

## **SUMMARY**

The first part discussed activity based costing, and designed a system for handling items in the specified business case. The system was made ready to be tested internally, to start providing insights on the costs of slightly different products ordered together. Tracing the indirect costs and assigning them to their corresponding products via the mentioned formulae showed which products previously carried the cost of other products. Moreover, activity based costing sets the stage for activity based management.

The second part analysed specific use case that exists in one of the manufacturing sites. After deconstructing the used methods for estimating the production times, new methods were introduced. Analysing the used methods showed their weaknesses, and the new methods focused on getting rid of the weaknesses that caused inaccurate measurements. A common product was used to test the new system and the presented numbers showed its success. The new system could be implemented with caution; for a smooth transition, it is recommended to use both systems and compare the results for the first estimations rather than switching abruptly.

After analysing and introducing more than 30 costing formulae, it was stated that the results are aligned with the costing objectives. The activity based allocation of the indirect costs helps reaching closer cost estimates. The current costing system does not allow product level insights regarding the overheads. The use of simple linear relationships to measure the production times makes the process faster. The current system does not show the logic behind the decisions, and is unfriendly for anyone who is not familiar with it. The transparency, and standardization of handling the direct, and indirect costs is favourable to the product stakeholders, as numbers could be traced back to their drivers.

A possible next step in line with this paper's topic is lot size calculation, and selecting the production routings based on the calculated size. After the design of a cost estimation system, the outputs could be useful for these decisions. Noting that, this will need coordination between several parties, as such decisions are not under the costing scope.