systems/stations in the buildings that provide heating. Main project stakeholder in projects on its district heating network.
- Benefits they are interested in: energy efficiency, products lifetime and quality, system size and durability.

Contractors/Distributors:

- Provide complex sales of equipment on the site.
- Benefits: compact design (less space for storage, less weight of package)

Installers:

- Turning designer's projects into working engineering systems.
- Benefits: smaller size, smaller weight, easy to manage/install.

Maintenance companies:

- Performing launch and usage of systems made during the project.
- Benefits they are interested in: strong plate design, better self-cleaning

On Table 1, we can see a customer overview, based on customer category, a specific type within the category and their role in the buying process. Here a simplification was done as the naming and roles differ from market to market.

*Table 1. Customer Categories, Types and Roles for Hex and Microplate Technology*

Customer Category	Customer type	Role
Investor	Business and Management	Decision Maker
DHU	General Management	Decision Maker
	Technical department	Influencer / Decision Maker
	Purchasing Department	Influencer / Decision Maker
Designers/Consultant	General Management	Influencer
	General Management	Influencer
	System Designer	Influencer / Decision Maker
Contractor/Distributor/Installer	General Management	Influencer/Decision Maker
	Hands on installer	Stakeholder
OEM	General Management	Decision Maker
	Technical department	Influencer / Decision Maker
	Purchasing department	Influencer / Decision Maker
Government/ Cities Housing associations	General management	Decision Maker
	Technical person	Influencer / Decision Maker

The customer categories also come from the sales channels, where we also differentiate between influencers, decision makers and direct buying customers, as many different

stakeholders are involved in the different phases of the project. The company representative reflected in the interview on this matter.

“Competitiveness is rather intense nowadays. The key of performing the sale of equipment is to keep in contact with all people involved in the process, make a plan of interrelations in this group of people and work with those, who have the biggest influence on decisions”.

The previous segmentation of customer types focuses on customers as companies or functions, but within a customer type such as DHU or a OEM we also differentiate between the role of a customer, based on his position and expertise, for example a management person and a technical department person or purchasing person. As a pattern we can identify two customer personas, one being more technically oriented and one being more business oriented. Here the company representative in the interview has given feedback on the different needs that exist for these two groups.

“Every customer has his own interests and not taking them into consideration will be a fatal mistake. For the first type we need the superior technology (innovation excites this customer group), for second type – attractive business conditions is essential”.

Various customer types have different goals, here the company representative has emphasized the key needs, focusing on the consulting engineer’s customer group.

“Each customer has his own goals he would like to reach with the help of engineering equipment. Different groups have various needs. For example designers are mostly keen on new solutions and new technologies they can use in their projects. Innovative and energy efficient solutions can help to make their system designs perform better and achieve energy savings for their clients the investors”.

The importance of the internal stakeholders for the success of the HEX business, as Danfoss is a large multinational company was emphasized by the company representative.

“Important stakeholder group for the HEX business is internal Danfoss employees providing technical support and consultancy services to our HEX customers. Our internal employees are using the hexact tool in their support function to customer or external sales employees”.

Additional key value is not only the new technology but continuous support by internal stakeholders as well as tools to assist customers in their work. Here the company representative gave an overview.

“Designers really value high level of technical support from the producer. In the field of HEX that usually means easy access to dimensioning software, its profound calculation abilities, free set of drawings and etc. In other words, designer is expecting to have efficient tools for performing his main duty – designing the system. On the other hand, installers and

maintenance are mostly focused on real work of equipment – how easy it is mounted, what are the service abilities”.

With a clear segment of customers in all customer categories and types focused on technical aspect of the solution, it is of great importance for microplate to focus on those customers, here the company representative has highlighted the importance especially with consulting design engineers.

“Really depends on the situation. But most designers, for example, are in constant search of new solutions for engineering systems in order to make their design projects more efficient and compact. In the case of an OEM customer, we have the OEM company with it several departments a decision makers, management, technical, and purchasing”.

The purpose of this research with focus on microplate technology and the goal in recommendation of a digital marketing framework, the group of technical oriented customers will be addressed, focused on the internal stakeholders on one side and the consulting engineers on the external stakeholder side. The opportunities lie in addressing internal stakeholders to make sure they understand and are advocating the microplate technology, and for externals to understand and also recommend the use of products with microplate technology in their projects.

## **2.4 Business objectives for microplate technology and microplate heat exchangers**

In order to define the right digital marketing objective within the framework, understanding the overall direction of the business and business objective of the heat exchangers for Danfoss is key requirement. Here the link between the technology and the overall business should provide basis for defining the goals and objectives along with input to the strategy for microplate technology digital promotion.

For a start, it is important to establish the positioning of Danfoss in this market for heat exchangers, and the feedback is that Danfoss is a new player on the market, establishing itself and making strong market penetration by bringing products with new technology in the market.

“In the field of HEX – a new and coming player, rivaling and unsettling established market players, disrupting the market with new innovative technology in our products”.

Being a new and growing player on the market, regarding the technology, it is important to know if it is available over the whole range and in all addressable markets. Here Danfoss plans to expand both geographically in new markets as well as in existing ones, and increase the penetration by entering yet unserved application hotspots.

“Currently, technology is provided to all currently addressable markets. But we plan to expand both in geographical sense and with new products where the technology is applied, while entering new applications and segments in both heating and cooling areas in existing markets”.

The microplate technology is available in all currently addressed markets and application segments, but not in the whole range of products. Here Danfoss is on a continuous new product launches, where it is introducing new heat exchanger products in the market with microplate technology on board.

“Our key business objective is to further make market penetration by increasing of market share, followed by having our entire heat exchanger product portfolio with microplate technology. Furthermore, we intend to raise awareness about Danfoss as a key heat exchanger supplier in the market, and innovation trendsetter by emphasizing microplate technology as key differentiator and enabler of energy saving solutions”.

Danfoss key business objective, as provided by the company representative interview feedback, is market share increase and new market/applications segment penetration, by applying microplate technology to the whole range of products and ensuring that Danfoss is recognized as key heat exchanger supplier in the market. Aiming to achieve this with microplate technology as key differentiator towards competitors and enabler of energy saving solutions for customers. Here the company not only wants to provide just the commodity products, but with the new technology and improved efficiency, to improve and add value to the customers solutions, and at the end achieve better overall system efficiency and contribute to CO<sub>2</sub> reduction. This is emphasized by the company representative and reflected in it feedback during the interview, where future development and achievement of better energy efficient solutions is a long term goal regarding the microplate technology and the heat exchanger products.

“We would like to provide our customers not only products, but energy efficiency solutions. Therefore raising the awareness about the benefits of Micro plate technology is one of our key objectives as going ahead the major steps in our development will be with the learning gained, we will advance this technology and provide even better and more efficient solutions in the heat exchanger market. Here by further advancement we expect to make an overall impact to energy efficiency in district heating networks and heating and cooling applications, as well as significant contribution to CO<sub>2</sub> reduction”.

The hexact dimension tool, as software platform that support customers in selecting the right product from their system is of key value to Danfoss and their customers. Therefore the customer support provided with hexact tool should be only improved and further developed.

“It is crucial tool for the HEX business as designers could simulate our products according to any condition and choose the most relevant (price, dimension, delivery time) option”.

The main purpose of the hexact tool is to assist in selection of the right product for the customers system, here a significant opportunity lies for bundling in micro plate technology and enabling customers to have a better visibility of the difference in value that microplate technology brings. For example, it offers a comparison of products with traditional design and ones with microplate technology for the same selections criteria. Today this opportunity is not fully unified as it is also stated by the company representative.

“Currently microplate technology is mentioned in a low scale. But differentiation should be more visible. Especially by simulating the calculation differences between old fishbone and new micro plate heat exchanger types in the software will give customers better realization. They will be able to see the differences in performance after simulation of their applications”.

A summary to the business objectives section indicated that Danfoss is a new market player, with potential for increase of market share and penetration into new markets and applications. In the road ahead, microplate technology is viewed as a key enabler both for Danfoss as a business in its business objectives and for customers, and energy efficiency booster. Danfoss needs to raise awareness of the microplate technology and its visibility as supplier of heat exchangers while continuously introducing new products with microplate technology in the markets, and further utilizing the opportunities of customer support especially with the hexact tool.

The following conclusion can be drawn from the input of the company representative and the secondary research and own observations of the author as a marketing stakeholder in Danfoss: if Danfoss is to succeed in the goal of utilizing microplate technology as key differentiator, it needs to focus on the microplate technology as a separate communication and engagement topic, here by exploiting the opportunities with new digital marketing platforms, it should achieve that, the digitally addressable customers can validate the value microplate technology adds, through the heat exchangers to their systems. From the digital marketing platform ,Danfoss sales organizations should benefit by receiving input by lead generation for customers interested and ready to take the next step in implementing product with microplate technology in their systems.

## **2.5 Danfoss marketing communication approach and content for microplate technology**

Based on secondary literature research from available marketing communication material such as leaflets, website landing page and other internal marketing material as power point presentations and other documents, combined with authors own insights, a review analysis was done on the communication approach used and content available of microplate technology. Based on the research, we can point out that Danfoss has used microplate technology in a bundle package in marketing communication about heat exchangers; the heat exchangers themselves are named microplate heat exchangers. The content is focused on the

two product group of heat exchangers gasketed and brazed, and has supported new product launches. The micro plate technology is only a part of the communication, presented as a new feature of the products. There is no dedicated marketing material or content focusing only on the microplate technology.

In current marketing content available, micro plate technology is communicated alongside new product launches of heat exchangers, in both online and offline form, but generally with focus on more traditional content formats. Here is a list of the most significant marketing communication, content formats developed and used by Danfoss for marketing communication purposes as part of a new product launch marketing package for heat exchanger products with microplate technology.

- Leaflets,
- Power point presentations,
- Advertisements,
- Animation,
- E-mail signature,
- Roll-up posters,
- Exhibition material,(displays, posters)
- Direct mail
- Seminar invitation letter
- Website landing page, including video and marketing materials in pdf

The quality and quantity of the content itself is significant for further use over digital marketing channels, as proven by the B2B marketing award that the microplate campaign has won. There is sufficient quantity of content available that can be built upon in a new focused customer engagement activity based on digital marketing. The marketing activities conducted within the marketing campaigns for new product launches focused more on offline B2B traditional practices such as:

- Direct mail campaign,
- Events, Seminars and trainings,
- Exhibitions and fairs
- Prints advertising,
- Sales visit marketing toolbox

Here special emphasis is also made on empowering of the sales engineer with marketing toolbox during sales visits to customers. The online communication includes, publishing news articles on website and presenting the content on landing page, that consist of all the key product benefits with both video and additional materials in content format pdf. There was no separate website dedicated only to heat exchangers or to microplate technology. There has not been further utilization of social media marketing, search engine marketing of other digital marketing practices in the launches of the new heat exchanger products, or more importantly

no additional separate focused activities over digital marketing have been done for micro plate technology itself as a focus area. While this has proven effective in launching of the new products, with the change of the way customers interact with us, and emergence of all digital environment, Danfoss has a unique opportunity to further engage customer and focus on microplate technology with digital marketing. There is an opportunity to utilize digital media channels and further build upon existing quality content and develop a targeted digital marketing campaign. For this the recommended framework approach in the last chapter will provide basis and direction setting for such a campaign.

### **3 CUSTOMER INSIGHT RESEARCH**

#### **3.1 Research design**

For discovering the customer insight, in regard to their digital behavior and microplate technology, a quantitative method of survey was used. Given the diversity and global aspect of the sample, it was the most productive and efficient way for obtaining responses from this large and geographically diverse user group. For collecting the relevant input, the questionnaire was developed based on literature review and qualitative research. Further on, the section on target group and countries selection, as well as questionnaire design, are elaborated in more detail. In order to achieve a global perspective of the customer insight and to address a higher target group sample, the users of the Hexact software tool were selected as a customer target group for the quantitative questioner survey. The users of the tool are directly linked to the heat exchangers as products and represent a relevant target group for micro plate technology.

Hexact is a dimensioning and selection software used to correctly dimension and select the right heat exchanger based on application type. As mentioned before, heat exchangers are the products where Microplate technology is applied. Being by itself software, a digital tool, it also offered the opportunity to collect insight for the tool itself as it is regarded a business crucial by the company representative, as stated in the qualitative interview. The ability to reach out and send the questionnaire without need to obtain additional permissions from the users was also a key selection principle alongside the high relevance of the group. User permission to send questionnaire was already obtained by Danfoss with the download and installation of the hexact software by the users, the questionnaire consisted of 21 multiple choice and open end questions, spread over 5 pages (Appendix B).

The multiple choice questions always offered an option of open field for free entry. In the multiple choice questions, an option in the structure was included that was offering a number of choices, where one of the choices was excluding the rest and always including other as option and possibility to enter an open filed choice. For example, what kind of smartphone you own, offering choice of few types of smartphone, then an option of “I don’t own a smartphone” or other with free entry choice filed. This design of questions was used in order



to offer maximum options and better context for the respondents instead of direct excluding of pre questions. This type bundles the choice of type and excluding yes & no options for answering. Other question types included unstructured questions, where direct input from customers was needed, and that it will be used for qualitative review analysis, as well as used in the final section on framework recommendation. Here examples are websites they visit to learn about heating products, such as heat exchangers. Two types of questions were dichotomous and represented a direct choice of two options, applicable and not applicable.

Several question included rating scales, one selecting satisfaction of a topic and two measuring importance of different options offered, based on relevance of the given criteria. A scale from 1 to 5 was used, where 1 being least important and 5 being most important. Same was applied on satisfaction where 1 completely unsatisfied and 5 completely satisfied. Here also an option of 0 was offered, where 0 represented not applicable.

Several questions address the demographic factor where customers have the option to choose the country, as there was previous knowledge from the user sample of applicable countries. Choice of gender was limited to two options, with single choice option. Age was offered in ranges starting from, up to 25, between 25 and 40 then, between 42 and 60 and final 61 of more years old. Based on input from the qualitative interview and definition of the different customer types, one type of question offered an option for users to choose between their current fields of occupation, where also the option of other or free entry filed was provided. Data was analyzed and structured in a report by the 1ka report tool, giving possibility for statistical data view, charts overview, graphic or summarized reports. Some of the graphical generated elements are used to support the results argumentation ahead in the following sections.

The sample frame consisted of 2953 users of the Hexact tool, comprising both internal Danfoss employees and external customers as users. Geographically, users came from 78 different countries. The survey was conducted over the [www.1ka.si](http://www.1ka.si) online survey provider, and mail chimp, an email marketing tool was used to deliver the newsletter with the questionnaire. The survey was sent once, with one additional reminder email, sent to those users who have not responded/opened the initial survey email. In order to be more efficient and productive, the survey was conducted in English language. This can be to an extent considered as a limitation, given that with local language the response rate could have been higher, but the complexity of the task with the number of countries and languages was not optimal, therefore English was chosen as the language of the survey.

