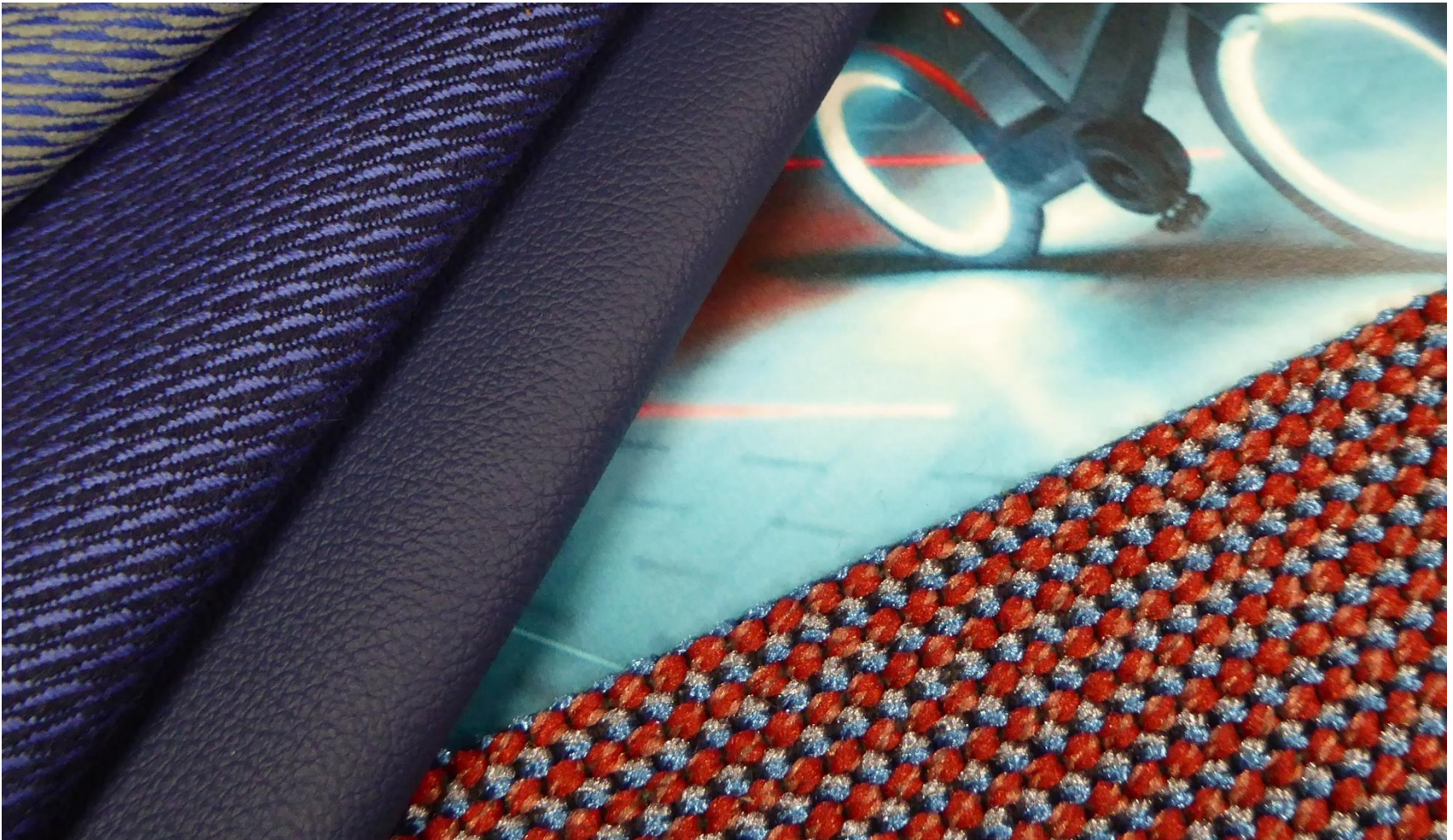


Lantal Textiles AG
Aircraft – Corporate Presentation



Welcome to Lantal Company Presentation

Lantal offers forward-looking counsel with the objective of achieving the ultimate in passenger well-being and enhancing the prestige of the customer's service brand.

The company has transformed from a pure yardage supplier to a provider of coherent all-in-one solutions with special emphasis on ready-to-install products, engineering and certification services for the aviation industry.



