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Digital Marketing Maturity Models: Overview and Comparison

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***Abstract*—**The variety of available digital tools, strategies and activities might confuse and disorient even an experienced marketer. This applies in particular to B2B companies, which are usually less flexible in uptaking of digital technology than B2C companies. B2B companies are lacking a framework that corresponds to the specifics of the B2B business, and which helps to evaluate a company's capabilities and to choose an appropriate path. A B2B digital marketing maturity model helps to fill this gap. However, modern marketing offers no widely approved digital marketing maturity model, and thus, some marketing institutions provide their own tools. The purpose of this paper is building an optimized B2B digital marketing maturity model based on a SWOT (strengths, weaknesses, opportunities, and threats) analysis of existing models. The current study provides an analytical review of the existing digital marketing maturity models with open access. The results of the research are twofold. First, the provided SWOT analysis outlines the main advantages and disadvantages of existing models. Secondly, the strengths of existing digital marketing maturity models, helps to identify the main characteristics and the structure of an optimized B2B digital marketing maturity model. The research findings indicate that only one out of three analyzed models could be used as a separate tool. This study is among the first examining the use of maturity models in digital marketing. It helps businesses to choose between the existing digital marketing models, the most effective one. Moreover, it creates a base for future research on digital marketing maturity models. This study contributes to the emerging B2B digital marketing literature by providing a SWOT analysis of the existing digital marketing maturity models and suggesting a structure and main characteristics of an optimized B2B digital marketing maturity model.

***Keywords*—**B2B digital marketing strategy, digital marketing, digital marketing maturity model, SWOT analysis.

I. Introduction

DIGITAL marketing is a new term, which requires a departure from traditional understandings of marketing. It involves customers in the creation of value of services and products. Moreover, it has a pull nature [11], which means that instead of a broadcasting, one directional way of communication, companies have to become customer-centric [5], [6]. This approach is highly resource-consuming, and therefore process and structure optimization play important roles within a company. Without a systematic approach, companies could get lost in the variety of available tools and tactics.

A framework that optimizes the processes and tools of digital marketing could offer the desired solution. Such a framework could be a maturity model, which brings tidiness to companies' strategic plans and fosters continuous improvement. A digital marketing maturity model (DMMM) serves as an auxiliary tool to evaluate a company's capabilities, increase the effectiveness of the existing channels and identify future improvements. However, there is no widely approved DMMM. Notwithstanding, some marketing institutions offer their own models.

This paper aims to provide an in-depth analysis of three existing DMMMs with open access. By means of SWOT analysis (strengths, weaknesses, opportunities, and threats), the advantages and disadvantages of each model will be identified. The provided SWOT analysis was used to create a structure and main characteristics of an optimized B2B DMMM. The paper has the following structure. Section II provides a background on digital marketing and maturity models. Section III provides an overview of the existing DMMMs and their main characteristics. Section IV presents the methodology of the provided analysis. Section V discusses the results of the SWOT analysis. Section VI suggests a structure of an optimized DMMM focused on B2B business. Section VII briefly summarizes the key findings and provides suggestions for future research.

II. Literature Review

A. Foundations of Digital Marketing

The term "digital marketing" existed previously but had a different meaning, indicating the marketing of digital goods, such as music on the Internet or electronic books. The modern understanding of digital marketing expands the previously-used terms of Internet or electronic marketing by adding mobile applications and digital TV [2]. However, the compound nature of digital marketing does not mean that the knowledge developed previously will be sufficient to provide a successful digital marketing strategy.

Digital marketing has a complex nature, which requires changes in the understanding of traditional marketing. The Internet has in general pull environment [5], [11], where companies engage potential and current customers to their online space. With the growth of digital marketing, the communication approach became bilateral, considering both customer and firm perspectives [13]. On one hand, digital marketing uses tactics and tools to engage customer interest and build relationships with them. On the other hand, it aims to fulfill the company's goals [13]. In general, the whole marketing concept in the digital era has shifted from outbound to inbound principles, where customers co-create value of services or products [5]. However, the majority of B2B

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(business-to-business) companies that implement digital marketing tools do not have any strategic plan [3], which could lead to low effectiveness and misalignments.

B. Characteristics of Maturity Models

Maturity models describe a step-based evolution of processes within an organization [9]. The majority of maturity models have three main purposes [9]: 1) descriptive: assessing the status of processes with reference to the desired goals; 2) prescriptive: providing recommendations regarding following strategic decisions; 3) comparative: used as a benchmarking tool for clear positioning on a market.

