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Measuring brand equity with public and social media data

**A new approach to
assess brand value**

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Executive summary

Harnessing the value of people's perceptions

Social listening activities have become a critical part of any business, gathering insights into what social media users think, feel, and/or understand about a certain issue, topic, product or event. But what is the best approach a business can take to leverage that knowledge to influence the next appropriate response action - and the one after that? Because the conversation never stops online, and all this chatter adds up to valuable data. How a company uses it will determine its continuous success.

Problems all brands face today

If you own a business, you already know how tough it is to stand out in the market and be heard. One of the keys is to listen. But with the tsunami of information and data overflow that occurs every day online, how can you not only take a distinctive place in consumer minds, but then harness that knowledge to build your brand a brighter future?

The world has changed for CEOs. Every consumer is now potentially a publisher. Online reviews can make or break your brand. This means you have lost part ownership of your communication. Add to this the fact that it is increasingly difficult to monitor and assess your digital brand footprint. Yet at the same time it is essential that you know what people say about your brand, that you measure this consumer reaction and identify preferences and market trends. Any business that does not monitor data and exploit it, is unlikely to survive.

Follow, Focus, Formulate

Your company should already be following all available digital communications and brand mentions from websites, media, blogs, forums and social media. This is a good proxy to assess the strengths of a brand.

The availability of online and social media data combined with new technologies such as natural language processing (NLP) and machine learning (ML) allows you to focus on and analyse large amounts of data and to depict trending topics, consumer sentiment and brand benchmarks. This data comes from an enormity of

sources and in an array of formats including text, images, videos, audio, emojis. This sheer volume also means that data cleaning is an essential activity and involves identification of fake accounts and bots, duplication of content, relevance check of the post to the brand. You want the right data.

Finally, to be able to formulate an exact impression of, not only where your brand is, but where it should be, you need to employ the calculation of specific metrics such as brand mentions, unique authors, level of engagement and related sentiment combined with a rigorous data process involving the right skilled resources (data scientists, analysts, linguistic experts) and advanced technology (NLP, ML, AI).

Key differentiation and added-value for brands.

It's time for CEOs to move to an agile market and stakeholder driven strategy of brand measurement by using the richness of the data that's already in the public domain (complementing or replacing traditional survey approach) to mitigate reputational risks.

This will help to create future value by increasing a brand's market potential and profitability through the identification of new consumer trends, associations of the brand and unserved needs and segments.

A successful strategy means identifying and reacting quickly to changing consumer preferences and market trends such as increased sustainability conscious purchasing and brand preferences. Then businesses need to correlate that consumer and market data with internal customer data (net promoter score, client satisfaction, customer live time value) for better market and customer segmentation. Finally, never forget the power of a story and use positive impact events for brand storytelling based on the market data and consumer generated content that has been harnessed. And then do it again.

Impact of public and social media on brands

Social media is becoming a more integral part of facilitating brand conversations (Fossen & Schweidel, 2019). It has impacted all types of business and marketing in terms of promoting brands and enhanced their equity (Ra'd Almestarihi et al., 2021). In the age of social media, listening to how brands are discussed online is crucial for brand management, as the comments are made by people who care about businesses and are real-time and dynamic (Bruhn et al., 2012; Kübler et al., 2020).

Eurostat proposes a separation of social media into the following categories:

- social networks such as Facebook, LinkedIn and Xing;
- corporate blogs or corporate microblogs such as Twitter;
- multimedia content sharing websites such as YouTube, Instagram, Flickr and SlideShare;
- wiki-based knowledge-sharing tools.

In 2019, 53% of EU businesses used one or more of these social media platforms, most of which with the purpose of boosting their market image or market products - numbers that have observed a steady increase since 2013. These percentages however vary substantially from country to country, e.g. from 33% in Romania to 84% in Malta for the European Member States (Eurostat, 2021).

Over seventy percent (79%) of the world's businesses have purchased Facebook advertising, according to HubSpot Blog research in 2021 (Needle, 2021). The same research found that more than half of enterprises plan to boost their Facebook, YouTube, and TikTok spending in 2022.

Social media and consumers

Recommendation and comments influence consumers' perception and choices. Based on (Ahmed, 2015), 81% of consumers' purchasing decisions are influenced by their friends' social media posts, and 66% of consumers have been inspired to purchase from a new brand after seeing social media images from other consumers (DeGruttola, 2021). Consumers are 71% more likely to make a purchase based on social media referrals (Ewing, 2012). People feel comfortable buying from brands that other people recommend: they feel it's less of a risk, especially if you're a new company or a brand they've never heard of.

In addition, **the more consumers hear about a brand or product, the more comfortable they feel buying it.** Some studies found a significant and positive impact of social media marketing strategies and tendency to online interaction on social media engagement of users.

