



Mastering Data-Intensive Collaboration and Decision Making

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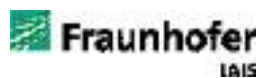
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Summary

This deliverable reports on the second round of the evaluation of Dicode Services for Use Case #3: "Opinion Mining from Unstructured Web 2.0 Data" (OMUWD). The evaluation process was performed by using properly formulated metrics and instruments, which have been described in D6.1 and follow the specifications of D2.2. The deliverable focuses on the assessment of the OMUWD related Dicode services and summarizes the feedback derived through the appropriately formed questionnaire used and personal interviews conducted. The document describes the key insights gained, which are important for the further development of the Dicode services.

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1. Introduction

1.1 Context

This deliverable reports on the second evaluation round of Use Case #3: “Opinion Mining from Unstructured Web 2.0 Data” (OMUWD), during which the enhanced version of the Dicode Workbench and related Dicode services were assessed.

The first evaluation round (see D6.4.1) reported on the validation and assessment of the first version of the Dicode services for the needs of OMUWD. In this deliverable (D6.4.2), we also summarize the key issues and insights gained from the first evaluation round, which were taken into account during the further development of the Dicode Services. The project’s evaluation activities will be summarized in deliverable D6.5, together with an assessment of the project’s outcomes from external experts and bodies.

1.2 Objectives

Through the OMUWD Use Case, we aim to evaluate the Dicode services with respect to the automatic analysis of voluminous amount of unstructured information. The Dicode services are evaluated based on how they can improve collaboration and decision making in OMUWD settings, so as to support well-informed marketing decisions and strategies.

The main purpose of this deliverable is to present the results of the second evaluation round of the developed Dicode services related to the OMUWD use case in order to assure their usability and accessibility. To provide a background for such an assessment, this document also describes the actual status of the OMUWD related Web 2.0 developments, as well as the associated challenges for the marketing community.

In this deliverable, emphasis is given to the usability and acceptability of the Dicode services in the marketing community. The evaluation feedback collected and presented in this deliverable will serve as a guideline for the service providers to develop the final Dicode suite of services, paying particular attention to the improvement of their usability and overall quality.

1.3 Social Media Monitoring in the current Web 2.0 environment

Web 2.0 is still an incredibly dynamic environment. Terms like “friend” and “influencer” are no longer adequate to describe the scope of social activity and interaction in the current Social Web. A deep understanding of consumer needs and motivations is the key to unlocking a real understanding of social media and its users.

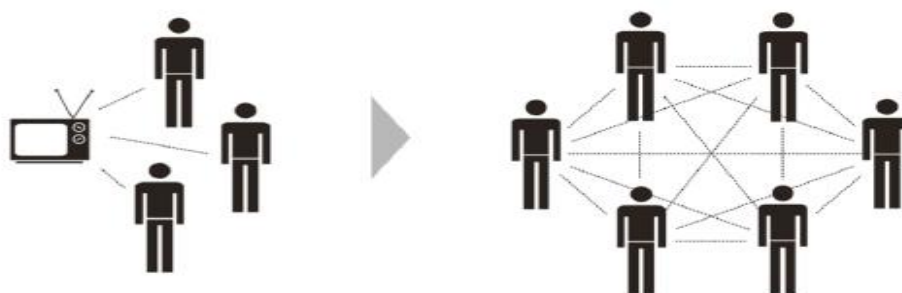


Figure 1.1: Radical Change in Communications: From the sender-receiver principle to cross-linked communication (Löffler/Wittern in *Markendifferenzierung*, Völckner, F./Willers, C./Weber, T., Gabler Verlag 2010).

Web 2.0 is challenging the existing marketing and communication paradigms. As shown in D6.4.1, the brand controlled communication “brands to sender” has become obsolete (Figure 1.1, left part). A cross-linked communication model (Figure 1.1, right part) is the one that describes today’s communication reality. Nowadays, web based communication has become more reliable compared to traditional media (Figure 1.2).

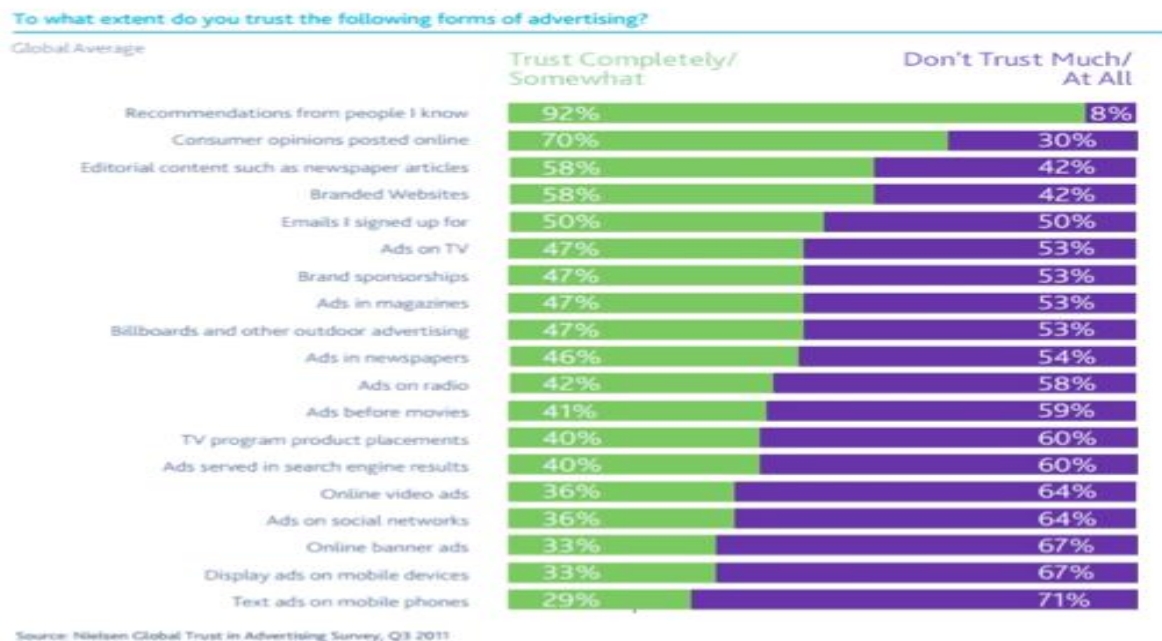


Figure 1.2: Nielsen Global “Trust in Advertising” Survey, Q3, 2011.

