

INF2177 Assignment #1

*by* *the* *group* *of*

Danni Yang

Hung Wang

Linxu Fang

Michael Jiang

Ognjen Sucur

**Course** **Instructor**: Dr. Safwat Hassan

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**Table of Contents**

* Introduction
* Business perspective
* Organizational perspective
* Information perspective
* Application system perspective
* Requirement and design
* Vender offering assessment
* Applicability
* Executive summary
* Conclusion

**Introduction**:

Technology has permeated every facet of people’s lives as a direct result of the accelerated pace of societal progress. Social media is becoming more important than ever in the areas of communication, marketing, and customer involvement in the modern digital age. The evolution of social media has enabled an increasing number of individuals to learn about new knowledge and insights. It has become crucial for some companies to effectively attract potential clients while at the same time maintaining individualized interaction with those customers, especially for the some specific industries where clients interact with them on a daily basis. Companies that wish to maintain stable business in an increasingly competitive market are required to establish sales targets, tailor their marketing strategies, and implement intelligent help desk operations. When this is the case, “Social media analytics is the ability to gather and find meaning in data gathered from social channels to support business decisions — and measure the performance of actions based on those decisions through social media” (IBM, n.d.).

“Social Media Analytics is an emerging interdisciplinary research field that aims on combining, extending, and adapting methods for analysis of social media data” (Stefan Stieglitz, 2014). Data from social media platforms may be retrieved and analyzed with the use of analytical tools, a process known as social media analysis. The transmission of content on social media may be global, which can be highly beneficial to the organization’s advertisement promotion. With millions of active users, social media networks provide significant opportunities for businesses to contact and engage their target audience. Advertising on social media will be even more prominent than in cities, and it will be far less expensive to deploy. When compared to social media, which simply posts a video or a few photographs, the construction of billboards in cities involves site rent as well as installation charges. People who shuttle back and forth in the city may not notice the content of billboards, but they may pause and watch for a few seconds when browsing the Internet, which potentially enhances the advertisements transmission rate.

Therefore, the application analysis of social media and the usage of tools are extremely significant in retail industries, which could improve various aspects of business operations. Data analysis assists brands in better understanding their customer behaviors and business performance, tracking rivals, and measuring social media activities. The data acquired from social media may be utilized to discover major market influences and trends, as well as to adapt and improve strategy direction. Analytics based on social media platforms have emerged as an essential component of the digital landscape of today’s business development. These analytics equip companies with the information and tools required to make sound judgements, improve their marketing strategies, and effectively compete in the global market.

**Business Perspective**:

From a marketing and business perspective, the emergence of social media has disrupted the traditional marketing and business-customer relationship, transforming and facilitating the interaction between companies and customers and allowing value co-creation by providing direct platforms for information exchanges. These platforms have not only increased connectivity between customers and companies but also empowered customers with a public voice that can reach an extensive network of friends, family, and connections around the world with a single message. As a result, the use of social media contributes to the rising importance of customer experience. This section will examine how social media changes the way businesses interact with their customers in more detail.

The use of social media has increased connectivity between individuals and organizations and made it easier for them to communicate and interact with each other. In traditional media such as newspapers, magazines, television, and radio, only the sender can decide what type of content to publish, telecast and broadcast. This one-way communication offered less effective interaction since the consumers could only passively receive information. On the other hand, as described by Mitic and Kapoulas, the nature of social media is characterized as participative, interactive, and collaborative (2012). In other words, social media enables information creation and sharing between the business and consumers, allowing companies to inform customers about products and services and inviting them to become involved in optimizing their own customer experience. Many organizations have adopted such practices. For example, one study shows that banks in the UK gathered customer feedback from social media to obtain valuable insights that can guide the development of their brand-relationship campaigns (Mogaji et al, 2016). This example demonstrates that customers nowadays have more influence on the business decision-making process than in the traditional media era, and they co-create values that benefit both parties. As a result, social media has not only changed the dynamics of customer-business relationships but also made companies vigilant about customer experience as customers are able to share their experiences, both positive and negative, with a large audience in real time.

