



## Opinion

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# Industry 4.0'S Product Development Process Aided by Robotic Process Automation



Calin Ciufudean\*

Department of Computers, Automatics and Electronics, Stefan cel Mare University, Romania

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\*Corresponding author: Calin Ciufudean, Department of Computers, Automatics and Electronics, Stefan cel Mare University, Romania, Email: ciufudean@usm.ro

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## Opinion

As well defined on the journal's site Robotic Process Automation (RPA) is the application of technology that allows employees in a company to configure computer software or a "robot" to capture and illustrate existing applications for processing a transaction, managing data, provoke responses and communicating with other digital systems.

Product Development Process (PDA) is a key element for implementing Industry 4.0 and as defined in literature it consists of integrating six main elements: requirement, definition, design, production, maintenance and recycling [1-3].

So, in order to implement Industry 4.0 fast and costless we need to capture and illustrate existing applications as well as new ones for processing ensuring a reliable product-life cycle [4] and to efficiently process transactions, assuring smart services, manage big data and communicate with other digital systems. In other words Industry 4.0 is relying on the RPA development. We should explain this statement by considering the fact that for existence of real world Industry 4.0 the digitalization and connectivity are essential as human to machine interfaces, as well as machine to machine interfaces are efficiently supported by managing huge amount of data through Internet of Things technologies. Real time concept all along the value chain is possible to realize using Big Data (BD) techniques and technologies. Smart Service concept is nowadays inseparable with the concept of sustainable development. Smart Service is defined by the link between product and a detecting, diagnosing, correcting, controlling and interconnected digital service in order to obtain an added value to product [5-7].

These desiderates are possible by processing data from both customer and supplier, e.g. building an intelligent

platform for delivering Smart Products. Of course, the concept of intelligent platforms necessitates advanced analysis of Big Data for reacting in real time to market demands. How is this possible? By connecting PDA with RPA, by monitoring in real time production and customer satisfaction about this product, by enhancing the efficiency and reliability of design, manufacturing and service process.

RPA implies also a revolutionary design and interpretation of the classic automation pyramid by flattening it as discussed in [8], as a consequence of stringent demands for non-limiting the effectiveness of open architecture of Industry 4.0. This means flattening, i.e. melting into a main stream, the different functional requirements characteristic to distinct pyramid's layers for developing a better communication between these layers such as between devices (sensors, processors, artificial intelligence and cloud connection) and the management layer.

The link between PDA and RPA ensured by Industry 4.0 offers an important opportunity for ensuring a sustainable drive growth of overall productivity, and by consequence a sustainable growth of wellbeing.

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