Brand managers of companies not only have to take the Web into consideration (if they don’t consider it, they jeopardize their brands and companies success); the consumers’ voice is much more reliable than that of the Company or traditional communication like TV/print/outdoor (Figure 1.2). In other words, the consumers have taken over the power. This forces companies to invest in additional resources to really understand what happens in the social web.

There is truly a fusion of the world-wide web and mobile devices. It has “created” the “Connected Generation”. They are mid aged people, with a high level of qualification (65% have a degree or post graduate qualification). Not only they are wealthy consumers, but also highly influential. They are more likely to work in senior decision making positions within companies (25%), try products first (index 172), and influence others with respect to their purchases (index 157) (<http://de.slideshare.net/Wikonsumer/social-media-tracker-universal-mccann-the-socialisation-of-brands-wave-5>).

Today, brands confront a situation where they potentially have to hand over some brand control to this generation. The expectation of the Connected Generation (or “Millenials”) is to become brand-experts and co-create with brands. Such a situation urges marketing experts, brands and strategy experts to really listen to their customers and use intelligent Social Media Monitoring (SMM) tools (<http://de.slideshare.net/EdelmanInsights/the-evolving-role-of-brands-for-the-millennial-generation>).

As underlined in D6.4.1, SMM has become a key issue for marketing and strategy experts. Using complex and versatile tools for listening to the consumer's voice as expressed on the Internet enables access to comments related to brands and companies, to product reviews, and to conversations between consumers about brands.

Thus, SMM tools are the "must" solution to build a company's capacity to listen to and interact with consumers, to understand the social media landscape of their domain, to achieve a better market and consumer understanding, to have more power to compete, and to assure real-time actionability.

1.4 Structure

Section 2 summarizes the first evaluation round process and feedback. Section 3 provides information about the overall evaluation process of OMUWD. It comprises two parts: one summarizing the results of the online research with ten marketing professionals (real users), and one reporting on the results of the personal interviews conducted with five marketing experts on the evaluation of the OMUWD related Dicode services. Finally, Section 4 draws final conclusions and outlines further work directions concerning the improvement of the Dicode Workbench and Dicode services.

2 Look back to the first evaluation round and feedback

One objective of the first evaluation round was to re-assess the overall Dicode approach for the needs of OMUWD. For this, ten interviews with marketing and strategy experts were carried out. The overall Dicode approach and services, as well as the proposed Dicode Workbench, were described in a rather general way.

The feedback obtained has clearly shown that:

- SMM is standard in communication agencies, whereas in marketing departments the information value of SMM results was seen as highly subjective or arbitrary;
- The willingness of companies to pay for professional SMM tools was very low;
- Data reliability of available tools, especially in the context of sentiment analysis, was seen as inadequate;
- Usability of SMM tools, especially interoperability with other programs, was seen as very weak (e.g. CRM programs).

Based on this feedback, implications for Dicode (as far as the marketing industry is concerned) were:

- Relevant data have to be presented in a consolidated and user friendly way. Thus, Dicode has to assure user-friendliness;
- The collaborative working platform proposed by Dicode was seen as very promising. Providing private areas at the same time was seen as an important issue. Thus, Dicode should provide functionalities for simultaneous use of "private areas";
- Dicode should consider integration of external applications.

3 Second Evaluation Round

3.1 Evaluation process

Based on the outcomes of the first evaluation round, the development and design of the Dicode Workbench has been optimized. New services have been also developed and integrated to it, as described in detail in D5.4.2: “Integrated Dicode Services (enhanced version)”. During the second evaluation round, ten high-level marketing professionals (real users) were conducted in March and April 2013 to evaluate the enhanced version of the Dicode Workbench and OMUWD related services. The research performed had two main objectives: to identify importance and challenges of SMM in a corporate context and to ensure relevance and usability of the Dicode Workbench and OMUWD related Dicode services. Parallel to that, a series of telephone interviews with five of those marketing professionals were carried out.

Such people have limited time to spend and are not used to work towards evaluating innovations in an early stage. For them, the “big picture” and the easy usability is by far more important than details. Their expectation is more to be faced with a nearly final or with an “easy to understand” version. We carried out the research through online questionnaires, accompanied by informative video-casts, as well as through individual telephone interviews, in order to have the possibility to clearly explain our approach, answer upcoming questions, and obtain a deep understanding of their needs and judgments.

All evaluators are in leadership positions in industry, communication agencies and universities with huge experience in the field of digital communication (some of them also participated in the interview series conducted during the first evaluation round in 2012). Understanding their requirements for OMUWD is certainly important for the successful exploitation of Dicode Use Case #3. Details about the participants of the individual telephone interviews, their roles and associated companies are summarized in Section 3.4.

A detailed justification of the approach followed during the second evaluation round of Dicode use cases can be found in D6.2.2.