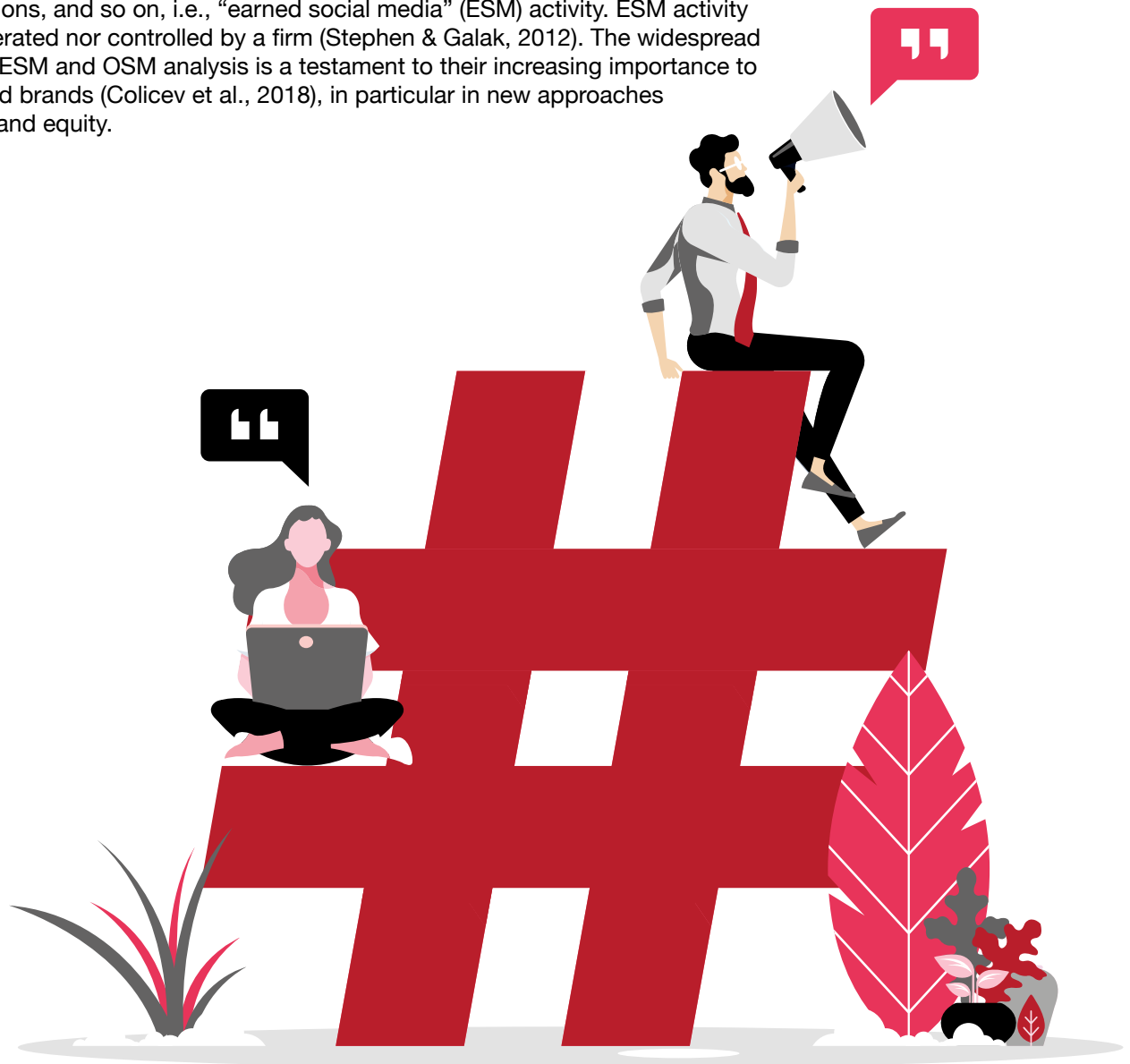
But even if you do have the best product on the market, a bad review or negative publicity can quickly make people think otherwise. More than 91% of consumers aged 18-34 **trust online reviews as much as personal recommendations.** As a result, a strong emphasis on how businesses connect their customers online produces positive or negative interactions that further affect their brand equity (Majeed et al., 2021).

Impact of public and social media on brands

Social media's impact on brands

In marketing, social media has thus become a critical channel for introducing new products and services to consumers, influencing brand image and brand awareness (Masa'deh et al., 2021). Solid brands perceive the power of social media in creating, sustaining, engaging, and interacting with new potential consumers, because it provides practitioners with unexpected opportunities to meet new consumers on social networks and eventually form strong relationships with them (Hudson et al., 2016). Users invariably provide comments on products they've purchased and share it with other users in their networks. Furthermore, the global nature of social media exposes brands to a worldwide audience.

Social media activity regarding brands is consequently closely monitored and considered by organisations for strategic decision-making of brands, and to figure out how to best leverage and achieve a memorable brand (Ra'd Almestarihi et al., 2021). To analyse these effectively, two facets of social media activities regarding brands are distinguished: "owned social media" (OSM) and "earned social media" (ESM). OSM refers to the activities that are initiated by the brand such as marketing campaigns using social media. But it is also possible for companies to gain exposure on social media through user-generated context, recommendations, and so on, i.e., "earned social media" (ESM) activity. ESM activity is neither generated nor controlled by a firm (Stephen & Galak, 2012). The widespread prevalence of ESM and OSM analysis is a testament to their increasing importance to consumers and brands (Colicev et al., 2018), in particular in new approaches to measure brand equity.



Brand equity and value

Brands are extremely valuable legal assets that can influence consumer preferences, be purchased and sold, and provide firms with the security of long-term revenue. Customers now play a significant role in the value and equity of brands, thanks to the evolution of marketing. Companies realised that in order to become even more profitable, they needed to go beyond simply keeping customers happy; they needed to develop a strong relationship and resonance with them as well.

There are two perspectives when analysing the value and equity of a brand:

1. **Brand equity** focuses on qualifying and quantifying the visibility, association, and loyalty of the brand to customers as they relate to the firm's management. The outcome provides a strategic support to a business strategy and will add long-term value to the organisation.
2. **Brand value** highlights the monetary worth of the brand and estimates the brand value in the market. The outcome of such evaluation is a key construct in marketing.

The next subsections will explain **brand equity** and **brand value** in more detail, before moving to the description/presentation of new approaches to measure brand's customer perception based on online real-time and social media.

Brand equity

Brand equity refers to the value derived from numerous benefits, and the underlying concept of brand equity is that a brand's strength is in the minds of consumers and how they perceive the brand over time. Thus, the brand equity emphasises customers' overall impression about a brand (Ra'd Almestarihi et al., 2021; Rust et al., 2021; Mogaji, 2021, Chapter 8).

Customer-related dimensions are thus central in brand equity, and a specific Customer-Based Brand Equity (CBBE) model has been developed by (Keller, 1993), who defines it as "the differential effect that brand knowledge has on consumer response to the marketing of that brand". He defines brand equity in terms of the individual consumer's brand knowledge, which influences the consumer's reaction to the brand's marketing mix. Perceived quality, brand loyalty, brand associations, brand awareness, and brand trust are the five basic consumer-related dimensions central to brand equity (Rust et al., 2021; Masa'deh et al., 2021). The CBBE model takes into account new ways of interaction between brands and consumers by the means of social media, to propose a simple, valid and parsimonious measurement (Rust et al., 2021). Afterwards, further extensions and improvements of the model have been proposed, identifying other key drivers of brand equity, such as customer brand attitudes and customer perceptions of brand ethics (Leone et al., 2006). CBBE is used to show how a brand's success can be directly attributed to customers' attitudes towards that brand.

