

An approach for evaluation of social media monitoring tools

Ioannis Stavrakantonakis¹, Andreea-Elena Gagiou¹, Harriet Kasper², Ioan Toma¹, and Andreas Thalhammer¹

¹Semantic Technology Institute (STI) - Innsbruck
ICT Technologiepark, Technikerstrasse 21a, 6020 Innsbruck, Austria
{firstname.lastname}@sti2.at

²Fraunhofer Institute for Industrial Engineering IAO
Nobelstr. 12, 70569 Stuttgart, Germany
harriet.kasper@iao.fraunhofer.de

Abstract. Social networks are important means for communication, engaging millions of users around the globe. For enterprises in particular, being present and aware of what is discussed on these communication channels about their products and services has become a must. Social media monitoring tools enable enterprises to have access to real customers' opinions, complaints and questions at real time in a highly scalable way. As the number of social monitoring tools has rapidly increased in the last years, enterprises are faced with the difficult tasks of choosing the right tool for their needs. This paper proposes a structured evaluation framework comprising a set of evaluation criteria that can be used to analyze social monitoring tools from three perspectives: the concepts they implement, the technologies used and the user interface they provide. To exemplify the usefulness of our evaluation framework we analyze a set of social monitoring tools after briefly describing them.

Keywords: social media monitoring, listening platforms, business intelligence

1 Introduction

Given the increasingly large number of consumers using social media, enterprises cannot ignore the power that is weaved within its networks. For instance, Power Reviews statistics on social commerce stats state that there are 500 million active Facebook users, 65 million tweets and over 3 billion Google searches each day [16]. People are using social media networks to express their needs and complaints, as well as opinions about proprietary products and services, and to compare them with solutions from other vendors. Due to the explosion of social media sites, marketers have

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an exponentially larger audience and the ability to instantly communicate with consumers [12]. In this respect, Forrester Research forecasts that, in terms of spending, social media marketing will reach an annual growth rate of 34%, outmatching all other forms of online marketing [13].

Enterprises utilize a wide range of traditional and nontraditional methods to listen to customers; however, in recent years, survey researchers are facing difficulties in collecting data through the traditional methods due to the decrease in landline telephone coverage and willingness of respondents to participate [14]. Moreover, the attractiveness of using free online sources of information is further sustained by the relative costliness and time-intensive nature of traditional survey research. As a result, in recent years, social media monitoring tools and platforms have emerged to address the need for customer listening methods, as well as to harness the wealth of information available online in the form of user generated content. These tools offer means for listening to the social media users, analysing and measuring their activity in relation to a brand or enterprise, process that can lead to valuable insights from the side of enterprises regarding which strategy they should employ, how customers view their services and solutions, what the enterprise should expect in the future or which of their offered features are not as effective as estimated. The added value of social media monitoring is that it offers access to real customers' opinions, complaints and questions, at real time, in a highly scalable way. Moreover, another advantage is given by the speed at which one can investigate a topic of interest, which greatly exceeds that of a traditional survey approach. There is no longer the need for sample identification, question construction, contact attempts, and data collection prior to the analysis - social media monitoring tools only require access to the online comments and mentions posted by customers. These advantages are sustained by a press release on a yet unpublished study of Alterian and Microsoft, which claims to prove that social media monitoring is more precise, faster and more economical [5] than traditional expert panel analysis. For the specific reviewed example this statement is certainly true, but cannot be generalized. In the current study, we provide a list of 10 major monitoring tools and platforms available commercially: Alterian-SM2, Brandwatch, Converseon, Cymfony- Maestro, evolve24-Mirror, Meltwater-Buzz, NM Incite-My BuzzMetrics, Radian6, Sysomos and Visible Technologies-Visible Intelligence. Our list is not exhaustive since it has been composed using the criteria presented below. The intended use of the list is to provide an overview of the presented monitoring tools and platforms as well as to offer insights on the technology employed, on the basic features they provide as well as their limitations. The vendor selection is aligned to the following guidelines:

- Offer products that scale across multiple business functions, e.g. marketing measurement, market research, customer support, crisis identification, and so on [8];
- Offer a combination of software and services, i.e. provide proprietary dashboards, crawlers and sentiment analysis engines [8];
- Considerable presence in the market, i.e. they are amongst the most relevant vendors on the market [8];

- Availability of technical information that could be gathered from the tools' official websites and online reviews.

