

VAUXHALL MOTORCARS

Organisation	Vauxhall Motors Ltd
Trigger	<ul style="list-style-type: none"> • Customer pressure and Government commissioned research.
Objectives	<ul style="list-style-type: none"> • To improve the security of its cars.
Tools/techniques	<ul style="list-style-type: none"> • Working with manufacturers.
Enablers	<ul style="list-style-type: none"> • Astra classified as worst performing car for security in the 1980s.
Tensions	<ul style="list-style-type: none"> • Cost of retroactively fitting security devices. • The country of manufacture did not recognise the problems associated with crime.
Impact	<ul style="list-style-type: none"> • Improved security, reputation and sales. • Vauxhall's cars are now classified as 'low risk' in terms of crime.
Lessons	<ul style="list-style-type: none"> • Security can be marketed. • By making consumers aware, security becomes a commercial issue. • Companies will respond positively to bad publicity.

Synopsis

This case illustrates the way in which Vauxhall Motors has responded to pressure from customers and Government to improve car security. First addressing the issue of theft from the vehicle, the company introduced measures such as removable stereo systems. With the improved reputation of the Vauxhall Astra, theft of the vehicle became more of an issue and deadlock immobilisers were fitted. As concern about car crime continued and the public became more informed about the relative performance of different makes, the opportunity to market security features was seized. This has been possible because Vauxhall has successfully tackled issues of car crime against its own models, thus contributing to an overall decrease in crime within the automotive sector. Moreover, through the Foresight programme, Vauxhall Motors is urging others in the field, such as the electronics industry, to also consider issues of crime linked with vehicles. The desire is to prevent the next crime wave – predicted to be theft of laptops, mobile phones, GPS systems etc. from cars. Vauxhall Motors has learnt the hard way the value of dialogue and the benefits of addressing such challenges at the design stage.

Background to Vauxhall Motors

Vauxhall Motors began increasing security on its cars in 1984, when approached by Philips to include a PIN code for the car radio. At that point in time, admits Stuart Harris, Product Affairs Manager, little thought had been given to security and so the company was somewhat perplexed by the request:

“What do we do with a PIN code, we said. That was the attitude. Security was way down on the list of priorities, below criteria such as comfort. The main practical concerns focused on perhaps servicing and insurance” (Stuart Harris).

Such attitudes were encouraged by the fact that, although beginning to be a problem in the UK, car crime was not an issue in Japan or Germany, where many cars and their components were manufactured and/or designed.

In 1987, Vauxhall Motors were asked to fit a central locking system to their new cars. Although this system actually deadlocked the car and thus prevented theft, Vauxhall Motors saw the system more as a convenience for the motorist, rather than a security measure.

It was through suppliers that the company became aware of crime being an issue for its customers, although it was Government who exerted the real pressure by commissioning research into rising levels of car crime. The fact that car vehicle theft has to be reported to the police for insurance purposes means it is one of the few crimes where reported crime accurately reflects actual crime and where figures can be gained for specific makes of car. Concerned about rising levels of crime, the Government commissioned research into car crime, which resulted in cars being ranked according to their vulnerability to crime, thus benchmarking them against their competitors. Gloria Laycock, Professor of Crime Science at the Jill Dando Institute, University College London, points out that the manufacturers ‘*hated the system*’, but were forced to address what had been made into a commercial issue (Laycock, 2001). As the Astra was ‘top of the list’ for car crime, Vauxhall Motors were forced to respond with a costly process of retroactively fitting security features. According to Harris, this was a ‘*nightmare*’, which could have been prevented by early dialogue with customers, Government and suppliers.

Stirred up by media coverage, customers began to take seriously issues of security when purchasing a car. Thus, Vauxhall Motors felt a need to look more closely at how to improve the security of its cars. This case study, which is based on a presentation for the Foresight Panel by Stuart Harris (2001), Product Affairs Manager, Vauxhall Motors, charts the measures taken to improve car security from the late 1980s until present day.

The Foresight Panel is a group of people from business, academia, law enforcement, Government and the voluntary sector who are committed to predicting and potentially preventing future crimes – focusing mainly on electronic products and services (Foresight Crime Prevention Panel, 2001). In light of the company’s experience in tackling and reducing vehicle crime, Vauxhall Motors has a key role to play in convincing industry of the benefits of design-led solutions to crime prevention.

Design Process

Theft from the Vehicle

Unlike the 'premium' cars, the Vauxhall Astra was not an object of vehicle theft itself in the late 1980s, but of theft from the vehicle as features such as radios and music systems etc., added to increase the model's attractiveness to customers, also made it attractive to thieves. In collaboration with the manufacturers, Vauxhall Motors introduced removable radios, where the radio and the display were separated, with the result that levels of crime 'plummeted'.