Brand equity and value

According to a PwC Survey (PwC Markenstudie 2019, 2019), 71% of respondents considered that social media has a positive impact on brand equity. Intangible assets including brands have taken on a growing importance as value creators for companies (Sinclair, 2017).

Components of brand equity

Brand equity is a concept defined in the literature as having numerous dimensions, the most important of which are brand awareness and brand image (Aaker, 1991; Keller, 1993). Based on the consumer-related features that are fundamental to brand equity, the measurements have been expanded in various research. The following are the essential components of brand equity. These assets create value for both the company and customers.



Brand awareness

The measure of how recognisable a brand is to the target market. Brand awareness plays an important role in consumer decision-making, perceived value, and consumer loyalty. Brand awareness signifies the presence of a brand in a consumer's memory and therefore indicates how well a consumer will recall or recognise that brand (Aaker, 1991; Bruhn, 2012; Zahoor, 2017).



Brand image

The metric is constituted by a set of brand associations and subjective evaluations automatically formed, made over time, that may or may not represent the objective reality (Aaker, 1991; Keller, 1993). Brand image is a vital element of brand equity that influences consumer decision making (Zahoor, 2017).



Brand loyalty

Aaker (Aaker, 1991) defines brand loyalty as a comparison of a brand to other brands that provide similar benefits. Loyalty is one of the main dimensions of brand equity, along with price premium and satisfaction. The brand equity for a company is determined by the degree of brand loyalty as this implies a guarantee of future cash flows (Zahoor, 2017).

Brand equity and value

Brand value

The value of a brand represents its impact on the short-run and long-run flow of profits that it can generate. **Brand value** is the monetary worth of the brand. To determine brand value, businesses need to estimate how much the brand is worth in the market – in other words, how much would someone purchasing the brand pay?

Customer-based valuation (McCarthy & Fader, 2018; Huang & Sarigöllü, 2014) refers to the use of customers as the primary unit of analysis in estimating a company's valuation. The goal is to estimate the present values of the business's free cash flows, and thus the valuation. The customer-based valuation links customer economics to corporate value. This allows investors to build a model, based on the drivers of customer value from the bottom up, that generates a warranted stock price. It also lets investors assess what expectations for the drivers of customer value are priced into a company's stock price (McCarthy & Fader, 2020; Gupta, 2009).

At a high level, it involves two parts (Mauboussin & Callahan, 2004):

- Calculating what the present value of a current customer is and multiplying it by the number of current customers, and
- Calculating what the present value of a future customer is (net of costs to acquire the customer) and multiplying it by the number of future customers.

The main focus of this report is on brand equity only and will not discuss the approaches to assess the monetary worth of the brand in the next sections. Please refer to (Jäger & Krostewitz, 2019) for more details on the brand value topic.



Brand equity measures and metrics

There are many methodologies for measuring brand equity from consumers' perspectives. Measurement of brand equity was usually developed around market surveys which were administered to consumers and other potential stakeholders, or based on financial methods, in some cases considering the differential value of a product with and without its brand. In a study by Colladon, the importance of attention paid to customers was discussed (Colladon, 2018). In this sense, the text analysis of consumers' interactions on social media can be of great importance.

Traditional survey-based approach

Surveys were the foundation of modern market research nearly a century ago. Since then, a lot has changed in the business world (Jäger & Krostewitz, 2019). Now that we're firmly established in the digital era, standard practices for gathering consumer intelligence have evolved as well. Surveys are capable of providing highly targeted insight into the products or services offered by brands.

However, this traditional approach has a number of disadvantages. Primarily, gathering insight from a survey is a time-consuming process, even when done online. Before beginning the analysis, the questions must first be designed, then distributed to an unbiased group of participants, and finally a time period set aside to await the results. This can be fatal when investigating cultural shifts – and can lead to bias and inconsistencies when attempting to determine the root cause of a crisis. Because online attention spans are so short, obtaining a sufficient number of respondents can be difficult. Even so, actionable insight will take time to develop. Furthermore, if they believe the survey will take too long, the majority of potential respondents will abandon it (Feigenbaum, 2021).

Additionally, traditional brand measurement approaches are largely at the aggregate level and are often only available once a year. Among these are the Interbrand “Best Global Brands” list, the Forbes “World’s Most Valuable Brands²” list, the Kantar Millward Brown “BrandZ Top 100 Global Brands” list, and “Brand Finance” to name a few. These brand measurements rate major companies based on the overall worth of their brands. Other brand measures (for example, the Y&R Brand Asset Valuator) use surveys to measure multiple dimensions of customer brand perceptions, but the actionability of the dimensions is limited because the measured dimensions (differentiation, relevance, and knowledge) do not map directly to strategic business decisions. However, social media based methods exploit this new social environment and strongly influence brand image (Bruhn et al., 2012; Rust et al., 2021).

In today’s “always on” society, social listening is more effective than surveys in revealing cultural shifts. The relatively long time required for survey-based insights, the practical limitations that well-targeted survey campaigns have on the frequency these can be performed and the usual low-response rate observed of surveys do not fit anymore with the fast-paced changing environment. These should be complemented with the new approaches based on public and social listening in order to keep organisations up to speed with their brand’s management.

² <https://brandfinance.com/>

Brand equity measures and metrics

Public and social listening approach

The availability of public online and social media data leads to the social listening approach to gauge brand equity and fashion smart business strategies. Social listening tools allow brands to keep tabs on what's being said about them across multiple channels. Think of social listening as having an "ear to the ground" to what social media users are saying about a brand (Mogaji, 2021, Chapter 8; Sutherland, 2020, Chapter 7). For example, Griffith University's Big Data and Smart Analytics Lab in Australia correctly predicted political events such as Donald Trump being elected as U.S. president, the Brexit result and Scott Morrison being elected as Australia's Prime Minister in the 2019 Federal Election through the analysis of social media conversations taking place around these events (Sutherland, 2020, Chapter 7).

Sources and channels

When it comes to public and social listening, data is extremely important. Brand equity can be measured using a variety of online channels and resources. Exhibit 1 lists some of the reputable content creators for this purpose. Of course, in order to achieve high-quality results, the extracted data must be examined and verified (Boegershausen et al., 2022).

