

MASTER THESIS

To attain the academic degree of
Master of Arts in Business
from the
Degree Programmes
International Marketing & Sales Management
of *CAMPUS 02* University of Applied Sciences

DEVELOPMENT OF A SOCIAL MEDIA CONCEPT IN THE SEMICONDUCTOR INDUSTRY FOR THE US MARKET

exemplified by DR YIELD software & solutions GmbH

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Graz, 8.5.2017

Declaration of Authenticity

I hereby certify that I have written the present thesis independently and without help from any third parties. I have not used any sources other than those which are clearly indicated and have duly provided details of the sources of both direct and indirect quotations.

The present piece of work and parts thereof have to date not been presented to this or any other examination board in the same or similar form, nor have they been published. The present version is the same as the electronic version submitted.

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Summary

In times when the usage of social media is continuously growing among the population, especially in competitive markets, social media can represent a powerful new communication tool for suppliers in order to reach new contacts, create new leads and to differentiate oneself from the competition.

Therefore, the present thesis aims to create a social media concept for communication in the US semiconductor Industry exemplified by the yield management software supplier DR YIELD software & solutions GmbH.

Besides an extensive literature research regarding the science of B2B marketing, international communication and social media communication, the US market has been investigated towards its peculiarities regarding its semiconductor industry and the social media behavior on the US market in order to be able to communicate effectively in a foreign market. Moreover, a competitor analysis has been conducted that shall give a better insight of the current social media usage and activities of DR YIELD'S competitors. Furthermore, in order to fill the remaining knowledge gap about the usage of social media in the US semiconductor industry, a primary market research in form of interviews has been conducted. The results have shown that DR YIELD's target group does not only use social media for private purposes, but also for professional aims such as the research of potential suppliers which makes social media a suitable tool for DR YIELD to generate new leads in the US market.

Based on the research as stated above, a social media concept tailored for the US semiconductor industry has been created that gives – besides an analysis of the initial situation and DR YIELD's target group – recommendations regarding the strategy, the consequent actions, a budgeting plan and controlling measures.

Zusammenfassung

In Gegenwart, in der die Nutzung von Social Media kontinuierlich zunimmt, kann selbige vor allem in wettbewerbsorientierten Märkten ein leistungsfähiges neues Kommunikationsinstrument für Unternehmen darstellen, um neue Kontakte zu knüpfen, neue Leads zu generieren und sich von der Konkurrenz abzuheben.

Ziel der vorliegenden Arbeit war daher, ein Social Media-Konzept für die Kommunikation in der US-Halbleiterindustrie am Beispiel des Yield Management Software Anbieters DR YIELD software & solutions GmbH zu entwickeln.

Neben einer umfangreichen Literaturrecherche über die Wissenschaft des B2B-Marketings, der internationalen und der Social Media Kommunikation wurde der US-Markt auf seine Besonderheiten in Bezug auf dessen Halbleiterindustrie sowie deren Verhalten in sozialen Netzwerken auf dem US-Markt untersucht, um dort effektiv kommunizieren zu können. Darüber hinaus wurde eine Konkurrenzanalyse durchgeführt, die einen besseren Einblick in die derzeitige Nutzung dieser Medien durch die Mitbewerber von DR YIELD ermöglicht. Des Weiteren wurde eine primäre Marktforschung in Form von Interviews durchgeführt, um zusätzliche Informationen über die Nutzung von Social Media durch die US-Halbleiterindustrie zu erhalten. Die Ergebnisse haben gezeigt, dass die Zielgruppe von DR YIELD soziale Medien nicht nur für die private Nutzung verwendet, sondern auch für professionelle Zwecke einsetzt, wie beispielsweise durch tiefergehende Recherchen über potenzielle Lieferanten. All diese Resultate veranschaulichen, dass soziale Medien ein geeignetes Instrument für DR YIELD darstellen, um neue Leads im US-Markt zu generieren.

Auf Grundlage der oben genannten Forschung wurde ein auf die US-Halbleiterindustrie zugeschnittenes Social Media Konzept erstellt, das neben einer Analyse der Ausgangssituation und der Zielgruppe von DR YIELD Empfehlungen für eine Social Media Strategie, die daraus resultierenden Handlungen, einen Budgetplan und Kontrollmaßnahmen enthält.

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List of Abbreviations

B2B	=	Business-to-Business
B2C	=	Business-to-Consumer
CEO	=	Chief Executive Officer
CFO	=	Chief Financial Officer
GDP	=	Gross Domestic Product
IT	=	Information Technology
KPIs	=	Key Performance Indicators
OEM	=	Original Equipment Manufacturer
OSAT	=	Outsourced Semiconductor Assembly and Test
R&D	=	Research and Development
ROI	=	Return on Investment
SEO	=	Search Engine Optimization
SM	=	Social Media
SMM	=	Social Media Marketing
TG	=	Target Group
US	=	United States of America
vs.	=	versus
YMS	=	Yield Management Software

1 Introduction

The following chapter aims to describe the history of the company DR YIELD software & solutions GmbH, the business model as well as the company's product. Furthermore, the initial situation and the challenges will be explained.

1.1 DR YIELD software & solutions GmbH

The company DR YIELD software & solutions GmbH was founded in 2005 by Dieter Rathei after he had the idea to develop a new way of yield management software for the semiconductor industry. Together with Axel Wawrina and Bernd Gruhn as well as a team of software developers, they created YieldWatchDog – a yield control software that is able to automatically search for irregularities in the data to inform users about any anomalies found. DR YIELD's headquarter is located in Graz, Austria. At the moment, the company has a total of 11 employees and serves customers in seven countries on three continents. The customers cover the full spectrum of semiconductor applications. The current main markets are Japan and the US (cf. DR YIELD 2016a).

Product - YieldWatchDog

YieldWatchDog is a yield management software specialized on the semiconductor industry. According to different parameters, it tests data produced by the test equipment of semiconductor wafer factories. The software's main feature is the automatic tracking and recognition of patterns within data

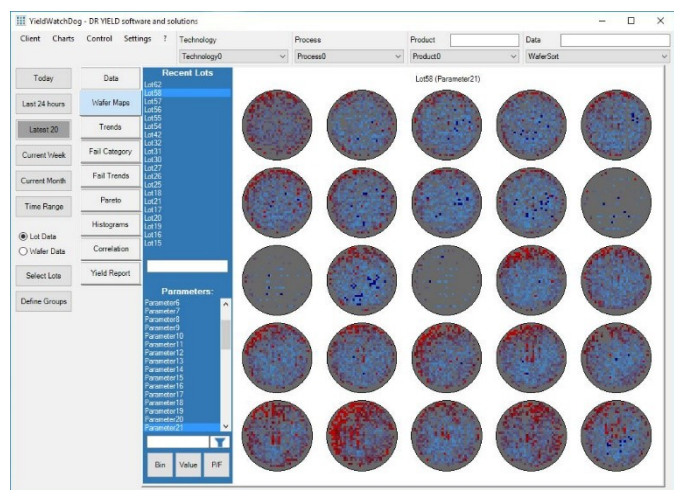


Figure 1: YieldWatchDog Wafer Map (DR YIELD 2016b)

that is collected during the manufacturing process of semiconductors. Furthermore, it automatically notifies the users in case it tracks abnormalities in the data. Additionally, YieldWatchDog offers a broad variety of visualization and analysis possibilities of lots and single wafers. YieldWatchDog can be tailored according to the customer's specific requirements and demands using further optional modules.

Distribution

The software YieldWatchDog was developed especially for the semiconductor industry; therefore, the target group of DR YIELD are semiconductor manufacturers all over the globe that want to automate the control of their manufacturing data and thereby increase their yield.

Currently, there are three different editions of the software available that in essence differ in the number of current users and included service hours. The price of the software varies according to the edition and the number of additional modules from a six to seven-digit Euro value.

At the moment, DR YIELD has two distribution partners: Solas Corporation, Co., Ltd. in Japan and E Test Reps, LLC for the US-market. Both acquire new potential customers within the respective market and support the sales process. Thus, long-term partnerships with customers in 7 countries in Asia, Europe and the US could be established.

Strategic Positioning

DR YIELD positions itself as innovative provider of semiconductor yield management software with short reaction times and flexible solution finding. The software YieldWatchDog was developed in a way that allows a fast roll-out process that allows a seamless implementation of the software in the customer's network and thereby saves the customer engineering as well as time resources. At DR YIELD, customers are being treated as partners, not accounts: Due to several optional modules, the software can be tailored according to their unique requirements. The relational partnership with customers brings knowledge and is therefore a basis for further development and adaptations of the software. Furthermore, every contract includes support hours that can be used for further development of specific features which the customer needs. Lean processes allow a fast and flexible reaction to customer's requests (cf. DR YIELD 2016b).

1.2 Challenge

Even though DR YIELD has already shown presence on several social media channels, the full potential of the respective channels could not yet be fully exploited. Hereby, DR YIELD has been missing the opportunity to use another efficient way to reach its target market also because the consumption and buying behavior in connection with social media channels has not been investigated yet. As a result, the company so far has not been able to increase its presence as well as the engagement of users on social media and therefore, the number of people forwarded from social media channels to the website.

The challenges DR YIELD faces regarding a solid social media presence are the lack of time resources on the one hand and a focus on different areas in the daily business on the other hand. Since the market for semiconductor yield software is a highly competitive field with long-term contracts, it is important to retain existing customers as well as to acquire new customers. Even though DR YIELD has created accounts on several social media platforms, it does not actively maintain the respective channels, although social media marketing would represent an attractive way to communicate with potential clients and therefore, to generate new leads.

The company's observation of its own and the competitor's presence on the social media channels has shown that especially one competitor was able to mobilize more people and was more present on social media. However, DR YIELD has not properly investigated the strategy of its competitors on social media channels yet. Also, a structured cost and resource plan has not been stated yet and methods to measure the success of a social media presence have not been determined.

1.3 Initial Situation

DR YIELD has established its reputation in the semiconductor industry through numerous contacts worldwide and is now about to grow its market shares in the US market which represents a very attractive but also highly competitive market. Despite the high number of activities on foreign markets, the number of initial contacts and therefore new leads could not yet be increased.

The average time from the initial contact to closing the contract takes – based on experience – on average one year. As visualized in Figure 2, there is a current lead-to-conversion ratio of roughly 6%. A study from MarketingSherpa has shown that the average lead-to-conversion ratio in the B2B software industry is at 7%. Compared to other industries, the industrial sector shows in general a below-average lead-to-conversion rate and is therefore depending on a high number of initial contacts (cf. Gerli 2015).

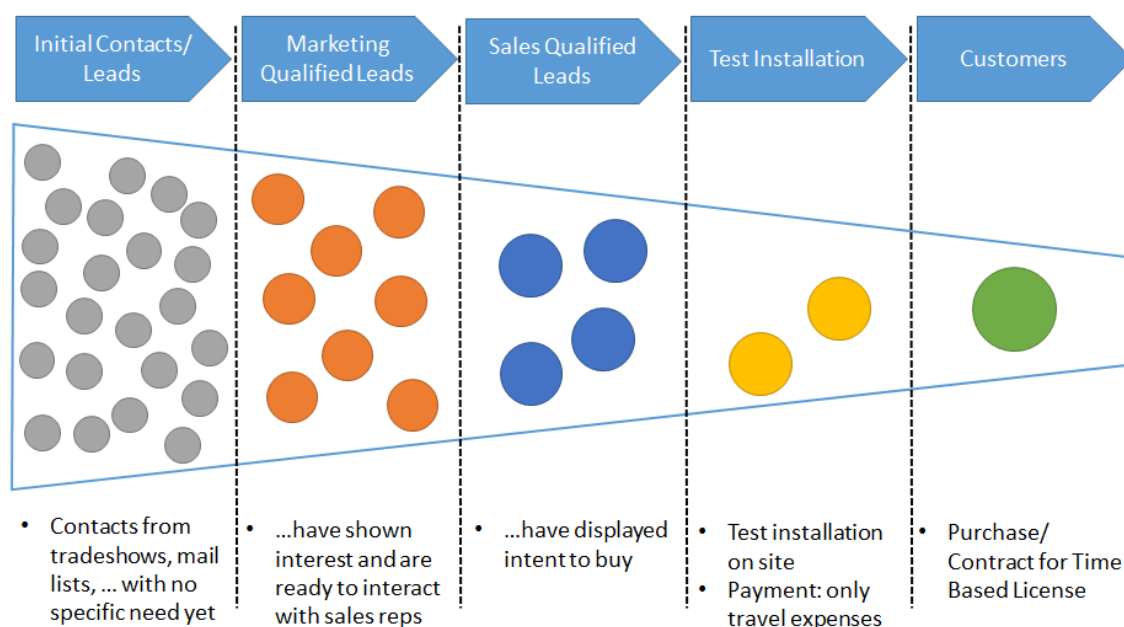


Figure 2: Sales Funnel at DR YIELD: From Initial Contact to Customer (own presentation)

At DR YIELD software & solutions GmbH, lead generation is actively supported by offline and online marketing as follows: Offline communication so far mainly includes the presence at conferences and trade fairs as well as classic communication channels such as classic sales, telephone sales and account management. Besides, the website, the concomitant search engine optimization

(SEO) as well as e-mail marketing are the most important parts of the online marketing at DR YIELD. Social Media is currently embedded as subcategory of the company's online marketing where it plays a minor, negligible role. The social media channels are primarily used to lead traffic to the website in order to track the people visiting the website via web analysis tools such as Google Analytics and StatCounter and therefore, also to check whether sales activities have been successful or not.

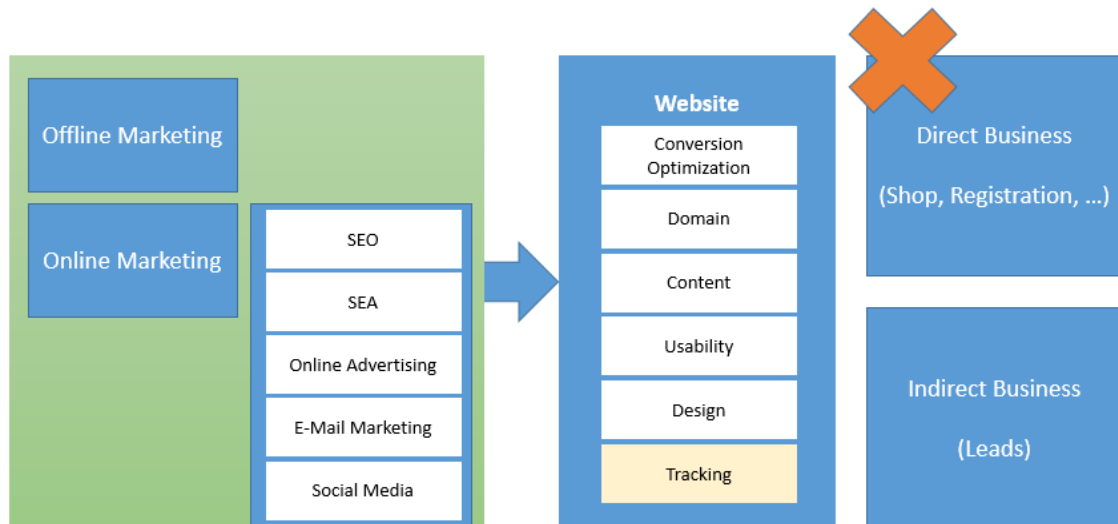


Figure 3: Lead Generation at DR YIELD (based on Beilharz 2014, p. 64)

At the moment, the company tries to increase the number of contacts by using the online channels as stated in the illustration above. Therefore, measures were taken in order to optimize SEO issues; advertisements were placed on Google (Goode AdWords) as well as on other social media channels (Facebook, Twitter, LinkedIn). Furthermore, e-mail marketing has been continuously improved in order to be able to reach potential customers more effectively. Solely the social media channels could not yet reach their full potential due to a lack of experience and knowledge since so far, the requirements for an appropriate social media presence could not yet be fully investigated. DR YIELD is currently present on the social media channels LinkedIn, Facebook, Twitter and YouTube, but currently does not regularly provide content. In the future, also these channels shall become another contact point for potential customers and essential component of the company's communication mix for lead generation.

1.4 Objectives

1.4.1 Company Objectives

The objectives of DR YIELD software & solutions GmbH are as follows:

- 1) The overall objective is to acquire five additional YieldWatchDog licensees by the end of 2018.
- 2) The second objective is to generate five marketing qualified leads over social media channels by the end of 2018.
- 3) The third objective is to increase the social media referrals to the website from 4,6% in the year 2016 to 15% by the end of 2018.

1.4.2 Aim of the Thesis

Following objective shall be attained within the scope of the present master thesis:
The development of a social media concept for DR YIELD software & solutions GmbH specified on lead generation and its application to the US market in order to generate marketing qualified US-leads.

1.5 Reference Framework

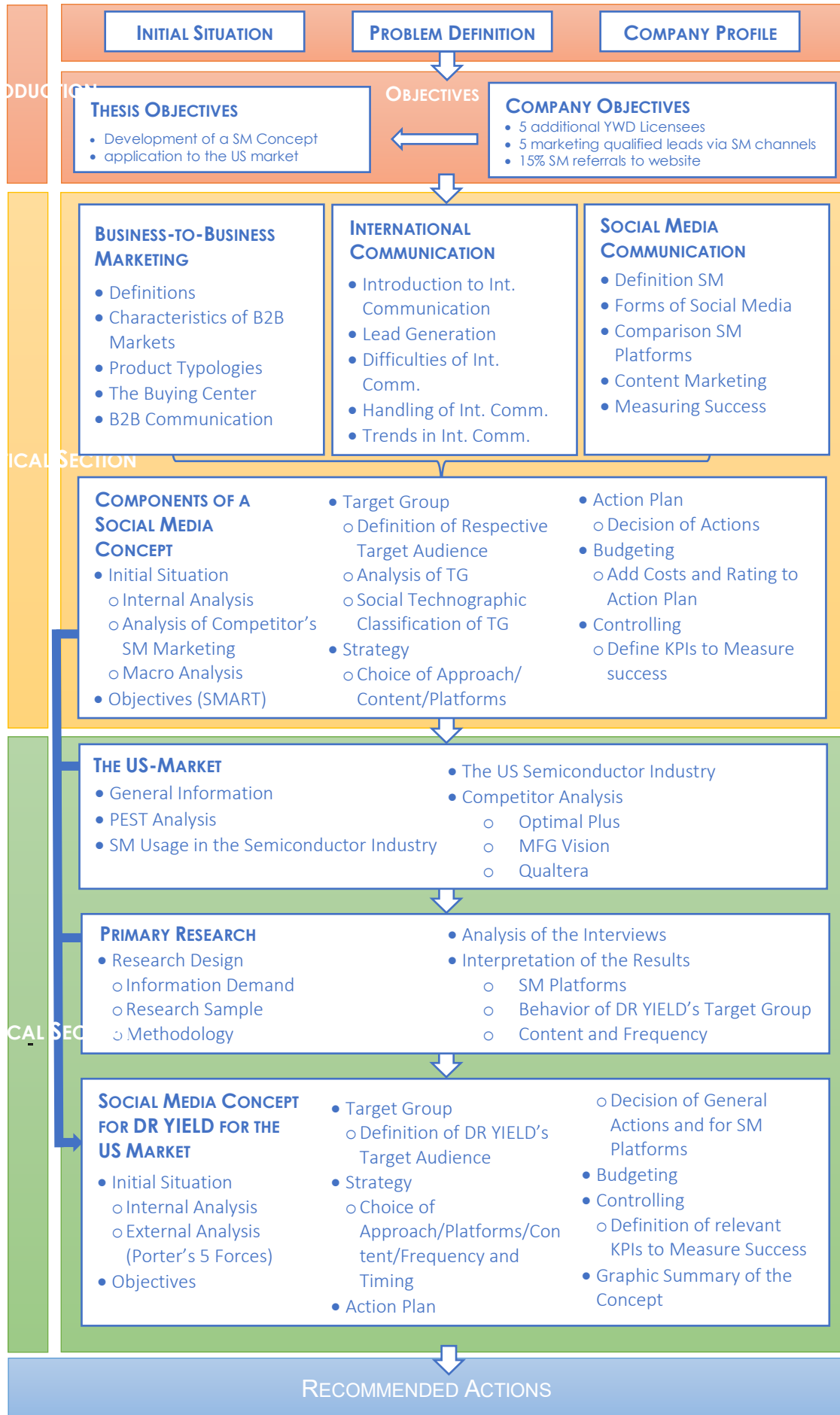


Figure 4: Reference Framework (own presentation)

2 Business-to-Business Marketing

In this chapter, the peculiarities of B2B markets and B2B marketing will be defined and hence, the resulting implications and difficulties for marketing activities will be specified. Furthermore, the buying center will be analyzed regarding its members and their particular needs regarding communication. Furthermore, considerations that need to be made when communicating to B2B markets will be presented.

2.1 Definition of B2B Marketing

B2B marketing is defined as the designing and marketing of market services to organizations in order to redistribute or process goods to other organizations (cf. Masciadri/Zuoancic 2013, p. 3). The markets between businesses are described as B2B markets. Therefore, B2B marketing refers to the meeting of demands of other companies (cf. Hague n.d.). Characteristically, the demand in B2B businesses is originally driven by the goods sold to end consumers (cf. Kotler et al. 2013, p. 177). The focus of B2B markets lies therefore on selling products or services to other companies and the resulting relationships between businesses. The main characteristics of B2B markets are high technical contexts, commonly long duration of business relations as well as extensive formalization of the buying process that is usually driven by different parties – namely the buying center – within the company (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p. 13).

2.2 Characteristics of B2B Markets

Even though B2B and B2C marketing have many similarities, there are still some crucial differences that should be considered when targeting the B2B industry. These are essentially as follows:

Buying processes are more complex and take longer: Due to the higher complexity of business purchases regarding the large value of monetary investments, complex technical and economic considerations and interactions among many people in the buyer's organization, the buying process tends to be more formalized and requires detailed product specifications, written purchase orders, careful supplier searches and formal approval (cf. Kotler et al. 2013, p.

179). Depending on the industry and goods purchased, decision and buying processes can take up to several years (cf. Beilharz 2014, p. 52).

The number of decision makers is bigger: The decision-making process is often driven by several decision makers that all have different interests and needs. Therefore, every stakeholder should be addressed in a different, but still consistent way (cf. Cohn 2015). This conglomerate of people on the buyer side is called “Buying Center” (cf. Beilharz 2014, p. 54). It is a frequent practice that extensive coordination processes between the members of the buying center take place (cf. Werani/Gaubinger/Kindermann 2006, p. 8).

The relationships between businesses last longer: Depending on the attractiveness and the profitability of a business relation, it makes sense to establish long-lasting relationships within the B2B industry due to the costs of acquisition and the mutual learning process. As a consequence of repeated transactions and a long-term relationship, knowledge and experience can be gathered, mutual empathy and trust can be built and costs can be reduced due to the reduction of control requirements (cf. Backhaus/Voeth 2015, p. 135). Also, the cooperation between buyer and seller is usually closer due to the higher customization level of offerings (cf. Kotler et al. 2013, p. 178).

The coherences are technically complex: It is characteristic for B2B businesses that the complexity of products and services is usually higher due to components and subcomponents that need to be integrated in the customer’s running manufacturing processes. Especially in the semiconductor industry, manufacturing and testing processes are highly complex and interdependent which has to be considered when introducing new systems (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p.15).

The investment amounts are generally higher: B2B businesses usually involve bigger volume amounts than B2C transactions due to the smaller amount of market participants and therefore competitors. Furthermore, the specific and individual requirements of the particular businesses require costly adaptations (cf. Voeth/Herbst 2015, p. 538).

The purchasing process contains high risk for the buying organization: Many purchases within the B2B industry are associated with a high risk for buying organizations regarding the unhindered operation of their own manufacturing process (cf. Beilharz 2014, p. 52f.). IT providers should therefore try to reduce the perceived risk of the customer by providing proof of qualification such as certifications, awards and customer references (cf. Gerth 2015, p. 114).

Make-or-Buy Decisions: Especially in terms of IT B2B marketing, certain programs and system solutions can be developed in-house as most semiconductor manufacturing companies have their own IT department installed. Therefore, in many cases, the question of "make-or-buy" – meaning to acquire an external supplier or to produce the software with internal resources – needs to be clarified for certain IT services within the potential customer's organization. At this stage, software suppliers should demonstrate the advantages of outsourcing. Potential arguments therefor can be financial advantages, flexibility or special know-how and need to be presented to the potential customer in a timely manner (cf. Gerth 2015, p. 108f.).

In order to summarize the most distinctive peculiarities between B2B and B2C businesses, the biggest differences shall be outlined in Table 1:

	B2B	B2C
Nature of Demand	Derivative Demand	Original Demand
Consumer	Organization	End Consumer
Number of Deciders	Multipersonal Decisions	Individual Decisions
Degree of Formalization	Formalized	Not Formalized
Performance Complexity	High	Low
Sales	Direct Sales/Sales Agent	Widely Anonymous Market/Direct Sales
Decision Making Process	Highly Heterogeneous	Rather Homogeneous
Decisions driven by	Rationality	Emotionality
Quality vs. Brand	Quality more important	Brand/Image usually more important

Table 1: Differences in B2B and B2C Industries (based on Kreutzer/Rumler/Wille-Baumkauff 2015, p. 14; Hofbauer/Hellwig 2012, p. 62; Helm/Mauroner/Steiner 2015, p. 122)

It can be concluded, that the buying processes on markets for industrial goods are more rational, more interactive, more complex as well as more process oriented than on consumer markets and therefore, a different approach of communication policy needs be applied (cf. Voeth/Tobies 2009, p. 1105).

2.3 Product Typologies

Even though the increased complexity is characteristic for B2B markets, different business types can be differentiated regarding the degree of individualization and complexity. Therefore, Backhaus and Voeth developed the model of four different business types in the B2B business as follows:

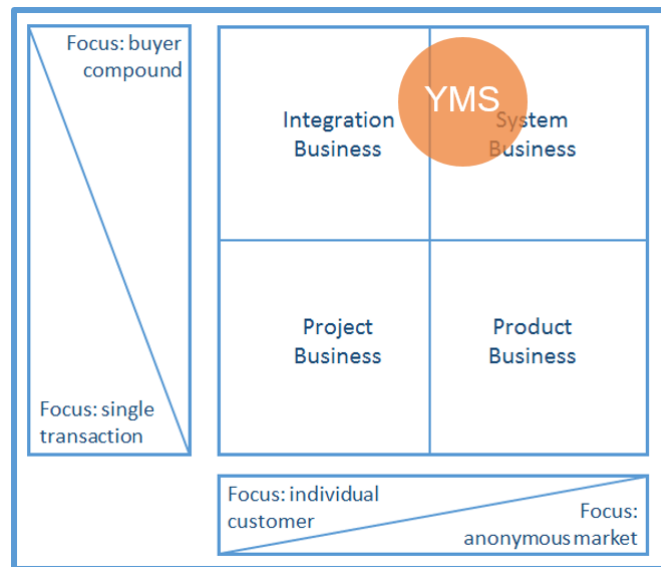


Figure 5: B2B Product Typology (based on Backhaus/Voeth 2014, p. 217)

The **product business** resembles broadly B2C markets where products are addressed to an anonymous market without creating any dependencies on buyer compounds (cf. Backhaus/Voeth 2014, p. 217). Therefore, the products are widely standardized and the duration of the business relation is rather short (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p. 16).

In the **system business**, the marketed products are designed for an anonymous market or a specific market segment whereas the sequence of buying steps proceeds successively (cf. Backhaus/Voeth 2014, p. 217). Usually the product has already been developed before it is marketed, but can eventually be customized depending on specific requirements of the buying organization (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p. 15).

The **project business** resembles the product business due to its self-contained buying process, but the degree of complexity is far higher. The high level of

individualization is characteristic for the project business, meaning that the developed product is usually not applicable to the requirements of any other company (cf. Backhaus/Voeth 2014, p. 217). In contrast to the integration business, project businesses do not target long-term business relationships – it is about a single transaction and eventually some minor, additional purchases such as upgrades or enhancements (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p. 16).

The **integration business** is characterized by the high degree of individualization – usually the service is performed individually for each customer from which often follows a strong dependency of the customer on the supplier. Therefore, integration businesses tend to long-term business relationships (cf. Backhaus/Voeth 2014, p. 218).

Software as such is difficult to subordinate to a specific area due to its immateriality and the respective target audience as well as the degree of adaption respectively customization. While software as consumption good is mostly standardized and targets anonymous mass markets (equal to product business), software as industrial good is mostly customized or even uniquely programmed for a specific corporate purpose (equal to integration or project business) (cf. Helferich 2010, p. 88f.). Especially a mixture of system and integration business reflects the peculiarities of yield management software as it is on the one hand characteristic for the software that is usually already developed beforehand, but customized after the purchase depending on the requirements of the customer from which often results a strong dependency on the supplier.

Furthermore, especially in the industry of industrial goods where expertise plays an important role, product-accompanying intangible components – such as consulting, trainings, technical maintenance – become increasingly relevant. It is therefore advisable to consider a product and its concomitant services as a bundle of services and not separately (cf. Engelsleben 1999, p. 88). While the primary performance that represents the original core competence of the company can always theoretically be separated from other offers of the company, secondary performances can only exist in connection with the primary good or service. This service bundle shall convey a higher market value than comparable primary goods of competitors (cf. Meffert/Burmann/Kirchgeorg 2012, p. 450). The necessity to

offer personalized value-added-services can be reasoned due to an increasingly competitive situation on saturated markets (cf. Engelsleben 1999, p. 88) for a more distinctive differentiation from the competitors (cf. Meffert/Burmann/Kirchgeorg 2012, p. 450). Hence, offers exceed mere technical statements and offer the potential customer a comprehensive comprehensive solution which also takes soft criteria such as the overall delivery service, maintenance, user training and upgrades into account (cf. Gerth 2015, p. 113).

2.4 The Buying Center

In contrast to consumer goods markets, buying decisions in industrial markets are usually taken multipersonally (cf. Backhaus/Voeth 2003, p. 63). The so called “Buying Centers” are formed that follow structured and mostly formalized purchasing decision processes (cf. Voeth/Tobies 2009, p. 1105). Especially highly complex or non-routine decisions require the involvement of several people in different roles. Following roles in the buying center can be distinguished:

Users: Users are the organization members that actively use the product (cf. Meffert/Burmann/Kirchgeorg 2012, p. 145). In many cases, it is the group of users that initiates the purchasing cycle and defines the product requirements (cf. Kotler/Keller/Blieml 2007, p. 327). In many cases, the users have a key position in the procurement process due to their role as experts regarding the product quality (cf. Backhaus/Voeth 2014, p. 52). Also, their experience essentially determines whether a purchase from a certain supplier is successful or not (cf. Meffert/Burmann/Kirchgeorg 2012, p. 145) as their behaviour towards the product determines whether the purchased good is adequately used or not (cf. Backhaus/Voeth 2014, p. 52).

Buyers: Buyers have the formal competency and authority to make a transaction (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p. 19). They are usually members of the department for operative procurement and responsible for the choice of suppliers (cf. Backhaus/Voeth 2014, p. 52). In many cases, they are also involved in the elaboration of product requirements. Due to that responsibility as well as their major influence on the choice of the supplier, buyers play an important role within the buying center (cf. Meffert/Burmann/Kirchgeorg 2012, p. 145). Buyers on

the level of strategic purchases are usually more in the role of the decision makers and hence hierarchically higher than normal buyers (cf. Backhaus/Voeth 2014, p. 52).

Decision Makers: Decision makers are – due to their high hierarchical level – the members of the buying center that have the last word in the purchasing process (cf. Kreutzer/Rumler/Wille-Baumkauff 2015, p. 19). Especially in the purchasing process of high investment goods, the decision makers are often board members that have high budgets on their command. However, due to their high position, it can be assumed that deciders are often not fully integrated in the purchasing process and therefore not fully involved in the details of the decision preparation since this task is usually delegated to lower hierarchical levels. This is why, in many cases, deciders feel insecurity since they bear the full responsibility, but only are marginally involved in the buying process (cf. Backhaus/Voeth 2014, p. 53f.).

