

KNOWLEDGE PILLS

Ramp-up: How to Accelerate Performance Without Risk and Maximize Operational Efficiency



Filip Simunovic
Consultant

What is a Ramp-up?

In the industrial world, operational efficiency is key to success. Every new production line, technology deployment, or capacity expansion comes with significant challenges. Ramp-up projects refer to situations in which a company substantially increases its output in response to increased demand or an expected increase in the near future.

The primary objective of such projects is not only to scale up production but also to ensure that products are manufactured with the right quality, at the right time, and in the planned quantities. However, with the growing complexity of products and processes in modern manufacturing environments, ramp-up projects present considerable challenges.

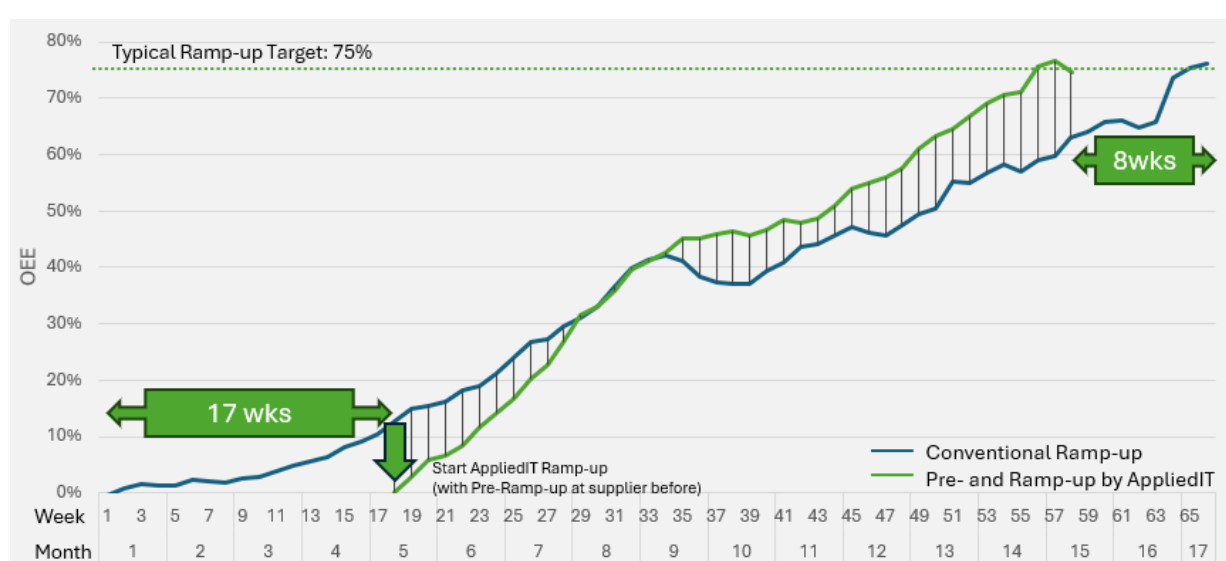
To consider these challenges, AppliediT has developed a methodology that enables companies to manage ramp-ups efficiently. By following this approach, businesses gain a competitive advantage, allowing them to enhance their performance and availability without risks.

This methodology establishes reduced downtime, optimized costs from the beginning, and a smooth transition into higher production volumes.

In this ebook, we'll explore in depth how this approach works, its benefits, and the best strategies to apply it in your organization.

AppliediT study and pioneering Ramp-up Methodology

AppliediT has conducted a study analyzing its involvement in the last eight Ramp-up projects within the automotive sector. As part of the study, conventional Ramp-up methods were compared within the approach developed and exercised by AppliediT.



The evaluation revealed that AppliediT's structured approach reduces delays, accelerates production stabilization, and ensures a faster path to full operational performance. **But how does AppliediT's methodology differ from conventional ramp-up methods?**

The core of AppliediT's methodology is a phased ramp-up approach, which systematically addresses challenges at each stage of production scaling. The objective is to constantly optimize the performance while at the same time minimizing risks. A key driver of the AppliediT approach is Overall Equipment Effectiveness (OEE), which serves as the primary performance indicator.

Unlike traditional ramp-up methods, the AppliediT methodology offers high flexibility due to its phase-based structure. Depending on the initial production conditions, companies can start at different phases, whether at the beginning of a ramp-up (from 0% OEE to a target value) or at an intermediate stage to further optimize an existing OEE level.

Common Challenges in a Conventional Ramp-up

- **Long LOPs:** List of open points with unclear prioritization and focus, impacting identifying bottlenecks and solving them.
- **Market and Customer Pressure:** High demands of output, customization and quick delivery.
- **Communication and Production Coordination:** Alignment between engineering, production, suppliers to meet aggressive ramp-up demands.
- **Cost Pressure:** Capital expenditure and unexpected expenses related to troubleshooting or redesign.
- **Workforce Readiness:** Need for specialized training and onboarding and high turnover risk due to unstable schedules and stress.

The AppliediT Ramp-up Method, on the other hand, anticipates these problems and corrects them before they materialize, ensuring a shorter learning curve and a faster return on investment.

How to achieve a successful Ramp-up

Companies rely on traditional ramp-up methods that no longer meet the demands of today's industrial environment. These approaches lack flexibility, leading to inefficiencies and delays in production scaling. In contrast, AppliediT employs an adaptive approach, ensuring continuous progress through stepwise prioritization and a focused problem-solving strategy.

Instead of addressing all challenges simultaneously, AppliediT tackles critical issues to establish quick wins and improvements.

AppliediT has developed its own method to carry out a successful ramp up, which combines a unique combination of problem-solving methods, lean practitioner skills and superior manufacturing analytics.