Success story



-
- 1886 Incorporation of Baumann & Brand linen mill
 - 1903 Incorporation of Baumann & Grütter weaving mill
 - 1930 Acquisition of company by sons Fritz and Willy Baumann
 - 1951 Fritz and Willy Baumann go separate ways. Incorporation of Création Baumann and Möbelstoffweberei Langenthal AG
 - 1954 Initial sale of seat cover fabrics to KLM
 - 1956 Acquisition of Meister AG weaving mill, entry into the railway and bus industry
 - 1979 Construction of the mill in Rural Hall, USA
 - 1985 Acquisition of Melchnau carpet mill
 - 1996 New company name: Lantal Textiles Ltd
 - 2004 Presentation of first pneumatic aircraft seat (prototype)
 - 2007 Incorporation of engineering division
 - 2008 Acquisition of Wollspinnerei Huttwil AG
First order for a complete pneumatic comfort system
 - 2011 Accreditation with Design Organization Approval (DOA), EASA Part 21 J (withdrawn end of 2018)
 - 2014 Incorporation and inauguration of sales hub Americas and sales hub Asia-Pacific
 - 2016 Incorporation and inauguration of fire test laboratory in Abu Dhabi in partnership with Etihad; Acquisition of ACC Aircraft Cabin Components GmbH, Germany, and Gierlings-Velpor SA in Portugal
 - 2017 Incorporation of Lantal Parts s.r.o. production site, Czechia
 - 2018 Acquisition of Airline Services Interiors in England
-



Lantal – Organization

Airline Services Interiors
Manchester,
England



ACC Aircraft Cabin
Components GmbH
Babenhausen,
Germany



Lantal Textiles AG
Langenthal, Switzerland



Lantal Textiles AG
Melchnau, Switzerland



Wollspinnerei Huttwil AG
Huttwil, Switzerland



Lantal Parts s.r.o.
Kraslice, Czechia



Lantal Textiles Ltd
Bellevue, USA



Lantal Textiles Ltd
Rural Hall, USA



Gierlings-Velpor SA
Santo Tirso, Portugal



Lantal Textiles SA
Toulouse, France



Lantal Textiles AG - Branch
Abu Dhabi, United Arab
Emirates



Lantal Asia-Pacific Pte Ltd
Singapore

- Headquarters
- Production Textiles
- Production Parts
- Production Services
- Sales

Lantal branch office

Lantal Textiles AG - Branch, Abu Dhabi



First commercial fire test laboratory in the Middle East

Thanks to the partnership with Etihad Airways Engineering, Lantal's top-tier laboratory services are now available in the Middle East as well and effective immediately can be quickly and conveniently accessed in this important region. The Lantal laboratory is located adjacent to the Abu Dhabi International Airport within the Etihad Airways Engineering facility. It offers services such as flame, seat cushion, heat release, and smoke tests.



Lantal subsidiary

ACC Aircraft Cabin Components GmbH, Germany



With more than 10 years of experience in the aircraft industry, ACC Aircraft Cabin Components GmbH is a well established company specialized in the sale and maintenance of used passenger seats and the overhaul of passenger cabins.

Thanks to its certification to EASA Part 145 and EASA Part 21 J as well as its access to aircraft seats, components, and soft materials, ACC can offer a very broad spectrum of products and deliverables.

Number of employees: 24



Lantal subsidiary

Lantal Parts s.r.o., Czechia



Lantal Parts s.r.o. is a pure contract manufacturer/workbench and employs 63 persons.

Thus, as of immediately, Lantal can independently sew covers, upholster seats, and produce literature pockets relying on existing production machinery.



Group Portrait

Lantal Textiles AG



-
- With more than 60 years of experience as a product and service supplier in the aviation industry, Lantal was the choice of more than 300 airlines, aircraft OEM's, seat manufactures, as well as MRO's and leasing companies.
 - With all-in-one solutions of soft interior parts and the status as Design Organization (EASA Part 21 J) of Lantal's subsidiaries ASI and ACC and Lantal's status as Production Organization (EASA Part 21 G), Lantal is able to support and provide you a huge range of services and products from design, ready-to-install material, up to full soft interior refurbishments and certification
 - Our know-how in design, materials, engineering within the aircraft industry, makes Lantal to the right partner for your next interior project

Group Portrait

Lantal Textiles AG – Product Organization (PO)