Influencers: Influencers are people that are not formally involved in the purchasing process. Still, they can influence the process by e.g. determination of standards or targeted information policy that influences the choice between different alternatives (cf. Backhaus/Voeth 2014, p. 53). Their claim therefore can be seen as decision constraint (cf. Meffert/Burmann/Kirchgeorg 2012, p. 145).

Gatekeepers: Gatekeepers are often assistants of the decision makers and control the flow of information to the procurement committee (cf. Backhaus/Voeth 2014, p. 52). Their influence therefore mainly lies in the stage of the decision preparation (cf. Meffert/Burmann/Kirchgeorg 2012, p. 145).

Figure 6 provides an overview over the respective roles of the buying center and their functions in the decision-making process with focus on the IT industry. As the different members of the buying center follow different goals, these distinct goals need to be considered when setting up the communication strategy and therefore, integrated in the message that is being transported to the respective group of members.

Phase	Initiator	User	Influencer	Buyer	Decider	Gate-keeper
Recognition of Requirements	X	X				
Clarification of Requirements		X	X		(X)	
Supplier Search and Preselection			X	X		X
Obtaining Offers and Bidding		(X)	X	X		
Selection of Supplier; Closing			X	X	X	
Order and Implementation Phase				X		
Performance Feedback and Re-Evaluation		X		X		

Figure 6: Influence of the Members of the Buying Center in the Decision-Making Process (based on Gerth 2015, p. 121)

Depending on the form of corporate organization, company size, corporate culture, purchase value and the industry (cf. Menthe/Sieg 2013, p. 75), there are usually at least five to six and up to several dozens of people involved in a purchasing process (cf. Kotler/Keller/Blieml 2007, p. 328). It is also possible that one person can hold several roles or several people have the same role (cf. Meffert/Burmann/Kirchgeorg 2012, p. 145). The activities of the members of the buying center depend on the one hand, on each other and are on the other hand built on each other (cf. Büschken 1994, p. 7).

The vendors need to investigate the way of thinking of each involved member regarding the decision making to identify the determinants, motives and structure of the buyer. This is necessary in order to be able to respond purposefully to their expectations and develop targeted benefit arguments. The following illustration shows the buying process with the respective tasks and targets through the whole buying process (cf. Menthe/Sieg 2013, p. 75):

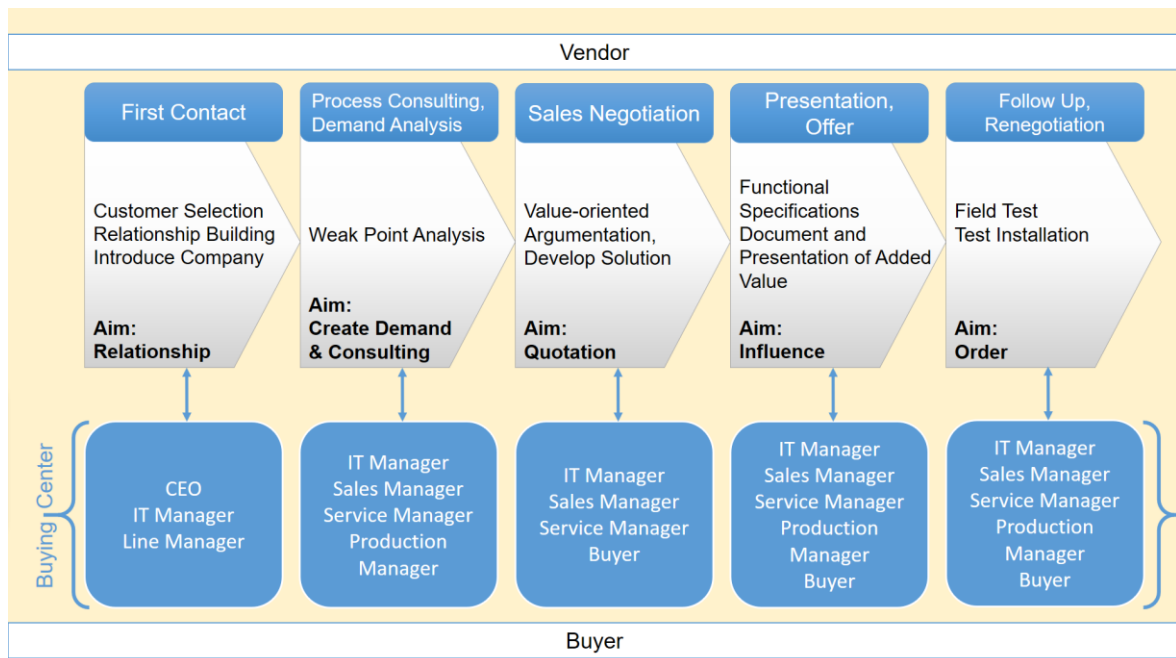


Figure 7: Steps of the Buying Process with Respective Members of the Buying Center (based on Menthe/Sieg 2013, p. 76)

General decision criteria in business buying processes are among others:

- Consulting by experts
- Price
- Low maintenance costs
- Delivery service (scope of service, delivery reliability)
- Quality of the offered or provided service (reference)
- Reaction speed (cf. Menthe/Sieg 2013, p. 85)

Furthermore, also emotional factors such as commitment, flexibility, innovation power and communication can play an important role when it comes to deciding (Menthe/Sieg 2013, p. 85).

2.5 B2B Communication

During the last years, even on industrial markets, an increasing saturation and approximations between competitive products have become more and more apparent which makes communication an even more important factor of the marketing mix in order to differentiate oneself from the competition (cf. Voeth/Tobies 2009, p. 1103). Due to the high technical complexity of goods, demanders feel high insecurities – therefore, the aim of corporate communication should support the minimization of risks and convince the potential customers of the company's solution solving potential (cf. Backhaus/Voeth 2015, p. 345). According to a study, only 27% of B2B leads are ready to buy when first generated. It is therefore important to provide the leads with strong content during the whole process in order to keep the qualified leads in the sales funnel and their attention and interest until they are finally ready to buy (cf. PropelGrowth n.d.). Furthermore, it has to be considered that the formal purchasing process and the distribution of different roles require the operationalizability of determinants of multipersonal purchase decisions, the empirical verifiability of the model as well as the practicability by providing clues to the design of the supply policies (cf. Büschken 1994, p. 14).

Moreover, in order to sell successfully to a company, it is important to understand the buying motives of the members of the buying center (cf. Menthe/Sieg 2013, p. 73) while especially smaller companies should focus on the key persons in the buying center (cf. Kotler/Keller/Blieml 2007, p. 328). It has to be considered that different people with different targets – that can even stand in contrast to each other – participate in the decision-making process (cf. Büschken 1994, p. 15). Moreover, especially in the field of software marketing, it has to be kept in mind that also the specific characteristics of software necessarily influence the communication. These are the product's immateriality, its aging, its fast changeability compared to material goods and the features of software that are not easily quantifiable (cf. Wolle 2005, p. 15).

The overall goals that companies strive for are especially the reduction of insecurities, the determination of savings potential as well as the creation of competitive advantages (cf. Menthe/Sieg 2013, p. 80). Other marketers represent the opinion that – besides the rational, quantitative factors – also qualitative factors

such as favors, respect and low personal risk influence the industrial purchasing decisions (cf. Kotler/Keller/Blieml 2007, p. 329). Figure 8 demonstrates the purchasing motives from rational to emotional factors comparing the B2C and B2B industries:

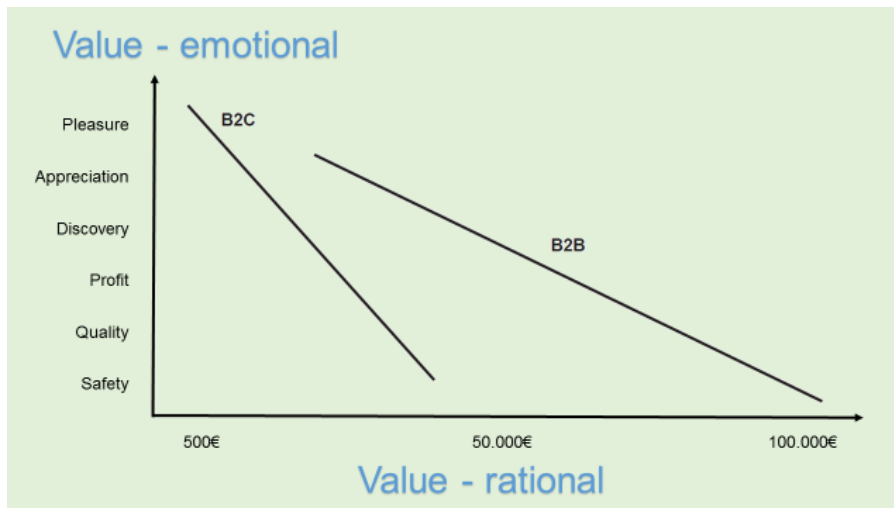


Figure 8: Rational and Emotional Value in B2C and B2B industries (based on Lippold 2016, p. 20)

As stated above, every member of the buying center needs a different communication approach – it is therefore advisable to encounter the different roles with different presentations (cf. Menthe/Sieg 2013, p. 75). In order to successfully address a certain member of the buying center, following questions should initially be clarified and accordingly have influence on the respective communication instruments:

- What is the professional background of the individual person?
- What are the individual desires, needs and goals of each person?
- What personal benefit does this person draw from a decision for our company?
- What kind of information does this person need?
- Does the benefit for this person have technical, commercial or emotional value? (cf. Menthe/Sieg 2013, p. 92)

All in all, the modern procurement tends to leave the cost pusher approach, aiming for a more strategical approach in terms of a joint and active creation of results in order to create synergies regarding quality, innovations, price and service (cf. Menthe/Sieg 2013, p. 83).

3 International Communication

In the following chapter, the term “International Communication” will be further defined and set in relation to the communication goal of generating leads. Furthermore, the risks and barriers for international communication will be outlined and a guideline how to handle these risks and therefore international communication will be given. Finally, an overview of the latest and future communication trends will be provided.

3.1 Introduction to International Communication

Today, companies are increasingly exposed to the pressure of internationalization and globalization. In order to sustain the existence of a company in the long term, the competitiveness of the company must be secured against domestic and foreign competitors on the domestic market, while at the same time potentials must be developed in foreign markets. The international communication efforts of companies go hand in hand with these international activities. International communication means the international exchange of information between a sender and recipient (cf. Berndt/Sander 2009, p. 671) and describes the conscious and strategic design of information of a company about itself and its products for the purpose of behavior control under the framework condition of globalization and standardization requirements in order to reach the international sales target (cf. Fuchs/Apfelthaler 2002, p. 147). Figure 9 illustrates the process of international communication:

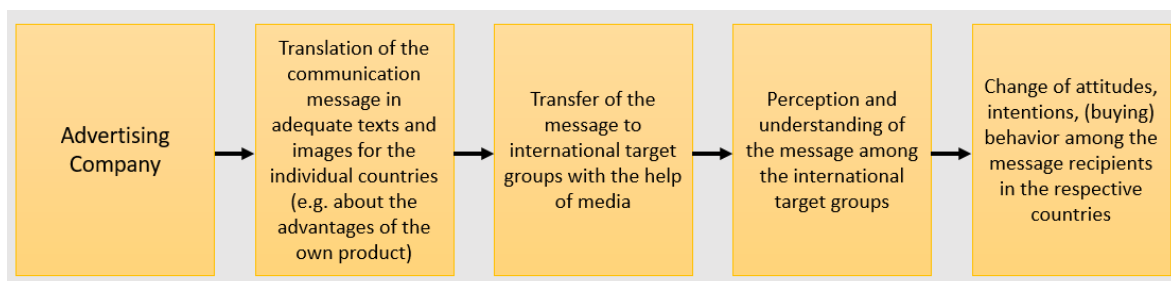


Figure 9: International Communication Process (based on Berndt/Sander 2009, p. 671)

The communication policy encircles the external and internal communication, but also the interactive communication between employees and customers such as consultations or the communication via social media (cf. Bruhn 2015, p. 3). While

the overall goal of a successful communication policy is the effective and efficient establishment of a competitive advantage in the perception of demanders (cf. Voeth/Tobies 2009, p. 1105), the common goals of an international communication policy are a decrease of development costs, a higher brand recognition, the improvement of planning quality (cf. Fuchs/Apfelthaler 2002, p. 147) as well as the generation of leads (cf. Stevens 2012, p. 18) which will be further described in the following chapter 3.2. Focusing on B2B markets, there are four central tasks in regards of the communication policy: the characterization and imprinting of the institutional appearance of the company, the sale of products and services, the intensification of personal customer contact as well as the networking communication (cf. Bruhn 2015, p. 344-346).

Especially in the international context, it is particularly important to consider the intercultural differences in order to communicate successfully. Therefore, the designing of the verbal, non-verbal as well as symbolic communication needs to be adapted to the local requirements and expectations. In this regard, it has to be considered that aspects such as language, pictures, local references, color design, texts, selling arguments and many more aspects could be interpreted in a completely different way depending on the recipients of the message (cf. Fuchs/Apfelthaler 2002, p. 147f.). Regarding the communication activities, decisions concerning the choice of the target group, the selection of instruments as well as the composition and style of the activities (cf. Voeth/Tobies 2009, p. 1105-1114) and the scope of standardization or differentiation of the communication strategy (cf. Berndt/Sander 2009, p. 676) have to be made.

3.2 Lead Generation

One of the most important goals for communication strategies is the generation of leads as mentioned in chapter 3.1. Especially in the IT industry, lead generation is the most used marketing strategy goal (cf. Versteegen/Esslinger 2003, p. 17). Leads are prospects that have the potential to become a customer. When a lead is qualified regarding certain pre-determined criteria such as having a pertinent need for the respective product or service, the right budget, decision making authority and the readiness to buy within a suitable amount of time, the lead is delivered from the marketing department to the sales team. Lead generation therefore

means the identification of prospective customers and their likelihood to buy (cf. Stevens 2012, p. 18-21) as well as the stimulation and capturing of their interest in a product or service in order to develop a sales pipeline (cf. Marketo n.d.). Lead generation is a straightforward process that involves a complex series of steps beginning with inbound and outbound marketing activities that target the generation of inquiries and their qualification, going over to handing the contact to the sales department and finally trying to move the lead through conversions to sales revenue (cf. Stevens 2012, p. 19). This is the progression that people go through on their way from being strangers who are not familiar with the organization or brand to becoming qualified prospects, one-time buyers, repeat buyers and – in the best case – loyal customers (cf. Bly 1998, p. 2). While the primary purpose of lead-generation marketing is to convert people from suspects into prospects that are likely to need the company's product or service (cf. Stevens 2012, p. 21), the primary task of the sales department is then to convert people from prospects into customers (cf. Bly 1998, p. 2f.). This means, the generation of leads does not attempt to close the sale, but to get the potential customer to the next step in the sales process. Necessary to that end is to have a definition of the steps in the sales process in order to understand the processes and where the lead-generation promotion fits in (cf. Bly 1998, p. 8).

Lead generation differs from general marketing communication as it strongly relies on direct marketing – respectively direct-response marketing communications – and therefore comprises a set of marketing activities that are targeted, measurable and driven by ROI considerations and has as primary goal the stimulation of an action such as a click, a call or a website visit. Still, the ideal process and activities of lead generation are based on processes, best practices as well as continuous testing and improvement. The most important contribution that direct marketing generates for the business is the generation of leads for the sales force. Continuous improvement of the processes furthermore leads to lower costs of lead generation activities as well as higher conversion rates to sales (cf. Stevens 2012, p. 23).

As specified in more detail in chapter 3.4, the increasing abundance of information leads to attention scarcity of message recipients – therefore, it is nowadays crucial regarding lead generation to create own attention – instead of so called “rented

attention” – by becoming a trusted advisor to one’s prospects by publishing and creating valuable content and thought leadership (cf. Marketo n.d.).

3.3 Difficulties and Handling of International Communication

When companies do business and therefore communication abroad, they face different risks and barriers that they have to overcome in order to be successful in international business.

Due to intercultural differences, it often happens that translation mistakes are made within international communication. Especially when using culturally embedded jokes or wordplays, the different understanding has to be considered. Also, there are differences regarding the expected formality in communication: While in more formal countries such as Germany, Austria, Sweden and many Asian countries, it is common to address a new contact by their last name, a more informal tone and therefore the usage of the first name is suitable even in business communication in the US (cf. Usunier/Lee 2005, p. 378).

Mistakes in communication were made when the advertising message is not perceived by the target group, when the message is incorrectly interpreted or in case that it causes non-intended reactions (cf. Fuchs/Apfelthaler 2002, p. 148).

In order to communicate successfully in international business and to overcome the difficulties of cultural aspects, different aspects regarding the peculiarities of international communication have to be considered. The ability of recognizing and managing conflicts regarding values plays a crucial role in successful intercultural communication exchanges (cf. Samovar et al. 2013, p. 165).

First of all, in order to be able to communicate successfully, the following steps have to be considered: Firstly, a target group needs to be identified. This can be e.g. potential customers, but also current users or deciders of the purchasing process. Depending on the selected target group, the communication strategy will be adapted. After defining a target group, the communication objectives regarding the desired response need to be determined. When the objectives are defined, the designing of the message needs to be determined regarding the content, structure

as well as the format and channel. Finally, for controlling purposes, feedback should be collected in order to measure the effectiveness and to find improvement potentials (cf. Kotler et al. 2013, p. 424-429).

For effective international communication, accurate preliminary preparation is inevitable in which the different aspects of international communication need to be examined and trained. Therefore, it is important to assess the possible intercultural obstacles that could appear when communicating abroad such as e.g. language and cultural barriers. Also, it has to be considered that – due to cultural peculiarities – what is explicitly said is not always implicitly meant. There will always be a part of the language that can only be translated when knowing the cultural connection and influence (cf. Usunier/Lee 2005, p. 394f.).

In order to get an overview of the peculiarities of different markets and hence, to understand them better, Hofstede assesses countries according to six dimensions which will be explained in the following:

Power distance relates to the discussion how less powerful members of organizations accept the unequal distribution of power. Even though these kinds of inequality exist everywhere, the extent of them differs strongly. The **avoidance of uncertainty** describes to what extent the members of a society feel comfortable – or not – in unstructured situations that are unknown. Therefore, avoiding uncertainty relates to the attempt of a culture to minimize these situations by introducing rules, laws and behavioral codes. The dilemma **Individualism vs. Collectivism** relates to the level of integration of people in groups. While individualistic societies are rather distanced and people are rather seen as “lone fighters”, people in collectivistic cultures are from the very beginning integrated in the group and have therefore developed a strong “we”-consciousness. The question of **Masculinity vs. Femininity** is also a societal aspect that refers to the distribution of values between genders. While cultures with a high degree of femininity show a minimum emotional and social role differentiation between men and women, masculine cultures show a maximum role differentiation between genders where men deal with facts and women feelings. In order to understand other cultures, it should also be investigated whether a culture is rather **long- or short-term oriented**. While East Asian and Eastern- and Central Europe countries are considered as widely long-term oriented, countries such as the US

and Australia are rated as short-term oriented which means that members of these countries think that the most important events in life occurred in the past and social spending and consumption play an important role in their lives. The last dimension of Hofstede is labeled with **Indulgence vs. Restraint** which indicates whether a society allows relatively free gratification of desires regarding the joy of life (such as in South and North America, Western Europe et al.) or whether the society is policing gratification and has therefore introduced many strict social norms (e.g. Eastern Europe and Asia) (cf. Hofstede 2011, p. 9-16).

Especially in the semiconductor industry, four dimensions play a major role:

- **Avoidance of Uncertainty:** As with a software purchase, semiconductor companies continuously try to achieve process stabilization and improvement as well as to avoid disruptions in manufacturing processes.
- **Masculinity:** As decisions are mostly rational and standardized, there is hardly any place for emotional factors in the choice of suppliers.
- **Restraint:** Due to the standardization of processes and organizational restrictions, choices have to be justified according pre-determined criteria. Therefore, a deviation from the organizational structure towards free choices is hardly realizable.
- **Long-term Orientation:** Due to high amounts of investments and long implementation and integration processes every time a new supplier is acquired, companies focus on long-term business relationships.

Furthermore, a study has shown that especially three dimensions have a strong influence on social media behavior:

- **Masculinity:** Even though a high masculinity would imply that technological innovations are appreciated as material things and career advancements are highly valued, social media is more frequently used by rather feminine cultures for keeping up with personal relationships.
- **Uncertainty Avoidance:** A high level of uncertainty avoidance influences especially the expressive usage of social media platforms negatively, while cultures with a low uncertainty avoidance show a greater tolerance for risks

and therefore, tend to be more innovative and try new things such as social media channels for communication.

- Long-Term Orientation: Finally, also long-term orientation is negatively associated with the rate of social media usage as especially short-term cultures will perceive the benefits of social media and therefore tend to use social media more actively (cf. Gong/Stump/Lee 2013, p. 42-44).

Another example is the different perception of high and low power distance countries: While in countries with high power distance, it is considered to be respectful when a company's CEO publishes something on social media channels, people of low distance cultures will start to think that the CEO has nothing better to do (cf. Chiang 2014).

Furthermore, a PEST analysis can help to analyze and monitor the macro-environment of an organization. PEST is an acronym that stands for the Political, Economic, Social and Technological factors that influence the company's environment (cf. Professional Academy n.d.). It should be considered aside from the company's internal resources and industry factors in order to give an understanding of a situation and how the different factors will affect the performance and activities of businesses in the long-term (cf. PESTLEanalysis 2013). The **political** factor concerns governmental regulations as well as legal factors that are assessed regarding their possibility to affect the market and therefore business activities. These could be e.g. political stability, tax guidelines, trade, safety regulations and employment laws. The **economic** factor encompasses e.g. inflation and interest rates, economic growth, business cycles, unemployment rates and policies that can also have an impact on the business. In order to understand how potential customers are minded and what attracts them, also the **social** factor needs to be considered. It outlines the socio-economic environment of a market such as customer demographics, cultural limitations, lifestyle attitude and the level of education. Also, **technology** in regards of technological advancements, lifecycles of technologies, the role and usage of the internet and the rate of innovation can have an impact on the business (cf. PESTLEanalysis 2013). The PEST analysis can also be extended by legal and environmental factors that can possibly influence a business (cf. PESTLEanalysis

2013), but as these factors are only marginally influencing the semiconductor software industry, they will not be further presented in the framework of the present thesis.

Particularly important for the semiconductor industry is, on the one hand, the economic factor since investments done by semiconductor manufacturers are dependent on the current economic situation and the development in the semiconductor industry as well as their own business figures. Also, in regards of the technological aspects, it has to be learned how technically advanced the company's production facilities are and how flexible new systems can be integrated. Especially from a social media point of view, the social factor plays an important role as it gives indication about the age, income and educational distribution and therefore about the social media usage and behavior of the members of the buying center.

3.4 Trends in International Communication

During the past years, some communication trends have been particularly standing out. The generation of leads for example has been undergoing substantial changes in the past few years due to the rise of new online and social techniques.

Customers are changing. Due to the 24/7 availability of information on the internet, the kind of "self-directed buyers" has emerged. The abundance of information results in attention scarcity – potential buyers become increasingly better at ignoring messages that they are not particularly interested in (cf. Marketo n.d.). People furthermore stop relying on marketer-supplied information – they use the internet and other technologies to find the specific information they are particularly looking for and connect with other consumers in order to exchange brand-related information or even create their own marketing messages online (cf. Kotler et al. 2013, p. 419). Still, the huge variety of possible choices also increases the need for orientation in order to manage the multi options society. This requires companies to set up and maintain clear brand profiles as well as a clear and consistent appearance in communication (cf. Bruhn 2015, p. 586).



Figure 10: Changes in Communication and Buying Behavior (Marketo n.d.)

Since customers are changing, also the **marketing strategies** need to change: marketers are continuously shifting away from classic mass marketing due to high divergence loss and are developing more and more focused marketing strategies in order to build closer relationships with customers in more narrowly defined micro-markets (cf. Kotler et al. 2013, p. 419). Therefore, the focus of communication instruments will lie on an individualized target group approach that opens possibilities for interaction such as interactive TV, personalized e-mails, weblogs and direct mailings. Thus, the use of communication will not simply lie on the distribution of information, but on the dialogue-oriented communication (cf. Bruhn 2015, p. 586).

Finally, also the **technologies** for communication have dramatically changed over the past years that are a new source of information and offer new possibilities in regards of communication tools. While classic outbound communication tools such as television, magazines, newspapers and other mass media have started losing their market dominance, the trend is going towards a more specialized and highly targeted media in order to reach smaller customer segments with more personalized, although interactive messages (cf. Kotler 2013, p. 420).

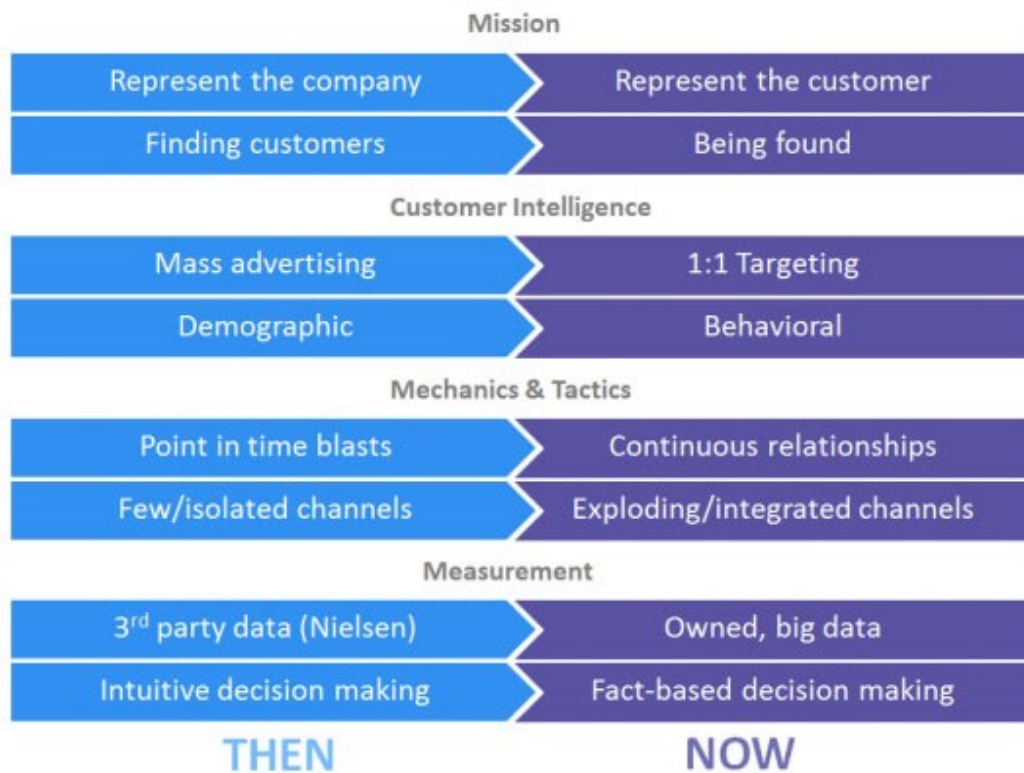


Figure 11: The Transformation of Marketing (Marketo n.d.)

Figure 11 provides a summary of the biggest trends in marketing communication: All in all, communication drifts away from the self-promotion of companies to providing potential customers with information and helping on a partnership-based exchange. The times of mass marketing are widely over – people demand a customized and content based communication approach. The target group will not only be segmented according to its demographic peculiarities, but on their (buying) behavior. Finally, due to the masses of available data provided by new technologies, decisions will be more and more based on statistics and facts and less on simple intuition.

4 Social Media Communication

In the following chapter, the terms social media communication and social media will be defined. Furthermore, the different forms of social media channels will be explained, the most popular social media platforms will be compared and the term content marketing will be elucidated. Finally, different methods for measuring the success of social media activities will be presented.

4.1 Definition of Social Media

The term **social media communication** refers to decisions regarding the design and type of transmission of corporate messages on social media platforms and describes both the communication as well as the collaboration and the networking between companies and social media users. Hence, the goal of social media communication is the mutual exchange of information, opinions, impressions and experiences as well as the participation in the creation of company-relevant contents, products or services (cf. Bruhn 2014, p. 1040f.).

The term **social media** describes all kinds of media and platforms that allow the interactive exchange of information as well as the creation of content that is shared with other communities (“many to many”-approach) (cf. Goderbauer-Marchner/Büsching 2015 p. 13). Crucial for the definition of social media is the possibility of contributions of users and mutual exchange (cf. Beilharz 2014, p. 1); the individual or a group of individuals (community) are in the center of attention, the social software and its users organize themselves and social feedback is supported in the form of cross-references, comments or social ratings etc. (cf. Fiege 2012, p. 18f.). **Social media services** are Web 2.0 internet-based applications where individuals and groups create profiles that are provided by various platforms that allow the connection of profiles with one another in order to generate user-specific content (cf. Obar/Wildman 2015, p. 2). The users can be seen as prosumers that use contents of others but also create their own content to share with others which, as a consequence, creates interaction (cf. Goderbauer-Marchner/Büsching 2015, p. 11f.).

When choosing social media platforms, companies should make some basic considerations in order to focus on the platforms where the company's target

group can be found. It is therefore important to determine goals that shall be achieved with the respective strategy; hence, market studies and trends need to be analyzed in order to find the appropriate platform for a company. When starting with a social media campaign, it is in many cases advisable to focus initially on one or two platforms in order to establish a proper appearance on the chosen channels before moving to other platforms. It is important to keep in mind that the presence on each social media platform needs to be regularly maintained which is on the one hand time and therefore cost consuming (cf. Buchenau/Fürtbauer 2015, p. 57).

4.1.1 Social Media in the B2B Industry

While many companies have already taken advantage of the manifold possibilities that social media channels offer, many companies are challenged by the changing environment where the greater part of customers have already adopted social media and competitive pressure forces companies towards a presence on social media channels as customers expect them to have a social media presence. Still, there is a lack of comprehensive frameworks, theories, methods and research instruments which makes a professional implementation of social media difficult for them (cf. Effing/Spil 2015, p. 1).

The strongest argument against the usage of social media for companies used to be that their customers are not present on the respective channels – but this has dramatically changed over the past few years (cf. Ceyp/Scupin 2013, p. 4). Right now, about 78% of all US citizens have a social media profile which is a plus of 54% compared to the year 2008 (cf. Statista 2016a). Due to the importance of personal relationships and interactions on B2B markets, social media are gaining increasingly attention also in B2B marketing as individuals want to be social and share their experience with others (cf. Huotari/Ulkuniemi 2014, p. 761). Especially in the B2B industry, companies usually have a narrow range of (potential) customers. Therefore, it has to be asked whether investing resources in a social media presence is reasonable. Following, five reasons why social media channels can be especially useful in regards of B2B marketing communication are listed below:

- Due to smaller target markets, B2B companies are usually more familiar with their customers as well as their expectations and needs. This makes them able to customize content shared on social media channels even more
- Especially in the technical B2B sector, marketing employees often have a technical background; this profound knowledge about the subject allows them to generate informative content which is the most crucial prerequisite for content marketing
- In most B2B companies, the financial situation forces marketers towards cost efficient communication measures that lead to measurable results. Social media represents an effective tool at low costs and could therefore be the right fit
- Especially in the B2B industry, buying processes take long and the value of investments is high – in order to support customers through the process and beyond, social media can be a useful tool to accompany leads through the sales funnel
- In B2B companies, dealing with customers is most of the times done directly; therefore, knowledge about how to interact individually with customers – as it is done on social media – is most of the times already available and directly transferable to social media (cf. Beilharz 2014, p. 50f.)

According to the 2015 report of the Direct Marketing Association (DMA), 45% of all respondents of the underlying survey think that among all marketing channels, social media marketing offers the greatest opportunities over the next years leading in front of email marketing with 40% approval and the website with 34% approval (cf. Direct Marketing Association 2015, p. 14). Due to its specific characteristics, social media is able to facilitate the collection of information, the reduction of costs, the service delivery and expands the geographic reach of communication measures (cf. Habibi/Amilton/Valos 2015, p. 642). Also, social media platforms allow a faster and far more personalized interaction between customers and companies and are therefore highly suitable for deepening business relationships (cf. Huotari/Ulkuniemi 2014, p. 761).