Considering the information offered on the official websites of the tools, we have selected tools that are in accordance with the first two criteria mentioned. Regarding the third criterion, we have chosen tools that have been mentioned by reports created by major technology and market research enterprises, such as Forrester Research [8], and agency-client relationship experts, such as RSW/US [15]. Moreover, it should be mentioned that our assessment criteria has been developed on the information provided on the official websites. Furthermore, we have selected only commercially available tools, since free tools have the tendency to either offer limited support or non-customizable options. However, we have included in the discussion section a short review of such free social media monitoring tools. Considering the large number of social media monitoring tools available, enterprises need an evaluation criterion to help them select the tool that is compliant with their needs and goals. The current study contributes by offering an insight of the features provided by ten of the most important social media monitoring tools available commercially, as well as provides a series of criteria for future evaluations of such tools. The remainder of the paper is structured as follows: Section 2 presents the application fields and motivation for using social media monitoring tools. Section 3 focuses on the proposed criteria for the evaluation framework split in three main categories: concepts used, technologies employed and the extent of the user interface. In Section 4 we present short descriptions for the tools chosen in the study. Section 5 focuses on the discussion and actual comparison of the tools based on the criteria chosen. The last section presents the conclusions and contribution of the present study.

2 Application fields

Posts on social media sites, in blogs and forums are relevant to many different stakeholders in an enterprise. For business leaders they provide insight in the overall online reputation of the own brands, competitors, products and services, thereby help define future strategies. Marketing can use the insight to control feedback on campaigns. Additionally, service may identify current pain points and requests, whilst product and innovation management could derive new ideas and so forth. In a market study on social media monitoring tools of Fraunhofer IAO [1] the following application fields have been specified:

- reputation management;
- event detection, issue and crisis management;
- competitor analysis;
- trend and market research plus campaign monitoring;
- influencer detection and customer relationship management;
- product and innovation management.

The keyword-sets that trigger a monitoring in each of these application fields are dissimilar and so are the positions in the enterprise that will utilize the results of a respective monitoring. Therefore, identifying the information needs must be the first step in setting up a social media monitoring project. The innovation mining process of identifying information need(s), collecting information, processing results, analyzing and interpreting and disseminating and acting is being presented by Finzen and Kintz (2011) [2]. This process has been used as a general reference for building a social media monitoring framework by Kasper and Kett (2011) [3], which includes application fields, themes, functions, activities and roles in the enterprise. The importance of social media management is further discussed in the conclusion.

3 Evaluation framework

Currently there are more than 200 available social media monitoring tools on the market, thus making an educated choice about which tool to use has become increasingly difficult. Moreover, creating an evaluation framework for such tools has been a challenge for many reviewers and market research enterprises. For instance, Forrester [8] assesses tools based on three criteria: current offering (services and features offered), strategy (how they address enterprise-level needs) and market presence. However, the proposed criteria are insufficient. We have chosen to create a more detailed framework that focuses on the basic features of a social media monitoring tools, as well as on the technology and user interface features.

This section is split in three categories that address the following issues: the main concepts related to social media monitoring (analysis, insights, engagement, workflow management and influence); the technology used by the tools and the most important aspects related to the user interface.

3.1 Concepts

“Concepts” refers to the elements that define a social media monitoring tool: ability to gather data and analyze it in a meaningful way to the client (illustrated by the Analysis concept), features that would enable the client to reach out to the customers (Engagement) and determine the influencers (Influence), as well as tools that allow different members of the enterprise to communicate with the tool (Workflow management). The current subsection will shortly describe these concepts and their importance. From the evaluation view, we have to take in consideration the presence of the various concepts in the tools.

Analysis

The social media monitoring tool selected should be able to gather data from many sources and in different forms (e.g. posts, pictures, videos) and to establish a listening grid to capture such data. Having established a listening grid that captures data and posts around the topics the user is interested in, the next step is to analyze the data and produce actionable reports and insights for the user of the tool. The analysis is of

particular importance as it encompasses the methods used to both filter the gathered data of unwanted information (e.g. spam, duplicates) and to process it (e.g. determine the language or sentiment) in a way that is meaningful for the enterprise. The analysis should provide:

- Brand monitoring and reputation management
- Consumer segmentation, customer insight and market research
- Identify specific conversations to join
- Gather information about competitors
- Support product and service development

Engagement

The engagement concept refers to the ability of the tool to support reaction with the social media posts. Many tools today offer the integrated possibility to reply to posts and follow up to any mention, complaint or question that is needed or has some opportunities.