Theft of the Vehicle

In 1994, theft of the vehicle increased as the reputation of the Vauxhall Astra improved. Vauxhall Motors developed an engine deadlock immobiliser, which was extremely costly. Deadlocking disables the normal lock functions and prevents a thief opening the car from the inside by breaking the window and operating the release handle or button. The immobiliser prevents the vehicle from being driven away, either by locking the steering wheel, gear lever or pedals in position (mechanical) or disabling the vehicle's electrical system (electronic). Later, it also introduced visible VIN (vehicle Identity Number) and freewheeling door locks. Even though security measures were not supported by manufacturers in Korea or Japan, where car crime level was practically non-existent, the UK-based company persevered, recognising that such measures were necessary to maintain its position in the market.

Marketing Security

By 1999, the company was starting to market the benefits of features such as engine immobilisers to its customers and introduce new features designed to improve convenience. It introduced, for example, a system where the car would alert the driver should the keys be left in the car on leaving the vehicle. Rather than assuming that security does not sell cars, Vauxhall Motors was beginning to realise that security could be 'marketed' and that security features could be used to ensure good ratings in consumer magazines such as 'Which', as Harris explains:

"Which Magazine rank cars according to security. We have learned to market this feature. It gives you an advantage" (Product Affairs Manager).

Advanced Technologies

The current model of the Vauxhall Astra has a whole range of features designed to protect it from being stolen, as this, rather than theft from the car, continues to be a problem. The 'top 12' for Security are:

- Engine deadlock immobiliser with advanced transponder chip control.
- Steering wheel/column 'anti-break' control.
- Smart user-friendly integrated keyless entry control.
- Ultrasonic alarm system with integrated glass break feature and back-up power sounder.
- Removable radio display panel.

- Separate multi-functional display for in car entertainment.

- Electronic interlock control on automatic transmission models.
- Visible VIN/bar code
- Freewheeling anti-tamper door locks.
- Central door deadlocking.
- Visual and covert parts marking.
- Aftersales security control data.



Figure 1: Vauxhall Astra

In addition, new methods of preventing crime are continually being developed. Security measures on the market currently include alarms, bonnet locks to prevent thieves from attacking the engine compartment, glass breaker detectors, perimeter protection and various systems for alerting the owner to an attempted theft (e.g. paging).

The company predicts that theft from the vehicle might increase again, however, as electronics are increasingly fitting into cars or drivers use the vehicle to store valuable electronic aids such as laptops and mobile phones. While the onus is perhaps on the automotive industry to respond to such problems, Harris believes that the electronics industry too should act to improve the security of such valuable items. Encouragement to address crime through collaborative working might come from the car insurance industry, which currently carries the cost of equipment stolen from inside the vehicle. As Harris points out regarding crime, "it's an issue of desirability, *if it's not nailed down, then people will steal it*".

Impact

The 1999 Car theft index produced by the Home Offices shows that Vauxhall models have moved from being 'high risk' in the 1980s to being 'medium' risk in the early 1990s, with many models in the late 1990s classified as 'low risk'. In addition, although theft of motorbikes remains a problem, overall levels of car crime have decreased. Indeed, Roberts (1997) reports a definite steady reduction in vehicle crime of approximately 6% per annum since the British Industry's Criteria for Vehicle Security was introduced in 1993.

Lessons Learned

This case demonstrates the value of information in helping consumers consider issues of security in their purchasing decisions and the role of Government in raising awareness and improving product knowledge (Roberts, 1997). In effect, a 'perfect market' has been created for vehicle security, where consumers are aware of the design features associated with a model and have access to data on the model's performance relative to competitors.

From a design perspective, the case study shows that companies who respond positively to challenges can improve the security of their cars and use this as a marketing strategy. Although expensive to retrospectively fit security measures, such efforts help a company re-establish itself following potentially damaging publicity. In addition, collaboration with electronics manufacturers potentially presents the automotive industry with new opportunities to improve the security of valuable products fitted into their cars or simply stored in their by the car owner. This might also enable the electronics industry to introduce security measures at the design stage, which is likely to prove cheaper.

References, Related Case Studies and Further Reading

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Classification Index

Eklom's crime classification	Misappropriation (theft).
BCS crime classification	Theft
DAC	Protecting vehicles and products
Primary motivation	Improve image.
Type of designer	Engineer
Approach	Adoption of latest security measures
Sector	Automobiles
Location	Vehicles
Author	Caroline Davey

DAC – Vauxhall Motors