Among the components of maturity levels, the following elements are identified:

- domain, or scope of the assessment [8];
- levels or stages, representing a hierarchical structure [1]. The number of levels usually varies from three to six [4];
- level descriptor, providing a short explanation of the level, sometimes in one word, e.g., "initial / repeatable / defined / managed / optimizing..." [4]. The model might include a spread overview of levels;
- process areas within each level [4];
- activities within each process area, including their explanation [4];
- possible maturation path [10].

In order to understand the development stage of digital marketing processes, companies could use DMMMs. As mentioned earlier, some marketing institutions already use their own models; however, there is no academic research on them. This paper aims to analyze some such models and identify the main components of the models, their advantages and disadvantages. This knowledge will provide a base for a theoretically grounded study and be beneficial for business.

III. Overview of the Existing DMMMs

Three DMMMs will be compared: Adobe's Maturity Self-Assessment Tool, the Digital Marketing Maturity Index developed by Stein IAS and Oracle Marketing Cloud, and the Smart Insights Digital Marketing Toolset. These models were selected by searching in a search engine for a free online digital marketing maturity tool.

A. Adobe's Maturity Self-Assessment Tool (ASDT)

Adobe Systems has created a five level maturity model. The tool was developed in 2014 as a part of the marketing research at the Adobe Summit in Salt Lake City. The maturity levels are Initiated, Emerged, Focused, Advanced, and Optimized. The model is focused on three process areas: people, process and tools. The online questionnaire is structured in seven dimensions within the process areas: Channels, Audiences, Context, Content, Assets, Campaigns, and Data. Each dimension covers two to five questions.

B. Digital Marketing Maturity Index (DMMI)

Stein IAS and Oracle Marketing Cloud have created a three level maturity model. The tool was developed in 2015 as part of the marketing research for the World B2B Congress in Shanghai. The maturity levels are defined as follows:

- Digital Master: "Customer-centric, early adopter of best of breed technologies and marketing practices";
- Digital Pragmatist: "Customer-orientated, mass adopter of mature technology channels and tactics";
- Digital Explorer: "Brand-centric, relatively slow adopter of digital tools and techniques" [12].

Besides maturity levels, the model distinguishes maturity stages. There are four stages: Reach and Attract, Engage and Inspire, Nature and Convert, Analyze and Optimize. Each stage consists of three process areas.

C. Smart Insights Digital Marketing Toolset (SMART)

The web-portal Smart Insights has created a five level maturity model. The tool was created as an auxiliary instrument for portal members. The maturity levels are Initial, Managed, Defined, Qualified, and Optimized. Besides the maturity levels, the model distinguishes stages. There are four stages: Reach, Act, Convert and Engage. Within each stage the model recognizes five different dimensions.

IV. Analysis of DMMMs

A. Research Methodology

Following the studies on business processes maturity models (e.g., [7], [10]), the parameters related to the model design and the assessment process were identified. Because digital marketing belongs to business processes in an organization, it has been decided to use the principles of business process analysis in the current paper. The criteria for the analysis are presented below.

Assessment process criteria evaluate the measurement system of a model. *Openness* characterizes whether or not respondents have to sign up to assess a tool. *Targeting* refers to segmentation according to the size of the company, industry sector or geographical region. *Measurement* reflects the accuracy of the provided information. The data can be expressed in scores, percentages, or in other formats. *Length of questionnaire* is connected to the quality of a survey. Reliability of the data often depends on the amount of provided information. The current research information is derived from a questionnaire. The more questions the survey is comprised of, the more detailed the data.

The criteria related to a maturity model characterize the model's composition. *Process area* describes the main activities within the process scope of a model. As a rule, every level and every stage is assigned with the key dimensions. *Dimension* describes what key aspects are analyzed by a model. *Strategy* refers to a short description of levels or stages. This criterion represents a "motto" of companies at certain stages or levels. Many companies participating in a survey would like to know their position on the market compared to their competitors. The criterion "*benchmarking*" defines whether the information about the industry or region is presented. *Recommendations* are the main part of the model. Companies, taking part in the survey would not be satisfied just to determine the status quo of their digital marketing

capabilities, but would like to know their strengths and weaknesses and identify the next steps for further development. Recommendations provided by a model have to be detailed enough to create a strategic plan for future implementation.

The value of the criteria is expressed as a qualitative measure, with a yes-no answer. A "Yes" response indicates criterion relevant to the analyzed model, while a "No" response indicates the opposite. Each "No" response is converted into a 0 score, and each "Yes" into a 1 score. The scores related to the criteria are coded as separate variables: ACi or MCi.

