Why does the producer of this dishwasher detergent of the choice of either being green or being clean? Does one requirement have to limit the possibilities of the other? No, the wish for a low environmental impact does not mean that there needs to be a compromise in aesthetics or state-of-the-art technology.

The world today is struggling with several problems concerning the environment to which the building industry is contributing especially by pollution and resource depletion. This research calls for optimizing the way facades are constructed and materialized, in order to limit these problems. For this optimization to be accepted there has to be a convincing reason to replace conservative means. This thesis offers insight in the facade's contribution, obtained by a literature study and an impact assessment that can be seen as the main reason.

The base of a sustainable facade is the honest intention to do so and stick with it. The next step is to adopt a holistic perspective that involves all disciplines in a continuous discussion throughout the design phase and during the use phase when upgrades or maintenance is needed. The design should have an adaptable layout that enables these upgrades serving state-of-the-art technique and user requirements. Moreover the basic construction is best kept general in order to prolong the facade's life span. Finally the facade's environmental impact is minimized by closing material loops and choosing renewable resources.

The high performance of state-of-the-art facades is partly dependent on their materialization. Aluminium, plastics and insulation glass are examples of this materialization that at the same time has a high environmental impact. The facade's components that relatively have the highest environmental impact include the load bearing construction and the transparent area. These materials and components should therefore be designed with extra care in order to achieve an excepted environmental impact without compromising in performance.