the DESIGN MUSEUM

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the design brief

Jeremy Leggett is the chief executive of Solarcentury. He founded a solar charity called SolarAid to bring affordable lighting to remote rural areas in Africa.

SolarAid contacted Solar manufacturer Yingli Namene to set the brief to make an affordable light. Yingli Namene contacted several designers with the idea.

Solar Aid

designers

FUTURE PRODUCT

Future Product is a small design consultancy that works with a range of different types of design to create solutions to big problems. The company was founded by Henry James and Bryn Morgan in 2012 as InventID but has since changed name and focus to meet design's ever changing role in the world. Henry and Bryn were successful in their designs and Yingli Namene worked closely with them on the designs.

starting with the problem

598 million people in Africa do not have access to electricity. Many use kerosene lamps to light their evening tasks. The lamps are made from any available resource such as old food tins.

Creates over 1 tonne of CO2 per lamp every year

Emits toxic black smoke

Costs up to 15% of a family's income in fuel each year

House fires accidently started by kerosene lamps can kill entire families

"When I first started SolarAid 11 years ago the lights we sold in Africa were $25 each. Over the last decade prices have come down and now SolarAid sells what we believe is the world's most affordable solar light on the market. The SM100 is available to people in many rural communities for just $5 and we really hope this step change in pricing will help us get on the road to eradicating the kerosene lamp for good."

– Jeremy Leggett – Founder, SolarAid.

"Whilst I studying Product Design at University of Leeds in 2009 I learned about the need for low cost solar in developing countries. At the time the component parts were too expensive to make an affordable light, but a few years later a friend of mine told me about their contact who had plans to work with affordable solar lighting. By this time the components had got cheaper and so we decided to team up to create the SM100."

– Henry James – Creative Director and Co-founder, Future Product

SunnyMoney
SM100 SOLAR LIGHT

users

The SM100, along with other lights sold by SunnyMoney sellers have benefitted over 10 million people in countries including Malawi and Zambia.

The light had to be robust enough to survive rural conditions in Africa so

Henry, Bryn and team dropped their prototypes from the fifth floor to see if they would survive.
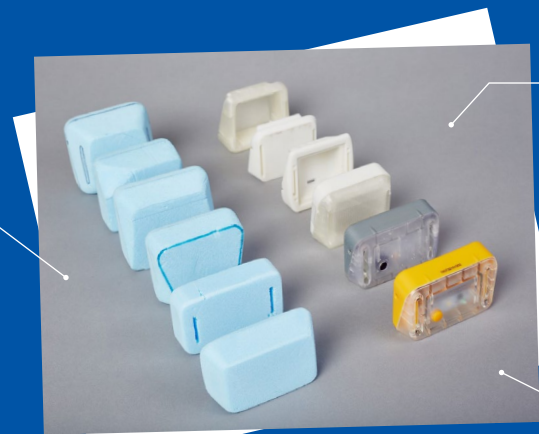
They tried to do some tasks that may be carried out by the end user. They changed a bike tyre and cooked a meal using only the light from their SM100 prototype.

Henry, Bryn and their team made many prototypes using foam and 3D prints to get the right shape.

sellers

sunny money™

SunnyMoney is a social enterprise company set up by SolarAid. The company employs local people in countries in Africa to become sellers of solar lighting. This creates a market and expertise around solar lights in the local community. SolarAid links the sellers to Yingli Namene and even helps them with loans to cover their orders.

Ellis Bwanali is a sales agent for SunnyMoney, selling SM100s in Malawi. She sells them to a small village in the Salima District.

Ellis used the income from her entrepreneurial efforts selling solar lights to buy a plot of land and she now has her own agricultural business. She has used the income from solar light sales to invest in a wooden cart to make transporting her produce easier. She has ambitions of setting up Malawi's first SunnyMoney solar light shop.

manufacturers

NAMENE SOLAR LIGHT COMPANY

The Namene Solar Light Company, a wholly owned subsidiary of Yingli Namene Solar, owns the design rights to, and produces the SM100 Solar Light – a clean, affordable and sustainable source of light that substitutes dangerous and polluting kerosene lamps. Their mission is to deliver sustainable power and lighting solutions to improve the lives of human beings with pollution free electricity, generated by the sun at affordable prices with no compromise on performance, quality and durability.

"Back in 2012 a representative from Yingli Europe attended an event initiated by SolarAid. We were shocked by the problem of kerosene lamps but inspired by the solution of solar lights. Through SolarAid's extensive research, together we identified a key problem: The most affordable solar lights on the market were still too expensive for millions [of the poorest people]. Our joint goal was clear: To create the world's most affordable quality entry-level solar light. And this was the beginning of our partnership with SolarAid and Future Product."

– Carolin Stähler – Solar Light Project Director, Namene Solar Light Company

With thanks to SolarAid, Future Product and Yingli Namene for providing copy for this poster.