FRAMEWORK FOR BUSINESS VALUE OF SOCIAL INTERNET OF THINGS

By

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Abstract

In the current era of Digital Business Transformation, multiple technologies are convalescing cohesively. Emerging synergies amongst Internet of Things (IoT) and Social Technologies, are driving elevated value, in various industries and ecosystems. This accruing coalescence between two swiftly propagating technologies, hither-to believed-to-be heterogeneous, is leading to the diffusion of Cyber Physical Social Systems (CPSS).

Fuelled by advances in diverse technology domains like Smart Objects (e.g. semiconductor physics, opto-electronics, embedded software and analytics, etc), connectivity (like 5G network technologies), analytics (e.g. Business Intelligence, Big Data Analytics, Artificial Intelligence and Deep Learning), Middleware and Applications, Security and Management technologies, etc; these systems are developing higher than expected levels of autonomy, posing fundamental philosophical questions to scientists and researchers. While the phenomenon is being investigated primarily from technology perspective, there are hardly any rigorous studies to understand the business value of such technology convergence, that is disrupting industry-boundaries and requiring new business models.

This research work systematically understands the business value of Social Internet of Things (SIoT). Detailed study covering multiple technology and management literature streams, identifies determinants of SIoT and its business value. Through rigorous amalgamation of extant literature spanning Digital Business Strategy, Business Model Innovation, Technology Convergence and Business Value of Information Technology; a research model framework is developed for the Business Value of SIoT. This factors-in imperative IS and Organization-contingent constructs, along with contextually relevant hypotheses. The model framework is empirically validated through surveys conducted of experienced industry practitioners and

consultants. Further, the enhancements are analysed in light of earlier business model frameworks for IoT. Implications for academicians and practitioners are discussed along with future research directions.

Keywords:

Social Internet of Things (SIoT), Cyber Physical Social Systems (CPSS), Technology Convergence, Internet of Things (IoT), Social Technologies, Business Intelligence (BI), Analytics, Artificial Intelligence (AI), Deep Learning (DL) Systems, Data Science (DS), Framework, Business Agility, Business Value

Table of Contents

List of Figures

List of Tables

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