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India 2.0: Vision for India 2047 - Digital Ecosystem & Harnessing Artificial Intelligence

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33	Digital Innovation: Reshaping Business to Meet the Digital Era Dr. V. Simi & Dr. R. Sathish	189
34	Digital Business Technology for Innovation in Human Resources Practices of Higher Education Dr. A. Saravanakumar	195
35	Unleashing Economic Prosperity: A Roadmap for Sustainable Growth in the Digital Ecosystem Dr. M. Gayathiri	202
36	Mutual Funds Performance Analysis: A Comparative Study of the Select Top Mutual Fund Schemes in India G. Ayyanappan, Dr. V. Kanagavel & Dr. M. Selvakumar	209
37	Artificial Intelligence and E- Commerce Dr. S. Shanmugapriya & S. Pavithra	216
38	Digital Economy Dr. T. Mohana Sundari	221
39	A Study on Influence of Social Media Marketing in India with Special Reference to SMEs Dr. R. Vennila	228
40	Significance of Digital Innovation in Business Process Dr. R. Ramya, Dr. B. Indira Priyadharshini & P. Divya Bharathi	242
41	Artificial Intelligence and Machine Learning: Implications and Applications N. Eswara Moorthy	248
42	Exploring the Competitive Advantage of AI in Business: A Comprehensive Analysis G. Lisy Angel & Susan Anita Andrew	255
43	Digital Innovation in Business N. Indhupriya & Dr. G. Gnanaselvi	261
44	Digital Transformation through AI in the Internet of Things Landscape: A Business Perspective M. Suriya	267
45	Digital Innovation in Business M. Krishnaveni, G. Rathakrishnan & J. Vijay Jerin	275
46	The Impact of AI-Powered Learning Tools on Student Academic Performance Dr. D. Jebaselvi Anitha & J. Vishnu Preetha	284
47	Potentiality of Artificial Intelligence in Education Dr. C. Kothaiandal & S. Shilpa	290
48	Impact Artificial Intelligence (AI) in Education Dr. R. Amsaveni & Dr. S. Kaleeshwari	295

SIGNIFICANCE OF DIGITAL INNOVATION IN BUSINESS PROCESS

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Abstract

Emerging technologies have capabilities to reshape business process management from its traditional version to a more explorative variant. However, to exploit the full benefits of new information technology, it is essential to reveal research potential and to detect recent trends in practice. Therefore, this work presents a systematic literature review with 231 recent academic articles from 2014 until May 2019 that integrate Business Process with digital innovations. We position those articles against seven future Business Process trends that were inductively derived from an expert panel. By complementing the expected trends in practice with a state-of-the-art literature review, we are able to derive covered and uncovered themes in order to help bridge a rigor-relevance gap. The major technological impacts within the Business Process field seem to focus on value creation, customer engagement and managing human-centric and knowledge-intensive business processes.

Keywords: Business Process Management - Business Process Innovation - Digital Innovation Emerging Technologies.

Introduction

Today's technologies are triggering a fourth industrial revolution and generate new ways of doing business. With the rapid boom of new technologies from block chains, Internet of Things or artificial intelligence, organizations are struggling to take maximum advantage of new in response, business operations, structures and processes need to learn how to adapt and implement a new version of business process management called ambidexterity. Ambidextrous is a mixture of two aspects: exploiting the benefits of existing technologies while simultaneously, exploring the benefits of new explorative on the one hand, emerging technologies enable disruptive digital innovations which are rudimentary prerequisites of sustainable business processes an organization's long-term way of working. While product/service innovations are a potential feature for organizations to lead in the market, digital process innovations help in terms of reducing time delays and resource sharing Consequently, digital innovations are transforming both the client needs and the infrastructural requirements.

