

In the Digital Age, Collaboration is the First Step Toward Unlocking Innovation in the Workplace

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Abstract. Collaborative innovation has become crucial for organizations that wish to stay relevant and competitive in the quickly evolving digital age. There are plenty of opportunities, but there are also several obstacles to overcome. Information and data security in a digital world vulnerable to cyberattacks is one of the biggest problems. Sophisticated security measures must be implemented by organizations to safeguard confidential data that is shared among team members. Resistance to change is also an obstacle that needs to be overcome. When organizations adopt new technology, employees often face difficulties adapting. Organisations can create more efficient and effective solutions with the latest technologies, such as artificial intelligence and data analysis. Collaboration across industries and disciplines enables a holistic approach to solving complex problems. By understanding and overcoming existing challenges, organizations can harness the potential of collaborative innovation in the digital era to create added value, increase efficiency, and ensure business continuity in an ever-changing world.

Keywords: Collaboration Innovation, Workplace In Digital Era, Long Term Success.

INTRODUCTION

In the current digital business era, innovation is critical to maintaining a company's competitiveness. (Sari et al., 2019) say that a company's ability to successfully implement new technology and procedures can improve business operations. However, innovation is not a single result that appears magically and suddenly. Innovation is a long process resulting from collaborative efforts from individuals who want to share visions and goals for better mutual progress (Tidd et al., 2005)

Innovation in the workplace can be said to be a product of creativity resulting from cross-disciplinary thinking and collective courage to try new things (West et al., 2014). Through built-in effective and collaborative cooperation, organizations can unlock innovative potential that has been locked. (Edmondson, 2019a) focuses on built collaboration as a critical element so that the innovation potential that is realised can help organizations compete in a business world that continues to change rapidly (West et al., 2014). Collaboration is the main foundation that provides space for innovation to develop and change for the better. It is a movement that takes the organization to a higher level and allows the teams to explore the latest ideas, overcome complex challenges, and create innovative solutions (Hargadon et al., 2006).

The role of collaboration opens up innovation in the workplace to generate new thoughts, develop more sophisticated products, and optimize business processes to make them more efficient and effective (Oke et al., 2009). The best strategy for facilitating successful

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collaboration in the work environment can be to create a culture that supports continuous innovation (Edmondson, 2019b).

In today's digital era, which continues to develop, collaborative innovation has become a stepping stone that plays a vital role in organizational success. The factors mentioned above, such as a supportive organizational culture, visionary leadership, and the use of sophisticated resources and technology, are very important elements that colour the formation of a landscape of collaboration and innovation (Schein, 2010; Bass & Riggio, 2006; Westerman et al., 2014). This article attempts to understand why collaboration is the key to unlocking the potential of innovation in the workplace and how this can help organizations achieve long-term success.

LITERATURE REVIEW

Collaboration Innovation

Collaboration is a cooperative process that is built where individuals or groups are willing to work together to achieve common goals by sharing knowledge, resources and responsibilities (Inkpen, A. C., & Tsang, 2005), while innovation is the use of creativity, knowledge, and technology to create something new or to improve something existing, to achieve efficiency, effectiveness, or positive changes in results (Chesbrough, 2003). The following is Table 1, which contains the definition of collaborative innovation:

Table 1: Definition of Collaboration Innovation

No	Author	Definition
1	Tavani et al (2018).	Collaboration with research organisations and suppliers is critical to process innovation capabilities.
2	Tsai (2009).	Collaborative networks are the development of a network model for innovation development, which includes four variables describing collaborative networks: suppliers, clients, competitors and organisations.
3	Durmusoglu (2004)	Describe collaborative innovation as Open Innovation. Open Innovation means that valuable ideas can come from inside or outside the company and go to market from inside or outside the company.
4	Rainey (2008)	Emphasises the value of network management to enable governments to find solutions to complex problems. Collaborative innovation is usually associated with the concept of Networked Government.
5	Stewart (2014)	This concept includes effective coordination between government organisations and the possibility of integrating non-profit and for-profit sectors into a production system designed to achieve public goals.

No	Author	Definition
6	Zeng, 2010	Collaborative innovation is a big idea brought to life in actionable terms, enabling businesses across the value chain to participate in new collaborative business models.

Collaboration is considered a key element in improving process innovation capabilities. This shows that collaboration with external parties can play a very significant role in stimulating organizational innovation. In this context, the focus on collaboration primarily aims at collaborative networks involving suppliers, clients, competitors and organizations as the main elements defining innovative models. Collaborative innovation is often identified as Open Innovation, meaning valuable ideas can come from inside or outside the company and be directed towards internal or external markets. In this framework, being open to contributions from various sources is considered a practical approach to achieving optimal innovative outcomes.

