RE-CONNECTING HUMAN CAPITAL WITH THE DISCOURSE OF DIGITAL TRANSFORMATION TO ACHIEVE THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

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ABSTRACT

Digital transformation (DT) is a key driver of knowledge creation and economic growth. It empowers individuals, groups and organisations to find solutions to social and economic challenges. This paper will attempt to explore the importance of DT in the transformation of human capital towards achieving the United Nations' 2030 Agenda for Sustainable Development (SD) and its 17 Sustainable Development Goals (SDGs). In doing so, the paper will provide a summary of the key recommendations from the World Association for Sustainable Development's (WASD) recent international conference held in London, United Kingdom, 13–15 November 2023. Central to discussions was the need to create an enabling environment that encourages investment in DT and innovation and creativity to accelerate the pace of the UN's Agenda 2030 for SDGs and the implementation of its 17 SDGs, currently half-way to its finishing line. More importantly the paper will outline the challenges facing DT in many countries and the need to support national agendas by facilitating the transition to a digital economy within the context of SDGs. Finally, the paper concludes with a discussion of the strategic and policy implications of these findings and provides recommendations.

KEYWORDS: *Digital Transformation; Human Capital; Sustainable Development; Sustainable Development Goals; Agenda 2030; United Nations; Strategy and Policy*

INTRODUCTION

Many authors have long argued that the concept of Sustainable Development (SD) must enhance the long-term productivity of the resource base and improve the long-term wealth and well-being derived from alternative resource-use systems, with acceptable environmental impacts. The complex relationship between the economy, society and the environment and scientific knowledge requires a multi-disciplinary approach; it also urges for skilled

communication that is capable of addressing the technological issues and the political framework within which problem solving necessarily takes place.

The term Digital Transformation (DT) simply means deploying or adopting technologies in all parts of an organisation to create value and enhance productivity. Many authors argue that DT is the key enabler for countries to achieve the **United Nations' 2030 Agenda for Sustainable Development** and its **17 Sustainable Development Goals (SDGs)**. Moreover, the United Nations Development Programme's (UNDP) Strategic Plan 2022-2025 calls for investment in DT and innovation and creativity to accelerate the pace of the UN's Agenda 2030 for SDGs and the implementation of its 17 SDGs, currently half-way to its finishing line. The plan also calls for supporting national agendas by facilitating the transition to a digital economy within the context of SDGs.

The World Sustainable Development Outlook series is developed with that objective in mind, namely, to provide an overview of SD and why it is important and to provoke forward thinking on the development of a more coherent approach to solving global problems related to sustainability. In doing so, an holistic approach is used to critically examine the inter-relationship between the natural, the governmental, the economic and the social dimensions of our world and how science and technology can contribute to solutions. A framework for understanding and acting upon these solutions will be presented, taking into account a variety of international, institutional and intellectual perspectives.

The Outlook series seeks to address growing concerns for the future of our interlocked ecological, political and economic systems in a highly populated world that is characterised by major social and economic disparities. Sustainable development is not just a concern for developing countries. The series is intended to explore global viewpoints on the state of business, technology, innovation and SD. All countries, whatever their level of development or past scientific and technological glories, must pay attention to sustainable development. It is important at every level to develop a clear understanding for a consensus on the meaning of SD and the realities of our common future.

OUTLOOK 2023

The theme of the *World Sustainable Development Outlook 2023* has been carefully chosen to discuss the theoretical and practical aspects of the role of human capital in the new digital era towards achieving the **UN's 2030 Agenda** and its **17 SDGs.**

Human capital (*knowledge, abilities and skills*) is considered to be a stimulus to the innovation process for economic growth and development. Moreover, DT is a key driver of knowledge creation and economic growth. It empowers individuals, groups and organisations to find solutions to social and economic challenges. In this conference, participants learned about the importance of DT in the transformation of human capital towards achieving the UN Agenda 2030 and its 17 SDGs.

The book also addresses the question of how DT can contribute and enhance competitiveness for graduates. Job creation, economic diversification and the act of inventing new products and services are increasingly seen as vital for a country's future development. Policy-makers

seek to ensure that national economies benefit from the digital revolution by building capacity for the creation of new ideas, technologies, organisational know-how and innovation.

