

## Proposing an Agile and Sustainable Industry 4.0 Implementation Framework for Small and Medium size Manufacturing Companies

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**Abstract :** Digital transformation has the power to change the way we live and work. Within the manufacturing sector many companies have been quick to adapt to the new digital ways of working especially after the covid-19 pandemic has accelerated adoption. Within the manufacturing sector the umbrella term of industry 4.0 does a good job at summarising specific technologies that can be adopted as part of a digital transformation to leverage many benefits to the business. These technologies include but are not limited to big data, advanced robotics, IoT, digital twins, augmented reality and many more. As larger companies with abundant resource and knowledge in these areas have adopted these new technologies they pave the way for SME's within the industry to follow suit however they are stalling in doing so do to many factors limiting their ability to progress. This paper explores the critical success factors to digital transformation under industry 4.0 for manufacturing SME's. It proposes a detailed framework to enable businesses to implement industry 4.0 in a sustainable and agile way catering specifically to the needs of SME's.

**Keywords :** digital transformation, industry 4.0, manufacturing SME, sustainability, business agility

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