

ACQUIRING CUSTOMERS THROUGH CONTINUOUS TECHNOLOGICAL DEVELOPMENT – DIGITAL OPEN INNOVATION BUSINESS MODEL

Roxana-Maria Barb^{1*}

¹ Lucian Blaga University Sibiu, Romania

Abstract: In these times of uncertainty in the business environment, organizations need to direct their efforts towards innovation strategies and adopt a business model based on digitalization. All the technological advancements push companies to use digitalization in their business management, to set up instruments so they can communicate with their clients to improve products and services. Through the Digital Open Innovation Business Model, organizations can have an enormous and important impact on the market, and they can improve and revolutionize the manner they operate their businesses. A relevant aspect of operating a Digital Open Innovation Business Model is to obtain a competitive advantage over competitors by developing new products and services or improving the current ones. By taking Amazon and Tesla as a case studies, the aim of the article is to focus on the importance of implementing the Digital Open Innovation Business Model as a means for the company to be profitable and provide added value for their clients.

Keywords: digital business model, digitalization, open innovation, open innovation strategies

JEL Classification: O32, Q55, O00, O30, O32, O36

Introduction

In these unpredictable times, companies need to be agile and always be able to adapt to the new technological advancements in the business environment by adopting innovative strategies and an open innovation business model. The challenges of the market and the need for organizations to overcome them swiftly create a proper

¹ Roxana-Maria Barb, PhD Student, Bulevardul Victoriei 10, Sibiu 550024, Romania,
roxanamarca.barb@ulbsibiu.ro, <https://orcid.org/0009-0005-8367-0759>

* Corresponding author: Roxana-Maria Barb, roxanamarca.barb@ulbsibiu.ro

environment for these companies to be successful and gain a competitive advantage over the other players in the industry. All the technological tools and instruments have revolutionized the strategies adopted by companies in terms of making real-time decisions by maintaining on-going communication with clients, suppliers, shareholders in order to improve their current offer and develop innovative products. Moreover, firms may consider approaching niche markets. All of these constitute a business model adopted by a company.

Open innovation is a relatively new concept that appeared in the early 2000s, defined by Henry Chesbrough. It conceptualizes a new perspective in the innovation process of companies in which stakeholders' ideas are considered for product development. In doing this, companies create added value for their clients, and it will lead to making them profitable. Organizations should use a combination of different digital channels to gather improvement and innovation ideas from stakeholders to be implemented in their product and service offer.

Another important concept is digitalization, which has become very important in the current business market as it dictates how companies conduct their operations and how they can provide long-term value to all stakeholders (clients, suppliers, shareholders, partners). Companies which harness the potential of digitalization by using Big data and analytics will grow their revenue and they will have higher operational efficiency (Marshall et al., 2015).

Organizations are looking to benefit from these new technological tools, and they observe digitalization as “the use of digital technologies to innovate a business model and provide new revenue streams and value-producing opportunities” (Parida et al., 2019). There are numerous innovative business model challenges which should be taken into consideration when adopting digitalization. One important key aspect is the way to create, customize, analyse, and sell intangible products in a digitalized process. There are business models which promise their clients a particular result and they do not sell any product or service (Visnjic et al., 2018).

The research undertaken for this paper is important since it provides a wider and a more detailed perspective on two concepts of interest: open innovation and digitalization, among practitioners, as well as the academic and business world. Innovation and digitalization are the main drivers of adaptability for companies (Araújo et al., 2021), as these concepts are placed at the centre of companies' strategy. They are vital for the development of companies, the creation of value and obtaining competitive advantages (Rocha, 2018), especially in recent years following the challenges and uncertainties in the economic environment (Frynas et al., 2018). The current study broadens the knowledge by providing the successful stories of Amazon and Tesla, which combine open innovation and digitalization methods in their organization strategies to increase their profits, being good examples for other companies. Moreover, the paper provides a new definition of the concept of Digital Open Innovation Business Model, which may constitute the basis for future research on the subject.

In the following sections of the paper, details and explanations of each concept will be given: digitalization, open innovation, business model. They will form a new perspective: the Digital Open Innovation Business Model (DOIBM). To demonstrate

how it can impact companies in attracting and engaging clients, it will be explained by the successful stories of two companies, Amazon, and Tesla.

