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Crowdsourcing: A New Phenomenon or an Old Practice of Leveraging Society's Intellectual Capital? History and Definitional Framework of the Concept

ABSTRACT

This article explores the concept of crowdsourcing by examining its historical context, contemporary applications, and theoretical framework. Crowdsourcing is defined as a mechanism for converting societal intellectual capital into value through collective participation, which dates to antiquity and has evolved with technological advancements, especially the internet. By analysing historical cases, such as the Longitude Act and the Enigma code-breaking effort, the

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study demonstrates the effectiveness of collective intelligence in solving complex problems. The research also evaluates various definitions of crowdsourcing, emphasizing its adaptability across industries and its role in open innovation. The study concludes with a proposal for a comprehensive definition of crowdsourcing, highlighting its potential and challenges, including intellectual property rights, participant motivation, and ethical considerations. This analysis underscores the transformative impact of crowdsourcing on business models and its capacity to drive societal engagement and innovation.

KEYWORDS: crowdsourcing; historical innovation processes; history of crowdsourcing; science and technology; society's intellectual capital; crowd wisdom

INTRODUCTION

The phenomenon of crowdsourcing has recently gained popularity, and we can easily observe an increasing number of analyses using this concept (Estellés-Arolas & González-Ladrón-de-Guevara, 2012). Indeed, in science, as in other areas of life, various trends are noted, including adopting a specific research topic or applying some methodological solution, such as using qualitative techniques in research processes. Thus, it is reasonable to ask whether crowdsourcing is a new phenomenon that was discovered only recently or whether it is a mechanism for converting society's intellectual capital that has been used for centuries. Finding the answer to this question will help us to better understand how definitions of new phenomena and processes in scientific language are created. Examining this mechanism is also essential for understanding the way current definitions and theories of phenomena and processes that involve crowdsourcing are constructed.

In this article we aim to present the mechanisms of conversion of society's intellectual capital using specific, well-known examples in the history of humankind to date. Thus, the analysis of cases concerns various situations from the past that involve the

use of the potential of human intellect to solve a specific problem, with the involvement of people who are not directly affected by the problem (they do not own it). In addition, we decided to provide an analysis of the major definitions of the concept of crowdsourcing in literature to assess their adequacy and theoretical relevance.

As a result of the analyses indicated above, a tangible theoretical contribution to science will be to characterize case studies of mechanisms of converting society's intellectual capital. We will also attempt to construct a new definition of the concept of crowdsourcing that would be better suited to cognitive possibilities in the social sciences. The text captures the existing research in terms of the definitional framework, pointing to a construct that covers the cases of society's intellectual capital conversion as precisely but also comprehensively as possible.

CROWDSOURCING: A NEW OR OLD PHENOMENON?

The phenomenon of crowdsourcing, not taking into account today's vast and ever-growing possibilities of using the internet for this, goes far back in history. According to Oliver Gassmann, crowdsourcing was already practiced in ancient times, even before Jesus Christ. As an example, he cites the famous "Gordian Knot", which to this day signifies a situation that is very hard to solve. As legend has it, the man who untangles the complicated Gordian Knot, placed on a royal cart by King Gordios I – the mythical founder of the Phrygian state and the city of Gordion – and deposits it as a gift in the temple of Zeus, will become the lord of Persia and, in some tales, even of all Asia. Many attempted to accomplish this but in vain. When in 333 BC Alexander the Great, after conquering the Persian Empire, learned of the prophecy, he decided to untie the knot to prove that he would be the ruler of Persia. Despite his persistent efforts, Alexander the Great was

unable to untangle the knot conventionally, but he came up with a brilliant idea and cut the knot with a sword and thus announcing his triumphant victory over Persia (Gassmann, 2010, p. 12).

In the Middle Ages, monasteries were centres of knowledge, where monks copied and preserved ancient texts. In addition, medieval scholars, though often working individually, relied on the collective exchange of information, the debating of ideas, and the development of knowledge. The collection, classification, and transmission of knowledge between monasteries by monks was aimed at preserving and expanding the intellectual output of an entire civilization. This collective approach aimed not only to preserve knowledge but also to develop it, which was a form of crowd intellectual capital (Epstein, 2003).