The survey was sent out to in 2 separate groups, due to list management function of the email marketing tool on 3.6.2014 and 4.6.2014 with an additional reminder on 10.6.2014 sent only to users who have not opened the initial mail. The majority of responses were within these days while the survey was open until 3.9.2014.

The survey was completed by 308 respondents, while 35 had done partial completion of the survey, making it to total valid 343 respondents and 11.6% of the addressed user group. The total response rate including the invalid was 552 or 18.6 %. Here I believe that with language localization, the response numbers would have been even higher, but the valid completed survey responses are at a satisfactory level for the purpose of this research. A total of 50 respondents took the survey in the period after the final reminder and closing of the survey.

### **3.2 Research goals and hypothesis**

As part of the survey, hypothesis were established to support the research goals in the digital media behavior and digital media channels area, as well as the awareness of micro plate technology; involving relevant target customers for the microplate technology as well as heat exchangers and enable the main goal of recommending a digital marketing framework for micro plate technology. The research goals are part of the overall research project goals, and cover the part of the quantitative survey, this goals will help us understand the addressability of this target group by digital marketing channels, identifying some channels they use and can be used to communicate with them, and get an insight on their understanding of microplate technology. The goals are listed below:

- Researching the digital media behavior of key customer stakeholders across selected markets. This will include their online search approach, the devices they use, their frequency and location of use, their most visited social media and websites, their research journey when they have a new project that includes heat exchangers.
- Identifying the relevant digital media channels for reaching and interacting with the key stakeholders, including social media and websites for micro plate heat exchanger industry (blogs, forums, portal websites, and company websites).
- Determining the level of awareness and understanding for microplate technology, energy efficient heat transfer and user satisfaction with the hexact selection tool

Based on the research goals, three hypotheses are developed. These hypotheses are very relevant for the final recommendation, as it provides the basis of building the framework recommendation by confirming one of the key criteria for a successful digital marketing approach and that is the relevance and addressability of the selected customers group. The first hypothesis is based on the notion of addressability, meaning if the customers are not active online on social media and use mobile devices, then the application of the digital marketing framework is not highly relevant for Danfoss. This is based on the literature review and the digital marketing characteristics. The second hypotheses is based on the input from the in depth interview, where the knowledge of microplate technology was ranked very high, and key for the business objectives. Therefore, we would like to confirm if there is a knowledge gap, that will be later an opportunity to address with the digital marketing framework. The third hypothesis is also based on the input from the in depth interview, where the customer characteristic of system design was very highly rated, and customers with this characteristic noted as highly relevant and important for microplate technology. For this

reasons we have established hypotheses that were tested in the online quantitative survey. These are:

- H1: The majority of target users are active participators online.
  - H1a: More than 50%, of target users go online and search for information every day.
  - H1b: More than 50% of target users are active users of mobile devices for online and apps.
  - H1c: More than 50%, of target users are active on social media
- H2: 90% of target users have the knowledge of microplate technology
- H3: The majority of the respondents will cover the field of system design.

Accepting or dismissing hypotheses and getting insight from the research goals, is of key value in the definition of the recommended digital marketing framework.

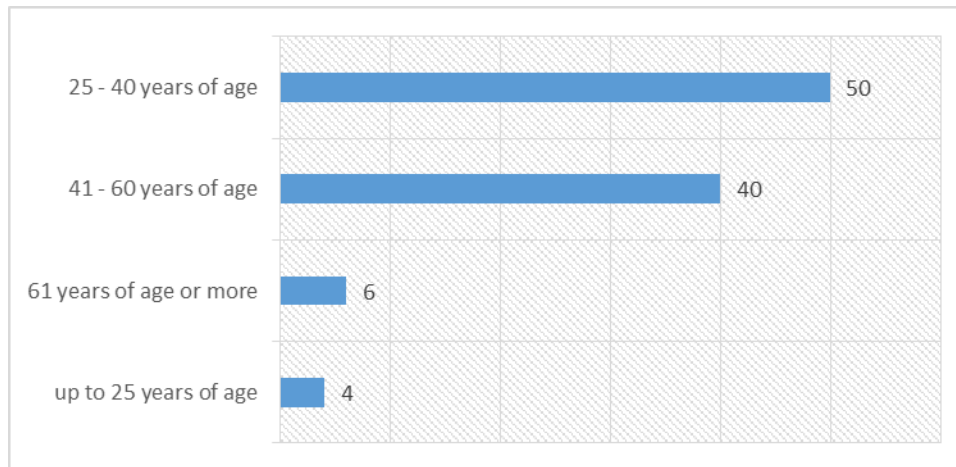
### **3.3 Results of quantitative research**

The presentation of the results is organized in three sections, covering sample characteristics, results from questions and argumentation of the hypothesis research. Within presentation of the sample characteristics, the gender, age group and field of work or occupation are covered. The presentation of the research question results includes summary and structured presentation of the findings from the survey. While in the last section, the hypothesis assumptions are argued.

#### **3.3.1 Presentation of sample characteristics**

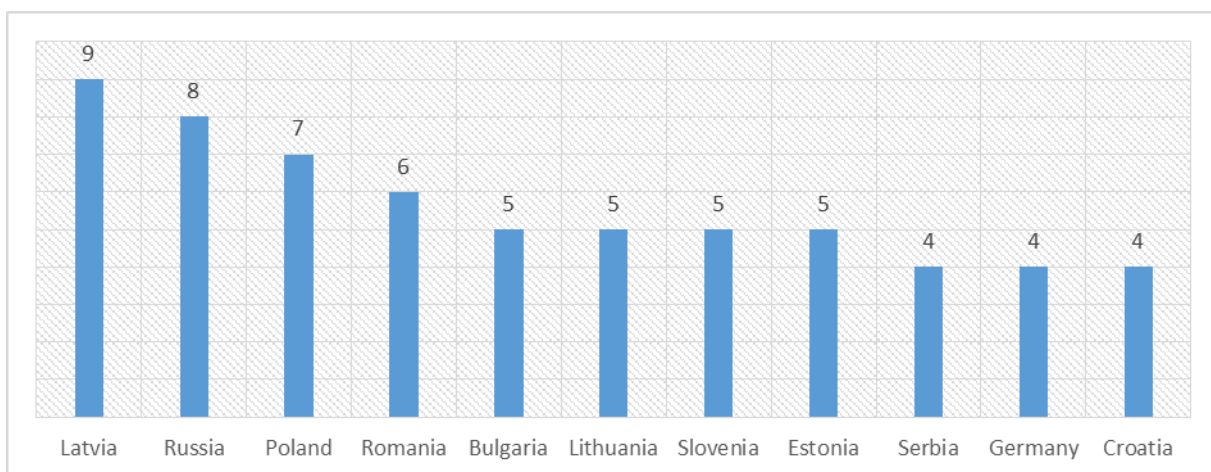
In the section dedicated to demographics, the areas were covered to understand the age group, gender and country of origin. Out of 300 respondents, we have 50% in the age group of 25 to 40 years closely followed by 40% being in the age group 41 to 60 years old. While only 4 % in the age group up to 21 years old and only 6%, being 61 years or more old. Regarding gender, we have an unequal split, so that 89% of the respondents are male and only 11% female. This is not unexpected as the target user group and professions include more male dominated engineering fields. On the figures 20 and 21 we can see the ratio regarding gender between female and male, and the distribution of respondents according to the predefined age groups.

*Figure 20. Respondent's age, in %*



Out for 78 different countries of origin, of the target user group of Hexact, on the survey we have 301 respondents coming from 47 countries. Most represented countries are Latvia with 28 or 9% respondents, Russia with 25 or 8%, Poland with 22 or 7%, Romania with 18 or 6%. On Figure 21, we can see distribution of respondents by country displayed by percentage of total, where results are included for countries representing a minimum of 4%, or 11 out of 47 countries overall represented.

*Figure 21. Respondent's by country of origin, in %*

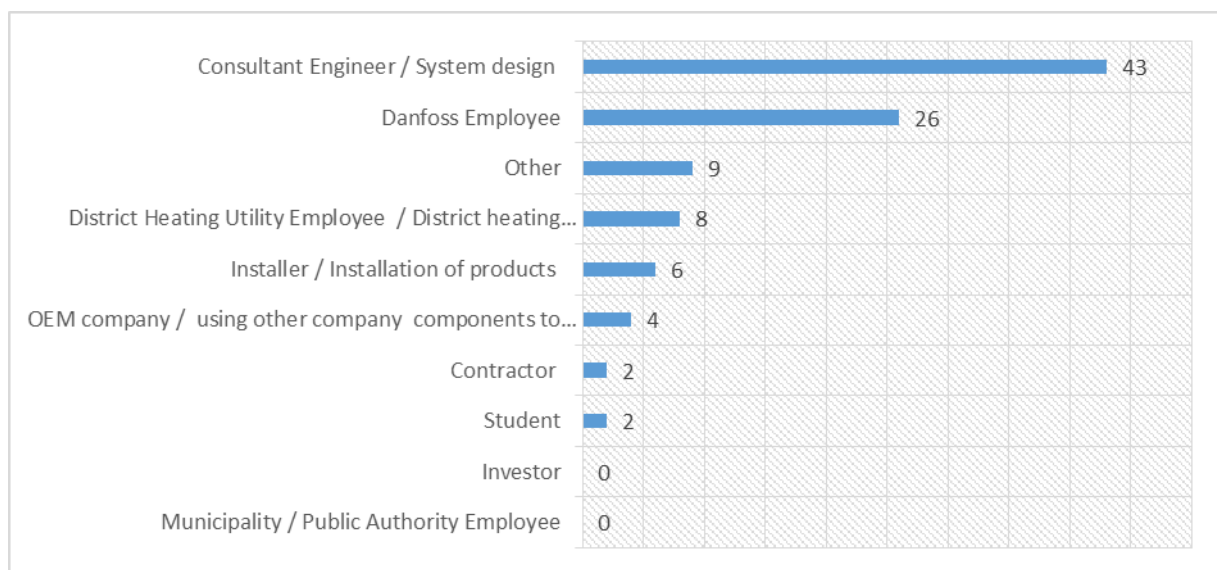


To understand the occupation and position that will lead to defining the customer type , the term field of work was used, and respondents were provided with predefined choices based on input from the qualitative interview, as well as leaving another-open filed option so they can define any other not included. Here we see that the complex situation of the high number of different stakeholders present, with many different roles, from direct buying customers, to influencers and key decision makers. The approach in defining all categories was both the title and the application of the work, place of work so we can offer the best possible frame for the respondents.

We have responses to all 9 predefined categories, plus key additional being distributor, sales representative or other variation of distributor and some unique one time entries as a landlord, producer of medical equipment and others.

Out of 301 respondents the most significant customer group is consultant's engineers and Danfoss internal employees, followed by District heating utility, and Installer. While OEM was last. Least represented were Students, Investors and Municipality. On figure 22, we can see, overview and percentage size, of our respondents by the fields of work.

*Figure 22. Filed of work and occupation, in %*



The result is understandable, because the target group of users of hex act are primarily engineers dealing with system application design both external and internally Danfoss employees supporting customers, and as mentioned before, these are a key target group for digital marketing communication regarding microplate technology that can improve their system design efficiency.

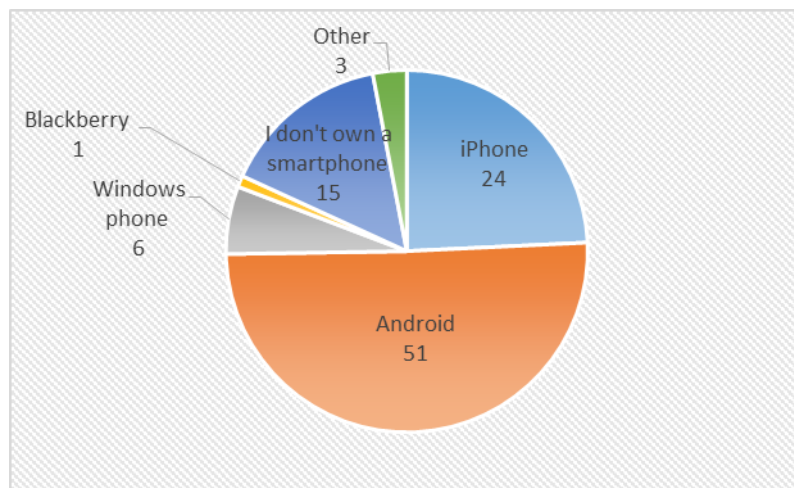
### **3.3.2 Presentation of results from questions**

In this section the results of the survey question will be presented, and this will cover the following topics: Devices, Social media, Search Engine use in context of HEX, Websites and content information areas of importance, Microplate technology, hexact and energy efficiency in heat transfer.

The section covering the mobile devices used, answered the question of whether they own a smartphone/tablet device and what type of smartphone and tablet, including the frequency of use. The results indicate that the majority of the responders are device wise digitally ready.

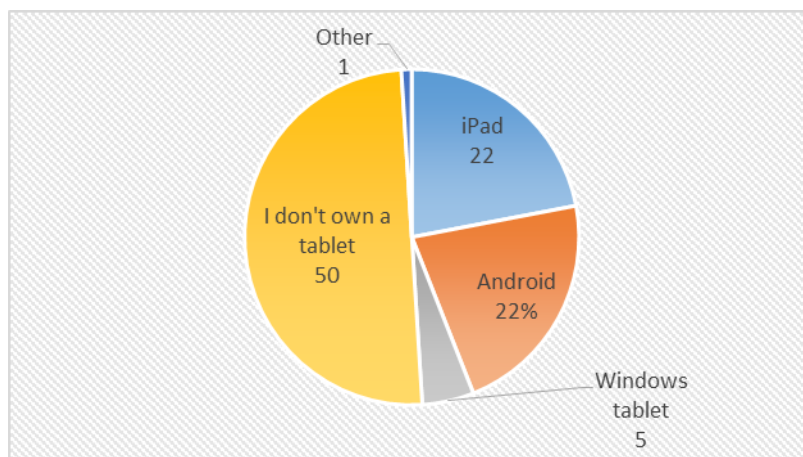
With total number of respondents being 339, the smartphone device findings point out that only 15% of our respondents do not use a smartphone, and 85% own a smartphone. While 24% use and iPhone or Apple brand of Smartphone and a high number of 50 % use a smartphone from various manufactures operating on the android mobile platform. The rest of the platforms / manufactures are Windows phone, followed by Blackberry and then all others representing. On figure 23, we can see the ration of ownership and brand preference of smartphones among our respondents.