Digital Innovation Trends in BPM

As shown in the previous sections, BPM in the digital economy is transforming and creating new opportunities for improving business processes. For example, new IT can automate several manual tasks with internet-based and intelligent devices. An extensive use of social technologies encourages push and pull factors in marketing, leading to increased sales volumes and customer interactions or emerging technologies also help during process analysis, namely for tracking and monitoring in a fast and efficient manner. Although digital innovation transforms BPM with the help of emerging technologies, more research is needed to fully grasp those opportunities. Hence, Van Looy and Poels collected the opinions of 19 BPM practitioners on how they see the future of BPM evolve based on emerging technologies, and categorized them into the following seven BPM-DI trends:

We have adopted these BPM-DI trends to categorize our literature review in order to find ways to bridge the rigor-relevance, which refers to the differences between practical experience from industry and academic theories or literature. Bridging this gap is important, as research and real-time practical experience are interdependent to obtain rigorous insights that are relevant for society. Subsequently, we explain each BPM-DI trend by highlighting relevant studies on different industries and perspectives before systematically mapping the state-of-art for deriving calls to research and practical guidelines.

Digital Technologies and Connectivity Can Drive Economic Inclusion of All Businesses

Essentially, the wide group of mostly free digital tools from the Facebook company, combined with the worldwide expansion of the internet, afforded less-advantaged groups the ability to connect their products and services with customers around the world and serve a wider, and sometimes even global, economy in 2018-2019. We contend that digital tools could help to foster economic activity and further increase social inclusion in the coming years. In keeping with the UN Sustainable Development Goals, which highlight economic inclusion, we suggest that continued improved access to infrastructure and investments in digital skills for the regions and groups that currently have limited or no access to these resources would facilitate this economic activity and social advancement.

Digital Technology Can have a Marked Impact on Hiring and Jobs

Digital tools allow employers to advertise job requirements for vacant positions quickly and at low cost, while giving applicants the ability to seek jobs in a wider geographical area, improving the overall functioning of the job market. In our survey, 29 per cent of firms using Facebook apps and technologies reported that they used the apps and technologies for hiring purposes in 2018-2019.³ In addition to making hiring easier, digital tools and associated reduced costs may enable companies to retain their headcount by helping to increase sales, exports, and profit margins.

Digital Technology Can Help Firms Access Markets Abroad

We find that digital tools have lowered trade costs and offered firms a larger base of potential customers in both near and distant markets. In our survey of businesses across 30 countries and regions, we find a higher propensity to export by businesses using Facebook apps and technologies (44 per cent), compared to businesses not using Facebook apps and technologies (26 per cent), in 2018-2019.⁴

Digital Technology Can Help Decrease Barriers to Growth

By lowering the costs of marketing and enabling wider customer reach, digital technologies including, as an example, Facebook apps and technologies can help businesses overcome barriers to growth. In our survey, 78 per cent of businesses that reported using Facebook apps and technologies used them for paid ads, free marketing, or finding new clients or customers in 2018-2019.

The Benefits of Digital Transformation

According to the "2023 State of Digital Transformation" report from systems, the top 10 reasons why executives pursue transformation initiatives include the following: improved customer experience (40%), improved efficiency (38%), business process transformation (38%), modernization of IT infrastructure (35%), increased innovation (31%), improved cyber security (29%), improved employee experience (24%), introduction of new business models/revenue streams (23%), increased speed to market for existing products and services (22%) and introduction of new products and services (21%).

Those Digital Transformation Benefits Include the Followings

1. *Increased efficiency and productivity*

Digital technologies deliver gains in efficiency and productivity by speeding up processes and streamlining operations. Technologies such as robotic process automation and AI, including machine learning, consistently demonstrate an ability to outperform humans by multifold factors in both speed and accuracy.

The economic potential of generative AI: The next productivity frontier, " a 2023 report from global consulting firm McKinsey & Company, quantified the benefits these technologies deliver, noting experts estimate that approximately half of the work activities that exist in 2023 could be automated by 2060. The report also noted that generative AI could "enable labor productivity growth of 0.1 to 0.6 percent annually through 2040, depending on the rate of technology adoption and redeployment of worker time into other activities."

2. *Better resource management*

As companies transform, they're replacing legacy systems serving individual business units with modern IT architectures designed to consolidate processes and seamlessly enable the flow of data across all departments. Experts said this end-to-end digital technology approach has helped CIOs and other executives eliminate duplicate and superfluous technologies, as well as associated costs. Furthermore, on-demand computing

resources and as-a-service platforms have helped organizations optimize their technology spending by providing as much computing capacity as needed in the moment versus paying for excess capacity to handle rare peaks in usage.