4.1.2 Lead Generation as Possible Goal of Social Media Activities

Figure 12 illustrates how social media can contribute to the generation of leads by setting actions on the respective channels and addressing the audience. In the best case, different forms – depending on the channels – of engagement of the audience can be achieved. That form of engagement should then ideally lead to clicks on the company’s website which in the end generates leads. Studies have shown that over 80% of consumers report that they use the web for doing research about products and services. Especially in times where the attention of potential customers is volatile and a lack of trust is recognizable, businesses should therefore take advantage of the power of social media channels as they allow companies to introduce themselves to potential customers in a more personal and less commercial atmosphere than classic online marketing tools. Today, the most trusted buying influence are shared opinions of friends and acquaintances or “shoppers like me” (cf. Funk 2013, p. 311). The art is, on the one hand, to keep fans and followers by offering interesting value-added content, but also to lead them as elegantly as possible to landing pages in order to generate leads and – in the best case – sales (cf. Fiege 2012, p. 105).

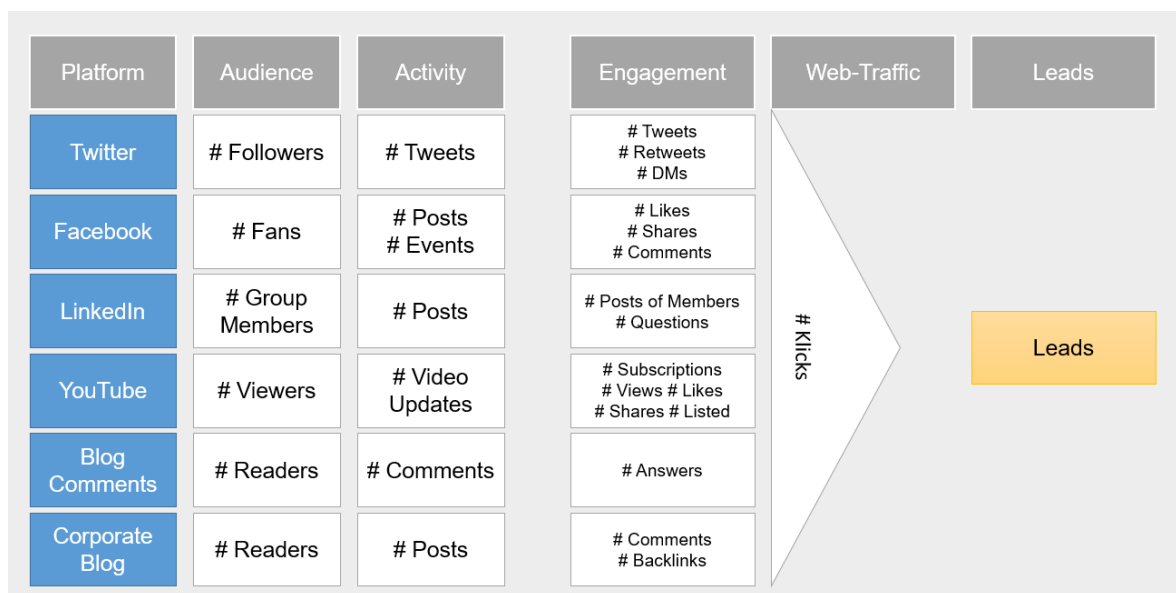


Figure 12: Cause-Effect Relationship of Social Media Marketing and Lead Generation (Fiege 2012, p. 105)

4.2 Forms of Social Media

In the following chapter, the most important types of social media will be explained and the most popular social media platforms will be introduced. From a management perspective, the social media types and their respective platforms have to be assessed regarding costs, time, credibility, changeability and regionality (cf. Ceyp/Scupin 2013, p. 23). Moreover, the most popular social media platforms for B2B marketing will be presented in more detail.

4.2.1 Social Networks

Social networks are communication platforms that aim to build and manage networks for social purposes. This goal is achieved by linking the contacts of all users and thus, by establishing a close-knit network of users. Such networks have the purpose of establishing new relationships and exchanging information between users (cf. Fiege 2012, p. 22). There are almost countless platforms available that offer social exchange, but the most popular social network platforms are currently Facebook, Twitter (which is a mixture between microblog and social network), LinkedIn for professional exchange and Google+ (cf. Content Marketing Institute/MarketingProfs 2016). The value of the platform is determined by the number of users and the frequency as well as the quality of the users' activities, but also the homo- or heterogeneity of a network characterized by the combination of strong and weak relationships is decisive. Social networks can be divided into several categories: rather privately used networks such as Facebook, Twitter and Google+ but also rather professionally used networks such as LinkedIn (cf. Fiege 2012, p. 22).

Social networks such as Facebook have become a center of attraction for large target group segments that want to maintain contact with other people online. These platforms offer marketing access to highly segmented customers as well as a platform for the implementation of viral campaigns and new forms of interactive advertising. Thereby, companies can actively engage their customers in these networks through e.g. company pages, brand applications and other components (cf. Fiege 2012, p. 22). In general, groups and fan pages on communities are a simple and fast-to-create medium for communicating with customers and potential customers. Also, the group affiliation allows users to publicly show their affinity to a

brand or company. In groups, there is usually an exchange between customers and companies taking place (cf. Ceyp/Scupin 2013, p. 53). In 2016, 2.34 billion people have been using social networks (cf. Statista 2017b). On average, 28% of the daily total time spent on the internet is spent on social networks (cf. Mander 2015). At the moment, Facebook is the platform with the widest web-coverage with over 1.7 billion monthly active users (cf. Statista 2016a) whereas over 71% of US internet users are on Facebook. While the growth on Facebook since 2013 seems to have plateaued, other social networks such as LinkedIn and Twitter have registered a significant user growth in the last years (cf. Nanji 2015) whereas LinkedIn represents the most popular social media platform in the B2B industry (cf. Siamagka/Christodoulides/Michaelidou 2015, p. 93).

4.2.2 Blog Platforms

The term “blog” comes originally from the words “web” and “log” meaning online logbook. A blog contains regularly appearing texts which are made available online to all internet users or to a certain circle of readers. Initially, the first blogs were public diaries or daily reports, most of them related to particular subject areas (cf. Ceyp/Scupin 2013, p. 23f.). A study has shown that more than 73.6% of the participants regard blogs as a very credible source of knowledge which represents a much higher degree of trust compared to other online sources such as online newspapers, online news magazines as well as broadcast, cable television and radio news. A further investigation of blog credibility showed that the degree of trust strongly depends on the interest people have in common with the respective bloggers (cf. Sublet/Spring/Howard 2011, p. 385).

Especially in North America, it has become common for companies to inform employees and customers almost daily about more or less important facts and topics of the company via blogging (cf. Ceyp/Scupin 2013, p. 25). Furthermore, it is important to integrate important blogs of opinion leaders into the social media monitoring of an organization as by that, trends can be recognized on the one hand and influenced on the other hand if the communication work is integrated in a targeted way (cf. Fliege 2012, p. 32).

One blog platform that shows an impressive growth of 35% in members is Tumblr (cf. GlobalWebindex 2014) which is a blogging website free of charge on which users can easily create content (cf. Smith 2011, p. 5f.).

Microblogs: A microblog is “a webservice that allows the subscriber to broadcast short messages to other subscribers of the service” (Rouse n.d.). Microblogging can therefore be understood as a pinboard function on the web where short messages of limited character number can be posted. Other users can follow these short messages – also called tweets – of a person, and are notified when new messages are “tweeted” (cf. Schütt 2013, p. 42). Thus, microblogging closely resembles sending text messages (SMS) via the Internet (cf. Fiege 2012, p. 24). Among microblogs, especially Twitter has prevailed, a platform which limits the number of maximum characters for a post with 140 characters (cf. Schütt 2013, p. 42). Via Twitter, companies get the opportunity to communicate with customers or potential customers in real-time and to address concrete user groups and target groups with similar interests. This allows companies to keep their customers up to date on products and innovations (cf. Buchenau/Fürtbauer 2015, p. 54f.). The direct and informal communication on Twitter allows marketing professionals to appear not as faceless companies but as real people (cf. Fiege 2012, p. 24).

4.2.3 Content Sharing Services

Content sharing services are platforms where the focus lies on sharing media such as videos, presentations and pictures. The most relevant content sharing platforms by now are YouTube and Slideshare. Even though also platforms such as Facebook and Twitter offer the possibility to share media, their original focus lies on providing texts (cf. Beilharz 2014, p. 261).

Video Sharing: Video portals can play an important role for companies as they allow to visualize complex facts and circumstances. As people often perceive the reading of usage instructions as complicated and therefore categorically reject it, the spoken text in the video can describe a product and its advantages and therefore spare the viewer from reading a long instruction text. Furthermore, the handling and usage of goods can be much better and easier presented in videos than on a printed user manual and can hence be better understood by users. This

facilitation of understanding can represent a possible purchasing criterion for not versed customers (cf. Ceyp/Scupin 2013, p. 85f.). The big advantages of these videos are the relatively inexpensive production, the high utility and that interested viewers place high value in suchlike videos. For example, with such a video, the business model, specific products or the process that the customer can expect when commissioning the company could be explained (cf. Beilharz 2014, p. 268f.). This could be particularly auxiliary for the semiconductor industry where processes are often complex and hard to explain without providing an illustration of mechanisms.

Currently, the biggest video portal is **YouTube** with more than one billion users (YouTube n.d.), but there are also other portals available on the internet such as Vimeo, Clipfish or Sevenload (cf. Heymann-Reder 2011, p. 209).

Presentation Sharing: Especially in the B2B industry, it makes sense to upload corporate presentations for the customer approach, product presentations or customer service. A tool that enables the upload of presentations and the automatic transformation from a PDF file to a Flash animation is **Slideshare** (cf. Beilharz 2014, p. 285). The platform also allows a private audience meaning that presentations can only be shared with a defined group of people. Also, presentations from other companies can give a feeling for the community and the respective target groups as well as their expectations (cf. Heymann-Reder 2011, p. 219). Slideshare is the world's largest professional content sharing community with over three billion slide views a month. Furthermore, the platform has five times the traffic from business owners compared to other popular social websites such as LinkedIn, Facebook, Twitter and Youtube (cf. Kuhar 2013).

Picture Sharing: Beside sharing videos and presentations, the sharing of pictures also becomes increasingly important as it offers a good possibility for companies to publicly present their products, events or ideas. The biggest portal that is specialized on the hosting of photos is **Flickr** owned by Yahoo (cf. Heymann-Reder 2011, p. 211). Solely in the US, Flickr can report 17.49 million unique visitors in July 2015 (cf. Statista 2017a), but as it is solely a picture based platform, it is not particularly applicable for explaining abstract and complex processes which are characteristic for the semiconductor industry.

Pinterest is another social network focused on the sharing of pictures. It is constructed like a virtual pin board where users can share their photos, graphics or short videos publicly or store pictures from other pin boards privately. However, the coverage in the B2B industry is still quite small (cf. Beilharz 2014, p. 300f.). Hence, Pinterest does not represent an attractive channel for the semiconductor industry.

Another social network based on pictures and short videos is **Instagram** which was released in 2010 and acquired by Facebook in 2012. The app allows to directly edit the photos with numerous filters and then to upload it directly on the network or to share it on other networks. As Instagram mainly lives of funny or extraordinary snapshots, high pace and fast interactions, it is still rather uncommon for the B2B industry as these peculiarities exhaust the marketing capabilities of many especially small or medium sized companies (cf. Beilharz 2014, p. 302f.). Also, Instagram is more suitable for high-visibility brands, and therefore, in most cases not appropriate for the tech B2B industry (cf. Buchenau/Fürtbauer 2015, p. 57).

One of the newest and currently fastest growing platforms is **Snapchat**. Snapchat is only available for mobile devices and provides – contrary to most other social networks – no timeline, but numerous filters, face masks and drawing tools for the pictures and videos taken with the app. The pictures disappear at the latest after 24 hours (cf. Caracciolo 2016, p. 41). Currently, Snapchat has about 200 million users which is double as much as Pinterest (cf. t3n 2016, p. 12), but so far has not been particularly relevant for the B2B sector as the communication runs on high pace and is built up on quickly vanishing figurative content which cannot contribute to providing educational or informative content as necessary for generating leads within the semiconductor industry.

4.2.4 *Forums*

A forum is a website on which exchange of information and opinions on specific topics takes place. The websites are often operated by private individuals. A forum is traditionally structured in some content categories with respective subcategories

where category-specific discussions take place. From a company perspective, forums should be primarily used as a reactive medium. Here, companies can learn a lot about the opinions of people regarding their (and competitive) products and the company itself. Any active contribution of the company, necessarily need the company to appear as such – otherwise the credibility of the company can suffer severely. Furthermore, a company affected by criticism needs to take up on the criticism by answering to the negative review or experience with an official corporate account on the forum page. Company-damaging statements in highly-frequented forums usually receive a high credibility which makes it even more important to react officially to such a statement (cf. Ceyp/Scupin 2013, p. 41).

4.2.5 Location Based Services

Location Based Services are web applications that are mostly operated on mobile devices that determine the location of a user by using GPS data which is transmitted when using the application (cf. Fiege 2012, p. 28). The applications allow their members to tell their friends where they currently are located at by checking in to locations such as bars, restaurants, work or events (cf. Lieb 2012, p. 68). The motivation of people to use these apps is primarily the offered gaming factor (cf. Fiege 2012, p. 28). The biggest players of geo-social networks are **Foursquare** and **Gowalla**, but also the platforms Facebook and **Yelp** are players in the area of location based services. Still, the idea of location based services is relatively new, the adoption of the services is relatively small and the user group of the applications rather young and tech-savvy (cf. Lieb 2012, p. 67). Therefore, also location based services do not represent suitable platforms for the communication in the semiconductor industry.

4.3 Tabular Comparison of the Social Media Platforms

In Table 2, the previously stated most popular social media channels for the B2B industry regarding the degree of penetration, number of users and target group will be compared. In terms of lead generation, this information gives a first impression about the peculiarities of the respective platform and an indication of their applicability regarding the needed purposes of a company.

	Facebook	Twitter	YouTube	LinkedIn	Google+	Tumblr
Launch Year	2004	2006	2005	2003	2011	2007
Purpose	Social network with content sharing possibility	Micro blogging site that limits posts to 140 characters	Video Sharing	Social network for professional networking	Social network by Google that allows brands and users to build circles	Platform for creating blogs
Active Users	1,712 m	313m	1,000m	106m	540m	555m
Growth in Members	1%	10%	7%	20%	5%	35%
Age Distribution of Users	25%: 16-24yo 29%: 25-34yo 22%: 35-44yo 15%: 45-54yo 9%: 55-64yo	30%: 16-24yo 31%: 25-34yo 21%: 35-44yo 12%: 45-54yo 6%: 55-64yo	31%: 16-24yo 30%: 25-34yo 20%: 35-44yo 13%: 45-54yo 7%: 55-64yo	26%: 16-24yo 32%: 25-34yo 21%: 35-44yo 14%: 45-54yo 7%: 55-64yo	29%: 16-24yo 31%: 25-34yo 20%: 35-44yo 13%: 45-54yo 7%: 55-64yo	26%: 16-24yo 24%: 25-34yo 17%: 35-44yo 14%: 45-54yo 13%: 55-64yo
US Market Coverage	41%	17%	No data available	11%	12%	8%
US Share of Visits	42%	5.2%	24.9%	1.2%	No data available	1.3%
Costs	free	free	free	From 29,95€/month	free	free
Best Time to Post	Sat, Sun: 12-1 pm Wed: 3-4 pm Thu, Fri: 1-4 pm	Mon-Fri: 12-3 pm Wed: 5-6 pm	Mon-Wed: 2-4pm Thu-Fri: 12-3pm Sat-Sun: 9am-11am	Tue, Wed, Thu: 7:30-8:30 am, 12 pm, 5-6 pm Tue: 10-11 am	Wed: 9-11am	Mon-Sun: 2 am, 3pm

Table 2: Comparison of Social Media Platforms (based on Ellering 2016; Statista 2016b; Muruganandam 2016; XING 2017; Smith 2017; Smith 2016; Beilharz 2014, p. 120; GlobalWebIndex 2014; Morrison 2015; Newberry 2016; Statista 2017c; Statista 2017d; Kemp 2016)

4.4 Content Marketing

In order to make an organization's social media engagement successful, it is crucial to provide the community regularly with interesting content that offers the user a personal added value (cf. Fiege 2012, p. 31) such as answering questions or providing profound information (cf. Lieb 2012, p. 2). Instead of simple advertising, the trend goes towards publishing; instead of purchasing media, it is important to provide content when potential customers are doing research for purchasing decisions about products and services. Companies that are successfully addressing customer needs and content issues place value on conversations that take place online and thus, become trusted advisors (cf. Lieb 2012, p. XII). Long-term goals of a content marketing strategy are the enhancement of brand recognition, brand loyalty, trust, credibility as well as authenticity (cf. Lieb 2012, p. 2). Typical mid- and short term goals of a content marketing strategy can be the enhancement of traffic, increasing revenue, increasing the ranking on search engines (SEO), gaining new customers, optimizing the conversion rate and to generate leads (cf. Ward 2015, p. 67).

Content keeps a community active so the blog or fan page can accomplish its communicative function (cf. Fiege 2012, p. 31). By providing interesting or entertaining content for a product or brand, positive network effects can be achieved when users and customers share their contributions with other people in their personal network. This approach is also called viral marketing. By that, the advertising message is spread to other individual contacts and hence, penetrates more and more personal networks. As a result, it is no longer possible to only speak of content created by organizations (owned media) or content purchased by other providers (bought media) in the area of content marketing: It is especially the content passed on by fans, customers or partners to the company (earned media) which constitutes, on the one hand, a cost-effective advertising method, but on the other hand, also earns more attention as usually a higher attentiveness is given to messages received from a personal contact than to normal advertising (cf. Fiege 2012, p. 32).

A study of Roper Public Affairs showed that 80% of business decision makers prefer to get information about a company from articles rather than from advertisements while about 70% claim that content marketing makes them feel

closer to the delivering company. About 60% of the respondents think that company content helps them make to better product decisions (cf. Lieb 2012, p. 2). These numbers show that content marketing is nowadays no longer nice to have, but a must-have (cf. Lieb 2012, p. XII).

4.5 Measuring Success of Social Media Activities

The success of social media marketing can be measured well through social media monitoring as the “Buzz” is reflected quantitatively (e.g. number of likes, retweets, comments) as well as qualitatively (positive, neutral or negative responses). The resonance with which a community responds to new information and posts is called engagement (cf. Fiege 2012, p. 32). Still, many companies have failed so far to integrate an appropriate social media performance measurement method into their social media marketing marketing (cf. Fiege 2012, p. 95).

One of the most important key figures in marketing is the Return on Investment (ROI) (cf. Zarrella 2010, p. 221). In business economics, the ROI is defined as ratio between profit and costs and indicates how much profit could be achieved with the money spent and can be calculated as follows (cf. Blanchard 2012, p. 273):

$$\text{ROI} = \frac{\text{Gain of Investment} - \text{Cost of Investment}}{\text{Cost of Investment}}$$

The problem regarding measuring the ROI in social media is though that many effects are, on the one hand, not measurable such as e.g. brand awareness, image or reputation; on the other hand, social media contributes indirectly to manifold results such as higher ranking in search engines or a stronger presence in media. All these effects can lead to a higher turnover, but usually a direct coherence cannot be measured. Therefore, companies should break the figure down into the different targets and in the end, connect the target with monetarily measurable elements (cf. Beilharz 2014, p. 367f.). In order to break the ROI down, Key Performance Indicators (KPIs) can help to see how successful social media activities are. KPIs consist of a collection of key figures and focus on the aspects of the company performance. They represent the most critical indicators for the

current and future company success. When a monetary value is added to the figure, a KPI becomes a Result Indicator (RI) that encompasses monetary measures. KPIs are either present-oriented or future-oriented and should therefore be monitored throughout, daily or at least weekly (cf. Fiege 2012, p. 97f.). Examples for possible social media KPIs are shown in Table 3:

KPI	Calculation
Active Advocates	$\frac{\text{\# of active advocates (in the last 30 days)}}{\text{Total Advocates}}$
Audience Engagement	$\frac{\text{Comments + Shares + Trackbacks}}{\text{Total Views}}$
Cost per Lead	$\frac{\text{Social Media Marketing Spending}}{\text{Total New Leads}}$
Engagement	$\frac{\text{Active Users}}{\text{Total \# of Users}}$
Issue Resolution Rate	$\frac{\text{Total \# of issues resolved successfully}}{\text{Total \# of service issues}}$
Lead Conversion Ratio	$\frac{\text{Total Leads}}{\text{Total Visits}}$
Sentiment Ratio	$\frac{\text{(Positive : Neutral : Negative brand mentions)}}{\text{All Brand Mentions}}$
Share of Voice	$\frac{\text{Own Brand Mentions}}{\text{Total Mentions in Examined Context}}$

Table 3: KPIs for Social Media Activities (based on Grabs/Bannour 2011, p. 98; Fiege 2012, p. 103; Klipfolio Inc. 2017; Omniture n.d., p. 6)

In the end, a target-performance comparison should be implemented that shows whether the targets could be achieved, exceeded or not achieved at all. Thus, the measures and strategy should be adapted accordingly. Furthermore, benchmarks should be conducted regularly in order to compare the own social media appearance with the social media presence of the competitors. A benchmark can show the different developments of the social media presence of the company and its competitors and can furthermore give ideas what the company could improve (cf. Beilharz 2014, p. 367).

5 Components of a Social Media Concept

In this chapter, the components of a social media concept will be presented and further explained regarding the different aspects which have to be considered in each step.

5.1 Initial Situation

At the beginning of every systematically strategic planning process, a situation analysis needs to be conducted from which in the following the goals of the concept can be derived (cf. Beilharz 2014, p. 76). The situation analysis can be separated in the internal analysis that consists of the investigation of the company's internal factors such as resources, strengths and weaknesses as well as the market position. Furthermore, also the company's environment needs to be examined including an analysis of the market, competition, procurement market and surroundings (cf. Holland 2001, p. 25).

Internal Analysis

The internal analysis of the company should outline what social media activities are currently carried out by the company and what internal resources are available for this purpose. Internal resources encompass e.g. the monthly available financial and human resources, know-how of the employees regarding the social media usage, content that has already been created in the company and more. The internal analysis can be carried out in form of a workshop with the company's employees that will later-on be responsible for the social media activities as well as the employees who have an overview over the existing material. At the end of the internal analysis, there should be an overview of the situation and available resources for building an appropriate social media presence that helps the company to plan activities realistically and to anchor them meaningfully in the company (cf. Holmes 2015, p. 179).

Porter's 5 Forces

Within the framework of a sector analysis, the determinants that have an influence on the profit expectations of a company need to be investigated. These determinants are the so called competitive forces. The goal of the investigation is to identify the degree of influence and the effects of the respective competitive

forces on the business success (cf. Olbrich 2006, p. 394). The named competitive forces encompass the market entry of new competitors, the threat of substitute products, the bargaining power of suppliers and customers as well as the competition among the existing competitors. The strength of each force is different in every industry and can change over time, but the overall strength of these five forces determines whether an industry's average return on capital invested can be achieved as it influences the prices, costs and investment needs within an industry (cf. Porter 2014, p. 24-26).

The **bargaining power of buyers** is a force that influences the market as buyers can make a demand and therefore put pressure on their suppliers. The degree of strength of this force is usually based on the concentration level of customers or a high price sensitivity that is dependent on product differences, brand identity, influence on quality or performance, the buyers' profit and incentives for the decision makers. Another aspect is the degree of standardization of the competitive products as the more comparable they are, the easier it is for customers to compare the products which allows them to choose freely. In the case of differentiated products, the customers are more closely tied to the individual suppliers (cf. Olbrich 2006, p. 38). Further influencing factors for the buyers' bargaining power are among others the number of buyers, switching costs, the level of information of the buyers and a possible backward integration (cf. Porter 2014, p. 27). In regards of social media, a demand-driven analysis is moreover recommendable where the acceptance, affinity and expectation regarding the social presence as well as the content provided of the demanders is analyzed (cf. Maier 2016, p. 158).

In the case of the **bargaining power of the suppliers**, the same aspects as for the bargaining power of buyers have to be considered. Additionally, suppliers can claim higher prices for their goods or services and could lower their level of quality if they cannot enforce a higher price (cf. Olbrich 2006, p. 38). As the production of software is in most cases not dependent on suppliers, this factor will be neglected in the following.

Furthermore, potential **new market entrants** respectively new competitors on the market represent a market force. New competitors broaden the industry's supply

and could therefore lead to price declines. The danger of new market entrants is strongly dependent on the existence and height of market entry barriers (cf. Obrich 2006, p. 38). Possible entry barriers that can hinder other companies from entering the market could grow out of economies of scale, brand identity, switching costs, investment and capital requirements, access to distribution, absolute cost advantages as the internal company learning curve or internal cost effective industrial design, but also e.g. state policies and legal restrictions (cf. Porter 2014, p. 27).

Moreover, also **substitute products** represent a threat on the market as they usually have the same function as the originally established product, but often offer a better price-performance ratio. The provider of the original product then needs to take countermeasures in order to increase the consumer preference with e.g. advertising or releasing a new comparative product which is often problematic due to the long time frames for product development (cf. Obrich 2006, p. 38). An important aspect in this regard here again is the relative price performance of the substitute products as well as the switching costs (cf. Porter 2014, p. 27).

Finally, the **intensity of competition** on the market which is depending on the current market condition influences the market attractiveness and therefore the corporate strategy. Especially in stagnating markets, the fight for market shares is growing where some competitors try to escape the price competition through product differentiation (cf. Obrich 2006, p. 38). Determinants of competition are among others the industry growth, product differentiation, switching costs, brand identity and exit barriers (cf. Porter 2014, p. 27).

The competitor analysis encompasses the market position of the company in the competitive environment as well as the observance of competitors with their strategies, marketing approaches as well as the appearance of new competitors on the market (cf. Holland 2001, p. 25). At the beginning of the competitor analysis, an overview over the major competitors should be created in order to outline information about their size, market share and key product lines (cf. Miller 2012, p. 94). Especially in regards of social media, the competitors should be investigated regarding their social media presence, the used channels, the strength of the respective channel presence, the regularity of posts, the provided

content, the strategic approach as well as the strengths and weaknesses of their social media appearance (cf. Beilharz 2014, p. 84).

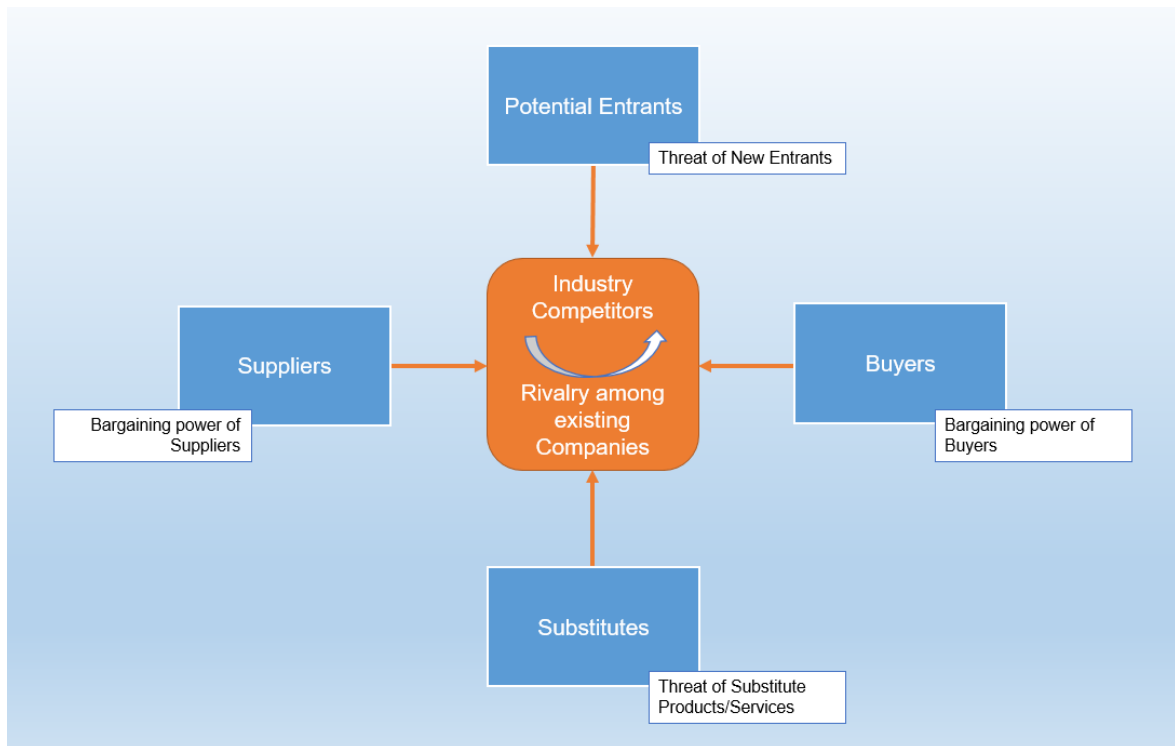


Figure 13: Model of Porter's Five Forces (Porter 2014, p. 25)

It is particularly important for every company to find its own competitive position on the market. The model of the five forces provide initial insights into the company's own market position compared to its competition (cf. Obrich 2006, p. 38).

5.2 Target Group

In order to develop a communication strategy as accurate as possible, a segmentation of the target group is required. As target audience, basically any type of stakeholder can be chosen such as consumers, buyers, users, wholesalers, retailers or even opinion leaders, but the group should be formed in a way that their reaction to communication policy measures is as homogeneous as possible (cf. Olbrich 2006, p. 178).

There are four ways how a target group can be segmented: according to demographic, socioeconomic, psychographic or behavioral characteristics. Even though the **demographic** (e.g. age, gender, household size) and **socioeconomic**

(e.g. income, profession, education) **segmentation** are often too imprecise for a concrete target group definition due to strongly differing value propositions, interests and behavior, single criteria such as age, education and income often correlate with psychographic criteria and can therefore be used well for a social media target group segmentation. The **psychographic segmentation** is based on the acceptance of social media appearances and communication supports, the requirements of interactivity as well as the information, entertainment and self-presentation needs. It relates to personality traits, motives and expectations. Further important target group criteria form psychographic characteristics regarding motives, knowledge and attitudes. Especially the information behavior is influenced by the product-involvement. Criteria of the **observable behavior** is related to the information and communication behavior. This criterion is especially suitable for the differentiation of target groups for social media communication measures as it relates e.g. to the usage of social media platforms, the communication behavior and the habits regarding product selection. Hence, it should be investigated as precisely as possible who, when, how long and what kind of content was invoked on which social media channels (cf. Bruhn 2014, p. 1079f.).

When starting with social media marketing, it is recommended that the focus of the campaign should lie on one target group and to transfer the gained knowledge and experience later on to other possible target groups. Especially in the B2B industry though, it has to be considered that several people are involved in most of the decision-making processes. Therefore, it is important to empathize with the different roles of the buying center regarding their expectations in terms of demanded information, content and channels. While **users** for example appreciate application videos, fast support, instructions and technical data, **purchasers** need information regarding comparison of costs, efficiency calculations as well as references and testimonials. **Deciders** who usually command a high position within the company need short and compact information about the product or service as well as an idea of which strategical impact the decision will have on the business and on the decider's position in the company. Therefore, deciders need case studies of successful applications, references, testimonials, checklists of advantages, infographics with the most important figures and short summarizing videos (cf. Beilharz 2014, p. 105-110).

When addressing several target groups, attention must be paid to a possible conflict of objectives (cf. Olbrich 2006, p. 178). The better the company understands its target audience, the better the communication can be modulated in the following (cf. Beilharz 2014, p. 105-110). Within the scope of a target group selection, online user profiles are included for the purpose of segmentation in order to get some indication of their participation in online activities or the level of activation e.g. the strength of the involvement (cf. Bruhn 2014, p. 1087).