3.2 Research layout and structure

The overall research was structured in two parts:

- First, we developed two video-casts showing a detailed setting of the Dicode Workbench and OMUWD related Dicode services. These video-casts present functionalities related to the issues to be evaluated through an online questionnaire consisting of 26 questions (see Appendix of this deliverable).
- In addition to the above, five experts were questioned in a personal telephone interview regarding two main topics: the relevance of SMM in corporate structures (also comparing their answers to the results of the first evaluation round in 2012) and their general opinion about the Dicode Workbench.

3.3 Online Research

We invited 12 marketing professionals and received 10 completed online questionnaires, which consists a response rate of over 80%.

3.3.1 Evaluation setting

Video-casts walk-through: You are a brand manager; as part of your everyday practice, consider the case that you want to check the frequency of discussions concerning your brand or the launch of a new product on a specific time period. You would also like to discuss with your peers the trend of discussions, and possible strategies for maintaining a positive impact, using their skills and special knowledge on the subject. For this reason you decide to launch the Dicode Workbench and create a collaborative session where you can check and analyze text data, and discuss the results with your collaborators.

3.3.2 Questionnaire Layout

The questionnaire is split in three parts. Section A explores the overall impression of the Dicode Workbench with a focus on clarity, design and user experience. Section B goes more into detail and highlights the Dicode services. With regards to the information provided in the video-cast, a critical evaluation of the presented services is expected. Section C elaborates the willingness of the participants to use the Workbench in their working environment.

3.3.3 General remarks

In addition to rating the statements/questions of the online questionnaire, evaluators had also the opportunity to comment on them. However, this happened very rarely and, when happened, most of the comments given were slightly critical. We interpret this as a reaction on the given Q&A structure and the fact that the evaluators had the chance to quickly complete the questionnaire (also due to the long duration and quality of the video-casts). There was almost no criticism on the actual concept of the Dicode Workbench and the Dicode services; this is a crucial finding. Besides the need for improving the quality of video-casts, and the layout/design of the Dicode Workbench, the overall results were very satisfying.

In what follows, we present the quantitative and qualitative feedback derived by the online questionnaires, divided into three sections (Sections A, B and C), exactly as given in the questionnaire (see Appendix).

Section A: Overall impression of Dicode Workbench

In this section, evaluators were asked to answer how strongly they agree or disagree with the following statements:

1. The information provided on the video is clear.
2. The design of the Dicode workbench is very pleasant.
3. The use of Dicode workbench is easy.
4. The user interface of Dicode workbench is intuitive.

In the first evaluation round, the Dicode Workbench was only described in a very general manner. The experts had to use their imagination to visualize a Workbench. In the second evaluation round, evaluators saw a video-cast of the Workbench in its actual development stage, which seemed to focus their attention to every specific detail rather than the big picture (in order to understand the description of every function). The video-cast without voice over was perceived as very hard to follow. As a result, most comments were made about the hardly understandable details, the missing voice over and the design of the Dicode Workbench (rather than about the overall impression).

The Dicode Workbench’s functionalities and usage seemed to be easily adoptable. However, most evaluators criticized the “old-fashioned” style of the interface. It was seen as a contradiction in terms of innovativeness compared to the functionalities offered. In other words, the Dicode Workbench was appreciated in terms of newness and innovation, but its design was judged as unpleasant/ old fashioned / not user friendly. It was stated that there is still room for improvement as far as switching windows within the Dicode Workbench is concerned. As shown in Figure 4.1, the mode and median values of Section A’s statements vary from 2 to 4. This is reflected in the following statements:

“Video 1 without any VO [voice over] can hardly be understood. Video 2 is more clear.”

“The look & feel is not contemporary. There is no reason why a workspace can't be more compelling than the current one.”

“The functionality remains clear, the design is not pleasant.”

“Looks like an old web application with a lot of frames and unnecessary visual clutter.”

“It seems to be easy adoptable but anyhow the UX [user experience] doesn't seem to be good.”

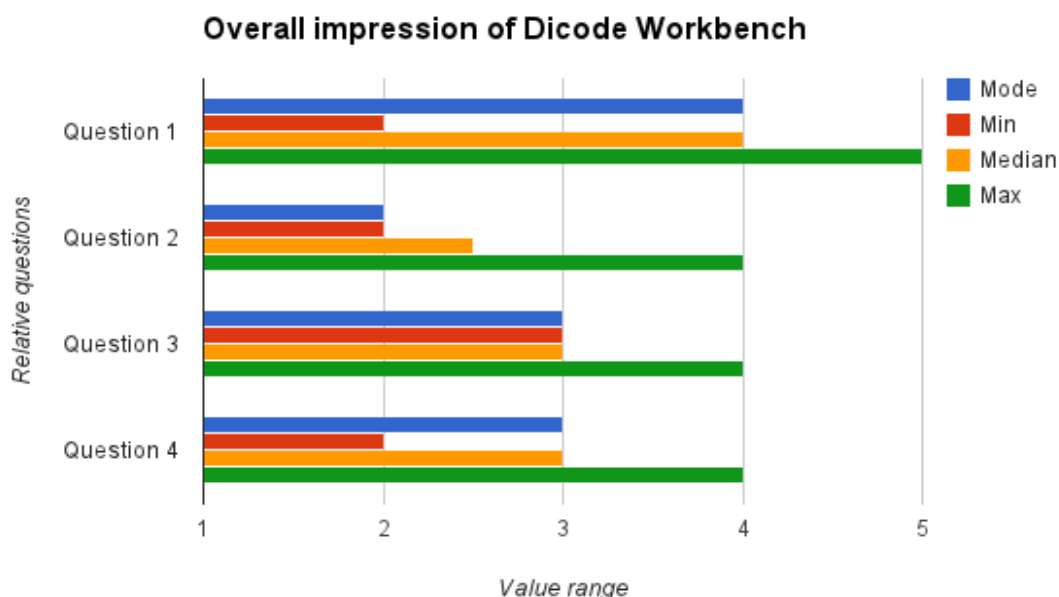


Figure 4.1: The overall impression of Dicode Workbench: mode, minimum, median, and maximum values are presented for Questions 1-4. The range of original values is 1-5, where 1 denotes strong disagreement and 5 denotes strong agreement.

