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## ACCEPTED MANUSCRIPT

# INTER-ENTERPRISE ARCHITECTURE AS A TOOL TO EMPOWER DECISION MAKING IN HIERARCHICAL COLLABORATIVE PRODUCTION PLANNING

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Abstract: The novel idea of inter-enterprise architecture from the enterprise engineering perspective allows collaborative networks to integrate and coordinate different organizations. Therefore, inter-enterprise architecture offers multiple benefits, including: joint process harmonization, business strategy and information technology alignment, technological cost reduction, risk and redundancies reduction, customer services improvement and enhanced responsiveness. Inter-enterprise architecture can be used to solve the different issues that collaborative networks face on a daily basis. A conceptual model that addresses the problem of unexpected events management in the context of hierarchical production planning to improve decision making in collaborative environments is proposed using of inter-enterprise architecture. The proposed conceptual model comprises of a framework, a modelling language and the methodology. The conceptual model has been applied to a Spanish collaborative network from the ceramic tile sector.

*Keywords*: inter-enterprise architecture, decision-making, hierarchical production planning, collaborative networks, unexpected events

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