EXHIBIT 1

Sources and channels considered for brand equity

Content format	Description
News websites	Magazines, newspapers, regional and local newspapers, press releases, articles from TV and radio, etc.
Blogs	There are currently estimated to be 456 million blogs on Tumblr alone, which means a wide array to choose from, but it also means that it is essential to assess each blog for quality before becoming a subscriber
Social networks	Twitter, Facebook, YouTube, LinkedIn, Google+, Flickr, Foursquare, Instagram, Twitch, TikTok, etc.
Corporate websites	Pixar, Apple, Prada, BMW, etc.
Search Data	Search data includes valuable metrics such as available number of clicks, top performing search queries, URLs submitted, crawl errors, etc. data integration and keyword ranking helps to analyse the brand. Distribution of organic traffic (visits to your website as a result of unpaid «organic» search results) versus paid traffic (visits to your website after you have paid for advertising promotions).

Brand equity measures and metrics

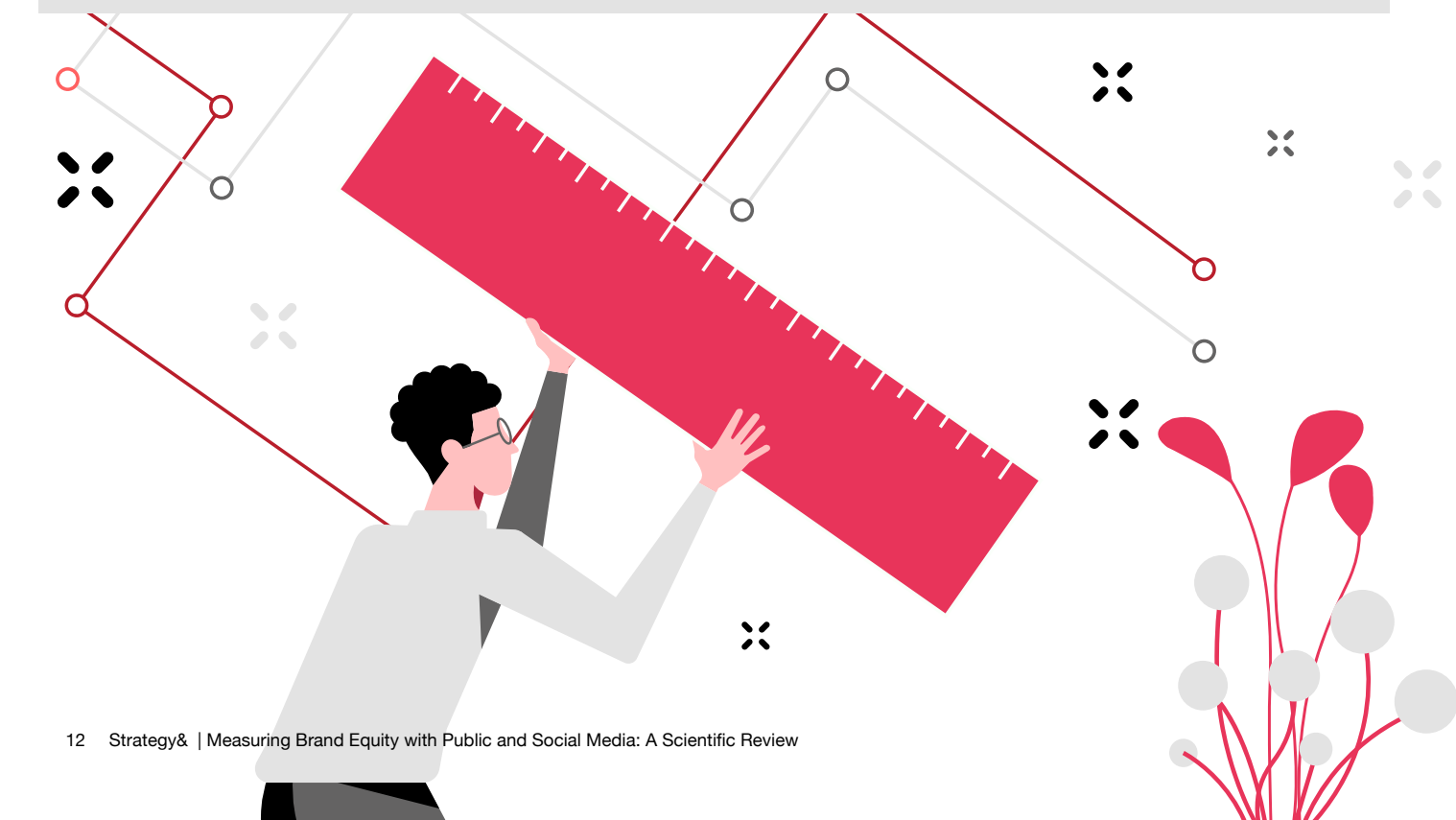
Content format and data types

Public and social media listening has followed the increasing trend of multimedia content that consumers use. The Exhibit 2 below lists types of the multimedia content that are produced by social media users and consumers.

EXHIBIT 2

Various multimedia content considered for brand equity

Content format	Description
Text	While social media is currently a very visually focused medium, text still plays an important role. A large quantity of the content that is gathered from different channels is in the text format.
Images	With 3.2 billion images shared each day, images are close to surpassing text as the medium of choice for online conversations. Visual listening (Liu et al., 2020) is essential to convey rich information about the consumption experience, attitudes, and feelings of the user. 80% of the images online that include a brand's logo don't mention the brand in the accompanying text.
Videos	Videos with increased bandwidth that consumers can access have turned to one of the most impactful ways of conveying brand communications. YouTube is therefore also classified as the second largest search engine processing more than 3 billion searches a month with 100 hours of video uploaded every minute. Source (The 2 nd Largest Search Engine on the Internet, 2020).
Audio	As of April 2021, there are now over two million podcasts available (Winn, 2021). With the rise of digital audio social networks (i.e, Club House) audio data analytics has become even more attractive.
Emojis	The use of emojis in tweets has been found to benefit brands by increasing audience engagement therefore it is recommended to use one or two relevant emojis in tweets where appropriate (Mathews & Lee, 2018).