Table I presents the assessment criteria as well as the process of maturity analysis of the models. An overall assessment index AC is calculated according to the formula:

$$AC = \frac{\sum ACi}{i} \quad (1)$$

An overall maturity criteria index MC is calculated according to:

$$MC = \frac{\sum MCi}{i} \quad (2)$$

Based on (1) and (2) an overall maturity model index DMMI is calculated according to:

$$DMMI = 0{,}5 \times AC + 0{,}5 \times MC \quad (3)$$

V. Analysis of the Results

Based on the provided model, an overall score for the analyzed DMMMs calculated according to (3) is:

a. Adobe's Maturity Self-Assessment Tool – 3.58;
b. Digital Marketing Maturity Index – 2.83;
c. Smart Insights Digital Marketing Toolset – 2.50.

Based on the provided calculation, the maximum score of marketing maturity could be 4.

The detailed scores for each maturity model are presented in Table II. A more detailed overview of the criteria of the digital maturity models is presented in Tables III and V.

All three tools have different origins. SMART was designed as an auxiliary tool on the Smart Insights web-site. DMMI and ASDT were developed as online marketing tools in order to assess data from companies and present their analyses within an annual conference.

As can be seen in the SWOT analyses, every model has advantages and disadvantages. ASDT pays attention to the assessment process criteria, as well as to the presentation of the results. Moreover, ASDT provides detailed benchmarking data, including targeting based on size, geographical area and industry sector. The other two models miss this criterion. SMART provides detailed recommendations related to every dimension and sub-dimension. Furthermore, it suggests further reading linked to the web-site. Comparing to the other two models, SMART could be used as a separate tool. ASDT and DMMI were developed as a research tool, and the online version of the survey does not provide full results.

TABLE I
Digital Marketing Maturity Model Criteria with Variables

Criteria	Value "Yes"	Value "No"	Variable
Assessment Process Criteria with Variables			
Openness	1	0	AC_1
Targeting	1	0	AC_2
Measurement	1	0	AC_3
Length of questionnaire			AC_4[a]
Maturity Model Criteria with Variables			
Process area	1	0	MC_1
Maturity level			MC_2[b]
Levels	1	0	MLC_1
Stages	1	0	MLC_2
Dimensions	1	0	MLC_3
Strategy	1	0	MLC_4
Benchmarking	1	0	MC_3
Recommendations	1	0	MC_4

[a] Since the number of questions in a survey is variable and certainly more than 0 or 1, a AC_5 will be calculated according to the formula: $AC_5 = Qi/Qmax$, where Qi = a number of questions in a survey; Qmax = a maximal number of questions within the analyzed surveys.
[b] $MC_2 = \sum MLCi / i$

TABLE II
Digital Marketing Maturity Model Criteria of the Analyzed Models

Criteria	ASDT	DMMI	SMART
Assessment Process Criteria with Variables			
Openness	1	1	0
Targeting	1	0	0
Measurement system	1	1	1
Length of questionnaire	44/120	48/120	120/120
Score AC	3.40	2.40	2.00
Maturity Model Criteria with Variables			
Process area	1	1	1
Maturity level	(1+0+1+1)/4	(1+1+1+0)/4	(1+1+1+1)/4
Levels	1	1	1
Stages	0	1	1
Dimensions	1	1	1
Strategy	1	0	1
Benchmarking	1	1	0
Recommendations	1	0,5	1
Score MC	3.75	3.25[a]	3.00
Total score	3.58	2.83	2.50

[a] Recommendations are very general and short.

Among the main weak sides of the analyzed maturity tools, the following aspects could be mentioned. The absence of targeting in SMART and DMMI makes it difficult to understand the position of a company on a market. Free access to the surveys by the same two models might result in errors in benchmarking statistics. SMART and DMMI pay low attention to assessment characteristics. They limit the scope to participants of the survey only. Furthermore, they provide no measurement system, offering the customer only a variety of fixed statements to be chosen. Besides the online survey, DMMI has published a DMMI report [12], which sheds light on the main findings of the survey and explains the tool in

more detail. However, without this report many parts of the questionnaire remain uncovered. As for ASDT, it does not consider the change of company goals over time (the customer journey), and therefore does not identify maturity stages. As a result, the provided recommendations look rather general.

The provided analysis shows some common characteristics of the existing digital maturity models. First of all, all of them are used as an instrument to reach some other goals: to get statistical data on companies for ASDT and DMMI, or to attract customers to the web-site for SMART. Secondly, the models provide three to five maturity levels, depending on the tightness of a company's cooperation with customers. Furthermore, it is irrelevant how many process areas are analyzed in a model (two (DMMI), three (ASDT) or seven (SMART)), all of them have the goal to maximize the use of available technology in digital marketing processes.