Another segmentation method can be carried out according to **social technographic profiles** that are based on how people participate in social media (cf. Huotari/Ulkuniemi 2014, p. 762). These technographic profiles are important as they give information how the company should approach its target group on social media. **Creators** are users who create their own blog entries, have their own website and upload content. **Conversionalists** are users who publish status updates in social networks and write entries on Twitter. **Critics** are people who write reviews of products and services, comment on blog posts and participate in forum discussions. **Collectors** are users who subscribe for newsletters and rate content. **Joiners** basically just have a social media profile and visit social networking pages. **Spectators** read customer reviews, blogs, forum entries and twitter messages, watch videos and listen to podcasts. Finally, **inactives** are people who do not have a social networking profile and do not read any contributions on the internet (cf. Grabs/Bannour 2011, p. 61f.). The quite similar distinction approach of Forrester Research regarding social technographic profiles shows the different distribution of behavior types across Japan, Germany and the US as illustrated in Figure 14:

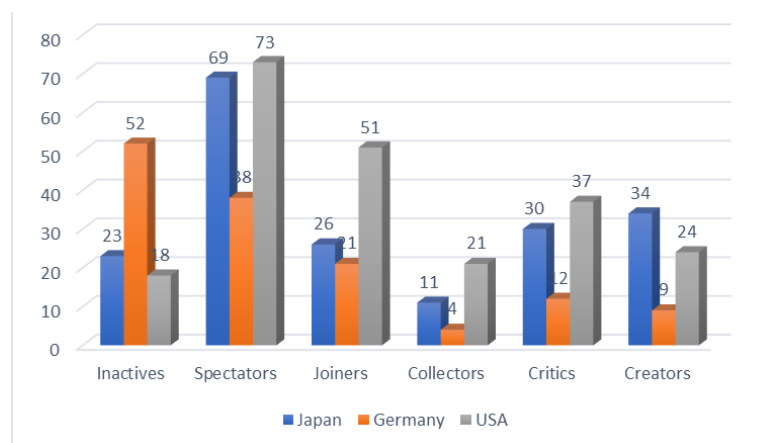


Figure 14: Distribution of Social Technographic Profiles (Bruhn 2014, p. 1084 quoted from: Forrester Research 2013)

5.3 Objectives

The objectives are based on the foregoing target group analysis which is fundamentally important for the goals as thus, information about the potential customers is gained which is important as it gives some indication of their preferred social media channels as well as how and what they communicate on the respective channels (cf. Grabs/Bannour 2011, p. 62). Communication objectives are derived from the marketing objectives which shall be achieved through the different psychological functions of communication which can be the information function, the influence function as well as the confirmation function (cf. Olbrich 2006, p. 176).

According to the B2B Online-Monitor 2014 the top goals of online communication are increasing access numbers and traffic as well as the product and brand awareness, a better ranking on search engines, support of sales and the acquisition of new customers, to provide extensive product and company information, the generation of leads and prospects, gaining more attention, improving the corporate image, position oneself as opinion leader and expert and to differentiate oneself from the competition (cf. Die Firma GmbH 2015, p. 33).

Goals should be defined SMART – the acronym stands for specific, measurable, assignable, realistic and time-related (cf. Doran 1981, p. 35). It is particularly important to define measurable goals as they give sense to a social media program, apply leverage to it, make everyone involved in the social media program liable to account and they show managers which parts of the social media campaign work and which do not (cf. Blanchard 2012, p. 248).

5.4 Strategy

Basing on the results of the situation analysis as well as the decisions regarding the goals and target group, the social media strategy must be determined (cf. Bruhn 2014, p. 1085). It can be defined as *“the conscious and binding determination of the emphases in the particular social media activities of a company, through the deployment of a binding action plan and a long-term framework to achieve the desired social media goals”* (Bruhn 2014, p. 1085).

In this step, a decision must be taken regarding the fundamental orientation of social media activities within the framework of the communication strategy. With the commitment to one of the available strategic options, it is determined how the company will behave towards the defined target groups in the long term which again stipulates the emphasis in the social media communication by defining an operational framework. The identification and prioritization of social media subjects as well as the categorization, evaluation and selection of relevant forms of appearance and communication media are carried out on the basis of the results that are relevant for market research and companies.

Moreover, it needs to be decided whether a passive or active social media communication approach is chosen (cf. Bruhn 2014, p. 1068). Generally, three different approaches can be distinguished: a reactive, proactive and passive approach, but seen in the long term, the proactive approach promises the greatest success. The **proactive approach** means that efforts are done voluntarily and is therefore suitable for the establishment of relationships and subsequently for the distribution of products. The **reactive approach** on the contrary, is characterized by its wait-and-see attitude and follows the goal to avoid a negative buzz. For this purpose, the internet is being searched through for comments on the company and the company reacts to negative statements. This approach could be examined when starting a social media presence in order to get a feeling for the community behavior and the different tools. The **passive approach** cannot be seen as an independent strategic concept as it only encompasses the observing and controlling of online communication, but it helps to comprehend the expectations of (potential) customers and in the following to decide whether the approach is altered into a proactive or reactive approach (cf. Grabs/Bannour 2011, p. 66-68).

Furthermore, it has to be decided what kind of messages will be transported via social media channels. Therefore, various approaches are possible of which some are further described in the following: The **infotainment approach** is a combination of information and entertainment. The goal is to provide information with including entertaining elements and by that, to generate a higher level of attention. The **entertainment approach** offers a pure entertainment component for the consumer by e.g. providing games, comics or quizzes. Another approach concerns **educational** content which allows the transfer of knowledge through e.g.

interactive learning programs, virtual computer-based trainings or computer-aided learning (cf. Bruhn 2014, p. 1088).

Also, the timing of social media activities is important. It has to be considered that especially on more privately used social networks there is a peak of internet usage on the weekends, meaning that comments on a corporate post on a Friday cannot be answered until Monday morning. The responsible personnel needs to be available and reactive (cf. Ceyp/Scupin 2013, p. 125).

Within a social media strategy, it also makes sense especially at the beginning to develop an initial content strategy in form of an editorial calendar which can be dynamically adapted over time (cf. Bruhn 2014, p. 1088). This plan avoids the danger of not knowing what to publish when the channel has already been chosen which could lead to frustration of the user who pays attention to the particular channel (cf. Ceyp/Scupin 2013, p. 125). The following graphic shall illustrate the structure of a social media content strategy:

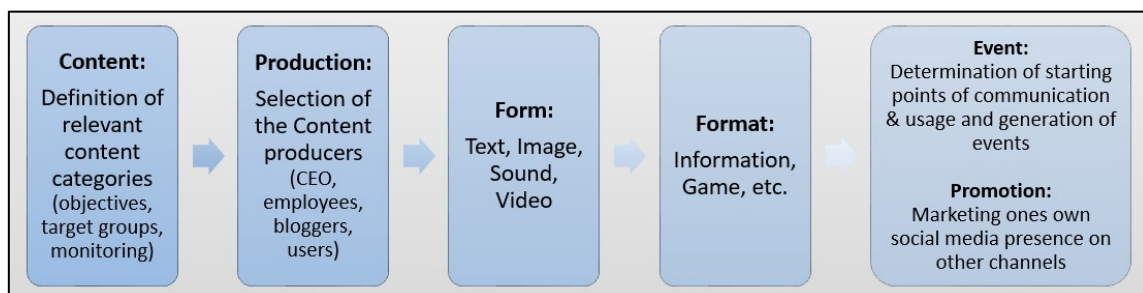


Figure 15: Strategy Pattern of a Social Media Content Strategy (based on Bruhn 2014, p. 1089)

The top challenges for B2B marketers when following a content based strategy are the lack of engagement, measuring the content effectiveness, producing content consistently, measuring the ROI of the content marketing program, lack of budget and producing a variety of content (cf. Content Marketing Institute/MarketingProfs 2016).

In the end, a decision regarding choice of the social media channels has to be made basing on the defined goals and target groups and the outcomes of the situation analysis. When selecting a channel, the different platforms need to be analyzed regarding their suitability to the corporate image, the overall

communication strategy, their reach, the costs for building and maintaining a presence on the respective channel and the preferences and expectations of the target group (cf. Beilharz 2014, p. 118f.). A survey with 1,521 marketers in the B2B industry in North America showed that following social media pages were ranked as most effective for B2B communication:

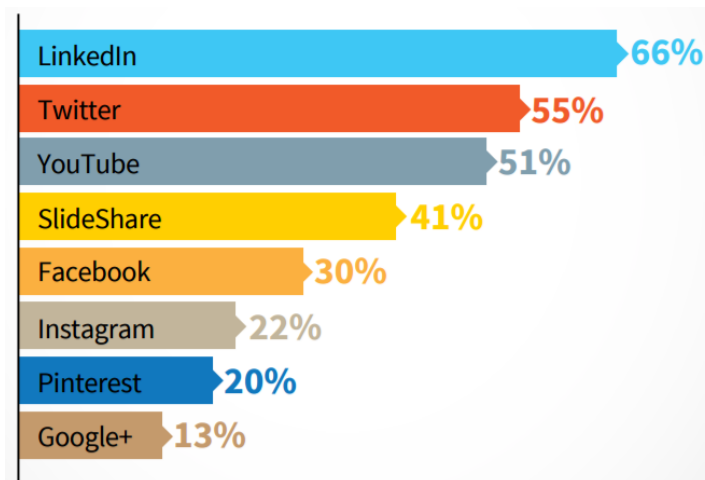


Figure 16: Most Effective B2B Social Media Platforms (Content Marketing Institute/MarketingProfs 2016)

Compared to the results of 2015, the effectivity rating of LinkedIn in the top position could even increase from 64% to 66%. Also YouTube and Instagram could increase their rating, while the results of Facebook, Pinterest and Google+ decreased (cf. Content Marketing Institute/MarketingProfs 2016).

5.5 Action Plan

The action plan encompasses the specific tactics that will be used in order to implement the marketing strategy and can be understood as a step-by-step instruction for the implementation. The action plan is therefore the most detailed part of the marketing plan (cf. Miller 2012, p. 97). Both the passive and the active social media strategy have to take into account the measures regarding content and technical, organizational and personnel resources. Contentwise means the question what kind of messages shall be distributed by social media channels and if or how the company shall react to user generated content. Regarding the technical requirements, e.g. a sufficient server capacity needs to be assured. Also, the organizational integration of social media in the company and the respective

department as well as the assignment of personnel requirements (e.g. number of employees) and resources are planned in this step (cf. Bruhn 2014, p. 1068).

5.6 Budgeting

In order to make a project successful, it is crucial to budget sufficient resources (cf. Hilker 2010, p. 66). The determination of the social media communication budget includes the calculation of the total social media costs and the allocation to the individual measures. For this purpose, the total arising internal and external expenses have to be planned (cf. Bruhn 2014, p. 1068).

For the calculation of the social media budget, a target-measure approach is recommended; this approach is based on the objectives that shall be achieved and calculates the costs of the instruments in order to reach these specific goals which include all internal and external costs. These comprise the uniquely occurring planning costs for the conceptualization and for the implementation costs that arise for the development of the social media presence (cf. Maier 2016, p. 165). Further uniquely occurring costs can arise for coding of software and apps, the basic design setup, external acquired consulting for legal advice, marketing and eventual training of employees (cf. Beilharz 2014, p. 87). Also, the running costs e.g. for the ongoing community management, the operation of technical and the usage of social media platforms have to be considered (cf. Maier 2016, p. 165). Further common expenses within the running costs that can arise for a social media presence are for advertisements, lotteries and the generation of content (cf. Beilharz 2014, p. 87).

After the budget has been determined, a factual or target-group-oriented distribution of the resources to the respective instruments takes place. The allocation of the budget is based on the level of value for the user group (cf. Maier 2016, p. 165) and hence, the highest priority of the respective activities (cf. Beilharz 2014, p. 87). The major element of the social media costs are usually the personnel expenses that are required for writing blog posts, maintaining the social media channels, moderating discussions and monitoring mentions. Realistically, the minimum of required work for a successful social media presence is about two to three hours a day (cf. Beilharz 2014, p. 87).

5.7 Controlling

After the social media concept has been implemented, it is important to measure the success of the social media activities in order to monitor how the used working time and resources can be justified. Effectively measuring the success of social media campaigns helps to figure out what impact these measures have on the operating results (cf. Zarrella 2010, p. 219). Furthermore, it is vitally important to understand which elements of the social media efforts work and which do not work in order to be able to set appropriate corrective measures (cf. Blanchard 2012, p. 248). Figure 17 illustrates the ranking of the most important metrics for companies in order to track the social media performance:

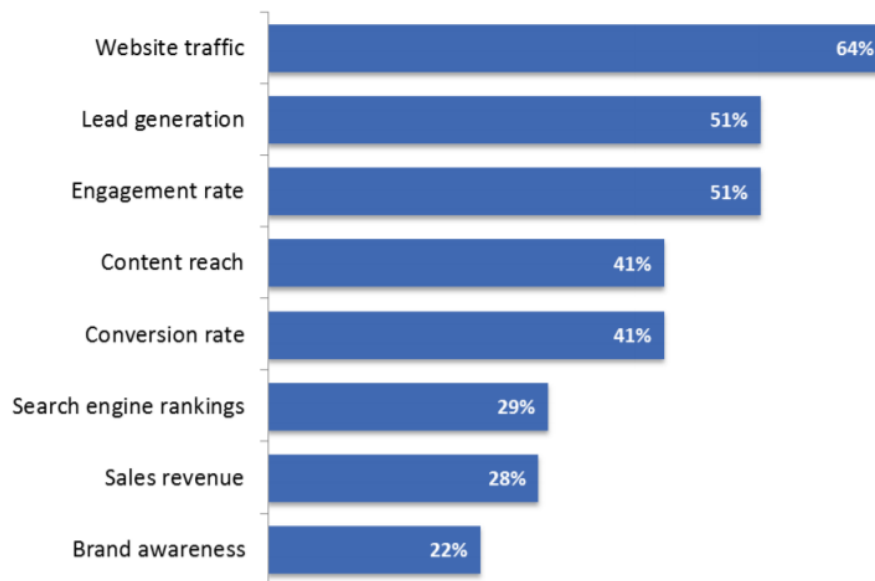


Figure 17: The Most Implemented Metrics to Measure the Social Media Performance (Ascend2 2015)

In order to be able to measure the performance of the social media activities, it is necessary to define goals with clear success parameters (cf. Grabs/Bannour 2011, p. 97; Zarrella 2010, p. 219). These goals should always be derived from the overall company goals as described in chapter 5.3 and can be measured using figures that contrast the social media use with the result (cf. Grabs/Bannour 2011, p. 97). An indicator for range that opens up a conversion funnel can be e.g. the number of followers, impressions, sentiment, click-throughs, retweets and engagement. Every piece of data should measure the impact of social media

activities on the consumer behavior and be put in context to the company goals (cf. Blanchard 2012, p. 259). Various key figures can then be defined depending on the respective target. Possible Key Performance Indicators (KPIs) that can be derived for the success measurement in social media are as further described in chapter 4.5 active advocates, audience engagement, cost per lead, engagement, issue resolution rate, lead conversion ratio, sentiment ratio or share of voice (cf. Grabs/Bannour 2011, p. 97).

6 Conclusion of the Theoretical Section

When doing marketing within the semiconductor industry, some crucial aspects have to be taken into account. Firstly, the decision-making process for industrial goods is in general highly rational, standardized, interactive, complex and process oriented. Industrial software for the semiconductor industry can be categorized in integration or system businesses and is therefore, usually based on long-term business relationships with individualization to a greater or lesser extent.

Moreover, software as intangible good, needs accompanying components to be marketed with the primary good such as consulting, trainings, technical maintenance. Also, it has to be considered that buying decisions of semiconductor companies are usually done multipersonally which implies that vendors have to investigate the way of thinking of each involved member in order to be able to respond purposefully to their expectations and to develop a targeted benefit argument for successful communication. Especially smaller companies should initially focus only on the key persons of the buying center in their communication. Criteria for purchasing decisions are beside monetary aspects such as price and low maintenance costs, consulting, reaction speed, but also “emotional” factors such as flexibility, innovation and communication which all represent aspects that social media could perfectly contribute to.

Especially when communicating internationally, it is important to consider cultural aspects and to adapt to local requirements and expectations in order to communicate successfully. A tool to characterize cultures effectively, represents the model of Hofstede’s six dimensions. In order to get an overview over the macro environment, a PEST analysis can provide useful information for the communication strategy.

In general, a trend towards a joint and active creation of results to create synergies regarding quality innovations, price and service can be foreseen. Today’s massive information overload leads to attention scarcity of the message recipients – therefore, it is be particularly important to create a clear and consistent appearance in communication, to provide valuable content and to drift away from self-promotion going to publishing valuable content in order to become a trusted

advisor to prospects to generate qualified leads for the company. For all the reasons stated above, companies should make use of the currently massive growth of the social media market coverage in order to appear not a as faceless organization, but to introduce themselves to potential customers in a far more personal and less commercial atmosphere which becomes increasingly important even in highly complex industries such as the semiconductor branch.

7 The US Market

The following chapter aims to describe and gather information about the US market in order to better understand the peculiarities of the market in general as well as the US semiconductor industry for being able to communicate effectively.

In order to get further information about the US market, the structure as illustrated in Figure 18 was chosen. Firstly, a PEST analysis of the US market helps to analyze the macro environment in order to examine the political, economic, social and technological aspects of the US market. Furthermore, the usage of social media of US citizens will be investigated and a deeper insight into the US semiconductor industry will be given in order to understand the industry's motives and trends to effectively communicate on social media in the US semiconductor industry. Moreover, the competition of DR YIELD will be analyzed regarding its social media usage and posting patterns.

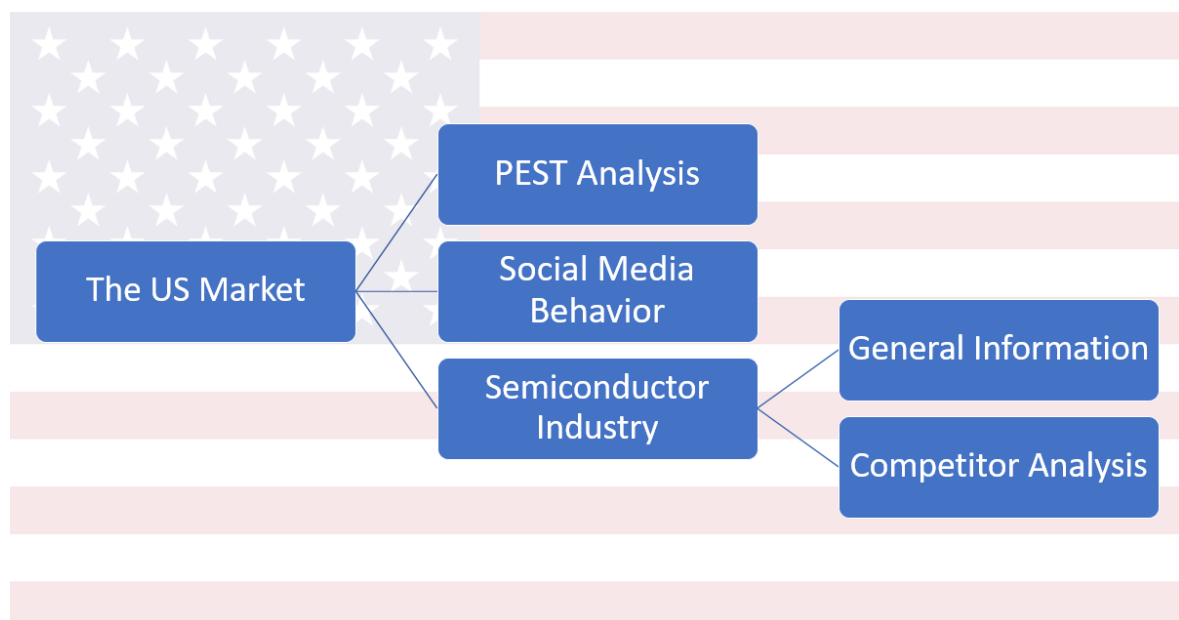


Figure 18: Structure of the Secondary Market Research of the US Market (own presentation)

7.1 PEST Analysis

7.1.1 Political Analysis

From the very beginning of the emerging of the semiconductor industry in the late 1940ies, the US government has played an important part in the advancement and further development regarding research and production ever since (cf. Platzer/Sargent 2016, p. 1).

Currently, the US government centers its powers on prolonging the short life of semiconductor driven technologies and to set the basis for new, revolutionary successor technologies as the current used metal oxide semiconductor technology has been brought to its physical limitations. Another ambition of the US government towards maximizing high performance computing was set with the executive order in the year 2015 of the former US president Barack Obama. The executive order established the so called National Strategic Computing Initiative that involves efforts to build a connected strategic vision and a federal investment strategy to create a viable future for high performance computing over the next 15 years (cf. Platzer/Sargent 2016, p. 20).

As electronic products are characterized by complex international supply chains, also semiconductors often cross several borders during the manufacturing processes. Therefore, the current federal discussions regarding TPP (Trans-Pacific Partnership) and TTIP (Transatlantic Trade and Investment Partnership) are being generally supported by the semiconductor industry as this could mean eased import and export restrictions. A recent push for the semiconductor industry was the expansion of the World Trade Organization Information Technology Agreement (ITA) in 2015, a plurilateral agreement with the purpose of cutting tariffs in the industry of information technology goods. These agreements are particularly important as foreign markets accounted for 83% of semiconductor sales of US based semiconductor manufacturers as the customers of semiconductors are often end-user industries such as e.g. computers and consumer electronics which are mainly based in Asia. Solely in 2015, the US semiconductor generated total exports of semiconductors and related devices of \$41.8 billion (cf. Platzer/Sargent 2016, p. 11f.).

7.1.2 Economic Analysis

It is the strong position in the manufacturing and services sector as well as the diversity that has made the US one of the most developed economic systems in the world. The innovation power makes the US a leader in industries such as automotive, aerospace, chemicals, electronics and IT. Moreover, the adoption of modern technology as well as the offshoring of sundry services to stay cost-competitive has strengthened these traditional industries (cf. MarketLine 2015, p. 20-25). The most important importing countries for the US market are Canada, Mexico and China as well as the European Union which in the other hand also constitute the biggest export markets (cf. World Trade Organization 2017).

In 2015, US semiconductor manufacturing companies have registered sales of \$166 billion of a total worldwide semiconductor sales of \$335 billion (cf. Semiconductor Industry Association 2016b). One aspect about the semiconductor industry is that according to Moore's law, within two years, the number of transistors fitting on a single silicon chip will double every 18 months making the microchips smaller, faster and cheaper. This estimate was published by Gordon Moore, one of the founders of the chip manufacturer Intel. Over the past approximately 50 years, this approach has proven to be surprisingly accurate, but currently, the validity of Moore's law is highly debated due to the attainment of physical limitations regarding the number of transistors fitting on one microchip. Notwithstanding the above, this implies that the semiconductor industry is characterized by short product life cycles which require the semiconductor manufacturing companies to continuously keep high levels of research and investment spending. Besides the technology itself, also semiconductor inventories become rapidly obsolete which can cause companies that have unsaleable stocks serious financial problems, as new designs are quickly replacing the existing products (cf. Platzer/Sargent 2016, p. 2f.).

In order to get an overview over the global market expectations regarding semiconductor-related expenditures, meaning equipment as well as software purchases, a study was conducted with 163 senior executives from leading global semiconductor companies. As illustrated in Figure 19, 49% of the respondents were from the United States. While in 2014 only 14% of respondents felt that there will be no increase in semiconductor-related spending in their company, this

number has increased dramatically to 39% in 2015. While 25% of the respondents felt that their semiconductor-related spending would increase between 1-5% in the next year, 27% of all participants see an increase in semiconductor-related spending by more than 6% (cf. Statista 2017f).

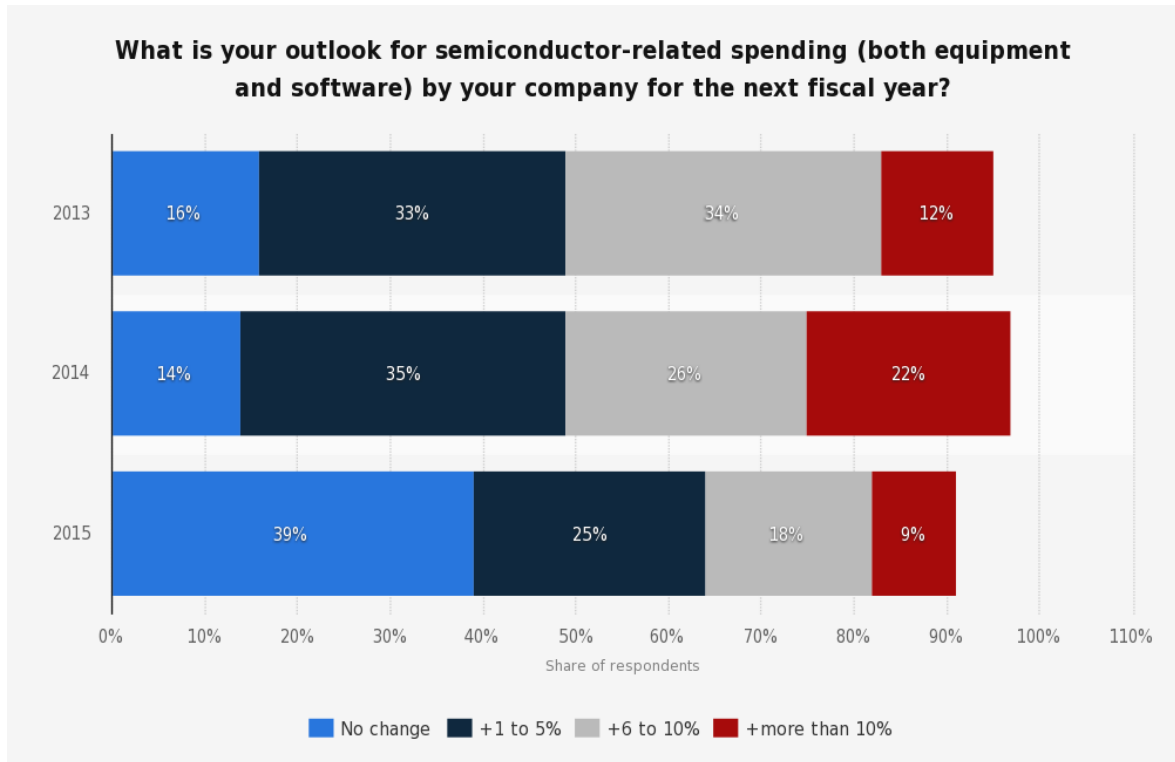


Figure 19: Global Semiconductor Related Equipment and Software Spending Outlook 2014-2016 (Statista 2017f)

Broken down to the US market, Figure 20 illustrates that the expected spending for packaged software shows a slight but continuous increase.

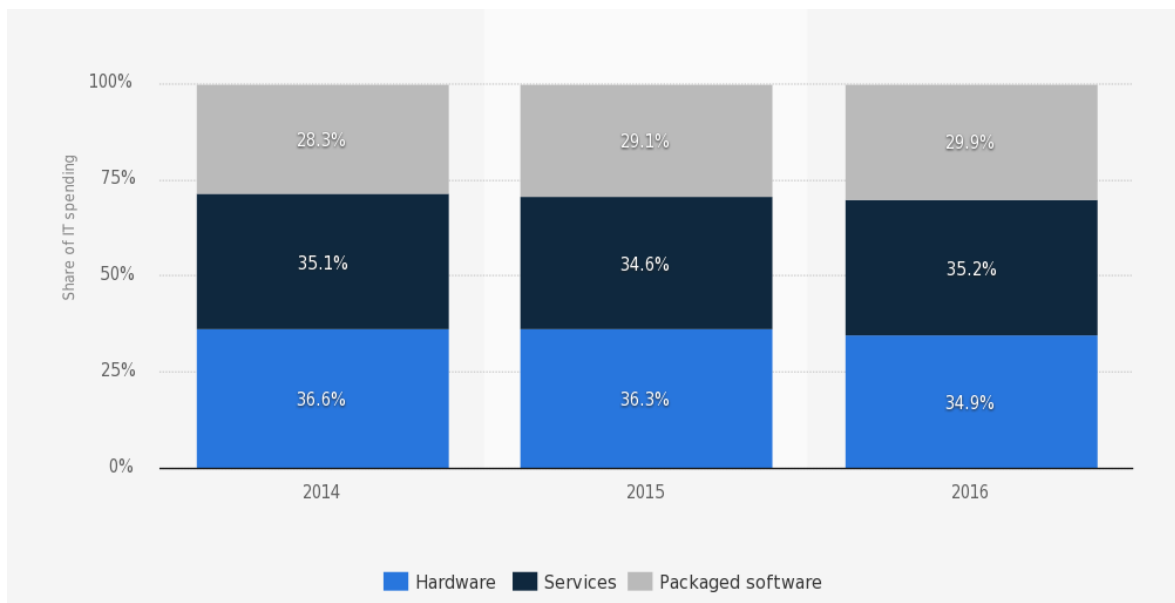


Figure 20: Forecast Share of Information Technology (IT) Spending in the United States From 2014 to 2016 (Statista 2017g)

Leading states of the US regarding IT expenditures in 2016 were California with \$65.2 billion, followed by the state New York with \$49.3 billion and Texas with \$48.8 billion. After a big gap follows Florida with \$24.4 billion contributions to the US IT spending (cf. Statista 2017h).

7.1.3 Social Analysis

The US population is characterized by repeated waves of immigration which resulted in an ethnically diverse population (cf. Statista 2017e). For this reason, breaking down the United States to a single culture is hardly manageable. Still, there are peculiarities of the American culture that form a central tendency in society. It has to be considered though that every person has to be treated as individual with its unique experiences and background which will effectively influence the behavior of the particular person (cf. Hofstede Insight 2017). In order to get an overview over the American culture and to be able to target the US semiconductor industry more effectively in terms of generating leads, the cultural characteristics as illustrated in Figure 21 should be considered. Further details regarding the six dimensions of Hofstede can be found in chapter 3.3.

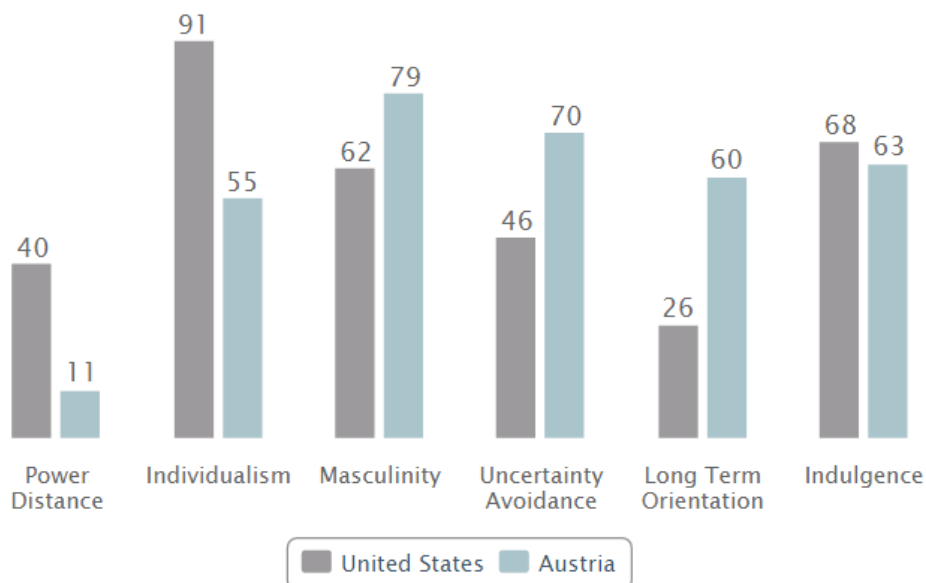


Figure 21: Comparison of Cultural Aspects Based on Hofstede's Cultural Dimensions (Hofstede Insights 2017)

The relatively low score on power distance paired with one of the worldwide highest scores of 91 in individualism, signifies the following implications for communication:

Superiors in US organizations are accessible and hierarchy is mostly established just for convenience while both managers and employees expect to be consulted frequently and continuously share information. Usually managers rely on individual employees and their teams for their expertise who are expected to be self-reliant and display initiative. The communication tends to be informational, direct and participative (cf. Hofstede Insight 2017).

The relatively high score on Masculinity with 62 can be well observed in typical American behavioral patterns. Together with one of the highest scores in Individualism, the American culture is characterized by competition, achievement and success, meaning being the winner or the best in the field. As a consequence, Americans talk freely about their achievements in life and like to demonstrate their success which is at the same time the motivator for this attitude. In order to be able to show how well a job has been done, the assessment systems in the United States are based on precise target setting together with a “can-do” mentality that implies that there will always be a way to do things in a better way which creates a lot of dynamics in society (cf. Hofstede Insight 2017).