3. More resiliency

Organizations that embrace digital technologies and build a digital culture to celebrate change are able to quickly adapt to shifting market forces, whether it's the quick rise of ChatGPT or dramatic social and economic upheavals like those caused by COVID-19. Additionally, their pervasive use of digital technologies, particularly cloud computing, delivers built-in redundancies and elasticity that further resiliency.

4. Greater agility

Digitally savvy enterprises have the ability to not just react to change but to capitalize on it, DX experts said. As Brouhard explained, transformation programs force organizations to modernize their legacy cultural and technical debt, both of which were designed for stability and, thus, require a long time to change. In doing so, these organizations can adjust more quickly, for example, by using cloud resources to rapidly scale up or down based on needs.

5. Improved customer engagements

Digital transformation calls for becoming customer-centric, Schrage said. Consequently, digitally mature organizations have learned to innovate by first asking how they can better serve their customers through new products, services and experiences and then determining what digital capabilities will let them deliver those in a "faster, cheaper, better and more agile" manner, he said. Those organizations "design from the customer or client experience in" as opposed to making design decisions based on their technology assets, Schrage explained.

6. Increased responsiveness

Digitally transformed organizations have better customer engagement initiatives, so they're better able to anticipate evolving customer requirements and changing marketplace "Companies are leveraging technology to change the ways they create and deliver a value proposition to their customers," said Bryan Throckmorton, global digital strategy and transformation lead at management consulting firm Protiviti.

7. Greater innovation

Digitalization creates new opportunities for companies across all industries to develop products and services they couldn't create previously. Examples include tool companies that offer online services to match contractors with customers and personal gym equipment that delivers virtual on-demand exercise instruction. "New technology solutions enable organizations to innovate their business models, opening up avenues for diverse revenue streams," explained Kamales Lardi, author of *The Human Side of Digital Business Transformation* and CEO of Lardi & Partner Consulting. "For example, a car manufacturer might introduce a subscription-based model for electric vehicles, offering charging maintenance and periodic upgrades as part of the package, thus creating a recurring revenue model."

8. Faster time to market

One of the biggest digital transformation benefits is a shortened product lifecycle, as companies can lean on modern technologies such as digital twins, which virtually replicate environments, and modern processes such as analytics for insights and decision support to rapidly test, pilot, iterate and launch. "It's about how fast you can go from ideas to putting ideas into the world," said Sheldon Monteiro, chief product officer at Publicis Sapient, a global digital transformation consulting company. "If it took you months or years before, transformation can help you reduce [that timeline] to weeks, days or hours."

9. Increased revenue

Although studies have found that executives don't always see the return on investments they anticipated from their transformation efforts, research has confirmed that digitally mature companies do see a boost.

10. Continued relevancy

When done right, transformation initiatives give organizations the ability to rapidly identify customer needs, marketplace trends and new opportunities and quickly pivot to meet them. That capability, experts said, keeps organizations, regardless of industry, not only in business but ensures their long-term competitiveness.

11. Encourages employee excellence

A July 2023 survey commissioned by company 10x, found that 94% of surveyed product managers in the banking industry would leave their jobs to work for a bank with better tech; 92% would leave for a bank with more ambitious transformation goals. That, in turn, further helps boost retention. "Improving employee experience allows you to retain folks," Smith said, an especially important benefit in a tight labor market.

12. Improves future digital growth

One of the biggest benefits of a successful digital transformation effort is its ability to propel an organization to further success, DX experts said. "It helps keep you competitive, improves your ability to move forward and instills the mechanisms for more innovation," Smith said.

Conclusions

Emerging technologies and digital innovations force us to rethink and streamline business process management. Current trends in the business world are forcing organizations to focus on process if they want to remain successful. Many of these trends, such as the mobility of the workforce, rising customer expectations, and the speed at which business is conducted, are not likely to stop in the near future. Therefore, process emphasis will continue to grow as a key component of future organizational success.

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