

# Aircraft *interiors* INTERNATIONAL

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## Materials special issue:

### AIRBUS AMERICAS

Amanda Simpson, VP of R&T, discusses materials innovation, the value of sharing ideas, and the growing role of women in aerospace

### THE LATEST MATERIALS

Materials developments that cabin designers need to know about, from 2018's trim and finish launches, to advances coming in the next decade

### TRENDS FORECAST

Color, material and finish experts from the world's leading design houses share observations that could influence the next generation of cabin schemes



## How to protect your ideas

WITH SO MUCH INNOVATION IN DESIGN AND MATERIALS, THE CABIN HAS BECOME A MINEFIELD FOR INTELLECTUAL PROPERTY RIGHTS. EXPERTS DISCUSS IF, AND HOW, ASSETS SHOULD BE PROTECTED



## STARS

WHAT COULD THE NEXT GENERATION OF CABIN LIGHTING BRING? NEW EFFECTS, MORE FUNCTIONS, COMBINED FUNCTIONS, HEALTH FACTORS, ENERGY EFFICIENCY: OUR PANEL OF EXPERTS HAS SOME GREAT IDEAS FOR THE FUTURE...



## SIGNS OF THE TIMES

Astronics Luminescent Systems Inc (LSI) is introducing new state-of-the-art LED cabin lighting systems to the market, including seat-mounted floor path emergency exit marking, emergency exit signs, lavatory occupancy signs, and overhead emergency lighting. The Universal Exit Signs are claimed to considerably simplify configuration management by eliminating the requirement for multilanguage exit signs. The overhead emergency lighting

embeds discreetly between ceiling panels to preserve cabin aesthetics and airline branding concepts. Meanwhile the lavatory occupancy signs feature automatic dimming to reduce the pictogram's brightness when the cabin lighting enters dark mode.

These innovations combine mandatory safety requirements with a focus on design and styling. These systems were recently certified on the Airbus A350 XWB, with more certifications pending.



## FLEXIBLE THINKING

Astronics PGA has developed a new RGBW strip lighting system, the Nuancia, to provide ambient lighting that can be easily controlled by a lighting management system. The lighting can highlight cabin elements such as monuments, armrest compartments, footrest areas, cabin

ceilings and lavatories. Ultra flexible with a 2in (5cm) bend radius, the Nuancia incorporates the latest LED technology in 50mm (2.1in) increments for a consistent and attractive illumination experience. The Nuancia can be ordered in any length and will be available in 2019.

## Telling stories with light

Light can play a key role in environmental comfort, affecting passengers' behavior and well-being. "We will expect to see dynamic color changing during each flight phase to create different ambiances," states Catarina Ferreira, a designer at Portugal-based studio Almadesign.

"Passengers experience boarding with bright, welcome brand colors and take off with a calm and soothing light spectrum. Imagine an intimate, appealing space during meals, as if you were having dinner in the city center. At night, passengers can experience a magical ambience, with comfortable dimmed light details.

"Cabin lighting is getting closer to what you find in nature, as lighting systems

are getting smarter, more sophisticated, more flush, embedded and integrated into materials, but still capable of anticipating our movements, moods and expectations.

"Light will also continue to bring brand identity into cabin interiors. The TAP A330 NEO brings this idea to life with a 'welcome effect' ceiling, where a window of zenithal light is filtered through a pattern of Portuguese tiles. These elements contribute to defining the onboard experience and creating the first contact with the TAP brand while boarding the aircraft. Light will continue to enhance the cabin interior and contribute to a memorable flight experience."



OUR PANEL OF TOP EXPERTS TRAWLED 2018'S MAJOR FASHION, FURNITURE AND AUTOMOTIVE SHOWS TO FIND THE TRENDS THAT WILL INFLUENCE FUTURE CONSUMER TASTES AND THE NEXT GENERATION OF AIRCRAFT TRIM AND FINISH. AND 2018'S KEY THEME SEEMS TO BE... **SOFTNESS**

# trends foreccast



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EMMA RICKARDS  
*West 6*

WE ARE IN THE MIDST OF AN UPRISING – A SOFT POWER UPRISING, SAYS CMF AND TEXTILE SPECIALIST, EMMA RICKARDS FROM WEST 6



EMMA RICKARDS

**T**his millennium has seen aircraft cabin interiors expand from being a technical consideration, to becoming the main business of flying, dominated by high-specification requirements and engineering skills, into a popular culture channel watched and appraised by a whole world of increasingly design-aware travelers and non-travelers alike. It's a 'soft power' uprising.

Soft power embraces the whole cabin interior experience – good design and use of color, texture, trim and finish that will increase passenger satisfaction and influence passenger choice of airline, thereby increasing the profitability of those airlines that harness it best. The successful use of soft power should be a key focus of every airline's future strategy.

Understated glamor infuses every decision made concerning the successful cabin interior. For inspiration, take a look at fashion-guru Anna Wintour, editor of *Vogue* magazine for the last 30 years. This is soft power at its best. She's unapologetically high-end in her choices. She carries nothing but a phone, almost always wears leather slingbacks the color of milky coffee and says style should be "unique to yourself and yet identifiable to others". Of course, there are those trademark dark glasses too... It's an uncluttered and pared-down aesthetic that true alpha power-players use to differentiate themselves from the rank and file.

For tomorrow's material choices in cabin interiors it's a polished, glamorous version of power dressing. And it's a look built on three essentials. Excellence in your choice of textile design and color, innovation in your material treatments and embellishments, and the clever use of special finishes and accessories for that final detail. The aim is to create an interior that's unique to your brand yet identifiable to your customers. It's the softest way to win power!



LEFT: THE GIO PONTI D.153.1 ARMCHAIR, TRIMMED IN PUNTEGGIATO FABRIC DESIGNED IN 1934, STILL LOOKS CONTEMPORARY

RIGHT: ENGINEERING AND LUXURY COMBINE IN THIS ALMADESIGN CMF SCHEME



**A**ircraft cabin interiors will be influenced by a new generation of technical materials to engage all the senses. The natural and the technological will combine in high-performance materials and flexible basics. Matt finishing and soft-touch surfaces combined with textiles will set a mood of beauty and meaning into the cabin interior. The ambiance will become more tactile and immersive, bringing the home comfort into the full travel experience.

It's interesting to see textile weaving knowledge being transferred into flooring systems, resulting in significant weight reduction or being integrated into thermoplastics, creating textural interplay in cabin interiors.

In the leather industry we see a move into ecological chrome-free leather, natural anti-allergenic products combined with laser cut details, singular perforations and embroidery details. Deep embossed surfaces with personalized patterns will create premium feeling and new luxury environments.

To create seamless experiences, we are now able to introduce advanced embedded technologies into leather and fabric lamination, such as LEDs, electroluminescent films and capacitive sensors, and produce 'smart' and comfortable solutions with the flexibility to adapt to different surfaces. The introduction of self-cleanable nanotechnologies will also open new possibilities, especially for lighter color palettes, improving maintenance and durability. These future materials and technologies, when combined, will certainly bring additional magic and performance to aircraft cabins. ✕



CATARINA FERREIRA

*Almadesign*

CABIN MATERIALS WILL BE SOFTER, GREENER AND WORK MORE CLOSELY WITH NEW TECHNOLOGIES, PREDICTS ALMADESIGN CMF EXPERT CATARINA FERREIRA