Literature review

Evolution of Open Innovation

Traditionally, until the year 2000, companies used to have a specific department with specialized employees who came up with innovative ideas to improve and develop their products. Starting with the new technological developments (the Internet, globalization, usage of computers worldwide, access to information in a faster manner etc.), relying only on those employees proved to be insufficient (Chesbrough, 2003). As such, companies started to search for ideas from their clients, suppliers, and other stakeholders. In this way, a new concept arose called Open Innovation. It was first defined by Henry Chesbrough, and it states that organizations need to be able to gather ideas from external and internal sources so they can take their products and services to market looking for new innovative technology (Chesbrough, 2003).

Open innovation is about having an open business ready to gather information, implement it and innovate anytime throughout the product cycle. The flexibility and transparency of this model made it easy to be adopted by companies. The connection between the company and clients changes according to the stage of the product lifecycle (Aouinait, 2022). In the first stages of the innovation process, the relationship between clients and organizations are the most important as it dictates the new ideas as well as the functionalities and specifications of products, whereas in the later stages these aspects become less important (Codini, 2015). Cooperation, collaboration and the exchange of new and innovative ideas represent the core of this new model.

Table 1. Open Innovation components

Shared value & vision	User driven innovation	Sustainable intelligent living	Full spectrum innovation	Innovation capability management
Quadruple helix innovation	Openness to innovation & culture	Simultaneous innovation	Mixed-model technologies	High expectation entrepreneurship
Ecosystem orchestration & management	Adoption focus	Business model innovation	Network effects	Social innovation
Co-creation & innovation platforms	21st century industrial research	Intersectional innovation	Servitization	Structural capital innovation

Source: (Curley & Salmelin, 2013)

In time, this new model evolved, and European Union researchers developed a new version, Open Innovation 2.0, in 2013. The advances in technology and other challenges in the market, opened up the perspective of collaboration between various

organizations, which made companies from business, the academic world and government to join forces and elaborate a new model to provide innovative products and services (Curley & Salmelin, 2013). The new model, Open Innovation 2.0, includes 20 components, shown in Table 1.

At the same time as Open Innovation 2.0, in 2013, another paradigm emerged as Open Innovation 3.0 (Embedded Innovation). It is defined as the “fundamental ability of a firm to synchronize organizational structures, processes and culture with open collaborative learning processes in surrounding communities, networks and stakeholder groups so as to ensure the integration of different external and internal knowledge, i.e., competences or technological capabilities, and to exploit this knowledge to commercial ends” (Hafkesbrink & Schroll, 2011). This new concept includes the surrounding communities in the open innovation process and comprises four types: Affinity Communities (persons interested in an organization’s products and services), Communities of Practice (persons interested in solving problems), Communities of Interest and Communities of Science (knowledgeable persons).

In the past few years, a more recent paradigm was defined as Open Innovation 4.0. This new model was conceptualized as a result of the objectives established on the 2030 Agenda from the United Nations, where sustainability occupies an important place. Apart from the sustainability aspect, this model comprises a more accelerated innovation cycle (Costa & Matias, 2020) switching to automatization, digitalization, and digital security (Costa & Matias, 2020). In an era where the Internet is advanced and communication is done by means of digital tools along with the fact that information and idea sharing are done over the Internet between persons from all parts of the world, companies are increasingly more forced to use the Open Innovation 4.0 process in how they operate their business. The business is evolving and there are more technological advancements emerging every day. Companies need to update and adapt in creating value for their clients by gathering information from them, having communities nearby and by means of digital tools, firms can implement these innovative ideas in their product and service offers.

The role of digitalization

Digitalization has gained progressively more ground in the business world in recent years due to the challenges faced with the fact that more employees work from home and the constant need to stay updated on how to create added value for clients. By incorporating digital tools in business operations, an organization can develop strong relationships with interested stakeholders (clients, suppliers, government etc.) having access to new business opportunities and challenges from the external environment (competitors, universities) (Bresciani et al., 2021).

Some of the roles played by digital tools such as Big data, artificial intelligence, social media, cloud computing, the Internet of things and blockchains, include methods by which companies gather information and make timely predictions in the decision-making process. Big data is defined as huge volumes of complex data which use several tools and technologies related to data management to analyse information

(Iqbal et al., 2018). Artificial intelligence comprises machines, which based on previous information and experience, can take decisions and actions (Samoili et al., 2020). The Internet of things constitutes a network which can detect information and data using software intelligence and an internet connection (Rayes & Salam, 2022). Kaplan and Haenlein (2010) define social media as applications based on accessible and digital technology used to share and create ideas and information socially in an online environment. Blockchains have a shared database which contains a growing list of data and information (Tapscott & Tapscott, 2018). Cloud computing is a model to enable “convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, storage, applications) that can be rapidly accessed and updated with minimal effort or interaction” (Campbell et al., 2018).