Since social media has become a major channel for customers to interact with companies, the customer experience on these platforms has become increasingly important, requiring the business to be more agile and adaptive to customer feedback. According to Forbes, 78% of consumers say companies' social media posts impact their purchases (Olenski, 2012). Moreover, consumers are 71% more likely to purchase based on social media referrals(Ewing, 2019). Therefore, a positive social media experience can enhance a company's reputation, increase customer satisfaction, and drive brand loyalty, while a negative experience can have the opposite effect. In 2022, one study found that 77% of brands consider customer experience to be a crucial factor in differentiating themselves from their competitors (Emplifi, 2022). Even banking that is often regarded as conservative is shifting from transactional to relational banking. Traditional banking channels have primarily focused on providing transactional services to customers and have not traditionally focused on building relationships or enhancing the customer experience. However, the rise of social media helps banks recognize the need to incorporate social elements into their traditional channels to provide more value to their customers (Deloitte Design Studio, 2023). By using social media analytics, companies can gain valuable insights into customer preferences, behaviors, and needs and use this information to improve the customer experience.

From one-way to two-way interactive communication, social media increases interaction between customers and companies, allowing the former to voice their opinions and experiences and the latter to respond quickly. However, this interactive nature may also impose some challenges for companies. For example, the most common form of phishing is to make a Facebook or Bank-like page (Soomro & Hussain, 2019). Cybersecurity is a major threat to company reputation in the social media age. Hence, as companies focus on adopting social media technology, it is equally important to invest in effective cybersecurity measures to protect themselves and their customers from cyber threats and maintain their positive online presence and brand reputation.

**Organizational Perspective**:

Social media and social analytics can have a profound effect on an enterprise at the organizational level as well. There is a direct impact between the information and data in which the technology provides, and the consequential changes to an enterprise’s internal organizational structure and operations. This falls true for enterprises within the retail banking industry as well, as such organizations are still consumer-facing and profit-maximizing businesses, meaning social media analytics is one of the most significant and insightful tools available to access consumer information and data. There are also numerous motivations in which enterprises would want to implement social media analytics. For example, social media analytics provides companies with the crucial insight into how their consumers perceive their brand, how they interact with the brand, but at the same time also provides a deeper understanding into potentially what their competitors are doing (“Benefits of Social Media…”, 2021).

Through the collection of such data and information, enterprises can then analyze it to extract patterns, trends, and deeper insights such as which banking service ads are most popular or which ones are most effective, engagement levels on social media pages, or even social media following growth rate. Furthermore, enterprises within the retail banking industry can utilize this information to adjust the enterprise’s existing internal structure and operations accordingly to maximize focus and investment on in-demand services, or reduce cost and resources for less-popular services. This will therefore undoubtedly have an effect on enterprise’s internal structure and operational strategies, as they would need to consistently adapt such structures to cater to the most recent market findings and analyses. Such changes to internal structures and operations would mean that subsequent changes to existing business processes are also necessary, as adjustments would be needed to allow for the successful adaptation and innovation of the business model and central focus. One of the core relationships that are crucial to this technology is the communication channel and relationship between marketing teams, data insights teams, and senior leadership/management. The data insights teams would provide feedback to the marketing team for effectiveness of their social media campaigns, which in turn would allow the marketing team to communicate new strategies and readjusted goals for senior management to approve. Therefore, enterprises may even look to hire or introduce specific roles that would be directly responsible for facilitating the connection between social media analytics/insights with high level business and organizational strategies.

To demonstrate this, let’s take a look at the Royal Bank of Canada (RBC) and how they have utilized social media analytics to improve business effectiveness and enable new business opportunities. RBC has invested heavily into developing their social media teams and expanding their competitive advantage within the social media space against other large banks within Canada. Their decision to do so was rooted in the fact that although they are the largest bank in Canada by capitalization, their social media analytics has shown that they are not at the top of the list in terms of social media engagement on multiple platforms (“TD Canada Trust…”, 2015). Hence, there is a clear demand and need for improved business effectiveness within its marketing and social media campaigns and strategies. To address this issue, RBC’s social media team emphasized a larger focus on ensuring their internal processes and operations are as efficient as possible. Their proposed solution was to utilize Sprinklr, a unified customer experience management platform, to manage their campaigns with other departments and teams across the enterprise. This allows them to minimize overlaps, planning errors, and conflicting strategies moving forward. In other words, RBC’s utilization of social media analytics allowed them to identify major critical areas within their organization’s process, structure, and strategies that needed corrections and modifications, in order to improve their existing information management capabilities, increase business efficiency, and discover new opportunities.

**Information Perspective**:

Modern organizations are expected to have a digital presence across a wide variety of social media platforms. The type of information created and stored by each of these platforms may differ slightly but is generally very similar. On the account level, data typically includes account creation date, a short about/biography, and number of followers/subscribers. This data likely has very little use for an organization to store for the purpose of analytics. Instead, organizations would likely store data that is not publicly viewable such as number of profile visits, follower growth over time, and demographic information of the organization’s audience of followers (Newberry, 2022). On its own, this information may be useful to gauge how popular the brand is online compared to competitors or to find new target markets for example.