Outlook 2023 includes a selection of the best papers presented during the 21st International Conference of the World Association for Sustainable Development (WASD), held in London, United Kingdom, 13-15 November 2023. The papers selected had tremendous scope in both focus and source, covering a broad geographical spectrum including Africa, America, Asia, the Caribbean, Europe, and the Middle East.

The different chapters selected for the book have tremendous scope in both focus and source, covering a broad geographical spectrum from across the world. Each part of the book starts with an overall executive summary outlining the main arguments discussed by the different authors in the section as well as their key conclusions.

THE MAIN PARTS OF THE BOOK ARE:
Part I *Introduction*
The first part of the book provides an overview and a summary of the key recommendations of the various topics discussed during the conference. This part will highlight the importance of DT and human capital in achieving the UN 2030 Agenda for SD and its 17 SDGs. This part will then be followed with more details and an in-depth discussion and analysis of all these topics in the following parts of the book.

Part II *Human Capital*
The second part of the book critically addresses the question of how DT is the key for organisations and governments to close the gap on sustainability targets and support efforts to meet each of the UN's 17 SDGs. There is an emphasis on the notion that an operational concept of social capital enhances social capital deployment for societal control of the SDGs on the global level.

The case of Vodafone shows how adopting a digital mindset is the key for organisations and governments to close the gap on sustainability targets and support efforts to meet each of the UN's 17 SDGs. In the same line as the UNDP's Strategic Plan 2022-2025, the research reveals that for these business outcomes to be successful, people need support to embrace DT. It is only with the right balance of push and pull strategy that meaningful transformation succeeds.

Part III *Education, Knowledge and Learning*
Human capital (*knowledge, abilities and skills*) is considered a key driver of knowledge creation and economic growth. The papers in this part critically analyse how the UN system acts as a generator and disseminator of knowledge in the implementation of its development mandate. As a promoter of development co-operation, the UN has influenced international thinking with its vision on development, proposed with their Agenda 2030 for SD that is built upon knowledge acquired over its entire existence.

The second study provides a better understanding of the importance of open innovation to ensure resilience at the individual level. In doing so, the study deals with the link between open innovation and resilience by examining the mechanisms by which open innovation

generates effects on different resilience forms. Open innovation, through its effect, is studied as a component affecting resilience, especially on an individual level. The findings of the study confirm that open innovation positively affects individual resilience through its two components, external technology acquisition and external technology exploitation. Furthermore, the study's results show that gender moderates the link between open innovation and individual resilience, but the age moderating effect is partially verified.

Part IV *Artificial Intelligence*

This part of the book explores the intersection of AI and SDGs through appropriate self-governance configurations at the firm, alliance and industry levels. The research proposes that organisations that adopt voluntary self-regulation have an early mover advantage, not only in developing capabilities to effectively respond to upcoming regulation, but also by providing critical input in the regulatory frameworks. In doing so, this study developed a conceptual framework for responding to the challenges of AI to environmental, economic and societal issues, by focusing on governance mechanisms that can moderate this relationship. The research is therefore very timely, as society is currently grappling with large questions on how to manage the diffusion of AI and the critical role that governance plays in these debates.

The papers in this part explore the latest publications on an AI application and present a systematic review of its impact in diverse sectors, particularly in mitigating COVID-19. The research examined one of the fundamental concerns that needs to be addressed–whether the public's understanding of AI's relevance will endure and strengthen in order to combat future pandemics. Considering the case study of Malaysia, the findings of the studies emphasise that Malaysia must put great efforts towards massive and effective use of digital technology, particularly AI adoption, to eventually help the country achieve the UN's 17 SDGs. Furthermore, the research also provides a brief description of the core challenges concerning technology adoption in general and in expediting AI in Malaysia.

Part V *Business and Entrepreneurship Development*

The practical implementation of this part of the book is how entrepreneurs can adopt DT to address the UN Agenda 2030 and its 17 SDGs, emphasising the use of digital tools to create sustainable solutions and the alignment of entrepreneurial efforts with the SD objectives.

The first study examines the link between entrepreneurship, DT, and the UN Agenda 2030 and its 17 SDGs by highlighting the potential of digital technologies in achieving these goals. The study's findings show how DT can empower entrepreneurs to address the UN Agenda 2030 and its 17 SDGs, such as by creating sustainable solutions for economic growth, inclusivity, and environmental stewardship. The study also offers recommendations and strategies for entrepreneurs to harness digital technologies effectively for achieving these goals, and emphasise the importance of alignment with SD objectives. Additionally, the findings touch on policy implications to support digital entrepreneurship in the context of the global SD agenda.