In the 17th century, the British Navy began to use collective wisdom to solve maritime navigation problems. Before the invention of precise navigational tools such as the chronometer, sailors relied on experience and local information gathered by different crew members. Crowd intellect, in this case, meant gathering experience from different sailors who had different skills and observations about weather, currents, and orientation at sea. This enabled more accurate navigation, thus avoiding disasters and enabling better route planning (Simms, 2007).

Another historical example of the crowdsourcing phenomenon is the British attempt to determine the degree of longitude. After serious accidents at sea and heavy financial losses, merchants and owners of merchant ships urged the British Parliament to provide funding for research and development in the field of navigation. In 1714, the British Parliament enacted the so-called Longitude Act to offer a hefty prize of £ 20,000 to a person who would devise a method for the precise determination of longitude at sea (within a few tenths of a degree). The task was undertaken by John Harrison, the son of a Yorkshire carpenter – an intelligent, gifted carpenter and a passionate mechanic, who after many years of intensive work, numerous interventions, and a personal

meeting with the King of England, came up with the desired method. For that he was awarded £ 18,750 (Gassmann, 2010, p. 12). Even today, most of John Harrison's mechanical clocks are still in use, offering high reliability and accuracy. Almost three centuries later, digital satellite navigation system measurements and caesium atomic clocks are utilized, with an acceptable deviation of 1 second in 300 years.

In the 18th and 19th centuries, during the Industrial Revolution, many inventions and technological solutions were created through the joint work and experience of different groups of people. Examples include the development of steam-powered technology and manufacturing machinery. Although individuals such as James Watt and Richard Arkwright were the leaders of innovation, their achievements resulted from the collective work of many inventors, engineers, and workers. The production systems that became the foundation of the Industrial Revolution were, in fact, the result of the collective work of people who shared their ideas and experiences (Mokyr, 1990).

Another example of applying crowd intellect is the case of weighing an ox, which took place in 1850 in England. At the Stokes Poges fair, during an exhibition, organizers asked participants to guess the weight of an ox. The person who gave the closest weight was to receive a prize. The results of the submissions were then calculated on average, and the result turned out to be surprisingly close to the actual weight of the ox. Although individual participants may not have had precise knowledge of the animal's weight, their collective assessment was very accurate (Surowiecki, 2004).

In the 1830s, Samuel Morse, supported by the collective work of many people, created the telegraph system, which later revolutionized communication around the world. The intellect of the crowd came to this technology during the development of the code system, which was based on different people testing their understanding and effectiveness of communication through

simple signals. The joint work of experts, engineers, and users of the telegraph led to the development of a system that proved to be extremely effective and of great importance in the history of communication (Hilt, 2004).

In the 19th century, gold prospecting in Polish mines was carried out in a way that combined individual attempts by miners with collective efforts. In this case, instead of relying on experts, many mine workers used intuitive methods, sharing their observations about the location of deposits. The miners, although lacking advanced geological knowledge, relied on experience and information from others, and were thus able to discover new deposits that may have previously been overlooked by individual researchers (Tomczak, 1991).

At the same time, in England, a wider public was involved in solving criminal puzzles, especially in cases of mysterious crimes. Many criminal cases were solved thanks to tips and opinions from the public, who analysed available information, discussed and exchanged theories. There were cases in which public advice and guidance helped prosecute criminals, even though official investigations were unable to reach a solution (Sherlock, 2000).