On the post level, there is much more data generated. At a minimum, this includes the content (text and media) of a post, when it was posted, and the engagement (views, likes, comments, and shares). Posts can also have hashtags and mention tags that link them to a broader topic or account respectively and allow them to be discovered by users interested in that specific topic or account. Additionally, there is more data generated when it comes to paid social media posts. Metrics such as CPM (cost per thousand impressions), CPC (cost per click), and CTR (click through rate), are all common methods of evaluating the performance of a paid promotion on social media (Davis, n.d.). Organizations may wish to store such information to track historically which types of campaigns generate the most engagement, reach, and website traffic and create more of those posts and promotions. Alone, this already provides the ability to better track ROI of marketing spend compared to traditional media promotion. However, the true power of social media analytics comes from the ability to track customers online and attribute online sales directly to social media campaigns through custom URLs (Google, n.d.). As such, revenue or other metrics leading to revenue like accounts opened or meetings booked in a banking context can also be data points to store that provide valuable insights for an organization and allow them to optimize profits.

Finally, there is the social level that includes the content of comments made in reaction to an organization’s posts. This level also contains user posts that mention the organization either directly via mention tag or indirectly via the name or alias of an organization. At the highest level, organizations can employ social monitoring techniques to respond to such comments and manage their online brand. Deeper than that, organizations can use social listening techniques to gauge how well their brand or campaign is doing, to get industry insights, or to perform competitive analysis (Sprout Social, n.d.). One method of social listening is sentiment analysis where an organization can track customer feelings towards the brand online and respond to any emerging threats or opportunities (Barger and Labrecque, 2013). Insights generated from this level are helpful for more strategic decision making rather than the operational nature of the other levels described.

**Application System Perspective**:

Social media is web-based or mobile-based interactive technology designed to create and share information and ideas in private social cycles. However, as fierce marketing is competing in this current digital era, more and more enterprises notice that the value of social media is underestimated. Such core functionalities of information creation and sharing could do more beyond personal social communication. Application systems were regarded as the warehouse to store and manage millions of information from social media users, but organizations with huge followers may tell a different story through data modeling and information analysis.

As mentioned in the information perspective part, different types of information stored in the social media platform may provide a sight to portray user preference and potential needs, which provides the datasets for enterprise marketing analysis. To be more specific, in the retail banking industry, since the retail banking services are mainly focused on checking accounts, mortgages, personal loans, debit or credit cards and certificated deposits, what could make the product highlight from others is hard to catch. Therefore, the application system analysis may do more on the datasets collected from social media to find out the answer of what is the current market demand and seize the opportunity. For instance, due to the currency inflation caused by the Covid 19 pandemic, a more flexible and short-term financial product may be more attractive than the traditional fixed-term deposit.

There are generally four main functional components of the social media application system: research domains, databases, approaches, and methods. Enterprises first figure out the research directions and decide the target information type, as well as the corresponding keywords list. The tracking approaches then grab the target information from the social media platform by using methods such as APLs, RSS or HTML parsing and then store the datasets in the system database. The collected data would be labelled as per its origins, topic or year and then be filtered and structured according to different analysis requirements. Finally, the data would be imported into the statistical models and come up with the report.

However, although the social media application system has been commonly applied in the commercial marketing analysis, the current system architectural design is still under updating and upgrading. The information collected as per the keywords may not fit the target topic since the social media information is private and casual style. The connection between social media users is often multi-dimensional, which would refer to different semantic meaning even on the same text content (Charu C, 2012). On the other hand, to justify fake information is also a big challenge. Most of the social media platforms in the western countries are not real-name registered and we even don’t know if the account does belong to a robot or a real person. The current system cannot winnow truth from falsehood would decrease the accuracy of the report which may not reflect the real marketing demands.

**Requirements and design; standards and guidelines**: Requirements analysis and design is a stage in the software development life cycle (SDLC). First, the software requirements are collected from different stakeholders, analyzed, and transformed into a detailed design that can guide the development process. During the analysis, the development team works with stakeholders to identify the functional and non-functional requirements of the software, such as what the software should do, how it should work, what challenges it might face and what guidelines it must follow. The purpose of the analysis and design is to create a plan for the software to ensure the final product can meet users' and stakeholders' needs and expectations. Therefore, various models, representations and languages are employed to ensure the goal can be achieved.

