



Audi carried out a lifecycle assessment of its A7 model to calculate, among other things, the carbon footprint of the leather it uses. CREDIT: AUDI

Industry 4.0 will lead Lectra to big R&D investment

Leather-cutting technology provider Lectra has said it will invest 10% of its revenues in research and development between 2017 and 2019 to help its customers establish “connected manufacturing” operations. It used the third edition of its Automotive Leather conference in Bordeaux in April to introduce this idea to customers in the leather industry.

Cloud-based solutions, smart manufacturing and powerful analytics will help companies in the automotive leather supply chain become part of the “new connected economy” and the fourth industrial revolution (Industry 4.0) that are redefining business models and manufacturing processes, according to technology provider Lectra. At its third Automotive Leather conference in Bordeaux in April, the company said it is aiming to help the automotive leather industry prepare for the changes to come by learning more about “vital technologies” and adopt “collaborative, agile and efficient practices”.

To help customer organisations achieve this, marketing director of the technology company, Céline Choussy Bedouet, said at the start of the event that Lectra will invest 10% of its revenues in research and development between now and 2019. She explained that this will mean that, by 2019, Lectra will be spending 50% more on research and development than it did in 2016.

The company is preparing to launch applications and services that will help its customers move to Industry 4.0, Ms Choussy Bedouet said, and she insisted: “We’ve been working on this, on the Internet of Things, for ten years now. We already have applications that put the factory at the heart of the value chain by connecting different operations in real time, allowing business to see things they could not see before and allocate their resources more intelligently.” She said selected key customers will test these Industry 4.0 services this year, with an official worldwide launch of the new

applications taking place in 2018. This will continue in 2019, with further new applications coming on stream then.

Specific to automotive leather, she said new ideas will include an integrated design concept for producing car seats in compliance with Industry 4.0, and a fully connected leather cutting-room that will help customers optimise their leather use, improve the quality of their cutting operations and improve their operational excellence. “We are co-thinking and co-designing our Industry 4.0 offering with our customers,” the Lectra marketing director said.

Audi and Volvo were among the original equipment manufacturers to send representatives to Bordeaux for the event, while tanners were represented by senior figures from the Scottish Leather Group, Gruppo Mastrotto, Lear-Eagle Ottawa, Tenerías Omega and others.

Unfair assessment

Henning Gathmann, who is in charge of material development at automotive group Audi, was one of an engaging group of speakers. In the course of his talk, he said he accepts that the company’s method for calculating the carbon footprint of the leather is unfair, but has said it would be difficult to change its approach now.

Mr Gathmann revealed that Audi has carried out a lifecycle assessment of the 2015 model of its A7 car in keeping with ISO standard 14040. This exercise resulted in a calculation of 40 tonnes of CO₂ equivalent as the environmental footprint of the car over its lifecycle, covering its development, its



production and assembly, its use on the road over 200,000 kilometres and the recycling of as much of the material as possible after use. Mr Gathmann said that the A7 uses around 10 square-metres of finished leather in the interior, which, at 50 kilos of CO₂ equivalent per square-metre, gives a carbon footprint of the leather the car consumes of 500 kilos. This corresponds to 1.25% of the car's total, which is a small share, but it was immediately clear from what Henning Gathmann said in Bordeaux that the leather industry will see two difficulties with the numbers.

Of these, the first is that he confirmed that 50 kilos of CO₂ equivalent per square-metre is also the figure that Audi attributes to the synthetic materials that automotive brands sometimes choose to use instead of leather, implying that leather is no more sustainable than these synthetics. The second difficulty is that Audi accepts that only 25% of the footprint it applies to leather is attributable to the production of the leather itself, with the other 75% coming from agricultural activities and livestock. "Of course this is not fair," Mr Gathmann said at the conference, "because it assumes cattle are slaughtered to make leather when the hide is simply a by-product of the food industry."

Leather's important role

It was 1982 before Audi began to put leather in the interior of its cars, with the Coupé (B2), the 200 and the Quattro among the first models to undergo the change. By 1988, Mr Gathmann said, Audi was on its way to becoming a premium brand; it launched the V8 sedan and it was at this point, he told the audience in Bordeaux, that leather began to play an important role in the way it presents its products. It went on to introduce cars with chrome-free leather in the interior in 1992 and, in 1997, decided that all the leather it sources should be chrome-free.

In spite of Audi's calculations being "unfair" with little possibility of changing the automotive brand's mind on the carbon footprint of leather, Henning Gathmann insists that it would be wrong for the leather industry to feel sorry for itself and do nothing to improve its carbon footprint. Addressing his own question, he argued that improvements in effluent and waste management are important and that options to carry out liming with less sulfur or no sulfur at all will help. He advocated the use of "new bio-based tanning agents and bio-based topcoats" that have come onto the market.

Decision-makers from more than 20 countries attended Lectra's third annual Automotive Leather conference near Bordeaux in April to learn how the 'smart factories of the future' will work and how Industry 4.0 is likely to affect the automotive leather supply chain. CREDIT: LECTRA

'Flawless' surfaces

Next, the Audi material development executive raised with the audience in Bordeaux the subject of the way automotive companies use leather. He said improvements in yield are vital because "hide utilisation of 60%" is not sustainable. Better ways of correcting grain and ways of laminating that use less heat and less glue can be part of this, but it would be better to embark on what he called the "long learning curve for the entire supply chain" of allowing natural marks on a hide to remain. He acknowledged that it will be hard to reverse the trend of the last 30 years that has led consumers to expect "a flawless surface", but in his opinion this is what is necessary now.

He described getting used to natural-looking material again as "something that customers must be taught", but argued that it will be an effort worth making because there is "almost nothing natural" about embossed leather. Mr Gathmann concluded: "The question is how to make a nice story out of all this. What we need is a joint effort to push that. Consumers are well informed and want innovative products that are sustainable; and they are willing to pay more for them. Plenty of customers want something authentic." 🌐

Chinese demand for automotive leather will keep increasing

Leather has a 13% share of all the material used in car interiors in China at the moment, but this figure could increase thanks to the growth in sales of premium vehicles there. That's the view of Sun Zhongwei, director of trims at Yanfeng Automotive Interiors, a speaker at the Lectra Automotive Leather Conference.

Mr Sun said automotive companies are encouraged by data for the first quarter of 2017 suggesting that China's gross domestic product grew by 6.9% year on year. He said current projections are that sales of premium cars in China will grow this year by 5%. Because of this, he said, demand for leather will keep increasing.