

FOSS Platform Architecture Development

Date: 2018-01-03

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Introduction

FOSS is a global leading player within food analysis. The products offered by FOSS is primarily highly advanced analytical instruments and related services.

FOSS has over the last years seen a record growth in both turnover and profit. At the same time the R&D department has doubled in size the last 3 years and will continue to grow even larger

Covering 7 different food segments from grain to milk over meat the product portfolio has increased dramatically to currently ~50 product offerings.

Hereby the complexity has risen to a level where it is hard for the designers to keep track of different possibilities lying in the solutions already designed and in the solutions that are currently in development. This leads to high component cost, high complexity, high inventory cost and longer development time.

There is therefore a need to start a study within Platform Architecture Development.

In the long run, FOSS wants to achieve a larger product portfolio with fewer components, lower cost and shorter development time by utilizing the benefits of modularization and platform architecture.



The aim of this project

Value for FOSS

Overall value of architecture and platforms is an increased option for product configuration and reduced development time.

By making a well defined delimited project the end result will show a pathway for the organization to reach a product platform.

FOSS will harvest the various benefits, but most importantly:

Prove that a product platform can be implemented.

Output

Framework for what and how to describe and define modules and interfaces.

Targeted at multiple benchtop instruments for measuring on liquids. Map existing modules and interfaces with these instruments for one or more selected modules of interest. It is not a desire to map the complete products involved but instead analyzing relevant shared functions across multiple products (like intake

pipette system, waste handling, cabinet etc). The number of analyzed functions/modules will be part of the final scoping of the project.

The project aim to be a narrow but deep allowing the student(s) to utilize a broad variety of methods and competences.

Define future shared module design for one or more of the analyzed modules.

Design a visual representation of the platform to aid the designers utilize and develop the platform.

Potential secondary output: Vision for how to integrate modularization in FOSS' PLM and CAD systems

A platform project was created and killed 7-10 years ago in FOSS it will be natural to include a screening of this project as a benchmark.

In this project

The student(s) will get desk at the Concept Development department in FOSS during the project period. FOSS will provide access to relevant R&D personal to aid the gaining of the necessary knowledge. There is a great opportunity to gain deep insight in how FOSS works and how products are developed including an unique opportunity to influence directly on the future of FOSS designs.

Practical details

Aimed for Master students. Preferably two students.

ECTS-points for a Master student: 30-35.

Prerequisite course: 41083 Technology platforms and architectures.

Additional information

Project start does not have to follow DTU general time slots for Master Thesis Projects

Contact

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