In the dimension of Uncertainty Avoidance, the US scores with a value of 46. This means, that Americans generally show a certain degree of accepting new ideas and trying something new or different may it be in technology, business practices or private areas such as testing new food. While Americans do not require a lot of rules and are less emotional expressive than higher-scoring cultures, they still tend to be more tolerant of ideas and opinions from others and allow the freedom of expression (cf. Hofstede Insight 2017). This general openness towards new ideas and technologies is also reflected by the increased usage of social media channels as a new communication tool (cf. Gong/Stump/Li 2014, p. 42).

The low score in Long Term Orientation implies that Americans tend to analyze information in order to check its veracity. Also, performance is being measured on a short-term basis meaning that quick results are considered desirable. This also

explains why most American businesses measure their performance with profit and loss statements on a quarterly basis (cf. Hofstede Insight 2017). In terms of social media usage, the rate of its utilization is positively associated with the short-term orientation of a culture, meaning that people from short-term oriented cultures tend to use social media more actively (cf. Gong/Stump/Li 2014, p. 44).

Due to its lack of relevance in terms of communication, the dimension of Indulgence will be not further explained at this point.

7.1.4 Technological Analysis

Since its beginnings, the US has always been holding a leading position in adapting and applying new technologies. Hence, innovation and technology are two cornerstones of the US economy which is leading in fields such as nanotechnology, environmental technology, biotechnology and IT which also offers great opportunities for companies with competence and experience in these areas (cf. PESTLE Analysis 2014). Nowadays, the semiconductor industry allows other industries to invest, develop technologies and to grow their own productivity as the prices of semiconductors show – despite their continuously increasing performance – a decrease in price. All in all, IT-using and IT-manufacturing industries are expected to generate almost all economic productivity growth in the US economy from 2010 to 2020 (cf. Semiconductor Industry Association 2016a, p. 1).

Right now, the US experiences pressure from China as emerging player to its innovation system as China's expenditures for research and development have massively grown over the last few years which now makes China the second largest R&D performer in the world (cf. MarketLine 2015, p. 37) ahead of the European Union (all 28 countries) and Japan as shown below in the OECD comparison of the total spending on research and development in million US dollars. But even though the US is facing strong competition from other countries, it is expected to continue to maintain a technology superiority over its competitors (cf. PESTLE Analysis 2014) considering that the investment for R&D is still the highest worldwide as shown in Figure 22 and especially focused on key high technology industrial sectors.

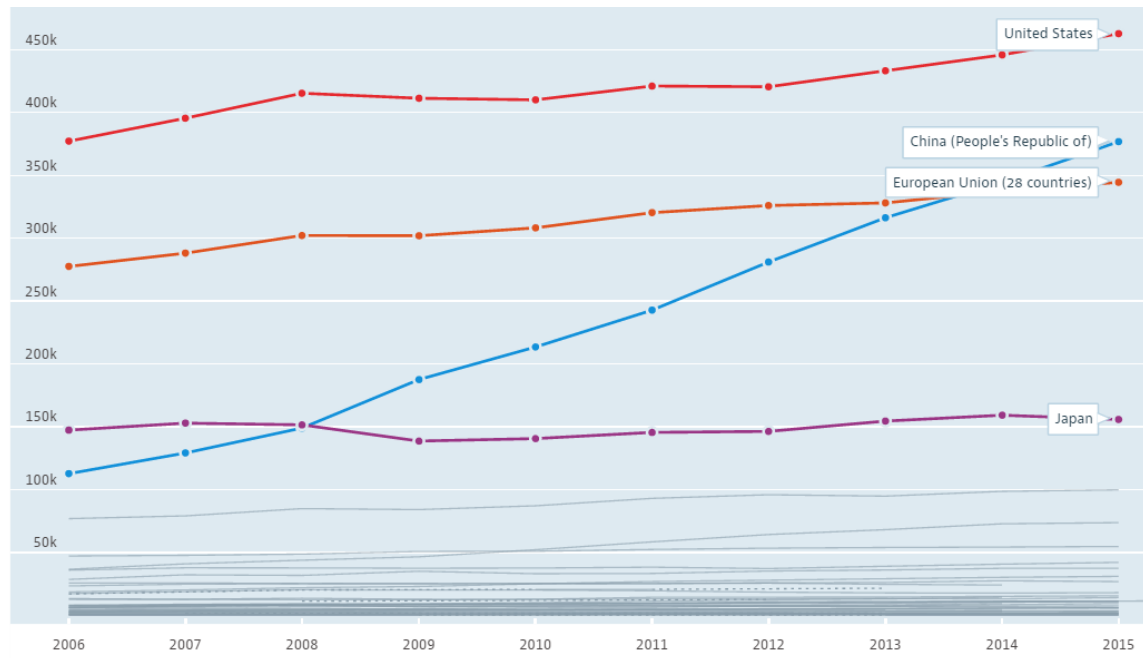


Figure 22: OECD Comparison of the Countries with the Biggest Expenditure on R&D in Total Million US Dollars (OECD 2016)

From all industries, the most expenditures for R&D as a percent of sales are spent in the semiconductor industry with more than 18% of the R&D expenditures as a percent of sales, followed by the industry of pharmaceuticals and biotechnology with 17.1% and software and computer services with 13.2% (cf. Semiconductor Industry Association 2016a, p. 19). The particularly high investment in R&D within the semiconductor industry can be explained by the constant pressure to innovate the products due to their comparatively extremely short lifecycles (cf. Platzer/Sargent 2016, p. 8).

7.2 Social Media Usage in the US Market

With a penetration of 66% in North America, the US is the worldwide leader in terms of social media usage (cf. Statista 2017I, p. 9). While for example media and entertainment websites in the US reach a percentage of 14.1 in regards of social media traffic, the technology industry only reaches 0.7% of social media traffic that goes to websites. The leading networks in the US based on the share of visits, are Facebook with a market share of 42%, YouTube with a market share of 24.9% followed after a gap by Twitter and Reddit with 5.2% each, Pinterest with 1.8%, Instagram with 1.6%, Tumblr with 1.3% and LinkedIn with 1.2%. The biggest group of social media users in the US are the users aged between 25-34 with more than 35 million social media users (cf. Statista 2017I, p. 16-18).

Social media statistics have furthermore shown that there are better and worse times to post on social media. The best timing for social media postings depends strongly on the used social media platform, the industry standards and the company's audience as well as the targeted region.

As LinkedIn is a professional social media platform, postings during the business day achieve the most activity. The best times to post are therefore the mornings when people are just about to get started with their work and at lunchtime (cf. Halloran/Thies 2012, p. 42f.). Due to that, the best times to post are Tuesday, Wednesday, Thursday at 7-8 am, 12 pm & 5-6 pm (cf. Ellering 2016).

On Twitter, the peak times of usage are situational and therefore depending on events, happenings and specific Twitter activities (cf. Halloran/Thies 2012, p. 43). Still, the best times to tweet according on average user statistics are Wednesday around noon and 5-6pm (cf. Ellering 2016).

On Facebook, it depends more strongly on the target group: If the target groups are mostly employed at large companies which have strict regulations regarding the usage of social media channels during work, posting on Facebook should better be done in the evenings when the target group is not at work anymore (cf. Halloran/Thies 2012, p. 42), during lunch break or on weekends. The best times to post are therefore Thursday to Sunday at 9am, 1pm and 3pm (cf. Ellering 2016). Further recommended times for posting on other social media platforms can be

found in the chart in chapter 4.3. Moreover, it has to be considered that within the US as a whole, people live in different time zones. As 80% of the US population live in the Central and Eastern time zones, this time zone should be used as a base for social media postings (cf. Ellering 2016).

In the year 2016, social media platforms were accessed 78% of the time with mobile devices which shows a clear trend towards the increasing importance of mobile devices (cf. Statista 2017I, p. 39). A study has shown that for managing work, 27% of users claim to use Pinterest, 21% Facebook, 18% LinkedIn, 13% Tumblr and 13% Twitter. In order to make professional connections, 80% of users use LinkedIn, 33% Facebook, 23% Twitter and 16% use Instagram (cf. Statista 2017I, p. 45).

The most named reason to engage with digital content in 2015 is entertainment with 18%, followed by finding specific information with 16% (cf. Statista 2017I, p. 52). According to consumers, the most popular social media channels to learn about new products are Facebook with 23%, YouTube with 14%, Instagram with 10%, Pinterest with 8% and Twitter with 6% (cf. Statista 2017I, p. 86f.).

7.3 The US Semiconductor Industry

Semiconductors are the basis for almost every functioning technical device that is being used for work, communication, travelling, entertainment, generation of energy, treatment of diseases as well as scientific discoveries and progress. Semiconductors were invented in the US which is still leading in cutting-edge manufacturing and designing of semiconductors. Semiconductors count to the top three manufactured export goods of the US and represent the number one export good in the category of electronic products (cf. Semiconductor Industry Association 2016a, p. i). Solely a single car encompasses up to 6000 semiconductors that store approximately 100 million lines of software code (cf. Platzer/Sargent 2016, p. 1). The market of semiconductors is driven by products that are ultimately purchased by customers: Of a total market of \$335 billion, the allocation of semiconductor demand by end users amounts to 34.1% in communications, followed by the PC and computer industry with 29.7%, the industrial and governmental sector including military with 13.0%, consumer with 12.8% and the automotive industry with 10.3% as illustrated in Figure 23:

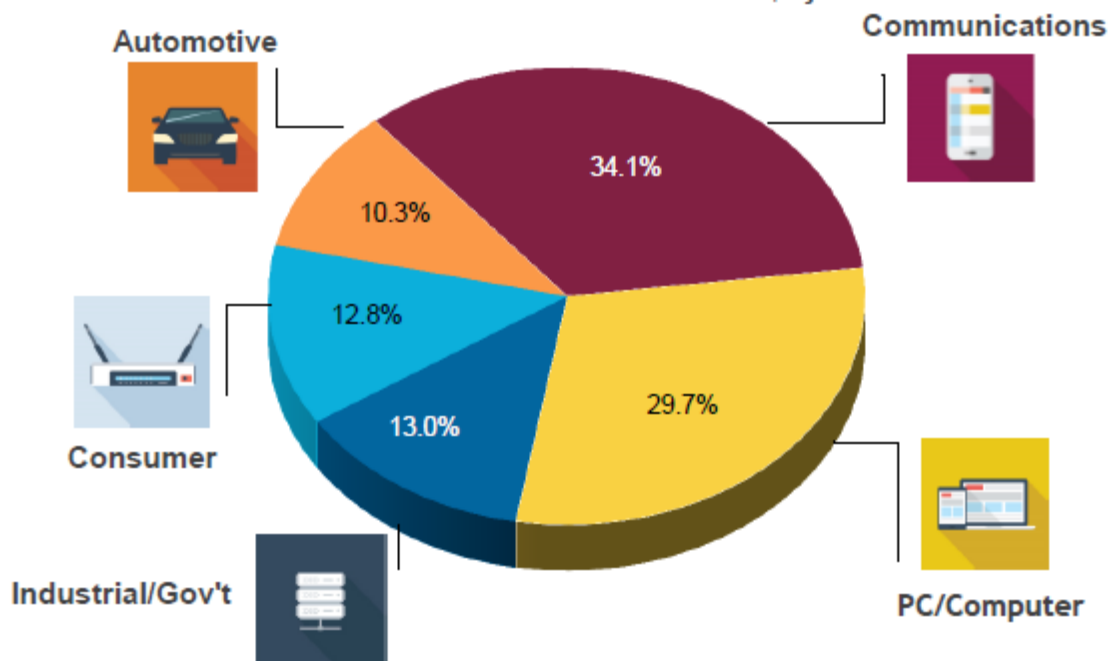


Figure 23: Percentage of Semiconductor Demand by End User (Semiconductor Industry Association 2016a, p. 10)

Considering the revenue of the companies, ten of the twenty largest semiconductor manufacturers are based in the US. These are namely: Intel,

Qualcomm, Micron, Texas Instruments, Broadcom, Apple, SanDisk, NVIDIA, Advanced Micro Devices, and On Semiconductor (cf. Platzer/Sargent 2016, p. 1f.).

In the year 2015, the local US semiconductor and circuit manufacturing industry has recorded a revenue of \$166 billion. Even though the total sales of US headquartered semiconductor manufacturers have decreased by two percentage points in the year 2015 compared to the previous year, US headquartered semiconductor manufactures still made about half of the worldwide semiconductor sales revenue which makes them the holder of the largest share of the global market. Generally, the US semiconductor industry strongly depends on the strength of the global economy and is therefore characterized by large fluctuations in supply and demand (cf. Platzer/Sargent 2016, p. 2). A slight increase of 4% in worldwide sales in the semiconductor industry is expected by the World Semiconductor Trade Statistics (WSTS) though whereas industry experts estimate the US market share to stay about 50% in 2017. Still, the US accounts a declining share of global semiconductor production capacity, as manufacturers increasingly build facilities in places where generous subsidies are made available or where the companies have proximity to electronic product manufacturers as downstream users. Currently, about 87% of advanced global wafer factory capacity are now outside the US (cf. Platzer/Sargent 2016, p. 3-6).

Of the 94 advanced semiconductor wafer factories in operation worldwide, 17 are based in the US, 71 in Asia and 6 in Europe (cf. Platzer/Sargent 2016, p. 1). Between 2015-2017, of a total of 36 new semiconductor fabrication plant projects worldwide, 14 were planned in China compared to the US where only five projects were planned (cf. Platzer/Sargent 2016, p. 11). Building a state-of-the-art semiconductor fabrication facility usually costs around \$10 billion (cf. Platzer/Sargent 2016, p. 9) which is why only a few large semiconductor manufacturing companies have the sales volume to build a new plant (cf. Platzer/Sargent 2016, p. 3).

In 2015, the semiconductor industry was able to register worldwide sales of \$335.2 billion which is an average annual increase rate of 9.5% per year considering the last ten years. The sales is forecast to grow up to \$352 billion in the year 2017 (cf. Semiconductor Industry Association 2016a, p. 2f.).

Figure 24 displays the presumable development of the different product groups in the semiconductor industry. Currently, the biggest product segment by sales worldwide is the logic chip industry with sales of \$91 billion, followed by memory devices with \$77 billion and analog chips with \$45 billion sales. Remarkable is the development of opto semiconductor devices (cf. Semiconductor Industry Association 2016a, p. 11) that are able to generate or sense light used for example in traffic lights or cameras (cf. Platzer/Sargent 2016, p. 4). They currently generate about \$33 billion sales but registered a plus of 11.3% compared to the previous year (cf. Semiconductor Industry Association 2016a, p. 11). The overall growth in the semiconductor industry will be lower than compared to the past, but specific semiconductor technologies will register a significant growth in the future compared to others. Accordingly, there will be a future growth in the area of MOS memory and analog chips as well as for chips with a specific purpose logic (cf. Jones 2015). This information is particularly important as most of the semiconductor manufacturers are specialized in producing a certain product type (cf. Platzer/Sargent 2016, p. 4) and therefore the developments and trends in the field of semiconductors are being displayed. Moreover, this information implies which semiconductor manufacturers have potential and will expand and invest considerably in the future and which companies are likely to shrink, make cuts in expenditures or disappear at all.

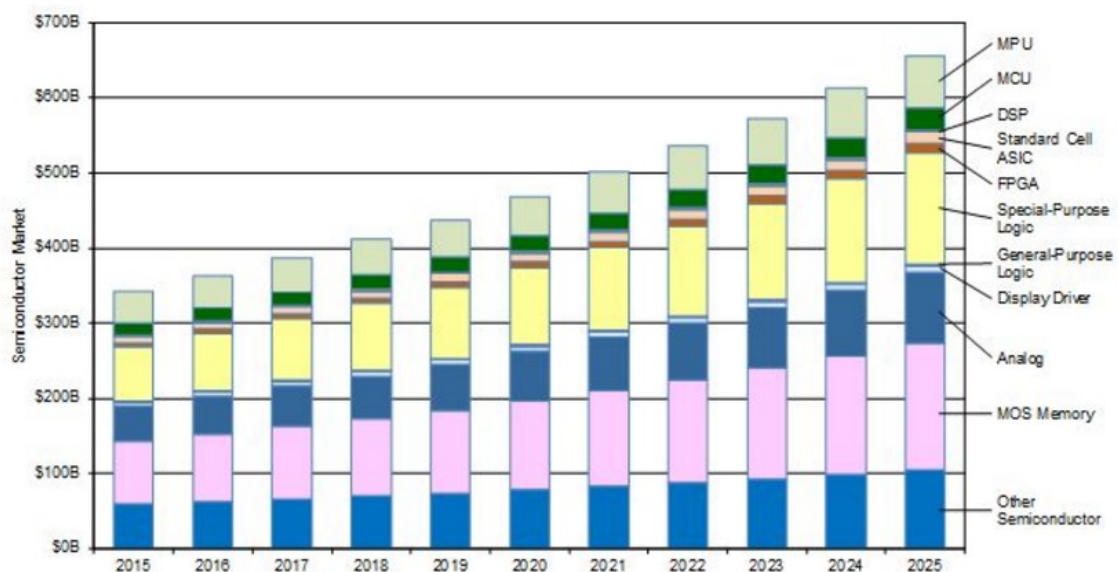


Figure 24: Global Semiconductor Market (Jones 2015)

One product group that is currently on the rise are multicomponent semiconductors that combine two different kinds of semiconductors in one device, reducing power consumption, needed space and weight. They are mostly used in smartphones, tablets and automotive braking and airbag systems. Companies that are leading in this field are the US based companies Intel, Texas Instruments, Qualcomm and Broadcom (cf. Platzer/Sargent 2016, p. 5).

Challenges which the US semiconductor industry are currently facing are on the one hand the continuous decrease in chip prices as the manufacturers even though manufacturers are producing increasingly powerful microchips. Between the years 2005 and 2015, the prices of semiconductors have fallen by 46% and continue to decrease. Furthermore, the appreciation of the US dollar has made exported US goods more expensive for foreign countries which contributed to a loss in market share. This means, that in order to maintain or grow revenue, semiconductor manufacturers need to sell a bigger quantity of chips and therefore, need to find new markets for their products (cf. Platzer/Sargent 2016, p. 7-11).

7.4 Competitor Analysis

In order to get an overview over the social media activities of the competitors of DR YIELD, the following competitor analysis provides basic information about the companies as well as a summary of the companies' activities on social media. For the comparison, the competitors Optimal Plus, MFG Vision and Qualtera have been chosen as these companies represent the main competitors in terms of product similarity regarding the software setup, main functions, value proposition and hence the same target market.

7.4.1 *Optimal Plus*

Optimal Plus was founded in 2005 in Nes Ziona in Israel and has operations in Asia, Europe and the United States (cf. Bloomberg 2017). The company provides Big Data analytics software for the semiconductor and electronics industries offering an end-to-end product analytics solution that offers brand owners and their suppliers to measure all aspects of their product such as the performance, quality or yield. Some well-known customers of Optimal Plus are AMD, Globalfoundries, Marvell, Nvidia, Qualcomm, Samsung, TSMC and Broadcom (cf. Optimal Plus 2017a).

Links to the social media accounts of Optimal Plus are integrated in the header as well the footer of the website of Optimal Plus in form of linked icons leading to its company profiles on LinkedIn, YouTube, Facebook and Twitter. Especially on Twitter and Facebook, Optimal Plus shares links leading to articles and blog entries on the website (cf. Optimal Plus 2017a).

Facebook

On Facebook, Optimal Plus runs two company pages – one English page called “OptimalPlus” and “OptimalPlus Israel” for the Israeli market. Content on Facebook is originally posted on the Optimal Plus page and postings are then being shared on the Optimal Plus Israel page. The posts encompass mostly events, links to blog entries and videos on their website, shared articles from other pages in which the company is being mentioned, shared industry articles, photos from their booths at tradeshows and talks at conferences as well as customer reviews and papers presenting how the software of Optimal Plus is being used at their customers’

manufacturing sites. The frequency of posts is on average one posting every two weeks (cf. Optimal Plus 2017b).

YouTube

On YouTube, Optimal Plus has its own channel. The uploaded videos describe on the one hand basic information about the software of Optimal Plus and its capabilities as well as videos about the company such as an image video or a video telling the company history of Optimal Plus on the occasion of their 10th anniversary celebration or videos from events of Optimal Plus. Also, the CTO of Optimal Plus, Michael Schuldenfrei, is blogging in their so called “CTO Blog” on how the software of Optimal Plus can be used in different fields of application. Beside these rather short videos, also longer videos showing presentations of Optimal Plus at conferences and tradeshows are uploaded on YouTube (cf. Optimal Plus 2017d).

Twitter

Twitter is the platform where Optimal Plus has its biggest and best maintained social media presence. Tweets are being shared at least daily or even several times a day. On Twitter, Optimal Plus shares mainly industry news from other pages with referrals to the author of the original tweet. Especially high engagement in forms of likes and shares is being achieved with tweets that are sent directly from conferences and updating their followers about presentations (cf. Optimal Plus 2017c).

LinkedIn

Optimal Plus also has a profile on LinkedIn where news and information about the company such as presentations or articles from other pages dealing in some way with Optimal Plus are being shared. Usually, there are one or two posts being published per month. Of a stated company size of 201-500 employees, 214 of the employees of Optimal Plus have a profile on LinkedIn (cf. Optimal Plus 2017e).

Google+

Optimal Plus also has a company profile on Google+ which they mainly use to share video links to their YouTube channel on average every other month (cf. Optimal Plus 2017f).

7.4.2 MFG Vision

MFG Vision was founded in the year 2005 and is based in Limerick, Ireland (cf. MFG Vision 2017e). It stands for cost-effective and efficient analysis of test data in the semiconductor industry (cf. MFG Vision 2017a). Therefore, the company represents another provider of yield management software specialized on the semiconductor industry. It offers a web-based analysis tool that allows the analysis and comparison of performance data using cloud computing and database software for the management of data. In terms of customer service, MFG Vision states furthermore that every customer will have a direct line to their CEO John O'Donnel (cf. MFG Vision 2017b).

Facebook

The activity of MGF Vision on Facebook is rather low with only one post per month on average. All posts include links back to the website of MFG Vision by sharing blog entries and events that were published on the company's website (cf. MFG Vision 2017c).

Twitter

As Optimal Plus, also MFG tweets in a higher frequency than they post on Facebook. Still, the frequency of tweets is about one tweet per month. Most of the tweets are providing links to their website, but many of them are broken and lead to an error page on their website. Besides, also photos of their headquarters in Limerick, and from business meetings as well as tweets from other twitter pages are being shared (cf. MFG Vision 2017d).

LinkedIn

Also on LinkedIn, the average number of posts of MFG Vision adds up to one post per month. Of a stated company size of 11-50 employees, 24 of the employees of MFG Vision have a profile on LinkedIn (cf. MFG Vision 2017e).

Google+

Even though the Google+ account of MFG Vision is being shared in form of an icon directly in the header and footer of their website, the page is not maintained at all and there is no content available (cf. MFG Vision 2017f).

7.4.3 Qualtera

Qualtera is another provider of big data solutions for the semiconductor test and manufacturing industry. The company was founded in 2010 and is based in Montpellier in France (cf. Qualtera 2017a). The CEO and CFO is Richard Mousties. Similar to its competitors, Qualtera has global operations and is specialized on fabless companies, OSATs, IDMs and foundries. Qualtera does not have any social media profiles except on LinkedIn and hence, in contrary to its competitors, does not provide any links to social media profiles on their website (cf. Qualtera 2016).

LinkedIn

The profile of Qualtera on LinkedIn is the only social media presence that Qualtera has. Besides a general company profile and some basic information as e.g. the year of foundation and company size, there are no contributions available on the platform. Of a stated company size of 11-50 employees, 28 of the employees of Qualtera have a profile on LinkedIn (cf. Qualtera 2017a).

Figure 25 summarizes the number of followers of the competitors of DR YIELD on the respective channels in comparison with the social media presence of DR YIELD.

	OptimalPlus	MFG Vision	Qualtera	DR YIELD
Facebook	601	259	-	451
LinkedIn	1.412	118	564	38
YouTube	81	-	-	5
Google+	1	0	1	0
Twitter	6.046	399	-	68

Figure 25: Number of Followers on Social Media Platforms of DR YIELD’s Competitors Compared by Platform (own presentation)

7.4.4 Interpretation of the Competitor Analysis

The following results can be derived of the foregoing analysis regarding the usage of DR YIELD’s competitors of social media platforms, the provided content and the frequency of posting.

Social Media Platforms

The analysis of the competitor analysis shows that the most used social media platforms among DR YIELD’s direct competitors are LinkedIn, followed by Facebook and Twitter. The platform Google+ is only actively used by Optimal Plus while MFG Vision and Qualtera both only have created a Google+ profile that they do not maintain at all. Even though YouTube would represent an attractive platform within the semiconductor industry as explanatory videos could be shared which could facilitate the understanding of the complex products in the field of yield management software, the companies MFG Vision and Qualtera have not established a corporate account on the platform yet. Figure 26 summarizes the activity on the respective social media channels of DR YIELD’s competitors.

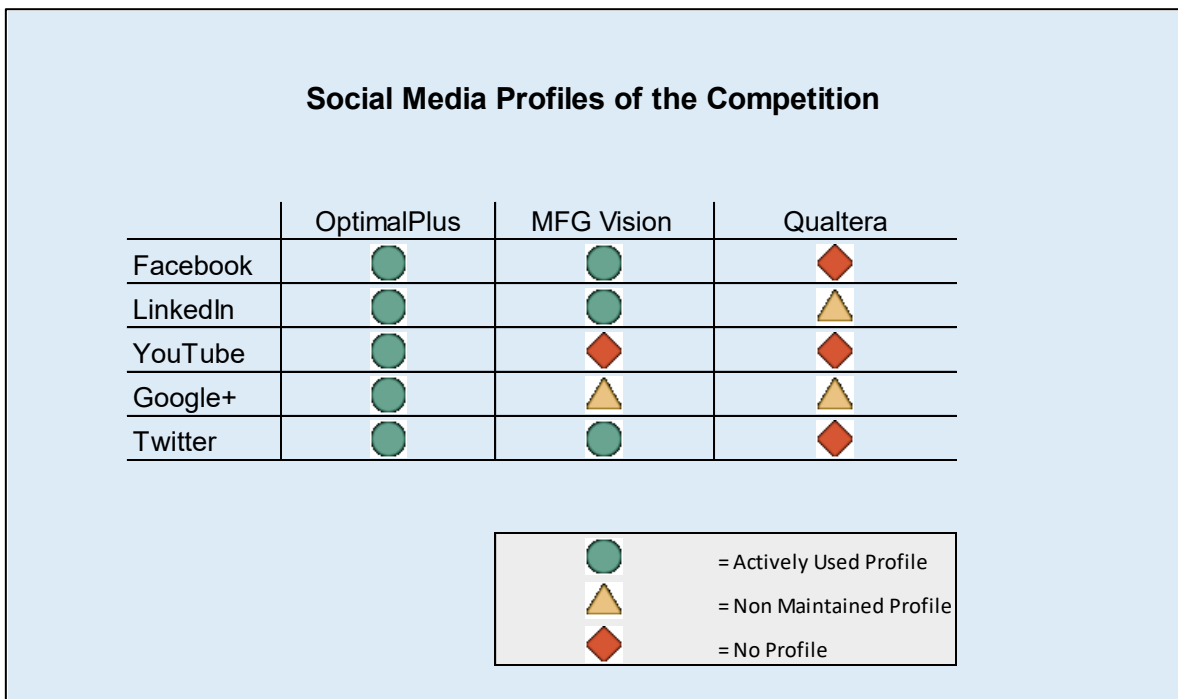


Figure 26: Social Media Profiles of DR YIELD's Competition (own presentation)

What can be observed especially at Optimal Plus and MFG Vision is the strong linkage between their website and their social media profiles. This linking is quite positive as it can bring visitors from social media channels to the website and thus generate more traffic on the company's website. Furthermore, in terms of Search Engine Optimization, an attempt can be made in order to make a certain content element so popular within a social network that this content makes it beyond the borders of the social network, ends up in links on other pages and thereby indirectly increases the ranking on search engines (cf. Alpar/Koczy/Metzen 2015, p. 314f.).

Content

On the platforms LinkedIn, Facebook and Twitter, the competitors of DR YIELD primarily provide information and articles about the company and updates from events such as videos and blog posts about the participation or presentations at conferences and tradeshow as well as links to blog posts on their website. Furthermore, the companies frequently share industry related articles from other pages. Optimal Plus and MFG Vision also post pictures from their headquarters, business meetings, social events at their company and company celebrations occasionally.

Only Optimal Plus shares customer reviews, articles about how their product is being used at their customer sites and success stories. All of the posts of the competitors show a similar structure starting with a short introduction text followed by a link, picture or video that provides more information to a specific topic.

Frequency of Posting

In general, the activity of DR YIELD's competitors is rather low among most social media platforms. The channel where most activity takes place is Twitter where especially Optimal Plus is daily pushing out information to its followers. Apart from Twitter, the frequency of posting among Optimal Plus and Qualtera amounts to about one to two posts per month on the platforms Facebook and LinkedIn.

7.4.5 Conclusion of the Competitor Analysis

Following conclusions can be made

- Especially in the US market, social media represents a new, attractive way of communication. Considering this aspect, especially the competitors MFG Vision and Qualtera are missing the opportunity to use social media as an effective communication channel.
- Having a company profile on social media but not actively maintaining it such as especially MFG Vision and Qualtera do, can leave a visitor disappointed as the content that has been expected by the visitor cannot be found on the respective platforms. Hence, it is recommended to only have a social media profile if the capacities are available to regularly maintain the social media platform.
- As especially two of the three main competitors of DR YIELD have not actively used social media so far, social media can offer a possibility for DR YIELD to differentiate itself from its competition by offering potential customers new sources of information and a new attractive communication channel.

8 Primary Research

Besides the secondary market research, the primary research aims to close information gaps in order to be able to develop a social media concept for DR YIELD for the American market in the following.

8.1 Research Design

8.1.1 Information Demand

This research aims to get information about the social media usage behavior of DR YIELD's target group in order to discover more about their expectations, which platforms they use, what general level of acceptance they have towards social media and what kind of content is valuable for them.

From this approach, three different main aspects for the research can be followed:

- **Private social media usage** of the target group of DR YIELD which includes information about the platforms they already use, the intensity of usage and the kind of information the target group is looking for.
- The **expectations** and **demanded content** that the target group of DR YIELD values and is searching for, what topics the target group would appreciate and what would make the target group 'follow' a corporate social media profile.
- **Professional usage of social media** of DR YIELD's target group, namely the openness of the corporate culture and colleagues towards the usage of social media during working times, how the target group uses social media during their work, what social media platforms are utilized mainly for professional purposes, whether social media is employed to gather information for supplier research and how social media influences the company's buying decisions.

8.1.2 Research Sample

In order to obtain information about the usage of social media as well as the role of social media as information source in the business buying process, 17 interviews were conducted with the target group of DR YIELD encompassing potential customers in the roles of users, buyers and deciders in the companies' buying center. In order to get valuable information that can be efficiently used for the development of the social media concept for DR YIELD for the US semiconductor market, the participants had to have at least three years experience in the semiconductor industry besides their role within the buying center. Moreover, the participants were required to be either in the engineering, procurement or IT department. In order to get another point of view from a different angle and therefore a more eclectic sight at the usage of social media in the semiconductor industry, also three people in leading marketing positions were interviewed.

The potential interview participants were personally contacted on the social media platform LinkedIn and via mail by the author of the thesis. The interviews were carried out by using the online meeting platform GoToMeeting with which all of the interviews were recorded. Due to security concerns and corporate restrictions, two of the participants agreed on the recording and transcription of the interviews, but asked to keep their names and companies concealed.