The appropriate models and representations for describing social media analytics systems will depend on the particular needs and requirements of the company. Selecting models and representations that are clear, concise, and appropriate for the stakeholders involved in the project is essential. For example, the development team can use Business Process Model and Notation (BPMN) to illustrate the process of gathering data from different social media platforms, processing the data, and generating reports based on the analysis. BPMN can also be used to model the various activities involved in each process and the inputs and outputs related to each activity. In terms of the specialized model used for social media analytics, Natural Language Processing (NLP) models use machine learning algorithms with linguistic consideration to analyze and understand human language, allowing for sentiment analysis (Batrinca & Treleaven, 2014).

Constructing the system requires both front-end and back-end languages. The front end of a social media analytics system requires creating a user interface where users interact with the system and check the results of the data analysis. For example, HTML (Hypertext Markup Language) is the standard language used for creating the structure and content of the user interface of webpages. CSS (Cascading Style Sheets) can be used to add styles and visual effects to the user interface, including colours, fonts, and layout. JavaScript is a scripting language that can add interactive features to the user interface, such as creating dynamic effects and handling user input (Dorman, 2022). On the other hand, since the back-end system involves processing and analyzing a large volume of data from multiple sources, building the system requires using powerful programming languages and frameworks to handle complex data-related tasks. For instance, Elasticsearch is a highly scalable search and analytics engine designed to handle a massive amount of structured and unstructured data, such as social media posts, and index, search, and analyze this data in real-time (Shah et al, 2018). Overall, the choice of programming languages for a social media analytics system depends on the scale of the system, the complexity of data processing and analysis, and the preferences and expertise of the development team.

As social media promotes better interaction between customers and organizations, it also challenges organizations. For example, a growing amount of social media data presents a problem to companies as to how to efficiently integrate data from different sources and store, process and analyze the data consistently to make accurate decisions. Organizations need to scale up their social media analytics system to overcome such challenges. An example could be leveraging big data platforms such as Hadoop. Hadoop is a distributed computing framework that can deal with a massive amount of data by distributing data and processing across a cluster of multiple computers for data storage, processing, and analysis(Gilmour et al, 2023). Hadoop is a popular choice for handling large social media data due to its scalability, cost-effectiveness and flexibility. It is scalable because it can handle large volumes of data by adding more servers to the cluster. It is cost-effective because it is an open-source framework, meaning it is free to use and can be run on commodity hardware such as computers. It is flexible because it can handle both structured and unstructured data, making it suitable for dealing with various data types from social media platforms, such as text, images, and videos (Indeed Editorial Team, 2022).

In addition, data privacy has always been a significant concern regarding social media use. Hence, the Canadian government and associations also enacted various laws and regulations that organizations must follow when dealing with social media data. For example, the Canadian government has published laws regulating data privacy, including the banking industry, such as Personal Information Protection and Electronic Documents Act (PIPEDA). It governs how Canadian private sector organizations collect, use, and disclose personal information in their commercial activities (OPC, 2021). From a business perspective, PIPEDA guides the companies' strategic planning and governance, ensuring the company's compliance with the Act. From an organizational perspective, the law affects operational strategies and organizational structure as companies must consider data privacy before making decisions. For example, RBC has a Global Privacy Office led by the Chief Privacy Officer to handle data privacy issues. From an information perspective, PIPEDA requires organizations to establish procedures to ensure personal information security and confidentiality. Lastly, from an application systems perspective, PIPEDA requires organizations to implement proper technical measures to protect personal information against adverse outcomes such as data loss or theft. Overall, with the popularity of social media use, the government and associations are taking data privacy seriously to protect individuals' personal information.

**Vendor Assessment**:

Any vendor of social media software needs to satisfy the needs of the various layers in an organization. Starting with the business layer, it was emphasized that the ability to facilitate two-way conversations is a critical need in today’s landscape. As such, a social media software should allow for interactions with customers and the public and the management of those interactions. In the organization layer, the importance of social media insights for various departments was highlighted. Therefore, a social media software should allow for multiple cross-functional users and the ability to export data to analyze and share across the organization. In the information layer, the different types of data and metrics that may provide value to an organization were covered. The ability to allow for social listening, manage paid as well as free social media content, and collect data from all such activities are key criteria for a software to have. Finally, in the application layer, the ideas of connecting social media systems to a database and data accuracy were introduced. To facilitate this functionality, a software needs to have the technical infrastructure to connect to an organization’s systems and ideally the ability to distinguish between real and fake social media profiles.