The image shows a 'Production Organisation Approval Certificate' issued by the Swiss Confederation (Schweizerische Eidgenossenschaft) and the Federal Office of Civil Aviation (FOCA). The certificate is for Lantal Textiles AG, located at Dorfstrasse 5, CH-4900 Langenthal. It references the approval number CH.21G.0012 and is based on Regulation (EC) No 218/2008 and Regulation (EC) No 748/2012. The certificate states that Lantal Textiles AG is a production organization in compliance with the Annex (Part 21), Section A, Subpart G of Regulation (EC) No 748/2012, approved to produce products, parts and appliances listed in the attached approval schedule and issue related certificates using the above references. The certificate includes conditions for approval and is signed by Christian Hegner, Vice Director Safety Division - Aircraft, and Gianmario Giacomelli, Head of Section Design and Production. The date of original issue is 01.12.2009 and the date of this revision is 17.12.2015. The certificate is EASA Form 005 Issue 5.

- Since December 1st 2006 Lantal is certified as a Production Organization (EASA Part 21 G) with the approval number: CH. 21G.0012
- This approval allows Lantal to:
 - Produce parts for pneumatic comfort system
 - Produce soft interior parts
 - Issue EASA Form 1
- Lantal's terms of approval are:
 - CS23/25/27/29

Group Portrait

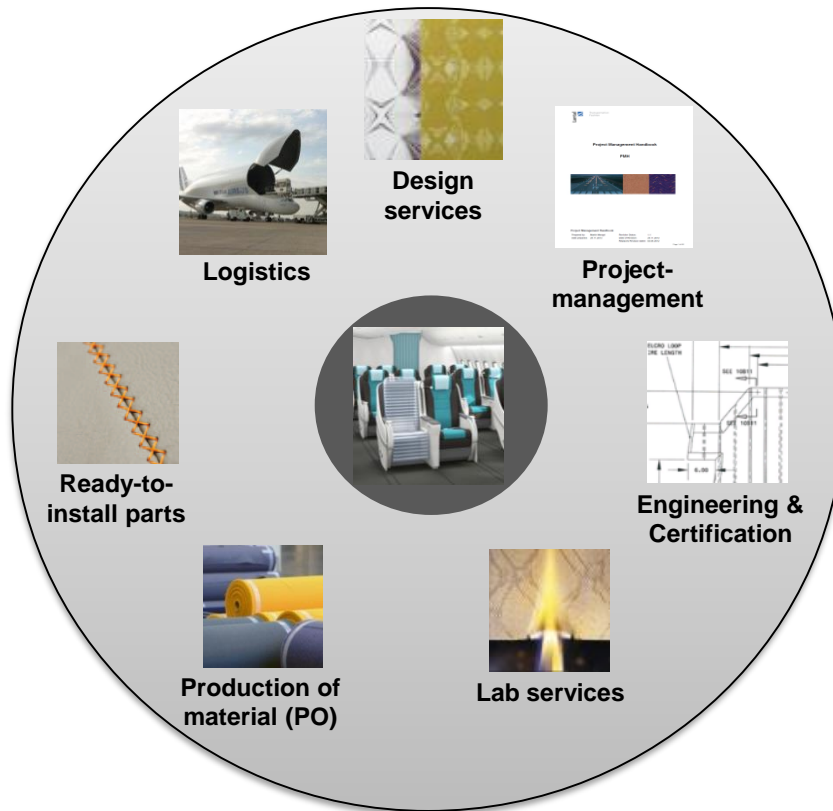
ASI and ACC – Design Organization (DO)



- Lantal's subsidiaries ASI and ACC have the status as Design Organization (DO) with the approval number EASA.21J.129 respectively EASA.21J.505.
- As a consequence of that approval, Lantal is able to conduct any minor changes or to apply for major modification which are related to the scope of work
- Lantal is also qualified to develop new soft interior parts and create approved design data

Lantal's all-in-one solutions

Parts and services



- Lantal's parts range from single roll goods to ready-to-install parts
- Lantal provides also a huge range of services, from design service, lab service to engineering & certification (MCA / STC) services, project management and logistics
- Parts and services are available in all kinds of combinations, if as a single service or product, or a whole package, Lantal makes it possible

Lantal's all-in-one solutions

Design services

- From the very first idea to a whole cabin interior design, Lantal's design team provides consulting, support, samples and 3D renderings for the best customer solution
- More than 10 designers worldwide working together with design consulting companies, airlines, aircraft OEM's and seat manufacturers on the perfect match for their interior.
- Every year Lantal's design team develops a Conceptual Forecast by screening new trends, styles and customer requirements, to inspire Lantal's customers and show Lantal's design abilities.