Table 4 shows the list of the interview participants:

No.	Name	Company	Job Title
1	Ajouri Stacy	Texas Instruments	Software Development
2	Ayats-Mas Otilia	ams AG	Director of Global Marketing Communications
3	Budri Thanas	Texas Instruments	Engineer Manager
4	Concealed	Concealed	Technical Leader
5	Concealed	Concealed	Product Engineer
6	Dover Russel	Lam Research	Director of Product Marketing
7	Johnston Haylley	Globalfoundries	Lead Central Planner
8	Joshi Pratik	Samsung	Staff Engineer
9	Meixner Anne	The Engineers' Daughter LLC; previous: Intel	Test Technologist / Principal Consultant
10	Palko Cindy	Entegris	Director of Global Procurement
11	Peissig Andrew	Globalfoundries	Global Sourcing Lead for Outsourcing
12	Pulvirent Larry	Globalfoundries	New Part Integration Manager
13	Rothe Jan	Globalfoundries	Manager of the Factory Solutions Group
14	Tucker David	Texas Instruments	Quality Engineer
15	Van Roijen Raymond	Globalfoundries	Senior Engineer
16	Werbaneth Paul	Intevac	Global Product Marketing Director
17	Williams Brett	ON Semi	Process Integration Engineer

Table 4: Interview Participants (own presentation)

8.1.3 Methodology

The usage of **qualitative interviews** allows the interviewer to get insights into the way of thinking, feeling and acting of the interviewee (cf. Berekhoven/Eckert/Ellenrieder 2004, p. 97). Therefore, it represents an ideal interviewing method in order to deepen the knowledge about the motives, feelings and expectations of DR YIELD's target group towards social media.

Since there will be some interrogations that are not supposed to offer a scope for question formulation, the questionnaire will include – where appropriate – some **standardized questions** in form of e.g. rankings and closed questions which are fixed and do not leave room for interpretation (cf. Berekhoven/Eckert/Ellenrieder

2004, p. 100f.). Due to the mixture of qualitative and standardized questions, the questionnaire is **semi-structured explorative**. The questionnaire furthermore contains conditional questions in order to enable the interviewer to ask the participants questions in greater depth to a specific topic depending on their answer beforehand.

A total of 17 interviews were conducted between the months February and March. Due to the local distance of the author and the interview participants who are all located in the US, the online meeting tool GoToMeeting was chosen as communication platform which offers the possibility of live video chat without needing the second party to register. Before starting the interview, all participants were asked for their permission to record the meeting and an introduction to the topic of social media and social media platforms were given to the interviewees. All interviews were entirely recorded except the introduction and closing part and transcribed using the analysis tools MAXQDA for the investigation of the qualitative questions and Excel for the analysis of the quantitative questions. For the analysis of the qualitative questions, Mayring's model of the procedure of inductive category division as well as the model of structured qualitative content analysis have been applied to the obtained raw data. Especially the deductive elements of category definition and subsumption were the fundamentals of a methodically controlled and incremental data analysis with the aim of summarizing the material while reflecting the basic material, structuring the data and hence filter important aspects (cf. Mayring 2002, p. 114-117).

8.2 Analysis of the Interviews

In this chapter, the results of the primary market research will be summarized and discussed. The data has been collected by conducting in total 17 online interviews with the target group of DR YIELD which were transcribed and then methodically reduced by categorizing them in order to uncover the core statements of the interviews as further described in chapter 8.1.3. All statements quoted in the following are taken from the interviews that were conducted within the scope of primary market research.

8.2.1 Social Media Platforms

The question “Which of the following social media channels have you used within the last month?” was answered by 17 of 17 interview participants with LinkedIn and YouTube, while only 14 of the interviewees have used Facebook in this time range, followed by Twitter with 9 users, “Others” with 7 users and Google+ with 6 users as illustrated in Figure 27. In the category “Others”, platforms such as Yelp, Google Sheets and corporate internal social media platforms were mentioned by the participants. Platforms such as Snapchat, Instagram, Slideshare, Flickr and Tumblr play a negligible role among the interview participants.

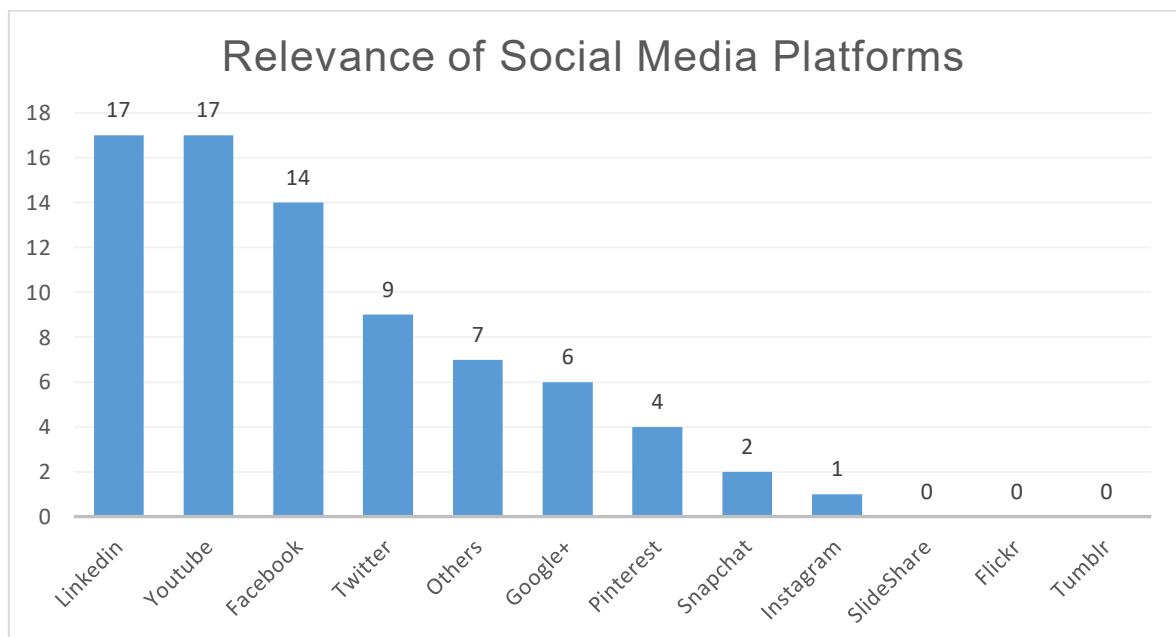


Figure 27: Used Social Media Platforms (own presentation)

The reason why the interview participants visit these social media platforms are manifold, but as illustrated in Figure 28, the most important reasons for visiting social media platforms are professional purposes, getting information about specific topics, keeping up with family and friends as well as entertainment. Examples for professional purposes are the usage of LinkedIn in order to keep in touch with the professional network, to keep up with developments of the industry and to visit groups associated to work. Other reasons for visiting social media are searching for news, sharing information with others, finding answers to specific problems, receiving information about local businesses and looking for reviews.

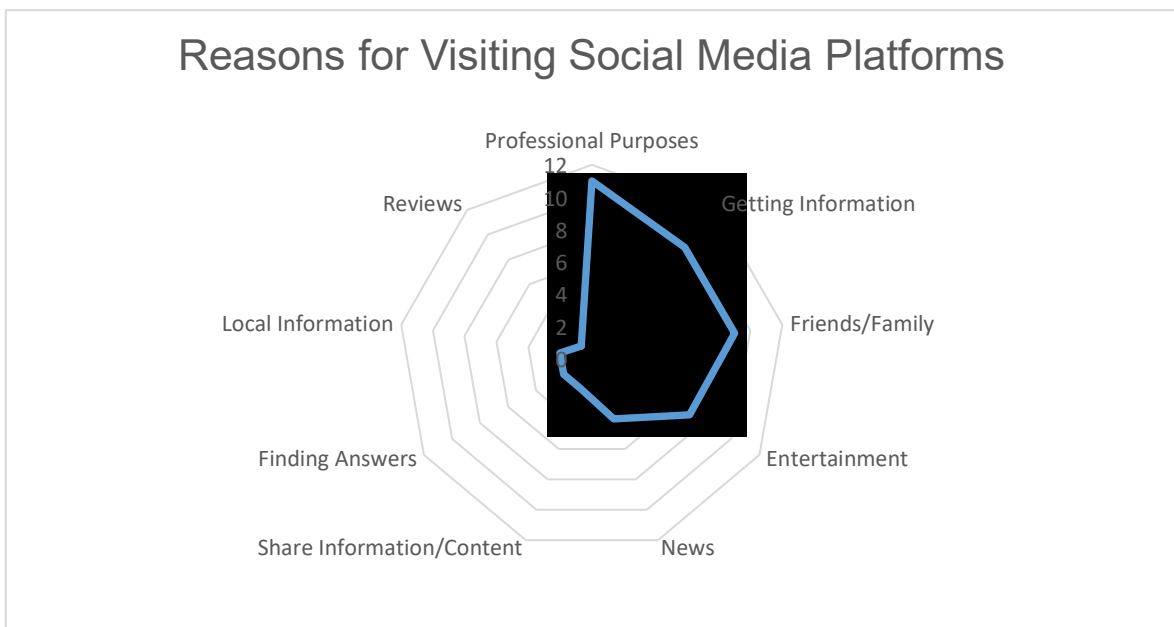


Figure 28: Reasons for Visiting Social Media Platforms (own presentation)

8.2.2 Participants and Social Media Usage

In order to be able to interpret the results better, also the age of the interviewees and the job department that the interview participants are working in were asked in the interviews. As shown in Figure 29, the distribution of age shows a tendency towards the age groups 45-54 and 55-64, meaning that almost 65% of the participants are over 45 years old.

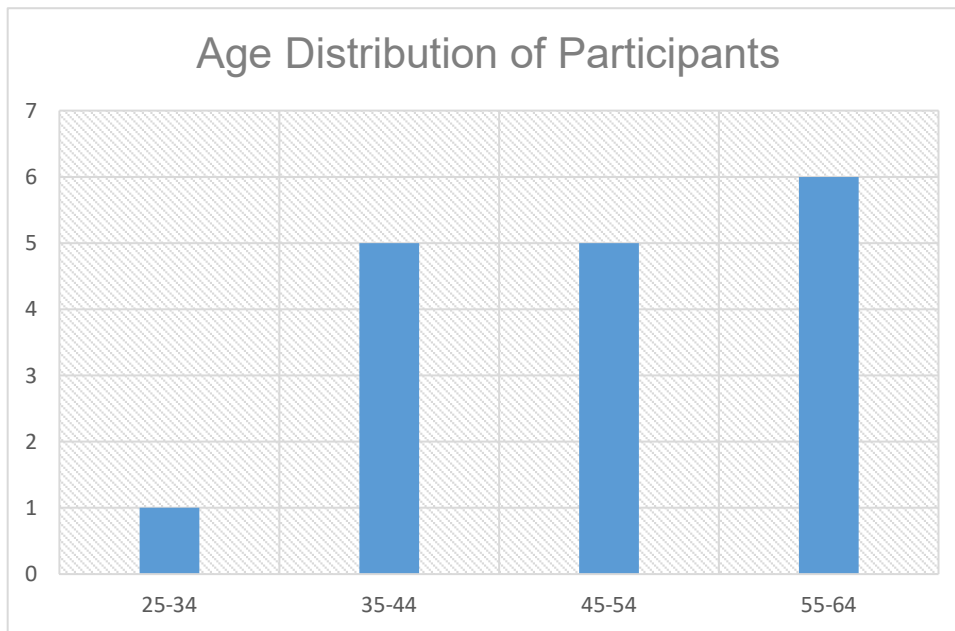


Figure 29: Age Distribution of Interview Participants (own presentation)

This distribution towards higher age reflects quite well the statement of one of the interviewees: *“[...] if you would do an age survey of people able to make a decision or people even in the US semiconductor population, I think you would find a disproportion of the older than you would expect for a working age population. As an industry, we have become grey. Even though we are still leading edge and innovative in many ways of science, we have become a grey industry”*. This statement is particularly interesting in terms of social media usage in the semiconductor industry combined with the statement of another interview participant: *“I think using social media in the semiconductor or technical world is kind of paving the future. I think there's a lot more opportunities to use social media in our industry. I think the new millennials coming onboard, they are constantly on social media and I think that generation really embraces it. The older generation of semiconductor professionals has 15-20 years left and will retire. I think there is a lot of capability”*.

In order to be able to interpret the results of the interviews more effectively, categories have been established that allow to break the single answers further down to a more detailed level. More than 41% of the participants are employed in the engineering department, 23% of the participants are currently in the procurement department and 18% of participants in the IT department, meaning that over 81% of the interview participants represent the direct target group of DR

YIELD in the buying center. Moreover, three participants working in the field of marketing were interviewed in order to have a contrary field to the technical departments to emphasize differences in usage of social media and preferences in terms of business-related context.

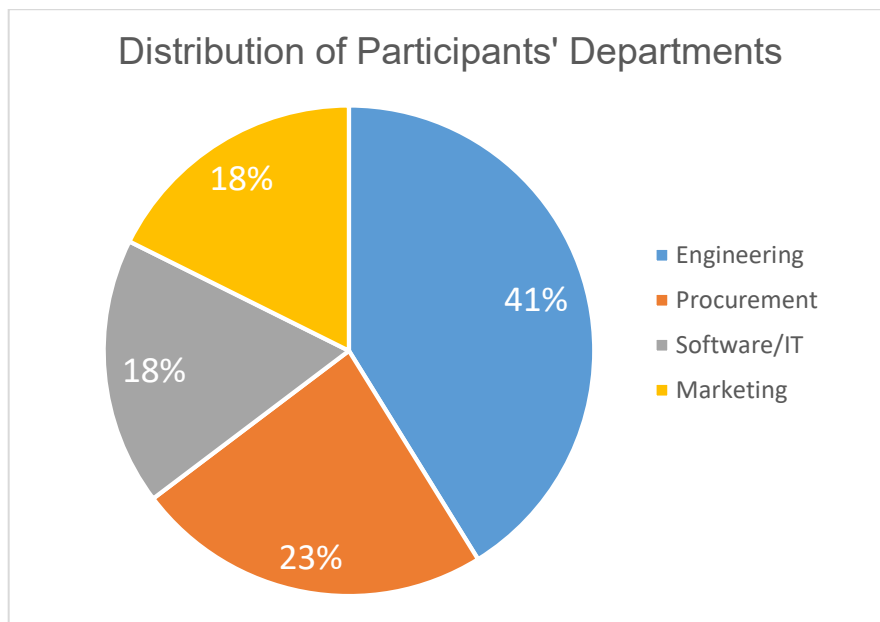


Figure 30: Distribution of the Departments the Interview Participants Work In (own presentation)

With regard to the daily time of social media usage, it is, as shown in Figure 31, not possible to identify clear tendencies in the results which would indicate that people from a specific department use of social media more or less than those of another department. All in all, about 2 thirds of the respondents stated to use social media between 15 and 60 minutes per day.

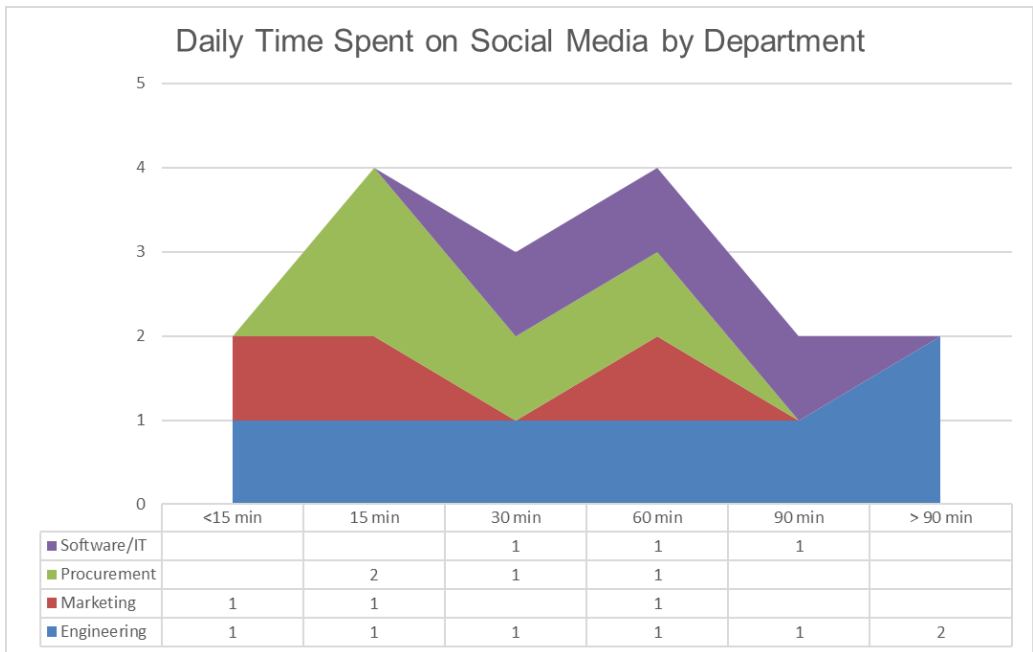


Figure 31: Daily Time Spent on Social Media by Department (own presentation)

On the other hand though, a tendency regarding the preferred frequency of corporate postings is apparent. As illustrated in Figure 32, especially in the engineering and procurement department, people seem to prefer one corporate posting per week. Thus, there is a clear trend in DR YIELD’s target group recognizable that one posting per week is reasonable.

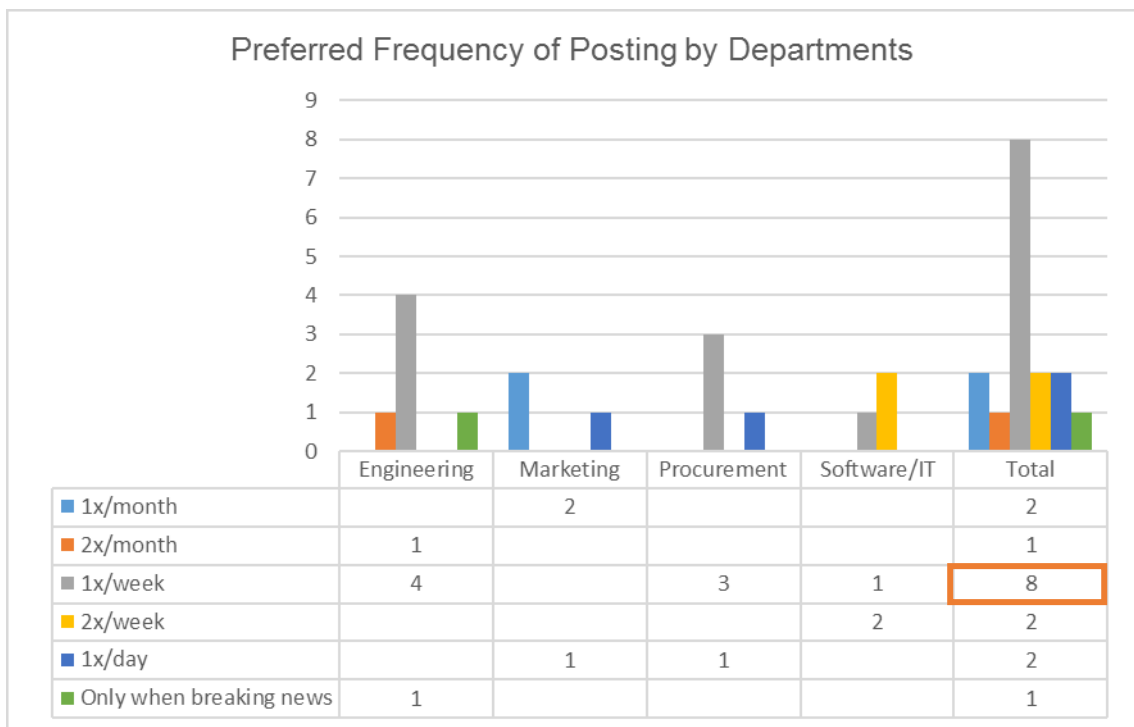


Figure 32: Preferred Frequency of Corporate Postings by Departments (own presentation)

In terms of the segmentation method according to social technographic profiles that are based on how people participate in social media (cf. Huotari/Ulkuniemi 2014, p. 762) especially in the departments of engineering and procurement is a clear trend apparent towards the social technographic profiles of spectators and joiners. This information is important for creating a concept as the social technographic profiles provide information on how the company should approach its target group on social media. This means that DR YIELD's target group mostly only uses its social media profiles to visit social networking pages and does not actively provide content on social media platforms. Furthermore, the target group likes to read customer reviews, blogs, forums entries, watch videos and listen to podcasts. None of the participants claimed that they do not have a profile on social media and do not read contributions on the internet at all.

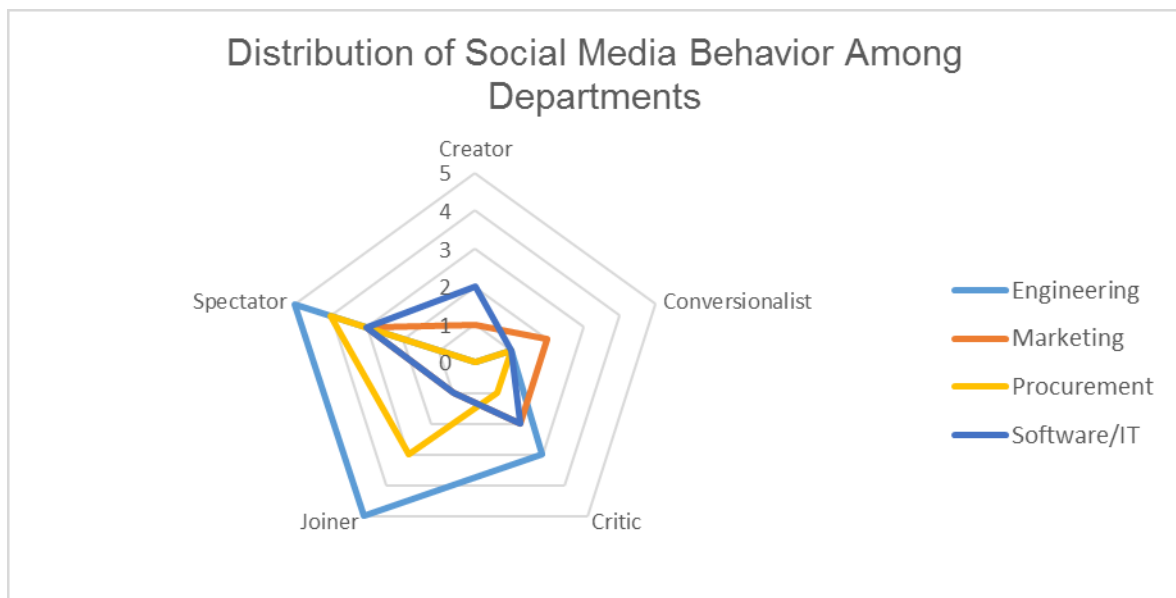


Figure 33: Distribution of Social Technographic Profiles Among Departments (own presentation)

Also, the global trend towards the increasing usage of mobile devices is delineated well in the results of the primary market research: Only 33% of the respondents claimed that they use their computer more frequently for accessing social media than their mobile devices. The remaining 67% in the other hand stated that they use their mobile devices more frequently to access social media platforms.

8.2.3 Expected Content and Frequency

Besides the results as stated above, the primary market research further intended to gather information about the expectations and valued content that is demanded by the target group of DR YIELD, what topics the target group would appreciate and what would make it 'follow' a corporate social media profile. Furthermore, the primary market research aimed to obtain data about the professional usage of social media of DR YIELD's target group, as for example the usage of social media during work, whether social media is used to gather information for supplier research and what social media platforms are mainly visited for professional purposes amongst DR YIELD's target group.

The most named reason of the interview participants to follow a corporate page on social media is as illustrated in Figure 34 that somehow, this corporate page is related to their profession and provides useful and valuable information. Also, the personal connection to a company plays an important role, as for example the interviewees would follow a corporate page when they have met an interesting person or presenter at a conference and they would like to receive more content from this person or company that is a thought leader or innovator in its field. Other reasons to follow a corporate page are that the company provides information about their product that the interviewees are particularly interested in, offers monetary incentives such as coupons, or the company is a local business that hosts events that the interview participants would like to know more about.

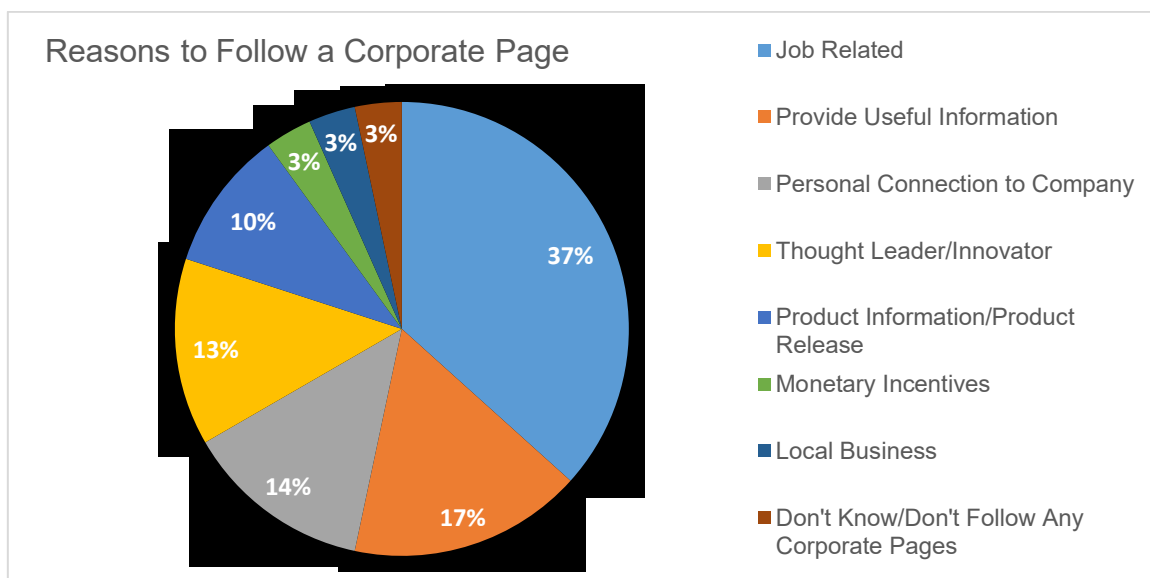


Figure 34: Reasons to Follow a Corporate Page (own presentation)

Except a single respondent, all interviewees stated that they have access to social media within their corporate network. Of these 16 people having access within their corporate network, 94% claimed to use social media also during their working time even though only 60% said that it is generally common to use social media during work for professional purposes at their company. The responded who reported that all social media platforms are blocked within his company’s corporate network, claimed that he uses social media in his leisure time for professional purposes though.

All in all, a majority of 71% of the survey participants responded that they use social media to collect further information about potential suppliers in their profession. Moreover, 75% of the people using social media for supplier research answered that they use social media also for getting a first impression of potential suppliers, meaning that they look up on social media who the people behind the company are. The platform that most of the participants stated to use for searching information about potential suppliers on social media is LinkedIn, followed with fewer mentions by YouTube, Google+ and Twitter. Only two of the interviewees claimed to use Facebook for further supplier investigation. In a business-related context, platforms such as Instagram, Snapchat, Flickr, etc. seem not to have any relevance within the semiconductor industry especially when gathering information about potential suppliers.

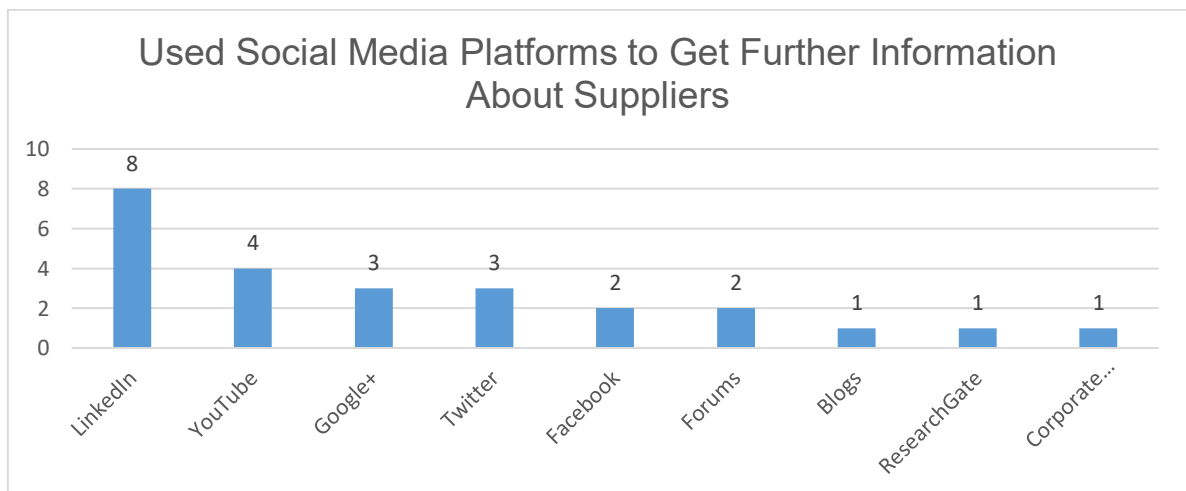


Figure 35: Most Used Social Media Platforms for Finding Further Information About Potential Suppliers (own presentation)

The content that the target group is particularly looking for on these platforms is as shown in Figure 36 first and foremost customer feedback and reviews as well as information about the product and service that the company provides. Furthermore, the respondents are looking for general, basic information as well as information about the company itself regarding general and financial advice, business size, strengths and customer base as well as about its offered products. Moreover, all of the respondents answered that explanatory videos would help them in the decision-making process.

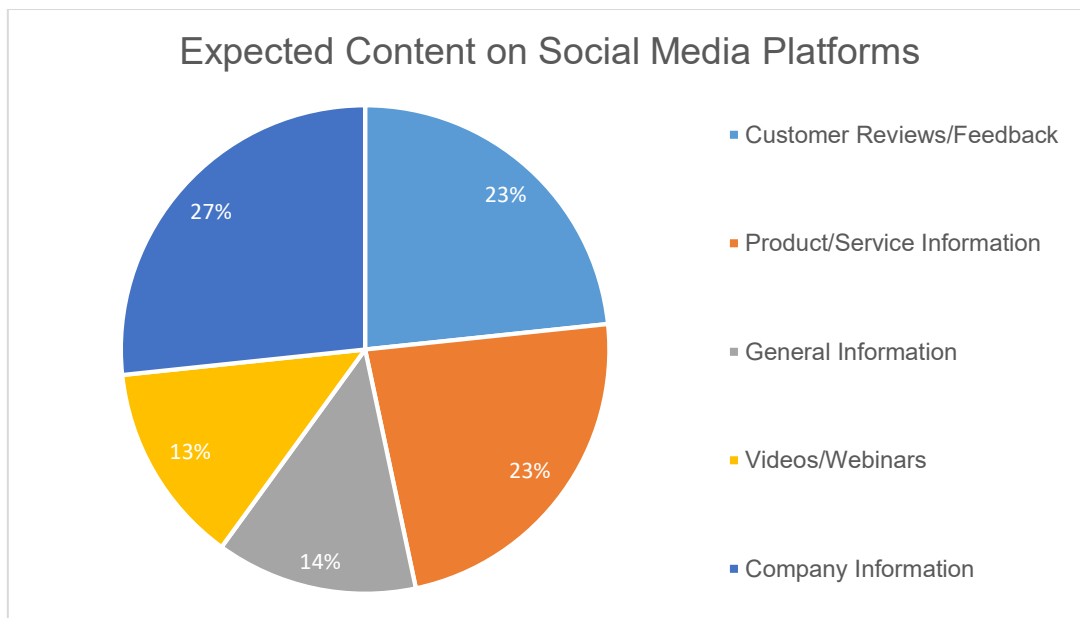


Figure 36: Expected Content When Visiting Suppliers' Social Media Pages (own presentation)

Besides collecting information about the role and therefore usage of social media in a business-related context, the interview also intended to get a deeper insight into the purchasing process of companies and therefore, the importance of specific criteria when choosing a supplier and whether these criteria can be supported by social media. As shown in Figure 37, the two most mentioned purchasing criteria are price and functions of the product, followed by the maintenance costs, communication and delivery service, meaning the scope of service and aspects such as reliability of the supplier. The criteria reaction speed, innovation power and flexibility of the supplier were also named by almost half of the respondents. One criterion that seems to have no relevance when choosing a supplier is the supplier's headquarters. One respondent noted that the supplier's headquarters only has relevance in case that it is based in countries where severe political

barriers such as in North Korea or currently Russia could massively aggravate the trade partnership or that the supplier for example manufactures military critical parts for the US government.

