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Virtual Organisations: Emergence and Management at InVision

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Title: Virtual Organisations: Emergence and Management at InVision

1. Introduction

Virtual organisations have become a dominant archetype in today's fast-changing business environment due to the development of technologies and demand for flexibility and effectiveness. A Virtual Organisation does not have a fixed address and does not have a physical structure; it relies on computers and software to organise its work (Vartiainen, 2024). This model is ideal for establishing a geographically dispersed work force that may even work across different time zones. InVision is an excellent example of a virtual organisation that has thrived in the digital product design sector. InVision started in 2011 and has only worked remotely, focusing on a distributed team of over 1,000 employees in 20 countries to continue introducing unique design products (HubSpot, 2024). This approach also helps InVision to maintain a constant inflow of talents and at the same time ensures that the company has to cease operations, and this improves on productivity and innovation. This particular assignment seeks to assess the development of Virtual Organisations and also discuss the way virtual management is applied at InVision. This model will discuss the prospects and difficulties for the company and It will study the approach of InVision for strategic planning, product design, and leadership in the international market (Gilson et al., 2015).

2. Emergence of Virtual Organisations

Virtual Organisations (VOs) have evolved due to the developments in the technology and globalisation enabling companies to gain flexibility and efficiency leading to the reduction in costs and tapping into the global talent pool (Al-Jedaibi, 2024). Transition from the conventional rigid structures to flexible positions came with the inception of the internet and particularly with the use of social media applications, intensified by the inventions of cloud computing and new generation collaboration software. VOs operate through digital communication, decentralization, and flexible working relationships. It also brings to view a real-time collaborative and integrated model of the global teams to improve on innovation and the responsiveness realizing. Lack of physical offices results in huge savings on facilities, resources that are reinvested into technologies and employees (Lipińska, 2015).