Design services
Some references

PriestmanGoode.

TEAGUE

HONOUR

seymourpowell

ludekedesign

PearsonLloyd



Landor

native

mormedi



trend_works



tangerine

DESIGNINVESTMENT

forpeople

Design services

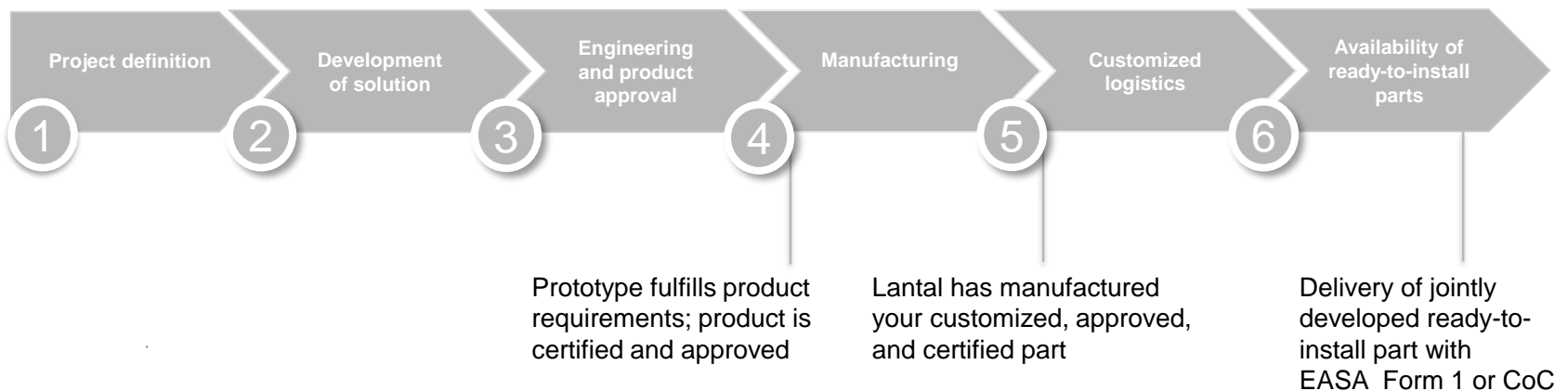
Some reference projects

Design company / Airline	Activities
PriestmanGoode / Thai Airways	Design of Y/C seat covers and manufacturing of fabric
PriestmanGoode / Swiss	Design of seat covers, curtains, carpets for B777 3-class configuration (Y/C, B/C & F/C), manufacturing of fabric
PriestmanGoode / Latam	Design of seat covers and manufacturing of fabric
JPA / Air China	Design and manufacturing of seat covers, curtains, carpets for 3-class configuration (Y/C, B/C & F/C) for B777
Tangerine / Azul	Design and manufacturing of carpet for A350
Acumen / Etihad	Design and manufacturing of F/C handtuft carpet for A380
Ludeke Design / Sri Lankan	Design and manufacturing of B/C & Y/C carpets
Teague & Kubo Design / Vietnam Airlines	Design and manufacturing of seat covers, curtains, leather for headrest, armrest and ottoman for B/C, carpets in a 3 class configuration (Y/C, Y/C+, B/C) for B787 and A350

Lantal's all-in-one solutions

Project management

- Lantal's team of project managers guide you through your project
- Lantal's project managers plan, schedule, organize, and monitor your project with all milestones to assure successful implementation.
- Six easy steps from the vision to your cabin soft interior



-
- Thanks to the status as Design Organization (DO) of Lantal's subsidiaries ASI and ACC, Lantal is able to provide different services like:
 - Design & certification of cabin interior refurbishment of soft interior parts (MCA) for:
 - Carpets
 - Seat and headrest covers
 - Curtains
 - Crew rest covers and mattresses
 - Issue of type design (drawings with Catia v5, ECR) and compliance data (QTP,QTR), as well as technical publications (SB, CMM)