Using all the digital tools mentioned above can improve internal processes and can lead to reducing costs (Parida et al., 2019). Moreover, digitalization can provide new ways for companies to gain revenue. An important aspect of using digital instruments in business is to provide transparency in the relationship of companies with their clients and other stakeholders. Parida et al., (2019) defined digitalization as “the use of digital technologies to innovate a business model and provide new revenue streams and value-producing opportunities”. Digitalization should be part of the strategy of all organizations as it influences companies “in all industries in terms of organizational structures, products, production, market shares, selling strategies, and as a result, firms have to establish management tools and practices to face these challenges” (Singh et al., 2023).

Another key aspect to consider is the rapid return on investment when using digital tools (Klymash et al., 2023). Digital tools are present in several businesses, such as online trading, tourism services as hotel bookings, travel arrangements (car sharing, airplane reservations etc.) and they have an important impact on payment and transaction processes. The digital tools presented above make it easier for companies to communicate with clients, use them to make rapid and efficient decisions to increase revenue and can reach stakeholders throughout the world.

New business models – Innovation Business Model and Digitalized Business Model

In the current changing business environment, many organizations need to innovate in various areas of their activity. Rapid shifts in clients’ needs and expectations force companies find and implement new solutions for their business models. These new solutions may refer to products, organization, or processes (Otola & Grabowska, 2020). Teece (2010) defines the business model as “the manner by which the enterprise delivers value to customers, entices customers to pay for value, and converts those payments to profit”. Moreover, Teece (2010) highlights the fact that the business model is defined as an organization’s architecture in which the value proposition for the customer is supported by data and other evidence and it has revenue and costs structures in order to deliver value. In 2016, Wirtz et al., stated that the business model is an aggregation of the activities undertaken by the company. In addition to the aspects related to value creation and strategy, elements such as the client and

market are observed in order to achieve the objective of securing a competitive advantage. The business model has nine elements: value proposition, target customer, distribution channel, relationship, value configuration, core competency, partner network, cost structure, and the revenue model (Wirtz, 2020). Organizations should focus on creating customer value, considering the competition (Hedman & Kalling, 2002) and the revenue outcomes along with strategic partnerships (Wirtz, 2020).

By introducing innovation in the business model, firms become more responsive to their competitors' actions and are able to respond quickly to the dynamic environment. Innovation may refer to organizations already in the market and to newly established business models by start-ups. Not only do businesses need to innovate to adapt constantly on the market, but they have to shift from a closed perspective to an open one, in which they should include clients and other stakeholders in the way they operate their business.

On the other hand, digitalization has become part of the everyday life of clients and companies in the last 15 years with the advancements in technology. In order for firms not to produce perturbances in how they operate their activities, they are suggested to follow a digitalized business model beside the traditional one (Bouncken et al., 2019). In time, companies may choose to shift altogether to the new digitalized business model. Using Big data, the Internet of things, and social media among other digital tools, will make companies create added value for their clients as finding out their changed expectations will increase the revenue and create improved and new products and services based on the ideas gathered from the market.

New concept definition – Digital Open Innovation Business Model (DOIBM)

Digitalization and open innovation are considered imperative for the success of all businesses in today's changing market. We may consider a rather new business model called the Digital Open Innovation Business Model (DOIBM), which comprises both concepts of digitalization and Open Innovation. Researchers have emphasized these two concepts rather separately, however, in the current business environment, there is a greater need to join these models in a new concept – DOIBM. The open innovation business model is defined as “a distributed innovation process based on purposefully managed knowledge flows across organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization's business model” (Chesbrough & Bogers, 2014). It consists of a lack of control of the processes and results (Mahr et al., 2010), includes external information and knowledge by using licensing, acquisition, and collaboration throughout the value chain (cooperation with customers, suppliers, competitors, and other interested organizations), which can be used in the process of new product development (Björkman et al., 2010). This forms the inbound process (Loučanová et al., 2022). Internal knowledge can be used externally, which is included in the outbound process (Ludvig et al., 2020). These aspects help companies to reduce risks and costs, quickly launch new products on the market and increase the performance of the companies'

processes (Fjeldstad et al., 2012). Companies that follow an open innovation business model are in search of new ways to collaborate with clients and suppliers so businesses can open and expand under the co-creation characteristic (Turoń, 2022).

