


## Chapter 7


# An Empirical Study Into the Impact on Innovation and Productivity Towards the Post-COVID-19 Era: Digital Transformation of an Automotive Enterprise

**Anthony Bolton**

 <https://orcid.org/0000-0002-1259-7479>

*University of South Africa, South Africa*

**Leila Goosen**

 <https://orcid.org/0000-0003-4948-2699>

*University of South Africa, South Africa*

**Elmarie Kritzinger**

 <https://orcid.org/0000-0002-5141-4348>

*University of South Africa, South Africa*

### ABSTRACT

*The purpose of this chapter is to present research describing work in an organizational context in order to optimize the practices established in the most diverse domains of knowledge, attending to the relationships between information and communication technologies (ICTs) and sustainability in the post-COVID-19 pandemic era. An empirical study into the impact of digital transformation via unified communication and collaboration (UC&C) technologies on the productivity and innovation of a global automotive enterprise is thus reported on in the chapter. The primary research question addressed in the study was: To what extent does digital transformation, implemented through unified communication and collaboration technologies, impact productivity and innovation within a global automotive enterprise? The conclusion of the study is that digital transformation, delivered via an integrated framework with UC&C technologies, impact productivity and opportunity for driving innovation within a global automotive enterprise.*

DOI: 10.4018/978-1-7998-6776-0.ch007

## INTRODUCTION

When commenting on the positive experiences encountered during a live musical performance, American composer Libby Larsen famously observed that technology sometimes creates barriers to communication among human beings (Ross, 2001) by driving a yearning for the intimacy that a live performance brings, with the performer being present, standing near the audience and looking into their eyes.

In order to describe the general perspective of the chapter, developments in the industry and the global market are introduced, not only relating to such human interaction, but also focusing on the theme of entrepreneurship, innovation, sustainability, and Information and Communication Technologies (ICTs) in the post-COVID-19 era. A look is taken at the importance of ICTs to business and enterprises in general, which have been witnessed over the last few years. New business models, new marketing channels and new markets are reached using ICTs. ICTs are a daily support and, many times, a way to develop creativity and innovation, which is expected to remain important in terms of renewed efforts in the post-COVID-19 pandemic era. Currently, most enterprises are dependent on Information Systems (IS)/ICT, in order to support their business strategies. IS/ICT can promote the implementation of strategies and enhancers of the optimization of the various aspects of business.

The experiences of the first author against a background relating to enterprise digitization enablement through Unified Communication and Collaboration (UC&C) technologies (Bolton, Goosen, & Kritzinger, 2016) and the impact of digital transformation on the productivity and innovation at a global automotive enterprise led to the establishment of the problem domain. Definitions of e.g. digitization, which is increasing the demand for digital human-to-machine and human-to-human communication and interaction, were thus established and supported by a literature review.

The main focus of the chapter reported on in this study was on the automotive industry, which offers a unique opportunity for research, due to the exceptional confluence of commercial and technical evolutions that are currently occurring across a broad set of critical business functions. Evolutions within the automotive industry, such as the electrification of vehicle platforms, digitization of large-scale manufacturing, enhanced digitization of retail experiences, autonomous and connected mobility services, globally shared vehicle architectures and globalization of operations, are driving rapid change and broad enterprise digital transformation. The chapter also raises issues related to the impact this has on people in affected enterprises, focusing on the increased demands for integrated real-time communication and integration with the emerging digital landscape of technologies and processes (Eigner, 2016). Combined with long-standing histories of industrial development (some automotive manufacturers have been in operation for over 100 years), the challenges experienced as automotive enterprises digitize business processes and evolve to digital business models provided a fertile landscape for the development of research data (Leyh, Schaffer, Bley, & Forstenhausler, 2017). The automotive sector was thus contextualized in terms of challenges with regard to the digital integration of technology systems, business processes and people.

The pandemic introduced disruptions to everyday life, in terms of, for example, ways of working, learning and socializing. These challenges bring difficulties to a number of sectors, such as tourism, aviation, etc., but also present a set of opportunities, with new solutions being developed in terms of ways to sell, market, teach and learn, etc.

Not only in market enterprises, but also in social enterprises, the digital economy and ICTs are important tools that can empower social entrepreneurship initiatives to develop, fund and implement new and innovative solutions to social, cultural and environmental problems. Digitization is more than a trend and ICTs are common and influential to the wellbeing of millions of people virtually everywhere.

25 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/an-empirical-study-into-the-impact-on-innovation-and-productivity-towards-the-post-covid-19-era/273954](http://www.igi-global.com/chapter/an-empirical-study-into-the-impact-on-innovation-and-productivity-towards-the-post-covid-19-era/273954)

## Related Content

---

### Framing Private Sphere Consumer Behavior: Likelihood of Using GoodGuide.com Information as Explained by the Value-Belief-Norm Theory and NEP Scale

Rebecca Angeles (2016). *International Journal of Social Ecology and Sustainable Development* (pp. 14-38).

[www.irma-international.org/article/framing-private-sphere-consumer-behavior/152218](http://www.irma-international.org/article/framing-private-sphere-consumer-behavior/152218)

### Political Clientelism and Sustainable Development: A Case of Kenyan Forest Policy

Zedekia Sidha (2022). *Research Anthology on Measuring and Achieving Sustainable Development Goals* (pp. 1147-1160).

[www.irma-international.org/chapter/political-clientelism-and-sustainable-development/290961](http://www.irma-international.org/chapter/political-clientelism-and-sustainable-development/290961)

### The Dragon's Footprints: The Impact of Chinese Migration and Investment in the European Union

Mona Chungand Bruno Mascitelli (2019). *Emerging Economic Models for Global Sustainability and Social Development* (pp. 260-273).

[www.irma-international.org/chapter/the-dragons-footprints/209917](http://www.irma-international.org/chapter/the-dragons-footprints/209917)

### CobWeb Multidimensional Model and Tag-Cloud Operators for OLAP of Documents

Omar Khrouf, Kais Khroufand Jamel Feki (2018). *International Journal of Green Computing* (pp. 46-68).

[www.irma-international.org/article/cobweb-multidimensional-model-and-tag-cloud-operators-for-olap-of-documents/221132](http://www.irma-international.org/article/cobweb-multidimensional-model-and-tag-cloud-operators-for-olap-of-documents/221132)

### The Dilemma of Purchase Intention: A Conceptual Framework for Understanding Actual Consumption of Organic Food

Brahim Chekima (2018). *International Journal of Sustainable Economies Management* (pp. 1-13).

[www.irma-international.org/article/the-dilemma-of-purchase-intention/202427](http://www.irma-international.org/article/the-dilemma-of-purchase-intention/202427)