

The Volvo S 80 combines innovative design, leading safety in world terms and a high technology level

In 1993, when the planned merger with Renault was called off, Volvo made a strategically important decision - to accelerate, increase speed, and focus on core business, to enhance both profitability and the brand name.

The focus on core business was announced in the spring of 1994. At the same time, the target of selling more than 500,000 cars a year following the millennium shift was also set.

One prerequisite when it came to this decision was an effective industrial structure to obtain economies of scale, which called for development and production based on a platform concept and front-wheel drive. This strategy will result in important benefits in the form of shorter lead times, more rational production and the opportunity to offer a more extensive product range.

Nor was it any coincidence that Volvo's commitment to growth began with a saloon, as these cars totally dominate the market.

The Volvo S80 - a typical and, at the same time, totally new Volvo

In all probability, the Volvo S80 is the most exciting saloon on the car market at the present time. No other car combines innovative design, leading safety in world terms and a high technology level to the same degree.

The Volvo S80 is a car which is already heralding the start of a new millennium. It is very definitely a typical Volvo, especially when it comes to safety, quality, reliability and environmental concern. However, it is also just as much a new Volvo, when it comes to its emotional values, such as its interior and exterior design.

"It would have been relatively easy to copy the majority of our main rivals. However, that would have meant that we would never have been better than second and that is not the way to achieve success as a speciality car manufacturer. We had to offer something different, something typically Volvo, something that would help us to stand out from the crowd and enable us to enhance our brand name," says project director Hans Wikman. "And we are doing exactly that with the Volvo S80."

The principal role of the Volvo S80 should be to act as a fantastic conquest car, which will attract large numbers of new customers in the family and post-family stages who like the saloon concept in general and the design of the Volvo S80 in particular. Most of these customers will have a more progressive lifestyle than is normally found among traditional Volvo saloon owners.



The Volvo 850 - the springboard for Volvo's future strategy

People's need for efficient, safe transport in all road conditions was the actual starting point when the Volvo 850 was developed. The challenge facing Volvo was to couple large interior dimensions, a solid safety structure, a compact exterior and effective energy absorption with a driveline which would combine comfort, performance and energy efficiency.

The Volvo 850 thus became the actual springboard for Volvo's future. The first car that added the spice of driving pleasure to the established safety concept, the car which laid the foundations for Volvo's exciting future.

The foundations of the future engine programme

The Volvo 850 also laid the foundations for the current engine programme - a transverse, in-line engine made of aluminium, the most effective solution in terms of space and safety, for example.

What is more, the in-line engine also offers benefits when it comes to emissions, as all the exhaust gases are discharged on the right side and can therefore be conducted with no heat losses to the catalytic converter, as the distance there is shorter.

This then means that the catalytic converter is activated and starts to work more rapidly. An in-line engine permits improved performance as a result of favourable intake and exhaust conditions, as the engine has a hot side and a cold side.

One decisive component in Volvo's engine philosophy is to offer a wide performance range, which is achieved by turbocharging. In this context, in-line engines offer another decisive customer benefit compared with V engines.

Volvo normally calls this philosophy Strong, Light, In-line, Multi-valve engines - and it offers customers a great many benefits.

These transverse, in-line engines are now fitted in every Volvo car, from the four-cylinder engines in the Volvo S40 and V40, to the five-cylinder versions in the Volvo S70, V70 and C70 and the five- and six-cylinder engine concepts in the Volvo S80.

This strategy involves a new way of developing and producing cars

This strategy also represented the start of a future way for Volvo to develop and produce cars, based on a platform concept and front-wheel drive.

"The challenge we faced was as follows. We had only a very short time to abandon our traditional way of working and change to a module-team-steered product and process development system," says development manager Hans Gustavsson.

The development of this working approach affected the everyday lives of several thousand people, as an organisation comprising what were known as module teams was created. These module teams were made up of people with different skills and expertise, both Volvo employees and suppliers, relating to products and processes. One module team is, for example, responsible for the floor of all the products on the new large platform.

"We also had to change the industrial process to reduce the lead times," Hans Gustavsson continues. "By creating an industrial village at Arendal near the Torslanda Plant, at which complete units are assembled, we were able to reduce both the number of direct deliveries to the plant and the number of versions that are built on the line."

The developed platform strategy also makes it possible to invest in advanced technological solutions which might otherwise be difficult to justify in individual car projects.

In May 1994, the development of the Volvo S80 began

In May 1994 - in other words, eighteen months before Volvo's new compact class cars, the Volvo S40 and V40, were introduced - Hans Wikman was given the task of leading the development of the Volvo S80.

This was to be a car with the kind of characteristics that were needed for Volvo to establish a serious position for itself as a specialist manufacturer - while making volume growth possible at the same time.

In short, the strategy for the new car was as follows

- It would encourage more customers to buy a Volvo - car buyers young and old alike.

- It would be roomier than all previous Volvo models and it would be Volvo's top-of-the-line model for the foreseeable future.
- The customer group is made up of relatively affluent, well-educated people who share Volvo's values and who neither want nor need to boast by using their cars.

Developing a car for these customers means complying with rigorous requirements and the explicit needs of self-assured, aware people with a large and attractive range of models to choose between.

"The prestige would come from a car that was safer, roomier and more fuel-efficient than those offered by our competitors, a car with an exciting, functional design or, to put it another way, understated prestige," Hans Wikman explains.

In other words, his brief was to develop the most complete Volvo ever. First and foremost, by extending the concept of safety from comprising a very high level of passive safety to include leadership in the field of active and personal safety - completely in line with Assar Gabriellsson's wise words and promises from the beginning of Volvo's history.

