



# Taking FMEA outside of the factory

## What is FMEA?

FMEA (Failure Mode and Effect Analysis) is a risk analysis tool often associated with manufacturing processes, especially around the launch of new products. There's no reason it can't be used in a wide range of other settings where risk needs to be analysed though, as has been proved in an event with a team of software developers.

## Applying it to a Back Office Function

The team of four work in a global corporation and have developed an online dashboard for managers throughout Europe to gain quick access to data on key performance measures like quality, delivery and cost, either for the business as a whole or on the geographical area they work in. They receive 80 separate pieces of data weekly, and were responsible for compiling it all in a way which would allow access to summary information and visual displays using an intranet site.

The data was used to help inform business decisions made by senior managers. The software developers were aware that any errors by them in the compilation of the data could lead to decisions about cost and people being made based on inaccurate information, so although theirs was a back office function within the business it was critical that they did everything possible to ensure accuracy. They requested help in doing this, and when FMEA was explained to them it was agreed that this was the best way forward.

The first step was to agree the scales for severity, occurrence and detection, defining a range against how bad a problem could be, how often it might happen and how likely it is to be detected. Once these were agreed the team went through receipt and handling of each piece of data one at a time, establishing everything that could go wrong and ranking that occurrence against each scale. With 80 data points this was a detailed process, it took three full days.

FMEAs can be a challenge from a facilitation point of view, because unlike most Continuous Improvement tools where there is variation in the format, with lots of interactivity from the teams and colourful post it notes building up everywhere, FMEA is just a spreadsheet on a screen, and the process is quite repetitive. With good use of breaks and energisers though the team focussed well, not least because it became clear very quickly that focussing on their processes in such a detailed way was generating a large number of opportunities for them to improve, and highlighting gaps they didn't even know they had before.

## Results

After 2½ days of ranking each potential failure mode against the risk analysis scales, a Risk Priority Number (RPN) had been automatically generated for each one. Sorting these into order, it was then immediately clear what the priorities were to ensure their process for compiling the dashboard was water tight. Each of the first 40 issues then had actions, individuals and completion dates assigned to them, so the team had a clear plan for improvement.

The activity was reported to the European management team to demonstrate IT Development's commitment to ensuring that the business had access to accurate, up to date information whenever they needed it. It was also promoted as an example of how transactional teams can benefit from using Continuous Improvement tools in a business where they had mostly been limited to Production and the Supply Chain.

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