Industrial Transformation Roadmap for Digitalisation and Smart Factories: The Danish SMEs Model

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Abstract: Today only some sections of the supply chain are digitalized, but some companies are also already far with Industry 4.0, where the virtual factory and the physical factory work closely together *(digital twin)*. Industry 4.0, which started in Germany among the large OEMs, seems to have not resonated much with SMEs. There is an imminent challenge of coming up with a feasible transformation roadmap which will resonate effectively and efficiently with SEMs as they are the core backbone of every performing economy. This research investigates Smart Factories/Industry 4.0 in the Danish SMEs model perspective. This research's main objectives are to develop a feasible roadmap in the form of a conceptual framework for easy industrial transformation to the digitalizing and smart way of *(doing things)* developing products and/or services. This research employs quantitative research methods such as surveys and interviews where applicable as well as a literature review in the SMEs perspective. Previous research has shown that the digital evolution coined as Industry 4.0 was started among large companies. However, this initial precedence has not resonated very much with all-inclusive industrial evolution, especially within the SMEs perspective. The main industrial implication will be the definition of a clear feasible roadmap for what this research terms as an industrial transformation process - "digital change management process – Industry 4.0/Smart factory" in the industrial SMEs perspective – the Danish Model. This research seeks to propose a conceptual smart factory roadmap in an Industry 4.0 perspective, which could be adopted among manufacturing SMEs to effectively, and efficiently transform their production operations. The Danish model perspective or angle of Industry 4.0.

1 INTRODUCTION

The world as we all know has seen three major successive technological and industrial revolutions. The Industrial Revolution first started in England at the very end of the 18th century up until somewhere towards the mid-19th century. It represented a radical shift away from a more farm-based economy to a more defined one by the introduction of mechanised and/or mechanical production methods, which is also known as mechanised farming. In the late 1960s towards the beginning of the 20th century, the second period of radical industrial transformation sets in evolving from mechanised farming into industrial production or manufacturing. Thus, the introduction of the birth of factories ushered the world into the mass production of affordable consumer products.

This revolution also brought about the mass utilisation of electronics and IT in industrial processes in production and/or manufacturing processes, thus, giving way to the new age of optimised and automated production. The world now stands or is experiencing the crescendo of the much-expected fourth industrial revolution. This industrial revolution promises to network and interconnect the worlds of production and manufacturing employing network interconnectivity into what is now known as the "Internet of Things." Thus, bringing about what is now widely known as the "Industry 4.0" era (Mckinsey Digital, 2015; Schuh, et al., 2017; Henfridsson, et al., 2014).

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Industry 4.0 or the fourth industrial revolution serves as a platform for what is termed, "Smart production." Smart production, therefore, is a production or manufacturing process which functions as a completely interconnected and automated manufacturing system. This Smart production process or system enables and enhances a production process that, enables intelligent ICT-based machines, systems, technologies and interconnected networks in a way that makes it capable of independent exchange and response to executed information in order automatically manage industrial production supply-chain processes and activities. Earlier research on Industry 4.0 indicates that the fourth industrial revolution is unique to Germany where it first started to pick shape. Germany, being the home of huge high-tech automobile OEMs also puts them in the right standing in terms of the initial financial capital-intensive investment required. The cyber-physical production systems (CPPS) required and the nature of the fourth industrial revolution, consisting of smart equipment or devices provide the enabling superior ICT-enabled interconnectivity for a seamless integration and networked production environment.

Because the fourth revolution presents a decentralized intelligence platform that helps facilitates intelligent cyber-physical systems or objects to be independently processed and managed, as well as integrated into real and virtual worlds, which is also known as the "Digital/Virtual Twin" (Henfridsson, et al., 2014). This presents a crucial new aspect of the manufacturing and/or production paradigm shift. Therefore, this is a very essential industrial paradigm shift from a "centralized" to a "decentralized" production system. Thus, presenting the possibility and capability for industrial transformational technological advancements. This paradigm shift would; thus, enable industrial production machinery to not only simply add value and/or "processes" materials into finished products, but also the product as physical objects configured in a way to be able to communicate with the machinery to tell it exactly what to do.

