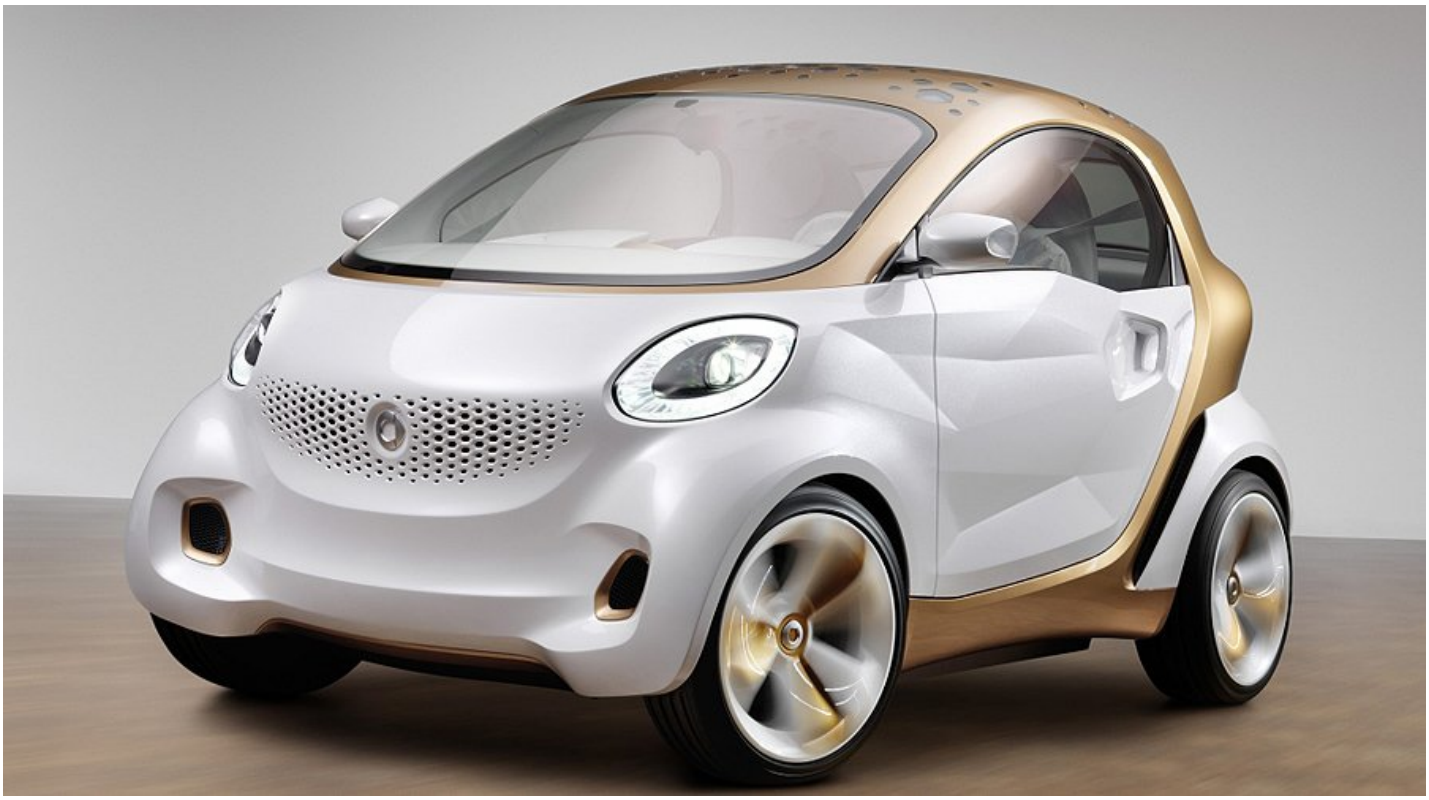
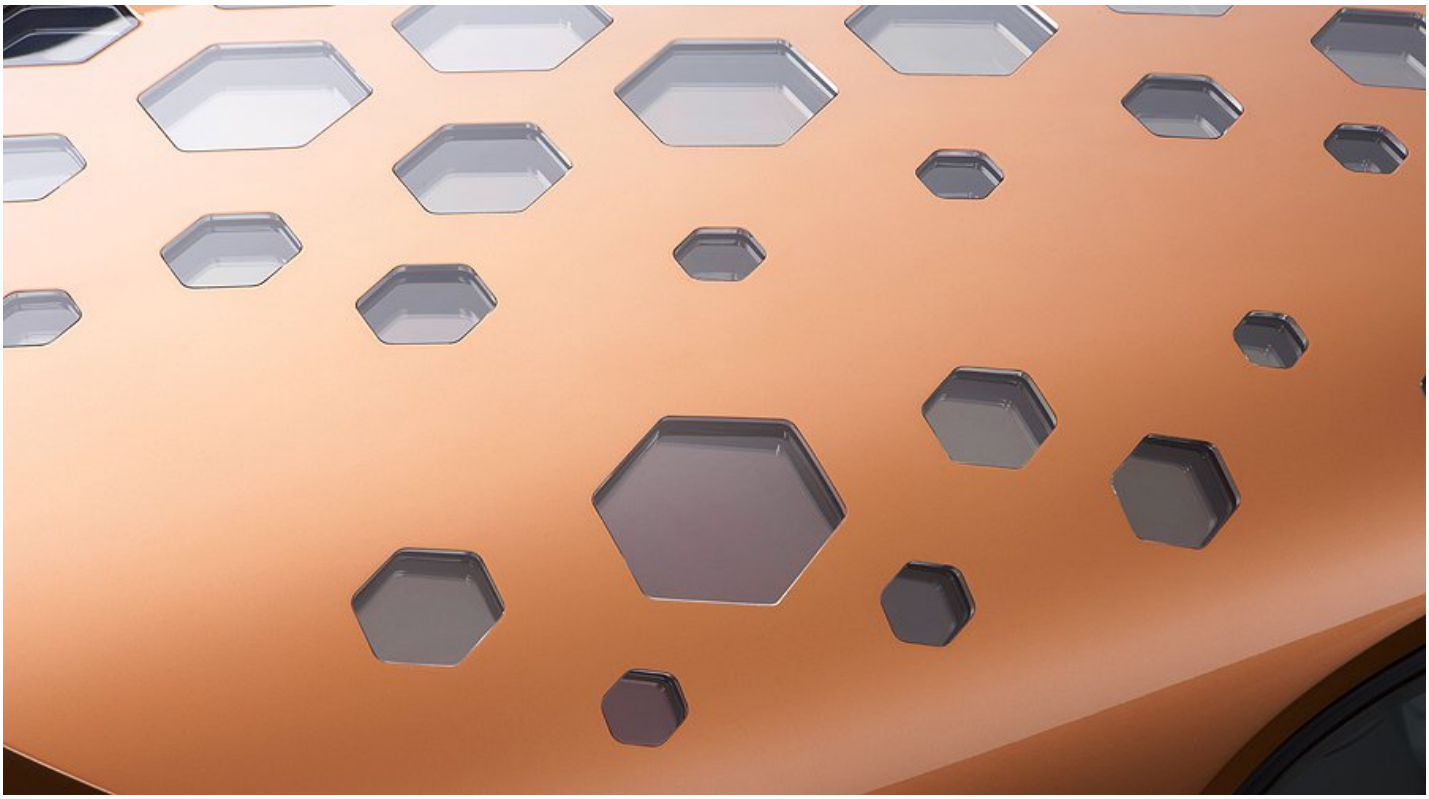
Smart Forvision: Technology-packed concept glides into Frankfurt