Brand equity measures and metrics

Social and public listening metrics

Essentially, social listening activities are used to gather insights into what social media users think, feel, and/or understand about a certain issue, topic, product or event, and then to use that knowledge to influence the next appropriate response action. Keeping this in mind, the Exhibit 3 below suggests some essential metrics to examine when engaging in social listening activities (Sutherland, 2020, Chapter 7).

EXHIBIT 3

Key social and public listening metrics

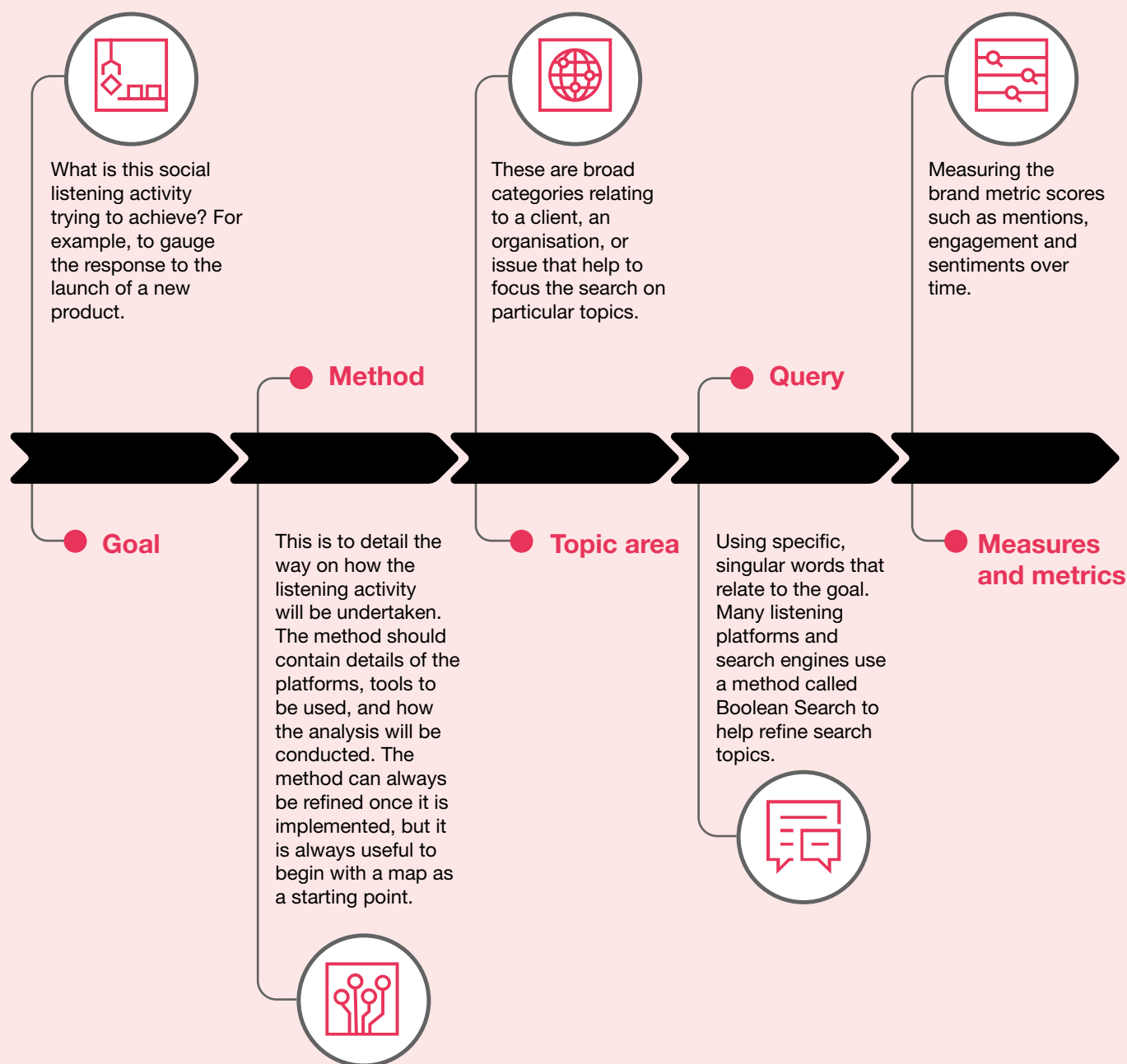
Public and social media metric	Description
Mentions	The number of times a brand name or keyword has been mentioned in the time period specified (Gonçalves, 2017).
Mentions Over Time	A graph demonstrating the spread of mentions over a specified time period.
Engagement	The number of people who have interacted with a post mentioning the brand or keyword in the specified time period (Lipschultz, 2019).
Estimated Reach	The estimated number of people that content reached containing mention of a specific brand or keyword.
Demographics (Gender, Age, Geographic Region)	The average age, gender and geographic region of the people mentioning the brand or key word on social media during a specified time period (Khan & Sponder, 2011).
Sentiment	The percentage of posts categorised to be positive, negative and neutral. Remember, it is always important to check these results manually (Tuten & Solomon, 2018).
Share of Voice	Share of Voice is a competitor analysis comparing which brand has received more brand mentions online during a specified time period (Kim, 2016).
Media Platforms	The online communication channels that mentioned the brand or key word during a specific time period. This is good to know in terms of which platforms are more likely to mention a brand or specific keyword.
Results	The list of sources (articles, tweets, Facebook posts, etc.) that mentioned the brand or keyword.

The above-mentioned metrics may have varying effects on the brand equity insight. Some studies (Colicev et al., 2016; Huang & Sarigöllü, 2014) concentrated on various metrics and assessed the impact of these metrics on brand equity insight into how to quantify and assess the effect of social media actions on branding.

Brand equity measures and metrics

Public and social listening implementation

The following figure presents the steps required and recognised as best practice in order to implement effectively public and social listening analysis, following (Sutherland, 2020, Chapter 7).



Brand equity measures and metrics



The first step in the social listening process is to establish a goal that must be met as well as the expected outcome of the process. The expected result differs depending on the purpose and is often quantified using a range of metrics. Therefore, different social tactics are defined to achieve the established goal. The next step is to develop the tactics that will be employed and to set up configuration tools that will make the data collection process easier. The next phase involves deploying tactics and technologies in real-time. This step entails performing quality assurance tests on the data collection methods used. Finally, data collected from the system is analysed, and if necessary, it is adjusted on the fly to improve the approaches employed (Ra'd Almestarihi et al., 2021; Sutherland, 2020). The final step guarantees that the final product is more in line with the first step's goal.