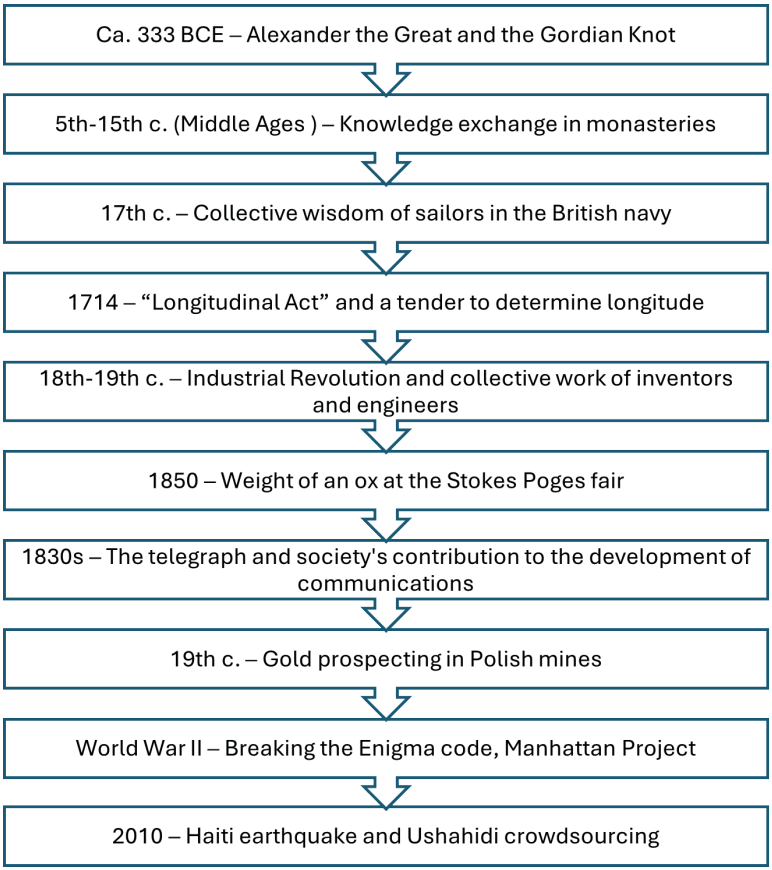
One of the most famous examples of the use of crowd intellectual capital in history was the work to break the German Enigma code during World War II. The work involved mathematicians, cryptologists, and linguists from France, England and Poland. Polish mathematicians Marian Rejewski, Jerzy Różycki, and Henryk Zygalski, employees of the Cipher Bureau of the Polish Army General Staff, were the first to break the cipher of the German cipher machine in December 1932. They developed very effective methods of breaking the Enigma code, thanks to which it took only 15 minutes to establish the machine's daily cipher. Unfortunately, in 1939, the Germans changed the coding method. This meant that the Polish team had to initiate further, very expensive activities. In addition, investments turned out to exceed the budget, and it was decided to transfer Polish equipment and

documentation to the British and French. And so the work on breaking the Enigma cipher was taken over by, among others, the centre at Bletchley Park under the direction of Alan Turing (2021). Although it mainly relied on the work of prominent mathematicians and cryptologists such as Alan Turing, the project was the result of the collective work of many people who contributed their ideas, research, and analysis. The British government organized a large group of specialists who worked to break the Enigma system in a variety of activities, including the use of many hands to solve coding problems. In the end, thanks to the involvement of a wide range of people, including outsiders (such as amateurs), the code was successfully broken, which was crucial to the outcome of the war (Hodges, 1983).

During World War II, the Manhattan Project, which aimed to develop the first atomic bomb, used a form of crowd intellect, combining the knowledge of many scientists from different fields. Although the project focused on an elite of experts, its success was the result of the collective work of many people who were not directly involved in mainstream research but who contributed important elements to the project in the form of new ideas, discoveries, and technical solutions. The collective wisdom of the group, as well as the ability to collaborate on a large scale, were crucial in the breakthroughs that led to the creation of the atomic bomb (Rhodes, 1986).

During the 2010 Haiti earthquake, the Ushahidi organization developed a method for using crowd intellectual capital in crisis mapping. By combining data reported by people in need of resources (via SMS, email, and social media), maps were built depicting the situation in real time, which were then used to coordinate rescue efforts. In this way, a crowd of people around the world, often without any prior experience in crisis management, were able to make a significant contribution to improving the effectiveness of humanitarian aid (Meier, 2011).

Figure 1: Sample use the intellectual capital of the crowd to solve a problem on an illustrative timeline.



Note. Own elaboration.

