Company Overview | SUIR ENGINEERING |suireng.ie

Established in Ireland in 1984, Suir Engineering is an Irish-based European provider of Mechanical & Electrical services to high-profile clients in the data centre, life sciences, manufacturing, commercial, substation, and renewables sectors.

Suir Engineering has offices in Waterford, Dublin, London, Sweden, and Denmark, and across the UK, and directly employs over 1,000 highly skilled staff. Suir Engineering has developed a reputation for delivering cost-effective solutions for its clients whilst ensuring an uncompromised approach to safety, quality, and project delivery. Suir Engineering is a wholly owned subsidiary of EDF Energy Services, a JV between EDF Energy & Dalkia.

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Overview & Background to the Lean Initiative

Since 2015, Suir Engineering has invested in its strategic and company-wide improvement initiative entitled "Suir Way". Since April 2018, Suir Engineering has rolled out new processes for managing the entire organisation based on Lean principles and PDCA. Suir Engineering has invested heavily in its employees by providing a significant amount of both off-site and on-site training, and has developed its own purpose-built training centre at its Dublin location.

Thanks to the company's investment in its people, it is now seeing a transformation within the business. Employees are using their new skills on projects of all sizes to remove the eight wastes; introduce JIT for site deliveries; run Kaizen events; value stream map processes; utilise look-ahead planning based on the Last Planner System (LPS); apply 5S and Kanban systems to site stores; and develop standard work.

These Lean tools and techniques are driven by Suir Engineering's management system that promotes discussion, is data-driven, and ensures the correct and relevant information is channelled through the business, thus empowering everyone from the SMT, project managers, supervisors, and trades, to make informed decisions with all the necessary information.

Suir Engineering looked at solutions as to how it could best make use of all the information and data it had collected, and how this could best be shared across the business. Its solution was the development of a bespoke app for the business that is referred to as the "T2 APP", and this case study examines this initiative.

Figure 1. Training Room Citywest

Lean Initiative Undertaken – Lean Thinking, Tools, Techniques

ISO 90001:2015 highlights the importance of the PDCA cycle. First proposed by Walter A. Shewhart, and further developed by W. Edwards Deming, the PDCA cycle is a widely-used four-step model that can be used to manage and control any continuous improvement process, including the quality management system. A vital aspect of Suir Engineering's vision for the Suir Way is to utilise this cycle of Plan, Do, Check, Act.

Whilst data recording and information gathering has always occurred within Suir Engineering, the successful implementation of the Suir Way across all Suir Engineering's sites has resulted in a considerably greater volume and level of detail of information being gathered than a few short years ago.

Figure 2. PDCA Cycle

In order to make best use of this information and present it in a visual way to the Senior Leadership Team (SLT), it required

substantial resources and time to gather the information from each site and produce and share the information across the business. The significant amount of time taken to complete this work meant that, by the time the documents had been complete and presented to the SLT, the information was almost two weeks old. This had a significant effect on the business's ability to make decisions and the SLT did not have the ability to be proactive with their decision-making. Decisions were, therefore, often reactive given that they were based on information that was several days or weeks old.

A Kaizen event was held to address this issue using Lean principles. At this event, we discussed how we could standardise the recording of information across sites, reduce the workload in order to produce reports, and also make the information easier and more accessible throughout the business.

Whilst there are many software packages that claim to offer solutions to these problems, when we engaged with the solution providers we found that we would need to spend significant time and effort working with developers to make their software work as we needed, or that the software on offer did not have the flexibility to provide what we required to drill down for the business's areas of focus and we would thus be confined to working within its limited parameters.

Therefore, the decision was taken to create our own platform as this would allow us to develop a bespoke solution. While working with the developer on the design of the app, a critical consideration for us related to Lean Waste, namely Muda, Muri, and Mura. Working closely with the developer allowed us to simplify the application, thus making it extremely user-friendly and ensuring that even users with the most basic of computer skills could easily use the system and not feel overburdened (i.e. Muri) by the data collection. With a standard dataset being recorded across the business, it means everyone is working in the same way, thus removing ambiguity and potential imbalance (i.e. Mura). As only information that is needed is being requested by the app, there is no unnecessary data collection, thus eliminating waste overall (i.e. Muda).

A 5S approach was applied to the T2 app. This approach was taken when it came to information requested by the app, and the order in which it would be requested, as we wanted to ensure there would be a natural flow when the T2 questions were being completed and that there would be no unnecessary questions that would be recorded in the app, thus keeping completion time to a minimum. By implementing a 5S approach to the project, we could develop a better and easier product to use, thus resulting in greater buy-in from management and site teams.

Sort
Remove data and information that was not needed and only keep what was needed. By doing this, the app becomes easier, quicker, and more efficient.

Set in Order
Arrange the questions in an easy to follow arrangement where information flows easily one step after the other.

Shine
Keep things clean and tidy. The app interface was kept simple to ensure a barrier-free and user-friendly approach.

Standardise
Establish standards and guidelines to maintain the first three S. Every site would then be recording the same KPI in the same format.

