

# Vehicle Thermal Management – A Case Study in Web-Based Engineering Analysis

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Modelica has proven to be a compelling technology for creating sophisticated multi-domain models. It provides modern language features to promote model reuse and maximize developer productivity. These capabilities are backed up by proven simulation performance. More recently, the Functional Mockup Interface standard (FMI) has created an avenue for these models to be exported outside the model development environment as Functional Mockup Units (FMUs).

In this paper, we explore one possible way to utilize models that have been exported as FMUs. Specifically, we discuss how to incorporate these models into a web-based engineering analysis application that is designed to be accessible to non-expert users. Our goal is to show the important role that web and cloud based approaches can have in magnifying the impact of modeling activities across the enterprise.

We consider a specific engineering model and discuss exactly how we have transformed the model to make it accessible as a web-based application. This includes a discussion of the input and output data associated with the model as well as how a web based deployment (backed by cloud based services) can provide unique features compared to more conventional methods of model deployment.