This kind of massive "Digital Change Management – (DCM)" approach can only be possible or initiated in any industrial organization when effective awareness of especially the top management is firmly secured as well as the organizational employees who will contribute to its success. Therefore, this article seeks to investigate how SMEs may also transform their classical routine production processes into a "Smart Factory" or smart production by attempting to propose a simple industrial transformational roadmap in the form of a conceptual framework. The rest of the article would be expanding into detail the attributes mapped up in the conceptual framework proposed in this article as a feasible industrial transformation roadmap into a "Smart Factory" or "Smart Production" as follows: Design/Approach initiative - awareness creation (case study surveys), Determining factors, Implementation plan and Smart Factory/SCM digitalization & evaluation.

2 DESIGN/APPROACH INITIATIVE

Having a strategy is an important aspect of any successful business. However, the journey towards digitalisation and Industry 4.0 is an uncertain path for most companies, especially SMEs. Defining the right strategy and ensuring the continuity of business is a challenging task, which is only increasing in complexity, as digitalisation is becoming a permanent bullet point on the strategic agenda. Managers and decision-makers have to consider external as well as internal factors when defining their business strategy and creating an implementation plan. Failure to do so might have severe consequences for the company, leading to loss of business and in the worst-case, bankruptcy.

When implementing a strategy, managers and decision-makers have to go through a lot of considerations regarding internal as well as external factors. External factors: on one hand, digitalization efforts and the cost of investments in new digital capabilities are continuously decreasing, which is enabling SMEs to follow the trend and upgrade their facilities and products. On the other hand, competition is getting steeper, market trends are shifting at a higher rate, and customers are becoming more unpredictable, demanding better quality, faster delivery, and cheaper prices. Internal factors: identifying and setting the right objectives and estimating technical feasibility, as well as executing the strategies within the organisation based on the needs of the organization (Schuh, et al., 2017).

Hence, the organizational strategy is an essential part of the industrial transformation roadmap for digitalisation and smart factories that SMEs should not neglect (Mckinsey Digital, 2015; Schuh, et al., 2017; Piccinini, et al., 2015). However, defining strategic objectives related to digitalization might be very challenging in itself and more so if a company wishes to quantify and monitor the objectives. It would be more beneficial to focus the company strategy on customer needs, market trends and company vision and use digital technologies as a means to achieve this. Additionally, it is equally important to prepare the organization to deal with the appertaining changes that will emerge as companies focus on digital technologies and ensure organizational buy-in.

Therefore, based on the above note it would be imperative that the awareness of digitalizing industrial SC processes is first sorted with the top management, executives and/or CEOs of organizations. This is a strategic top-down approach that would ideally work with very significant industrial transformation within the organizational operations setup.

This approach could not also be realized without the entire work personnel on board the organizational "digital change management (DCM)" shift/movement. Furthermore, effective and deliberate relevant stakeholders' engagement of both customers and suppliers is expected in a co-design initiative.

2.1 Awareness Creation Modes (Case Study & Surveys)

A good awareness creation procedure mostly begins with all of the relevant stakeholders coming together for a common goal, agenda or vision. The main purpose of awareness creation at the beginning of a digital transformation agenda is to quickly mobilise relevant and significantly transforming ideas about the digital transformation agenda by usually beginning with the top management team and then the operational staff. Therefore, awareness creation in this sense could be defined as a broadly organised effort to change routine operational practices or activities, policies or behaviours (Sayers, 2006). Hence, a well-planned and orchestrated awareness creation is arguably one that would most effectively and efficiently seek to communicate to stakeholders detailed and pragmatic information. Therefore, this approach is about a particular mode of awareness creation to a large variety of groups or people with different backgrounds, skill sets, responsibilities and levels of education or assimilation rates such as that in manufacturing SMEs. On this note, this study would adapt Robinson's solution to identifying the seven steps to social change or transformation (Giorgadze, 2003) which include:

