

THE KNOWLEDGE

Frank Stephenson designed the Ferrari F430, Maserati MC12 and the 2001 MINI. Now Design Director at UK supercar manufacturer McLaren Automotive, he shares the ideas, trends, and technologies driving his thinking.

01

BIOMIMICRY

When I was in the Caribbean a couple of years ago I fell in love with a sailfish. I bought one, got it taxidermied, then sent it down to the Formula 1 department and had it painted like a McLaren racecar. But before we did that we scanned it for data. We found that the scales create little vortexes of air so that water doesn't touch the fish when it's moving at speed – it just runs over a boundary of air and the vortexes pull the fish forward like in suction. We can use that for the areas around the duct on the car, where we have to pull in a lot of air. That procedure has never been 'invented,' yet it's already out there in nature.

02

CLEAN FUEL TECHNOLOGY

About seven or eight years ago, people started asking whether hybrid or hydrogen was going to be the new fuel technology. But there's something dark here – there are many small companies that have built hydrogen and air compressor engines and all the prototypes have been bought by major companies, which have kept them secret.

03

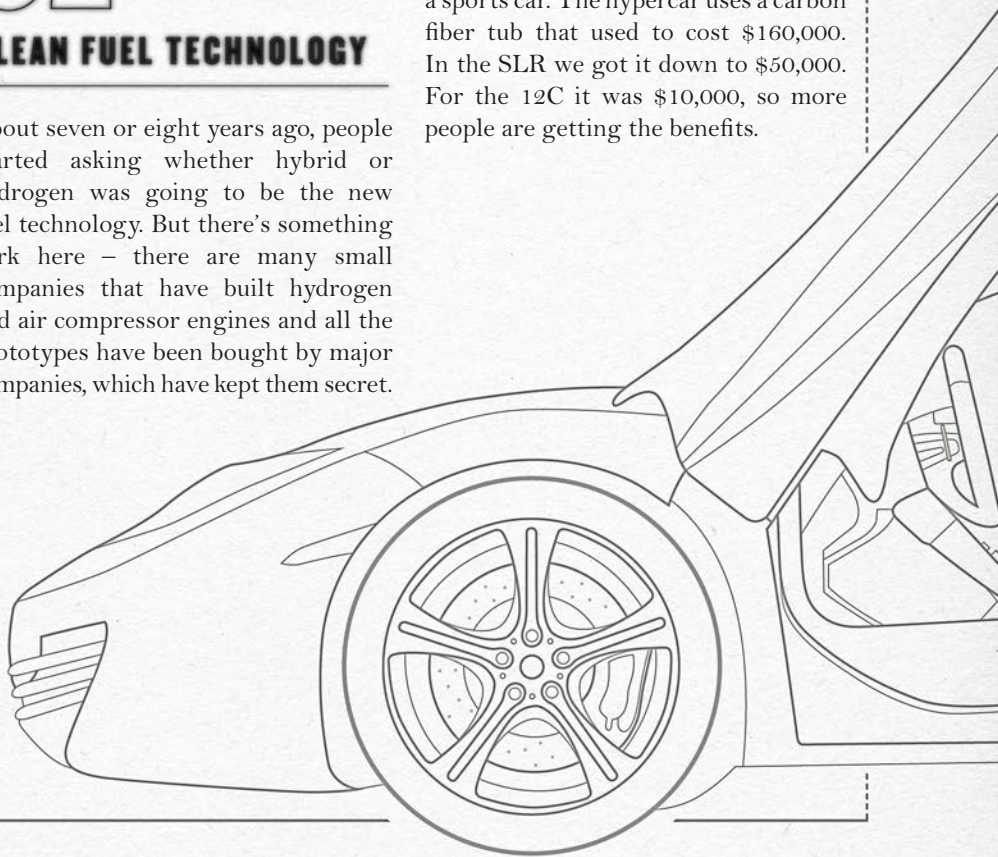
MATERIALS

We're connected to a lot of companies around the world whose only objective is to expose us to new materials, whether it's a new fabric, alloy, plastic or rubber. Our role is to work out how we can use these materials – is it going to be beneficial to us?

04

OPTIMIZATION

You get people who criticize McLaren for having no purpose other than to satisfy the desire to have something unnecessarily superior. But the whole point is to filter the technology down. We make a hypercar, a supercar and a sports car. The hypercar uses a carbon fiber tub that used to cost \$160,000. In the SLR we got it down to \$50,000. For the 12C it was \$10,000, so more people are getting the benefits.



05

HOLOGRAMS

Last Christmas I went to a company in London that is developing holographic technology. I'm sitting on this couch and a guy and a girl start doing a dance. This goes on for about three minutes, then the guy from the company asks, "Which one is real and who's the fake?" I was like, "What?!" The lights were on and they were indistinguishable. I was blown out of my mind.

06

DIGITAL RENDERING

The traditional way of designing has been to take a piece of paper and draw with fast pen sketches, but a lot of students these days use digital rendering where you can create your design in a 3D data model.

Digital actually allows you to be more risky because you don't have to worry that you'll spend eight hours on a drawing and have to throw it away and start all over again. The speed is really important – you can try thousands of ideas where before you could only try one.

07

THE BEAUTY OF EFFICIENCY

When you see something that works, it's beautiful. The beauty of pure function is seductive. You know, you wouldn't redesign a horse because it would look better if its neck was shorter. It works as it is, so it's beautiful. At McLaren, we're trying to develop a unique style in the sports car world. The concept we're heading towards is pure efficiency – we're looking to build a vacuum, shrink-wrapping the surface of the model across the hard points. And by creating something efficient – something that functions perfectly – we'll have created something beautiful.

08

QUESTION PERCEIVED WISDOM

Every car in history has had a windscreen wiper, but recently I went to an Air Force base and asked them why modern aircraft don't have windscreen wipers. I was told that they have this very inexpensive technology, which means absolutely nothing sticks to the windscreen, but nobody uses it in the automotive industry. What if we use this technology in our cars? You might put out of work all the windscreen wiper companies and windscreen washer fluid companies, but that's the cost of innovation. Whenever you take a new direction you're always going to sacrifice something.

09

MAINTAIN INTENSITY

In our studio we have a very small team. It's similar to the concept of a kitchen with a lot of cooks; you get a spoiled soup. The more intense the atmosphere can be, the more interesting the products are going to be ©