In Table 4.1, we can observe that the majority of the given responses show a moderate impression over the Dicode workbench, since their marginal frequency is 0.462 (18/39), however $p(\text{mark} \geq 3) \approx 0.769$, which indicate a somewhat positive tendency of the evaluators.

Questions\ Marks	1	2	3	4	5	N/A
Question 1	0	1	3	5	1	-
Question 2	0	5	4	1	0	-
Question 3	0	0	7	3	0	-
Question 4	0	3	4	2	0	1
SUM	0	9	18	11	1	1

Table 4.1: Overall impression of Dicode Workbench: marginal distribution of responses for Questions 1-4.

Recommendations for improvements

- When interviewing senior experts, the research material should be high level quality and up to date. This will notably improve their feedback.
- Design and layout is almost as important as the actual functions. The improvement of the design is a huge opportunity to uplift Dicode Workbench image. It will support the innovativeness.
- Senior experts want an intuitive and user-friendly interface. Since we are in the final development stage, paying much attention to a user-friendly platform is a very critical success factor.

Section B: Support of collaboration, decision making and data-mining

In this section, evaluators were asked to rate their agreement with respect to the following statements:

5. The "Topic Graph" service is very helpful to easily indentify competitive topics.
6. The "Top Entity Service" allows me to easily discover the discussions about my topic (in a certain type, for a certain domain, at a certain point in time).
7. The "Named Entity Service" discovers precisely the right object of my investigation (e.g. liquid spice named "Maggi" and not the first name "Maggi").
8. The "Prominence Graph" quickly finds the entity occurrences over time and in comparison to competition.
9. With the "Prominence Graph and Google", I easily understand the drivers of the conversation.
10. The "Topic Graph" is very helpful to easily identify competitive topics.
11. The "Phrase Extraction Application" is an automatic learning service which strongly supports my update skills.
12. Sentiment Analysis has become an easy and time saving task by using the "Phrase Extraction Application".
13. The automatic highlighting of positive/negative phrases within a certain context in the "Phrase Extraction Application" is very valuable.
14. The easiness to analyse complex text will strongly support the speed of operation and collaborative working.

- 15. Dicode services can help me to deal with cognitive-complex issues.
- 16. The Dicode workbench can facilitate collaboration.
- 17. The Dicode workbench can enhance decision making.
- 18. The services of Dicode workbench are very well integrated.
- 19. The Dicode workbench can help me be more productive and concentrate on creative activities.

As shown in Figure 4.2, the individual Dicode Services (Questions 5-13) are rated with a median of 4 and even 5 in one case (“Prominence Graph and Google”). This is a very satisfying result that indicates the actual relevance and the proper development of the services. When considering a more general view of the integrated services (Questions 14-19), experts were a little more skeptical with their rating. Especially in terms of dealing with cognitive-complex issues, integration, creative activities and decision-making. Nevertheless, the mode and median values range from 3 to 5 (Figure 4.3), which indicates their overall acceptability. Some of the evaluators’ comments are given below:

“It only helps if all members of a group work with the system...”

“IMHO collaboration and decision making on marketing issues will - also in future - not be handled via this kind of tool.”

“It helps in gaining info’s from the web but is too one dimensional as a decision making tool...”

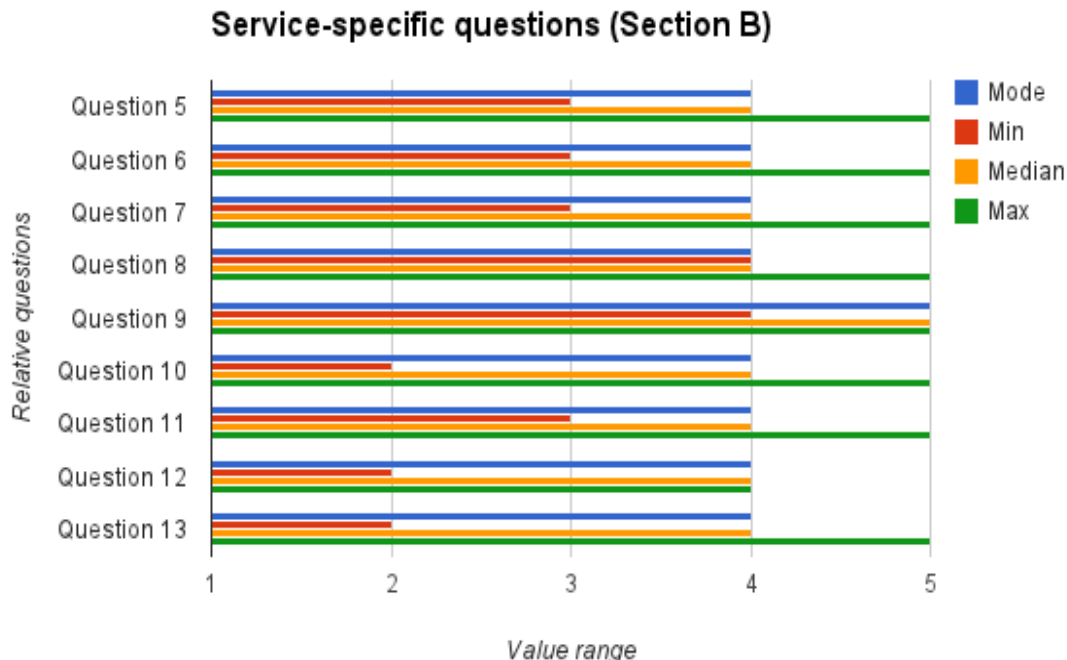


Figure 4.2: Support of collaboration, decision-making and data-mining: mode, minimum, median, and maximum values are presented for services’ specific Questions 5-13. The range of original values is 1-5, where 1 denotes strong disagreement and 5 denotes strong agreement.