- Knowledge - knowing there is a problem, thus, transforming legacy operational processes in a more digitalized transformed approach Desire - imagining a different future or transformational change agenda
- Skills - knowing what to do to achieve that expected future or transformational change
- Optimism - confidence or belief in success
- Facilitation - resources and support infrastructure (top management support and staff cooperation)
- Stimulation - a compelling stimulus that promotes action (requisite skill-set training & enhancement)
- Reinforcement - regular communications that reinforce the original message or messages – constant iteration of the digital change management processes until expected efficiency, effectiveness and productivity to boost return on investment (ROI) is achieved.

Figure 1: The seven steps to social change or transformation Source: (Giorgadze, 2003).

Figure 1 above, sequentially illustrates Robinson's seven steps to social change or transformation. Thus, with the above steps to social/industrial change or transformation in mind, this research seeks to employ a qualitative approach of employing surveys and interviews to collect and analyze the awareness creation phase of this research.

3 DETERMINING FACTORS

The current vision concerning digital transformation is represented by the progressive replacement of the automation pyramid with a network of nodes. These consist of automated or semi-automated services that intercommunicate digitally (Jeschke, et al., 2017).

3.1 The Concept of a Digital Supply Chain

The digital supply chain is defined by Porter and Heppelmann (Porter and Heppelmann, 2014) as a "system of systems" organization, that is meant to support and orchestrate interactions between partners at a global level (Bhargava, et al., 2013), synchronizing the different processes (Schmidt et al., 2015). These capabilities are based on machine-generated data, the interconnection between the multiple supply chain players, large-scale decisions, automation of business processes, and integration across the supply chain through information sharing (Wu, et al., 2016).

According to that, one of the key aspects of the digital supply chain is represented by transparency (Scrauf and Berttra, 2016). Within information management, this is considered a synonym for information transparency (Turilli and Floridi, 2009) and is meant for information visibility across a system. From a business point of view, this is translated into the availability of information for supporting decision-making processes (Winkler, 2000; Vaccaro, and Madsen, 2006; DiPPiazza, 2003; Turilli and Floridi, 2009). The competitive opportunities related to digital transformation (Mckinsey Digital, 2015) and, therefore, to the transition towards a digital supply chain are based on the achievement and the use of transparency across it.

3.2 The Key Transformation Areas

Although this transformation has originated from a technology agenda, both researchers and practitioners identified multiple fundamental factors that are orbiting around it and that has to be addressed as well to support this transition process. This has been defined as a progression of multiple complexity stages (Kagermann, et al., 2013) which have been proposed in multiple maturity models (Lanza, et al., 2016; Leyh, et al., 2016; Lichtblau, et al., 2015; Schumacher, et al., 2016). The investigation regarding the transition across these maturity stages highlighted the need for addressing several determining factors to operationalize this transformation. These factors have been analyzed and summarized by (Colli, et al., 2018) in the "360 Digital Maturity Assessment" in five dimensions. These are:

- Governance: clear company strategy, awareness concerning new technologies, both top-down and bottom-up innovation possibilities, lean management for innovation projects
- Technology: physical and digital assets that enable the generation, transmission, storage and analysis of digital data (e.g. CNC machines, getaways, cloud computing platforms) as well as physical and digital assets that base their functionalities on data (e.g. collaborative robots or autonomous guided vehicles)
- Connectivity: infrastructure needed for transmission inside the organization as well as across the supply chain value creation network: the ability to identify and capture value from new technologies and available data (e.g. business model shift towards the servitization paradigm, machine self- reconfiguration due to enabled communication between the product and the machine, predictive maintenance enabled by machine learning application on collected data from assets)
- Competences: cultural mindset and skills for the digital transformation (e.g. training and learning culture) as well as for capturing value out of digital technologies (e.g. competencies related to the use of digital technologies)

Although these dimensions have been identified, an investigation regarding how these factors affect the digital transformation process and which management practices have to be adopted to address them still has to be performed.

