8-10-2020

Defining and Measuring Digital Transformation

Guillermo Rodriguez-Abitia
Universidad Nacional Autónoma de Mèxico, grdrz@unam.mx

Graciela Bribiesca-Correa
Universidad Nacional Autónoma de México, gbribies@fca.unam.mx

Defining and Measuring Digital Transformation

TREO Talk Paper

Guillermo Rodríguez-Abitia
Universidad Nacional Autónoma de México
grdrz@unam.mx

Graciela Bribiesca-Correa
Universidad Nacional Autónoma de México
gbribies@fca.unam.mx

Abstract

There are many models that have been developed over time to measure the capacity of organizations to benefit from the implementation of Information Technologies (IT), so that efficiency and efficacy advantages may be obtained. However, the potential impact of IT has grown exponentially. Today, the profound appropriation of IT in organizations is represented by the concept of Digital Transformation.

In the knowledge era, it is ever more important to understand the value that IT initiatives may bring to organizations. Many terms have been used and evolved to describe this evaluation, from IT maturity to Digital Transformation., along with e-readiness. However, the evolution has been slow, starting with simple studies on the profitability of establishing and IT infrastructure, and moving all the way to the concept of Digital Transformation.

An ongoing research project in Latin America seeks to review the most important models that have emerged and evolved to the present day, now that we are immersed in the realm of Industry 4.0 and Society 5.0, to propose an integrated Digital Transformation model and an instrument to assess its state in a particular organization, Measuring its level of maturity, would provide a business the needed steps to follow, in order to better profit from an intelligent use of IT that takes into consideration the opportunities and challenges of a dynamic competitive environment.

Based on classical models for IT productivity (Brynjolfsson 1993), IT planning and alignment (Zachman 1984; Kaplan and Norton 1992; Henderson and Venkatraman 1999; Luftman 2000), e-Readiness and Digital Maturity (Venkatraman 1994), and more recent models for Digital Transformation (Heilig, Schwarz and Voß, 2017; Rossman 2018; Morakanyane, Grace, and O'Reilly2017; Matt, Hess & Benlian 2015; Osmundsen, Iden & Bygstad 2018), an integrated model is proposed, comprised by a matrix relating five organizational dimensions and three transformational objectives. Innovation and financial aspects are included to impact across all combinations.

Based on this model, a quantitative five-point scale instrument was developed to establish the level of Digital Transformation maturity of an organization. Such instrument is being pilot tested in five different countries for reliability, face, and content validity. Given its length, a possibility exists for dimension reduction.

It is expected that the adjusted instrument will allow testing the model in a greater sample, and a practical consulting methodology can be derived from it for industry application. The validated model, could provide cohesion to previously developed research, as well as adaptation of the body of knowledge to the current times and need of Society 5.0. The Latin American context will provide a valuable testing ground, provided the particular challenges faced by organization located in countries where infrastructure and digital awareness may be strong limitations to the success of IT initiatives.

Nonetheless, it is likely that the level of external validity will be more than acceptable, and the model may prevail after testing in different contexts.

References

Available upon request