On the other hand, the digital business model links two domains of the organization: technological and economic areas (Pieroni et al., 2019). It is more about how a company transforms technology into economic value (Ritter & Schanz, 2019). Digital tools affect the business model of a company in the perspective of value proposition, value creation and the automation of processes (Frank et al., 2019; Soluk et al., 2021). Technology transforms how the operations and processes of a company are carried out and revenue is generated (Veit et al., 2014). Digitalization helps companies to develop new products and processes as well as to launch them rapidly on the market (Khin & Ho, 2019). Digital capability makes the firm utilize technology and Big data to reduce consumption, to establish a new production system to monitor activity in various on-site locations and receive real-time feedback (Queiroz et al., 2019).

Considering the characteristics of the digital business model and the Open Innovation business model, we propose a new definition for the Digital Open Innovation Business Model (DOIBM) as an innovative manner which can be used by enterprises to create value for customers, gain new revenue streams and value producing opportunities by using digital technologies to gather ideas from external and internal sources to innovate their processes, products, and services.

The open innovation digital business model incorporates digital tools in order to create value, innovation value, value proposition value and value delivery innovation (Clauss et al., 2019; Panda, 2019; Still et al., 2017). Value creation innovation constitutes the process of using new partnerships and digital technologies to provide customers value (Clauss et al., 2019; Still et al., 2017). New software and digital platforms may support new services (payment), create good collaboration relationships between companies and attract new clients (Dasí et al. 2017). In organizations where digital tools, Big data and social media were integrated in the business activity, value was delivered to customers (Bouwman et al., 2019). In other companies, discussions on forums and blogs were used to build a closer relationship and connection with customers (Wikström & Ellonen, 2012). Other firms have used indirect distribution channels by means of digital platforms to expedite the delivery of products (Baber et al., 2019). Firms employ freelance bloggers to share the content of their products in the online environment (websites, networks) leading to lower costs and handling customers on the spot so their feedback can be received in real-time (Wikström & Ellonen, 2012). By utilizing this strategy, companies can encourage clients to access their websites, which will increase the website's traffic, and thus higher revenue (Wikström & Ellonen, 2012). Also, by having a customized pricing plan, clients choose the most suitable model for them and this will improve business revenues (Parida et al., 2019).

It is important for companies to be up to date and to meet customers' expectations to obtain a competitive advantage in the market and gain higher revenues. To highlight the advantages of having a Digital Open Innovation Business Model (DOIBM) for a company, Amazon's and Tesla's success stories will be presented as examples.

Research methodology

The objective of this paper is to provide details on how a company can meet clients' expectations and be profitable using a combined business model, between the digital business model and the Open Innovation business model in order to obtain the most successful results. Two companies were studied and their strategies of integrating clients' opinions in their innovation process and how they use digital platforms to sell their products. The method chosen to highlight the benefits of the Digital Open Innovation Business Model (DOIBM) is the case study. By means of this method, the DOIBM concept is researched more from a practical perspective in which the theory can be observed and verified whether it has good results or not. The case study provides answers to questions such as, "How is DOIBM put into practice successfully by the companies?" "What results did the companies obtain after implementing DOIBM?" This research method provides additional information which comes as a completion of the theoretical part and adds value to the paper. By selecting two companies, the theory can be analysed in depth and can provide a wider understanding of the researched subject.

The documentation method was used, thus online documents, online platforms, news websites, company's reports were reviewed and consulted in order to describe the digital and Open Innovation activities adopted by the respective companies. By using the case study as the research method, the way in which the theoretical aspects of the Digital Open Innovation Business Model are combined with practical ones can be observed. The author's intention is to provide examples of two companies which use in practice the concept of the Digital Open Innovation Business Model (DOIBM).