As presented in previous sections, traditional approaches to brand equity have gaps on the insights it can provide, but public and social listening can bridge and augment those. The implementation of public and social media based approaches have recognised best practices that PwC have studied and adopted to create a framework called PwC's Real-time Brand Valuation (RBV). RBV builds upon the above described general methodology using numerous social listening KPIs with various weightings to correctly reflect the quantity and quality of a brand's awareness, image strength, and relevance. Some of the measures are mentions, engagement, unique authors and sentiment that are calculated over the number of likes, shares, comments and posts and the sentiment of the posts. RBV benefits from advanced machine learning algorithms such as natural language processing (NLP) and data analytics tools to identify relevant data and effectively analyse and measure customers' voices and sentiment.

Brand equity valuation methodology

We have developed a unique methodology that links consumer perception of a brand to its monetary brand equity, complementing traditional brand equity measurement with a novel approach utilising public and social listening methods.

The brand equity valuation methodology provides clients with a comprehensive analysis of their brand, including an evaluation of market sentiment and key brand metrics. This analysis compares the client's brand image and perception to the industry and/or competition, offering a more in-depth and up-to-date understanding than traditional surveys alone.

The brand equity valuation methodology helps clients to have a more market-driven and comprehensive financial brand valuation, based on current company financials as well as market sentiment and brand metrics.

The goal of the brand equity valuation methodology is to calculate key brand performance indicators, such as brand awareness, brand image strength, and brand relevance, through observable and quantifiable metrics that are based on real-time data collected from public and social media sources.

The table next page summarises these three core brand measurement scores and provides a more detailed explanation of the public and social media listening metrics that they are based on.





Brand equity valuation methodology

Brand awareness

Assessing the volume and quality of a brand's mentions in social media in comparison to the mentions **across the industry and competition** as a whole.

The score takes into account metrics such as the volume of unique authors, the volume of engagement on owned social channels, the quality of the mentions (e.g. the brand is one of many brands mentioned vs. the brand is the main topic)

Metrics include: share of voice, unique authors, volume, engagement, owned channel metrics, etc.

Brand image strength

Translating the **brand's core attributes** as well as general **product quality and brand uniqueness** into consumer language and collecting all matching online mentions connected to the brand and competitors.

Scoring mentions both quantitatively and qualitatively in order to assess the level of consumer/market association for each brand.

Metrics include: volume and quality of mentions, volume and quality of engagement, mention sentiment, etc.

Brand relevance

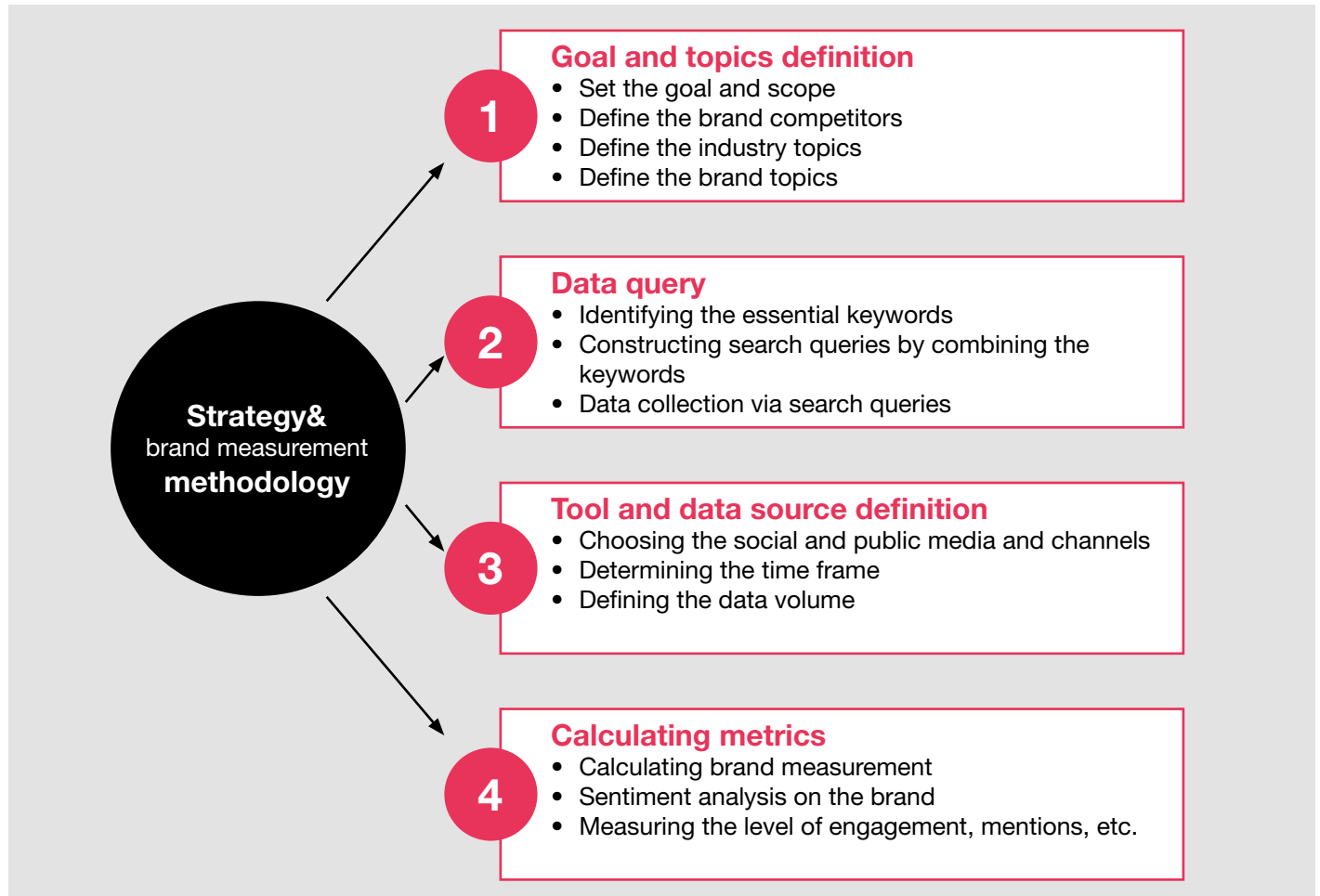
Segmenting the pure brand related mentions for each brand **versus** mentions related to the **product, quality, price, safety, reliability, etc.** and/or branding combined with organic versus brand search trends within an industry.