TABLE III
DIGITAL MARKETING MATURITY CRITERIA OF THE ADOBE'S SELF-ASSESSMENT TOOL

Criteria	Aspect	Value	Reference	Explanation
Assessment process criteria				
Openness	Open access	Yes	Adobe, web-site [14]	The survey can be accessed online without registration or membership.
	Membership	No		
Targeting	Size of organization	Yes	"1-499, 500-999, 1000-2499, 2500-5000, 5000+" [14]	The survey focuses on large companies.
	Industry sector	Yes	"Financial services, media/ entertainment, retail, travel & hospitality, B2B high tech, professional services, all other" [14]	The scope of the survey is limited to six industry groups.
	Region	Yes	"North America, South America, Europe, Asia Pacific, Japan" [14]	Geographical division covers certain regions. The survey does not provide any information about the countries included in each region. Japan is allocated to a separate region.
Goal	Depends on the survey	Yes	"The goal is to help you better assess your marketing maturity in order to foster change that allows you to deliver better business results and out-execute your competitors" [15]	The purpose of the survey is to identify the level of a company's marketing maturity and therewith to increase its competitiveness.
Scope	Marketing	Yes	See Industry & size [14]	The survey does not separate digital marketing from traditional marketing.
Measurement system	Percentage	Yes	100% [14]	Each dimension is covered by several questions. The number of questions pro dimension vary from four to nine. Each question represents a statement. A respondent can choose the level of agreement presented in a percentage and/or a scale from 0 to 5. It is possible to take the question out of the assessment process, if it is not applicable to a company, or a respondent does not know the answer.
	Scale	Yes	0 to 5 [14]	
	Other	Yes	Do not know, or not applicable [14]	
Length of questionnaire	Depends on the survey	Yes	[14]	The survey consists of 44 statements grouped into seven non-repetitive dimensions. The number of questions pro dimension vary from four to nine.
Frequency	Non-recurring	No	[14]	The survey can be taken any time.
	Continuous	Yes		
Maturity model criteria				
Process areas	Depends on the survey	Yes	"People, process, tools (technology)" [15]	The survey covers three process areas.
Maturity level	Level Description	Yes	[14]	During the survey a short description of every process area is provided, however, no description of maturity levels is available.
	Levels	Yes	"Emerged, Focused, Advanced, and Optimized" [14]	The survey provides five levels of maturity.
	Stages	No	[14]	There are no stages within the levels.
	Dimensions	Yes	"Channels, Audiences, Context, Content, Assets, Campaigns, and Data" [14]	The survey analyses and describes seven dimensions. The results of the questionnaire provide information on the strongest and the weakest (sub) dimensions.
	Strategy	Yes	[14]	The survey proposes strategies related to each process area.
Benchmarking		Yes	"The assessment also provides benchmark comparisons with other enterprises according to industry, size, and market geography" [15]	At the end of the survey a respondent sees an average industry score for the same company group, the industry sector and region as the respondents'. An industry average, the best and the worse results (in scores) are presented for either an overall score, or every dimension.
Recommendations		Yes		At the end of the survey, some further recommendations depending on a company's goals are provided.
Comments			• Recommendations are not based on the default assumption that companies would like to get the highest level of marketing maturity, but on the goals that companies have to set at the end of the survey. • The results can be exported as a PDF (Portable Document Format) document and can be downloaded or sent by email. • The results provide an overall marketing maturity score, however no description of the maturity levels. • The model provides information on an average industry score depending on a company's size, group, industry sector and region. • The survey takes the respondent's attention to the strongest and the weakest dimensions and sub-dimensions. • The survey does not provide detailed explanation of the status quo of a company, and focuses more on recommendations.	

