

The Design of an Outdoor Lighting product series

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Analyzing and designing a series of outdoor lighting armatures for Techmar B.V.

This assignment was offered by Techmar B.V. in Hengelo, Netherlands. Techmar focuses on the development and selling of outdoor lights. Their main focus lies with low voltage outdoor lighting systems, with its main advantage being its safety and ease of installing. The main lighting brand sold by Techmar is Garden Lights. This is a brand that is sold to different retailers across the world. This assignment focuses on designing a product series that fits into this brand. As Techmar is continuously looking to improve and innovate in their products, they want a product series that adds something innovative to their collection. The series consists of a post light, wall light, and a spot light. These three light types should have visual similarities, but remain different in terms of function. This ... resulted in the following research question:

How can a post light, a spot light, and a wall light be designed in an innovative way to create a product series that can be added to the Garden Lights brand and be produced and sold by Techmar?

This question is answered by first researching into the products that Techmar currently sells as Garden Lights. An analysis is done into the market for outdoor lighting, researching trends, and market segments in which the brand operates. Furthermore, stakeholders of the products are considered, as well as the style that the product series should fit into. From this, a list of requirements is set up. Next, ideas are generated with aid from these requirements. These ideas are then developed into different concepts that can be tested against the requirements. One of these concepts is chosen and developed into a detailed design, considering manufacturing, material, assembly, and usability.

The result of this assignment is a detailed design, including details on configuration, manufacturing, materials, and use. The result is visualised with use of a CAD model as well as a 3D prototype. The final product is an innovative addition to the Garden Lights collection. It is, however, not yet certain how well the product will sell. Due to time constraints, there has not yet been any testing of the product to find out whether it functions accordingly to its intended purpose, and whether the design is what consumers are looking for.

The research question has been answered in the sense that a potential product has been designed that is innovative, yet still fits within the Garden Lights collection. A product series is designed consisting of a wall, post, and a spotlight. These three types are visually similar. In order to further develop the design, further detailing should be done. Certain aspects of the products will need to be tested and potential buyers should be informed to see whether they are interested in the product. If there appears to be enough demand for the products, then Techmar could decide to introduce the products onto the market.