Network management is an essential highlight in collaborative innovation, especially in facilitating governments in finding solutions to complex problems. This idea is closely connected to the concept of networked government, which not only includes effective coordination between government organizations but integrates nonprofit organizations and the for-profit sector into a production system to achieve public goals.

Collaborative innovation is defined as a big idea that is implemented through actionable steps. This enables the involvement of various business actors in the value chain, resulting in new collaborative and participatory business models. Thus, collaborative innovation becomes the basis for the development of business models that are more inclusive and oriented towards concrete results. As reflected in various academic definitions, collaborative innovation is a multi-faceted process that includes interactions between various entities and individuals across organizational and geographic boundaries. This process relies heavily on exchanging ideas, knowledge, and skills, where each participant brings a unique perspective that contributes to the creation of innovative solutions. This collaboration occurs within organizations and involves external parties such as clients, suppliers, and research institutions, showing that innovation often results from joint efforts beyond traditional boundaries.

Technology plays a critical role in enabling and strengthening collaborative innovation processes. Virtual teams, for example, can shed more light on how technology can connect different individuals and organizations, allowing for collaboration without location restrictions. Technology exists to facilitate collective learning and rapid exchange of information, enable innovation collaboration to be more efficient and effective, and overcome physical barriers that might previously have hindered collaboration.

Innovation collaboration is an inclusive and participatory approach emphasising the importance of shared vision and cooperation in creating new products and solutions. Various parties can jointly overcome complex challenges through collaboration, producing more creative and sustainable solutions. Innovation collaboration increases an organisation's or team's innovative potential and helps build more robust and synergistic networks among stakeholders in the broader innovation ecosystem.

Factors that influence collaborative innovation

It is known from the previous paragraph that collaboration and innovation are two things that are mutually related and influence a company's success. Therefore, in this section, the author will briefly describe the factors that influence collaboration and innovation, including:

1. **Leadership:** The role of a leader is vital in creating an environment that supports collaboration and innovation. A leader who gives space, supports, and provides resources to his team can increase the possibility of an innovative process (Bass et al., 2006).
2. **Organizational Culture:** A work culture in the workplace that supports collaboration, opens up space for learning, supports teams to experiment, and tends to encourage innovation processes. Organizations that support and **promote** diversity, inclusiveness and freedom of expression tend to be more innovative. (Schein, 2010)
3. **Resources:** Resource allocation, such as budget, time, and workforce, also plays an important role and can impact an organization's ability to collaborate and innovate. Adequate resources and appropriate investment in research and **development** can support innovation. (Teece, 2007)

The benefits of collaboration and innovation in the Digital Era

In today's digital era, collaboration and innovation are stepping stones for organizational success. The effectiveness of collaboration allows for the exchange of ideas and knowledge between individuals in the team, speeds up decision-making, and increases operational efficiency. In the context of innovation, the digital era also provides more significant access to technology and data. It allows organizations to create breakthrough new solutions for products or services more adaptive to market changes and consumer demands. Take for example, the existence of cloud computing technology, sophisticated data analysis, and online collaboration platforms have changed the way organizations think, interact and produce more innovative ideas (Westerman et al., 2014)

Collaboration and innovation in the digital era also include increasing competitiveness. Organizations that combine expertise from various disciplines and dare to innovate in applying digital technology will tend to be superior in meeting the demands of this dynamic market. Apart from that, successful collaboration can also expand business networks, create new business opportunities, and increase visibility in the global digital market (Bughin et al., 2008)

With increasingly advanced technological developments in communication and connectivity, organizations can create an innovation ecosystem that continues to grow. Collaboration and innovation in this digital era are about following trends and creating new trends that can shape the future of business and industry (Dodgson et al., 2008). Awareness of the benefits of collaboration and innovation is critical as a stepping stone for organizations that want to remain relevant and sustainable in this digital era.

Discussion

Challenges of collaborative innovation in the digital era

Facing a digital era that continues to develop and cannot be predicted, organizations face several challenges that need to be addressed together to maximize the potential for collaboration and innovation. One of the leading real challenges is the security of data information in a digital environment that is very vulnerable to cyber threats. To anticipate such things, organizations need to implement more sophisticated security strategies and ensure that all collaboration participants understand the importance of maintaining the confidentiality of data information (Singer et al., 2014). In addition, uncertainty regarding security regulations in the digital era can also hinder cross-border collaboration or sending data across countries or internationally. Therefore, organizations need to understand the legal framework that applies in each country and develop an adequate compliance strategy system to overcome the obstacles in question (Dedrick et al., 2003).