Crowd intellectual capital has become a popular tool in problem-solving in various fields, including science, technology, medicine, and emergency management. In the history of humankind, there have been many instances of using this approach to solve real problems, in which large numbers of people participated in data collection, information analysis, or creation of solutions. Is crowdsourcing something new? Well, its initial phases were organic thanks to technologies that were primitive at the time and did not provide the kind of opportunities that the internet provides today. The internet does not have the geographic and time barriers that, for example, the transmission of radio waves has. Instead, it gives people around the world the opportunity to participate interactively in the value-added process. In particular, the emerging, youngest technologies used in Web 2.0 and even Web 3.0 and beyond, as well as the social development of the internet, have contributed to the prevalence of crowdsourcing and have led to the fact that the intelligence and power of internet users' work can be used effectively.

CROWDSOURCING TODAY

The term crowdsourcing was introduced by Jeffrey Howe in 2006, who defined it in an article in *Wired* magazine as "a process in which organizations or individuals outsource tasks or solutions to problems to a broad online community" (Howe, 2006). From a technological perspective, crowdsourcing is closely related to the development of the internet, which enables mass communication and real-time collaboration. In this context, crowdsourcing becomes a tool for gaining access to knowledge, ideas, and talent that would previously have been inaccessible to organizations. A key element of this definition is the emphasis on the global nature and openness of the process, which allows resources to be effectively sourced from anywhere in the world (Brabham, 2013).

According to Reichwald and Piller, authors of the book *Interactive Value Addition* (Reichwald & Piller, 2009), the term "crowdsourcing" was not introduced in *Wired* magazine until after the publication of their book in 2006. Crowdsourcing is a contemporary, updated interpretation of the idea of interactive value addition. In the book, the authors describe the phenomenon as real-time interactive relationships between market participants during value creation. In the context of interactive value creation, both innovative and operational processes are relevant. In the case of innovation, we are talking about open research and development processes (so-called Open Innovation), which integrate different groups of stakeholders into the creation of new products. An example of such a model is the company CrowdSpirit. Operational processes, on the other hand, such as mass customization, involve stakeholder collaboration in the final stage of production, where products are individualized according to customer preferences (e.g., Spreadshirt, a company that offers personalization of clothing).

Comparing the definition of crowdsourcing according to Jeffrey Howe with that of Reichwald and Piller, one can see that they differ mainly in the degree of precision. Both definitions point to crowdsourcing in an open-ended manner, targeting a broad, indefinite number of people, implying the global nature of the process. However, Reichwald and Piller's definition is more specific – pointing to specific tasks and assigning appropriate roles to stakeholders within the innovation and production processes. In this definition, special attention is given to the role of users, who take the lead in value-added, leading to so-called co-creation, where the consumer becomes a prosumer.

In the first edition of Reichwald and Piller's (2006) book, interactive value creation referred mainly to product innovation and customization. However, in the 2009 version, the concept was expanded to include so-called "simple tasks" performed on platforms such as Amazon's Mechanical Turk, developed in 2015. This

platform enables routine tasks such as identifying photographic objects or verifying translations. These tasks are called Human Intelligence Tasks (HIT) and are rewarded by the company. The purpose of these types of platforms is to solve problems that require human intelligence but cannot be performed by machines.

So both terms, crowdsourcing and "interactive value-added", cover a wide range of activities. In both cases, it is about large-scale collaboration – both in terms of innovation and product customization as well as in terms of simpler assignments that are not related to the creation of new products, but rather the execution of tasks that require human interaction. Internationally, the term "crowdsourcing" has gained more popularity, although both concepts refer to the same process of interactive value creation. In this paper, we will refer to the term "interactive value-added creation" in the context of crowdsourcing.

Crowdsourcing is a concept that combines the ideas of Open Source and Open Innovation, transferring the principles of free software development and open innovation to other areas of the economy. With this model, crowdsourcing can be applied to various areas of business, from research and development to production and product lifecycle management. The creation of added value through crowdsourcing can include design, testing, production, distribution, as well as service and development of complementary products. In this way, companies can create better-quality products and services that meet customer needs while minimizing the risks associated with consumer dissatisfaction or a negative corporate image.