Workflow management

Workflow refers to the process of assigning, tracking and responding to social media streams, usually in a team environment in order to prevent double responses and missed opportunities. It is crucial for an enterprise tool to promote team productivity through collaboration.

Influence

Influence refers to the ability to affect other people's thoughts, perceptions or behaviors. In the context of social media, influence refers to those posts that have an impact on people. Although influence can be neutral, positive and negative, it is important only when it has an impact on the client's enterprise. Influence can be attributed to a single or more individuals (called influencer), websites, specific posts or comments. Enterprises must determine who is creating the posts, as well as how many people are reading. A variety of factors, from topic relevance and reach (audience), to credibility (popularity and perceived expertise of the influencer versus his potential for bias) shape the influence concept. Social media monitoring tools should be able to determine who the influencers and brand advocates are, as well as the main detractors.

3.2 Technology

In this subsection, we describe the technological features social media monitoring tools should provide in order to determine the extent of the effect of social media posts on the client's enterprise, in relation to the concepts presented in Section 3.1. Additionally, these features are the building blocks required to collect data, perform the analysis and return valuable insight to the client.

Listening Grid adjustment

The listening grid focuses on three main aspects: (1) the channels that are monitored (e.g. blogs and micro-blogs, social networks, video and image websites, etc.); (2) which countries and languages the tools provide support for; and (3) the topics relevant to the enterprise. Additionally, the listening grid should send alerts to inform clients (e.g. when post volume increases over a defined threshold or sentiment becomes very negative).

Near real-time processing

It is crucial for enterprises to follow up potential customers or customers' complaints, questions and thoughts well in time. Therefore, the monitoring tool should provide actual data in near real-time.

Integration with 3rd party applications (API)

In general, the various departments of an enterprise lean on a countable number of tools and applications. Thus, the social media monitoring tool should provide an API solution in order to make feasible the integration of the social media monitoring with other tools (e.g. customer relationship management tools).

Sentiment analysis

The effort of finding valuable information in user-generated data is called opinion mining. Sentiments are determined using elements of computational linguistics, text analytics, and machine learning elements, such as latent semantic analysis, support vector machines, Natural Language Processing. Since opinion mining is a broad term, most monitoring tools have concentrated their efforts on sentiment analysis, whose main purpose is measuring the attitude, opinion, emotional state, or intended emotional communication of a speaker or writer. A sentiment score can be extremely useful in evaluating a large data set of social brand mentions, as well as allow enterprises to filter content based on positive or negative comments, thus isolating the themes or issues that have determined the developed sentiment. The major method of extracting sentiment from user generated content is Natural Language Processing (NLP). Sometimes called text analytics, data mining or computational linguistics, NLP refers to the computerized process of automatically analyzing the meaning of human language. Most current tools attempt to assign sentiment to a post automatically. Although automated sentiment technology cannot reach the quality of a human annotator, they offer comparable results to humans in center real-world scenarios. Moreover, the automatic techniques are tireless, fast, consistent (they do not make random errors), and can be improved over time [18].

Historical data

Access to previously captured data is required in order to compare the current metrics and reports related to the monitored topic with any previous state of it. It is ne-

cessary to understand the improvement of a strategy in the long-run and through the years.

3.3 User Interface

Beside the accurate production of insights described in the previous subsections, the client should be able to visualize the results of the data gathering and analysis stages in a clear and concise way. Thus, the current section focuses on the user interface and the features it must possess in order to help enterprises understand their social media presence.

Dashboard

In information technology, a dashboard is a user interface that organizes and presents information in a manner that is easy to read and use. To some extent, most tools' graphical user interface resembles a dashboard. For certain tools presented in the current study, the developers consciously employ this metaphor so that the user instantly recognizes the similarity between the tool's user interface and an automobile's dashboard. Moreover, some tools refer to their user interface as dashboards since they aim to integrate information from multiple components into a unified display. It allows users to listen, monitor and report on the conversations they are following in a quick and easy manner. These tools allow advanced configuration options for filtering language, region, media type, or organize the results found. Additionally, the dashboard offers users graphical representation of the raw data in the form of charts, listings, and historical graphing of queries and phrases. Social media monitoring tools should provide a dashboard that can be customized to the needs of the client and that includes a wide range of visualization tools. Moreover, users should be able to archive content and conversation with notes and tags, and track a sufficient number of keywords and phrases.