This method is divided into six phases, each addressing specific needs of the line status at the given time, based on the system's performance, evolution, and available resources in each phase. These phases are:



Each phase is completed upon reaching clear milestones, particularly OEE levels, with the OEE result recorded as output. These milestones are clearly defined and determine which tools are used and where the focus is placed.

This approach ensures that technical challenges are addressed at each phase, while also prioritizing the engagement and training of human resources to effectively manage the ramp-up production and consider human factors throughout the process.

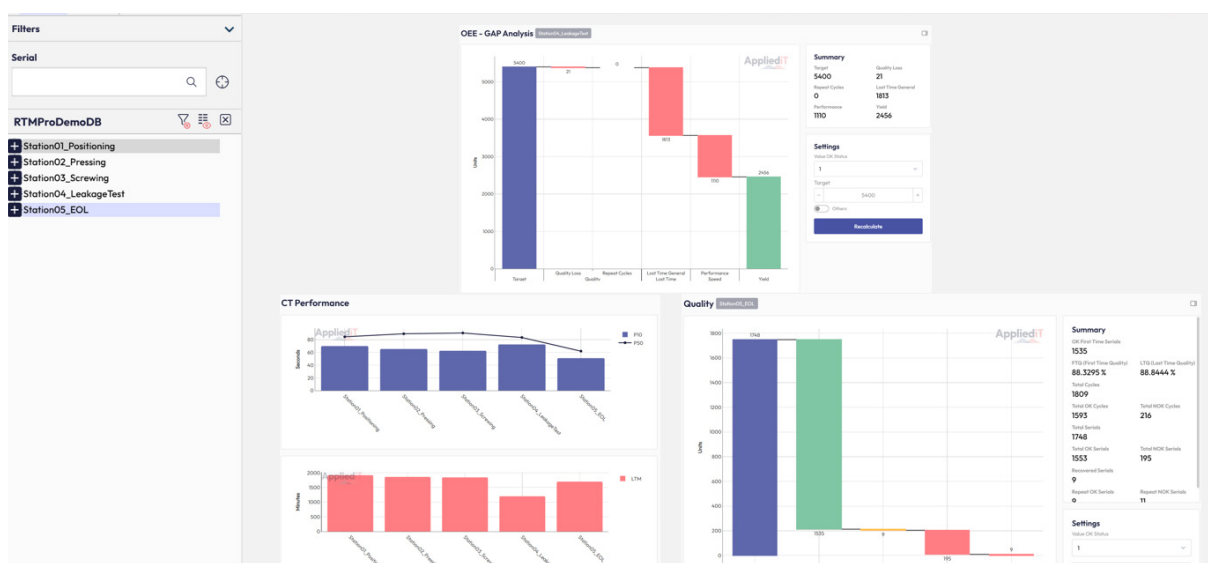
Use of RTM Pro within a Ramp-up

From complex problem solving of quality problems, problems that lead to downtime as well as the identification of bottlenecks due to technical limitations, the evaluation of data is essential. Based on the data analysis, it can be made sure that these problems are not only through interim measures but also with sustainable corrective actions, enabling informed, data-driven decision-making.

AppliediT has developed RTM Pro to serve as a powerful tool in this process. RTM Pro allow teams to analyze and visualize data, enabling them to detect issues early and troubleshoot effectively. This tool is particularly beneficial during the ramp-up phase, where optimizing processes and minimizing disruptions is essential for scaling operations.

What sets RTM Pro apart is its continuous refinement. It has been developed and fine-tuned to become the most important tool for covering all analytical needs that arise not only during a ramp-up but throughout the entire production cycle.

Despite its comprehensive capabilities, RTM Pro has been designed with simplicity in mind. It's intuitive and easy to use, meaning that users don't waste precious time navigating complex systems or struggling with unnecessary complexity. Instead, teams can focus on what matters most: resolve issues, improve processes, and make data-driven decisions.



* Tools within RTMPro for analyzing the OEE components quality, availability and performance using the example of the DemoDB

Benefits of Ramp-up applying the AppliediT method

Companies that implement a data-driven approach and data usage techniques achieve tangible results in costs, productivity, and quality. Based on AppliediT proven experience in successful ramp-ups, the following advantages could be highlighted:



Steep Start:

Safe 17 weeks to get to 30% OEE.



Time Recovery:

50% regained on AIT start at 30%.



Faster Ramp-Up:

75% OEE, 2-3 months sooner.



Proven Savings:

8-25 weeks cut.



Expected ROI

Either within project duration
and usually **less than 1 Year**.

The Key to Operational Success

Ramp-up projects represent a distinct complexity within manufacturing environments, demanding meticulous planning and execution to achieve operational success. When a company embarks on scaling up its production, the application of a robust and structured methodology becomes indispensable.

Recognizing this industry challenge, AppliediT has developed a phased methodology tailored specifically to support companies throughout their ramp-up journeys. This approach is particularly pivotal in the initial stages, where establishing a stable and efficient production process lays the groundwork for long-term success.

By integrating a data-driven strategy in the later phases, the methodology fosters continuous improvement, enabling the sustained enhancement of OEE potential.

In AppliediT, we will be happy to know your case and to share with you our expertise and insights. Would you like to know how we can implement this in your company?

Contact us in contact@applieditweb.com and we will advise you without obligation.



AppliediT combines a multidisciplinary team of expert IT engineers, data analysts and software developers to provide operational excellence, data engineering and application development services for data analytics in the industrial environment.

Our goal is to transform data generated in the industrial environment by people, processes, machines and information systems (ERP, CMS...) into knowledge to improve data-driven decision making, increase efficiency, save costs and optimize production times.

For more information, visit applieditweb.com