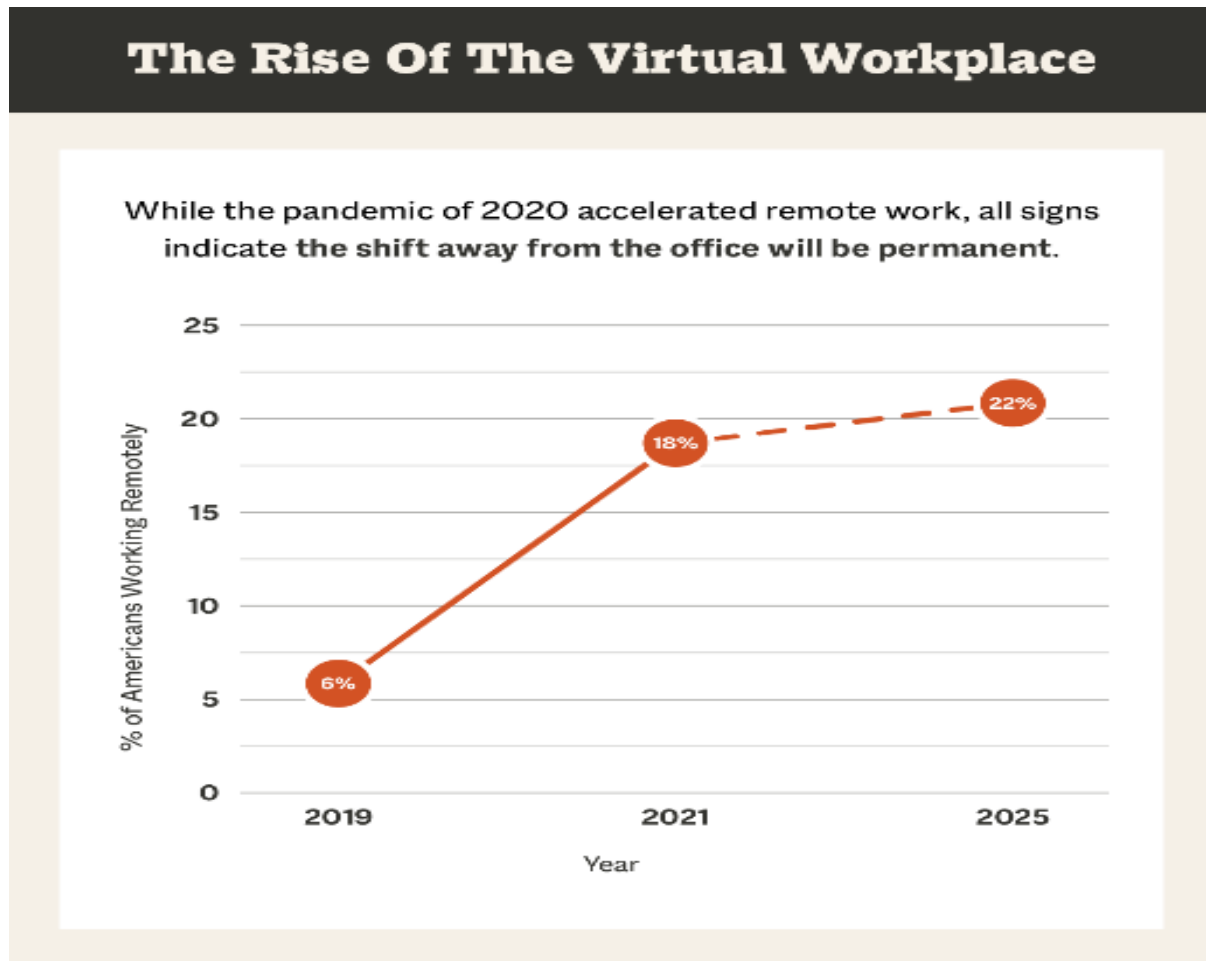


Figure 1: (Martin, 2023)

According to Gartner, most employees globally will work remotely at least five days a month by 2025, supporting the sustainable structure of the VO model. Further, a Buffer report conducted on working remotely in 2020 revealed that, 98% of employees want to continue with remote work, at least in some capacity, which shows that the model is preferred. InVision stands as a good example of a functioning VO (Aswani , 2024). It was launched in 2011 and ever since it only hired a remote workforce; it embraced the best technologies to oversee people all over the world. It has been decisive for making InVision to be able to employ talented and capable workforce from all across the globe and the firm has managed to sustain high productivity and creativity all the time. Thus, InVision provides a best practice for other organisations that can potentially try to implement a virtual model, and illustrates the positive and possible features of VOs in the modern world (Lara, 2023).

3. InVision as a Virtual Organisation

InVision is an American firm founded in 2011 as a sole actor in the digital product design space as a Virtual Organisation (VO). InVision currently has more than 1,000 people on its team, with hubs in over 20 countries; as a result, the company is entirely remote, with no headquarters. This approach provides the company with a wider and diverse talent pool that they can potentially harness to boost creativity and innovation (Lara, 2023). As a virtual company, InVision relies on numerous software tools – for instance, Slack is used for sharing messages, Zoom for organizing meetings, and Trello for tracking projects. Also, there are tools that have been developed by InVision for the purpose of design collaboration towards design projects. It is this technological structure that guarantees cohesion and synchronization of the team despite the physical distance that might be between them (Božić, 2023).