Results – Amazon case study

The ecommerce environment and the rise in popularity of online shopping have gained increasingly more ground in the last decades as technology has continuously developed. Following the surge in online shopping in 2020, the trend continued to rise between 2021 and 2022, with an average 18% increase over the three-year period (Semrush Blog 2023). In 2023, the trends in e-commerce relate to artificial intelligence as it is used more by companies and clients. The leader in the ecommerce industry is Amazon, which operates on international markets, and it expanded its operations rapidly. With sales of 2,722 million dollars, Amazon occupies the first place, followed by AliExpress (845 million USD), Walmart (748 million USD) and eBay (699 million USD). It can be noted that the US and European markets are declining in their share in sales, thus companies are looking for opportunities for expansion into other markets, such as promising countries from Asia, e.g. India or the Philippines.

Considering the fact that technology is quickly developing, and the competition is fierce, Amazon needs to secure its position as a leader on the market, thus implementing digital tools and open innovation is crucial for the organization.

Amazon was founded in 1995 as an online retailer of books, soon becoming a digital platform for selling various products. With the latest technology changes, Amazon has offered more digital products on its platform, so its offer can be more up to date for today's customers and to have higher profitability. The company's ecosystem includes "retail, transportation, B2B distribution, payments, entertainment, cloud computing, and other segments" (Dudovskiy, 2020). Starting with ecommerce, Amazon went on to be more digital, offering several elite products, which include music streaming, e-books or software by paying a subscription.

Amazon now has several divisions and products in its portfolio such as Amazon.com (online retail shop), Amazon Advertising, Amazon Alexa, Amazon Appstore, Amazon Basics, Amazon Books, Amazon Kindle, Amazon Music Unlimited, Amazon Prime and others (Anon, 2021).

Being an online store among others, Amazon uses ecommerce automation software on its platform. This automated solution may save the money, work, and time of businesses in different processes like establishing product prices and analysing sales trends. Ecommerce automation can be programmed by companies to perform repetitive tasks with no or little intervention so it can run the business easy and quickly. There are several benefits of using this software (Amazon, 2022):

- Obtaining important insights: the data and information can be rapidly found and compiled.
- Higher customer satisfaction: any changes to product prices are made in real-time, there is no waiting time.
- Consistency of the brand: the message spread across all channels is the same.

Moreover, Amazon developed Alexa, a cloud-based voice service on millions of devices worldwide, providing clients a more intuitive and easier way to interact with technology each day (Amazon, 2022). The service can be installed on any device which can support it, and Alexa can help consumers with numerous useful things in their personal lives, such as dimming the light in a room, playing music, reading the latest news and ecommerce. The company is up to date and uses artificial intelligence and the framework of the Internet of things in this application so clients can enjoy a full experience. Amazon uses Amazon Echo, a smart speaker, an Internet of things device, which constitutes the central point of the Alexa service. Alexa communicates with Amazon Echo and with other Internet of things compatible devices by converting Alexa's voice in the communication protocol used by other applications (Chung et al., 2017). Amazon developed artificial intelligence into robots to improve inventory operations in two new robot warehouses in the US. In these facilities, robots drive, load, and unload parcels to deliver products efficiently to clients while reducing costs (GlobalData, 2022).

At the same time, Amazon uses artificial intelligence to make predictions to determine the future purchases of clients based on past choices and their identity based on a well-established algorithm. On the other hand, Amazon uses cloud computing, Amazon Web Services (AWS) to provide clients a variety of services including computing power, storage, databases, and analytics (Digital Directions, 2022). AWS is an innovative service that provides organizations a solution to store data and

reduce costs. Besides data storage, the AWS service provides companies Big data and analytics so they can process large amounts of data.

As a technology company, Amazon uses open innovation in developing the Alexa service allowing clients who are interested in technology and third-party developers to contribute to Alexa's benefits and utilities. The company relies on open innovation to innovate and improve Alexa through collaborative communities and crowd contests. Each year, Amazon organizes contests offering million dollars prizes and it gathers dozens of research groups from universities. They research and share new ideas to include new skills and abilities in the Alexa service. Moreover, through collaborative communities, Amazon creates platforms where independent and corporate developers can share ideas and innovate Alexa's service.

Amazon's business model proved to be very profitable until 2021, and it continuously adapts to the new technological advancements in the external business environment creating added value for clients. Using various digital tools such as the Internet of things, artificial intelligence, ecommerce automation tools and providing digital platforms for clients to purchase products and services, Amazon is operating a digitalized business model.

In 2022, Amazon had a decrease in profits as a consequence of increasing operational costs; nevertheless, this is sustained by innovations and newly released products and services by which the company accessed new markets and obtained more competitive advantages in the market. In Figure 1, we can see the profit obtained by Amazon from 2012 until 2022.