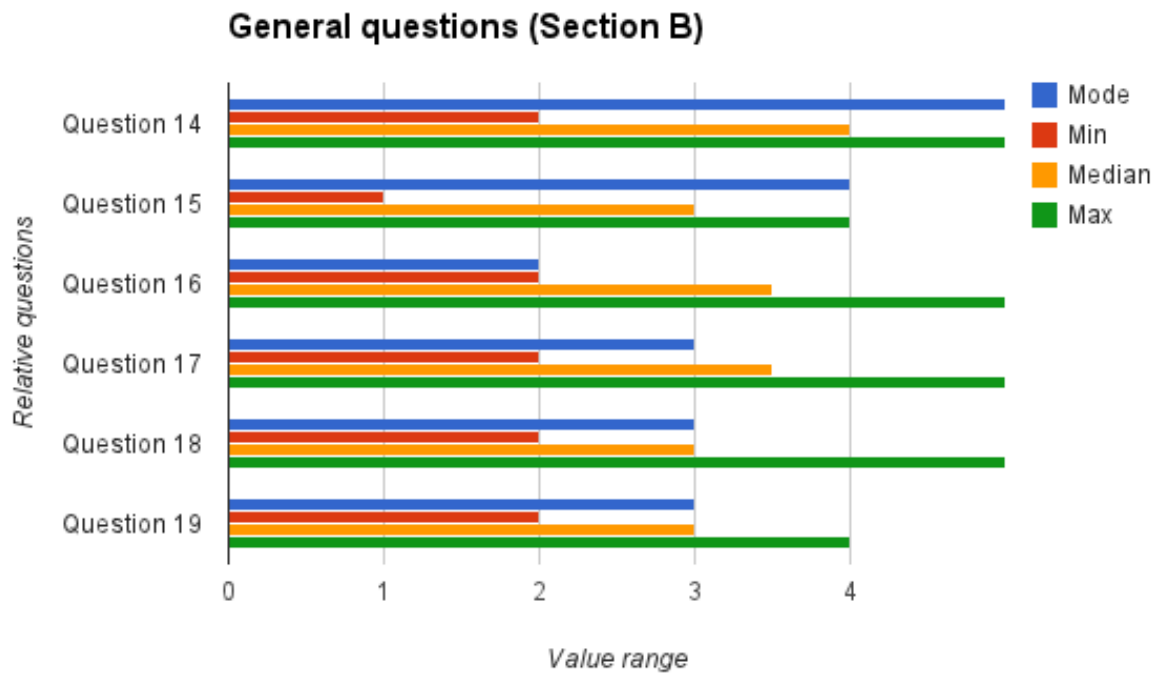


Figure 4.3: Support of collaboration, decision-making and data-mining: mode, minimum, median, and maximum values are presented for services’ specific Questions 14-19. The range of original values is 1-5, where 1 denotes strong disagreement and 5 denotes strong agreement.

In Table 4.2, we present the marginal distribution of evaluators’ responses for Questions 5-19 enquiring about collaboration, decision making and data-mining issues of the Workbench integrated services. From the 136 valid answers (14 N/A’s were reported), we can observe that most of them range in the scale from 4 to 5, with the frequency of $p(\text{mark} \geq 4) \approx 0.654$ and $p(\text{mark} = 5) \approx 0.221$. This is in accordance with the mode and median trend values presented above in Figures 4.2 and 4.3.

Questions\ Marks	1	2	3	4	5	N/A
Question 5	0	0	1	6	3	-
Question 6	0	0	2	6	1	1
Question 7	0	0	1	4	3	2
Question 8	0	0	0	6	3	1
Question 9	0	0	0	3	5	2
Question 10	0	2	0	4	3	1
Question 11	0	0	2	6	1	1
Question 12	0	1	3	5	0	1
Question 13	0	1	2	3	3	1
Question 14	0	2	2	2	3	1
Question 15	1	2	2	4	0	1
Question 16	0	4	1	4	1	-
Question 17	0	2	3	2	3	-
Question 18	0	3	3	2	1	1
Question 19	0	2	5	2	0	1
<i>SUM</i>	<i>1</i>	<i>19</i>	<i>27</i>	<i>59</i>	<i>30</i>	<i>14</i>

Table 4.2: Support of collaboration, decision-making and data-mining: marginal distribution of responses for Questions 5-19.

Recommendations for improvements

- The Dicode Services received a very high acceptance. A better explanation of them, especially in cases concerning cognitively complex issues, would be a plus.
- The Dicode Service with the most positive ratings is “Prominence Graph and Google”; this shows that experts highly appreciated the service itself but also the integration of other (well-known) working tools into the Dicode Workbench.
- Collaboration support was also very welcomed by the users. One recommendation was about implementing functionalities to enable usage of the Dicode Workbench with a “guest” identity (without a proper login, with limited properties).