Export results

In order to comply with their customers' needs, some social media monitoring tools developers enable users to download the results of their tool's analysis in different formats such as excel workbook or CSV format. In some cases, the users can create workspaces based on their preferences and download the reports.

4 Tools

This section gives a brief presentation of the tools that we are discussing in section 5 based on the evaluation framework. It is worth mentioning that the set of tools is not an exhaustive list of the available tools on the market.

4.1 Alterian - SM2

Market presence

Launched in 2007. Alterian¹ offers the SM2 tool, which is a business intelligence product that provides visibility into social media. In particular, it is a social monitoring and analysis tool which integrates with the other marketing solutions of the Alterian toolkit.

Technology & features

The tool relies on the broad coverage of the social media by using own proprietary crawlers and data aggregators. SM2 supports sentiment analysis by utilizing a proprietary set of technologies including word parsing, weighting, proximity and Natural Language Processing. The user of SM2 has access to a comprehensive set of tools, reports and metrics that allows him/her to track and analyze conversations regarding the topic of his/her interest. Alterian users are encouraged to merge social media data with other sources of data to determine the reach, sentiment, and longevity of multi-channel campaigns. Although Alterian is one of the most popular brands on the market, the SM2 product mostly offers standard services only: the dashboard is not easily customized by the user (the infographs are basic), it offers access to an extensive historical data, performs automated sentiment analysis and filters for relevance. Moreover, [17] describes it as a mundane, expensive option, that does not offer anything new and exciting to the analytical process.

4.2 Brandwatch

Market presence

Launched in August 2007. Brandwatch² is a social media monitoring tool which focuses on gathering, “cleaning”, analyzing and presenting data. The application enables users to add their own filters of country, source, type, credibility and sentiment to analyze the data and allow the user to focus on the most relevant insights.

Technology & features

The application monitors social media in four stages: (1) gathering data, (2) cleaning data, (3) analyzing and (4) presenting data. In the first stage (data gathering stage), the Brandwatch crawler operates in near-real time, gathering data based on the user’s search query from social networks, blogs and micro-blogging sites (e.g. Twitter), news services (international, national and regional), video sites, image sites, discussion forums, and corporate sites. The responses are provided in a broad data base. The data is filtered in the second stage, where irrelevant and outdated posts, as well as advertising and spam are eliminated. At this step, a Natural Language Processing algorithm notes the language used for the data, allowing the user to filter the results

¹ <http://www.alterian.com/>

² <http://www.brandwatch.com/>

by language. In the third stage, Brandwatch runs the remaining data through a five point analysis process consisting of language detection, title and content extraction, query matching, sentiment analysis and recurring phrase identifications. In the final stage the clients can use the online dashboards to create workspaces (custom reports) based on their preferences and download reports in excel workbook or CSV format. Users can create and save an unlimited number of workspaces. The dashboard does not require any software to be installed, except for a browser. Moreover, the developers provide an Application Programming Interface (API) for clients who wish to integrate Brandwatch data in their own system. Both dashboard and API function by making queries to the developer's data-center, where data is stored using a large distributed, redundant collection of servers, guaranteeing availability and performance.

On the other hand, the application's limitations³ are the accuracy of sentiment classification and spam filtering. However, Brandwatch states that the results can be improved using human intervention in correcting sentiment and filtering spam.

4.3 Converseon

Market presence

Converseon⁴ offers tailor made solutions in the field of social media monitoring. Converseon was founded in 2001 as a social media agency.

Technology & features

The Converseon social media monitoring toolkit utilizes the concepts of listening by mining relevant data from the social media sphere, organizing the social media campaigns of the organization and shaping its strategy in the market. Also, the toolkit supports the generation of reports and metrics regarding the performance of an organization in the market. Converseon combines technology with human analysis to obtain highly effective data quality, leading custom reports, and strong functionality [8]. However, the customized approach hurts long-term strategy, increases overall costs and slows down the pace at which customers can act on social media data [8].

4.4 Cymfony - Maestro

Market presence

Cymfony Maestro⁵ is a third generation social media monitoring tool which gives clients (near) real time access to a comprehensive and custom built archive of traditional and social media.