Other challenges that may occur are cultural changes and resistance to new technology. An effective strategy will involve empowering the team through continuous training and mentoring and building awareness of the need for the benefits of digital innovation to motivate technology adoption (Cram, 2016). By facing and overcoming the challenges mentioned above, it is hoped that organizations can build a solid foundation to build a culture of collaboration and sustainable innovation in the digital era. This strength is a stepping stone to continue innovating amidst the world's uncertainty and in this digital era.

Challenges also arise in optimizing collaboration and innovation in the digital era. Data information security, unpredictable and ever-changing regulations, and resistance to change can be significant obstacles (Singer et al., 2014; Dedrick et al., 2003; Cram, 2016). The importance of sophisticated security strategies and a deep understanding of the applicable legal framework regarding data information law is paramount for the continuity of collaboration across borders. Empowering and increasing employee capabilities and efforts to adapt organizational culture are strategic elements to be emphasized in overcoming resistance to change (Amabile, 1998; Chesbrough, 2003; Cram, 2016).

Opportunities for innovation collaboration in the digital era

In the digital era, collaborative innovation enables organizations to leverage cutting-edge technology and big data to create more effective and efficient solutions. With digital platforms, collaboration becomes more accessible, allowing stakeholders from various locations and backgrounds to participate in the innovation process. Integrating digital tools such as cloud computing, AI, and the Internet of Things (IoT) in collaboration greatly accelerates data collection, analysis, and idea development, expected to drive faster and more responsive innovation to market needs.

Collaborative innovation in the digital age also provides opportunities for more open innovation, where companies can develop new products and services in partnership with consumers, academics, and competitors. This approach increases innovation's relevance and calibre while quickening innovation's pace by combining disparate resources and concepts. By leveraging the vast network that digital technology provides, businesses can gain instant insights into the needs and desires of their customers, which will result in a more significant number of products tailored to their needs.

Creating collaborative innovation development strategies is crucial to increasing a business's competitiveness in the digital era. Innovation collaboration combines cutting-edge technologies and fresh ideas to create better, more efficient solutions. Businesses must form strategic alliances and collaborate across industries during the digital transition rather than relying solely on their internal resources. Chesbrough (2003), for example, shows the importance of open innovation, where companies rely on their internal resources and contributions from the broader innovative ecosystem.

This collaborative approach can be strengthened by utilizing digital platforms that facilitate the sharing ideas and information between companies, partners, and even customers. This tool facilitates real-time, virtual collaboration, which accelerates creativity. A study by

West et al. (2014) highlights the importance of creative networks formed through collaboration across businesses and sectors to establish a dynamic innovation ecosystem. This plan also asks to alter the company culture to promote open and cooperative thinking.

Employers should support employees' idea-sharing, cross-departmental collaboration, and involvement in the greater innovation ecosystem. In this sense, Chesbrough's (2003) open innovation model provides a strategic viewpoint on how companies can achieve long-term growth in the digital age by being more open to outside sources of innovation. According to Chesbrough (2003), one of the most essential strategies for surviving the fast-paced dynamics of the digital age is collaborative innovation of the most essential strategies for surviving the fast-paced dynamics of the digital age.

Many considerations need to be made to assess the success of utilizing collaborative innovation. The first and most important requirement for success is adding value, which can be done by creating more innovative products or services, increasing productivity, or entering undiscovered markets. The second criterion is partnership sustainability.

This involves having the capacity to sustainably and long-term form creative alliances. Furthermore, the achievement assessment may encompass factors like the capacity for ongoing innovation, quick adaptation to novel technology, and response to shifts in the market.

The success of innovation collaborations can be very significant. One of the main impacts is sustainable business growth; by creating more innovative products and services, companies can gain a solid competitive advantage, access new markets, and increase their revenues. Collaborative innovation can also positively impact human resource development, encouraging creativity and sustainable team learning.

According to (Chesbrough, 2003), collaborative innovation is an essential strategy for companies to achieve long-term success. Chesbrough stressed the importance of collaborating with the larger ecosystem, including external partners, customers and the scientific community. He also pointed out that the parameters for success in innovation collaboration include measuring the innovative contribution to revenue and profit, increasing resource use efficiency, and the innovative partnership's sustainability.

(Laursen, K., & Salter, 2006) Research results show that companies collaborating actively with external partners tend to have better innovative performance. They also found that success in collaborative innovation can be measured through increased productivity, sales growth, and the ability to create new products or services that are successful in the marketplace.