Section C: Potential benefit to my work (willingness to use the Dicode Workbench in their working environment)

In the last section of the questionnaire, evaluators were asked to express their willingness to use or recommend Dicode Workbench, as well as to change their current work practices. The statements of Section C were:

- 20. The “Topic Detection” and the “Topic Graph” services will be a strong support for my analytical work.
- 21. I can see the potential benefit of using Dicode workbench in my work.
- 22. Dicode provides sufficient services to support my work.
- 23. I would consider using the Dicode workbench in the near future.
- 24. The use of Dicode will have positive impact on my current work practices.
- 25. The use of Dicode will change my current work practices.
- 26. I will recommend the Dicode workbench to my peers/community.

A positive impact of the Dicode Workbench and Dicode Services on their current work practices in the near future was given by the majority of the interviewees. The readiness to recommend Dicode is on a high level. In Figure 4.4, we can observe that the mode and median values range in [2, 4], although most values are within the [3, 4] range. Even if the experts made very positive comments on the Dicode Workbench and the Dicode Services, the reaction on their use and recommendation was slightly more reserved. This can be explained by the fact that many experts stated in the personal interviews that they really need to use the tools to form a final opinion.

Nevertheless, Dicode Services are highly relevant for marketing today in order to derive meaningful information from the web. The services address important marketing challenges and strongly support social media monitoring.

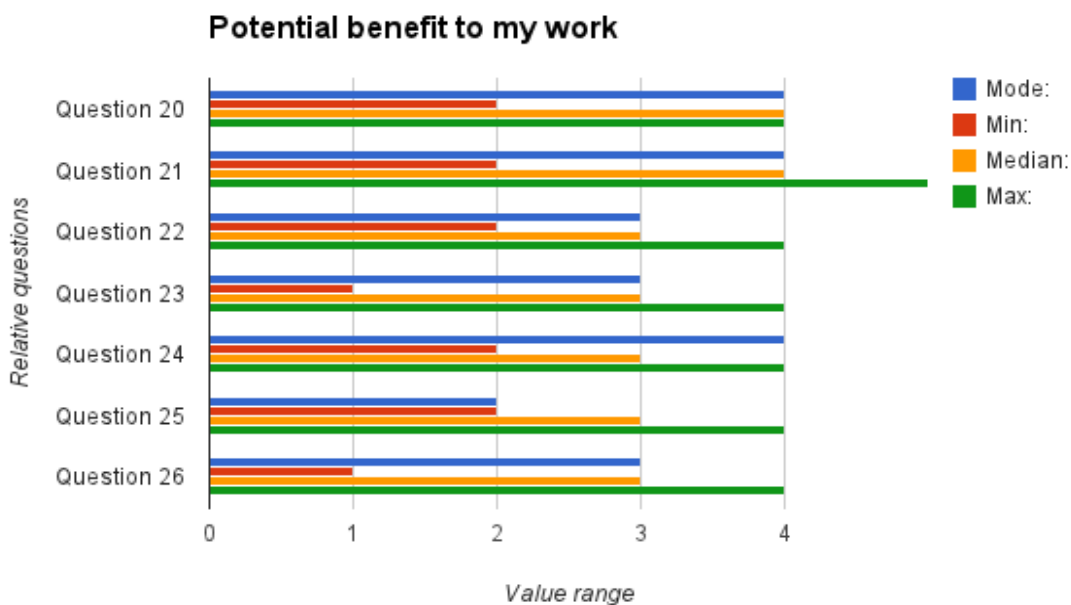


Figure 4.4: Potential benefit to my work: mode, minimum, median, and maximum values are presented for services’ specific Questions 20-26. The range of original values is 1-5, where 1 denotes strong disagreement and 5 denotes strong agreement.

The same conclusions can be drawn by observing Table 4.3. Particularly, the majority of the given responses are '3' and '4', where $p(\text{mark} \geq 3) \approx 0.75$ is the marginal frequency of the responses given above '3'.

Questions \ Marks	1	2	3	4	5	N/A
Question 20	0	1	3	6	0	-
Question 21	0	1	3	5	1	-
Question 22	0	2	5	2	0	1
Question 23	1	2	3	3	0	1
Question 24	0	3	2	4	0	1
Question 25	0	4	2	3	0	1
Question 26	1	1	3	3	0	2
SUM	2	14	21	26	1	6

Table 4.3: Potential benefit to my work: marginal distribution of responses for Questions 20-26.

Recommendations for improvements

- More information about the opportunities in the daily usage of the Dicode solution should be given. Dicode's opportunity is to show and better explain its innovativeness. Marketing experts are often overloaded with many tasks. Even though they are committed to SMM, they are not the drivers or main 'source' of innovativeness; instead, they are 'followers'.
- The opportunity for Dicode is to communicate and act like an innovative leader in the field of OMUWD.

3.4 Personal Interviews

In order to complete the feedback received through the questionnaires regarding the general view on SMM and the appreciation of the Dicode services, we conducted personal interviews with five senior marketing professionals (belonging to the group of evaluators who had completed the online questionnaire). During these interviews, we had the possibility to clearly explain our approach and directly answer upcoming questions related to Use Case #3. Moreover, we had the opportunity to re-check their understanding of this use case and to further explore noticeable results from the online research. Details about the roles and associated companies of the interviewees are summarized in Table 4.4.

3.4.1 Questions and results

This section reports on the issues raised and summarizes the results of the experts' interviews on the relevance of SMM in corporate structures (also comparing them to

the results of the first evaluation round) and their general opinion about the Dicode Workbench. The interviews were structured around three main questions.