The transfer of open source ideas to other fields, such as products or services, is in line with the concept of open innovation (Open Innovation), which Frank Piller and Christoph Stotko describe as the process of acquiring knowledge or performing activities from external sources (Piller & Stotko, 2003, pp. 24–25). This type of innovation activity mainly focuses on the creation of new products and services. Open innovation allows access to

information about demand and new solutions, which increases the efficiency of innovation. Thanks to the integration of users in the innovation process, the information collected is more precise than that obtained through traditional market research methods.

An example of open innovation outside the IT sector is the Open Source Car (Oscar) project, started in 1999 by Markus Merz. The goal of the project was to create a car whose design was the result of the work of the online community, including students, engineers, and designers. The model, based on open source principles, allowed free access to design data and allowed users to modify the vehicle according to their ideas. Similar initiatives have been implemented in other fields, such as the gaming industry, where users contributed to the development of popular products, and their contributions were rewarded or motivated non-financially (Piller, 2003, p. 12).

Another example of the application of the idea of open innovation is the so-called Open Medicine, the development of drugs for rare and tropical diseases that are not profitable for the pharmaceutical industry. An example is the collaboration of scientists, foundations, and R&D institutions on anti-malaria drugs, such as the drug developed by the Drugs for Neglected Diseases initiative (DNDi) and Sanofi-Aventis. Such initiatives show that the development of medical innovations can take place without traditional patent protection and that collaborations based on open licensing allow access to important drugs in developing countries (Ziegler, 2007).

For both open source and open innovation, values such as openness, transparency, free access, and collaboration are key. Crowdsourcing, as a tool for open innovation, allows for the involvement of a wide range of people in the value-added process. While crowdsourcing and open innovation share common characteristics, they are not the same concepts. Open innovation may involve a narrower circle of participants and is mainly aimed at developing new products or solutions within an organization.

Crowdsourcing, on the other hand, is a broad process involving the masses in a variety of activities that go beyond the traditional innovation process. Crowdsourcing uses online platforms where organizations can collaborate with users to generate ideas and solutions, making it an extremely flexible tool across industries (Goetz, 2003, pp. 150–158).

It is worth noting that crowdsourcing is based on the active and voluntary role of customers, who are not just passive consumers but co-creators of value. Thanks to Internet technology, it has become possible to combine mass production with individualization, which creates new opportunities for innovation and the creation of customized products. Crowdsourcing is thus not only an innovation tool but also a way to build a competitive advantage by actively involving a broad community.

There are many terms in the literature used to describe the phenomenon of crowdsourcing. One of them is "swarm intelligence" by Francis Heylighen (2007), a cyberneticist at Vrije Universiteit Brussel. He treats the internet and its users as a so-called super-organism: "Society can be thought of as a multicellular organism, with individuals as cells. The network of communication channels that connect individuals constitutes the nervous system of this super-organism, and the future development of the network is the development of the embryonic-stage global brain of the social super-organism" (Heylighen, 2007, p. 70).

The swarm does not replace the internet in this case but is only its basis. This view is consistent with the view of this medium as an information infrastructure. The meaning of the term, however, moves away from artificial intelligence to a kind of aggregation of human intelligence and is defined as "crowd intelligence or community intelligence" (collective intelligence).

Also, the concept of the wisdom of crowds (Surowiecki, 2007), or why groups are smarter than individuals and have greater innovation potential, is the title of a book written by James Surowiecki and published in 2004. In his book, he proves that gathering

information, solving problems, and making decisions in a group are often more effective and lead to better solutions than those proposed by individuals. In the book, Surowiecki provides numerous examples and anecdotes to illustrate his argument, citing primarily fields of knowledge such as economics and psychology.

An anecdote introducing this subject is about Francis Galton's surprise at an experiment he conducted in which visitors to a livestock exhibition, in a competition, quite accurately estimated the weight of a cattle carcass by taking the median of all the group's estimates (similar to the competition held at the Stokes Poges fair mentioned earlier). This type of intelligence is found in various forms around the world. This is because in this case there is a high probability that the mass of people has more information than individuals, and therefore, they also know the correct answer. This approach applies even if the majority of the group's representatives do not have much knowledge and rational, and yet as a group, they make the right decisions. In summary, Surowiecki (2007, p. 14) defines this phenomenon as follows: "The accumulation of information, knowledge, and skills of individuals into one group can lead to joint group decisions that are often better than the solutions of individual experts."

