

## **GitHub – Source Control for laboratory digital transformation (Proposal)**

### **Outline:**

Thermo Fisher is a large scientific organisation. They run a professional services division which implements laboratory applications for both internal and external customers. The services team which extends to development, engineering and operations does not currently have a software or code repository strategy in place for these customer projects. These factors and the perceived lack of control around our processes from customers are why I have identified this as an area to explore.

### **Discussion:**

The current situation for Thermo Fisher is we have a disparate range of systems with varying levels of complexity. Thermo Fisher has many standards for project and software delivery but does very little in the way of managing configuration or code control. One of the primary applications is a COTS package. We can create a bespoke configuration and extend using `c#` to meet customer requirements. We may often build external applications to facilitate integrations like Powershell scripts, custom API endpoints or configuration for cloud components.

My proposal is focused on the implementation of GitHub within our services organisation. I am currently working on an initiative with peers and other stakeholders to define a strategy and processes in GitHub to capture artefacts. By using Thermo Fisher's corporate environment the organisation can leverage the skills and expertise of internal groups and a well-established and secure platform. I will also be considering the aspects of a parallel stream of work implementing Jira. Jira has many benefits of tracking and managing the SDLC of a customer project with established integration protocols with GitHub. While the research and investigation will primarily focus on GitHub, I will be discussing the benefits of pairing the two solutions. By implementing these two products Thermo Fisher will benefit from standard processes, simplified management and control of projects as well as insights and metrics into requirement/development progress. One of the primary goals and benefits though is to improve our corporate and social responsibilities. The proposed solution gives credibility to our division within the organisation and reassures customers that their code and configuration is been managed securely, efficiently and controlled.

There are some problem areas to overcome which are already been discussed. One of the biggest risks will be the implementation of the changes. Organisations traditionally will struggle with change, so stakeholders need to remain pragmatic and support the organisation implementing these tools. Combined with these risks another factor to take into consideration will be security and access control. Our organisation has internal employees as well as external partners. Both will require the use of MFA and SSO so will require processes and training beyond the application to ensure the tools are accessible and secure. Will also require working with customers on the technical aspects of connectivity to Thermo Fisher's source control and management tools. By actively working on this initiative the assignment

will allow me to be reflective on what is been done and record decisions made, the rationale for the technologies etc.