Rapid Manufacturing is defined as “the use of a computer aided design (CAD)-based automated additive manufacturing process to construct parts that are used directly as finished products or components.” (N. Hopkinson, 2006)

Rapid Manufacturing (RM) is a relatively new discipline which offers great potential for designers in every industry. When further developed, this new method of manufacturing, which eliminates tooling and uses additive material processing for fabrication, could have major impact on the way we design, manufacture and sell new products. In several industries, RM is already being developed to contribute to an improvement in technology and for the building industry, it could also be worthwhile to explore the possibilities in the field of façade design. The technical performance within the façade industry could potentially be brought to a higher level by implementing the positive properties that the technique can provide.

A façade has to integrate a lot of functions for it has to deal with thermal, visual, hygienic and acoustic comfort, provide safety and meet the requirements for aesthetics as well. Looking into further depth to the visual comfort of a façade, shading devices play an important role, because they are dealing with the entering of heat and light in the room.

The production method determines the appearance and the properties for the detailing of a façade. When RM is used as a production technique, the design will become different than when contemporary production techniques are used. Geometric freedom, material properties and the fact that the design is independent on production eliminates a lot of boundary conditions for the design process.

There will be intermediate steps between the façade produced with current processes, and the fully rapid manufactured façade. During the introduction of the technique, printing shall first be introduced to produce only parts of the façade in a hybrid or a modular approach, applied in the area where the highest profit can be reached, and gradually be scaled up to building size.