For large organizations like banks, free and paid social media management is a large part of the overall marketing efforts. To effectively and efficiently orchestrate all social media activities, a software should connect to all social platforms used by the business in addition to the criteria above. Two vendors of such a software, Hootsuite and Sprout Social, are compared against the criteria mentioned in **Table 1** below. Overall, they offer similar services with Hootsuite having more integration capability. Both vendors offer nothing in terms of filtering out fake and bot interactions from the data collected.

**Table 1. How Hootsuite and Sprout Social Measure Up**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Hootsuite** | **Sprout Social** |
| Enable management of two-way interactions across platforms | - Aggregates interactions into one inbox  - Can assign specific questions to relevant team members  - Chatbot for instant replies | - Aggregates interactions into one inbox  - Can assign specific questions to relevant team members  - Chatbot for instant replies |
| Support multiple users | - Yes, and allows for role management | - Yes, and allows for role management |
| Enable social listening | - Built-in and can connect to other listening software  - Sentiment analysis included | - Built-in, sentiment analysis included |
| Allow for management of free and paid social media content | - Can create and schedule posts for almost every platform  - Paid posts for Facebook, Instagram, LinkedIn only | - Can create and schedule posts for almost every platform  - Paid posts for Facebook, Instagram, LinkedIn, Twitter |
| Collect data and allow for exporting of insights | - Built in analytics for free and paid posts as well as audience insights  - Reports can be created on platform and exported | - Built in analytics for free and paid posts as well as audience insights and response quality analytics |
| Support connections to external databases | - Can connect to CRMs like Salesforce  - Can integrate with Oracle DB | - Can connect to CRMs like Salesforce but seemingly can’t connect to external DB |
| Eliminate noise in the data from fake profiles and bots | - N/A | - N/A |

**Applicability**:

The use of social media and social analytics provides modern businesses with strong tools that enable the organizations to better test market data, analyze client preference, and increase the effectiveness of their business strategies. However, there are some certain situations that social media and social analytics are not applicable.

Social media marketing and analytics can be very effective if your target audience is active on social media platforms. For instance, if your target audience consists of young individuals who are frequent users of social media, social media marketing might be an effective strategy for attracting them. In contrast, social analytics would be less helpful if the target population is composed of elderly people or if the target demographic does not actively participate in social media.

The significance of social media analytics will vary according to the nature of the products or services offered by various businesses. If a firm provides visually appealing things, such as apparel or cosmetics, then social media may be an efficient approach to attract potential clients and exhibit products. Information regarding industry trends, consumer behavior, and competitors may all be collected via social media monitoring. Insights gained from this can guide companies towards better product design, promotion, and support for existing customers. However, if the service provided by the company is not apparently obvious to the customer, such as tax assistance or legal advice, the company’s use of social media may not be as applicable.

Furthermore, market competitiveness will also influence whether social media analytics is applicable. In a competitive market, social media and social analytics may be effective tools for setting a company apart from its rivals. For instance, expanding a company's reputation through publicizing on social media may attract more potential consumers and increase enterprise’s competitiveness. However, it is not relevant to markets where competition is rather weak. For instance, Hermes never advertises and does not hunt clients on social media since their brand positioning is superior and distinctive, attracting wealthy, long-term customers. Therefore, social media analysis is not applicable to Hermes, as it doesn’t have competition pressure.

The first alternative information system or technology to social media analytics could be customer relationship management. Customer relationship management is the combination of diverse enterprise strategies, practices, and tools that better facilitate a stronger direct relationship with its consumers or clients, whilst also allowing for the management and analysis of various forms of interactional data throughout the customer lifecycle (Chai, Ehrens & Kiwak, 2020). Based on this definition, we can interpret that social media analytics could potentially be categorized as a quantitative and analytical subset or branch of CRM itself. Other branches or subsets of CRM could also include process and workflow automation, artificial intelligence, and internal project management practices and standards. Similar to social media analytics, benefits to CRM include better and faster customer service, collection of customer data to generate trends and identify behavioral patterns for future predictions, as well as improve overall customer experience which in turn leads to higher customer retention rate (Chai, Ehrens & Kiwak, 2020). Therefore, by considering CRM as a possible alternative to social media analytics, we can imply that one area of motivation or condition that would prioritize this change would be if further practices, strategies, or tools are necessary beyond quantitative analytical data, in order to achieve the enterprise’s overarching objective of improving customer relationships. Furthermore, CRM would also be a preferred alternative in cases where the enterprise has multiple channels of interacting with its consumers or clients beyond just social media, and the enterprise itself is largely consumer-facing and consumer-oriented. This would provide a balanced management approach to customer relationships across the organization involving multiple departments and stakeholders.