Organizations that want to win the competition in this digital era must have effective data analysis capabilities, and evidence-based decision-making is important and primary. Artificial intelligence technology and predictive analysis can help organizations deal with data complexity and create valuable insights (Davenport et al., 2010; McAfee et al., 2012). The presence of a leader who can inspire, guide and create a very supportive work environment is also a key element in stimulating collaboration and innovation (Amabile, 1997).

In simple terms, innovation refers to creating new or significant improvements in various contexts, from ideas to products, services and business processes. In the fast-paced digital era, collaborative techniques are increasingly vital in dealing with rapid change. Collaborative innovation involves many parties, including companies, governments, and educational institutions, working together to build relevant and new solutions that may meet difficulties faced in a quickly changing digital environment.

Success in innovation collaboration may be measured by numerous metrics, including the development of added value, sustainability of collaboration, and the ability to adjust fast to market and technology changes (Tidd et al., 2005). Successful firms employ the latest technology, such as digital platforms, artificial intelligence, and data analytics, to boost the efficiency and effectiveness of collaboration. However, success in innovation collaboration is not just about the result but also about developing an environment that enables sustainable growth and the adaptation needed to stay relevant in an ever-changing digital era.

From the point of view of (Chesbrough, 2003), collaborative innovation initiatives deliver long-term benefits to firms. Collaboration with external partners, clients, and the scientific community can widen the vistas and resources accessible for innovation. In this approach, firms can handle changes and problems better, boost resource use efficiency, and create new products or services that are effective in the market. Studies also demonstrate that openness to innovation collaboration can boost organizations' innovative performance (Laursen et al., 2006), which in turn can strengthen their competitiveness in the competitive digital era.

According to (Laursen et al., 2006), innovative collaboration is the key to facing change and pursuing growth in the digital era. Companies must understand the relevant parameters, utilize the latest technology, and build a strong partnership network to succeed. With the right approach, innovation can be the primary driver in creating added value, increasing efficiency, and ensuring business continuity in an ever-changing digital world. Understanding this complexity allows organizations to develop an overall strategy that includes aspects of culture, technology, security, and leadership. Thus, when organizations can develop comprehensive

strategies in the areas of culture, technology, security and leadership, they can build a solid foundation to face today's challenges and gain maximum benefit from the potential of collaboration and innovation in the digital era.

CONCLUSION

In the rapidly developing digital era, collaborative innovation has great potential to bring significant change and growth to organizations. However, along with these opportunities, several challenges must be overcome so that innovative collaboration strategies can be successful.

One of the main challenges is information and data security issues. Organizations must ensure a sophisticated security strategy in a digital environment prone to cyber threats to protect the information and data they share in collaboration. Data security is critical, especially in cross-border cooperation and cross-border or international data exchange. Therefore, a deep understanding of cyber risks and measures to reduce their vulnerabilities is essential. Uncertainty regarding data security and privacy regulations is also an obstacle. Changing regulations in different countries requires special attention regarding compliance and data management. Organizations need to have a strong understanding of the applicable legal framework in which they operate and develop an adequate compliance strategy system.

One major obstacle to collaborative innovation is opposition to change, on top of security and regulatory concerns. When businesses implement new technology or modify their workflow, staff members frequently encounter opposition to these changes. Consequently, continuous coaching and mentoring of the team is essential for team empowerment in an innovative cooperation strategy. Employers should inspire staff members by outlining the advantages of digital innovation and the reasons behind these adjustments. Gaining acceptance of the advantages of digital innovation is essential to getting beyond opposition. It is also necessary to change the culture within the organization; business executives should promote cooperation, idea exchange, and an open work environment. The corporate culture needs to be infused with creativity and ongoing team learning, which calls for the full backing of upper management.

Companies can create more effective and efficient solutions by utilizing big data, digital platforms, and cutting-edge technologies. Digital tools such as cloud computing, artificial intelligence, and the Internet of Things (IoT) can facilitate faster collaboration. This speeds up data collection, enhances analysis, and produces more adaptable ideas to market needs.

Working together to innovate also increases access to more specialized information and resources. Digital connectivity facilitates collaboration across disciplines and industries, resulting in solutions that consider various viewpoints. This enables the application of a cross-sectoral approach to solve complex issues, producing more comprehensive and well-integrated goods and services.

Innovation cooperation opens doors to more transparent innovation in the digital age by involving consumers, competitors, and researchers in developing new products and services. This approach increases innovation's relevance and calibre while quickening innovation's pace by combining disparate resources and concepts. Using the vast digital technology network, businesses can gain real-time insights into the needs and preferences of their customers, resulting in a more significant number of products tailored to their needs. Therefore, in the digital age, collaborative innovation may be the key to future organizational success and growth despite its challenges.

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