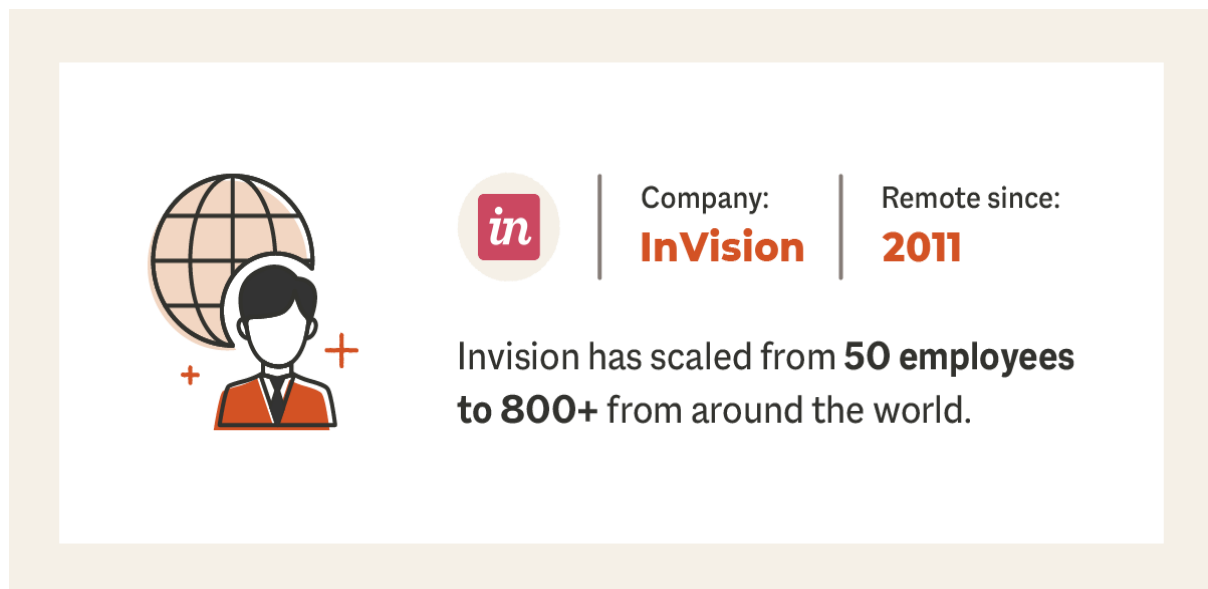


Figure 2: Virtual Workplace: Top Companies Making It Work and How

There are obvious advantages of having this virtual model. InVision does not have a physical address and it reduces costs on facility and other overheads leaving adequate budgets to be accorded to ICT and staff training. Moreover, the ability to work from home due to flextime improves the levels of satisfaction with the job and employment stability. A report from Buffer that was conducted in 2020 also indicated that 98% of the remote workers appreciated such working environments (Božić, 2023). Hence, InVision is an excellent example of a VO organization that works and supports the VO model. InVision has remained productive and innovative leveraging talent from all over the world together with digital tools thus being an inspiration to other organizations intending to adopt virtual models. This places InVision not only in the leader of its industry but also as an example of efficient virtual working.

4. Concept of Virtual Management at InVision

Understanding Virtual Management

Virtual management means solutions of managing and supervising tasks and processes within a virtual environment, where priorities are communication, trust, decentralised authority, and responsibility for the outcomes. In contrast with management where workers are in a similar workplace and where the manager supervises physically the performance of his subordinates, virtual management is based on results and standards. According to the recommendations, managers have to trust their subordinates and increase their autonomy level to optimize the performance of employees (Martin, 2023).

Implementation at InVision

At InVision, virtual management is incorporated as part of organizational culture, and as such it is prevalent within the company. The company employs several strategies to manage its remote teams effectively:

- **Remote Team Management:** Some of the typical practices of managing an organization include daily virtual meetings, establishment of goals, and feedback. InVision claims management practices include regular virtual meetings, establishment of goals, and feedback. These strategies work to the extent that all employees in a team are in tune with the company's goals and can monitor performance (Noto et al., 2023).
- **Communication Platforms:** As for the real-time communication, InVision uses such applications as Slack and Zoom. These include; Messaging, Video call and Sharing of files; thus the members of the teams are able to communicate without restrictions of region (Božić, 2023).
- **Project Management Tools:** Trello and Asana are examples of tools employed for task tracking and coordination. These platforms assist the teams to schedule the tasks, set time lines and track progress of the projects so as to complete them within purposed time (Martin, 2023).

Examples

InVision has implemented several specific practices to enhance virtual management:

- **Virtual Team-Building Activities:** Employees have to interact with one another despite being physically apart, and activities like online games and virtual coffee breaks foster relationships and a sense of team among remote employees (Zhang, 2022).
- **Asynchronous Communication Norms:** Being aware that several of the team members work in different time zones InVision promotes use of asynchronous communication. This practice enables the team members to reply to messages and perform the tasks at their most convenient time hence discourages the group members from feeling the pressure of replying to the messages (Kiely et al., 2021).

InVision's approach towards management through technology and emphasis on communication as well as operational independence can be regarded as a key component towards the achievement and sustenance of optimum levels of productivity and employee engagement and satisfaction in a totally remote work environment (Storey, 2020).

5. Challenges of Virtual Management at InVision

Communication Barriers

One of the main issues in virtual management at InVision, as found in the case, is lack of communication. The absence of face-to-face communication and the challenges that accompany the virtual environment increase the likelihood of misunderstandings. Thus, such interaction may pose the challenges of having to work in different time zones/ Sections may be located in different time zones, and trying to arrange meetings and consultations that are synchronized can be challenging (Raghuram et al., 2018). To overcome these challenges InVision has provided guidelines on communication and different modes of communication like slack and zoom for various communication purposes. Set meetings also make it possible for all working members to understand each other and any confusion is handled immediately (Eisenberg & Krishnan, 2018).