*Figure 23. Smartphone ownership and brand preference, in %*



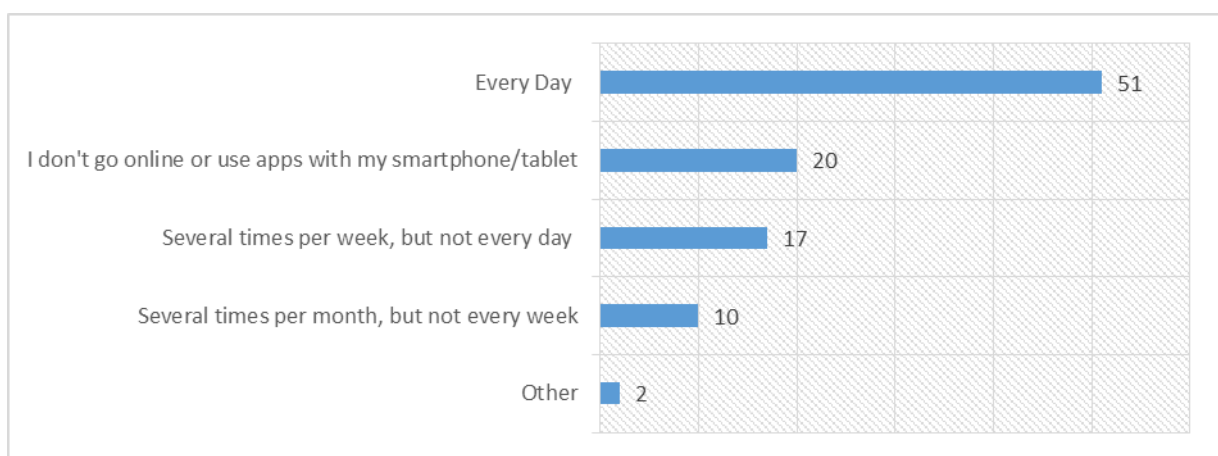
In the area of tablets, the results differ, so that out of 337 respondents the results show that, 50% do not own a tablet, while 22% own an iPad of Apple brand and also 22% of the respondents own tablets from various manufactures running android mobile platform, followed by windows tablet and all other. On figure 24, we can see the ownership ratio and brand preference of tablets among our respondents.

*Figure 24. Tablet ownership and brand preference, in %*



On the question covering usage frequency, out of 337 respondents the results show a high number of 51% have stated they are using their smartphone/tablet to go online or use apps every day, while further 17% stated they use the smartphone/tablet to go online or use apps several times per week, but not every day and additional 10% use it several times per month but not every week. A total of 20 % have replied that they do not go online or use apps with smartphone /tablet. This is very interesting because either they only use the smartphone for making phone calls or don't own one, that actually corresponds with the number of users not owning a smartphone. While other represented 2% of the total. On figure 25, we can see the frequency of use of smartphones/tables for online usage and usage of apps.

*Figure 25. Usage frequency of mobile devices for online and apps, in %*

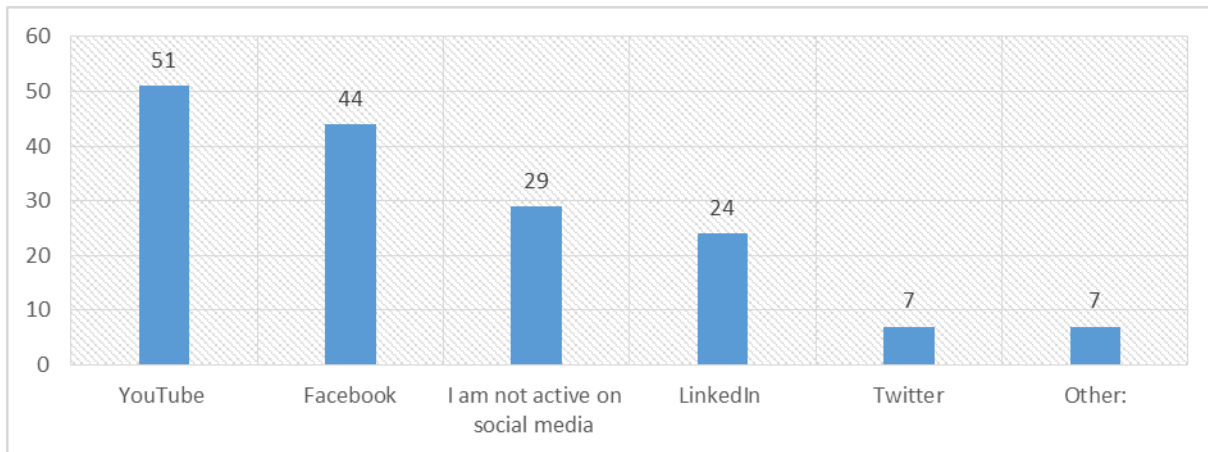


In the group of questions related to social media we have covered, identification and frequency of usage of the biggest social media networks, where one question with focus on searching and watching videos on the biggest video platform YouTube.

On the platform specific question, a choice of biggest social media networks was offered, with possibility of multiple answers. The question was focusing on visiting at least once, with timeframe of last two weeks, from the day of the survey answer. Out of 335 respondents, in the last two weeks, most visited is YouTube, followed by Facebook, and LinkedIn, while only small portion have visited Twitter and same amount to all other visited other less known or local social media networks. Further, 29% of the respondents replied that they are not active on social media. From the results we can conclude that 71 % of the respondents have been active on social media at least once in the two weeks prior to their answer to the survey. This is significant finding, as it confirms that the target audience for Danfoss regarding digital media is addressable over these channels as 71 % of the target group is active in social media, and the trend can only go towards increase of this number as social media continues with more penetration and enlarging of user base. On figure 26, we can see the distribution between social media networks, where our respondents have been active at least once in last two weeks of the survey.

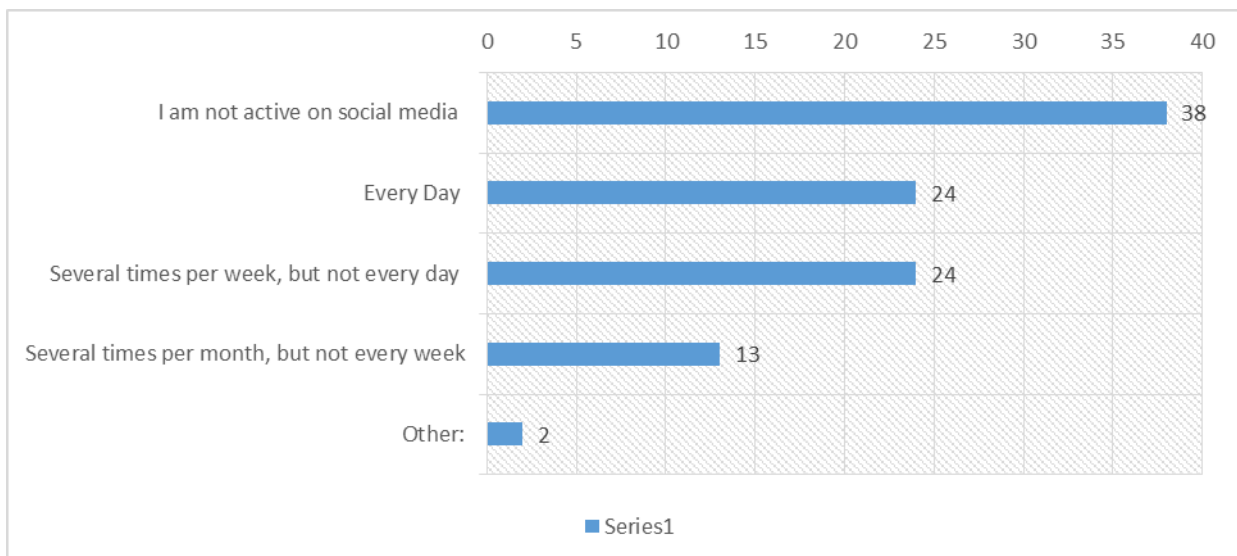


*Figure 26. Activity in visiting by Social media network, in %*



When asked about how often they check their Facebook/LinkedIn or other social media profile, out of 308 users, 24% replied that they do it every day, another 24% replied they do it several times per week, but not every day, 13% stated they check it several times per month but not every week and only 2 percent gave other timeframes, while 38% replied that they are not active on social media. Here we can see a difference in the previous question where 29% claimed they are not active on social media and here the number is 38%, the difference can be explained by the fact that the lower percentage in the previous question is because of listing the specific social media network by name as choices in the question, while the second one is more general, therefore the lower percentage of not using or higher of usage comes from the fact that respondents have identified themselves with the social media networks in the questions. On figure 27, we can see the frequency of checking, by respondents of their social media profiles on Facebook, LinkedIn or other social media networks they are on.

*Figure 27. Checking frequency exact user social media profiles, in %*

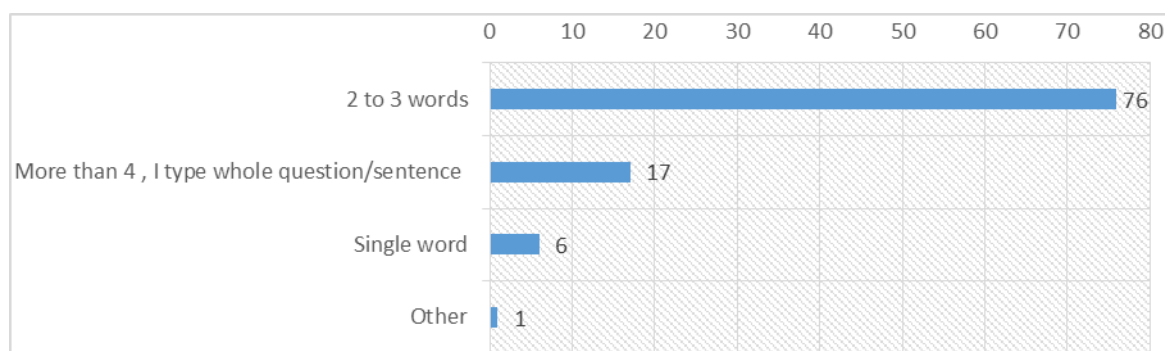




As video content is very important in digital marketing, the users were asked if they search and watch videos, regarding heating product on YouTube. Here the goal was to establish the usage of the platform and also the context of usage for information on heating products where heat exchangers belong. Out of 308 respondents, 58% use youtube for searching and watching videos on heating products.

In the section related to user behavior in online search, the topics of what search engine provider they use was covered, and the typical number of words used when they search on Google. It's possible to assume that a vast majority of users go online and search for information and websites using a search engine provider such as Google. Further input is collected on specific websites that the users visit to learn more about heating products. Out of 320 respondents, almost all use Google, while the minimal number of others use Bing or other local, here we can see the origin of country and inputs given that is related to Chinese and Russian local search providers. Out of 319 respondents, the majority use 2 to 3 words, while 17 % more than 4 or type a whole sentence/question, and only 6% are using one word, all others covered 1%. On figure 28, we can see the respondents search pattern in using a number of words.

*Figure 28. Number of keywords used for search, in %*



In the section related to the online behavior, we have asked for feedback regarding frequency of online activity from the hexact users, specific websites they go to visit, behavior patterns when visiting website and ranking of content information areas by importance. On the question how often did they go online and surfed on the internet in the past six months, out of 305 respondents, 76% stated every day, 18% replied they go several times per week but not every day, while 5 % answered, several times per month but not every day. Respondents that gave other open choice answers where below 1%. Here we can conclude from the result that 99% of the respondents are active online, while a majority of 76 % go online on daily basis making them addressable for communication and engagement over digital marketing channels.

On the question regarding direct input, users were asked to name in open files, maximum 3 websites/forums/blogs they visit, to learn about heating products. Out of 300 users and after cleaning up irrelevant and not applicable entries, a total of 219 names of

websites/blogs/forums were valid for the research. After analysis, 4 different groups were identified and all inputted names were grouped accordingly. The groups are Danfoss and Danfoss related websites, other companies including competitors, forums & industry portals and similar and search engine along with social media. The names given were in form as full website address or only the names of companies and websites, without URL formatting. By far the most inputs, 77 in total are for Danfoss and Danfoss related sites category out of which Danfoss.com is most mentioned with 55 inputs. In the second category on industry portals, out of 56 total mentions, most mentioned is the portal abok.ru with 9 times, followed with engeneeringtoolbox.com with 6 times. In other companies including competitor's category, total number of inputs is 68, with most popular company being Alfalaval. On Table 2, we can see a list of websites /forums/blogs customers visit to learn about heating products. The results are showing a cleaned up list.

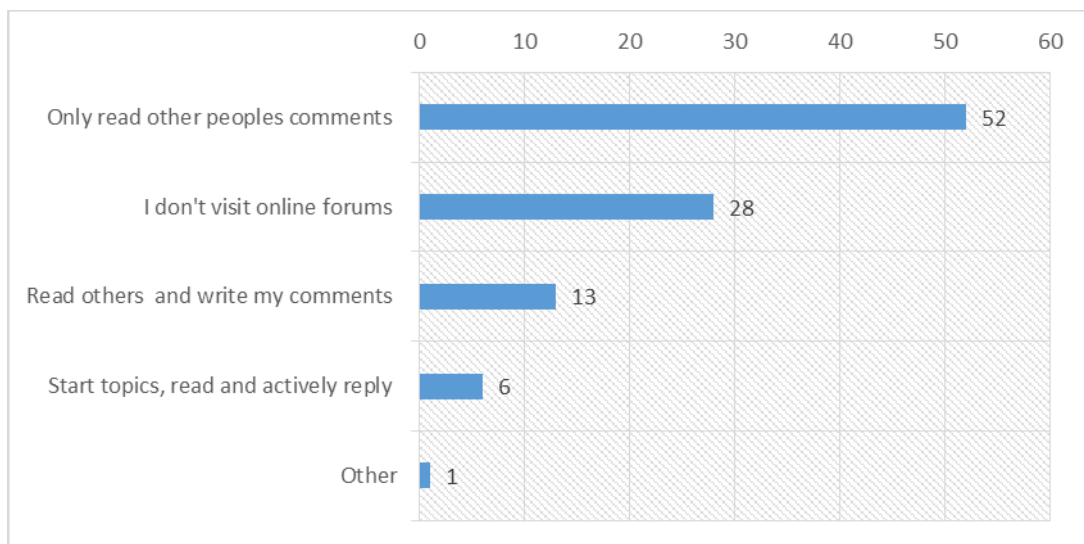
*Table 2. Webistes/Forums/Blogs Customers Visit to Learn About Heating Products*