Name	Role	Company	Description
Daniel Putsche	Managing Director Germany	The Mags	The Mags supports advertising agencies in terms of digital communications, has more than 60 employees, headquarter in Sofia
Achim Ewers zum Rode	Manager Brand Strategy & CIEurope	Opel AG	Car manufacturer, part of General Motors, Opel has about 25.000 employees in Germany
Dr. Benjamin Schwenn	Professor for Brand Management	design akademie berlin	Marketing expert with a broad range of experience in the agency business
Thomas Henrich	Head of Marketing	Commerzreal	Asset Management division of Germany's Commerzbank - No.2 in Pubic Banking in Germany
Oliver Jeschonek	Founder and Managing Director	Socialect	Brand Consultancy with offices in Berlin and Frankfurt

Table 4.4: Information about the five professionals that were interviewed.

Q1. How would you rate the impact of social media in your company/industry?

Social Media is an integral part of marketing; without any exception, all experts share the same opinion. But relevance differs between B2C and B2B. In fact, SMM budgets are much higher in the B2C sector.

While Social Media activities in their company were carried out in a very much unstructured way in 2012, many experts asserted that today Social Media is conducted in a much more strategic and integrated way. There is a consensus about the advantages that Social Media offers to companies. The fear of opening up to consumers and being more vulnerable fades towards the positive effects regarding consumer engagement, market research and valuable insights.

Due to its very direct and fast intercommunication, Social Media will have a huge impact on Human Recourses and Customer Service in the near future. However, there are still doubts about monetization through Social Media campaigns. Most experts doubt that there will be a direct ROI of Social Media campaigns soon - only indirectly by medium term brand image effects.

Q2: Does your company use Social Media Monitoring? If yes, in what way? If not, why not? What is the quality of the associated data?

First of all, experts state that there is SMM excellence in their companies' structure. However, there are different interpretations of SMM. Some experts mentioned that they do SMM by screening a few relevant Blogs, once or twice a week – while others rely on full automated monitoring conducted in-house or by third-party suppliers. Compared to last year's evaluation, the ratio between automated and non-automated systems is alike. A trend towards fully-automated systems is missing.

Fully-automated systems are much more time- and cost-consuming and do not necessarily provide better results. Fully-automated systems seem to focus mainly on quantitative results, giving a broad overview of consumer involvement but leave less room to extract valuable insights.

However, the majority of experts stated that there is still room for improvement of the SMM infrastructure in their company. While all experts assure the rising importance of SMM, there are very few plans to invest or raise the budget for it in the near future. A reason for that is mainly the missing measurability of ROI. Even if they are very open-minded towards new technologies, they still decide more conservatively because they just avoid taking risks. This is also linked to the phenomenon of internal competition. Collaboration within their companies seems to be a huge challenge. Depending on where SMM is located (Marketing, IT, PR, Corporate Communications), there is very little exchange of results; these departments still think and work in 'silos'. Even collaboration between different departments to optimize the monitoring process is very rare. The digital readiness is low. There is definitely room for improvement. In addition, limited marketing budgets play an important role.

Q3: What is your impression (pros and cons) of the Dicode Workbench?

Many experts stated that there is definitely a need for (r)evolution in this area. The sheer amount of mails, mailing lists, conferences calls, reports, video conferences etc. is seen as an inadequate way to work together in digital times. Often, it provokes similar working operating cycles and process ruptures which lead into ineffectiveness and inefficiencies.

The overall impression of the Dicode Workbench was positive; especially the workspace was perceived as new, very useful and innovative. Some critical comments about its design were made. The Dicode Workbench offers significant advantages regarding calibration and the sharing of results (Dicode workspaces).

While there is a very positive impression of the Dicode services, the biggest challenge might be the introduction of the Dicode Workbench in the corporate structure and culture. There are three main reasons for that:

- Corporate structures are very bureaucratic. The introduction of the Dicode Workbench implies a long lasting process of approvals, discussions and privacy protection. It is seen as a time-intensive project but marketing has to speed up with their internal discussion to finally use innovative tools to better understand the Social Web/Social Media.
- Employees have to get trained on the new tool and overcome their "silo thinking" to work in a collaborative way on a collaborative platform. A commitment to the Dicode Workbench is seen as voting against the existing communication tool in the

company. Today, there is a limited chance of success to implement an additional new tool as long as current tools are in use, or as long as a new tool is not able to integrate the existing ones.

- None of the experts thinks that a project can be conducted by using the Dicode Workbench only. In every project, there will be offline parts - phone calls, personal conversation and meetings. Ensuring a consistent project history in the Dicode Workbench implies updating the system after every offline interaction. This is a very time-consuming step and additionally there is a high risk of forgetting to update the project.

4 Final conclusions and further work directions

- Compared to the first evaluation round (see D6.4.1), the interviewed experts had the opportunity to experience the Dicode Workbench and OMUWD related Dicode services for the first time. This rendered a more intense involvement with the services during the interviews than before. The interviewees were not “forced” to stress their imagination to really understand the functions, which immediately created a far better foundation for their judgements and enabled them to pay more attention into details.
- Compared to the first evaluation round, both Dicode Workbench and Dicode services were perceived very positively as useful and highly relevant applications for SMM. The Dicode services were appreciated and seen as remarkable, intelligent innovative solutions.
- Criticism was clearly articulated regarding the “old-fashioned” look & feel of the Dicode Workbench. For sure, this can easily be solved by a state-of-the-art design.
 - We need to push development of the design (look & feel) to assure a “state of the art” look of Dicode Workbench and Dicode services.
- Marketing experts state that the option to integrate existing tools within a marketing organisation into the Dicode Workbench would create a huge additional benefit and would help to promote the process of change (out of “silo thinking”).
 - We need to think about the possibility to integrate existing tools/further applications to support the “buy in” of managers.

