

THE IMPACT OF INDUSTRY 4.0 ON THE WORKFORCE WITHIN A BUSINESS BANKING: PROJECTS AND OPERATIONS ENVIRONMENT

JARED SUBRAMANIEN

(Student number: 576849)

School of Mechanical, Industrial and Aeronautical Engineering

University of the Witwatersrand

Johannesburg, South Africa.

Supervisor: Bernadette Sunjka

A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree of Master of Science in Engineering.

Johannesburg, September 2021

ABSTRACT

Literature defines Industry 4.0 as a concept that is critical to adopt in organizations to remain competitive. It is an entire new way of breaking the traditional approaches of operation in an organization. The changes brought about will also impact the workforce with the Banking industry.

The first objective of this study was to develop a conceptual framework and thereafter evaluate the implementation of Industry 4.0 in a Business Banking: Projects and Operations environment in a particular Bank. The impact to the workforce in this setting was then understood to answer the critical research question which was to identify the impact of Industry 4.0 on the workforce within a particular Business Banking: Projects and Operations unit. A qualitative research approach was undertaken to understand the phenomenon. Semi-structured interviews were designed, based on the conceptual framework, and administered to eight subject matter experts within the unit and the results were analysed.

The Business Unit is well advanced in implementing disruptive technologies and at a moderate level in terms of transforming current processes and operations. The Business Unit also transforms existing architecture to suit the design principles of Industry 4.0. All these changes impact the workforce in the Business Unit such that it requires a modification of the working environment as well as modification of job profiles for both the lower and higher skilled workforce. Industry 4.0 was seen to present opportunities and threats to the workforce in terms of new roles offered as well as the possibility of certain roles becoming redundant.

Recommendations are presented for further research so that the research can be generalized. Further to this, recommendations are presented to the Business Unit to assist the workforce in an ever-changing digital world.