Danfoss		Industry portals and forums		Other Companies and Competitors	
www.danfoss.com	55	www.abok.ru	9	alfalaval.com	11
ru.heating.danfoss.com	4	www.engineeringtoolbox.com	6	tahydronics.com	6
heating.danfoss.com	3	forum.abok.ru	2	www.swep.net	4
www.danfoss.ru	2	wentylacja.com.pl	2	Caleffi	4
hexact.danfoss.com	2	epületgepeszet.lap.hu	2	www.carrier.com	3
bg.danfoss.com/	2	heatinghelp.com	2	Viessmann	3
kyte.danfoss.ee	2	www.bjgr.cn	1	Grundfos	3
www.incalzire.danfoss.com	2	www.chinaheat.org	1	www.unex-eu.com	2
heating.danfoss.dk	1	www.ogrzewnictwo.pl	1	Samson	2
www.heating.danfoss.pl	1	www.heatexchangers.org	1	Siemens	2
www.danfoss.com/slovenia	1	www.inzynierbudownictwa.pl	1	www.belimo.com	2
www.danfoss.com/lithuania	1	www.otoplenie.eu/	1	herz.eu	2
www.danfoss.at	1	agfw.de	1	daikineurope.com	2
www.danfoss.is	1	spirax sarco academy	1	Wilo	1
ECL portal	1	hydraulischer abgleich.de	1	GEA	1
		hcbbs.BBS	1	Schneider Electric	1
		www.hc-products.com/	1	Heimeier	1
<b>Search and Social Media</b>		engineering.com	1	www.funke.de/	1
youtube	6	www.proektant.org	1	Emerson	1
Wikipedia.com	4	diynot.co.uk	1	Oventrop	1
www.google.com	2	industryinfo.bg/	1	www.emmeti.com	1
www.baidu.com	2	www.pipelinedevco.com/	1	www.nasa-d.com	1
linkedin	1	cnki.net	1	www.buderus-tr.com/	1
ask.com	1	epgeponline.hu	1	ридан	1
		megsz.hu	1	теплообменник.рф	1
		kotel.ua	1	energyeco.com.ua	1
		strojnstvo.com	1	www.vilpra.lt	1
		www.matematyka.pl	1	romstal	1
		Eng-Tips	1	Purmo.ee	1
		www.ehi.eu/	1	www.valtec.ru	1
		www.cti2000.it/	1	www.airtradecentre.com	1
		rosteplo.ru	1	Hoval	1
		BSRIA/CIBSE Website	1	rehau.com	1
		rynekinstalacyjny.pl	1	podstvojo streho.com	1
		http://forum.edilclima.it	1	trane.com	1
		http://mechanical-hub.com/	1		
		hvac-talk.com	1		
		www.cheresources.com/	1		
		http://checalc.com/	1		

The input collected by this survey section is very valuable for the final part of the research and the recommendation to Danfoss, as it shows that hexact users are not only active online, but they can also identify the websites they visit for additional information and learning. Here of importance to Danfoss is the fact that that Danfoss websites rank very high with customers. Therefore, there is an opportunity of engaging with customers on industry portals and forums when we speak about microplate technology.

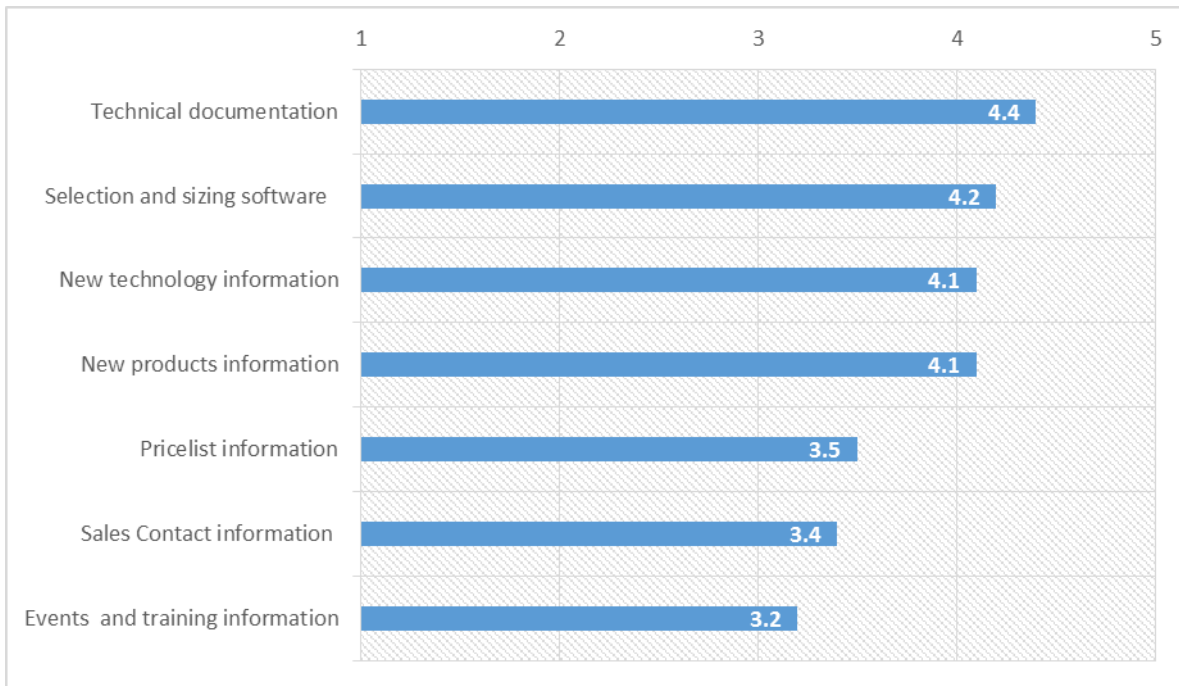
On the question of online behavior patterns on forums and when searching for business information, out of 313 responses, half of the users only read other peoples' comments, a quarter read others and also write own comments, while only 6% start topics, read and actively reply and 1% gave other input in open file, while a third do not visit online forums. On figure 29, we can see percentage distribution between the users based on their behavior pattern when visiting forums and searching for business information.

*Figure 29. Behavior pattern of users on online forums, in %*



With the next question, respondents were asked for their feedback in evaluating by importance the listed information content areas on a website, on a scale of 1 being least important to 5 being most important. A total of 296 respondents have made the evaluation and have evaluated technical documentation with highest average score of importance 4.4, followed by selection and sizing software of 4.2, then closely followed by 4.1 for both new technology and new products information, while pricelist was evaluated with average score of 3.5 and sales contact information with 3.4, and last with lowest average score of 3.2 was achieved by events and training information. Here the high scores of software and new technology are important as they relate to hexact and micro plate technology, and as they both fit in those content areas. In general, all content areas were of importance to the users as minimum average score was not below 3. On figure 30, we can see the ranking of importance for the different website content areas, rated on a scale from 1 to 5.

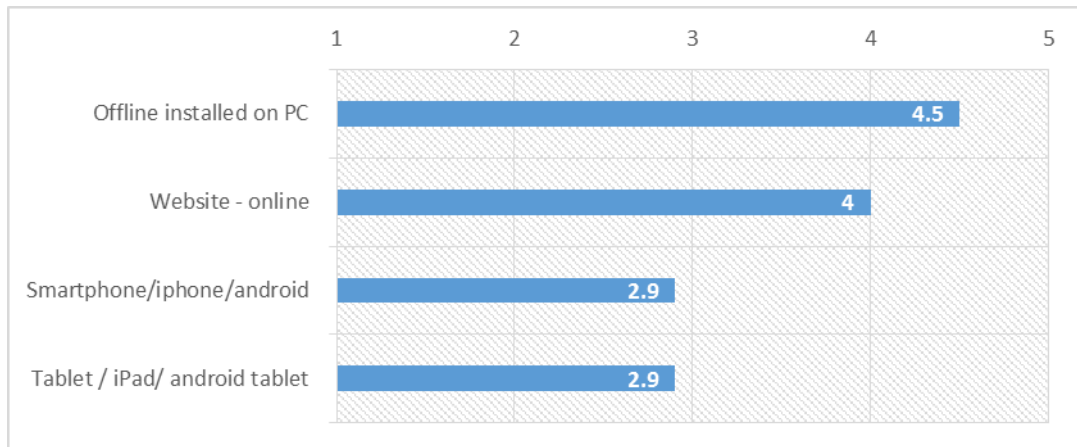
*Figure 30. Website Content area importance*



In the segment focused on the microplate technology, the users were asked about their knowledge of micro plate technology, then to rate the importance of efficient – energy saving heat transfer by a heat exchanger followed by user experience satisfaction rating and rating of importance of different platforms for the hexact software. On the question of satisfaction with the user experience of hexact selection tool, 299 users have rated their experience on a scale of 1 to 5, where 1 is completely unsatisfied and 5 is completely satisfied. 41% of users have rated the experience with 4, completely satisfied group giving a rating of 5 is represented with 22%, a further 21 % gave rating of 3, while rating of 2 was represented by 7% and rating 1 or completely unsatisfied with only 3%. Another option was also offered, as 0 of not using hexact, here 4% of the users have stated that they do not use hexact. The results show that user satisfaction is positive and the majority of users are satisfied with the hexact tool.

Users were also asked to rate the importance of different platforms for the hexact tool. The tool is currently only available on the offline PC platform and the other platforms were tested on their importance for future development. The rating was done on a scale of 1 to 5, where 5 is highest importance and 1 lowest. 291 respondents gave average rating of 4.5 to offline installed on PC, 4 to website online platform and 2.9 for smartphone and tablet. Here we can recommend that the next step of development for the software, should be to provide an online website version next to the offline one. On figure 31, we can see the rating of the platforms.

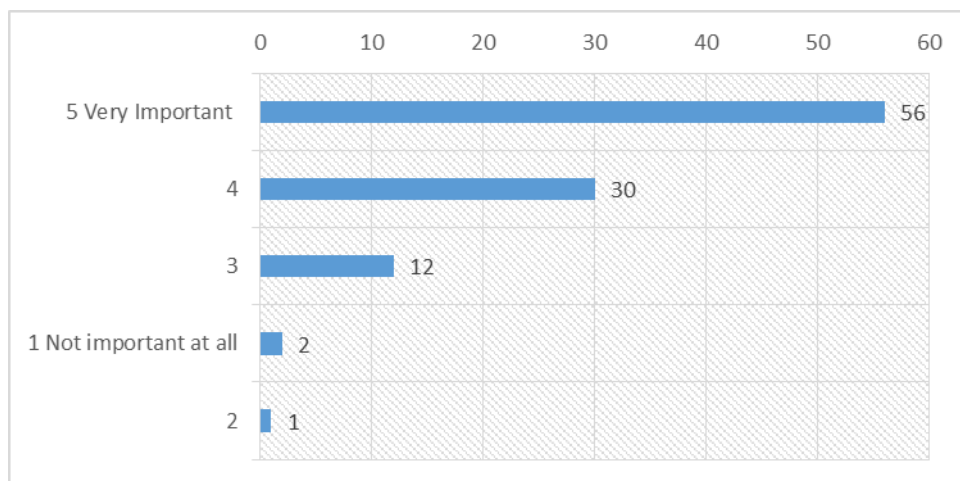
*Figure 31. Exact tool platform importance*



Out of 302 respondents 58% answered that they know what microplate technology is. Based on the hexact user sample and input from the interviews, this result is not satisfactory as almost all or between 90 to 100% as expected by the company representative should know what microplate technology is, and can elaborate about its benefits to their system.

A clear benefit of microplate technology is the efficient-energy saving heat transfer as a result of the new design. Therefore the respondents were asked to rate the importance of this function on a scale of 1 being not important at all, to 5 being very important. Out of 301 users, 56% rated it very important, a further 30 % rated it with 4, followed by 12% giving a mark of 3, while only 1% a mark 2 and mark 1 or not important at all had 2% of respondents. From the result, it can be concluded that this function or efficient energy saving in the process of heat transfer is of significant importance to the users of the hexact software and overall customers of heat exchangers. On figure 32, we can see graphical presentation of the rating by percentage.

*Figure 32. Energy efficient heat transfer rating, in %*



### **3.3.3 Result of hypothesis testing**

Based on the received results from the survey, the hypothesis assumptions are here reviewed and elucidated.

The assumption that majority of target users who responded on the survey are active participators online, was supported. The conclusion is based on results that reveal, for H1a, 76% go online and surf the internet every day, while 72% visit forums online when searching for business information. In the case of H1b, 78% go online and use app with their mobile devices and in the case of H1c, 72% of the target users are active on social media.

The assumption that level of knowledge of microplate technology is at least 90% of respondents, has been dismissed, as only 51% stated they know what microplate technology is. This number also includes the 26% Danfoss employees that should know the microplate technology by heart. The current percentage is not satisfactory, and is an area that will be used as opportunity area for improvement in the recommended digital marketing framework.

The last assumption that the majority of target users will cover the area of system design by their position or field of work, was supported, as 43% of users who participated were consultant engineers, and 26% are Danfoss engineers who also in support of customers use the hexact tool to assist in selection for the right product for the customers system design. The assumption is of importance, since the system design area is topic closely linked to microplate technology.

The results of hypothesis testing, supported that the target users are active in online digital media, the majority of them do know what microplate technology is, while also the majority of the target users in their field of work are dealing with heating system design.

## **3.4 Summary of findings**

The main goal of the survey research was to determine digital media behavior and so to validate the addressability for the target group for future digital marketing communication, including feedback and input on specific online websites they use. Additional insight was collected on the user experience of the hexact tool and the level of knowledge of the microplate technology.

The survey results and with that the research insight gained, are with global perspective as users from 47 different countries participated with their feedback. The two largest groups by field of work are consultant engineers and Danfoss employees, both key stakeholders for the microplate technology, one on the supporting internal function and other in the external key influencer role of system specification.

The findings reveal that a considerable number of users own smartphones and tablets, and they use them frequently to search for information online. Here smartphone usage is higher, as 75% own a smartphone and with tablets it is only 50%. The frequency of usage is also high, as 51 % go online every day and only 20% do not have or go online with their devices. As search engine is the most popular way of searching for information online, the level of usage was checked with the users and 100% of users use search engine providers to look for information of websites online, where Google is with 93% of the users the preferred choice of search engine provider. In search behavior, 76 % of the users use 2 to 3 words when initiating a search.

In the section dedicated to Social Media and Video, the results reveal that 71% are active on social media, where YouTube is the most popular platform followed by Facebook and LinkedIn. The frequency of usage among the user group is also high as 24% use it every day, followed by a 40% who visit it several times per week and month. As the most preferred platform, YouTube is also one where search is reformed and 58% of users actively search and watch videos for heating products. The survey has given insight on the behaviors on online forums and blogs where 52% of users are passive readers, 20% are actively engaged in commenting and starting up discussion topics and questions. A concrete confirmation of valuation was received on the importance of provided content topics on website. The topics provided are regarded as important for Danfoss on their websites and all of the topics scored above the average with importance. Here the new technology content topic, where microplate technology information can be related to, scored on average high 4.1 out of 5.

The survey has provided input from customers in the form of an input of websites/forums and blogs they visit. Here a total of 216 entries were received out of which the most important are the industry portals, forums and blogs, where Danfoss can utilize the opportunities to engage customers over digital media and especially in the case of microplate technology. For this research this section is of great importance and will be related to, in the final recommendation part of the thesis.

A relevant topic since conducting the survey with users of hexact tool was to get feedback on user satisfaction and future platform evaluation. The results here are good news for Danfoss as 90% of the users are satisfied with the tool, in the rest 10% only 3% are completely unsatisfied.

