Connect your smart manufacturing via Smart Work: A single-case study from the Renewable Energy Industry

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Abstract. The evolvement of new-generation information technologies, such as the Industrial Internet of Things (IIoT), is bringing today's production systems nearer the Industry 4.0 (I4.0) agenda, to why manufacturers have invested heavily in new equipment to become smarter in the way of working. While the development of organizational capabilities to support these investments is showing slow progress, practitioners are having difficulty getting their manufacturing connected using I4.0 technologies as they provide a limited understanding of how to balance the interrelation of the variables within their sociotechnical system configurations. To close this gap, this study presents a single-case study from the Renewable Energy Industry demonstrating how Smart Work principles (human-centric solutions) prove beneficial in balancing the social and technical variables for implementing IIoT technology in a production environment with a moderate number of I4.0 technologies implemented. By studying the company's organizational capabilities through the lens of sociotechnical theory, our findings demonstrate that the complexity of implementing new technology is related to the difficulty of handling transdisciplinarity within the sociotechnical system.

Keywords. Industry 4.0, Smart Work, Sociotechnical systems, Single-case study.

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