Technology & features

³ <http://www.monitoring-social-media.com/product-review-using-brandwatch-for-social-media-monitoring>

⁴ <http://converseon.com/>

⁵ <http://www.cymfony.com/solutions/maestro>

The listening and influence platform, Maestro, integrates distinctive technology with input from expert analysts to identify people, issues and trends that may impact a business. The analysis is performed in six steps: (1) gathering data; (2) refine the data to fit the customer; (3) automatic translation to English; (4) filter for spam and duplicates; (5) add value to the data (e.g. impressions, influence); and (6) Natural Language Processing for brand adds sentiment and tags of categories.

The tool acquires content in any language and is automatically translated to English. The results are presented in both the original language and English. The Maestro's API enables the deployment of Cymfony widgets to a corporate portal, employee dashboard and other web-based or desktop application. Additionally, Cymfony offers role-based security, a feature that is configurable based on the client's requirements and provides a finer-grained access to the underlying data set and Maestro functionality. Cymfony Maestro provides an enterprise-class SaaS platform, configurable, on-demand and unlimited number of dashboards, as well as Natural Language Processing and sentiment analysis. The platform integrates technology with expert analysis (research and PR professionals), offering a range of packaged and custom service, in order to gather competitive intelligence, improve customer insight and market research and provide brand monitoring and reputation management. Cymfony Maestro offers an enterprise-class SaaS platform, as well as configurable, on-demand and unlimited number of dashboards. Moreover, brands can use the basic Maestro platform to retrieve, process and analyze data in near-real time, whilst those with additional analytical requirements can access categorized market intelligence reports: "Competitive Landscape Reports", "Category Insights Reports", and "Holistic Market Research Engagement Reports" [17].

4.5 evolve24 - Mirror

Market presence

Evolve24⁶ offers a social media monitoring tool, called Mirror since 2004.

Technology & features

The Mirror uses proprietary algorithms in order to help the user define the best strategies regarding the monitored data from the social networks. It captures data from different sources in near real-time, analyzes it and generates reports. It helps the user recognize complaints, questions and emerging threats due to the sentiment analysis and weighting system that it uses. Its main strength is its text processing data quality, while its limitations are its dashboard interface and the lack of tool sets for marketers [8].

⁶ <http://www.maritzresearch.com/solutions/social-intelligence.aspx>

4.6 Meltwater - Buzz

Market presence

Meltwater Buzz⁷ helps businesses manage their social presence and engage with current and prospective customers since 2007.

Technology & features

Buzz combines the capabilities of Meltwater's Buzz tool with the features offered by the JitterJam product. The JitterJam product combines social media monitoring, a contact database and multichannel digital marketing platform in a single social CRM system, whilst Meltwater Buzz monitors, track and analyze user-generated content and social media presence. Engage focuses on specific individuals within the community rather than a generic topic in order to provide personal, trusted relationships with customers and stakeholders. Meltwater Buzz Engage provides a social dashboard, multi-user workflow and a personal social advisor (to help the user learn about the benefits of the tool, as well as provide guidance and support for the platform's features). The Social Dashboard offers a "brandometer" (a graphical view of the overall sentiment), a visualization of sentiment, search results, "themes cloud" (snapshot of most frequent themes found in search results) and media spread (graphical view of the customer's campaign search results by social channel). The theme cloud provides a snapshot of most frequent search result themes, as well as helps identify potentially damaging conversations. Additionally, the tool enables "campaign" searches (dedicated to a specific brand, market or topic) and identifies relevant conversations and key influencers. Furthermore, Meltwater Buzz helps clients determine the overall sentiment of social conversations about the clients' brand and understand social trends (the volume, sentiment and media spread of conversations).

4.7 NM Incite - My BuzzMetrics

Market presence

Nielsen & McKinsey launched a joint venture in 2010, the NM Incite. NM Incite offers a leading listening platform (My BuzzMetrics). However, Nielsen is active in the domain of social media monitoring since 1997.

Technology & features

My BuzzMetrics makes feasible the gathering of data from social media, as well as filtering out any noise from the monitored social conversations towards focusing on relevant topics. Moreover, the toolkit of NM Incite provides the user with reporting tools and the opportunity to react with the customers in real time via the social media profiles of the enterprise. My BuzzMetrics relies on automatic sentiment analysis and a wide range of social media sources. There is also an API available to connect any existing tools of the user to the data feeds and reports of the platform. NM Incite's

⁷ <http://buzz.meltwater.com/>

limitation consists in its poor user experience determined by the interface and functionality [8].

4.8 Radian6

Market presence

Radian6⁸ delivers one of the most popular social media monitoring tools in the market. Radian6 launched in 2006 and was acquired by SalesForce in 2011.

