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Reducing Costs for UBI

Developing a specialised bar code printer for high volume manufacture

a **science group** company

Despite impressive in-house technical expertise, limited experience of volume manufacturing had hampered UBI's attempts to develop a low-cost, mass-produced, thermal transfer bar code label printer. UBI needed new insights and asked us to help their development team redefine its current product strategies and designs, and make the move from low to high volume manufacture.

Product cost reduction ¬

We began by launching a product cost reduction programme to identify the best way forward. Our approach to product cost reduction – Product Challenge – adopts a holistic approach to reducing product costs. It looks beyond the individual components to the technical and economic contexts in which the product operates, in order to identify a strategy which will best satisfy financial, manufacturing and marketing demands.

Through Product Challenge we identified a number of design strategies that could achieve significant cost savings, and which could deliver the desired levels of technical and mechanical performance – an achievement we proved through accurate simulations. For example, the metal chassis was replaced with plastic injection-moulding, a fundamental change that allowed the integration of mechanical fixings at no extra cost, greatly simplifying product assembly. And by placing all the electronics on a single printed circuit board, interconnect and assembly costs were reduced even further.

Integrated product development ¬

Following the Product Challenge analysis, UBI approved full product development and manufacture. Working in partnership with UBI, we undertook every aspect of the development phase including industrial, mechanical and software design, tooling, and electronic engineering. We also found a suitable sub-contractor capable of handling high-quality volume manufacture.

We had to work to a demanding schedule, designed to get the product to market in the shortest possible time. To ensure this happened, material and manufacturing costs were constantly reviewed so the printer would meet specification, budget and delivery targets. As a result, the new printer was in mass production only 13 months after the redesign programme was launched, having successfully passed design validation tests, approval testing and production process validation. We also provided UBI with full design and production documentation, and we continue to provide ongoing support in manufacturing and product enhancement.

Structured, strategic re-evaluation ¬

Our Product Challenge solution delivered a structured, strategic re-evaluation of an already successful product, without sacrificing technical performance or quality. Our in-house expertise and product development facilities, allowed us to create a team of consultants with both technical and business knowledge, capable of handling the entire design and manufacturing process in order to meet a demanding delivery schedule.

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