

SCOOTING ELECTRICALLY

Every year GRO Design, a Dutch industrial design company, invests in a number of self-funded projects. These projects have two main aims. In the short-term they stimulate the design team to investigate and think about new product areas and refresh the way they think. In the long-term, the results can stimulate a wider scope of potential clients to consider working with the company. These projects illustrate the team's creativity, quality and experience. In the early spring of 2005, GRO Design initiated a project to explore the area of electrical scooters for urban commuting.

The premise

Personal car use has impacted on the quality of urban life. Air and noise pollution, traffic congestion all degrade our city environments. To counter the ever-increasing volume of traffic, city authorities have started introducing car tolls in cities like London and Singapore, reducing inner city parking spaces and raising parking costs in cities like Amsterdam. Although many city authorities are investing in extensive public transportation projects, public transportation is in the main crowded, inflexible to personal schedules and offers poor links across a city. Governments and oil companies are also increasing fuel prices. This overall situation is stimulating interest in other forms of transportation.

In the view of GRO Design, there is a great potential for alternatives for short-distance urban commuting other than by bike or petrol-driven vehicles. Its aim was to design an electric scooter that is simple to use and maintain, which appeals to a sophisticated,

style-conscious buyer, and which is, most importantly, affordable.

At GRO Design, the design process comprises a number of key stages: observing and testing products on the market; thinking about the product's potential and imagining scenarios that would enhance the product's use and engage potential users; creating a project framework in which designers can exchange thoughts and concept ideas; developing and selecting the design identity through a series of conceptual design workshops; refining the design identity through a range of models and CAD studies; and realising the final design identity. This process is a balance between analysis and imagination.

A series of design workshops was held. After the second workshop the team identified six design directions with potential. Through discussion, these ideas were reduced to the design concept that was eventually developed. At GRO Design, the design process is never straightforward; the team's strength is to constantly question and debate the merits of the work that is currently in progress in the studio. This leads to further refinement throughout the sketch design phase, early models and ergonomic testing – through to the CAD development stage.

The design's distinct character was identified in a series of sketches that encased the back wheel and tapers to the neck of the seat. These sketches created pure, triangular forms. From this identity, the design exploration continued right through to the user interface concept. Product lines are accentuated by strong graphic split lines. The middle U-shaped core creates an area of visual strength for the product. Each part, or split line, is considered and assessed within the context of the overall look and feel of the global design identity. This is what creates a distinct GRO product. Scoot is not only a design identity. By

researching the current electrical scooter market and testing, the most appropriate archetype was identified. Further research identified core technologies that form the foundation to the final design. All parts were considered for weight and reduced to the minimum. The design team envisages the back and front casings to be realised from either carbon fibre or rigid plastic mouldings. These shroud the supporting alloy frame, the motor, suspension and batteries. Scoot incorporates removable lightweight lithium ion batteries that recharge within six hours. This clean energy source powers the electric motor, which is limited to a maximum speed of 30 kilometres per hour.

Scoot's range is from 40 to 50 kilometres between charging. This range is very dependent on the environment in which it is used and the weight of the user. The product is extremely cheap to run, quiet, and is classified as a bike in some countries, requiring no helmet. Crucially, the scooter can be parked anywhere.

Scoot was first exhibited at the Milan furniture fair in April 2006. The design, modelmaking and photography were the result of a collaboration between three companies: GRO Design, Tim model-makers and Korf & van Mierlo photographers. Each company provided their expertise to showcase their world-class skills. Funding for the exhibition was partially provided by Design Connection, responsible for promoting and stimulating innovation in design and technology in The Netherlands.

It is clear from the positive feedback and enquiries that Scoot is not only a great design, but a fantastic business opportunity. 📍

For more information on the electroscoot, visit www.grodesign.com or www.electroscoot.com