On future platform hexact users alongside the current model of offline PC, they ranked high the importance of online website version, while mobile like smartphone and tablet was ranked lower.

The main benefits of microplate technology and savings are due to the more energy efficient and saving heat transfer function of the hexact exchanger. Therefore, it is critical to get feedback and rating from the hexact users of the importance of this function. A significant

number of hexact users, on their feedback, have high rating, 30% rate important and 56% as very important, for the function of energy efficient heat transfer.

Validating this claim then it is also expected that 90% of the users will know what Microplate technology is and that it can bring them more energy efficient heat transfer to their systems. Here the results from the survey show that this is not the case and 46% do not know what Micro plate technology is. Here the significance of the numbers is even bigger as we expect the 26% of Danfoss players in the survey to already know what microplate technology is. Here is opportunity for Danfoss by utilizing digital marketing platform and communication to improve the current situation.

To recapitulate from the results we can conclude that the target group, users of the hexact tool are digitally addressable, they are active users of devices and online platforms such as websites, blogs and social media networks. They highly rate the importance of energy efficient heat transfer, on the other hand a significant number of them do not know what microplate technology is, opening an opportunity for Danfoss, for utilizing digital media channels to convey the benefits of microplate technology in achieving energy efficient heat transfer.

## **4 RECOMMENDATION FOR DIGITAL MARKETING FRAMEWORK IN THE CASE OF DANFOSS MICRO PLATE TECHNOLOGY**

### **4.1 The digital marketing framework**

The key outcome from this research project is the recommended digital marketing framework for microplate technology that will provide valuable input for Danfoss to further act in the area of digital marketing, as well as provide basis for further research in the field. Based on the literature review combined with the primary and secondary research input collected, it is possible to define and present a recommended digital marketing framework for microplate technology.

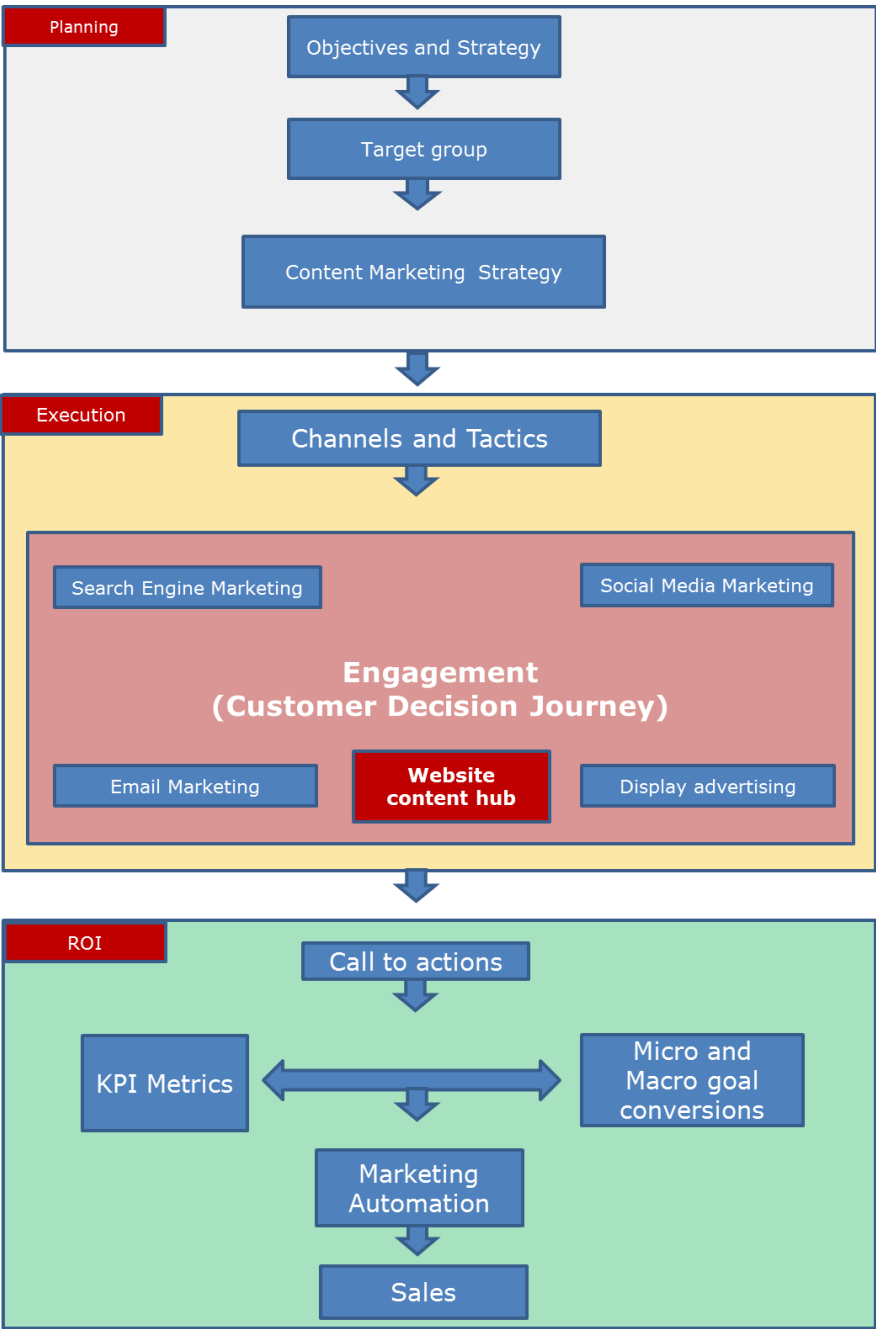
The recommended framework consists of 3 components, each component, has multiple different sections and activities. The components can be implemented, in same time, as there are many linkages in between.

The first component is covering the phase of planning and content development, where the objectives, overall strategy and target group are first defined. Then secondly, the content marketing strategy is defined, including the purpose of the content, the various formats, the platforms to be used to host the content, and the planning of content development. Proposed planning documents here include a documented objectives strategy and customer group, then a detailed content marketing strategy plan with timeframe and plan on the content development.



The second component is covering the phase of execution that covers the selection of the specific digital marketing channels and tactics to be used for distribution and activation of the content and achievement of customer engagement. Recognizing the customer decision journey is of key importance. Planning documents include a detailed execution plan with channels tactics used, presented with timeframe allocation, indication of key performance indicators (hereinafter: KPI) measurement goals, and a detailed mapping of perceived customer decision journey. On figure 33, we can see the high level presentation of the recommended digital marketing framework, for Danfoss microplate technology

Figure 33. Recommended digital marketing framework for microplate technology



The last component is focusing on the return on investment impact of the framework, and is covering the definition and implementation of KPI metrics, along with definition of micro and macro conversion goals, for the specific call to actions and outcomes. The overall objectives are broken down to specific and measurable targets, and linked with the execution plan in the previous execution segment. Then in this component, the crucial connection and value added from digital marketing is done by linking the outcome of the framework to sales with the marketing automation process and supporting platform, by lead generation, nurturing and transfer.

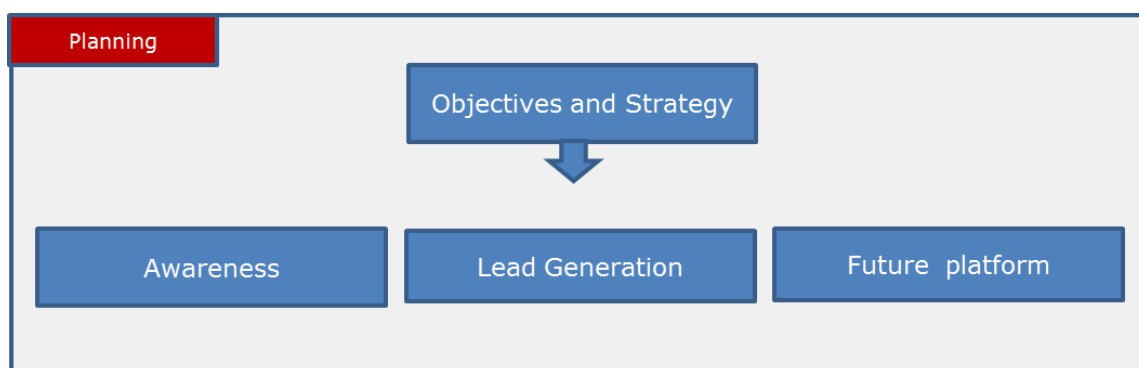
## 4.2 Objectives and strategy

Based on the business objectives defined by the company representative and the customer insight, the next objectives of the digital marketing framework are recommended to Danfoss:

- **Increasing awareness** about microplate technology and Danfoss as a manufacturer of plate heat exchangers. Example target, reach awareness of microplate technology with 70% of consultant engineers in a target market.
- Achieving **lead generation**, and support the personal selling function, by lead nurturing and transfer to sales. Example target, # number of new sales leads.
- Establishing a **futureproof platform** that can be utilized for engaging customers when launching new products and expanding microplate technology.

On figure 34, we can see the three key objectives of this digital marketing framework.

*Figure 34. Key objectives of the DM framework for Microplate technology*



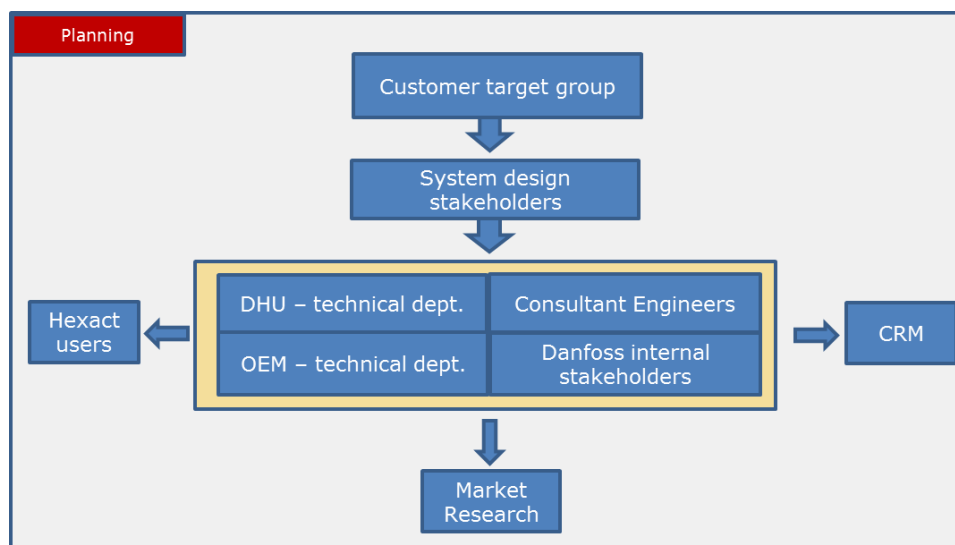
The strategy is delivery of increased level of awareness about the microplate technology by focusing fully on the technology and utilizing the various digital marketing channels and tactics to achieve high level of customer engagement, trough content focused on the microplate technology. Secondly in the later steps of the customer journey to present the product portfolio with applied microplate technology, and through the marketing automation

process and model of ranking, deliver specific interested leads to sales to follow up, where the end result is to make a documented impact on sales revenue by converting the leads to buying customers by sales. And the last part is by establishing the framework to create a sustainable platform for later usage in launching new products and explaining the microplate technology. This is to be achieved by carefully planning the content strategy and content platforms.

### 4.3 Customer target group

The recommended targeted customer group for Danfoss regarding the digital marketing framework is the prospects involved in heating system design. According to the customer mapping, we find this customers as consultant engineers, technical department in district heating utilities, technical department in OEM customer, as well as internal Danfoss stakeholders who are involved in supporting customers in their heating system design. These are technical support, sales engineers and customer service center involved. The selection is based on the relevance of the microplate technology for heating system design and its impact on improving system performance. These are relevant areas of interest for system design involved stakeholders. On figure 35, we can see the overview of the, recommended customer target group with indication for sources from where Danfoss can identify the customer group.

*Figure 35. Customer target groups*



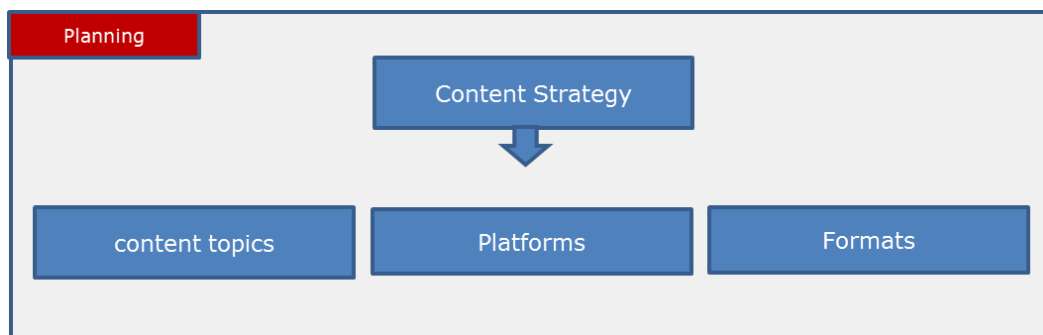
Danfoss should utilize its exiting, options in identifying the exact target group, and here many possibilities exist. The users or the hexact tool, are a key target group as more than 70% of them qualify for the system design proposition. Another key asset that Danfoss should utilize is its own customer relationship management (hereinafter: CRM) system and the content it holds, as this type of stakeholder is key for Danfoss and represented in its CRM system. By utilizing its own CRM, and the hexact users as start, a strong target group can be identified, and further expanded by customer intelligence research, as the number of people involved in system design or target companies is not as vast as in other industries.

## 4.4 Content marketing strategy

The content marketing strategy covers the planning and development of targeted content as well as establishing content platform that can host the content, and from where the execution and customer engagement can happen, for example a dedicated website.

The recommended content strategy in the case of microplate technology is to focus fully on the technology part and communicate about the heat exchangers products at the end of the journey. Customers need to discover the technology and though the technology, later discover the products it is applied to and the benefits it brings. The emphasis is on the educational perspective, where the microplate technology is explained and put into perspective with the applications where it affects, and the heat transfer function it improves, with end effect of improving the energy efficiency of the whole system. The content should not be developed in the traditional product first approach, meaning selling through product features, but focus on educating the customers and helping them comprehend the value that this new technology brings. The content on products comes only when the customer is at a point in the journey where he shows intention to utilize the benefits and apply the technology in his system design. On figure 36, we can see the three elements of the content strategy, the content topics of interest toward the customer, the platforms where the content is hosted, and the formats that the content is developed in.