The second alternative to social media analytics could be big data analytics. This practice is similar to the aforementioned CRM practice in the sense that social media analytics can be interpreted as a subset or branch of big data analytics as well. Big data analytics is the use of advanced analytical techniques and tools to perform data analysis on extremely large and complex datasets to identify potential trends, patterns, and insights (“*Big Data Analytics*”*,* n.d.). Therefore, if CRM was the combination of non-quantitative practices with social media analytics, then big data analytics would be the expansion of existing social media practices to other fields of the enterprise to provide a better understanding of information regarding the enterprise itself as a whole, rather than purely focusing on social media. Hence, the use cases or opportunities where big data analytics would be the chosen alternative over social media is if the enterprise decides to expand its quantitative and analytical strategies beyond social media as a focus, and include other channels of information and data that can also provide valuable insight if analyzed and examined as well. For example, within the retail banking sector, enterprises can expand their analytical focus to include transactional data and information to identify potential trends and patterns in this area, allowing organizations to reallocate resources and realign strategies according to the analysis findings.

In order to achieve successful implementation and adoption of social media analytics, we can identify and examine various efforts or potential initiatives that enterprises may undertake from each of the four major perspectives. Firstly, from the business perspective, enterprises can focus on enabling and promoting information creation and sharing practices and tools between the enterprise and its customers, which would allow for an optimized platform where this interaction can take place efficiently. It is also worth mentioning that such platforms should be able to support multiple users and user groups simultaneously to maximize its benefits and impact.

To ensure the successful implementation of social media analytics from an organizational perspective, enterprises should establish clear and efficient communication channels between their internal teams and departments, to allow for better information quality and accuracy when being transferred between business units. Efficient communication channels are essential to the success of social media analytics due to the necessary information flow from the initial analytical or social media teams to management and senior leadership who would then be responsible for processing this information to initiate corresponding strategies moving forward.

At an information level, certain practices or initiatives that would support the successful adoption of social media analytics include social listening, where enterprises would continuously monitor interactions and conversations between customers and the brand, and perform sentiment analysis on the information and data gathered to identify what is being said about the enterprise and how the customers feel about certain marketing ads, campaigns, or enterprise initiatives.

Lastly, from the application system perspective, enterprises can implement initiatives to ensure the proper storage capabilities of large quantities of customer data, as well as the security of such storage features, particularly within the retail banking sector as customer information is extremely sensitive. Nevertheless, by ensuring the vast quantities of social media data gathered from analytics and digital platforms can be properly and efficiently stored, it maximizes the enterprise’s ability to perform accurate analysis on the data, without concerns over information bias that arise from a limited scope or sample of customer data.

**Conclusion**:

Overall, the integration of social media into company operations has significantly impacted the connection between companies and their customers. Social networks may provide a more direct relationship between businesses and customers, and a social media post can reach internet users worldwide. Social media analytics data can help businesses learn more about their clients, allowing them to provide superior service tailored to their individual needs. However, to safeguard their online reputation, businesses need to invest in robust cybersecurity safeguards.

On the organizational level, social media analytics has a direct impact on the internal structure and operations of an enterprise, such as those in the retail banking industry. Analyzing the data collected from social media can provide crucial insights into consumer behavior, which can then be used to adjust internal operations and maximize focus on in-demand services. These changes require adjustments to existing business processes to allow for the successful innovation of the business model.

From the information perspective, there is a wealth of information generated by social media platforms that can be used by businesses to track customer sentiment, optimize advertising efforts, and understand the popularity of their brand. Data gathered on the consumer’s end can provide valuable insights into how a business might position itself within its industry.

Further, the perspective of the application system highlights the value of social media in the context of corporate market research. In order to identify market openings, application systems sift through data sets obtained from social media platforms. These frameworks are composed of several elements, including but not limited to, fields of study, databases, research methodologies, and theoretical frameworks. The collected data is filtered and structured for analysis, which is then imported into statistical models to generate reports. However, the existing system architecture continues to evolve and presents several challenges, including ensuring the authenticity and reliability of information, discerning truth from misinformation, and overcoming the limitations posed by private and informal social media sources.