

Vendor Selection in Industry 4.0 - Large Process Industry Companies' Requirements for MSE Technology Providers

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Abstract

Industry 4.0 (I4.0) development and competition drive the industry to develop new I4.0 solutions, which are often partly or entirely developed by external technology vendors. Choosing the right vendor through the vendor selection process is one of the industry companies' most crucial decisions to ensure that the procurement fulfills their needs. I4.0 solutions require diverse capabilities that are often difficult to find from a single technology vendor, which drives the industry to procure from multiple vendors. However, these solutions don't often work well together, and selecting the right technology vendors can be cumbersome.

I4.0 is a complex and rapidly developing field that requires further research in many fields. I4.0 supply chain, roles of external I4.0 partners, and procurement of digital solutions need still further research to improve I4.0 vendor selection. To respond to the research gap, our aim in this paper is to clarify the industry's requirements towards micro-and small enterprise (MSE) technology vendors by identifying the key requirements that large process industry companies emphasize in I4.0 technology vendor selection. To achieve this, 6 global Finnish large process industry companies were interviewed and the interviews were analyzed to identify large process industry companies' key requirements for the technology vendors. Through this analysis, 9 key requirements were identified which take into account technology vendors' agility, communication, reliability, knowledge, productization, foreign language, contracting, partnership aim, and value proposition fit. These key requirements provide valuable insights for

MSE technology providers regarding vendor selection in I4.0. This phenomenon has hitherto been underexplored.

Keywords: Vendor selection, Supply chain, Technology vendor, MSE, Industry