While its alien-esque appearance might give the impression that it's 'just another concept car', the Smart Forvision does in fact have some substance beneath its futuristic bodywork.

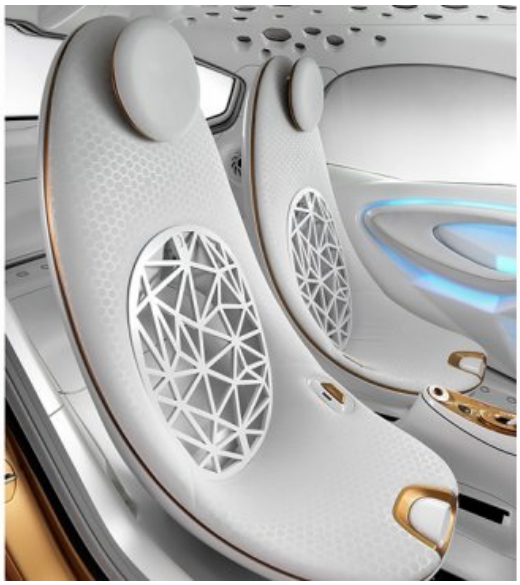
It has been developed in conjunction with German chemical giant BASF which, as you might have guessed, has led to some pioneering developments. Not only does the vehicle have an electric powertrain, but also a variety of innovative methods of improving energy efficiency.

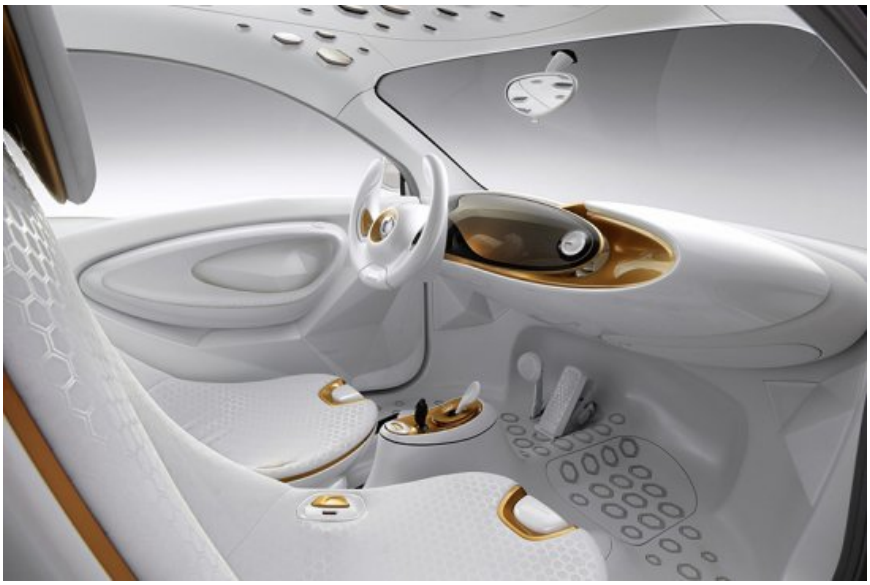
The first of these is the roof, which has solar cells that generate power using 'organic-chemical dyes', and also double-up as a design feature of the microcar. The dyes are light-activated, and parent company Daimler claims that even in low light they can generate enough energy to power the multimedia system and climate-control fans. In sunlight, the entire climate control system can take its power from the roof.



However, due to the other inventive temperature-control features of the Forvision, the climate control is likely to remain dormant, meaning that the extra energy generated can contribute towards powering the car itself. The first of these features are the lightweight seats with 'e-textiles' (thin plastics with heat-conductive coatings), also used in the armrests of the doors.

BASF’s contribution to the project also includes the use of ultra-thin insulation foams within the body panels to maintain a constant temperature, while additionally reducing weight. Smart has also applied a BASF-developed infrared-reflective film to the windows, which - unlike other films - only keeps out sunlight and heat. GPS, Bluetooth and mobile phone signals remain unaffected.