TABLE IV
DIGITAL MARKETING MATURITY CRITERIA OF THE DIGITAL MARKETING MATURITY INDEX

Criteria	Aspect	Value	Reference	Explanation
Assessment process criteria				
Openness	Open access	Yes	SteinIAS, web-site [17]	The survey can be accessed online without any registration.
	Membership	No		
Targeting	Size of organization	No	-	According to the DMMI report [12], the survey focuses on mid to large companies; however, the online survey does not provide any targeting based on size.
	Industry sector	No	-	Targeting based on industry is unavailable; however, it is possible to choose a functional role of a respondent in the company analyzed.
	Region	No	-	According to the DMMI report, the survey focuses on four regions: Global, APAC, Americas, EMEA, however, the online survey does not provide any targeting based on geography.
Goal	Depends on the survey	Yes	"DMMI gives B2B marketing leaders an empirical benchmark to compare their digital marketing capabilities with peer enterprises" [12]	The DMMI aims to compare marketing capabilities in B2B digital marketing with the best practices.
Scope	Marketing	No	-	The scope of the survey is B2B mid to large companies; however, any company can fill in the online form and get the results.
Measurement system	Percentage	No		Each stage is represented by three dimensions. Each dimension is covered by four statements. A respondent can choose one out of four statements depending on the level of application to a respondent's company.
	Scale	No		
	Other	Yes	Statement [17]	
Length of questionnaire	Depends on the survey	Yes	[17]	The survey consists of 48 statements grouped into 4 stages. Each stage is covered by three non-repetitive dimensions.
Frequency	Non-recurring	No	[17]	The survey can be taken any time.
	Continuous	Yes		
Maturity model criteria				
Process areas	Depends on the survey	Yes	Technology and digital strategy	The survey describes the suggested strategy in the chapter focused on recommendations.
Maturity level	Level Description	No	[17]	Level description is provided only in the DMMI report, not during the survey or in the survey results.
	Levels	Yes	"Digital Master, Digital Pragmatist and Digital Explorer" [17]	The survey identifies three levels of maturity.
	Stages	Yes	"Reach and Attract, Engage and Inspire, Nature and Convert, Analyze and Optimize" [17]	The model focuses on four stages.
	Dimensions	Yes	Reach & Attract: a) Data / profiling, b) Channels / devices / media, c) Consumption mediums / asset types; Engage and Inspire: a) Digital – web / social, b) Content generation / frequency / segmentation, c) Hosting and tracking; Nurture & Convert: a) Nurturing and re-targeting, b) Lead scoring / routing, c) Sales enablement; Analyze & Optimize: a) Skills – specialization, b) Technology – automation / CRM, c) Reporting / analytics [17]	The survey analyses three different dimensions within each stage. The measurement is presented in a form of several statements, and a respondent has to choose one the most appropriate.
	Strategy	No	[12]	The recommended digital strategy is not provided in the results, but is mentioned in the DMMI 2015 report.
Benchmarking		Yes	[12], Results of the survey	At the end of the survey a respondent can see an average industry score.
Recommendations		Yes	Results of the survey	Recommendations are provided at the end of the survey.
Comments			• The recommendations are based on the default assumption that companies would like to get the highest level of marketing maturity. • The survey is based on the best practices and has been used as a tool to create a DMMI report 2015. It is rather difficult to use the survey as a separate tool, because some explanations and descriptions are not included in the survey and the survey results. • The recommendations are very general and short, and merged with the description of the stages.	

Some differences exist between the maturity models. The analyzed models can be divided into two groups according to structure and concept: 1) ASDT and 2) SMART and DMMI. ASDT has a vertical structure, proposing only the levels of maturity. DMMI and SMART provide a matrix structure. Alongside the capability levels (horizontal division), they suggest maturity stages (vertical division), which are based on the customer journey. The name of each stage comes from the main goal of customers at a certain stage of their journey. Both models use similar names for identifying the maturity stages. ASDT attaches importance to dimensions. DMMI and SMART place more attention on stages than on levels,

assuming that marketing goals evolve together with the development of the relationship with customers. Concept also differs among the two groups of maturity models. ASDT provides a scale proliferation, whereas SMART and DMMI use fixed statements. Finally, SMART can already be used more or less independently, whereas ASDT and DMMI require an update and rework. The detailed SWOT analysis is presented in Table VI.