4 IMPLEMENTATION PLAN

4.1 The Importance of an Implementation Plan

The implementation plan in this study would serve the purpose of translating a company's strategic vision into tangible goals on a tactical level and specific steps to follow on an operational level. A digitalization strategy for SMEs might not be as extensive as one of a large enterprise; however, an implementation plan might still be highly beneficial for SMEs to consider. Due to the limited implementation of new digital technologies and lack of empirical data regarding pitfalls and common mistakes, a strict implementation plan might not be the best approach for SMEs.

An implementation plan for an SME should be rather flexible and focus on the alignment between decision-makers and production floor workers since the workers will most likely play vast roles in designing and implementing any new solutions. Therefore, an implementation plan for an SME should be brief and serve to answer questions such as what, why and how. Answering these questions will ensure alignment between a company's strategic vision and implemented solutions.

4.2 Following a Systematic Iterative Process Model

Due to the many uncertainties around working with new technologies and the lack of knowledge regarding the challenges that might occur along the way: it might be highly beneficial to follow a systematic iterative process that focuses on continuous learning and improvements. On a macro level, we suggest an implementation plan that includes the four phases shown in Figure 2 below.

These four phases are, understand, define, prototype and test, implement and standardise.

The authors have developed this model based on the combination of the Design Thinking approach by (Doorley, et al., 2018), which follows the four phases of Empathize, Define, Ideate, Prototype, and Test as well as lean principles, which highlights standardization as an essential step in any new implementations (Womack and Jones, 2003). The suggested model for the implementation plan will provide a systematic and holistic approach to implementing new and untested digital solutions.

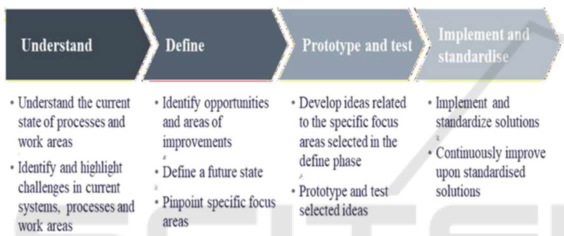

Figure 2: Four-phase plan for implementing new digital solutions, inspired by Design- (Doorley, et al., 2018) and Lean thinking (Womack and Jones, 2003).

On a micro level, (meaning the operational and project management part), for the different tasks in each of the four phases in the implementation plan, suggest that following a simple Plan, Do, Check, Act (PDCA) approach, could ensure an iterative process (Andersen, 2007). The Plan phase focuses on defining the what, why and how, thus this is in terms of the approach or design initiative.

The Do phase focuses on following through with the implementation. The Check phase focuses on following up on the performed activities from the Do phase. Finally, the Act phase serves to ensure that the necessary actions are taken to adjust and improve, or to standardize the solution in terms of demystifying complexity and maximizing responsiveness into the incremental digitalization transformational phase - Smart Factory / SCM Digitizing Evaluation.

4.3 Incorporating Human Factors

Diaz, et al., 2016; estimates that the transition to Industry 4.0 will demand human-centric design and engineering philosophies that focus on enhancing and augmenting the human workers' physical and cognitive capabilities rather than unmanned automated factories. Hence, such a statement emphasizes the importance of considerations regarding human factors and ergonomics and the importance of accommodating the worker's well-being.

While all companies are different and operate by their cadence, we suggest that it would be highly beneficial to also follow or get inspiration from standards such as human-computer-interaction (HCI) standards (BSI, 2010; BSI, 2016)), which deal with Human Centred Design (HCD). In cases where the implementation of new digital technologies affects the roles and responsibilities of workers, it would be beneficial to consider the following recommendations as companies start anchoring in the implementation.