*Figure 36. Content strategy elements*



The recommended topics of interest, for the new marketing content in the case of microplate technology should provide answers to following example customer needs:

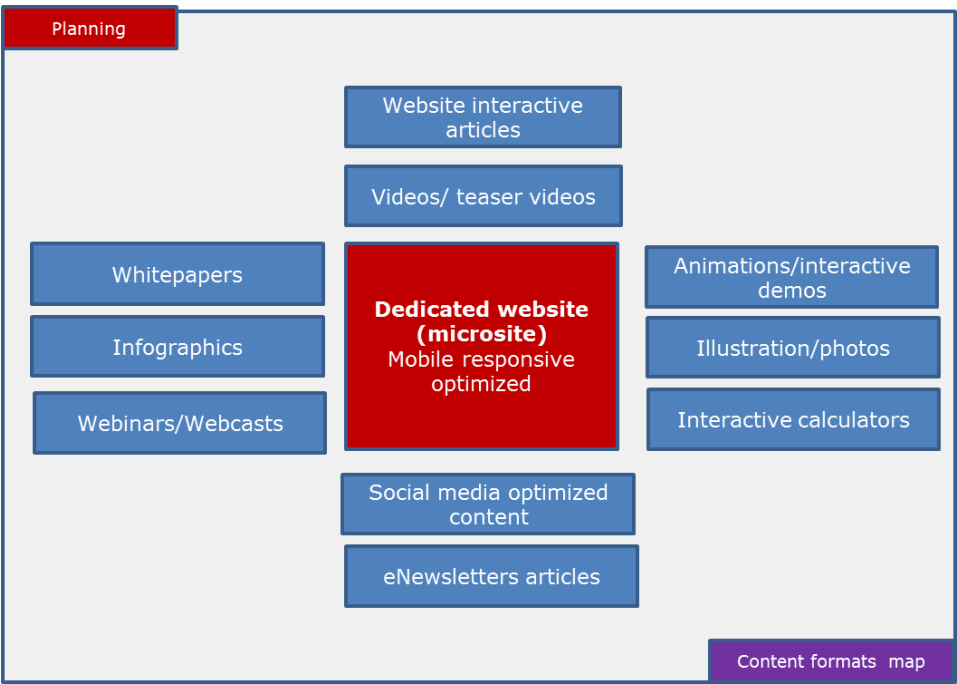
- What is microplate technology?
- The impact of microplate technology on the function of heat transfer in a heating system?
- The effect of using applied microplate technology in a heating system?
- How can microplate technology be applied in a heating system?
- Which Danfoss products have “microplate technology inside”?
- Do you have a case study in project where the benefits of microplate are documented in application?

Based on deeper research, these assumptions can be further elaborated to cover more deeply and technically the field of application of microplate technology. Customers should find compelling and engaging content that will educate and not present selling arguments. The sales process starts after prospect leads are handed over to sales, where the sales engineer can utilize the value selling techniques and argumentation. A vast number of content formats are available to Danfoss to apply in developing the marketing content for microplate technology. The content formats and platforms where they are shared and hosted are closely linked.

For the case of microplate technology, a dedicated website is recommended to function as the central content hub and customer engagement platform, linking all other digital marketing channels. Being the key conversion place for lead generation, the website should be mobile optimized and deliver tailored customer experience on desktop and mobile. The website content hub platform can be also utilized to support the launch of any new products that will be based on the microplate technology in the digital environment. The website should not be the only platform for content hosting and sharing, it is also recommended that additional especially social media platforms are used to place and host the content that will be linked with the website. Here for video, YouTube, Facebook, then for power point presentations, slide share, as well as many forums and specialized blogs where content can be also shared.

The option on content formats is vast. Alongside the website content hub, an example of selected group of content formats are recommended. However, with the vast number of content formats available, this can be optimized even more when the specific planning is in motion. The selected number of recommended content formats are presented on figure 37:

Figure 37. Content formats map



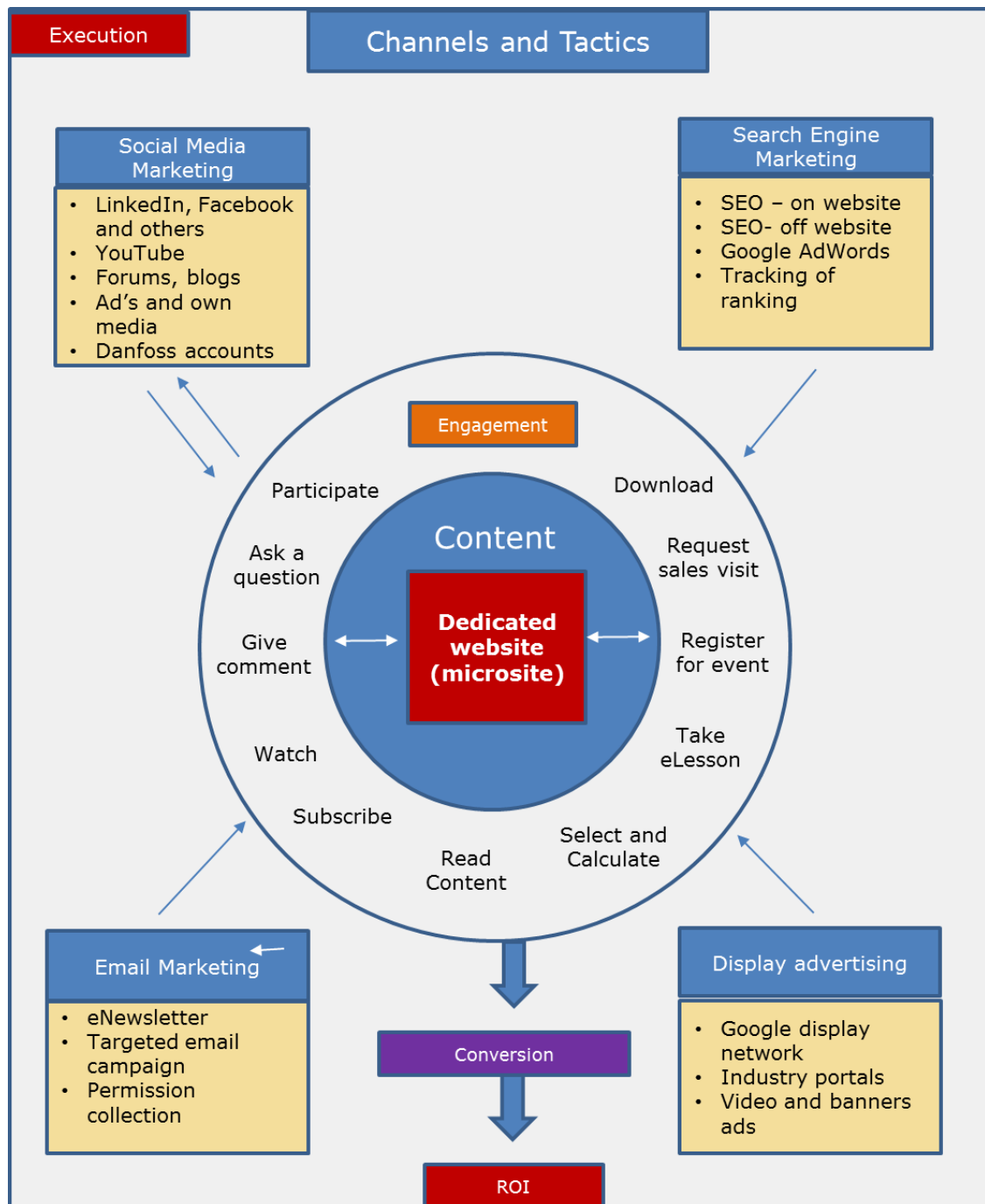
## 4.5 Digital marketing channels, tactics and engagement

While the content represents the value, the company shares with the customers the engagement and interaction is achieved through the various digital marketing channels and tactics used. As elaborated in the first chapter, there are many different options available in the digital marketing world when it comes to selecting channels and tactics. The choice is ever expanding especially in the segment of tactics and the line is blurred on the terminology of what is a channel and a tactic. In the case of microplate technology, regarding digital marketing framework, four main channels are recommended, to integrate and interact with the dedicated website and the different content types. This is based on the literature review, insight from both the company representative and the customer survey conducted. These four channels are social media marketing, search engine marketing, email marketing and display advertising.

The social media marketing relation with the content hub is of a two way interactive nature, as web 2.0 and social media is allowing the customers to directly interact with Danfoss. While all other platforms are more into driving the end conversion and lead generation through the customer interaction with the content, the recommended tactics involve sharing of content over the relevant social media networks, in this case LinkedIn as most important but also Facebook, and directly engaging customers by stimulating the effect of content sharing by customers and answering their direct questions. Furthermore, full utilization of targeting and advertising possibilities in sponsoring the content distribution in social media should be used. Both Facebook and LinkedIn are offering multiple and advanced options for targeting customer groups. While a dedicated microplate technology account is an option, utilizing the existing segment and corporate Danfoss accounts for social media customer engagement can be sufficient in the case of microplate technology.

The Search engine marketing channel, consists of two activities. One is the search engine optimization done on the content, specifically the recommended website. Here the optimization is done on website content and also additional technical and link building is done off website. The second activity is utilizing the advertising option in the text search result ads, by Google ad network to position a link from the website next to result list, in the customers search process. The objective of both activities is to reach more customers in the process of searching for information, by driving them to the website with the relevant content. On figure 38, we can see the channels, corresponding tactics and the interaction with the content hub.

Figure 38. Execution overview, digital marketing channels and tactics related to content hub



Through email marketing channel, a target email campaign should be conducted along with a subscription option on the website followed up by a newsletter with relevant content. Current permissions of the hexact users and other relevant customer permission collected by Danfoss should be used in this email campaign. In B2B, email marketing is a key digital marketing channel and provides a high level of conversion opportunities from a prospect to a sales lead.

The importance in this channel is to provide valuable and relevant content, and link it to a marketing automation platform for acting based on customer's insight.

The display advertising is the closest of the channels to traditional marketing advertising. Here we have multiple options and tactics of utilizing the display ads to drive traffic to the content hub. The automated Google display network can be used, with placing ads on selected websites based on the preference of interests of the target audience. The other recommended option is to utilize the list of industry web portals (websites) that the customer survey research has provided, and collaborate by placing ads on them. Ads in other third party industry portals newsletters can also be utilized. Both video ads can be used on platform like YouTube, and standard click banner ads.

Within this digital marketing channels and the linkage to the website content hub, is where the customer engagement resides. It is defined by the four measurement areas of interaction, involvement, intimacy and advocacy, and is actually conducted with the response and activity of customers on the provided call to actions. These include actions like, subscribe to a newsletter, ask a question, give comment, read an article, watch an animation, download a whitepaper, calculate a product, and other relevant call to actions defined. It is of key importance that these calls to actions are predefined and relevant to the customer's needs, as they will drive the level of engagement and ultimately the conversion rate success in lead generation and transfer to sales impact.

The linkage of the different digital marketing channels and engagement should be designed and tracked based on customer decision journey. The funnel metaphor is dead and customers today have nonlinear journeys jumping in and out of different segments, thus creating complex journeys. Before planning digital marketing activities based on this framework, the expected customers journeys need to mapped and documented, based on the customers' needs and known behavior. These documented journeys will then serve as a guiding principle in the execution over the digital marketing channels.

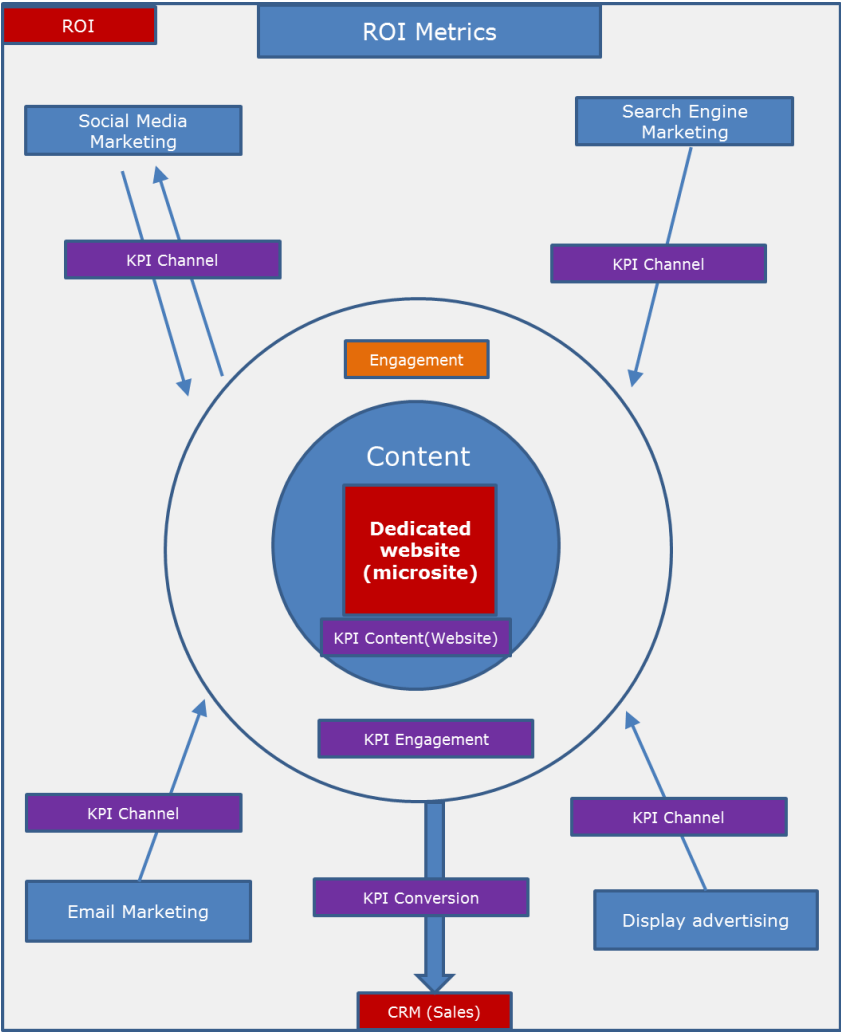
## **4.6 Key performance indicators, analytics and metrics**

The KPI section of the digital marketing framework is a key segment, as it provides the success rate level of the whole planning and executions phases. With the current vast number of tools, like Google analytics, and the options the social media platforms and other online advertisers provide, it is possible to real time track and measure the results, and determine if the set targets are achieved, and if not - improvement actions to be conducted. Therefore, it is required that specific targets are set up, so that the success rate of the objectives will be measured. The two key objectives for target setting are awareness and lead generation, enabled by the rate of customer engagement across the different digital marketing channel and the website content hub.



The measurement of awareness is happening all across the execution segment of the framework, and specific metrics like number of impressions, number of website visitors, number of video views, email open rate likes on page, sharing of posts and many more metric options are included. The goal is to track the level of reach that marketing content is making, and the number of people that at the end become aware of microplate technology and heat exchanger products. Figure 39 gives an overview of the KPI metrics points of measurement in the execution map.