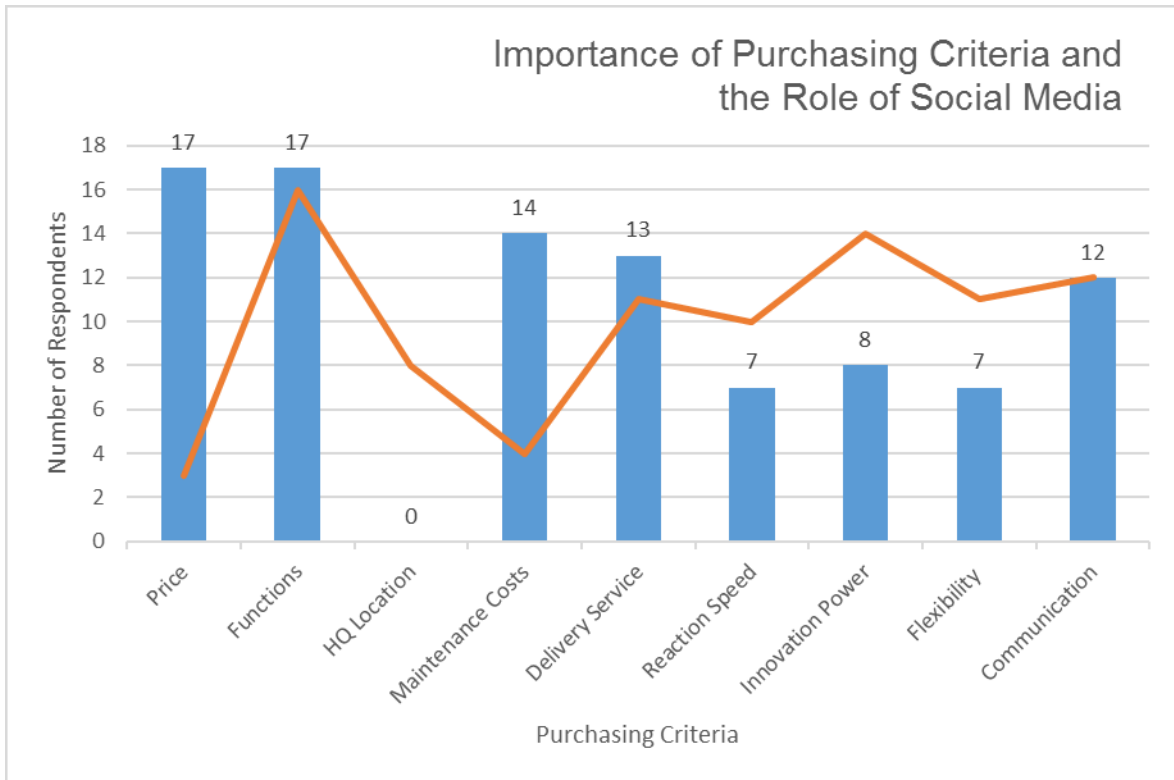


Figure 37: Importance of Purchasing Criteria and How Well These Criteria Could Be Supported by Social Media (own presentation)

The orange line on Figure 37 graph shows which of the purchasing criteria the respondents think could be supported by social media channels. The respondents hereby feel that especially monetary information in the semiconductor industry such as price and maintenance costs cannot be supported by social media on the one hand because information regarding prizes could diminish the bargaining power of the suppliers, on the other hand, because the respondents shared from their experience that generally, making prices available to the public is rather uncommon within the semiconductor industry. In the contrary, over 94% of the respondents think that the functions of the products could be supported well by social media platforms. Also, the criteria delivery service and communication which most of the respondents consider as important in the purchasing process in their company, could be well supported by social media according to most of the interview participants. According to the respondents, the criteria reaction speed,

innovation power and flexibility are considered as less important than the criteria mentioned before, but could be well supported by social media platforms. Only one participant claimed that he thinks none of the criteria can be supported by social media as those are considered as trade secret and the company does not want to be brought in any connection with its suppliers. Therefore, all these criteria are being discussed by personal contact.

The main reasons the participants who have stated not to use social media for the search of potential suppliers were that they get information directly from the supplier's website, they search the supplier solely on Google in order to find customer reviews, they mistrust the information provided on social media, they contact the potential suppliers directly in order to obtain more information or they currently do not find useful information for the research of suppliers. The distribution of arguments for not using social media is illustrated in Figure 38:

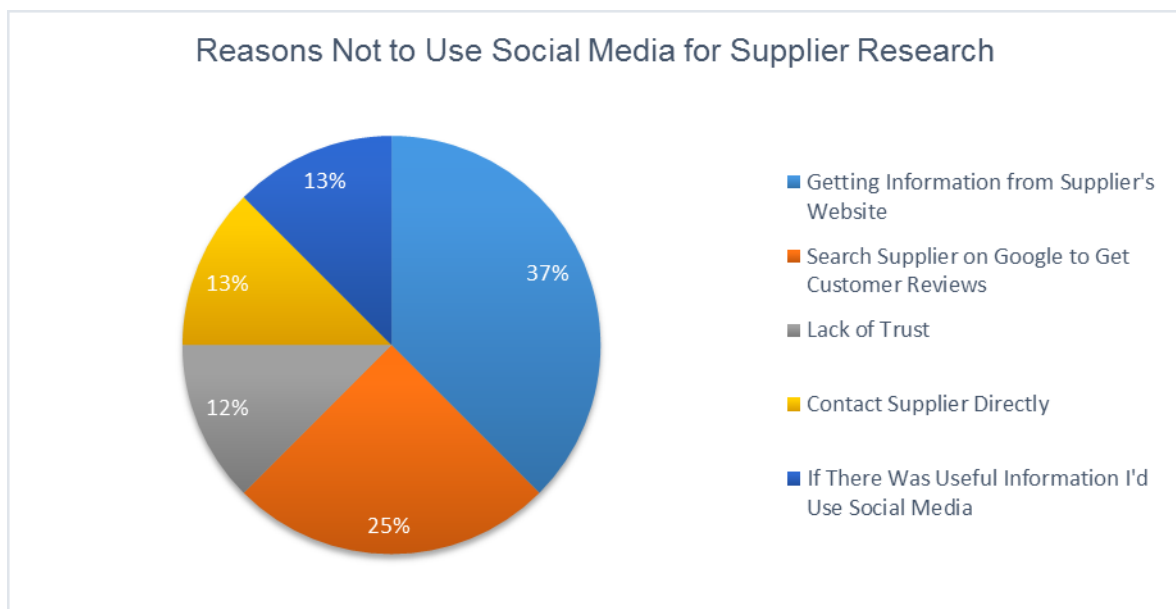


Figure 38: Reasons for Interviewees Not to Use Social Media for Supplier Research (own presentation)

In order to get in touch with the supplier, only one interview participant claimed to use social media. 42% answered that e-mail is their preferred medium to establish contact with the supplier, 34% would make a phone call and 8% would use the contact form on the supplier's website.

8.3 Interpretation of the Results of the Primary Research

In this chapter, the most essential findings from the conducted interviews are being recapped and interpreted as a basis for the resulting social media concept.

8.3.1 Social Media Platforms

The test results suggest that the two best-suited social media platforms in the semiconductor industry are LinkedIn and YouTube in order to reach the target group of DR YIELD. LinkedIn and YouTube are not only the most frequently used platforms, but are also used most extensively for the search for potential suppliers. While Google+ and Twitter were named as well amongst the most used social media platforms for supplier research, especially Google+ is popular used in comparison to the generally most used social media platforms. Facebook on the other hand is hardly used for supplier research, but ranks as third most used social media platform in general. Other social media platforms such as Pinterest, Snapchat, Instagram and others are rather preferred for private purposes and do not show any relevance regarding supplier research and therefore lead generation on social media in the semiconductor industry.

8.3.2 Behavior of DR YIELD's Target Group

The target group of DR YIELD is on average over 35 years old and spends on average 15-60 minutes per day on social media and regards one corporate post per week as accurate. Especially in the departments of engineering and procurement, most of the people can be classified as spectators and joiners in terms of the social technographic profile. Most people that have access to social media in their corporate network also actively use it during their working time even though only 60% of the people regard it as common to use it at their company. 71% of the target group also uses social media in order to collect further information about potential suppliers which implies that there is potential for suppliers to generate leads over social media if they provide useful information that the target group expects. Furthermore, about 2 thirds of the target group prefer using mobile devices to access social media platforms which means that posting should be adjusted to mobile devices.

8.3.3 Content and Frequency of Posting

The content that the target group of DR YIELD expects to find on social media is primary informational content such as customer feedback, information about the products and its functions, the delivery service and the company as well as explanatory videos. Other material that the target group regards as appealing is information about the company size and financial strength, news about the company and the particular strengths of the company compared to its competitors.

In order to follow the corporate page, the target group of DR YIELD demands content that is related to their profession and provides useful and valuable information. The corporate page should then be regularly maintained, but should not exceed a weekly frequency of one posting.

9 Social Media Concept for the US Market

Based on the literature, the findings from the secondary and primary market research, the following social media concept has been developed for DR YIELD to design their social media activities more effectively.

9.1 Initial Situation

9.1.1 Internal Analysis of DR YIELD software & solutions GmbH

DR YIELD has established its reputation within the field of yield management software in the semiconductor industry. Currently, DR YIELD is about to increase its market presence in the US market. Besides efforts in all of the other currently used online marketing tools such as SEO, SEA and e-mail marketing, DR YIELD is not yet exploiting the full potential of its social media due to a lack of know-how and experience in the field of social media communication. Furthermore, there is currently a lack of personal resources and a daily focus on sales activities.

At the moment, DR YIELD has social media profiles on LinkedIn, Twitter, Facebook and Google+. The most frequently updated profile of DR YIELD is currently Facebook where mostly blog posts and links of the company's website as well as photos of the team, company celebrations and events are being shared. Even though the most activity on social media of DR YIELD happens on Facebook, there is no regularity recognizable. On LinkedIn, currently only some blogs posts on the website are shared. The frequency therefore is about one post every two months. Of a total of eleven employees, only six employees have a profile on LinkedIn. Also on Twitter, there is no regularity of postings recognizable, but on average, the company tweets about 2-3 times per month since its registration on Twitter at the end of 2015. DR YIELD as well has a profile on Google+ which is not actively maintained at all; except two shared blog posts that link back to the website, there is no content provided.

One strength of DR YIELD is the long-term experience of some of the employees in the field of semiconductor manufacturing. This experience can be of great help when it comes to developing informational and valuable content that is then being shared on the various social media platforms. The other asset that DR YIELD has is the fast and flexible internal communication which allows fast responses even to

very complex, technical questions as the marketing specialist who is responsible for all social media activities has a direct line to the developers or the CEO himself. The basis of social media communication should therefore build up on these strengths in order to be effective.

9.1.2 External Analysis

In the following, the environment of DR YIELD will be analyzed using the model of Porter's 5 Forces in order to understand the industry and the nature of relations between the various participants in the market and to identify the performance and influence factors of this sector. This allows DR YIELD to evaluate how changes within an industry can affect its profitability (cf. Michaux/Cadiat/Probert 2015, p. 5). As DR YIELD is as software supplier not pendant on suppliers, the force of suppliers will be omitted.

Bargaining Power of Buyers

The US market generally represents an attractive market for suppliers to the semiconductor industry: The US government supports the US semiconductor industry and makes efforts in form of international agreements and national initiatives to actively push the market of semiconductors. One problem that semiconductor companies currently face is that despite the increasing capacities of microchips, the prices continuously decrease as described in more detail in chapter 7.1.2. Even though the revenue of semiconductors in the US shows a steady growth, the semiconductor-related spending has therefore become smaller. Moreover, the semiconductor market in the US is driven by a few big semiconductor manufacturers which increases the bargaining power of the buyers. Still, due to the decreasing prices of semiconductors, the companies need to sell in higher quantities which means they need to expand their manufacturing capabilities and make their processes more efficient. In order to get along these production masses, a more efficient data analysis tool will be needed where semiconductor manufacturers are dependent on suppliers of yield management software such as DR YIELD that have a massive developmental advantage.

As social media facilitates the research of potential suppliers and its usage is widely spread among the US market in general as well as among DR YIELD's

target group, it will be easier for buyers to directly set the competitors in the field of yield management software in comparison which further increases their bargaining power. Nevertheless, social media represents an additional communication channel which can facilitate the direct communication between the supplier and (potential) customers.

Competition

As the US semiconductor market is the home of some of the biggest semiconductor manufacturing companies in the world and holds about 50% of worldwide semiconductor market share, the market is highly competitive also in the field of yield management software.

With the highest penetration worldwide and also a high importance among the target group of DR YIELD, the usage of social media is becoming increasingly important also in the semiconductor industry. So far though, only one of DR YIELD's competitors has established a strong presence on social media. Therefore, social media offers a good opportunity to differentiate oneself from the competition in terms of communication with the customers. Furthermore, due to the increasing relevance of social media in the semiconductor industry, a poor social media appearance could even hurt the corporate image of suppliers.

Substitute Products and New Market Entrants

As the US semiconductor industry is highly attractive for suppliers, there will always be a threat of new market entrants or substitute products. Especially for new market entrants though, there is a high barrier due to high capital investments, required experience in semiconductor manufacturing beside countless hours of setup to develop a suchlike yield management software. Another barrier are the patents of the strongly confidential source codes of the software that make a market entrance difficult. It would therefore be more likely that an existing semiconductor IT supplier develops a new yield management software as expansion of existing source codes of similar functions which would mean a drift off the original core competencies of IT suppliers though and is hence also rather unlikely.

Still, all the advantages that social media has to offer, could also be of use for new potential entrants. As social media is widely spread on the US market and provides a lot of information about the market, social media can be used by new entrants to analyze the market quickly and to make new relevant contacts via social media. Thus, with an effective social media strategy, a new market entrant can even challenge the established suppliers by using social media as strong tool with a minimum of investment needed.

9.2 Target Group

DR YIELD's yield management software is designed to complement usually in-house developed yield analysis solution and targets therefore semiconductor foundries as well as fabless semiconductor companies. Regardless of the company, DR YIELD is targeting especially the users, buyers and deciders in the buying center. As thus, several people are involved in the decision-making process, it is important to empathize with the different roles of the buying center regarding their expectation in terms of demanded information, content and channels. The segmentation based on the observable behavior is especially suited for the differentiation of the target group for social media communication, as it relates to the usage of social media platforms, communication behavior and the habits regarding behavior and price.

From the theoretical section as well as the conducted research of the present paper, following characteristics of DR YIELD's target group could be identified:

- Service bundles are being valued higher than the sole product
- Buying decisions are taken multipersonally by at least five to six people
- Decisions are driven by rationality with a high level of formalization and complexity
- The drivers for a purchase are the reduction of insecurities, the determination of savings potential and the creation of competitive advantage
- Many purchases are perceived as high risk as mostly they include high investment amounts and could hinder the complex and fragile manufacturing processes
- There is a general openness towards new ideas and to try something new

- Quick results are considered as desirable
- The target group tends to question information in terms of its accuracy
- As the products of DR YIELD' target group mostly have a short life cycle, there is an emphasis on investing in research and development
- Special emphasis in purchasing processes is placed on price, functions and maintenance costs, but also communication with the supplier plays an important role

In terms of social media communication, following aspects of the target group are particularly relevant:

- The target group uses rather mobile devices to access social media platforms than computers
- Online channels are preferably used to get a market overview
- More than two thirds of the target group use social media for supplier research
- The communication tends to be informal, direct and participative
- The American culture is driven by competition, achievement and success which should be integrated in the communication strategy
- The majority of the target group can be classified as joiners and spectators in terms of the social technographic profile who have a social media profile and visit social networking pages and enjoy reading customer reviews, blogs, forum entries and twitter messages, watch videos and listen to podcasts
- The particularly expected content on potential supplier's social media platforms are customer reviews, information about the product and service, general information and explanatory video material.
- The most visited social media platforms are LinkedIn, YouTube, Facebook and Twitter
- Preferred Platforms in a business-related context are LinkedIn, YouTube and Twitter

9.3 Objectives (SMART)

The implementation of the social media concept will contribute to the achievement of the following objectives:

- Generate five marketing qualified leads over social media channels by the end of 2018.
- Increase the social media referrals to the website from 4,6% in the year 2016 to 15% by the end of 2018.

Moreover, the achievement of these aims as stated above, will support the achievement of DR YIELD's overall objective to acquire five additional YieldWatchDog licensees by the end of 2018.

9.4 Strategy

9.4.1 Choice of Approach

The social media strategy determines how the company will behave towards their target group in the long term and hence defines an operational framework for social media communication. Therefore, it has to be determined whether the proactive, the reactive or the passive approach is being followed.

As the passive approach just targets the observing and controlling of online communication and the reactive approach represents a simple wait-and-see attitude to avoid a negative buzz, the proactive approach is the most promising approach for success with social media communication as efforts are done voluntarily and hence, it is suitable to establish relationships and subsequently, the distribution of products.

In consideration of the primary goals, namely to generate marketing qualified leads and to increase the social media referrals to DR YIELD's website, the proactive approach is therefore recommended. This means, that the company will actively push out valuable information to YIELD's target group in conformity with the general communication strategy of DR YIELD. This could be for example product or service information, customer statements or explanatory videos. Furthermore, the frequency of posting should neither exceed nor deceed the expectations of the target group which is – as the results of the primary market research have shown – ideally one posting per week. Posting too much and therefore deluging the newsfeeds of the target group could make the people unfollow the page again as they perceive too frequent postings as disturbing. In order to achieve this regularity of one posting per week, at least two employees (one person as proxy in case the other main responsible person is hindered) should be put in charge of this task to assure the realization of the plan.

Moreover, the proactive approach implies that also direct communication with the people reacting or commenting on posts or asking questions will be established.

9.4.2 Platforms

As further defined in chapter 5.4, the top three effective B2B social media platforms are LinkedIn, Twitter and YouTube. This result has been verified in the conducted interviews of the present thesis where the most named social media platforms for supplier research were LinkedIn, YouTube, Twitter and equal with Twitter, Google+. As shown in more detail in chapter 7.3, the platform with the biggest market share in the US is Facebook (42%) far ahead of YouTube (24,9%), Twitter (5,2%) and LinkedIn (1,2%). The most used social media platforms for managing work are besides Pinterest, Facebook, LinkedIn and Twitter; for making professional connections, the top three platforms are LinkedIn, Facebook and Twitter. Among DR YIELD's competitors, the most actively maintained platforms are Facebook, LinkedIn and Twitter. So far, YouTube is only used by the competitor Optimal Plus. Due to the higher activity on the respective platforms, also the number followers and hence, the range of network is the biggest on Facebook, LinkedIn, and Twitter.

Taking all of these aspects into consideration, it is recommended to focus on the social media platforms LinkedIn, YouTube and Twitter. Even though Google+ was named as one of the most used platforms for supplier research, the general usage of it by now is quite low, especially in comparison with Facebook which is the third most generally used platform among DR YIELD's target group. Therefore, it is recommended to consider also Facebook as fourth platform within the social media communication strategy, as its general range is far ahead of all other social media platforms and also plays an important role among DR YIELD's potential customers. Besides the wide reach of these platforms, they are furthermore well suited to the corporate image of DR YIELD as well as DR YIELD's communication strategy. Moreover, all of these platforms offer apps for mobile devices which is particularly important considering the trend towards the increasing social media usage via mobile devices.

Additionally, for increasing the number of referrals to the website, there should be a strong linkage between the social media platforms and DR YIELD's website in order to lead visitors actively back to the online "home base" of the company where visitors can furthermore be tracked back to their domain name.

9.4.3 *Content*

In regards to the decision which messages will be transported via social media channels, several possible approaches are available for selection. Three of them are the infotainment, the entertainment and the educational approach. Especially the educational approach in terms of providing useful and valuable information to the company's target group allowing to transfer knowledge is the most appreciated approach of DR YIELD's target group in a business-related environment.

Especially valuable for customers would be information such as customer feedback, reviews of the software and the business partnership with DR YIELD from customers, product information for which especially YouTube would be particularly suitable in form of posting explanatory videos, general information about the company, the team and success stories. As potential customers target long-term business partnerships and therefore would like to know whether the supplier is financially stable, also information about the financial strength of the company is important for them. This could be done by providing information such as updates about new gained customers, business travels, reaching milestones, growth such as the recruitment of new employees, that implies the company's financial wealth. For many of DR YIELD's target group it is furthermore important to see who the people behind the company are. For this purpose, pictures of the team and company celebrations could be shared. Moreover, the employees should be motivated to create profiles on LinkedIn, so potential customers can easily see what competencies, background and experience the employees have. In addition, it is important that no matter what kind of content is being published, a consistent and authentic message in alignment with the corporate identity and therefore the overall communication strategy, should be distributed.

In order to increase the referrals to the website, also some of the posts with high engagement in form of likes, comments or shares could be sponsored targeting the specific group of people that are particularly interested in that kind of content. Especially on Twitter it makes furthermore sense to add relevant hashtags in the post in order to get also the attention of people who are searching for the particular topic.

9.4.4 Frequency and Timing on Social Media

As stated above, the frequency of posting should meet the expectations of the target group which is according to the conducted interviews ideally one posting per week.

Besides the frequency of posting on social media, it is also important at which times the content is being pushed out to the target group. The ideal time to post is dependent on several factors such as the respective platform, the target market and the targeted audience. Furthermore, especially in the US it has to be considered that the different states are in different time zones. As further described in chapter 7.3, 80% of the U.S. population is located in the Central and Eastern time zones, which is why these time zones should be used as reference point. Figure 39 is based on the results of chapter 4.3 and was developed by the author to represent a figurative graphic roadmap when to post on social media channels.

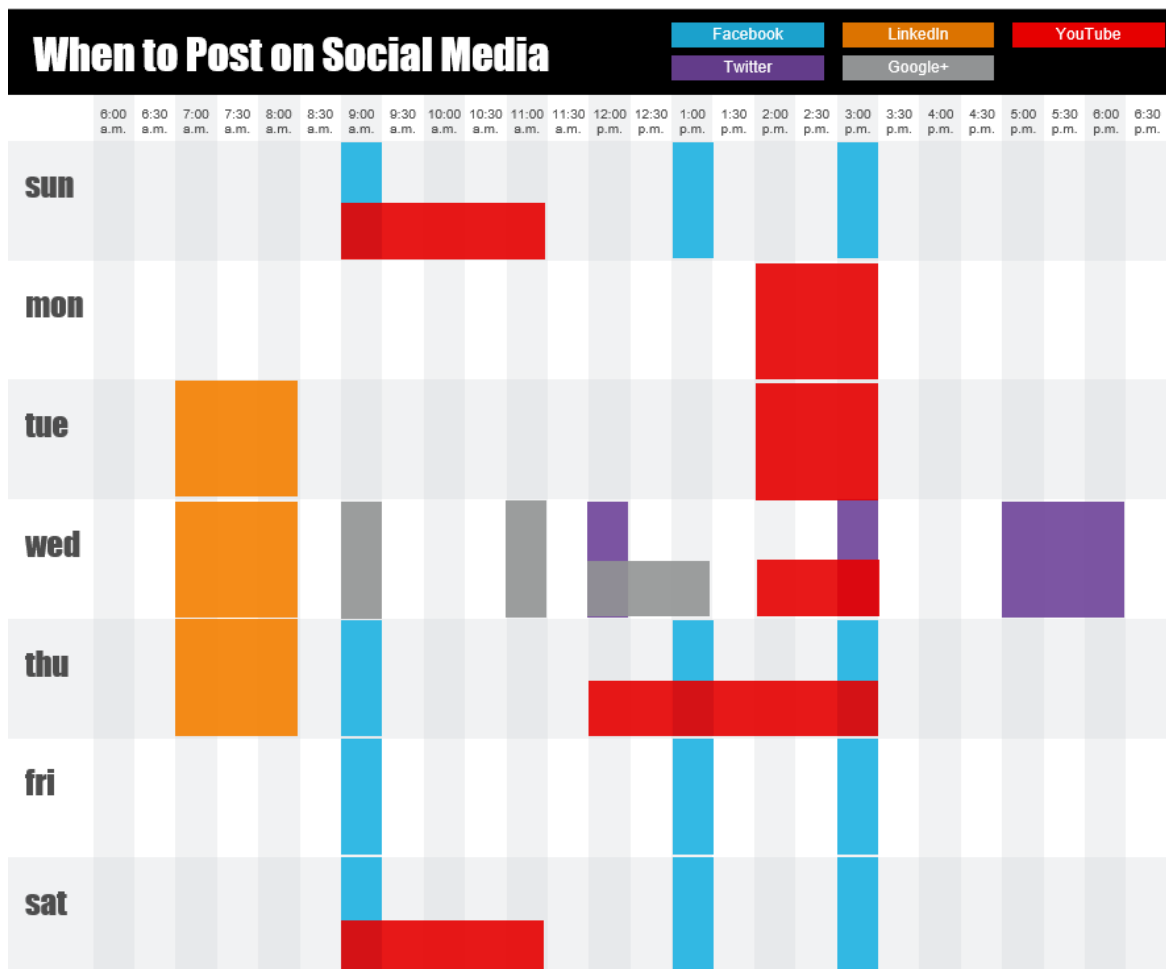


Figure 39: Roadmap of the Best Times to Post on Facebook, LinkedIn, Twitter, YouTube and Google+ (based on Ellering 2016)

9.5 Action Plan

9.5.1 General Actions

Before actively starting social media communication, preparations need to be undertaken. First of all, it needs to be determined who the responsible persons for social media are. Ideally, there should be at least two people who are in charge of the social media communication to assure the regular posting on the different platforms even though one person is not available. These persons should have a broad know-how regarding the different social media and social media monitoring tools, experience in the fields of B2B marketing and international communication as well as good writing skills. In the case of DR YIELD, the responsible persons are therefore likely to be the marketing specialist supported by the management assistant.

When the responsible persons have been determined, the different social media platforms should be optimized regarding their appearance and should include all relevant information that can be provided on the profile. Meanwhile, an editorial calendar should be developed to get a clear overview over the planned contents, to coordinate among these, to plan further postings in advance and hence, to avoid bottlenecks in terms of content later on. Furthermore, the editorial calendar should define who of the company is responsible for providing the content and a due date for submission.

When everything has been setup, following activities have to be executed on a regular basis:

- **Share content:** Information that is interesting and of valuable for DR YIELD's target group should be posted about one time per month. Possible content for the platforms LinkedIn, Twitter and Facebook are customer reviews, information about the product, service and company, the strengths of the product, news about the company and postings that imply how the business is doing as further described in chapter 9.4.3. On YouTube, videos should be published on a regular basis that describe the product and its functions, the company and who the people behind the company are.
- **Answer questions, react on comments:** Even though DR YIELD's target group prefers to contact suppliers directly via e-mail or phone, it has to be

taken into account that questions could be asked on the social media channels or people could comment on DR YIELD's postings. Especially on social media as extremely fast-paced medium, it is important to react as quickly as possible. The positive side effect is on the one hand that by introducing this measure, the company offers (potential) customers another medium to communicate and therefore also lowers the barrier of contacting the company. On the other hand, reacting promptly can also increase customer satisfaction and an improvement of the corporate image.

- **Participate in discussions:** In order to increase the recognition on social media channels and thereby attracting more people to one's social media page, it is recommended that DR YIELD actively participates in discussions in professional groups in the role as specialist in semiconductor test software.
- **Observe the market, trends and competitors:** It is recommended that besides the market in general, also the trends as well as the competitor's activities are being observed to keep track of actual developments.
- **Monitor, measure results and if necessary adapt the strategy:** In order to continuously improve one's presence on social media, it is crucial to consistently monitor one's activities and investigate which kind of content is successful and generates engagement among the target group and which does not. If some of the measures on social media do not work as well as expected, the strategy and subsequently the editorial calendar should be modified to that effect.
- **Plan further social media postings:** In the editorial calendar as mentioned above, the content for the next weeks as well as the responsible person that provides the content should be determined. Also, it should be checked if there is already information such as press releases, product information or upcoming events available in the company that could be used for new social media postings.

In the following, the necessary actions on each channel will be described in more detail and an overview over the expected costs of the respective actions will be provided. For this purpose, an hourly wage of 25€ has been calculated on the basis of internal personnel's salary at DR YIELD under the collective agreement

including all accruing ancillary wage costs for the employer. The abbreviations in the field “Personnel Resources” define which person is responsible for a specific task. MS stands for marketing specialist, MA means the management assistant and TP means a person from the technical department.

Measure	Re-current?	Frequency	Personnel Resources	Time (Total)	Total Costs	Total Costs per Month
Develop editorial calendar	No	Aug.17	2 persons (SM, GA)	16h	400€	-
Observe market, trends and competitors	Yes	2x/week	2 persons (SM, GA)	3h/week	75€/week	300,00 €
Answer questions, react on comments	Yes	5x/week	1 person (SM)	1h/week	25€/week	100,00 €
Plan further social media postings	Yes	1x/week	3 persons (SM, GA, TD)	3h/week	75€/week	300,00 €
Monitor social media activities	Yes	1x/month	1 person (SM)	2h/week	50€/week	200,00 €
Measure results	Yes	1x/month	1 person (SM)	3h/month	75€/month	75,00 €
[if necessary] Adapt the strategy	Yes	1x/month	2 persons (SM, TD)	3h/month	75€/month	75,00 €

Table 5: Action Plan for General Actions (own presentation)

9.5.2 *LinkedIn*

DR YIELD already has a company profile on LinkedIn that provides some basic information about the company and its product. In order to make the profile more outstanding in terms of appearance, a background picture for the profile should be added. Even though a link to the company’s website is provided, links to other social networks such as YouTube or Twitter where more videos and short company updates could be found, should be added. Furthermore, the number of followers and therefore the size of the network on LinkedIn should be extended. This could be done by regularly posting interesting information about the semiconductor industry as well as the active participation in discussions in professional groups where DR YIELD can position itself as expert of yield software. Additionally, when initiating the regular social media communication, some payed advertisements could be placed on LinkedIn to gain more followers and hence to reach an enlarged audience. The estimated costs for placing

advertisements on LinkedIn have been calculated on the basis of a square-shaped text based advertisement considering a lead-to-conversion rate of 6% and a social media referral conversion rate of 13,74%. This means that at least 234 social media referrals to the website are necessary in order to create one lead. Based on this information and the targeting to people working in the US semiconductor industry, LinkedIn calculates an expected Cost per Click of 6,91€. Hence, in order to generate 234 Clicks on the Website, it is recommended to plan a yearly advertising budget for LinkedIn of 1619,28€ which results in an average monthly budget of commercially rounded 135€.

Measure	Re-current?	Frequency	Personnel Resources	Time	Total Costs	Total Costs per Month
Optimize the LinkedIn profile (background picture and links to other social media profiles)	No	Aug.17	1 person (SM)	1h	25€	-
Share content	Yes	1x/week	1 person (SM)	3h/week	75€/week	300,00 €
Participate in discussions	Yes	1x/week	2 persons (SM, TD)	2h/week	50€/week	200,00 €
Place advertisements (duration each: 10 business days)	Yes	4x/year	1 person (SM)	(1h x 4) /year	min. 135€/month + 8,33€ (=25*4:12)	143,33 €

Table 6: Action Plan for LinkedIn (own presentation)

9.5.3 YouTube

Especially YouTube could play an important part when sharing informational videos on the channel. So far, only three videos have been shared on DR YIELD's social media channel. The profile layout in the compliance with corporate design guidelines and some basic information is provided on the page. Still, further information should be provided at each video. Due to the importance and appreciation of explanatory videos, videos should be posted more regularly. Especially in consideration that so far only one of the DR YIELD's competitors has actively maintained its YouTube page, the active and professional usage of YouTube could attract potential customers and therefore differentiate DR YIELD from its other competitors. For this purpose, the activity on the channel should be increased by sharing new videos about DR YIELD's product, product applications

or the company. As the video content in terms of yield management software is quite complex and thus, additional costs can be saved, it is recommended to produce the videos internally. For example, one series on the channel could be about the functionality of the different modules of YieldWatchDog. Another video could explain, how YieldWatchDog collects and aggregates the customer's data and what value this means for the customer.