Cultural Differences

There is diversity in culture and ways of working amongst people residing in different regions of the world. Since employees at InVision are from different parts of the world, they are bound to have contrasting cultures, thus exposing themselves to cultural conflicts. To address this, InVision provides cultural sensitivity training and has policy measures in place that recognize and honor diversity (Walied Askarzai, 2017). It becomes evident that to support a global culture every group member must understand and embrace everyone in InVision's vision. It is also

crucial establishing tight-knit organizations that foster esprit de corps and engage in virtual team-building exercises to work across cultural differences.

Technology Dependence

The use of technology by InVision opens up risks for example technical hitches, cyber crimes and blase. Technical challenges affect the flow of business performers while threat breaches endanger the company's information assets (Walied Askarzai, 2017). To reduce such risks, InVision has employed adequate technology infrastructure investment and has practices for frequent system upgrade. Tech support is provided to mitigate the occurrence of technical issues by quickly addressing them. In order to reduce the problem of tiredness resulting from being in front of computers for long periods of time, InVision breaks and enforces work-life balance, giving employees frequency to have fun and be creative (Charthop, 2017).

By effectively managing and mitigating these challenges, InVision has a strong and successful virtual management system in place for its international and dispersed team.

6. Opportunities of Virtual Management at InVision

Flexibility and Productivity

One of the key advantages of virtual management that InVision can leverage is notably increased flexibility of the workflow. InVision provides employees with more flexible schedules as it allows them to work from home, which helps create a better work-life balance. This results to high job satisfaction and therefore improved productivity resulting from the created ability by employees to custom make their own environment (Charthop, 2017). Such measures as the provision of flexible working hours and policies on working from home are also a part of this strategy at InVision.

Cost Efficiency

There is also significant cost advantage accruing from the fact that the organisation operates virtually. InVision reduce office space, utilities and transport costs whereby the resources so saved can be channeled to other parts of the organization. Thus, this discrete financial flexibility allows InVision to invest in the capability of its people and technology to improve the ability of the organisation. Thus, with the help of proper resource allocation, InVision qualifies to sustain its competitive advantage and constant enhancement (Jimenez et al., 2017).

Global Talent Acquisition

The first benefit of virtual management is that it is possible to recruit workers from all over the world. InVision can also tap experienced talents all over the world – and can derive competitive advantages from this type of talent pool. The remaining diversity contributes to innovation and creativity, which are foundational to InVision's success. This means hiring and maintaining the best talent and strategies that will see the company extend its reach worldwide to cover the best talents (Shekhar & Shekhar, 2016).

7. Planning, Designing, and Leading Virtual Organisations

Strategic Planning

Virtual management at InVision is most efficient when the company starts with planning. Such components include selection of goals, detailed scheduling of resources and utilization of indicators to determine achievement. Another strategy that InVision has implemented in its planning fall into the agile planning which is dynamic. Time to time, the reviews and updates of the strategy is important to ensure that the organisation is in good stead to tackle current conditions and alludes to strategic goals (Shekhar, 2016).

Designing Virtual Workflows

The creation of effective virtual workflow is essential in order to enhance the productivity within the virtual context. InVision also focus on efficient work and in this case, their operations are mainly digital. Tools such as Trello and Asana that enable the organization of tasks and other project management and communication tools are very important in the achievement of these tasks. These tools assist in the coordination of the team and ensure that works are properly done within the recommended time (Čulo, 2016).

Leadership in Virtual Context

The role of leadership in Virtual Organisation has its unique characteristics that are different from the ones found in physical environment. InVision's leadership behavior is therefore transformational, participative, and empowering. Headquarters in InVision stress teamwork, build and maintain trust, and delegate responsibilities to the working staff. Video conferences, report sharing, and organization of fun activities are crucial to ensure the employees are engaged and motivated (Stowell & Cooray, 2016). Therefore, by adopting the above practices of leadership, InVision makes it possible to keep the people in the company motivated, effective, and directed to achieve the set vision. Through this view, InVision stands as an

example of a highly effective virtual organisation, showcasing the advantages of remote work organisation and management for those willing to adapt this model (Sandhya Shekhar, 2016).