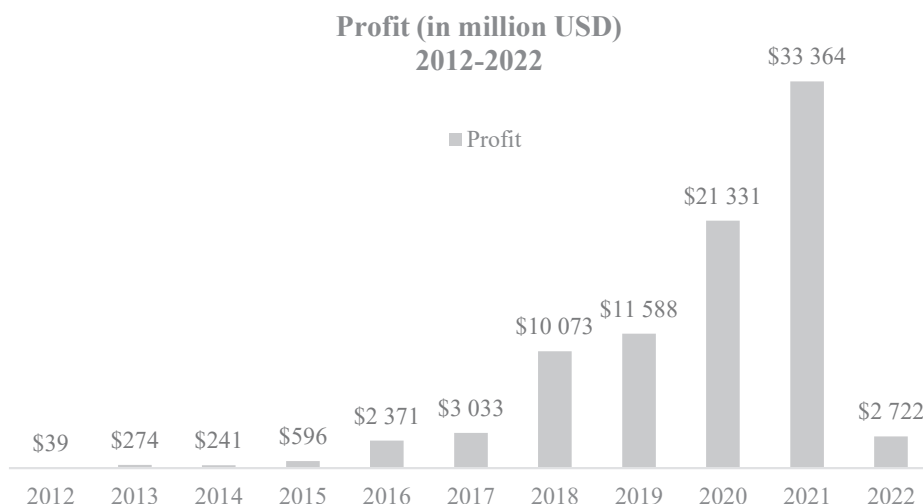


Figure 1. Amazon profitability

Source: (Pereira, 2023)

Moreover, by organizing yearly prize contests where research groups from universities compete in providing the best innovative ideas to develop and improve the Alexa cloud service along with collaborative communities, Amazon adopts an open

innovation business model where clients' opinions are valued. We may conclude that by combining the two business models, Amazon has a combined business model called the Digital Open Innovation Business Model (DOIBM), which was defined in the theoretical part of this paper.

Amazon is an innovative company in its industry, and it will invest in innovative products and services which are profitable and advanced and in time, the company believes will bring more revenue. Open innovation and digitalization are two core values for Amazon, keeping up to date with machinery, the Internet, technology, and innovations from clients and research groups are very important for the company.

Results – Tesla case study

The global electric vehicle market is growing as in 2022 the market was valued at 330 billion dollars and in 2023 it is projected to grow to 388 billion dollars, while it is expected to reach 951 billion dollars in 2030 (MarketsAndMarkets.com, 2030). Due to increasing environmental awareness, government policies, and technology developments, electric cars have become a viable and sustainable transportation option (MarketsAndMarkets.com, 2030). The expected increase is based on advancements in battery technology, cost reduction, and more fast-charging capabilities. Tesla Inc. was founded in 2003, previously named Tesla Motors, and is a manufacturer of electric vehicles, solar panels, energy storage and power systems contributing to environmental issues with these products. The first electric car produced by Tesla was in 2008 and since then, the company has launched several new models on the market (Model S, Model X and others).

Tesla is using open innovation in its activity to develop new technologies and facilitate growth (Karamitsios, 2013). The company adopted three main strategic alliances: supplier alliances, R&D alliances, and alliances with other car manufacturers. Tesla conducted a design competition and it entered into a partnership with the winning company, Lotus. Part of this alliance, one of Tesla's vehicles is manufactured in the partner's plant in United Kingdom and the cars are stored there, reducing costs. The partnership with Panasonic provided Tesla with battery cells for cars and collaboration to develop new battery systems for future electric vehicles (Karamitsios, 2013). Another open innovation strategy used by Tesla is opening its patents starting with 2014 and completed the process of open sourcing the patents in 2019 (Wang & Peng, 2020). This opening is not unconditional, as Tesla requires the organizations to open their patents for products related to Tesla's patents (Wang & Peng, 2020). This open innovation approach has several advantages for the company (Ajaja, 2021):

- Creating the opportunity to open the mass production of electric vehicles
- Increase business opportunities for Tesla as the growth of variety of electric cars
- Global energy infrastructure growth: worldwide governments will be forced to develop the energy infrastructure at a faster pace
- Reducing internal costs as the innovations are externalized.