Kadir, et al., 2018; make the following suggestions regarding working with collaborative robots, although it is arguable that the same principles might apply to other new digital technologies as well. With the implementation of any new digital technology, SMEs should strive to develop some sort of Standard Operation Procedures (SOP) to highlight the division of labour between workers and digital technologies.

In addition to SOPs, formalizing a brief job description for each worker might also be beneficial in this regard. Such standardization will ensure consistency and pave the way for continuous improvements.

4.4 The Conceptual Framework for Industrial Transformational Roadmap: The Danish SME Model

The Denish local region of Aalborg has assigned Aalborg University (AAU) to establish an ecosystem around the AAU Smart Lab to support local SMEs with information and activities that enable them to identify and realise the potential of Industry 4.0 (I4.0) in their particular context. Thus, the Innovation Factory North (IFN) was founded to build a local ecosystem of SMEs, technology suppliers, and R&D institutions to develop I4.0 competencies (Møller, et al., 2022b).

The approach enabled the qualified industries to collaborate on Industry 4.0 awareness and innovation in the IFN ecosystem. Hence, the digital transformation roadmap towards Industry 4.0 is corporate transformation with IT as an enabler and strategic goal (Møller, et al., 2022b). Therefore, most of the frameworks for industrial transformation are primarily top-down approaches driven by a strong managerial vision and supported by large-scale investments and enablement projects or programs as illustrated in Figure 3 below. Although this approach does not fit the local industry structure of Denish manufacturing SMEs very well due to their low level of digital maturity, the proposed conceptual framework illustrated in Figure 3 below provides a feasible digital transformation roadmap for these Danish SMEs.

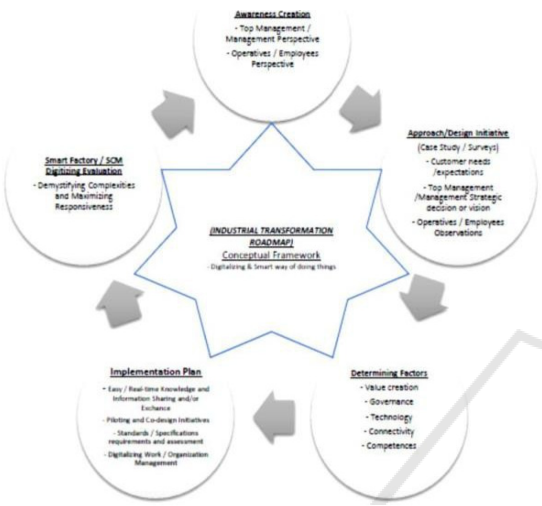

Figure 3: Industrial Transformation Roadmap – A Conceptual Framework for Smart Factories.

Figure 3 above, illustrates the iteration sequence or model adopted in this study for the conceptual framework targeted for the Danish SMEs model, for the digitalization of industrial SMEs' transformation roadmap agenda.

5 SMART FACTORY/ SCM DIGITALIZATION & EVALUATION

5.1 SME Manufacturing Firms Toward Product-Service Offerings: A Digitalisation Perspective

A product-centric manufacturing firm that wants to achieve the vision of moving the value chain position further downstream to its end customers has to transform. Thus the transformation toward the product-service offering rather than the pure products. Scholars argue that during this transformation, organizations are likely to change their strategy, operations and value chains, technologies, people expertise and system integration capabilities. The questions are WHAT is the difference between this transformation era to the prior industry revolutions? What is the lesson learnt from the previous industrial revolutions?

Indeed, the business context of Industry 4.0 is far more complex than anyone in previous history. A "product" is not only produced for one single functional usage purpose. A product thus, on the other hand, also plays the role of a "bridge" towards a business ecosystem. The paper outline below some examples of Denmish Smart Factory SMEs that have attempted to implement Smart Production processes or aspects of it by adopting the digital transformation roadmap(Møller, et al., 2022b): Maersk and the IBM joint venture Tradelens is an example of a corporation employing an Intelligent Supply Chain (Moller & Maersk, 2019). Maersk has access to practically the entire container logistics ecosystem via the Tradelens platform and may benefit from a balanced demand and supply. In another case, an SME changed its function in the supply chain from Engineer-to-order to Assembly-to-order by integrating the supply chain with digital technology (Bejlegaard et al., 2021).