TABLE V
DIGITAL MARKETING MATURITY CRITERIA OF THE SMART INSIGHTS DIGITAL MARKETING TOOLSET

Criteria	Aspect	Value	Reference	Explanation
ASSESSMENT PROCESS CRITERIA				
Openness	Open access	No	Smart Insights, web-site [16]	The survey can be accessed online only after registration.
	Membership	Yes		
Targeting	Size of organization	No	-	Targeting is unavailable.
	Industry sector	No	-	
	Region	No	-	
Goal	Depends on the survey	Yes	"Assess the capability of …business using the RACE digital marketing framework" [16]	The purpose of the survey is to measure companies' capabilities in digital marketing.
Scope	Marketing	No	-	The scope is limited to the web-site members.
Measurement system	Percentage	No	-	Each stage is represented by five dimensions. Each dimension is covered by five statements. A respondent can choose one out of five statements depending on the level of application to a respondent's company.
	Scale	No	-	
	Other	Yes	[16]	
Length of questionnaire	Depends on the survey	Yes	[16]	The survey consists of 120 statements grouped into four stages. Each stage is covered by five non-repetitive dimensions.
Frequency	Non-recurring	Yes	[16]	The survey can be taken for free only ones. Paid membership allows taking the survey several times.
	Continuous	No		
MATURITY MODEL CRITERIA				
Process areas	Depends on the survey	Yes	Strategic approach, Performance Improvement Process, Management buy-in, Resourcing and Structure, Data and Infrastructure, Integrated Customer Communications, Integrated Customer Experience [16]	The model focuses on seven process areas.
Maturity level	Level Description	Yes	[16]	The survey provides a short description of every level depending on the maturity stage.
	Levels	Yes	"Initial, Managed, Defined, Qualified, Optimized" (Smart Insights, web-site)	The survey identifies five levels of maturity.
	Stages	Yes	Plan, Race, Act, Convert, and Engage [16]	The five stages of maturity are based on the stages of customer lifecycle.
	Dimensions	Yes	[16]	The survey analyses five non-repetitive dimensions per stage. A short description of each is provided.
	Strategy	Yes	[16]	The survey provides a short description of the strategy related to each process area.
Benchmarking		No	-	Benchmarking presents a percentage of the web-site members per every levels of maturity.
Recommendations		Yes	[16]	At the end of the survey, further recommendations depending on the level and stages are provided. The results consider an overall score for every capability (dimension) and provide detailed recommendations. Further reading is suggested as a link within the web-site.
Comments			• Recommendations are based on the default assumption that companies would like to get the highest level of marketing maturity. • The recommendations are very detailed. They are based on either an overall score, or the scores of the dimensions and sub-dimensions.	

VI. DEVELOPMENT OF A B2B DMMM

In respect with the characteristics of the analyzed DMMMs and taking into consideration the outcomes of the SWOT analysis, a structure of an optimized B2B DMMM has been developed. The main characteristics of a B2B DMMM are based on the evaluation criteria discussed in Section IV.

A. Assessment Criteria

Openness: As it can be seen from the analysis, two out of three DMMMs analyzed provide open access to a tool. However, in both cases a DMMM is used not as independent tool, but as an instrument of a research project. Open access to a tool might influence the survey statistics used for benchmarking. Registration reduces statistical errors and lets companies follow the changes in the development of their digital marketing capabilities.

Targeting is required mostly for benchmarking purposes. It is important for companies to know their position on the market compared to the competitors. The proposed B2B DMMM should provide targeting according to size, industry

and geographical region. Targeting should be based on business segmentation in an analyzed region or country. The number of segments of the model should vary from five to seven, except the cases when a project has specified number of segments (e.g. segmentation based on the regions in a country or districts in a city).

The *purpose* of the B2B DMMM is threefold: to identify the status of digital marketing capabilities with respect to the goals set (descriptive); to provide suggestions about the necessary changes in a strategy (prescriptive); to provide benchmarking (comparative). The goal of the B2B DMMM is to help a respondent company better assessing digital marketing capabilities in order to deliver better business results.

Measurement: Likert scale is the most frequently used measurement system in surveys. It is suggested to use a Likert scale in a DMMM. However, in order to increase the effectiveness and flexibility of the research, it is important to use other formats, e.g. a possibility to exclude a question/a statement out of the survey if the latter does not applicable to a respondent company. This will assure the accuracy of the provided information.

Length of questionnaire should depend on the number of process areas and dimensions. The more questions the survey is comprised of, the more detailed the data.

Frequency: companies should have an opportunity to retake the survey and follow the change of digital marketing capabilities.

B. Maturity Model Criteria

Process area should cover at least three main aspects of a business strategy: channels to place a product, tools to measure effectiveness of the channels, and people to implement the business strategy.

Maturity levels: the analyzed DMMM used three to five levels. Based on that, it is suggested to use three levels of maturity in a simple survey, and five in a more detailed survey, where every process area and every dimension are covered by more than a single question.

Stages have to be introduced in order to reflect different stages of the customer journey.

Dimensions have been developed based on the comparison of the seven dimensions of ASDT, 12 dimensions of DMMI and 20 dimensions of SMART. The common dimensions were identified and grouped according to the stages of the customer journey. It was suggested to use four dimensions in every stage.

Benchmarking should cover the best practices and provide the average data in a target group.

Recommendations should correspond to the level of digital marketing maturity of a respondent company. A company should be able to set/change a goal. This is important because not every company aims to reach the highest level of maturity in every process area. The recommendations should include a company's strategic orientation. The recommendations provided by a model have to be detailed enough to create a strategic plan for future implementation.