8. Conclusion

Virtual Organisations (VOs) have become an important development which provides flexibility, cost reduction and access to talents across the globe. Progressive companies such as InVision showcase the full potential of a virtual model by using it to foster innovation and efficiency. The companies' management practices in terms of communication, use of technology, and emphasis on outcomes all reflect the strengths of virtual management. InVision responds well to threats of communication breakdown, cultural differences, and technology reliance whilst benefiting from strengths of flexibility of work, operating cost, and access to global talents. It can be expected that the shift to the growth of virtual models will persist and be complemented by advancements in technology. Organizations that plan to compete in this environment must implement high standards of virtual work such as strong communication policies, equal opportunity provisions, and feedback loops. By adopting the above-discussed strategies, organisations will be able to fully unlock the potential of virtual work and hence be sustainable in the ever-changing business environment.

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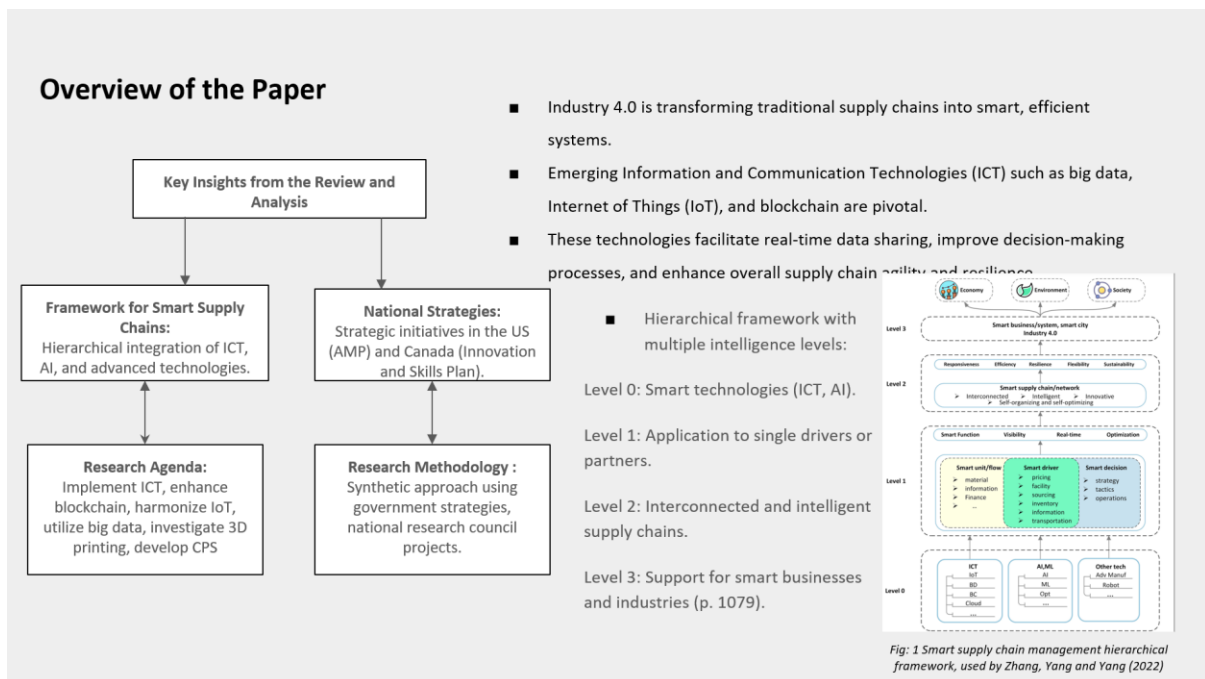
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Appendix 1: PPT



Analysis and Reflection

Challenges Identified:

- Cybersecurity and data protection are major challenges.
- Assimilating new technologies into existing systems.
- Lack of reference models and large-scale complexity

Table 1: Perspective of Authors

Technology	Authors	Keypoints
IoT Integration	Manavalan & Jayakrishna (2019)	- Integrating food supply chains from farm to consumer - Potential to improve food safety and quality
Big Data Analytics	Nguyen et al. (2018)	- Use of big data in predictive analytics and demand forecasting - Enhances supply chain efficiency
3D Printing	Ivanov, Dolgui, et al. (2019)	- Revolutionizes supply chain dynamics by enabling more localized and flexible production

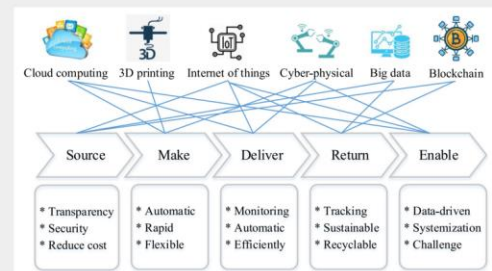


Fig. 2: The performance of Industry 4.0 for fulfillment supply chain used by Zhang, Yang and Yang (2022)

Future Research Directions:

- Foster collaboration between academia, industry, and government.
- Focus on real-world implementation of ICT in supply chains through pilot projects and case studies.