In the second study in this part, using Kuwait as a case study, the researchers examine the relevance of factors that research has identified as barriers to the widespread adoption of cloud

computing, particularly for DT and IT adoption by small and medium-sized enterprises (SMEs). The study's overall aim is to provide a general macro and micro strategy to enable the development, usage, and adoption of cloud computing by SMEs in Kuwait. The results call for the implementation of an interdisciplinary perspective for the adoption of cloud computing, encompassing not only the technical side but the socio-economic and behavioural side of cloud computing adoption.

Part VI *Digital Planning and Technologies in Construction*

The purpose of the first paper in this part of the book is to critically review the literature on urban planning systems to address the impact of IT programs on the city making process, which is clearly missing in the literature. Government decision-making processes regarding planning applications for property development proposals require a better site context determination, efficient planning information distribution, and a communicative stakeholders' consultation process. The paper argues that these requirements are the main spatial justice measurements, and it is extraordinarily complex in terms of information types, communication methods, and development stakeholders' interests. Moreover, the research highlights the difficulty in managing planning applications for development proposals without making use of planning websites, online mapping programs, case management software, and document management systems. The paperwork planning process has led to a lack of communication processes, management co-ordination and community involvement, involves many invalid planning applications and is increasingly time consuming. The paper reveals the impact of digital planning on spatial development and the planning systems should question the digitalisation of the planning process, not just to stimulate spatial justice, but also to ensure a sustainable built environment.

The second paper presents a systematic review of the latest applications of automation technologies for construction site safety management, as well as highlighting areas less examined for future research to address. Using bibliometric analysis, the paper argues that construction phase and hazard identification were the most researched topics. In addition, the content analysis discussed the key safety applications that were implemented within each branch of technology. In doing so, the paper presents the state-of-the-art applications of automation technologies in construction site safety management, identifies the existing gaps, and recommends future research topics.

Part VII *Sustainable Housing*

In this final part, the first paper focuses on the fact that a significant proportion of the population in the capital city of Dhaka lives in overcrowded slums or lacks basic shelter altogether. The primary objective of the paper is to examine the role of the Bangladesh Capital Development Authority (CDA) in promoting sustainable housing and its efforts in implementing sustainable housing practices within a city of 20 million people as a regulatory authority aligned with the SDGs. The paper argues that to address the housing crisis and implement SDG 11 in Dhaka, it is essential to develop sustainable solutions.

The second paper explores the potential of 3D printing as a new technology to transform the building industry, notably in the field of sustainable housing. This study investigates the

role of 3D printing in sustainable housing by analysing the technology's current state-of-the-art and its implementation in the building sector, resulting in a systematic review. After investigating multiple options for each of the considerations, the results show that the Inkjet technique appeared to be the best technique that could be used, and modified cementitious powder (CP) would be the optimum material to be used. Moreover, the Articulated Robot System was found to be the most advantageous system among other robotic machinery. Amongst multiple versions of software, such as AutoCAD and Rhino, Revit was chosen as the most convenient and practical software to be used for 3D printing applications.

CONCLUSIONS

The overarching objective of the 2030 Agenda for SD is the transformation of the world. Governments across the world are under increasing pressure to rise to the current challenges of improving performance and accelerate the pace of the UN's Agenda 2030 for SDGs and the implementation of its 17 SDGs, currently half-way to its finishing line. It is therefore very important to create an enabling environment for DT and innovation and creativity to accelerate the pace of achieving the SDGs.

Policy-makers need to consider creative and innovative approaches to cost saving and performance management. Most countries across the world have embarked on several major transformation and restructuring initiatives towards re-connecting human capital with the discourse of DT.

We hope that the ensemble of papers presented in this volume will help to stimulate debate amongst scholars, researchers and policy-makers, and that you will find this volume interesting and thought-provoking.

We would like to congratulate the authors for their valuable contributions, and we are grateful to our track chairs and many reviewers for graciously offering their invaluable comments that have enriched the quality of the papers in this volume, and for making available to us their valuable time and efforts. Our most sincere thanks go to all of the keynote speakers and presenters who shared with us their expertise and knowledge.

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We hope that you will find this volume informative and engaging. Any feedback you can provide will be greatly appreciated as we are always looking at ways in which we can improve your experience.

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