Sustain
Make 5S a habit. The benefits of 5S are only truly to be seen if it is maintained in the long-term. With the app able to generate beneficial real time data, users could see the benefit. Another critical aspect was that the senior management bought-in to getting their information from no other source other than via the T2 app and this was a considerable factor giving sites no choice but to adopt the app.
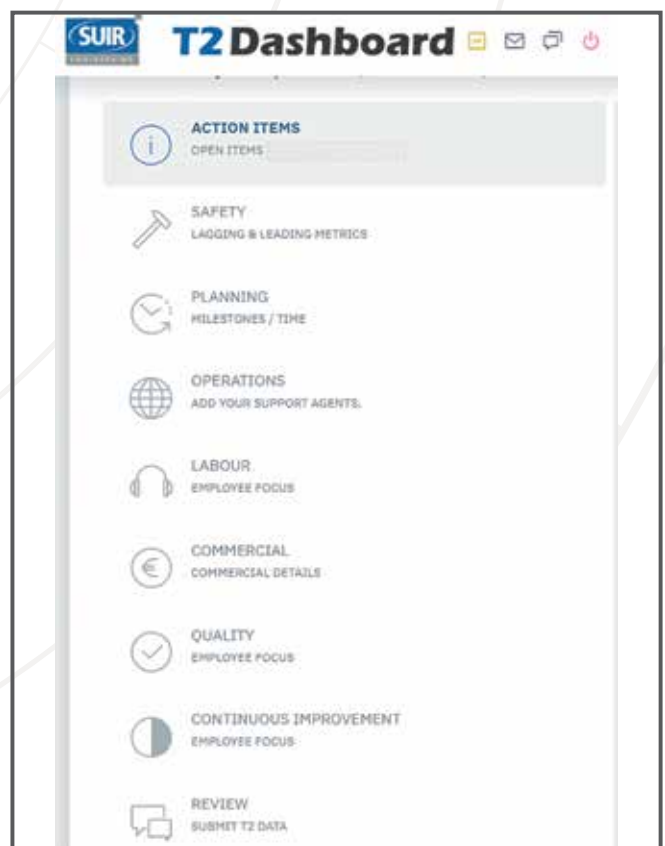

Figure 3. Sections of the T2 app

Figure 4. Data presented simply and without clutter

Lean Initiative Improvements & Impact

The improvements gained from the development and roll out of the T2 app across Suir Engineering's sites have been significant and improvements have been made both on-site and off-site.

At SLT level, information and charts can be called upon instantly, giving the user the ability to have a real time visual representation of how the overall business, individual projects, or even a variation within a job, is performing on a weekly basis. This information is then being used to determine the deployment of resources within the company. It is also becoming a steering device pointing the SLT team in the direction they need to focus their efforts. This enables the SLT to focus time and resources where they will have the greatest impact for the business. By placing an emphasis on those projects requiring the most input, a greater focus is placed on utilising more Lean activities such as Gemba walks, problem solving, and reaffirming the Suir Way on the project in order to ensure that the problems on the project are uncovered and rectified as quickly as possible.
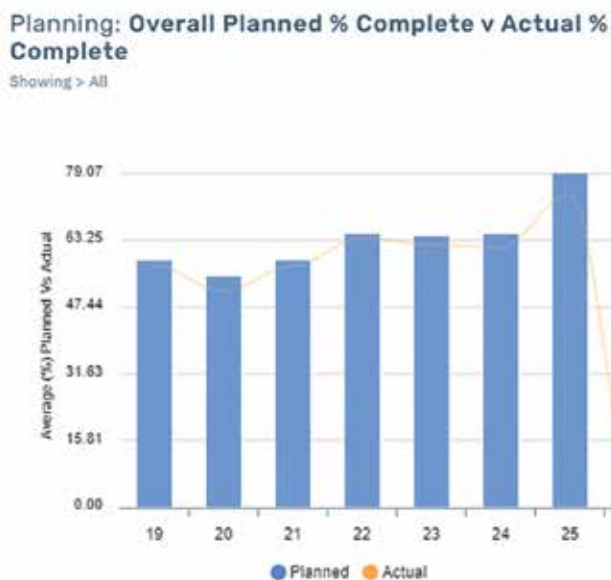

Figure 5. Weekly Progress Report

At the project level, Project Management Teams have the ability to perform a deep dive on the data being generated from their projects and use this information to analyse trends, compare actual progress to predicted progress, and ensure any steps to complete corrective actions that are within their control are taken swiftly. This ensures that negative trends do not begin to develop.

Amongst Suir Engineering's Supervision, the T2 app has been responsible for an increased focus on the importance of planning tasks in advance and ensuring we maximise customer value. This

increased planning has meant that staff have had to make more of an effort to work more collaboratively with each other, therefore improving communication on site. The result is that issues are raised in a timely manner and with more time to discuss and resolve the issues, and items are being resolved before they have a chance to make an impact on the project timelines.

With more people aware of the overall company objectives and goals, Suir Engineering personnel are able to see how their contributions make an impact within the organisation. This high level of employee engagement has resulted in improved morale. Additionally, there have been reductions in over-processing and Takt-time as we begin to see and address problem areas. The importance of a right first time mentality has been generally adopted by staff who are showing positivity towards Lean thinking and practices.

Figure 6. Example of information being tracked on site

Staying true to the PDCA philosophy that made the app come to fruition, the T2 app is continuously being developed and updated to implement more improvements and features that will better serve the business. As the volume of data we capture increases over time, the company will be able to better predict areas of risk when taking on new projects and build up the adequate resources in the required areas. This will allow Suir Engineering to continue to be a trusted and reliable provider of Mechanical & Electrical services to some of the world's most high-profile companies.