

TURNING RISK INTO REWARD: ENHANCING MANUFACTURING PROCESS QUALITY

Abstract

When a global leader in heavy equipment manufacturing set up a new facility in China, Joseph Antipas, the organisation's Process Quality Manager needed to identify and manage the risks to its processes. This case details how Joseph brought a quality team from Infosys BPM on board to support him with the challenge, and how their approach eventually delivered optimised operations and enhanced profitability.



A new facility with new risks

Joseph Antipas is a Process Quality Manager at an American company that manufactures heavy equipment widely used across the construction, mining, and engineering industries worldwide. In his role, Joseph oversees the development and implementation of Process Failure Mode and Effect Analysis (PFMEA) documents. His responsibilities include guiding his team in systematically identifying potential risks and failures in the company's design, manufacturing, and assembly processes, prioritising them, and coordinating with cross-functional teams

to resolve underlying issues. With the company establishing a new manufacturing facility in Wuxi, China, Joseph faced an exciting new challenge. He needed to ensure that all potential concerns were identified and addressed early during the development stages of the processes involved, thereby enhancing product quality and reliability. However, he realised that his team was struggling to develop the crucial PFMEA documents. They faced challenges in identifying risks associated with the process and the product, as well as in

prioritising potential failures. With time running out to address these risks during the early stages of setting up the plant, the company was increasingly exposed to higher chances of process failures, rising costs, and compromised product quality. Faced with this situation, Joseph decided to seek external support. Following an efficiently conducted global RFP for a suitable business partner with expertise in quality processes, he chose Infosys BPM. Soon, a team of quality professionals, led by veteran expert Shakti Chandran, was on board to tackle the task.

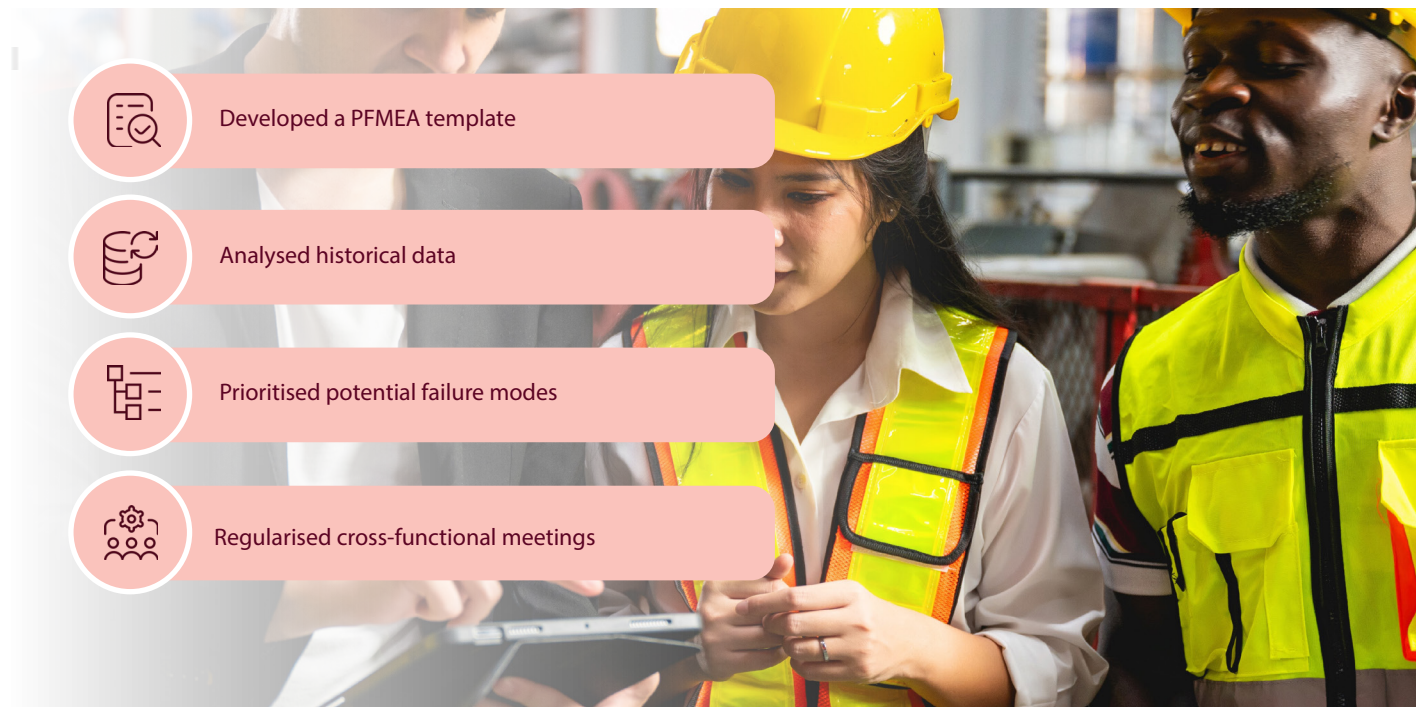
A structured approach to risk management

Over a series of early meetings with Shakti, Joseph outlined the issues his

team had faced and mandated Shakti with developing a structured and proactive risk

management approach.

Approach summary



Without delay, Shakti directed his team to develop a PFMEA template that clearly detailed the process work steps. Using historical data and collaborating with a cross-functional team (CFT) established by Joseph, both teams began identifying potential failure modes. This included analysing the severity, occurrence, and detection data of historical process failures to establish the Risk Priority Number (RPN) for each failure type. Shakti's team then prioritised the process failures based on their RPN and documented the corresponding action items. He also initiated regular CFT meetings to monitor

the progress of these actions. Reflecting on the process, Joseph had initially harbored some concerns about how effectively an external team could navigate a new company structure to coordinate and communicate with the cross-functional teams. However, Shakti's team's consummate professionalism in managing the PFMEA project soon put his worries to rest. The team did face some resistance from certain stakeholders in the organisation when it came to accepting and implementing the PFMEA process. Similar to Joseph's team members earlier

on, these stakeholders struggled with accurately identifying and prioritising potential failures, as well as ensuring timely communication and coordination among all involved parties. Moreover, maintaining the accuracy and relevance of historical data used for identifying risks proved to be a challenge. Nevertheless, with Shakti and his team persistently working against these odds, their proactive approach to identifying and prioritising risks early in the process was ultimately ready and yielding results.

When a good system pays great dividends

By significantly enhancing Joseph's ability to address the risk of failures before they impacted the process, the new system substantially reduced the likelihood of

failures in the new facility's operations. Additionally, he was soon able to leverage it to minimise operational disruptions, further increasing the reliability of the

processes. This, in turn, led to reduced costs and elevated product quality, reliability, and safety to levels exceeding industry standards.

Key benefits



With customer satisfaction and loyalty scores soaring, the organisation was delighted. It improved profitability through cost savings and enhanced market positioning, thanks to the new product's superior quality and safety. This allowed the company to maintain a competitive pricing strategy while

ensuring high profit margins. Furthermore, the manufacturing giant later used Shakti's proactive, logical, and structured PFMEA process to identify areas of concern, leading to optimised operations and better alignment with strategic objectives. The resulting enhanced resilience and adaptability

soon helped the organisation tackle market uncertainties more effectively. Unsurprisingly, Shakti and the Infosys BPM team continue to deliver quality and value across other areas of the organisation's operations.

**Names have been altered to preserve the identities of the people involved.*

For more information, contact infosysbpm@infosys.com

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