The integration of engineering activities across the full lifecycle is referred to as virtual manufacturing. Concurrent engineering, verification, and validation of new goods or changes in products or manufacturing processes are possible when engineering operations are digitally linked (Addo-Tenkorang, R., 2011). Vestas (Yidiz et al., 2021) is an example of the possibilities of end-to-end digital manufacturing. Vestas can teach employees virtually using VR technology before the physical factory is completed, therefore increasing the time to market. Industry 4.0 is built on the collaboration of Smart Factories across the whole manufacturing ecosystem (Schou, et al., 2021).

In Industry 4.0 and Smart Production, an empowered and agile organisation is critical. An organisation can be enabled by instrumenting and linking personnel at all levels, from the shop floor to the boardroom, for optimal decision-making. This necessitates the timely and appropriate degree of information required for educated decision-making, given in an actionable manner. Arla exemplifies how an effective collaboration could empower an organisation by decentralising access to analytical data to support local data exploration and decision-making (Asmussen et al., 2021).

6 DIGITALIZATION & EVALUATION

6.1 Demystifying Complexities and Maximizing Responsiveness

To respond to and also be able to evaluate those five determining dimensions (Colli, et al., 2018) in the above-mentioned section, an agile project management approach would be one of the promising means. According to Brady and Davis, 2004, a good model of project capability-building is often recognized to have two ways of complementary approaches. They perceived that those firms, equipped with two interacting levels of project management are highly reaching competitive success. On one hand, a bottom-up approach, called 'project-led' learning, is working cross-different layers of the organization. It works from an exploratory phase (e.g. new to technology) to a lesson-learned phase (capture using experience) and then to an equipped phase (the ability to implement such new technology).

A top-down approach, on the other hand, called 'business-led' learning, is taken place to support and lead the upcoming project activities with sufficient resources and the right competencies; Figure 4 below, gives a generic and simple illustration of these contextual perspectives of what this study also terms as digital change management (DCM). The idea of running a complete project management circle creates checking points to echo those five identified factors toward the maturity of digitalization (Colli, et al., 2018).

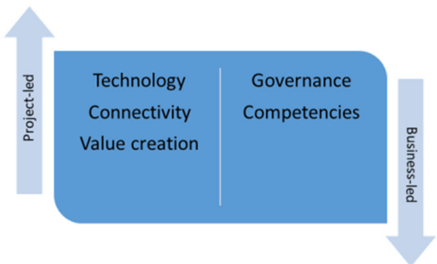

Figure 4: Contextual evaluation framework towards digitalization (Colli, et al. 2018)

Further to the move for digitalization of industrial production processes in smart production with Industry 4.0, it is approached in an industry-specific implementation process for SMEs; this has led the agenda of the European Council (EC) to come up with a new policy position on Industry 5.0 (Møller, et al., 2022a).

The European Commission has positioned Industry 5.0 as its transformative vision for Europe in relation to Industry 4.0 as: "It complements the existing Industry 4.0 approach by specifically putting research and innovation at the service of the transition to a sustainable, human-centric and resilient European industry" (European Commission, 2021).

7 INDUSTRIAL IMPLICATIONS

Industrial implications of digital transformation, in general, seem to pose some challenging multidimensional trends for top management. SMEs seem to be currently challenged with radically and rapidly reshaping and transforming their enterprise operations, which is thus, straining their existing business operations to enable them to sustain their competitiveness (Mckinsey Digital, 2015; Schuh, et al., 2017; Piccinini, et al., 2015; Henfridsson, et al., 2014).

Therefore, the main industrial implication identified by this study is defining a clear feasible roadmap for what this research terms an industrial transformation process: which is coined in this research as the "digital change management (DCM) process – Industry 4.0/Smart factory" in the industrial SMEs perspective – the Danish Model as illustrated in Figure 3 above.