Appendix: Dicode questionnaire - second round

The live form of Dicode's Use Case #3 OMUWD was uploaded via Google Docs platform and can be found in <https://docs.google.com/forms/d/1FhbjCHUBlAvrgGjc-xIGNGTjnpKuZtOeDWB0eRPCNPs/viewform>. The Questionnaire includes:

- an introduction to the Dicode project,
- a description of Dicode project's objectives,
- a description of Dicode project's evaluation objectives,
- an introduction to the accompanied videos explaining the walkthrough video scenario presented,
- links to the two accompanied videos,
(<http://hodgkin.dia.fi.upm.es:8080/dicode/workbenchVideo2.mp4> ,
http://dicodedev.cti.gr/screencast/UC3_screencast/UC3_Opinion_Mining.mov),
- a set of 26 questions aiming to explore the functionality of the Dicode Workbench, the functionality of the integrated services and their future potential under OMUWD. The services considered are:
 - 1 Workbench - collaboration service
 - 2 Workbench decision-making service
 - 3 Data-mining - Phrase Extraction Application, Topic Detection, Entity Prominence, Emotion Detection Training service / Sentiment, Top Entities services

We hereby include the whole body of the questionnaire as presented to the evaluators of the 2nd evaluation round of the Dicode project - Use case #3.



Tell us what you think!

We appreciate your input on the Dicode EU FP7 project. The following questionnaire will help us collect your feedback and understand what aspects of the Dicode workbench and integrated services satisfy you.

Before filling in this questionnaire please watch the accompanied screen casts, which show on a step-by-step basis the log-in process to the Dicode workbench and the options offered for intuitive collaboration and data analysis via the workbench integrated services.

Think about all the tasks that were presented at the screen casts while you answer these questions. Please read each statement and indicate how strongly you agree or disagree with the statement by ticking a number on the scale. If a statement does not apply to you, please tick N/A. Whenever it is appropriate, please write comments to explain your answers.

Screen casts:

1. The first screen cast presents the log-in process along with the functionalities of the Dicode workbench

<http://hodgkin.dia.fi.upm.es:8080/dicode/workbenchVideo2.mp4>

2. The second screen cast presents an overview of the collaborative and decision making functionalities as employed in the Dicode workbench, in order to analyze complex text and find competitive advantages of brands/products.

http://dicodedev.cti.gr/screencast/UC3_screencast/UC3_Opinion_Mining.mov

**A. Overall impression of Dicode workbench**

1. The information provided on the video is clear.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

2. The design of the Dicode workbench is very pleasant.

Strongly disagree 1 2 3 4 5 Strongly agree

Please name any specific features you did not like so much.

3. The use of Dicode workbench is easy.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

4. The user interface of Dicode workbench is intuitive.

Strongly disagree 1 2 3 4 5 Strongly agree

Please indicate any alterations you would suggest.

B. Support of collaboration, decision making and data-mining

5. The "Topic Graph" service is very helpful to easily identify competitive topics.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

6. The "Top Entity Service" allow me to easily discover the discussions about my topic (in a certain type, for a certain domain, at a certain point in time).

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

7. The "Named Entity Service" discovers precisely the right object of my investigation (e.g. liquid spice named "Maggi" and not the first name "Maggi").

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

8. The "Prominence Graph" quickly finds the entity occurrences over time and in comparison to competition.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

9. With the "Prominence Graph and Google" I easily understand the drivers of the conversation.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

10. The "Topic Graph" is very helpful to easily identify competitive topics.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

11. "Phrase Extraction Application" is an automatic learning service which strongly supports my update skills.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

12. Sentiment Analysis has become an easy and time saving task by using the "Phrase Extraction Application".

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

13. The automatic highlighting of positive/negative phrases within a certain context in the "Phrase Extraction Application" is very valuable.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

14. The easiness to analyse complex text will strongly support the speed of operation and collaborative working.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

15. Dicode services can help me to deal with cognitive-complex issues.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

16. The Dicode workbench can facilitate collaboration.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

17. The Dicode workbench can enhance decision making.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

18. The services of Dicode workbench are very well integrated.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

19. The Dicode workbench can help me be more productive and concentrate on creative activities.

Strongly disagree 1 2 3 4 5 Strongly agree

Please name specific activities you foresee to perform using Dicode workbench.

C. Potential benefit to my work

20. The "Topic Detection" and the "Topic Graph" services will be a strong support for my analytical work.

Strongly disagree 1 2 3 4 5 Strongly agree

Please add comments if any.

21. I can see the potential benefit of using Dicode workbench in my work.

Strongly disagree 1 2 3 4 5 Strongly agree

Please name specific foreseen/ expected benefits:

22. Dicode provides sufficient services to support my work.Strongly disagree 1 2 3 4 5 Strongly agree**Please add comments if any.****23. I would consider using the Dicode workbench in the near future.**Strongly disagree 1 2 3 4 5 Strongly agree**Please add comments if any.****24. The use of Dicode will have positive impact on my current work practices.**Strongly disagree 1 2 3 4 5 Strongly agree**Please name specific aspects of your current work practices where you foresee/ expect a positive impact.****25. The use of Dicode will change my current work practices.**Strongly disagree 1 2 3 4 5 Strongly agree**Please provide specific examples of the foreseen/ expected changes:****26. I will recommend the Dicode workbench to my peers/ community.**Strongly disagree 1 2 3 4 5 Strongly agree**Please add comments if any.**

Thank you for your participation!