Technology & features

It enables organizations to become Socially Engaged Enterprises by providing means for listening to social media, analyzing and measuring the raw data, producing insights based on Natural Language Processing and engaging with the streams of posts in the social media sphere (engagement console). Moreover, the users of Radian6 are able to use a summary dashboard tool in order to get in brief the status of their monitored topics. The Radian6 platform allows the administrator of an enterprise to supervise and orchestrate his/her team by exploiting the features of the workflow management console included in the engagement console. Thus, (s)he is able to assign conversations and posts to his/her colleagues in order to take care of them, specify the priority of the tasks and also classify them (e.g. question, complain etc.). Compared to the other tools presented, Radian6 dashboard offers the basic features as well as attractive infographics. Moreover, the developers provide software capable of performing CRM, which connects the dashboard with the sales databases in order to create contacts and leads from the “River of News”. Radian6’s major strengths are its comprehensive coverage of social media data, its scalability and ability to integrate with other enterprise applications. On the other hand, Radian6 offers only 30 days of immediate historical data, which is not sufficient for a brand that wishes to analyze sentiment before, during and after the implementation of a new product or service. Moreover, due to the many features and functions, a user experiences a learning curve.

4.9 Sysomos

Market presence

Sysomos⁹ provides tools for monitoring social media conversations and themes, identify key influencers and gather insight and intelligence to help shape the business decisions and strategies of the client’s enterprise.

Technology & features

Sysomos offers two tools for social media monitoring: Media Analysis Platform (MAP) and Heatbeat. MAP is a feature-rich service that mines and analyzes social

⁸ <http://www.radian6.com/>

⁹ <http://www.sysomos.com/>

media and user-generated content. MAP provides a comprehensive and spam-free database with content gathered constantly by actively indexing blogs, social networks, Twitter, YouTube, wikis, messages boards, video sharing sites, and news sources. Additionally the tool offers an automated sentiment engine, measurable metrics, key influencer identification, competitive analysis, global and multi-language support, a full-featured engagement workflow and detailed demographics of the results. Heartbeat offers cost effective and near real-time social media monitoring and measurement, providing engagement capabilities for professionals, brand managers and customer support groups delivered using a variety of user-friendly and intuitive graphics. In essence, Heartbeat provides a subset of MAPs features, with a strong focus on enabling companies to track social media, organize conversations, manage workflows, facilitate collaboration, and provide ways to engage with influencers. The underlying content aggregation and analysis engine commercialized by Sysomos has been created as part of the BlogScope project, a free search service for the blogosphere developed as part of a research project between Sysomos Inc. and the University of Toronto.

4.10 Visible Technologies - Visible Intelligence

Market presence

Visible Intelligence¹⁰, a product of Visible Technologies, enables users to monitor, analyze and actively engage in social media conversation using a single environment. The product was launched in 2005.

Technology & features

Visible Intelligence has been designed for marketers, research groups, agencies and any other enterprise department that want to monitor and analyze social media trends to maximize ROI. The tool is designed to handle substantial amounts of information, manage alliances, workflows, assimilate and adjust to the client's processes and systems. Visible monitors the brand and manages the reputation of the client's enterprise, providing consumer segmentation, crisis communication, support of customer services efforts and support product/service development. Moreover, the tool gathers competitive intelligence and tracks social media initiative in order to identify brand advocates (influencers) or specific conversations to join. Visible provides Web crawling technology, API integrations, text mining and filtering, as well as Natural Language Processing and text analysis (at the topic level). Furthermore, the tool offers both human analysis and manual analysis' refinement by client to help the client understand the landscape and determine which intelligence to use. The primary mode of delivery for the analysis results is browser-based dashboard and self-service tools. On the other hand, Visible Technologies does not approach the subject of context or limitations of NLP engines. Moreover, [17] claims that apart from positive client testimonials, there is little evidence that Visible Intelligence is superior to cheaper competitor tools.