Measure	Re-current?	Frequency	Personnel Resources	Time	Total Costs	Total Costs per Month
Add information to existing YouTube videos	No	Aug.17	1 person (SM)	2h	50 €	-
Planning and creating new videos	Yes	Ø 6x/year	3 persons (SM, GA, TD) (Time resources per Video: MS 20h, MA 5h, TD 7h)	192h /year	4.800 €	400 €
Sharing the videos and writing accompanying text	Yes	Ø 6x/year	1 person (SM)	3h/year	75 €	6,25 €

Table 7: Action Plan for YouTube (own presentation)

9.5.4 Twitter

DR YIELD also has established a Twitter profile in December 2015. Since then, 46 tweets have been published. Still, the number of followers and therefore the network that DR YIELD reaches with its postings is quite low. Firstly, the Twitter profile should be updated to the newest corporate design. In order to increase the number of followers, it is recommended to tweet at least three times a week. Shared content could be self-created, but also shared from other reliable sources. Each tweet should contain relevant hashtags in order to draw also other non-following Twitter users' attention to DR YIELD's Twitter page.

Measure	Recurrent?	Frequency	Personnel Resources	Time	Total Costs	Total Costs per Month
Optimize Twitter design	No	Aug.17	1 person (SM)	1h	25 €	-
Post and share content	Yes	2x/week	2 persons (SM, TD)	3h/week	75 €	300 €

Table 8: Action Plan for Twitter (own presentation)

9.5.5 Facebook

DR YIELD has already established a Facebook profile. Even though the profile has been adapted to DR YIELD's corporate design, the page is maintained only on an occasional basis. Furthermore, some adaptations are recommended in order to use the full potential that Facebook offers for corporate pages. Even though the 'About' page includes already some of the core information such as the address, founding date and a telephone number, already on this page, more information about the company and the product could be provided, so visitors do not have to scroll through the timeline in order to obtain more information. Furthermore, at least one posting per week should be published. The posting should contain similar information such as LinkedIn, but especially on Facebook a view behind the company is appropriate and gives the visitor an idea of who the people behind the company are.

Measure	Re-current?	Frequency	Personnel Resources	Time	Total Costs	Total Costs per Month
Optimize Facebook profile	No	Aug.17	1 person (SM)	1h	25 €	-
Post and share content	Yes	1x/week	2 persons (SM, TD)	2h/week	50 €	200 €

Table 9: Action Plan for Facebook (own presentation)

9.6 Budgeting

Based on the action plan, the costs were divided into one-time and recurring costs and calculated separately. These costs are only related to the planned measures; other measures such as recruiting new employees via social media is not included. After the budget has been determined, a target-group-oriented distribution of the resources to the respective instruments to allocate the budget ranked basing on the provision of the greatest value for the user group which has been derived from the number of mentions of DR YIELD's target group. As further described in chapter 5.6, also the costs for each platform need to be taken into consideration. For this purpose, a weighted scoring model has been implemented using the factors relevance and costs while the factor relevance is grounded on the rating of the most used social media platforms of DR YIELD's target group. The weighting has been determined based on an internal assessment at DR YIELD considering the recommendation of theory to prioritize the greatest provided value for the user group. At this point, however, it shall be clearly noted that an adequate weighting needs to be carried out on the basis of preceding expert surveys in order to achieve the most prudent results possible. All further calculations can be found in detail below.

- Relevance (70%)
 - 3 points: 5 or more mentions
 - 2 points: 3-4 mentions
 - 1 point: 0-2 mentions
- Costs (30%)
 - 4 points: 0-2000€/year
 - 3 points: >2000-4000€/year
 - 2 points: >4000-6000€/year
 - 1 point: >6000€/year

Measure	Time (Total)	Total Costs	Total Costs per Month
General Actions			
Observe market, trends and competitors	3h/week	75€/week	300,00 €
Answer questions, react on comments	1h/week	25€/week	100,00 €
Plan further social media postings	3h/week	75€/week	300,00 €
Monitor social media activities	2h/week	50€/week	200,00 €
Measure results	3h/month	75€/month	75,00 €
[if necessary] Adapt the strategy	3h/month	75€/month	75,00 €
LinkedIn			
Share content on LinkedIn	3h/week	75€/week	300,00 €
Participate in discussions	2h/week	50€/week	200,00 €
Place advertisements (duration each: 10 business days; min. daily budget of \$10)	(1h x 4) /year (=25*4:12)	min. 135€/month + 8,33€ = 410€	143,33 €
YouTube			
Planning and creating new videos	192h/year	4.800€/year	400 €
Sharing the videos and writing accompanying texts	3h/year	75€/year	6,25 €
Twitter			
Post and share content on Twitter	3h/week	75€/week	300 €
Facebook			
Post and share content on Facebook	2h/week	50€/week	200 €
Total Recurring Costs per Month			2.599,58 €
Total Recurring Costs per Year			31.194,96€

Table 10: Total Recurring Costs for Social Media per Year (own presentation)

Measure	Time (Total)	Total Costs
General Actions		
Develop editorial calendar	16h	400€
LinkedIn		
Optimize the LinkedIn profile (background picture and links to other social networking profiles)	1h	25€
YouTube		
Add information to existing videos	2h	50€
Twitter		
Optimize Twitter design	1h	25€
Facebook		
Optimize Facebook profile	1h	25€
Total Uniquely Occurring Costs		525€

Table 11:Total Uniquely Occurring Costs for Social Media (own presentation)

As shown in Table 10, the total recurring costs for social media amount to commercially rounded 31.195€ per year considering besides general actions such as observing the market, answering requests and controlling the measures, all activities on LinkedIn, YouTube, Twitter and Facebook. The total uniquely occurring costs on the other hand are summarized in Table 11 and amount to 525€. Based on the monthly recurring costs, the following weighted scoring model shown in Table 12, has been developed:

Platform	Relevance	Weight Relevance	Costs	Weight Costs	Total	Ranking	Monthly Costs
LinkedIn	3	70%	1	30%	2,4	1	643,33 €
Twitter	2	70%	2	30%	2	2	406,25 €
YouTube	2	70%	1	30%	1,7	3	300 €
Facebook	1	70%	3	30%	1,6	4	200 €

Table 12: Weighted Scoring Model of the Platforms Regarding Relevance and Costs (own presentation)

Building on these calculations, following ranking of the social media platforms results based on the respective relevance and recurring costs:

Ranking	Platform	Monthly Costs
1	LinkedIn	643,33 €
2	Twitter	406,25 €
3	YouTube	300 €
4	Facebook	200 €

Table 13: Ranking of the Social Media Platforms (own presentation)

Of course, this ranking has to be interpreted with caution, as these monthly costs already include costs for advertising and take into account that some content provided for one platform can be shared with minor adaptations on another platform without having to be written from the very beginning.

9.7 Controlling

After the social media concept has been implemented, the social media activities need to be measured in order to figure out which of the social media efforts are successful and which are not in order to be able to set appropriate corrective actions. As the return on investment is often not measurable, key figures need to be determined beforehand depending on the respective target that shall be achieved with the help of these social media activities.

The aim of DR YIELD is to generate five marketing qualified leads over social media channels as well as to increase the social media referrals to the website from 4,6% in the year 2016 to 15% by the end of 2018. Key Performance Indicators that are therefore recommended are:

Recommended KPI	Calculation
Lead Conversion Ratio	$\frac{\text{Total Leads}}{\text{Total Visits}}$
Cost per Lead	$\frac{\text{Social Media Marketing Spending}}{\text{Total New Leads}}$
Website Referrals	$\frac{\text{\# of website referrals from social media}}{\text{\# of total website referrals}}$

Table 14: Recommended KPIs for DR YIELD (own presentation)

Other KPIs that are recommended to monitor are the audience engagement as well as the general engagement as these figures show which of the measures are effective among DR YIELD's target group and which are not and hence, if DR YIELD is on the right way. In case the results show that some of the measure are not effective, corrective actions need to be introduced accordingly.

Further possible KPIs and their respective computation can be found in chapter 4.4.

9.8 Graphic Summary of the Concept

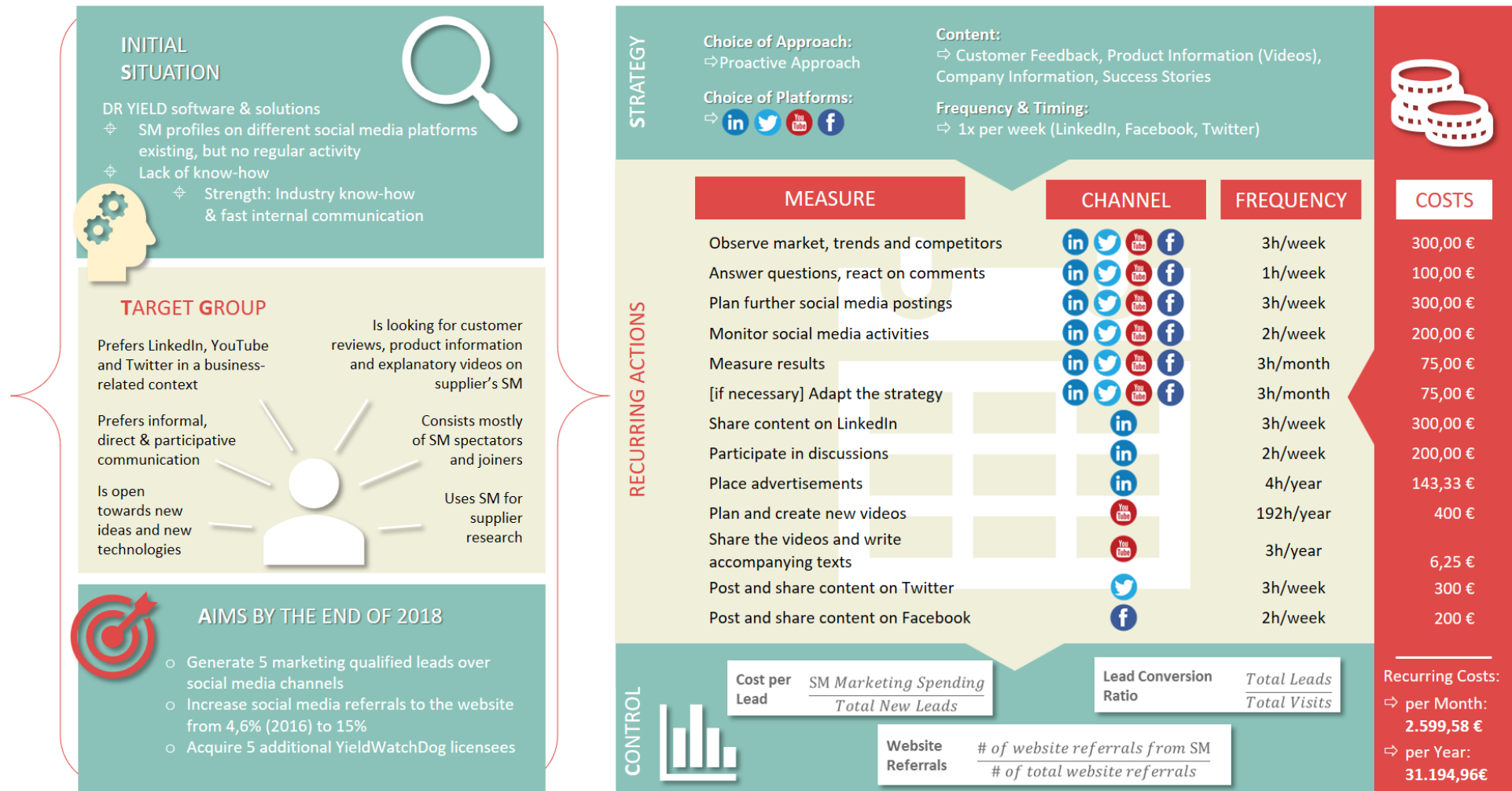


Figure 40: Graphic Summary of the Social Media Concept for DR YIELD for the US Semiconductor Industry (own presentation)

10 Recommended Actions

Before being able to start with the social media activities, the approval of budget from the management is necessary. When the budget has been approved, at least two people should be determined to be in charge of the social media activities to assure the regularity of posting also in case that one person is absent. The persons being chosen for this purpose should have know-how regarding social media platforms and their usage as well as experience in the field of B2B marketing and international communication.

Prior to implementing the present social media concept, it is recommended to develop a written social media guideline that determines some important basic rules and policies for the behavior on social media as well as the people who have corporate access to the respective platforms. As next step, all employees should be included by informing them about the social media guidelines, the planned activities and the desired outer appearance of the company on social media. Furthermore, the employees should be encouraged to participate by providing ideas for new postings and content.

As a next step, as further described in chapter 9.5, the social media platforms should be optimized regarding content and appearance before finally starting with the regular social media communication. It is further recommended to use the tools provided by the respective social media platforms as well as the KPIs that are further defined in chapter 9.7 to monitor the social media activities and if necessary to set corrective actions.

For a better overview, Figure 41 summarizes the recommended actions.

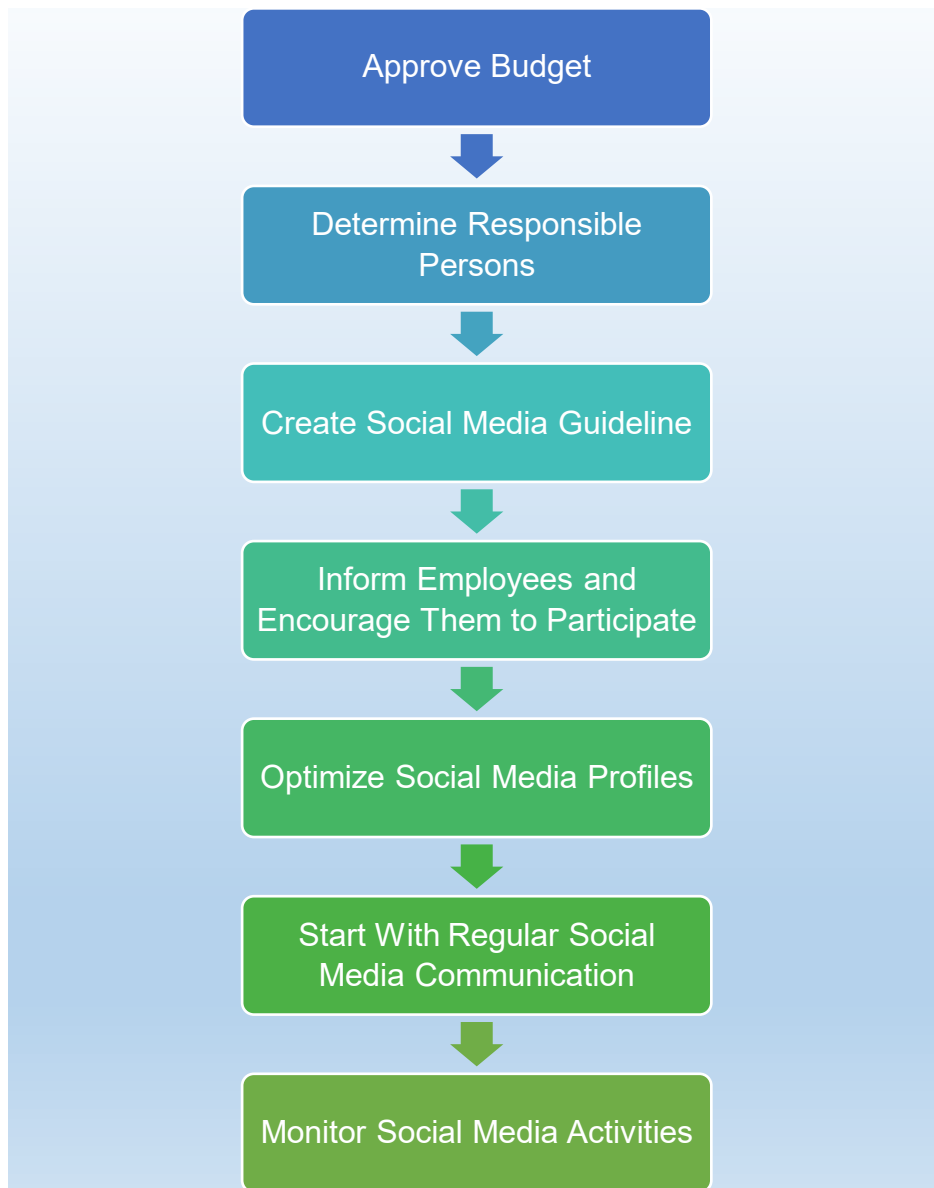


Figure 41: Graphic Representation of the Recommended Actions (own presentation)

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Appendix

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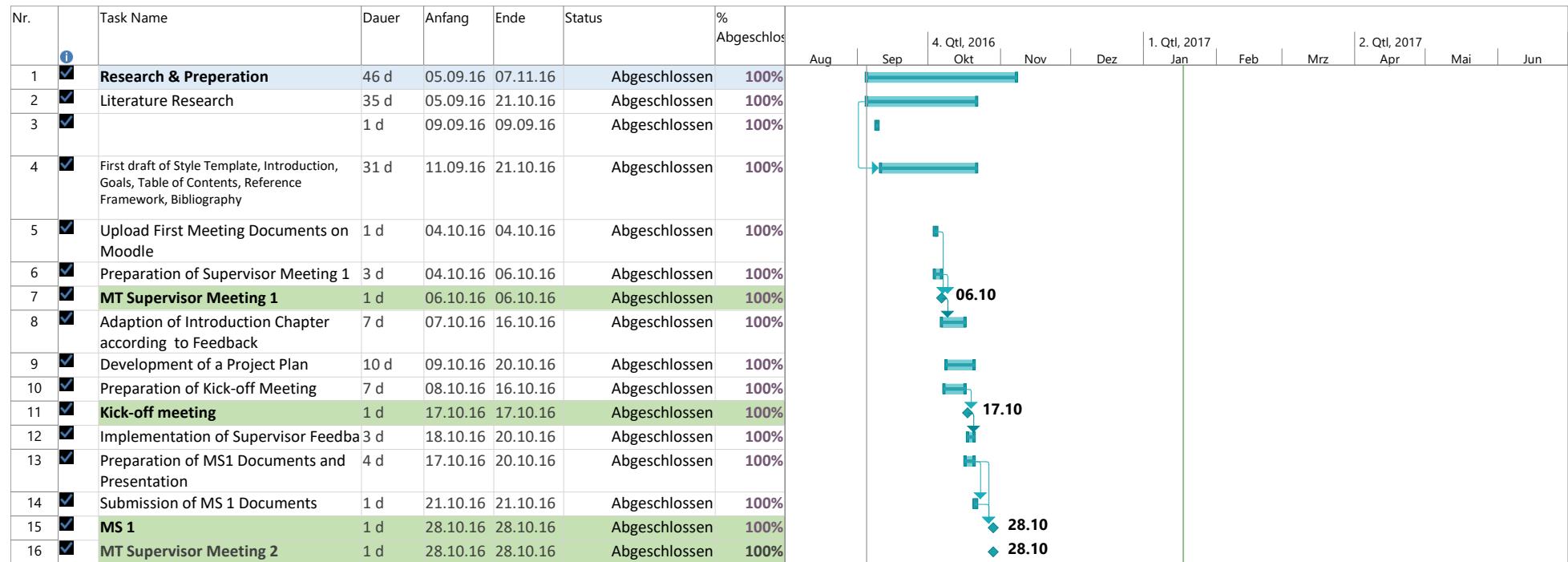
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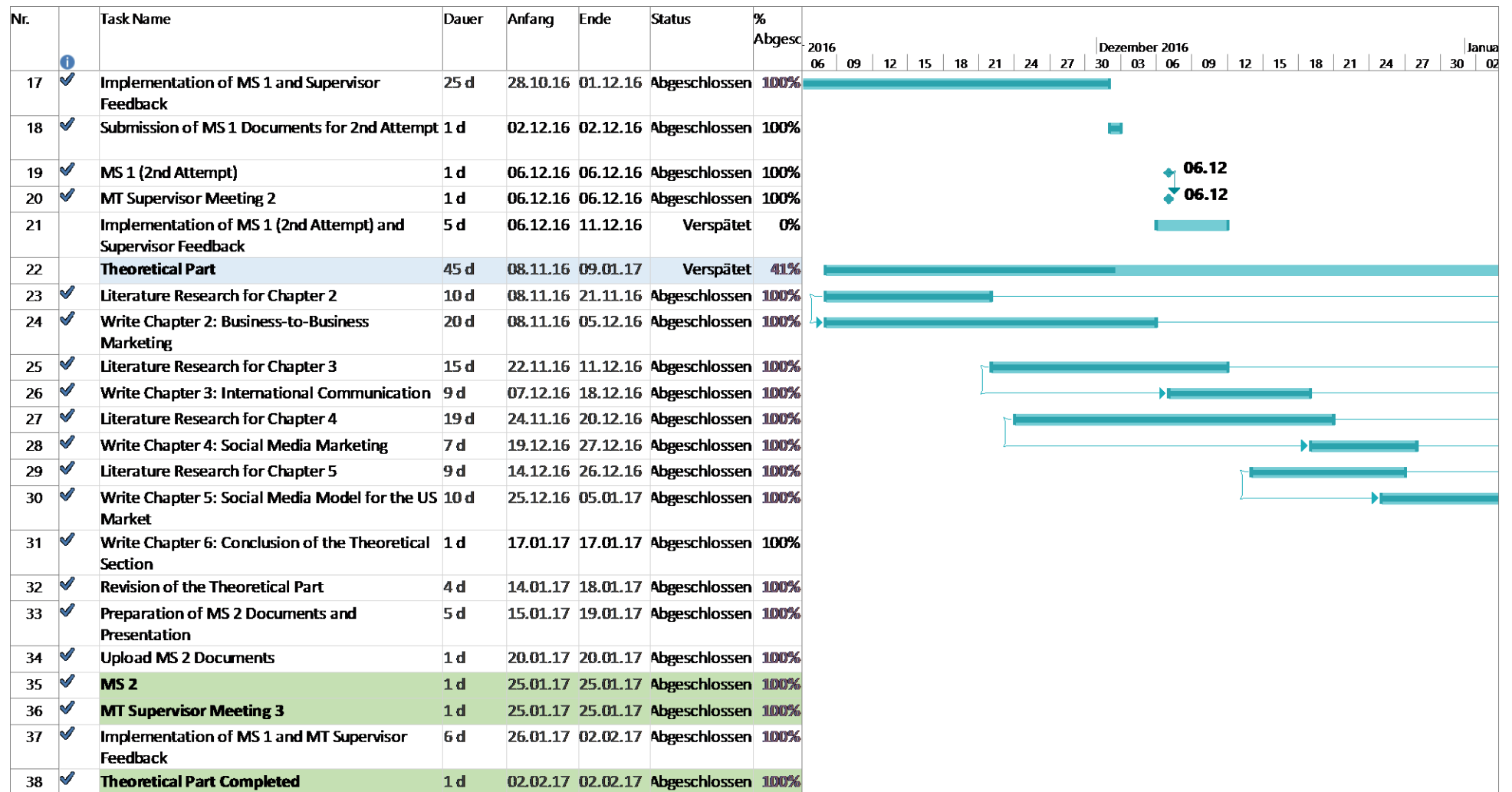
1 Project Schedule

Project Title MT: Development of a Social Media Concept in the Semiconductor Industry for the US Market

Project Supervisor	Stephan Wenger, BA, MA	MT Supervisor not available	CW 47-48, 51-52
Project Start	05.09.2016	Student prevented	CW 46, 23
Project End	03.07.2017		



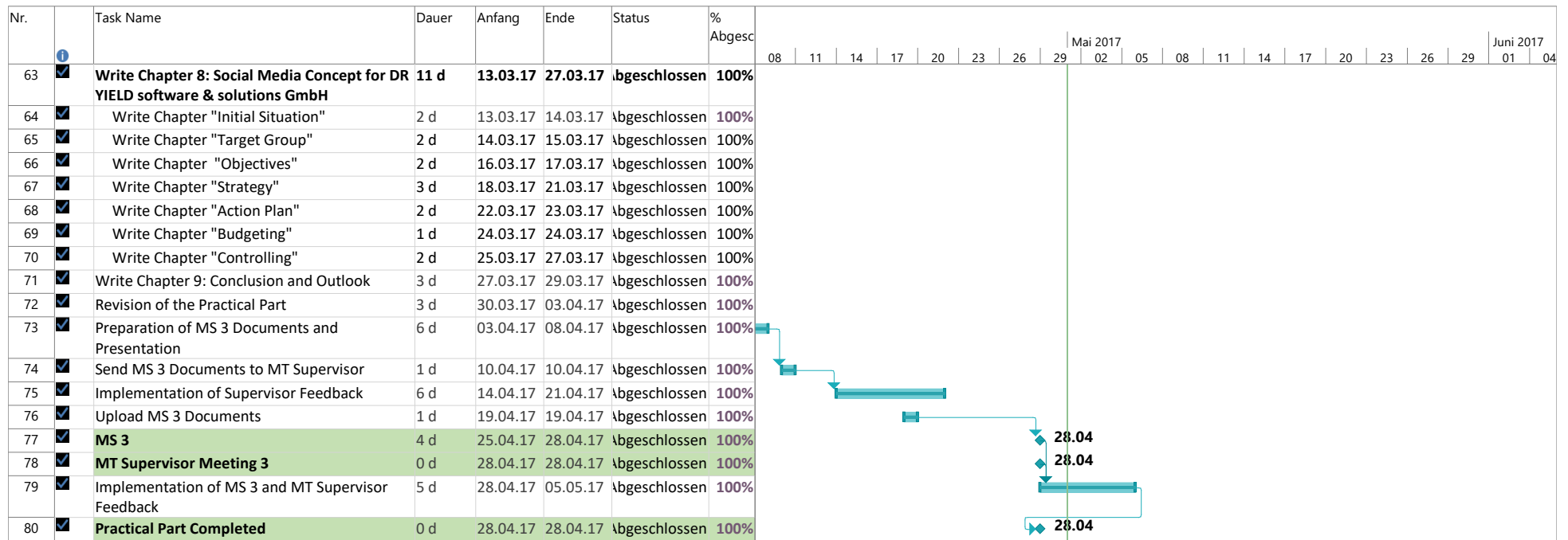
Appendix Figure 1: Project Plan Part 1/5



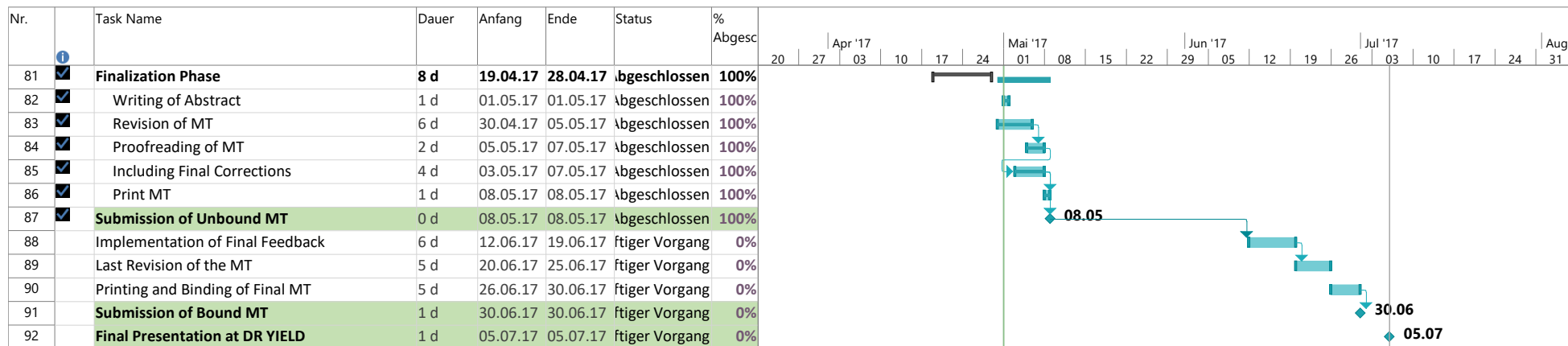
Appendix Figure 2: Project Plan Part 2/5



Appendix Figure 3: Project Plan Part 3/5



Appendix Figure 4: Project Plan Part 4/5



Appendix Figure 5: Project Plan Part 5/5

2 Interview of the Primary Market Research

1	Introduction		
Introduction of the topic.			
#	<input checked="" type="checkbox"/>	Task	Notes
1.1		Tell what the goals of the research are	
1.2		Ask for participant's approval to record the conversation	
1.3		Social Media Introduction: Explain what is understood as SM	
2	Opening Questions		
#		Question	Notes
2.1		Which age group are you in? 25-34 35-44 45-54 55-64	
2.2		What is your Job Title?	
2.3		Thinking of the last month: How much time did you spent on average on social media channels per day?	
2.4		Which of the following social media platforms have you used within the last month? Facebook Google+ Twitter LinkedIn YouTube SlideShare Flickr Pinterest Instagram Snapchat Tumblr Others	
2.5		Did you visit them more often via computer or mobile devices? Computer Mobile Devices	
2.6		Please name three reasons why you usually visit a social media platform.	

Appendix Table 1: Interview Part 1/4

2.7		What kind of information do you usually seek for on social media platforms?	
2.8		What would it take that you like/follow a corporate page?	
2.9		If you follow a corporate page, in which interval would you like them to post?	
2.10		Which sentence describes your social media behavior best? (Multiple selection possible) I have an own blog and like to create content I regularly post and tweet status updates I like writing product and service reviews, comment on blog posts and rate content I only have a social media profile and visit social networking pages I like to read customer reviews, blogs, forum entries and twitter messages, watch videos and listen to podcasts I do not have a social networking profile and do not read contributions on the internet	
3	Key Questions		
#		Question	Notes
3.1		What are usually the reasons why the acquisition of new software is being considered?	
3.2		Who of your company does usually trigger a software purchase?	
3.3		All in all, how many people are usually involved in a software purchasing process in your company?	
3.4		Which departments are usually involved in a software purchasing process in your company?	
3.5		From the first contact to the final purchase: How long do decision processes for the choice of a new software supplier usually take in your company?	

Appendix Table 2: Interview Part 2/4

3.6		When having decided that a new software will be acquired: How do you get an overview over the market of potential suppliers?	
3.7		Where do you usually get further information about potential suppliers from?	
3.8 & 3.9		<p>What are relevant criteria for purchasing decisions in your company? Please cross where applicable:</p> <ul style="list-style-type: none"> Price Functions of the Product Location of Supplier's HQ Maintenance Costs Delivery Service (Scope of Service, Delivery Reliability) Reaction Speed Innovation Power Flexibility of Supplier Communication with the Supplier 	<p>Of the previous criteria, please check the ones that you think could be supported by Social Media?</p> <ul style="list-style-type: none"> Price Functions of the Product Location of Supplier's HQ Maintenance Costs Delivery Service (Scope of Service, Delivery Reliability) Reaction Speed Innovation Power Flexibility of Supplier Communication with the Supplier
3.10		<p>Would further product information in form of explanatory videos help you in the decision-making process?</p> <p>Yes No</p>	
3.11		<p>Do you also use social media platforms to get further information about the potential suppliers?</p> <p>Yes No</p>	
3.11.1		⇒ If No: Why not?	
3.11.2.1		⇒ If Yes: Which social media platforms do you use for this purpose?	
3.11.2.2		⇒ If Yes: When visiting one of these social media platforms – what kind of content do you expect to find there?	

Appendix Table 3: Interview Part 3/4

3.11.2.3		⇒ Do you also use social media to get a first impression of who the people behind the potential suppliers are? Yes No	
3.12		In your company, do you have access to social media platforms? (Are any pages blocked in your corporate network?) Yes No	
3.12.1.1		⇒ If No: Which platforms are banned?	
3.12.1.2		⇒ If No: Do you use social media in your leisure time for professional purposes? Yes (If yes, continue with question 3.12.2.3) No	
3.12.2.1		⇒ If Yes: Do you use social media during your working time? Yes No	
3.12.2.2		⇒ If Yes: Is it common to use social media during work for professional purposes in your company? Yes No	
3.13		Once you have chosen a supplier, how do you get in touch with the company?	
4	Closing Questions		
#		Question	Notes
4.1		Is there anything else that you would like to add regarding social media?	
4.2		Is there anything else that you would like to add in general?	

Appendix Table 4: Interview Part 4/4