
Adapting to Change: Agile Ramp-Up Management Framework

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Résumé

In the dynamic context of the competitive and unpredictable marketplace, the process of ramping up production or services is one of the most challenging decision-making problems in product or service life cycle (PLC or SLC). Agile ramp-up management refers to the ability of an organization to quickly adapt and scale its production or service processes in response to market demands and changing circumstances. There are various strategies for managing ramp-up, characterized each by complexities arising from unpredictable problems or disruptions. Navigating these complexities necessitates a proactive approach fortified by a systematic manner to facilitate successful ramp-up projects. This research aims to contribute to closing this underscore area, by emphasizing agility to swiftly adapt to unforeseeable events and disruptions. This emphasis on agility serves as an enabler for ramp-up management to improve the organization's performance and strengthen its business success and market leadership by making it more responsive and flexible against volatility in today's dynamic environment.

The paper at hand addresses a general decision support framework (Fig. 1) for agile ramp-up management, aiming to focus particularly on the "Escalation" stage as the heart of the agile ramp-up, where the real ramping up and scaling up happens, based on conceptual and practical approaches. The framework not only supports decision-making processes during the 'Escalation' stage but also equips practitioners with the tools and insights necessary to tackle the agile ramp-ups with heightened efficiency.

The framework is grounded on the Scrum method, business process modelling, and simulation, introduced as the implementation approach for the proposed framework (shown briefly in Fig. 2). Its use is illustrated by conducting a case study in additive manufacturing following the Design Science Research (DSR) methodology. The case study underscores the robustness and practicality of the proposed framework positioning it as a valuable asset in the pursuit of agile ramp-up pathways to reindustrialization.

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