Surowiecki also pays special attention to the parallels concerning statistical selection procedures, in which a certain group of individually decisive people constitutes the totality of all possible outcomes of a certain event, and thus are able to make a better prediction for the future. This phenomenon is referred to as the "wisdom of the crowd" and can be applied to all areas of interest. The key to understanding the phenomenon of "wisdom of the crowd" is, therefore, not the psychology of the masses, but the diversity and independence of different groups of independently deciding individuals, since the best collective decisions are not based on consensus and compromise, but are the result of fierce competition of various differing opinions and strong arguments of independently acting individuals. Group evaluation is,

therefore, usually more accurate than the evaluation of individual participants. Another example of the wisdom of the crowd is the "Joker" option in the TV show "Millionaires", in which the audience members answer a contestant's question.

The wisdom of the crowd is at the heart of crowdsourcing, as the results of solutions sought through open appeal depend on the individual characteristics of each person, such as their knowledge and skills. This potential can be used for both simple tasks, such as forecasts or estimates of elections or price formation, and more complex tasks, such as the development of a new SARS (severe acute respiratory syndrome) flu vaccine, tasks that involve innovative solutions. In this particular case, the work of laboratories independent of each other on combating the SARS virus bore fruit, as they exchanged the knowledge they had gained with each other and thus quickly came to an effective solution (inventing a SARS vaccine). Without this direct cooperation, each laboratory would have taken many months, if not years, to find a solution. This cooperation took place based on so-called self-organization.

OTHER THEORETICAL CONCEPTS

Beyond the core definition of crowdsourcing, the literature offers several related concepts that overlap with or complement it. These include swarm intelligence, the wisdom of crowds, prosumption, lead users, and user-generated content.

The concept of the prosumer, a combination of the roles of producer and consumer, was introduced by American futurist Alvin Toffler in 1970 (1980, p. 273). In his book titled *The Third Wave*, Toffler outlined the evolution of the economy, dividing it into three main phases: agrarian, industrial, and post-industrial society. The first wave was a period of self-sufficiency in agrarian societies, in which people produced mainly for themselves and producer–consumer boundaries were typically blurred. The

second wave, which began with the Industrial Revolution, was dominated by the division of labour – producers created goods and consumers bought them. The turn of the 1980s, marked by increasing specialization, mass production, and consumption, ushered in a new era – the third wave.

During this period, thanks to technological advances, there was a change in consumer attitudes. Wider choice, personalization of products, and lower production costs have caused consumers to take over some of the tasks previously performed by manufacturers. Examples of such active consumption include self-testing of pregnancies in the 1970s, which had previously been carried out by medical staff, or the introduction of self-service fuel dispensers in response to the energy crisis in the 1970s. With these changes, consumers became active participants in the production process, which introduced the concept of the prosumer.

The development of technology has contributed to the further development of prosumption, and the consumer has started to play the role of an informal employee. Many companies now transfer tasks to customers that were previously part of the services offered. Examples include self-service stores, fast food restaurants, and gas stations, where customers not only buy goods but also take on some of the service duties, such as scanning products or cleaning.

This phenomenon can also be observed in other industries. Consumers often perform self-service tasks instead of using traditional services. Examples include online banking, booking tickets online, or using ATMs. Consumers are taking on the role of active participants in economic processes, and their work is becoming an informal part of corporate operations. Through these activities, businesses can save on operating costs, but customers are not compensated for their involvement.

This phenomenon is sometimes criticized because it is not always the result of voluntary cooperation, but rather an imposed form of cooperation in which the consumer becomes an unpaid

employee of the company (Voß & Rieder, 2005). In this context, we often speak of "cheap labour" or "hired entrepreneurs" who perform tasks for companies without a formal contract or compensation (Grün & Brunner, 2002). Examples of companies that use this model include IKEA and McDonald's. IKEA shifts part of the production process to customers, forcing them to pick up, transport, and assemble furniture, saving the company huge sums of money. McDonald's, on the other hand, has saved millions of euros a year by involving customers in waste segregation.