Assessing the quality and quantity of consumer conversations which express an emotional connection to the brand itself in comparison to other purchase decision factors.

Metrics include: branded keyword search vs non-branded keyword search.

Brand equity valuation methodology

In this section we detail and describe the five main steps of the approach to derive, define and measure brand awareness, brand image strength and brand relevance scores from data collected via public and social media. The methodology is aligned with public and social listening implementation best practices described above. The process is iterated to fine-tune and improve queries for maximising the collection of relevant data and minimise noise.



Goal and topics definition

First, it is essential to clearly define the brand competitors for a certain industry and geographical scope, in order to effectively measure the relative brand's strengths both in qualitative and quantitative terms, to help understand the underlying drivers and detractors.

Second, following the methodology described above, in order to collect relevant data, two dimensions need to be carefully defined:

- **Industry topics** will encompass keywords related to the industry of the brand or product under evaluation. These keywords should be broad enough to be relevant for the brand and its competitors under consideration but also specific enough to risk dilution of information.
- **Brand topics** will use key attributes for the brand under consideration as part of the brand promise to measure how differentiated those key brand attributes are seen in the market while benchmarked to competitors.

Brand equity valuation methodology

Data query

Relevant data for the evaluation and measurement is collected via a sort of 'search queries' on the selected public and social media data sources (posts, tweets, articles, etc.). A query is built using relevant topic keywords - defined previously - and Boolean operators, and translates the industry and brand concepts into consumer language.

The design of queries with keywords combination and the use of Boolean operators requires major work and care in order to make the most out of the data collection using social listening platforms. Best query should maximise the extraction of relevant data while minimising the noise in the data collected.

Designing and building query that target most relevant data therefore requires a good knowledge of boolean operators and the careful use of them combined with keywords for each language. Indeed, just translating the keywords from language to language without considering the keyword combinations or query as a whole, or the specific context in which this keyword is used might have a big impact of false effects. An example can be the case when the translation of a keyword has an additional connotation/use in the slang of the translated language, that may introduce a lot of non-relevant posts or articles in the collected data for that specific language.

To mitigate this risk, the queries design (and their translations if applicable) should be carefully managed and reviewed. The queries building follow iterative cycles of design, test and assessment, before being validated and used for the actual data collection.

The approach also takes into consideration other risk factors that could impact negatively the quality of the data collected, including but not limited to:

- bots generating mentions,
- spam accounts,
- paid 'likes',
- irrelevant content.

These elements are either dealt with in the query design phase but also in the data quality assessment and cleaning process that is put in place once the data collection is made.

In view of the real-time dimension of the public and social data, the queries used to collect this data are also carefully monitored and maintained in the approach, in order to manage the cases when e.g. there is a change in image or products names, changes in accounts or identities used not only by brands but also by competitors in the social and online media.

Finally, in view of the different dimensions to be considered in the brand valuation methodology, several queries are usually designed to cover the brand and its competitors, the industry and the market, the core attributes, and their different comparisons/combinations. In order to collect comparable data the queries must hence have a certain level of coherence for each study.

Brand equity valuation methodology

Tool and data source definition

The list of public and social media sources and channels from which to collect data is rather long: news sites, magazines, blogs, forums, corporate websites, social media sites, etc. The selection of the right data sources for the given brand's sector, products or even culture is also very important for the effectiveness of the brand measurement output.

The brand equity valuation approach leverages state-of-the-art technology and tools that provide real-time data: new results are added minutes after posting or publication. Thanks to these, one can track and monitor almost in real-time e.g. online media campaigns and engagements covering specific digital channels, such as assessing the performance of TV ads during the Superbowl via Twitter posts and reactions.

The data collection process starts by retrieving and querying large data sets of public online data sources using social listening platforms, leveraging on advanced analytics and artificial intelligence. In order to process millions of data points, automation is used to optimise processes such as data extraction, query construction and data cleaning. Advanced data analytics methods in machine learning and natural language processing (sentiment analysis, topic modelling, text mining etc.) are used to apply those techniques at scale across large data sets.

Once collected, the data is cleaned and further enriched via statistical and machine learning methods and tools to remove duplicates, eliminate spam, extract entities/topics, determine missing information like language and geographical location, extract engagement numbers, calculate sentiment, etc. Some of these elements might require further investigation, for instance identifying the actual value of duplicate context and repetitions - as these might indicate not only noise (e.g. mentions generated by bots) but also the popularity, weight or the "virality" of specific content.

Using advanced analytics with artificial intelligence capabilities, allow for the extraction of the most relevant data. In addition, it computes numerous key metrics, such as audience engagement (total number of audience interactions with a page/post, i.e. likes, shares, retweets, comments) and sentiment analysis (positive, negative or neutral), determined via a machine learning algorithm - see the section below on calculation of metrics.

Various factors, in addition to the brand valuation specific scope and requirements, might impact the data sources definitions and tools used. Among those, it is important to mention:

- **Accessibility to local/country social media data** - for some countries, like China, the access to the country's social media ecosystem is limited and/or restricted for most of Western social media listening providers. Accessing those data sources might require buying data sets from local Chinese data providers which proves costly, complicated and time consuming.
- **Accessibility to specific social media platforms/channels data** - Limited access to data sources caused by either password protected and closed online forums or paywalls and limited/closed API for certain platforms (e.g., LinkedIn, TikTok) to connect with social listening providers.
- **Technical limitations** on the data volume that could be collected via some social listening providers - in which case sampling in the data collection might be required.

- **Limitations on the timeframe that can be considered when collecting data** - public and social media data (posts, mentions, articles) have a time dimension: the date and time of publication. Thus, when collecting public and social media data it is important to define/frame the time period to be covered. However, most of the social listening providers and platforms have paywalls and/or technical limitations on the maximum time span or time range that can be used when triggering the data collection.
- **Limitations on the number and/or complexity/length of the data queries** - usually social listening providers have a certain limit of queries numbers and/or queries lengths (number of characters) - see section data query below for more details.

