CASE STUDY

How Sanofi Reduced Changeover Time by 57% on Key Packaging Lines

RΛVEN

Company Profile

Sanofi is a world-leading pharmaceutical company striving to transform the practice of medicine. With 70 manufacturing sites and 20 R&D sites, Sanofi provides healthcare treatments and vaccines to millions of people in more than 100 countries.

⊕ Pharmaceutical / Discrete   👥 90,000+   💰 >$40B

The Challenge

As a leading pharma manufacturer rapidly expanding across the globe, Sanofi was focused on digitizing the performance management of their Operational Excellence System (Sanofi Manufacturing System). Sanofi's corporate OPEX team needed a way to ensure their plants were set-up and operating as efficiently as possible, but their initiative to deploy a digital performance management system took a lot of effort and time to implement and fell short of engaging and empowering the plant stakeholders to acquire critical performance context.

Additionally, because of the shortcomings of their own digital platform, management teams had to rely on pen-and-paper processes to track and manage performance on the shop floor, and this was preventing Sanofi from gaining complete understanding of performance and root causes of inefficiencies.

Sanofi needed a digital OEE and continuous improvement solution that helped them:

1. Immediately digitize shop floor data collection and reporting processes to capture real-time accurate data, and account for 100% of production time
2. Analyze their production and changeover processes to identify the root cause of losses
3. Empower the frontline to focus on efficient changeovers and production targets, by automating downtime tracking and providing real-time visibility into performance

The Solution

As Sanofi's chosen digital solution, Raven worked alongside their operations team to build out a sustainable program that ensured changeover efficiency on top of other performance metrics, while ramping up their new pharmaceutical packaging lines. The push for Raven started at the plant-level with an initial pilot using 8 assets. Initial implementation of Raven in the Ridgefield, New Jersey manufacturing site took a matter of weeks, with positive results in just a few months.

The following Raven features were applied to Sanofi's key packaging lines:

Raven's Smart Assistants
Raven's Smart Assistants were placed on each line to remove the burden of manually recording downtime reasons. With an intuitive HMI, operators could tag exact downtime reasons in seconds — and only when machine sensors couldn't track them automatically.

Changeover Stepwise Improvement Program (SMED)
Raven then worked with the Sanofi team alongside an Industry 4.0 partner to implement a changeover stepwise improvement program (SMED) that ensured changeovers were efficient and streamlined in a step-by-step process, making it easy for teams to follow and be prepared to win each shift. This was done by 1) setting targets for changeover duration and frequency and 2) highlighting improvement opportunities for reducing waiting times.

Reporting Platform
In addition, Sanofi was able to set real-time alerts to be sent to supervisors when the changeover time exceeded the target. Real-time data reports were used to monitor changeover performance for each step on an end-of-shift, 24h, weekly and monthly basis. Raven also automatically created a visual event timeline, accounting for 100% of production time, to quickly identify how time was spent on the shop floor. The real-time performance metrics were incorporated into their daily stand-up dashboards and allowed them to share best practices between teams. This empowered shop floor leadership to make fact-driven improvements for greater efficiency moving forward.

Forecasted Lot Completion Module
Sanofi also used Raven's Forecasted Lot Completion Module to ensure holistic practices were in place for changeover measures. The module ensured the rate, progress and expectation for a given batch by providing insight into the next iteration.

The Results

Within the first 6 months of piloting Raven, the Sanofi team saw an 11% OEE gain. With the frontline successfully hitting their weekly targets, the plant manager was able to shut down overtime on weekends for increased work-life balance. After the pilot, the New Jersey site implemented Raven plant-wide across all assets.

Sanofi's leadership team was excited about more opportunities to expand Raven in their locations because of 1) the speed of deployment, 2) the ability to capture 80/20, and 3) the rapid time-to-value for plants that needed to accelerate their operations and production targets. This led to the expansion into Sanofi's headquarters in Val de Reuil, France, with 5000 employees and a deployment across 17 rooms. Sanofi's team was able to quickly and successfully deploy Raven due to the bolt-on, plug-and-play software. Raven integrated with existing systems for data harmonization so Sanofi HQ was able to identify areas for improvement as soon as data started flowing — using Raven's Smart Assistants, real-time reporting platform and modules.

With the development of their own eOEE software as a corporate initiative, Raven was used as the stepping stone to the deployment of the eOEE software in Val de Reuil. Since the scope of Raven's use case, as a best-of-breed solution, is much narrower than the eOEE software, starting with the implementation of Raven really helped the operations team better prepare and facilitated their corporate change management strategy.

In 18 months, some of Sanofi's key wins with Raven included:

- Reducing changeover time by 57% on key lines
- Increasing capacity by 25% + $2.4M new bid opportunities
- $230k cost reduction
- Reducing shifts from 3 per day to 2 per day and less overtime hours
- Mapping out changeover journeys and developing a changeover stepwise improvement program (SMED)
- Determining exact downtime reasons for changeovers
- Gaining real-time visibility into key production metrics and identifying top bottlenecks and losses