Case Study





The business

Started in 2005, Totnes Kayaks is a small business based at Baltic Wharf in the town of Totnes, Devon and located directly on the River Dart. Mainly a retailer of kayaks, canoes, paddles, clothing and accessories they also provide a wide range of training courses for beginners and advanced paddlers, and offer rentals.

The owner recognised that his business model was based on the sale of high value, bulky, plastic products that are mostly imported, and was therefore potentially vulnerable to oil price impacts. Transportation costs, and also the petroleum-based raw materials used to make the boats were felt to be a particular risk.

The owner worked with Transition Training and Consulting to define and then conduct an **Energy Resilience Assessment (ERA)** for the business.

The questions

Because boat sales are 56% of all revenue, and in turn drive all other retail revenue streams (e.g. paddles and buoyancy aids) this project focused on the fossil-fuel and oil-related resources used to manufacture and transport one of the best-selling kayaks imported from the USA.

Manufacturers and distributors in the supply chain were happy to provide relevant financial information, as they too were interested in the project outcomes and what it would tell them about their own vulnerabilities.

The main question that framed the data collection and analysis was "How will rising oil prices affect the wholesale prices and my profit margins, and what might I be able to do about it?"

"I now look at my business in a whole new light and am more aware of the significant impact that energy and oil prices will have on me, my customers and my suppliers. One of the best things about this work though, is seeing all the new opportunities coming my way, and knowing I am ahead of the game..."

Tom Morris, Owner

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The findings

The kayak that was the focus for the study retails at around £650. Of the wholesale price, and looking across the entire multi-stage international supply chain, it was found that about a third of total cost is directly related to the oil price.

This breaks down as about 16% of total cost for transport fuel, with another 14% reflecting the price of various plastics used in the moulded hull and other fittings. Only around 2% related to the embedded energy for manufacture and facilities.

Thus the ERA approach allowed the business to explore how increases in transport, energy and plastic prices would impact the profitability of this highly representative product.

This, in turn, identified the point at which the retail price would become prohibitive (especially given the wider economic impacts of high energy prices on customers' pockets), and where profit margins would be most at risk across the business.

An interesting additional finding was that for a typical kayak, regional freight distribution costs were on a par with international shipping costs due mainly to the bulk nature of ocean shipping.



The outcomes

The significant vulnerability of the business to rising oil prices (with implications for raw material costs, product pricing and profit margins) was clearly identified and quantified.

The most direct and immediate result of the study, is that the business is now developing more diverse income streams by, for example, expanding its rental fleet and training course offerings. It is also building a reputation for sourcing quality second hand boats and kit.

At the same time, the financial information gathered by the ERA is helping to model and plan a strategic response. Sourcing decisions, alternative materials research and different ownership models (for when boat purchase costs become prohibitive for many customers) are all being explored further.

More local and regional manufacturing possibilities are being explored, as are partnerships with other outdoor activity specialists, and even former competitors. These options will help to broaden the company's offer and appeal, while reducing its vulnerability to oil price and supply volatility.

Note: this work was delivered jointly with the University of Liverpool's Oil Depletion Impact Group's oil vulnerability audit pilot.

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