This phenomenon is also linked to the development of online platforms, such as Web 2.0, which enable companies to take advantage of mass consumer involvement in various processes. This, in turn, leads to deregulation of the labour market and an increased sense of personal responsibility among consumers. The modern understanding of prosumption and crowdsourcing (outsourcing) assumes that customers become full partners of companies, co-creating added value in the production and development of services.

The modern economic model is increasingly based on delegating tasks to consumers, which raises questions about the limits of corporate responsibility and the fairness of this system.

At a time of mounting pressure to create and implement innovations, companies need to constantly introduce new products to the market to remain competitive and secure their position in the market. In the context of the role of customers in innovation processes, two distinct approaches have been identified. On the one hand, according to Kleemann, Voss and Rieder, companies seek to use the unpaid labour of customers to increase their profits. On the other hand, Eric von Hippel (1986) emphasizes the voluntary and growing influence of customers and users on innovation processes in companies.

His concept of "leading users" (1986, pp. 791–805) focuses on customers and users who are ahead of market and technology

trends and develop a sense of future market needs. Characteristics of lead users include:
– early recognition of relevant technological and market trends and formulation of general social needs based on them;
– lack of satisfaction with the available solutions, prompting them to create non-standard innovations;
– a pioneering use of new solutions and technologies.

The role of lead users can be seen in both R&D and production processes. In special cases, when companies do not see market potential for a particular product or when the demand is very specific and involves only a small group of customers, it is the lead users who can take the lead. Sometimes they are involved in the entire development and production process, from the idea to the finished product. A good example of such innovations is sports gear, such as mountain bikes, snowboards, and kitesurfing equipment. They were created out of the need of users who could not find products on the market that met their expectations.

Cooperation between enterprises and lead users brings both benefits and challenges. The advantages include:
– early identification of market and technology trends;
– better understanding of customer needs and market risks;
– providing information about competitors' activities;

The disadvantages of such cooperation include:
– higher organizational requirements for coordinating activities;
– the risk of focusing too much on niche products that may not find a wide audience;
– intellectual property regulation problems in the absence of lasting agreements between companies and lead users.

Lead users also play a key role in the crowdsourcing phenomenon, especially in the context of innovation processes. Their involvement is based on their initiative, motivation, and desire to realize personal aspirations. Examples of such activities show that customers with the characteristics of lead users, such as high

motivation and the need for self-actualization, can develop innovative solutions, which often take the form of breakthrough products.

From these examples, one can see changes in the organization of value-added processes. Customers are not only participating in these processes but are increasingly taking the lead in them, leading to a redefinition of traditional models of cooperation between companies and their users.

Other terms used on the crowdsourcing framework are user generated content (UGC; OECD, 2007) or user-created content (UCC). This means that the content of an online offering is not created by its provider but by its users. The term UGC became widespread in 2005 and refers to various types of content such as videos, blog posts, podcasts, and wiki entries. As defined by a 2007 OECD report, user-generated content must meet the following criteria:

- Publication requirement – user-generated content is available to the public, e.g., on a website or available to a select group of people on a social networking site.
- Creative contribution – the content created is the result of the user's creative work. This work can be entirely user-generated or a collaborative element, as in the case of pages that users can edit together or recycle already existing content. What is important, however, is that the user must produce some new value. For example, merely copying a part of a TV show and uploading it onto an online video site is not considered to be UGC, according to the OECD.
- Creation outside of professional activity – UGC-created content is content created by users in their free time. It is produced most often by amateurs who do not expect any profit. Their motivating factors are contact with peers, publicity, prestige, and the desire for self-expression.