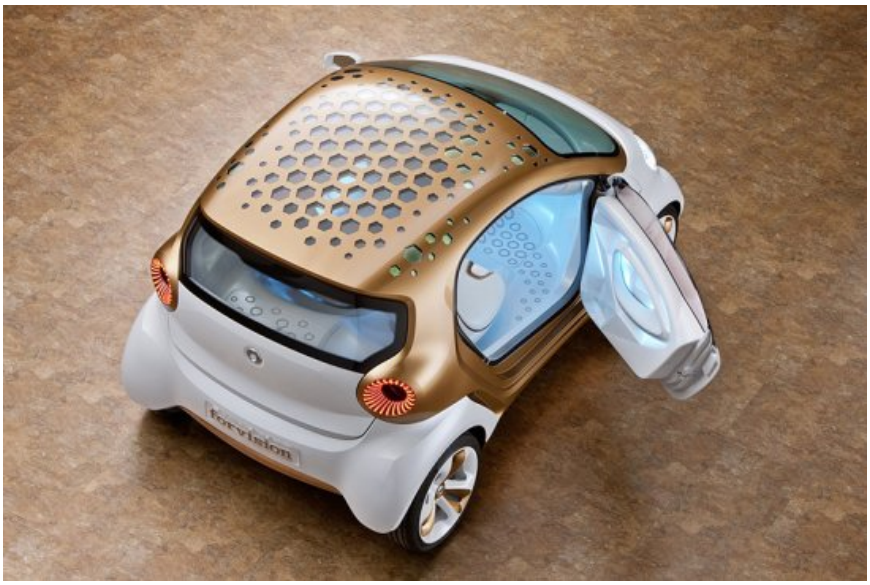


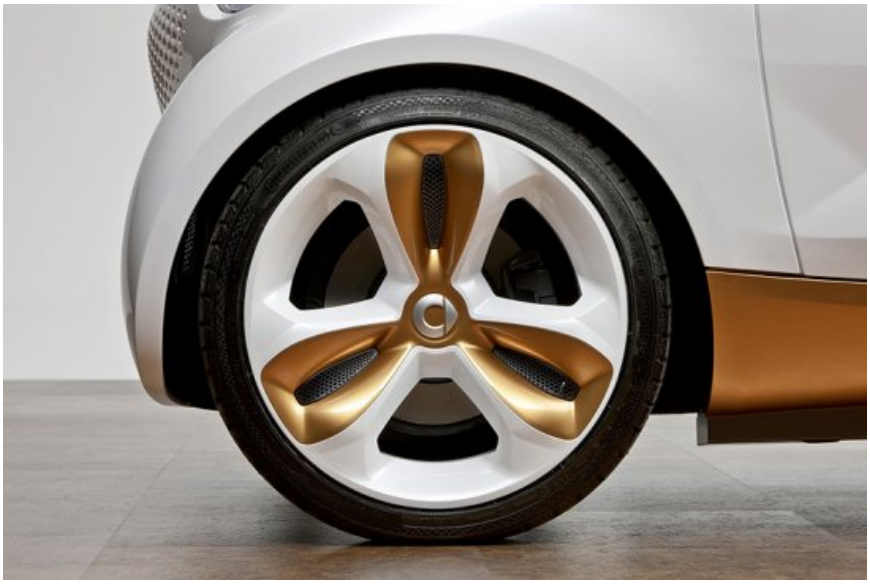


In addition, the chemical giant has developed a colour pigment in the exterior paint which reflects heat away from the body, apparently leading to a 4°C reduction in interior temperature. This effect is magnified by the pearlescent white colour of the show car.

The car is so innovative that it really has 'reinvented the wheel'.

By rolling on 100% plastic-construction wheels, the Smart Forvision further reduces its weight (in particular unsprung mass, which could mean the old Smart’s questionable ride quality is finally addressed), and Mercedes has confirmed that the technology is suitable for high-volume production.





Unfortunately, however, the project is still in its initial development stage, so it’s unlikely that these exciting technological developments will make it into the third-generation Fortwo, due in Spring 2012. The good news, though, is that it will be more powerful and offered in higher production numbers than the lease-only, second-generation electric Fortwo.

The Smart Forvision will make its first public appearance at this year’s Frankfurt Motor Show, alongside a host of other important cars to be revealed at the show.

Text: Joe Breeze
Photos: Smart

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