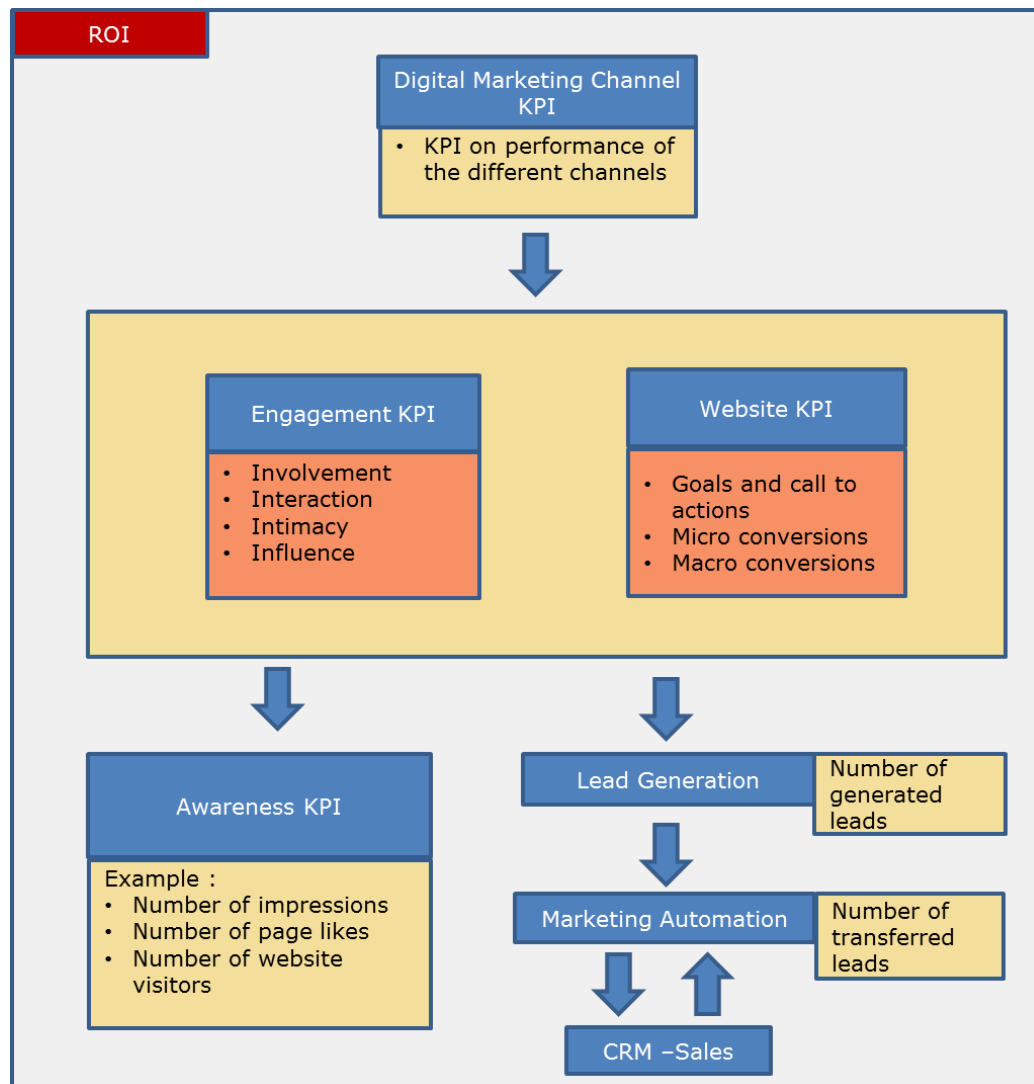
Figure 39. KPI points of measurement overview in execution map



Here the performance is tracked of all channels contribution to the engagement, and then the conversion rate from the engagement that can happen both within the different digital marketing channels and the website content hub, to lead generation and ultimately through marketing automation CRM sales. The next key measurement area is the engagement, and the recommendation is to use the defined engagement measuring method developed by Forrester (2008). The engagement is measured as contribution of the different digital marketing channels and represented through the four sections. These are involvement, interaction,

intimacy and influence. For each of the phases, multiple numbers of KPI metrics can be selected. As a minimum, it is recommended that in the case of Danfoss microplate technology, the phases of interaction and involvement are mandatorily applied. On figure 40, we can see the complete overview of the recommended KPI metrics tracking hotspots across the execution phase of the digital marketing framework.

Figure 40. Digital marketing KPI metrics, an overview map



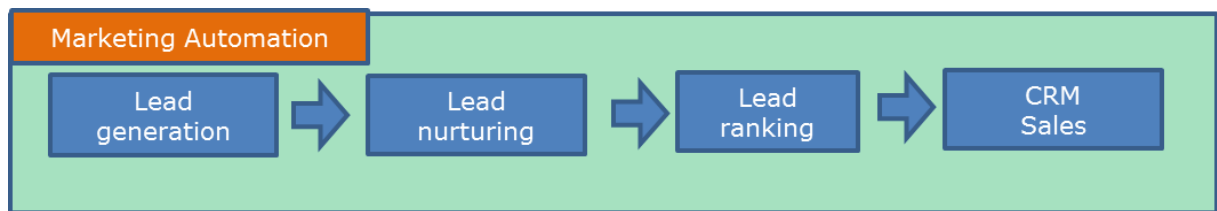
This is in syncing with the performance metrics of the website, where the micro and macro conversions, on the specific call to actions, deliver the end goal of lead generation. Here the conversion rate is a key KPI metric and all other web analytics metrics are complementary and supporting the conversion targets. The engagement segment KPI tracking if followed by the lead generation and marketing automation section, where the tracking is done on the number of generated leads as an effect for the execution phase, both with awareness and engagement, represented by a conversion rate. The engagement KPI metrics are also

represented and deliver the status for the awareness objective. Then, through the process of marketing automation, the ranked leads are transferred to CRM for Sales to follow up. The representation here gives a direction and sets the stage, while in the process of application of the digital marketing framework, based on the specific call to actions and defined content, the exact metrics types and methods should be defined.

## 4.7 Marketing automation process

It is recommended that this framework is linked to the marketing automation platform and processes in Danfoss. The execution of the platform should utilize some of the standard channels and processes established or planned by Danfoss. The marketing automation platform represent, through ranking capabilities, an automated process can then transfer the qualified leads generated during the application of the digital marketing framework. The marketing automation process itself is presumed to be established in the company and the framework can work in alignment and be integrated in the platform. Figure 41, presents an overview of phases in marketing automation process.

*Figure 41. Phases in a marketing automation process linked to the framework*



In this case, through the application of the digital marketing framework, the phase of lead generation is covered, and then in integration with the marketing automation platform and process, the next two closely linked phases follow. They are lead nurturing, and then the lead ranking process, where after achieving a defined rank level, leads are transferred to sales via the CRM system as last step for sales to do follow up.. This is a crucial link in the chain, since it enables the achievement of the objectives in the digital marketing framework. Its contribution from the digital as along achieving a high level of awareness of microplate technology and Danfoss as a supplier of heat exchangers, will directly provide sales with an opportunity for increasing market share and fulfilling the business objectives.

## CONCLUSION

The marketing world has changed, and it is a new dawn now, for marketers and companies to embrace, adopt and by doing so – tackle the new challenges and opportunities. Digital Marketing is the answer, but requires an effort from companies both regarding investment and significant competences build up, for complying with the complexity that digital marketing brings. Embracing Digital Marketing is not a novelty but a necessity in order to cope with the changes in media and communication landscape. Due to the digital world we live in today,

traditional marketing communications can have only limited impact in creating awareness and lead generation with limited investment costs, on the contrary they would have high investment costs.

It is very important for B2B organizations, especially manufacturing companies based in a more conservative slow paced industry as the case of Danfoss District Energy, to adjust to the changes in the marketing communication landscape that is a now a reality, and turn the challenges into competitive advantages. Danfoss has developed a new and patented technology of plate design for its heat exchangers products called “Micro Plate”. The result is huge competitive advantage over its competitors. But it will only be possible if the benefits that this new technology brings, have reached and are understood by one of the key stakeholders, that is the design engineers that are designing the heating system and specifying the products to be used. In order to achieve its business and marketing objectives in this new connected environment, Danfoss needs to use Digital Marketing as the answer, through the concepts of engagement and content marketing applied over the various digital media channels.

Microplate technology is for Danfoss a key differentiation and value asset in their business objectives for the heat exchanger business. Being an emerging player on the market, it is essential that the awareness and benefits of this new technology is achieved in existing and new markets where Danfoss operates, and achieve the end goal of growth and market share increase. Digital marketing here is the key, as it offers more cost efficient way to achieve this, compared with the traditional marketing. A further opportunity with digital marketing approach is to focus fully on the microplate technology and bring in the products at the later stage of the customer decision journey.

If Danfoss is to succeed in the goal of utilizing microplate technology as key differentiator, it needs to focus on the microplate technology as a separate communication and engagement topic. Exploiting the opportunities of new digital marketing platforms should result in success, so that the digitally addressable customers would validate the value of microplate technology adds, through implementing, the heat exchangers to their systems. From the digital marketing platform, Danfoss sales organizations should benefit by receiving input by lead generation for customers interested and ready to take the next step in implementing product with microplate technology in their systems.

The customers or key stakeholder map in the case of Danfoss heat exchangers and microplate is a very complex one, as it consists of more than 6 types of stakeholders with multiple inside roles. But the key conclusion regarding the customers is that the microplate related focus is on the technical system design involved stakeholders. A clear pattern can be found in this approach and the stakeholder group has been identified. According to the customer mapping, we find these customers both as consultant engineers, technical department in district heating utilities, technical department in a OEM customer, as well as internal Danfoss stakeholders who are involved in supporting customers in their heating system design.

In today's digital world, we are all connected, and so are the Danfoss customers. From the survey of the hexact users, we can conclude that the target group, users of the hexact tool are digitally addressable; they are active users of devices and online platforms such as websites, blogs and social media networks. They strongly appreciate the importance of energy efficient heat transfer, on the other hand a significant number of them do not know what microplate technology is, opening an opportunity for Danfoss, for utilizing digital media channels to convey the benefits of microplate technology in achieving energy efficient heat transfer. This represents a clear opportunity for Danfoss for Digital Marketing

The key outcome from this research project is the customer insight and recommended digital marketing framework for microplate technology that is representing valuable input for Danfoss to further act in the area of digital marketing, as well as provide basis for further research in the field. Based on the literature review combined with the primary and secondary research input collected, it was possible to define and present a recommended digital marketing framework for microplate technology. By working with the analysis of customer groups, defined objectives and the conceptual structure of the digital marketing framework presented, Danfoss can respond to Digital Marketing Trends on the case of Micro Plate technology.

## REFERENCE LIST

1. *About Danfoss*. Retrieved January 25, 2015, from <http://www.danfoss.com/about/>
2. *B2B Outlook: marketing priorities and plans*. Retrieved February 3, 2015, from <http://adage.com/article/btob/mobile-content-focus-b-b-2014/290904/>
3. Barger, C. (2012). *Social media strategist: build a successful program from the inside out*. USA: McGraw Hill.
4. Blanchard, O. (2011). *Social Media ROI: managing and measuring social media efforts in your organization*. Boston: Pearson Education, Inc.
5. Bodnar, K., & Cohen, L. (2012). *The B2B social media book: become a marketing superstar by generating leads with blogging, LinkedIn, Twitter, Facebook, email and more*. Hoboken, New Jersey: John Wiley & Sons.
6. Bosomworth, D. (2014). The content marketing matrix. *Smart Insights*. Retrieved April 13, 2014 from <http://www.smartinsights.com/content-management/content-marketing-strategy/the-content-marketing-matrix-new-infographic/>
7. Bosomworth, D. (2015). The social media marketing radar. *Smart Insights*. Retrieved February 27, 2015 from <http://www.smartinsights.com/social-media-marketing/social-media-strategy/social-media-marketing-radar/>
8. *Campaign, Microplate Heat exchangers*. Retrieved March 25, 2015, from <http://district-heating.danfoss.com/news-and-events/campaigns/mphe/>
9. Chaffey, D. (2008). Customer engagement interview with Richard Sedley of cScape. *Smart Insights*. Retrieved March 3, 2011 from [www.smartinsights.com/blog/customerengagement/customer-engagement-interviewwith-richard-sedley-of-cscape](http://www.smartinsights.com/blog/customerengagement/customer-engagement-interviewwith-richard-sedley-of-cscape)
10. Chaffey, D., & Ellis-Chadwick, F. (2012). *Digital Marketing: Strategy, Implementation and Practice* (5<sup>th</sup> ed.). Harlow: Pearson Education Limited.
11. *Digital natives and digital immigrants*. Retrieved May 25, 2013, from <http://www.mediative.com/assets/research/mediative-white-paper-digital-natives-and-digital-immigrants.pdf>
12. Edelman, D., & Salsberg, B. (2010). Beyond paid media: Marketing's new vocabulary. *McKinsey Quarterly*. Retrieved November 24, 2012, from

[http://www.mckinsey.com/insights/marketing\\_sales/beyond\\_paid\\_media\\_marketings\\_new\\_vocabulary](http://www.mckinsey.com/insights/marketing_sales/beyond_paid_media_marketings_new_vocabulary)

13. Gambetti, C. R., & Graffigna, G. (2010). The concept of engagement a systematic analysis of the ongoing marketing debate. *International Journal of Market Research Volume 52(6)*, pp. 801-826.
14. Gillin, P., & Schwartzman, E. (2011). *Social marketing to the business customer*. Hoboken, New Jersey: John Wiley & Sons.
15. Godin, S. (1999). *Permission Marketing: Turning Strangers into Friends and Friends into Customers*. New York: Simon & Schuster.
16. Gurau, C. (2008). Integrated online marketing communication: implementation and management. *Journal of Communication Management, Volume 12(2)*, pp. 169 –184.
17. Härmäläinen, T., Lyytikäinen, M., & Persson L., (2010) *Dimple Pattern – A challenger in plate heat exchanger Technology* (internal publication). Portoroz: SDDE.
18. Halligan, B. (2013). 5 issues with marketing automation. *Salesforce blog*. Retrieved February 10, 2014, from <https://www.salesforce.com/blog/2013/05/marketing-automation.html>
19. Haven, B. (2007). Marketing's New Key Metric: Engagement. *Forrester Research*. Retrieved May 15, 2012 from [https://www.adobe.com/enterprise/pdfs/marketing\\_new\\_key\\_metric\\_engagement.pdf](https://www.adobe.com/enterprise/pdfs/marketing_new_key_metric_engagement.pdf)
20. Haven, B., & Vittal, S. (2008) Measuring Engagement. *Forrester consulting*. Retrieved June 22, 2014 from [https://www.adobe.com/enterprise/pdfs/five\\_tools\\_and\\_technologies\\_engagement.pdf](https://www.adobe.com/enterprise/pdfs/five_tools_and_technologies_engagement.pdf)
21. Horvat, E., Heron, M., L., Agbenyega, T., & Bergey, B. (2012). *Doing qualitative research*. New York: Teachers college press.
22. *How engaged are your customers?* Retrieved August 12, 2012, from [http://www.indigopacific.com/pdf/Forrester\\_TLP\\_How\\_Engaged\\_Are\\_Your\\_Customers.pdf](http://www.indigopacific.com/pdf/Forrester_TLP_How_Engaged_Are_Your_Customers.pdf)
23. Hutt, M., & Speh, T. (2013). *Business Marketing Management* (11<sup>th</sup> ed.). South Western: Cengage Learning.