C. Structure

The structure of a suggested B2B DMMM is depicted in Fig. 1.

VII. Discussions

This paper contributes to the paucity of research on DMMMs. It provides a SWOT analysis of the existing DMMMs accessed online free of charge. Based on the results of the analysis it provides characteristics for an optimized B2B DMMM.

TABLE VI
SWOT Analysis of Digital Marketing Maturity Models

Model	Strengths	Weaknesses	Opportunities	Threats
Adobe Self-Development Tool	• Open access without registration; • Two measurement systems: percentage and Likert scale; • Descriptive goal setting: the goal could be changed; • Clear (graphical) presentation of the results; • Clear presentation of recommendations; • Benchmarking, targeting according to size, industry and region; • Exportable and downloadable results of the survey.	• Absence of maturity level description; • Absence of the stages of the customer journey; • Limited number of questions: 44; • Short recommendations.	• Possibility to "deepen" the survey by considering the customer journey and adding the stages.	• Open assess might influence the survey statistics.
Digital Marketing Maturity Index	• Open access without registration; • The customer journey is taken into consideration; • Focus on digital marketing; • Clearly defined process areas and dimensions.	• Limited description of maturity levels; • Limited number of questions: 48; • Inflexible goal setting; • Absence of clear presentation of the results; • Limited recommendations; • Non-exportable and non-downloadable results of the survey.	• Possibility to "deepen" the survey by means of adding targeting and benchmarking possibilities; • Possibility to access full recommendations after contacting the company.	• Open assess might influence the survey statistics.
Smart Insights Digital Marketing Toolset	• The survey results linked with the web-site; • The customer journey is taken into consideration; • Large number of questions: 120; • Clear presentation of recommendations; • Exportable and downloadable results of the survey; • Benchmarking.	• Registration is required; • Measurement based on scenarios. Absence of categories or scales; • Inflexible goal setting; • Limited description of process areas.	• Recorded re-take of the survey could be done by paid members.	• Regular reminder of the paid membership might repel some web-site users.