From the digital perspective, Tesla is involved in several technology partnerships and collaborations with several companies. For example, in collaboration with Re|Source, Tesla developed a blockchain system to track the supply chain of cobalt from producers to the factories (GlobalData, 2023). Moreover, artificial intelligence is a central point in Tesla's activity. Tesla Bot is a robot under development by Tesla to be used as a driver for electric vehicles. The company's engineers are working to improve the Dojo system in order to provide high-technology machine learning to be used internally and externally by clients. Autonomy Algorithms, also based on AI, are tools to create a high-fidelity representation of the world and predictive trajectories to help drivers on the road (Tesla, 2023). Cloud computing is used by the company to improve the autopilot of electric cars through feedback received in real-time while driving (Sangfor Technologies, 2022).

The organization takes advantage of social media to promote its products and leveraging the influence of its CEO Elon Musk in the online environment, helps Tesla gain brand awareness and reach millions of worldwide clients (Instagram – 9.5 million followers, YouTube – 2.38 million subscribers, LinkedIn – 10.9 million followers, Twitter – 75.5 million post views) (Armstrong, 2023).

In conclusion, Tesla has successfully implemented open innovation by forming alliances with suppliers, R&D companies and other car manufacturers to create new products. The company uses artificial intelligence, cloud computing, blockchain, and social media tools to obtain feedback from clients and to continuously improve their products. The Digital Open Innovation Business Model (DOIBM) implemented by Tesla leads to an increase in profitability and innovation in the automotive industry.

Conclusions

In a changing business environment, companies need to be in touch with their clients to create for them added value based on innovative and continuously improved products they offer using different digital tools to gather new ideas from stakeholders. The concepts of digitalization and open innovation have become more important in recent years and numerous companies implement these models in their business operations. Researchers defined the concepts of the digital business model and Open Innovation business model, however, with the latest advancements, a new model emerged, and it needed to be defined, the Digital Open Innovation Business Model (DOIBM). By implementing this concept into their operations, the businesses of Tesla and Amazon are growing with increasing profitability and they provide concrete methods in achieving this objective including clients or other companies as partners.

Both companies use artificial intelligence in their products and social media to improve their current portfolio and to obtain feedback from clients. Moreover, both Tesla and Amazon use cloud computing to store real-time information from customers to improve and add value to their products. At the same time, Amazon's cloud computing is one of the services sold by the organization. On the other hand, part of Tesla's strategy is to form alliances with various companies on the market with the purpose to innovate. An important aspect to be considered is Tesla's perspective to open its patents for usage by other organizations to broaden innovations in the EV industry.

The evolution and presentation of each concept provides a wider view on the model and why it is important for organizations to adopt. By studying the Amazon and Tesla cases, which use several digital tools in their operations along with adopting the Open Innovation concept to include stakeholders in the development and improvement of their products, it proves that DOIBM is useful and profitable.

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POZYSKIWANIE KLIENTÓW POPRZEZ CIĄGŁY ROZWÓJ TECHNOLOGICZNY – MODEL BIZNESOWY OTWARTYCH INNOWACJI CYFROWYCH

Streszczenie: W czasach niepewności w otoczeniu biznesowym organizacje muszą ukierunkować swoje wysiłki na strategię innowacji i przyjęcie modelu biznesowego opartego na cyfryzacji. Wszystkie postępy technologiczne zmuszają firmy do korzystania z cyfryzacji w zarządzaniu biznesem, do tworzenia instrumentów, dzięki którym mogą komunikować się ze swoimi klientami w celu ulepszenia produktów i usług. Dzięki Modelowi Biznesowemu Otwartych Innowacji Cyfrowych organizacje mogą wywrzeć duży i ważny wpływ na rynek oraz mogą udoskonalić i zrewolucjonizować sposób, w jaki prowadzą swoją działalność. Istotnym aspektem funkcjonowania Modelu Biznesowego Otwartych Innowacji Cyfrowych jest uzyskiwanie przewagi konkurencyjnej nad konkurencją poprzez opracowywanie nowych produktów i usług lub doskonalenie obecnych. Biorąc za studia przypadków Amazon i Teslę, celem artykułu jest skupienie się na znaczeniu wdrożenia cyfrowego modelu biznesowego otwartej innowacji jako sposobu na osiągnięcie rentowności przez firmę i zapewnienie wartości dodanej dla jej klientów.

Słowa kluczowe: cyfrowy model biznesowy, digitalizacja, otwarte innowacje, otwarte strategie innowacji

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