24. Järvinen, J., Tollinen, A., Karjaluo, H., & Jayawardhena, C. (2012). Digital and social media marketing usage in b2b industrial section. *The Marketing Management Journal* Volume 22, Issue 2, pp 102-117.
25. Kaushik, A. (2010). *Web analytics 2.0*. Indianapolis, Indiana: Wiley publishing.
26. Kaushik, A. (2012). Digital marketing measurement model. *Occam's razor, Digital Marketing and Analytics blog*. Retrieved October 15, 2014 from <http://www.kaushik.net/avinash/digital-marketing-and-measurement-model>
27. Leibtag, A. (2014). *The digital Crown: wining at content on the web*. USA, Waltham: Elsevier.
28. Lieb, R. (2012). *Content Marketing*. USA, Indianapolis: Que Publishing.
29. *Marketing Strategy Report: Social Media*. Retrieved March 23, 2014 from <http://ascend2.com/home/wp-content/uploads/Social-Marketing-Strategy-Report-Ascend2-Edition.pdf>
30. Meerman, S., D. (2010). *The new rules of marketing and PR: how to use social media, blogs, news releases, online video, & viral marketing to reach buyers directly* (2<sup>nd</sup> ed.). Hoboken, New Jersey: John Wiley & Sons.
31. Mullhern, F. (2009). Integrated marketing communications: From media channels to digital connectivity. *Journal of Marketing Communications*, Volume 15, (2/3), 85–101.
32. *Next generation heat exchangers for your district energy applications*. Retrieved October 15, 2014, from [http://heating.danfoss.com/pcmpdf/vbgdsd202\\_sep2014%20lores.pdf](http://heating.danfoss.com/pcmpdf/vbgdsd202_sep2014%20lores.pdf)
33. Oden, L. (2012). *Optimize, how to attract and engage more customers by integrating SEO, social media and content marketing*. Hoboken, New Jersey: John Wiley & Sons.
34. Pulizzi, J. (2014). *Epic content marketing: how to tell a different story, break through the clutter, and win more customers by marketing less*. USA: McGraw Hill.
35. Pulizzi, J. (2014). New B2B Content Marketing Research: Focus on Documenting Your Strategy *Content Marketing Institute*. Retrieved December 9, 2014, from <http://contentmarketinginstitute.com/2014/10/2015-b2b-content-marketing-research/>
36. Pulizzi, J., & Barrett, N. (2009). *Get content get customers: turn prospects into buyers with content marketing*. USA: McGraw Hill.



37. Ryan, D., & Jones, C. (2009). *Understanding digital marketing: marketing strategies for engaging the digital generation*. London: Kogan Page.
38. Ryan, D., & Jones, C. (2011). *The best digital marketing campaigns in the world: mastering the art of customer engagement*. London: Kogan Page.
39. Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. *Management Decision Volume 50*(2), pp. 253-272.
40. Schultz, D., Tannenbaum, S., & Lauterborn, R. (1994). *Integrated Marketing Communications*. Chicago: NTC Business Books.
41. Smith, P., & Zook, Z. (2011). *Marketing communications: integrating offline and online with social media* (5<sup>th</sup> ed.). London: Kogan Page.
42. *Social Marketing 2015: The Key to ROI Will Come from Within*. Retrieved September 08, 2014, from <http://www.emarketer.com/Article/Social-Marketing-2015-Key-ROI-Will-Come-Within/1011305/1#sthash.WwWfwa5K.dpuf>
43. Solis, B. (2010). *Engage*. Hoboken, New Jersey: John Wiley & Sons.
44. *The Digital evolution in B2B Marketing*. Retrieved July 28, 2013 from <http://www.executiveboard.com/exbd-resources/content/digital-evolution/pdf/Digital-Evolution-in-B2B-Marketing.pdf>
45. *The State of Marketing Automation 2014*. Retrieved May 28, 2014 from <http://www.regalix.com/about/news/2014-marketing-automation-trends-unveiled-b2b-marketers-regalix/>
46. Thorsen, J.E., Gudmundsson, O., & Brand, M. (2014). Performance specifications for heat exchangers for dh substations of the future. *The 14th International Symposium on District Heating and Cooling*. September 7th to September 9th, 2014, Stockholm, Sweden. Retrieved April 10, 2013, from [http://www.svenskfjarrvarme.se/Global/Konferenser/DHC14/Proceedings/\\_5.1%20Jan%20Eric%20Thorsen%20PERFORMANCE%20SPECIFICATIONS%20FOR%20HEAT%20EXCHANGERS%20FOR%20DH%20SUBSTATIONS%20OF%20THE%20FUTURE.pdf](http://www.svenskfjarrvarme.se/Global/Konferenser/DHC14/Proceedings/_5.1%20Jan%20Eric%20Thorsen%20PERFORMANCE%20SPECIFICATIONS%20FOR%20HEAT%20EXCHANGERS%20FOR%20DH%20SUBSTATIONS%20OF%20THE%20FUTURE.pdf)
47. Thorsen, J.E., & Iversen, J. (2012). Impact of lowering dt for heat exchangers used in district heating systems. *DHC13, the 13th International Symposium on District Heating and Cooling* September 3rd to September 4th, 2012, Copenhagen, Denmark. Retrieved September 20, 2013, from [http://heating.danfoss.com/PCMPDF/VFGSA102\\_impact-of-lowering-dt.pdf](http://heating.danfoss.com/PCMPDF/VFGSA102_impact-of-lowering-dt.pdf)

48. *US Digital Ad Spending to Top \$37 Billion in 2012 as Market Consolidates*. Retrieved April 10, 2013, from <http://www.emarketer.com/newsroom/index.php/digital-ad-spending-top-37-billion-2012-market-consolidates/#9eeTFrXLd470PgRL.99eMarketer>
49. VanBoskirk, S. (2011). Forrester interactive marketing forecast 2011 to 2016. *Forrester Research*. Retrieved June 20, 2012 from [http://www.bcama.com/documents/Forrester\\_interactive\\_marketing\\_forecast\\_2011\\_to\\_2016.pdf](http://www.bcama.com/documents/Forrester_interactive_marketing_forecast_2011_to_2016.pdf)
50. Vivek, D. S., Beatty, E. S., & Morgan, M. R. (2012). Customer Engagement: Exploring Customer Relationships Beyond Purchase. *Journal of Marketing Theory and Practice*, volume 20(2), pp. 127–145.
51. Weber, L. (2009). *Marketing to the social web: how digital customer communities build your business* (2nd ed.). Hoboken, New Jersey: John Wiley & Sons.
52. Webster F.E., Malter, A.J., & Ganesan, S. (2005). *The decline and dispersion of marketing competence*. MIT Sloan Management Review, volume 46(4), pp. 35-43.
53. *What are the benefits of marketing automation?* Retrieved April 10, 2015, from <http://www.emarketer.com/Article/What-Benefits-of-Marketing-Automation/1011966>
54. *What is marketing automation?* Retrieved March 5, 2015 from: <http://www.hubspot.com/marketing-automation-information>
55. WSI - We Simplify the Internet. (2013). *Digital Minds - 12 Things Every Business Needs to Know About Digital Marketing*. Victoria, Canada: Friesen Press.

## **APPENDIXES**



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## **Appendix A: Interview questions**

### ***Business Objectives related to microplate technology***

Is the microplate technology with the benefits it brings a value differentiator for your customers?

Is Danfoss an established market leader or new up and coming player in the market?

What are the business objectives for the Microplate Heat exchangers and with that the Micro plate technology?

Is the technology applied to products that are being sold to all addressable markets, or you plan to introduce the microplate technology and hex products to new markets?

Is Micro plate technology used and communicated within the hexact tool?

How important is the hexact tool for the hexact exchanger business?

Do you plan to launch new products that will be with microplate technology?

### ***Customer Groups***

How would you classify MPHE customers, what type or groups are there?

How would you describe the main characteristics and needs of the different groups? For each group?

Do you differentiate between, decision makers, influencers and buying customers?

Do you differentiate between, technical oriented customer like consultant engineers and business oriented like purchasing department in OEM?

What is grouping differentiating criteria, example system design?

How important is the technical solution and performance to each of the different customer types?

## Appendix B: Survey Questionnaire

Your feedback and opinion matters to us !

---

Survey short title: Online customer insight - Case  
StudyMPHE

Survey long title: Your feedback and opinion  
matters to us !

Question number: 21

Survey is closed.

Active from: 03.06.2014

Active until: 03.09.2014

Author: ivan temovski

Edited: ivan temovski

Date: 03.05.2014

Date: 03.06.2014



**Q1 - What kind of Smartphone do you own ?**

- ☐ iPhone
- ☐ Android
- ☐ Windows phone
- ☐ Blackberry
- ☐ I don't own a smartphone
- ☐ Other:

**Q2 - What kind of Tablet do you own ?**

- ☐ iPad
- ☐ Android
- ☐ Windows tablet
- ☐ I don't own a tablet
- ☐ Other:

**Q3 - How often do you use your smartphone/ tablet to go online or use apps ?**

- ☐ Every Day
- ☐ Several times per week, but not every day
- ☐ Several times per month, but not every week
- ☐ I don't go online or use apps with my smartphone/tablet
- ☐ Other:

**Q4 - Which of the below listed social media websites, you have visited at least once in the last 2 weeks ?**

Multiple answers are possible

- ☐ Facebook
- ☐ LinkedIn
- ☐ YouTube
- ☐ Twitter
- ☐ Other:
- ☐ I am not active on social media

**Q5 - What search engine do you use for searching information on the internet ?**

- ☐ Google
- ☐ Bing
- ☐ Other:
- ☐ I don't search for information online

**Q6 - When searching on Google, how many words you usually type ?**

- ☐ Single word
- ☐ 2 to 3 words
- ☐ More than 4 , I type whole question/sentence
- ☐ Other:

**Q7 - Which keywords would you use to search for heat exchangers on Google/Internet ?**

Type in your input in  
the fields below:

Using one word :	<input type="text"/>
Using 2 to 3 words:	<input type="text"/>
A whole question or sentence ?:	<input type="text"/>
Other::	<input type="text"/>

**Q8 - When visiting forums and searching for business information, you :**

- ☐ Only read other peoples comments
- ☐ Read others and write my comments
- ☐ Start topics, read and actively reply
- ☐ I don't visit online forums
- ☐ Other:

**Q9 - How often do you check your Facebook / Linkedin or other social media profile ?**

Multiple answers are possible

- ☐ Every Day
- ☐ Several times per week, but not every day
- ☐ Several times per month, but not every week
- ☐ I am not active on social media

☐ Other:

**Q10 - Do you search and watch videos about heating products on YouTube ?**

☐ Yes

☐ No

**Q11 - Name some websites/forums/blogs you visit , to learn about heating products ?**

	1	2	2
Website Name :			

**Q12 - How often did you go online and surf on the internet in the last six months ?**

☐ Every day

☐ Several times per week, but not every day

☐ Several times per month, but not every week

☐ I don't go online

☐ Other:

**Q13 - How important to you are the below stated information areas on a website, with 5 being most important and 1 least important ? Please rate all information areas.**

	1	2	3	4	5
New products information:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New technology information:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical documentation:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Selection and sizing software :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Events and training information:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pricelist information:	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales Contact information :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q14 - How would you rate your user experience with the Hexact dimensioning program ?**

- ☐ 5 Completely satisfied
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 Completely unsatisfied
- ☐ 0 I don't use Hexact

**Q15 - Please rate, how important for you is to have the Hexact selection program on these platforms, with 5 being most important and 1 least important ? Please rate all.**

	1	2	3	4	5
Smartphone/iphone/ android :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tablet / iPad/ android tablet :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Website - online :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Offline installed on PC :	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Q16 - Do you know what Danfoss Micro Plate technology is ?**

- ☐ Yes
- ☐ No

**Q17 - How important for you is efficient-energy saving heat transfer by a heat exchanger ?**

- ☐ 5 Very Important
- ☐ 4
- ☐ 3
- ☐ 2
- ☐ 1 Not important at all

**Q18 - Which field do you work in :**

- ☐ Installer / Installation of products
- ☐ Consultant Engineer / System design
- ☐ District Heating Utility Employee / District heating Systems
- ☐ Investor
- ☐ Contractor
- ☐ Municipality / Public Authority Employee
- ☐ OEM company / using other company components to build own solution
- ☐ Danfoss Employee
- ☐ Student
- ☐ Other:

**Q19 - What country are you from ?**

- ☐ Argentina
- ☐ Armenia
- ☐ Australia
- ☐ Austria
- ☐ Azerbaijan
- ☐ Belarus
- ☐ Belgium
- ☐ Bosnia and Herzegovina
- ☐ Brazil
- ☐ Bulgaria
- ☐ Canada
- ☐ Chile
- ☐ China
- ☐ Colombia
- ☐ Croatia
- ☐ Cyprus
- ☐ Czech Republic
- ☐ Denmark

- ☐ Dubai
- ☐ Ecuador
- ☐ Egypt
- ☐ Estonia
- ☐ Finland
- ☐ France
- ☐ Germany
- ☐ Greece
- ☐ Hungary
- ☐ Iceland
- ☐ India
- ☐ Indonesia
- ☐ Ireland
- ☐ Israel
- ☐ Italy
- ☐ Jamaica
- ☐ Japan
- ☐ Kazakhstan
- ☐ Kosovo
- ☐ Latvia
- ☐ Lebanon
- ☐ Liechtenstein
- ☐ Lithuania
- ☐ Macedonia
- ☐ Malaysia
- ☐ Mexico
- ☐ Moldova
- ☐ Mongolia
- ☐ Montenegro
- ☐ Netherlands
- ☐ New Zealand

- ☐ Norway
- ☐ Pakistan
- ☐ Peru
- ☐ Philippines
- ☐ Poland
- ☐ Portugal
- ☐ Qatar
- ☐ Romania
- ☐ Russia
- ☐ Saudi Arabia
- ☐ Serbia
- ☐ Singapore
- ☐ Slovakia
- ☐ Slovenia
- ☐ South Africa
- ☐ South Korea
- ☐ Spain
- ☐ Sweden
- ☐ Switzerland
- ☐ Taiwan
- ☐ Thailand
- ☐ Turkey
- ☐ Ukraine
- ☐ United Arab Emirates
- ☐ United Kingdom
- ☐ USA
- ☐ Uzbekistan
- ☐ Vietnam

**Q20 - In which age group do you belong?**

- ☐ up to 25 years of age
- ☐ 25 - 40 years of age
- ☐ 41 - 60 years of age
- ☐ 61 years of age or more

**Q21 - Gender:**

- ☐ Male
- ☐ Female