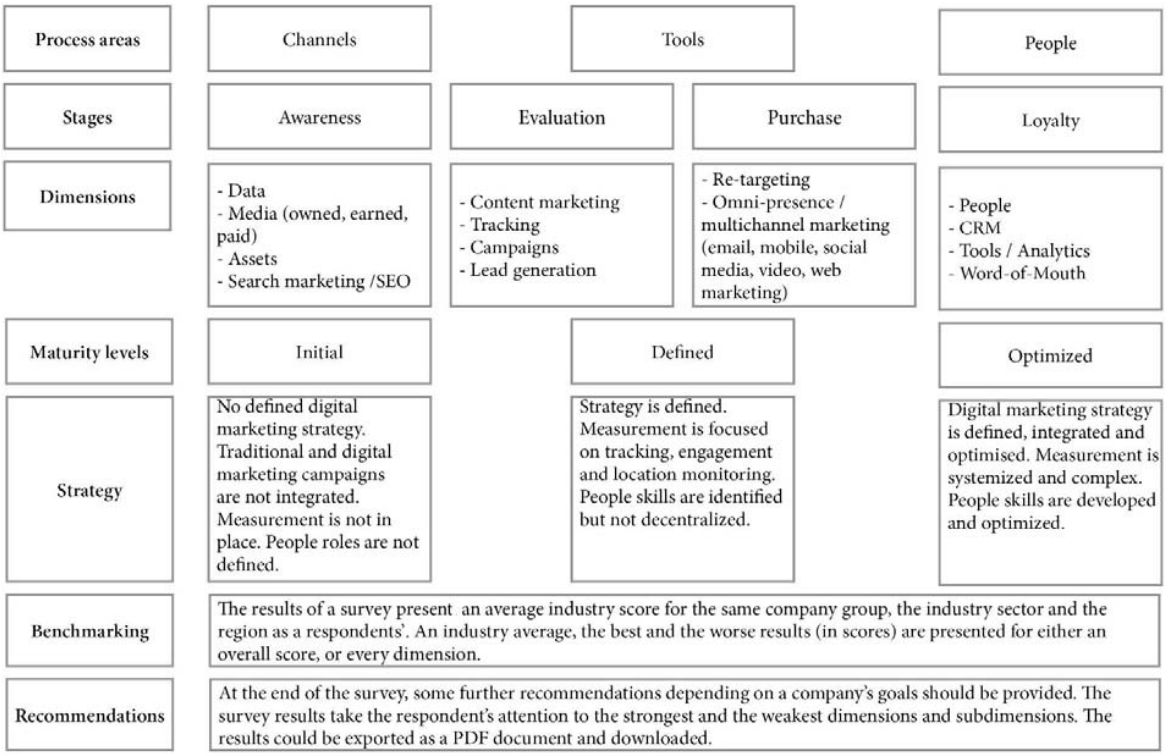

Fig. 1 The structure of a B2B digital marketing maturity model

In general, all three analyzed models have similar goals - to assess a company's marketing capability taking into consideration the existing technology tools and to identify the ways for further development. In order to do this, the models suggest to analyze certain process areas and to identify critical criteria or dimensions. However, the recommendations, based on the analysis of the process areas and dimensions are rather superficial, and do not help to identify the exact steps in the business process development. Sometimes the maturity levels are not even described, as in ASDT, or very limited, as in SMART. Information on the stages and dimensions sometimes not specified. Consequently, a lack of this information could hamper the process of identifying and coordinating the drivers for change in order to assure maximum effectiveness of company's capabilities. Different models draw different attention to the assessment process criteria. For example, ASDT focuses on clear organization of the survey and detailed presentation of the results. The maturity model criteria are fulfilled; however, the model avoids a deep explanation of the maturity levels. SMART, in its turn, have relative week assessment part, but provide a deep analysis of the dimensions and the stages. DMMI positions itself in between the other two models.

In general, all three models have great potential. The section of the provided SWOT analysis, representing opportunities, summarizes the opportunities for every model. According to the provided analysis, DMMI and SMART should specify the assessment criteria, especially the measurement system. The measurement system has to be flexible, and not just provide fixed statements. Moreover, both models should introduce targeting, which will help companies to identify their position on a market. ASDT should consider a customer journey. The identified potential threats are related to the openness criterion. This criterion is very delicate. On one side, open access to a tool influences the statistics, especially the benchmarking data. On the other side, a constant reminder of paid membership might disinterest some survey users. Nevertheless, according to the opinion of the author, the registered access provides clear data on companies and assures more personal communication.

Based on the results of the provided SWOT analysis of three existing DMMMs, a framework of a DMMM focused on B2B has been identified. It combines the strengths of the analyzed models, particularly, ASDT and SMART. The suggested B2B DMMM should have a matrix structure, covered by three process areas, four stages, 16 dimensions and three maturity levels. The purpose of the B2B DMMM should be to assess the digital marketing capabilities, provide benchmarking and recommendations for a digital marketing strategy depending on the goal set.

The current research is beset with some limitations. The paper considers only three DMMMs. Research on other existing maturity models, for example paid models, will provide additional insights on the analyzed topic. Therefore, further research should consider more practical examples. The current analysis covered only the models accessible online free of charge. It analyses the models against a framework of design and content principles, and thus, mainly evaluates

assessment process and maturity model criteria. There could be other research focused on the above mentioned criteria in more detail, or analyzing other criteria.

The current paper could be beneficial for science, because it creates a base for future research. For example, additional maturity models' specifications could be suggested. For instance, analysis of maturity models that are focused only on B2B sector or specific regions, countries or industries could be conducted. The current study could stimulate a creation of theoretical knowledge based on DMMMs. It could also focus on the integration and consolidation of already existing maturity models. The provided analysis can be used as a base for the analysis of other marketing maturity models.

From the practical point of view, business companies gain certain benefits as well. The current research could be used as a guideline for choosing one of the analyzed marketing tools. The mentioned surveys pay company's attention to the weak and the strong sides of their digital marketing strategy and help to identify important KPIs.

From the point of view of the benefits for future academic research, this paper deepens the knowledge on digital marketing. It creates a platform to transform the knowledge from the practical area into the scientific field.

VIII. Conclusion

Maturity models show the strengths and weaknesses of a company's digital marketing strategy and help to identify the ways to increase the effectiveness of the existing tools. The findings from the company's digital marketing analysis identify a baseline for future improvements.

The current study provides the first analytical review of the existing DMMMs and therewith contributes to the lack of knowledge on this topic. The findings of the SWOT analysis of the existing DMMMs indicate a lack of theoretical basis on maturity models. The existing DMMMs are based on best practice, and usually do not consider a framework for theoretically grounded research. The SWOT analysis depicts the main advantages and disadvantages of the existing tools. It also helps to identify similarities and differences between the tools.

Based on the provided analysis, a framework of a DMMM focused on B2B has been suggested. It is based on the strong characteristics of the analyzed DMMMs. Moreover, the proposed B2B DMMM is aimed to focus equally on both assessment and maturity model criteria. The findings of the current in-depth analysis on practically based DMMMs could be used for future theoretically grounded research.

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