Based on the above, it can be noted that there are many other related concepts in the literature that fit into the broad

phenomenon of crowdsourcing. However, all the previously described concepts have one thing in common: they are integral elements of crowdsourcing and together form its comprehensive picture. It is worth emphasizing that the potential of crowdsourcing is essentially unlimited, but its success depends on many diverse factors. A key element in the process of planning and implementing a crowdsourcing project is their careful identification and analysis. Companies that intend to implement such a venture should first recognize these determinants to maximize the chances of success of their efforts.

DISCUSSION

Based on the analysis, it can be concluded that crowdsourcing is a complex phenomenon with a rich history and versatile applications. History shows that mechanisms resembling modern crowdsourcing were already present in ancient times and developed in various forms in subsequent eras. The modern understanding of the concept is evolving (Estellés-Arolas & González-Ladrón-de-Guevara, 2012), especially in the context of the development of internet technologies that enable global collaboration in real-time.

An analysis of historical cases, such as the breaking of the Enigma code or the Longitude Act project, demonstrates the power of collective work and the potential that lies in harnessing the intellect of the crowd. By involving diverse groups of people with diverse skills and experiences, it was possible to achieve breakthrough results. The contemporary application of crowdsourcing in areas such as medicine, crisis management, or consumer product development shows that this phenomenon is still growing, gaining importance in the context of globalization and digitalization.

Crowdsourcing is based on the active participation of a community, leading to a transformation of traditional value-creation models. Customers, who used to act as passive buyers, are becoming co-creators (Schlagwein & Bjørn-Andersen, 2014), which is changing the dynamics of the relationship between companies and their (Brabham, 2008) environment. It is worth noting, however, that such cooperation, while bringing numerous benefits, also brings challenges, such as the risk of focusing on niche products or the difficulty of coordinating the activities of multiple participants.

In literature, crowdsourcing is often compared to other concepts, such as open innovation or prosumption. Although these phenomena differ in detail, they share a common feature – the involvement of external stakeholders in the value-creation process. Particular attention should be paid to the "wisdom of the crowd", which points to the effectiveness of collective intelligence in solving problems, even when individual participants lack expertise.

Crowdsourcing is a multifaceted concept that can be defined in many ways in different contexts – from the earliest definitions, which focused mainly on the technological aspect of the process, to contemporary approaches that incorporate its use in business models and innovation processes. Crowdsourcing is becoming an increasingly complex tool that allows organizations to source resources, ideas, and solutions from outside, which fosters innovation and flexibility. However, like any tool, crowdsourcing comes with some challenges, such as issues of participant compensation, data protection, and intellectual property (Niedzielski, et. al., 2023).

Based on the above examples, it can be said that the phenomenon of crowdsourcing, depending on the definition, has been covered in both general and specific ways. The general concept of crowdsourcing includes all types of stakeholder activities, while the specific concept of the phenomenon is oriented more toward technical issues, such as the use of various online platforms and

Web 2.0 and downstream technologies. However, none of the above-mentioned definitions include the issue of added value within the framework of value creation arising from the abilities, skills, life experience, and motivation of participating human individuals and the possibility of their flexible application. For this reason, the following definition of crowdsourcing is proposed: **the voluntary engagement of the external community by organizations or individuals to solicit, among other things, ideas, knowledge, labour, funding, or support, using information and communication technologies**. This form of collaboration is based on the active and voluntary participation of participants who share their skills, time, and resources, creating added value. Crowdsourcing involves all links in the value-added chain and can be used for all types of activities. This open collaborative model allows organizations to benefit from the diverse perspectives and skills of the community, which can lead to innovative solutions and enrich the products or services offered.

CONCLUSIONS

Crowdsourcing, as a form of harnessing the intellectual capital of the crowd, plays a key role in a dynamically changing world. Its potential is essentially limitless and covers every link in the value chain, from research and development to production and distribution. However, to take full advantage of its potential, organizations must adopt a strategic approach that takes into account the identification of key success factors, such as the appropriate selection of technology platforms (Henhappel et. al., 2023), managing the diversity of participants, and addressing ethical and legal issues.

The modern development of technologies such as Web 3.0 and the growing public interest in active participation in innovation processes indicate that the role of crowdsourcing will be even

greater in the future. This phenomenon not only enriches business processes but also contributes to building a more integrated and engaged society.

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