

Adding new capability to in-house NPD teams

Case Study: Security Monitoring System (2009)



Introduction

Topshine Technology Ltd. is a young high-tech corporation hived-off from the mighty Harbour Networks in 2007, and specialising in the research, development, production and sale of wireless safety and security networking products. Backed by a leading investment firm, they've used their 120 skilled R&D staff and 10,000m² production base to rapidly build a solid product range and brand that now dominates the Asian market. But to keep their ideas fresh and innovative, and to consolidate their market position, Topshine's management boldly decided to bring in an external design consultancy to augment their in-house product development team on future projects.

Brief

Naturally we were keen to be involved with such a dynamic business, so being invited to pitch was a great honour. We previewed our work in similar sectors, talked about our services and process, and explained the breadth of skills our people could bring to their projects. We also discussed the benefits of a more wide-ranging collaboration - one where we could provide ongoing creative and technical support, take part in their internal project group meetings, discuss ideas whenever they needed our input, configure an exclusive design team to work on their projects, watch trends or competitors in their market space, and oversee their local supply chain. They saw significant advantages in our offer, and finally appointed us as their long-term product development partner.

Activity

Our input so far has been very broad, but here's an account of 2 specific areas that have made a big difference to our customer's prospects:

Building a brand identity across their range

As we know, product quality and performance is the key to long-term corporate development, and can define the image of a company. Topshine started out with just some R&D expertise and patents in the wireless security field, but their technological level could hardly be distinguished from competitors. In fact the entire market had actually reached a stagnation point where all players were competing with similar products and technologies. Using R&D to innovate out of this situation was too slow, so we advised Topshine that branding might help them gain market share more quickly.

All designed products have distinctive brand characteristics conveyed through any number of features - styling, colour, logos and so on. In our opinion Topshine needed a simple branding solution for consistent application across their wide range, but also a bold one for maximum customer recognition. Our designers looked closely at the built environments where these safety and security devices would be installed, noting everything from colours, materials, shapes and even other equipment nearby. We distilled this mass of data into a few visual cues: angular geometric forms, defined edges, muted colours, demarcation or safety barriers etc. We presented many concepts to our customer using these themes in different formats, but they liked our suggestion of a striking red line over a chamfered black/grey body. From that point on, all Topshine products were designed around this effective brand identity.

Finding a new innovation point from our market segmentation ideas

Throughout our deep collaboration with Topshine, it became clear that the wireless functionality of their products best suited safety and security applications that were noisy or isolated. Sales figures proved that end users with these needs were rejecting wired systems, favouring wire-free as it was simply more practical to install. We proposed extending this technology to more fields as a horizontal extension, and following considerable market research and brainstorming on both sides, we identified a number of new possible markets to explore. The most interesting new application was forest fire prevention – a market that Topshine has now entered and already enjoying some promising results. Here's an extract from their press release on this subject:

“In August 2009 we installed our new wireless video monitoring system in the heavily forested area of QuZhou in ZheJiang Province. Fifty monitoring sites were used including the forestry zones of JiangShan, JiuHua countryside, QingShi town and Lotus town. Even though video had to be wirelessly transmitted over 25Km distance at some points, data flow and quality was good enough to give a simultaneously controllable monitoring image at all times. QuZhou city has now permanently adopted this system as one of its methods to remotely monitor and prevent forest fires. By using a flexible wireless network, our video monitoring solution successfully overcame the inherent problems of laying communication and power cables over complex terrains in forestry zones. Our wireless system also has higher bandwidth and anti-jamming capability, making it superior to traditional analogue microwave relay solutions that suffer with weak data security and limited control of multiple video inputs.”

Results

To date we've successfully completed over 20 design projects for our customer, with many new wireless security products entering the market and some not. Those not yet commercialised still contain valuable IP for the company, some of which are purposefully being held back for release at a later date once the market is ready. Once these latent designs are finally transferred to production, our role continues along a different path. For contract customers like Topshine, we get deeply involved in taking our designs from concept right through to manufacture - by helping them commission new tooling, control cost and quality, plus also designing their user guides and packaging. Trusting us as a design authority across their whole business has freed our customer to focus on their core expertise of R&D, manufacture and sales.

Our collaboration so far has resulted in some very satisfying results for Topshine. Sales have grown 120% annually, plus their brand value has further strengthened on the success of these new products. Initially their production facility was unable to keep pace with demand, but extra capacity was soon added to resolve this. Most importantly, the new industrial applications developed by our design work have substantially reduced their competitive pressures.

Here's what our customer had to say about working with PER Design:

“My reflection on the cooperation with PER Design can be concluded into three points:

- 1) The power of brand appeal is great.**
- 2) Once the innovation is proven, the amount of profits and market share gained were beyond our wildest imagination.**
- 3) Industrial design is much more than just making products more attractive. More importantly it can help corporations find potential new markets, users and profit margins.**

I think we will continue to make use of brand strategy and industrial design to make greater accomplishments. I would like to say thank you to PER Design's general manager Tony Zhong, and we appreciate the efforts of his design work for Topshine Tech.”

**Mr. Peng Song
CEO of Topshine Technology Ltd.**

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