

CSE 566 - Homework #1 Lean Software Development

Matthew Howard

Part A

The hypothetical situation for this homework is a software development company with a scrum master and a handful of developers as seen in Figure 1. The company has outsourced its QA testing to an external company to gain efficiency. There is a significant amount of overhead involving the transfer of the code to and from the QA company, thus there is opportunity for improvement.

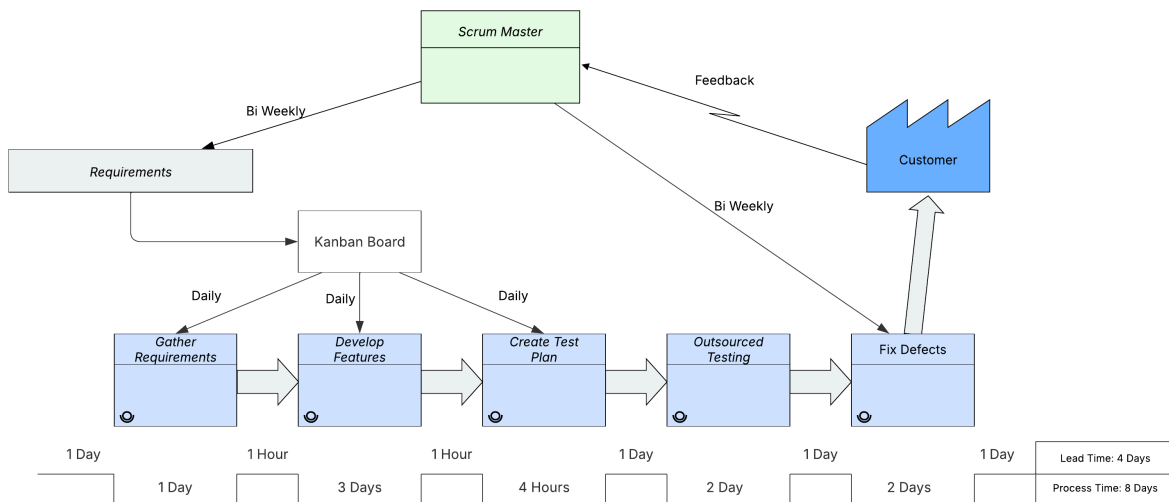


Figure 1: Value Stream Map

Part B

There are three areas that would be considered “Lean Waste” based on Lean Software Development best practice. The three areas are:

- Waiting for QA to start work (Waiting)
- Receiving the QA report (Transportation)
- Redundant and slow regression testing (Over processing)

Each of these wastes have been identified in Figure 2. In order to reduce waiting for QA to start, there could be a pull approach that QA starts its work immediately on completion of a feature in an automated way. To reduce the time to receive the QA report, the report can be delivered digitally and in a format that can trigger notifications etc. Additionally the third waste can be addressed by setting up regression testing to trigger automatically via CI/CD when the QA report is completed. By reducing the physical exchange of information and adding automation efficiency can be found.

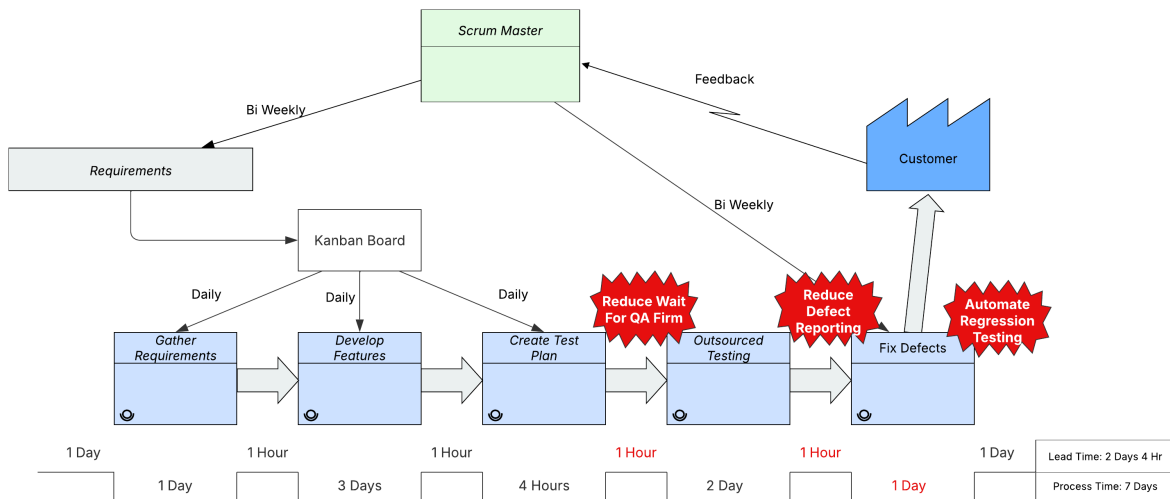


Figure 2: Value Stream Map

Bibliography

- [1] "Lucidchart." [Online]. Available: <https://lucid.app/>
- [2] "Value-stream mapping." [Online]. Available: https://en.wikipedia.org/wiki/Value-stream_mapping