Appendix 2: Precis

This academic study looks at how supply chain management (SCM) has been transformed by emerging information and communication technologies (ICT) within the context of the Industry 4.0 paradigm. The analysis presents a multifaceted view of the developments and difficulties in smart supply chain management (SSCM) by integrating national policy frameworks, current research initiatives, and academic literature.

The authors stress the critical role that supply chains play in the manufacturing and service industries, pointing out that these chains have an impact on the strategic goals of supply network stakeholders. The COVID-19 pandemic has highlighted the importance of having flexible and robust supply chains. The emergence of intelligent supply chains has been accelerated by Industry 4.0, which is defined by technologies like big data analytics, blockchain, and the Internet of Things (IoT). These supply chains optimise performance by seamlessly integrating customer demands across manufacturing and distribution.

By enabling cyber-physical systems that align production stages with customer demands, the Industry 4.0 paradigm improves horizontal integration throughout value creation networks. The foundation of smart manufacturing is this integration, which depends on clever supply chains for effective production and prompt delivery. Smart supply chains are made possible by advanced ICT, which unites diverse partners' processes into a cohesive, intelligent ecosystem.

The research uses a tripartite methodology that includes a review of the literature on ICT-assisted supply chains, an analysis of national strategies in North America, and an examination of research projects supported by significant national councils. Using a combination of theoretical frameworks and practical insights from ongoing research and national initiatives, this approach produces a holistic perspective.

The writers stress how important it is for national research initiatives and plans to take into account changes in research paths and technology. Through a close examination of these resources, the study fills a vacuum in the literature by providing a thorough overview of cutting-edge technologies and future development roadmaps in SSCM, which frequently overlooks the fusion of academic insights with national strategies and applied research.

In order to implement smart supply chains, the paper outlines several challenges, such as developing resilience against major disruptions, ensuring adaptability to changing markets, and integrating advanced ICT across decision-making echelons. Prospective research avenues include investigating the impact of particular ICT technologies on supply chain operations, creating multi-level intelligence frameworks, and devising plans for smooth technology integration into current architectures.

The study concludes that by enabling smart supply chain development, Industry 4.0 technologies greatly improve supply chain performance. SSCM's current state and future prospects are thoroughly examined through the synthesis of national strategies, ongoing research, and academic literature. This highlights the critical role of advanced ICT in transforming supply chains to meet modern demands within the Industry 4.0 paradigm.

The main ideas of the paper are summarised in this summary, which also covers the methodology of the review, the challenges that have been identified, and the directions that future research in smart supply chain management within the context of North American Industry 4.0 will go. The all-encompassing strategy emphasises how important it is for advanced ICT to change supply chains in order to fulfil the demands of contemporary manufacturing and service operations. This is because advanced ICT fosters intelligent, networked systems that improve performance by integrating customer needs throughout the entire production and distribution process.

Appendix 3:

Summary of "Smart Supply Chain Management in Industry 4.0: The Review, Research Agenda, and Strategies in North America"

The research paper "Smart Supply Chain Management in Industry 4.0: The Review, Research Agenda, and Strategies in North America" by Zhang, Yang and Yang (2022), published in the Annals of Operations Research, examines the transformative impact of Industry 4.0 and related Information and Communication Technologies (ICT) on supply chain management (SCM). The paper combines an analysis of national strategies in North America, ongoing research projects, and a comprehensive literature review to present a holistic view of smart supply chains (SSCs) and their evolution.

Introduction and Importance of Supply Chains

The introduction highlights the crucial role of supply chains in manufacturing and service operations. The paper underlines the importance of flexibility and the repercussions of a flexible supply chain strategy, especially when variability and disruptions occur, such as the COVID-19 pandemic. Supply chain management- a system that relies on the efficient coordination and organisation of the acquisition of materials necessary for production to delivery of the final products is instrumental in business success

The emergence of new ICTs, such as big data analytics, the Internet of Things (IoT), and blockchain, provides the foundation for developing smart supply chains that are more responsive and efficient.