***"Cars are driven by people.
The guiding principle behind everything
we make at Volvo therefore is - and
must remain safety."***

"However, the fact that the Volvo S 80 is one of the world's safest cars is not enough to attract the target group. We have to continue to develop our own scenario, we must focus on the characteristics and values which distinguish us from our competitors," Hans Wikman continues.



Hans Carlstedt, technical project manager

Doug Frasher, the person responsible for the exterior design of the Volvo S80.



Project director Hans Wikman

"In the Volvo S80, we have also developed other characteristics in areas where Volvo was previously not sufficiently competitive. This is absolutely necessary if we are to establish ourselves as serious competitors in this segment. "

The Volvo scenario

The Volvo S80 is an eagerly-awaited addition to the Volvo family. A car which will develop and strengthen Volvo's brand name. A car which both the current four million Volvo owners and the owners of rival makes have felt is lacking.

"The Volvo S80 is a very modern car, totally in line with the values which will dominate in the next century. It reflects the company's soul," says the head of marketing at Volvo Cars, Knut Simonsson. "It also shows that we are continuing to live up to the promise Assar Gabrielsson made 70 years ago.

The Volvo S80 will play an important role in our vision of developing to become the world's most attractive and successful brand name among speciality cars. At the same time, it will help us to reach our target of selling more than 500,000 cars a year after we pass the millennium shift."

The Volvo S80 is the first entirely new car to be based on Volvo's S, V and C strategy - to develop unique products to match the functional and emotional needs of different customer groups.

According to this strategy, the Volvo S80 has been developed as a unique saloon, completely in line with the needs and requirements of the modern family.

- The Volvo S80 radiates enormous self-confidence as a result of its highly modern and distinct design.
- The Volvo S80 sets a totally new standard for Volvo when it comes to both ride comfort and sound comfort.
- The Volvo S80 has plenty of interior space, as a result of Volvo's engine philosophy of fitting transverse, in-line engines.
- The Volvo S80 introduces a number of new features and systems in the important field of safety.
- The Volvo S80 is extremely functional and practical, in true Volvo fashion.
- As the Volvo S80 is a car for the next century, it is also based on the very latest communication and information technology.

To put it another way, the Volvo S80 is a unique saloon, developed without being restricted by the special requirements which are set when a saloon and estate are produced using the same basic design.

So, the Volvo S80 will not be produced in an estate version. This means that the next V model from Volvo will be developed in the corresponding manner as a unique V model with unique systems and design solutions.

More than nine million cars a year

Our market surveys on our main markets of Europe, the USA and Japan reveal that the need for a new car among affluent families corresponds to



more than nine million cars a year. As the number of people in modern families who share Volvo's values is increasing very rapidly, there is huge growth potential.

These people are attracted by an attractive, modern design and unique consumer benefits. To comply with these requirements, it is essential to offer a new and competitive profile, sensible exclusiveness, something which distinguishes the Volvo S80 from other car makes.

"Who I am" is more important than *"What I am"* for these people.

Among those families whose children are still at home, saloon cars dominate with 34% of the market, while 7% of this target group prefer estates. So there is enormous sales potential for the Volvo S80 in this group.

All the clinics reveal that the Volvo S80 also appeals very strongly to younger people and this will help to create interest and confidence in Volvo, even before these young people have families.

"There is no question that the Volvo S80 will be the right car for us and our customers well into the next century," Knut Simonsson says. "It is an exciting, safe and functional car in a modern packaging, which very definitely matches the needs and values of the modern family. "

***With six unique features in terms
of driveline, safety, the environment
and communication - the most
complete Volvo ever***

No car manufacturer in modern time has succeeded in fitting an in-line, six-cylinder engine transversely in the engine bay. However, as tangible proof of Volvo's conscious commitment and engine philosophy, this has now been achieved in the Volvo S80. As a result, Volvo has once again developed the world's shortest and most compact manual gearbox - this time with four shafts.

A number of other unique features are also being introduced in the fields of safety, the environment and communication in the Volvo S80. In all, there are six of them:

- For the first time in modern time, a car manufacturer has succeeded in fitting an in-line, six-cylinder engine transversely. The driveline programme also includes the world's shortest manual gearbox.
- The new seat concept WHIPS (Whiplash Protection System), which provides considerably improved protection from whiplash injuries in rear-end collisions.

- ic, Inflatable Curtain, which protects the head and neck in a side impact. is the third stage in the development of Volvo's Side Impact Protection System.
- The Volvo S80 is the first car in the world to carry an environmental product declaration, checked by Lloyd's Register, an independent inspection institute. This environmental declaration covers every phase in the life cycle of the car.
- The integrated GSM phone is part of Volvo's systematic development of technology which results in smooth and reliable interplay between man and machine.
- The pioneering electrical system with multiplex technology with 18 computers in a network has fewer cables, offers greater reliability and can handle more electrical functions, including updates, than a traditional electrical system.

The Volvo S80 radiates enormous self-confidence

The Volvo S80 has consciously been given a very modern and distinct design, as it is important for a small speciality car manufacturer to be seen on an incredibly competitive market. It is not enough to imitate others and be one of the crowd. The car has to influence and touch people.

In August 1994, there were four design proposals to choose between. Three of them had attractive Volvo lines, but they were too traditional.

The fourth proposal came from Volvo's design studio in California and was based on the environmental and design study, the Volvo ECC. It was not as safe a proposal as the other three, but it was far more modern, challenging and exciting.

As it was important to cross a new design barrier with the Volvo S80, the proposal from the young us designer Doug Frasher, who was also responsible for the design of the Volvo ECC, was chosen.

"The Volvo S80 radiates enormous self-confidence. No one will be unaffected by the car," says Volvo's chief designer Peter Horbury. "The rear has a very powerful identity. No one will ever be in any doubt about which car is in front of them."