Thus, industrial digital transformation technologies could be described as a digital-change management process, as a combination of data/big data, information, computing, communication and connectivity or networked technologies. These technologies would include cloud computing, big data value-chain management, big data analytics, and mobile and networking technologies (Bharadwaj, et al., 2013).

Therefore, digital transformation technologies provide SMEs with both open and flexible operational environments that allow organizations to break some of the traditional operational constraints. These organizational constraints, together with previously detached networks when effectively and efficiently transformed by digitalization; fosters an enabling environment for innovations to create new customer experiences, relationships, and overall organizational digital transformation (Lucas, et al., 2013; Yoo, et al., 2012).

Current research trends on industrial digital transformation and innovation have brought to bear how the essence of the emergence of industrial digital transformation technologies is bringing about a paradigm shift in industrial production processes.

This has enabled organizations to achieve major operational efficiency and effectiveness by enabling the creation of new business models or frameworks (Fichman, et al., 2014). Furthermore, innovation processes always seem unpredictable, and previous research has outlined how inferior technologies win market dominance because of higher adoption rates and also the old looming threat of cyber security issues with technology innovations. Therefore, this could mean, that cheaper and inferior technologies, will disrupt incumbent vendors' technologies (Møller, et al., 2022a).

Leng et al., 2021, a measure to tackle this cybersecurity issue in smart productions is the use of blockchain technology. It is an innovative computing paradigm that is recently revolutionizing the digital world and bringing a new tool to the cybersecurity and efficiency of systems (Ahram, et al., 2017). This blockchain technology is a foundation for distributed ledgers that offers transparent and decentralized data/information; it is a mechanism for making authenticated computational transactions in both business and industry areas (Yuan and Wang, 2018). The inherited characteristics of blockchain technology as a cybersecurity measure would enhance trust through transparency and traceability within production/industrial transactions (Abeyratne and Monfared, 2016).

8 ORIGINALITY & VALUE

In this study, the proposed industrial digital transformation roadmap seeks to provide SMEs with the unique advantage of enabling opportunities for value creation from expanding profit pools – return-on-investment (ROI), creating new revenue models such as "servitization" within their operations management.

This, therefore, affords them an exceptionally enabling equal playing field for businesses in accessing global markets' digital initiatives. Thus, possessing or equipping the SMEs with the enabling potential to improve their business operations more sustainably.

Therefore, this research given the potential opportunities of digital transformation technologies seeks to propose a conceptual smart factory roadmap in an Industry 4.0 adopted by manufacturing SMEs to transform their products effectively and efficiently and/or servitization operations among the Danish industrial SMEs.

9 CONCLUSION AND RECOMMENDATION

The importance of realizing the collaborative force and value of digital transformation technologies cannot be overemphasized, given that digitalization has a central role as a potential technological solution for many of the challenges SMEs are confronted with today.

Thus, driven by digital technologies, obligatory role in today's SMEs' operational activities, they must be ready and adequately prepared to deal with business transformations that are more progressive incrementally but radical enough. This is to enable smooth integration and interfacing with their existing legacy systems than some of the known effects reported on IT transformations in recent-past research (e.g., Piccinini, et al., 2015).

Therefore, further study into this research will look into further investigating in detail each of the blocks in Figure 3 – the industrial transformation conceptual roadmap. Also, some of the core challenges and critical success factors associated with them and in line with the industrial digital transformation agenda among SMEs in Denmark (The Danish model). This approach and/or study would be among the first research to, systematically investigate digitalization and/or digital transformation among industrial SMEs. Digitalization and digital transformation with the operational processes of these SMEs have been radically initiated here in Denmark already as compared to previous studies available concerning the genesis of Industry 4.0 activities and operations among the rather huge original equipment manufacturers (OEMs) specifically in Germany (Adolph, et al. 2016; Møller, et al., 2022a; Møller, et al., 2022b).

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