Industry 4.0 and Its Impact

Industry 4.0, driven by new technologies and the need for market adaptation, offers a new platform for smart manufacturing, integrating customer needs into various stages of production. This horizontal integration across the value creation network coincides with supply chains, making SCM a critical factor in smart manufacturing performance (Saucedo-Martínez et al., 2017, p. 1076). The paper argues that smart supply chains, supported by advanced ICTs, are essential for enabling smart manufacturing.

Literature Review and Research Methodology

The literature review covers various aspects of smart supply chains, exploring how different technologies impact SCM under Industry 4.0. The paper compares smart logistics, smart warehousing and the incorporation of trends such as IoT and Big Data in supply chain solutions. Analyzing table 1, it is said that the approach adopted by the study is synthetic, using government documents on strategies in North America, and major national councils' funded projects, as well as the academic literature to establish the state within which innovation and learning are currently being practised.

Smart Supply Chain Framework

The authors propose a hierarchical framework for smart supply chains, reflecting their dynamic evolution and integration of advanced technologies (Figure 1 of the article, p. 1079). The framework consists of multiple levels of intelligence, starting with smart technologies (Level 0) that include ICT, AI, and other technologies. The initial stage (Level 1) involves applying these technologies to improve single drivers or partners within the supply chain. The second level (Level 2) encompasses interconnected and intelligent supply chains that can self-organize and optimize in response to environmental changes. The ultimate goal (Level 3) is to support smart businesses and industries, such as smart automotive manufacturing, retailing, and healthcare services.

National Strategies on Industry 4.0

Moreover, the study details national strategies for advanced manufacturing in the United States and Canada. In the US, initiatives like the Advanced Manufacturing Partnership (AMP), Manufacturing USA, and the American Leadership Strategy in Advanced Manufacturing aim to revitalize the manufacturing sector and enhance supply chain performance. These strategies emphasize the integration of ICT, big data, IoT, and cloud-based implementations to improve supply chain efficiency and resilience.

In Canada, strategies such as the Innovation and Skills Plan and the Economic Strategy for Advanced Manufacturing focus on fostering collaboration between government, industry, and academia. The goal is to enhance competitiveness and innovation in manufacturing through the adoption of Industry 4.0 technologies. The Canadian approach also emphasizes

the importance of skilled workforce development and the establishment of advanced manufacturing technology adoption centres.

Research Agenda on Emerging ICT

The paper examines the studies conducted in the field which are currently supported by the National Science Foundation (NSF) in the US and the Natural Sciences and Engineering Research Council (NSERC) in Canada (Table 4, p.1087). Looking at the distribution of different technologies in the projects, it is apparent that SCM research heavily employs such technologies as blockchain, big data, IoT, and 3D printing. For instance, blockchain ideas solve problems like availability, throughput, and security in supply chain platforms as an application of blockchain, IoT deals with the difficulty of harmonizing and connecting food supply chains beginning from the agriculture field to the consumer domain.

Researched propositions brought up the desire to further investigate how these technologies can help to improve the performance of the supply chain. The paper points out that with most of the projects currently studying the viability of these technologies, more efforts should be put into studying their real-world implementation and assimilation into current supply chain environments.

Challenges and Future Research Directions

From the analysis of the paper, the following risk factors are seen to hinder the realisation of smart supply chains under Industry 4.0. These include areas like security, the large-scale abstract and complexity of smart buildings and the integration of new technologies as well as the lack of standard reference models. The authors discuss several directions of future research for tackling these challenges, including the increase of collaboration between different faculties, as well as between universities, industries, and governments.

Conclusion

In conclusion, the paper provides a comprehensive review of the impact of Industry 4.0 and related ICTs on supply chain management. The authors provide a literature review, a continuous study of the existing and emerging practices and national implementation plans to give a comprehensive overview of the state of the smart supply chain. The formulated

hierarchical scheme and recognized research avenues can be beneficial to both theoreticians and practitioners engaged in the sphere of supply chain management.

Reference for Task 1

Zhang, G., Yang, Y. and Yang, G. (2022). Smart supply chain management in Industry 4.0: the review, research agenda and strategies in North America. *Annals of Operations Research*, [online] 322(2). doi:<https://doi.org/10.1007/s10479-022-04689-1>.