¹⁰ <http://www.visibletechnologies.com/>

5 Discussion

To evaluate the products against our set of criteria, we have gathered details based on a combination of information offered by official websites for the tools or vendors, white papers and external product reviews. We have set weights to reflect our analysis, as well as score the tools on a clearly defined scale, following the criteria proposed in Section 3. The weights offered are intended only as starting point, since our analysis did not include a test on the actual tools and on the underlying technologies they employ. The evaluation framework, described in the third section, provides a set of criteria that the authors of this paper find important and useful for the comparison of social media monitoring tools in the market. The purpose of this evaluation is to help potential users of social media monitoring tools make the right choice. Our purpose is not to provide an exhaustive list of tools and a detailed survey on their features in order to conclude which of them addresses the criteria in the best way. Thus, Table 1 demonstrates a way to evaluate a set of tools towards the evaluation framework that this paper introduces. Regarding the notations used in the table: we use the check mark (✓) in case the criterion is fulfilled and the (✗) in case it is not supported. For the criteria that we have not sufficient information, we leave the related space blank.

Table 1. Evaluation of tools on the criteria

Tool name	Analysis	Engagement	Workflow Management	Social Profiles	Listening Grid	Near real-time processing	API	Sentiment Analysis	Historical data	Dashboard	Export results
Alterian SM2	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brandwatch	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓
Converseon	✓	✗	✓	✓	✓	✓	✓	✓		✓	✓
Cymfony Maestro	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
evolve24 Mirror	✓	✓	✓	✓	✓	✓		✓		✓	✓
Meltwater Buzz	✓	✓	✓	✓	✓	✓	✗	✓	✓	✓	✓
NM Incite My BuzzMetrics	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Radian6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Sysomos	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Visible Technologies Intelligence	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Besides the users' time, tool-costs of up to several thousand Euros a month [1] arise when introducing professional social media monitoring. Using free services like the ones shown in Table 2 are a cost-efficient alternative especially when starting exploring this field, but the following aspects need to be considered: (1) Free tools are

also free of service. There is no contact person answering questions on functions, underlying methodology and there is no guarantee concerning the availability of the service. (2) Functions are often limited to quantitative/statistical reports. Complex analysis, for example the automated sentiment detection, is not available for languages other than English in free tools. (3) Many of the free tools are point solutions considering few or only one platform like Twitter. Services that claim searching the entire web do not reveal which sources are really included. To get a comprehensive overview several free services must be combined. (4) Results of free tools have to be saved and archived in user-defined structures and formats for example for adding own comments and especially when consolidating data from more than one free tool. (5) Workflow-functions for example for forwarding findings to colleagues and tracking the processing of such a finding are usually not available.

Table 2. Some free social media monitoring tools

Addict-o-matic	www.addictomatic.com
Boardreader	www.boardreader.com
Google Alerts	www.google.com/alerts
HyperAlerts	www.hyperalerts.no
Klout	www.klout.com/home
Netvibes	www.netvibes.com
Twazzup	www.twazzup.com
WhosTalkin	www.whostalkin.com
Yahoo Pipes	pipes.yahoo.com

6 Conclusion

In the introduction we have discussed how social media monitoring tools enable enterprises and other institutions to gather direct and up-to-date data which can provide valuable insights for their business in various application fields. To support choosing such a tool studies on social media monitoring tools have been presented for example by Plum [6], Gilliat [7], Kasper [1] and Forrester Research [8]; however, they are quickly outdated due to the rapid development of the market: new functionalities, takeovers and the appearance of new players make it difficult to solely rely on such studies. A promising approach is to make information on social media monitoring tools instantly available and editable through web-platforms like www.medienbewachen.de or www.somemo.at. However, since the information is entered by the vendors, this concept might lack objectivity. To support the process of choosing a social media monitoring tool we have introduced an evaluation framework and exemplarily applied this on a set of professional tools. The framework provides a basic structure which can be further detailed for example by specifying data sources and regional context of this data. Social media offers new opportunities for enterpris-

es, both in monitoring conversations and in actively participating and providing content on social media platforms. Social media monitoring tools support these activities; however, an enterprise also needs social media management, that means the definition of strategies, roles and processes in this new field. Due to an incident known as “Dell Hell” [9] the enterprise Dell has started early to set up structures to deal with the new communication paradigm where organizations no longer only push information through mass media, but engage in conversations with the customer. A social media listening command center has been installed to address social media conversations [10] and furthermore all employees are trained and empowered to speak on behalf of the enterprise. Enterprises must realize, that social media is not only a topic for corporate communications or marketing, but needs to be addressed cross-departmental. The Social Media Governance Study 2011 [11] shows that “greater experience of organizations results in the incorporation of more areas”. Choosing the right tools and instantiating an appropriate organization for one’s strategy are key factors for businesses to benefit from social media.

7 References

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