Calculating metrics

As described above, the brand measurement methodology is based on well-defined and commonly-used social listening metrics. Among these, we select four main types of metrics for the brand measurement study:

- The **number of mentions** of a specific topic - the number of times a specific set of keywords assumed to define a specific topic are mentioned online;
- The total **number of distinct authors** who contributed to the total mentions;
- The **level of engagement** on a specific topic - the number of times an online publication has been forwarded, shared, liked or commented on;
- **Sentiment concerning a specific topic** (i.e. opinion or feeling associated with the context in which a specific set of keywords appears, which can be either positive, neutral or negative). Sentiment of public and social media data points are determined via machine learning algorithms and methods based on semantics and intensity of the words, as well as analysis of the emojis used. The accuracy of the sentiment analysis output depends however on the topic considered and/or language of the data points, since the performance is based on the data set used for training of the AI and Machine Learning model used. Custom training and/or customisation of this technology or model might be required in specific cases to have better performance and accuracy.

Outcomes

Using customer-based metrics as input into the financial valuation model helps companies to have a more agile and market-driven assessment of their brand. The outcome is a financial value of the brand by market or product.

The brand measurement methodology has been successfully used in numerous projects across industries and regions.

The brand measurement methodology is thus now a proven and well-established methodology that provides valuable insights and actual added value to organisations for timely and comprehensive brand and products monitoring and management.

The following section describes more in detail a case study of Strategy&'s methodology in action.

A case study: social listening and real-time brand equity assessment of a global automotive brand

A global automotive brand sought to perform an assessment on the brand equity for its different business units. The approach was to set up a brand valuation model using public web data for key markets, in order to collect and analyse the consumer sentiment and volume of mentions and engagement around the brand. This provided a full picture of consumers' current viewpoints on the brands, allowing to draw a comprehensive overview of the brand's consumer perception.

Methodology

Based on metrics such as brand awareness, image strength and brand relevance the client received qualitative and quantitative data on its brand performance and benchmarked those figures against the client's main competitors from the industry.

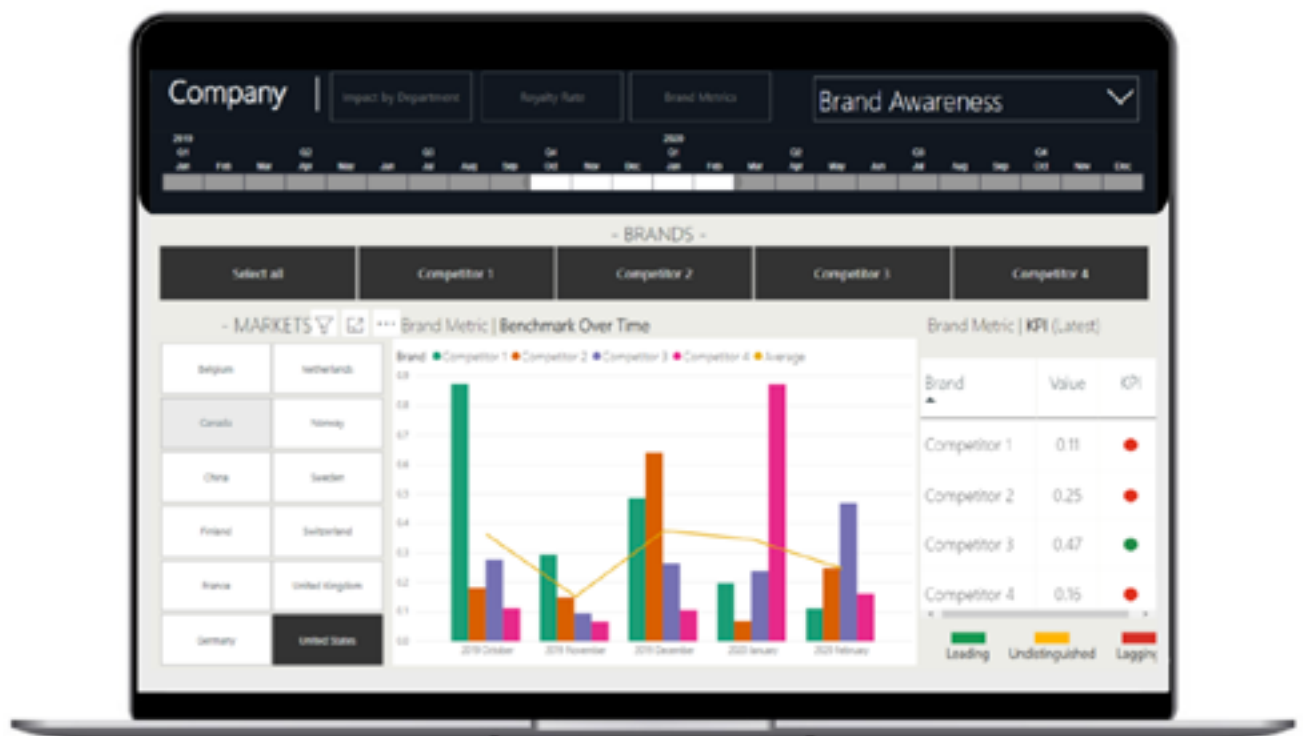


A case study: social listening and real-time brand equity assessment of a global automotive client

Outcome

The automotive brand used the gained insights to complement and update their annual brand survey and mitigate some of the biases with a data set coming from public and social media sources with unprompted and non incentivised results.

- Comprehensive overview for management to follow brand metrics and positioning by market including competitive insights on overall industry brand performance on attributes such as “Technology”, “Sustainability” and “Trust”.
- Assessment of campaign impact and influence on underlying brand value with the identification of the brand’s weaknesses in each of its business units based on consumer feedback and sentiment analysis.
- Investigation where brand awareness, brand relevance and image strength is low to discover marketing weak points for brand and sub-brands and adapt marketing strategies accordingly.
- Benchmarking against competitors to derive communication strategies that help the client remain competitive in the key topical areas.
- Financial brand valuation score for each market to correlate brand investment and financial brand value.



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