

Case Studies **Industrials**

Toyota's gamble on the Prius

Innovation requires a long-term focus



Gerard Tellis MARCH 4 2013

The story

In 1993 the US administration of President Bill Clinton announced an initiative to encourage the development of vehicles with much greater fuel efficiency. The Partnership for the Next Generation of Vehicles invited American automotive companies to participate.

[Toyota](#), the Japanese carmaker, sensing a big push for fuel efficiency and conscious of exclusion from the US government-backed project, launched its own initiative to develop a fuel-efficient car.

The first challenge

In the US, an important market for Toyota, the Japanese carmaker was known for low-price, copycat cars. It was seen as neither stylish nor innovative. [General Motors](#), the global industry leader, was already investing heavily in fuel-efficient research, especially in electrics. The issue for all carmakers was that such technologies were expensive to develop and electric cars' reputation for low power made them unpopular with American consumers.

The engineering strategy

Akihiro Wada, a Toyota vice-president, was asked to lead a secret team to develop a fuel-efficient car.

He felt the new car should distinguish Toyota as innovative in the eyes of consumers. In addition, he set the team a goal of 100 per cent improvement in fuel efficiency so rivals would not be able to catch up, and created a sense of urgency by setting a short deadline for having a prototype ready for the 1995 Toyota Motor Show.

The innovative breakthrough would come from focusing on hybrid technology, which would generate and store electricity when the gas engine runs at high efficiency but switch to using the stored electricity for power when the gas engine operates at low efficiency. A team of about 1,000 engineers worked long hours to overcome some big engineering design hurdles, such as getting the rest of a car's systems to mesh with the core hybrid technology.

Mr Wada's team also had to deal with doubts from the rest of the organisation, which questioned whether a hybrid technology was feasible and whether consumers would buy the product. But the team pressed on. An estimated \$1bn-plus was spent on research and development.

The marketing strategy

In late 1997 Toyota unveiled the Prius, initially in Japan. But consumers did not like the new car's unfamiliar engineering – in one test, a driver reportedly feared electrocution because it was raining. In the US, reviewers said the simple interior and small size made it look like a cheap “Japan car”.

In the late 1990s, low oil prices meant the imperative for fuel efficiency vanished in the US. In addition, fellow Japanese carmaker [Honda](#)'s hybrid car, the Insight, was available in the US before the Prius. The combination of low demand and direct competition led Toyota to sell the car at just under \$20,000, representing an initial loss of \$20,000 per car. In 2002 GM withdrew its electric car, the EV1.

What happened

Prius sales slowly picked up, helped by rising interest in green issues. Toyota also steadily reduced the costs. The distinct design became a fashion statement and celebrities such as Leonardo DiCaprio bought the car.

By 2010, Toyota had sold more than 2m Prius cars worldwide, half in North America. It won trophies and developed a cult-like image.

Although the company began to make a profit only on the third-generation Prius, more than 10 years after launch, the car had already recrafted Toyota's image as an innovator.

The lesson

Ultimately, the Prius was judged a success. It also brought Toyota a name for innovation.

But innovation may require a long-term focus. Toyota's 1993 vision was realised profitably only 17 years later.

It may also require huge risks: developing the Prius absorbed \$1bn-plus and the time of a team of engineers even though the pay-off was uncertain.

Lastly, innovation often needs huge persistence in the face of technological hurdles, internal scepticism and resistance from consumers.

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