Lantal's all-in-one solutions

Lab services



- In connection with the Production Organization Approval (POA), Lantal's lab was audited by the FOCA.
- Lantal is able to provide:
 - Recognized test certificates for:
 - CS25.853 Part I – Flammability Test
 - CS25.853 Part II - Seat burn test
 - CS25.853 Part IV - Heat release rate
 - CS25.853 Part V – Smoke
 - ABD0031 – Smoke and Toxicity
- Accredited as a center for fire tests pursuant to ISO/IEC 17025 and Airb



Lantal's all-in-one solutions

Production of material

- Lantal designs, produces and delivers carpets, fabrics and leather
- Lantal's production sites in Switzerland fulfill the highest quality and economic standards, mean:
 - Certified as EN9100 and ISO 9001
 - Approved supplier of Airbus and Boeing
 - Reduction of CO2 level throughout the production process
 - Fulfillment of Swiss wastewater standard
- Lantal ensures, that all subsidiaries and partners fulfill the Lantal quality and economic standards



Production of material

Some reference OEM's & airlines



Production of material
Some reference seat OEM's



Lantal's all-in-one solutions

Ready-to-install parts



Seat

Seat and headrest covers



Fabric and leather, cut to size, sewn. Also for seats with Pneumatic Comfort System

Antimacassars



Fabric and leather, cut to size, sewn

Arm caps



Cut to size

Literature pockets

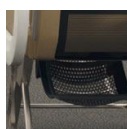


Custom-designed to fit the seat

Leg-/ footrests



Leather, cut to size



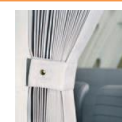
Nets, custom-designed to fit the seat



Cabin Divider

Curtains

Pleated, sewn, or steam-set, including tie-back



Plain, sewn, including tie-back



Floor

Carpets

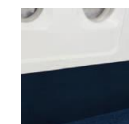
Cut to width, rectangular tiles, cut to size, shapes pre-cut to size



Floor to Ceiling





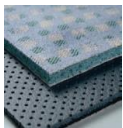






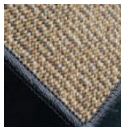




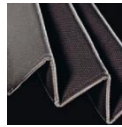
Lower sidewalls

Cut to size



Lantal's all-in-one solutions

Ready-to-install parts & options

Parts	Seat and headrest covers	Antimacassars	Curtains	Carpets
	 <p>Fabric and leather, cut to size, sewn. Also for seats with Pneumatic Comfort System</p>	 <p>Fabric and leather, cut to size, sewn</p>	 <p>Pleated, sewn, or steam-set, including tie-back Or: Plain, sewn, including tie-back</p>	 <p>Cut to width, rectangular tiles, cut to size, shapes pre-cut to size</p>
Options	 <p>Lamination, fabric and leather</p>	 <p>Embroidery, fabric and leather</p>	 <p>Laser-perforated or semi-transparent</p>	 <p>Tone-on-tone serging</p>
	 <p>Perforation, leather</p>	 <p>Embossing, leather</p>	 <p>Double-sided printed</p>	 <p>Contrast serging</p>
	 <p>Contrasting seams and decorative stitching, fabric and leather</p>		 <p>Light-blocking</p>	 <p>Self-adhesive coatings</p>
	 <p>Stain repellent, antimicrobial finish, fabric</p>		 <p>Sound-absorbing</p>	

Lantal's all-in-one solutions

Ready-to-install parts, Pneumatic Comfort System (PCS)



Lantal's all-in-one solutions

Ready-to-install parts, Pneumatic Comfort System (PCS)



Polyester 3D-mesh

- Climatization
- Seating comfort, ergonomics
- Haptics (touch-and-feel)

Nomex/Kevlar

- Accidental damage
- Certification issues (flammability)

PUR pneumatic cushion

- Comfort, firmness

Lantal fabric cover

- Comfort, wearability, protection,
- Individual Design Concept, airline CI



Production of PCS parts
Some premium airlines using PCS



Lantal's all-in-one solutions

Logistics



- **Essentials Stock:** Lantal's Essentials Stock contains a selection of stylish, distinctive and tasteful articles, which allows a fast, and off-the-shelf delivery
- **Consignment stock:** In consultation with you, Lantal retails a consignment stock of your specific articles (including PCS)
- **On-site warehousing:** Lantal's warehouses all over the world guarantee a fast due date delivery
- **OTD:** Lantal is proud to have an on time delivery of 99.5%



Some reference projects

Austrian Airlines



- All ten Austrian Airlines long-haul jets – six Boeing B767 and four Boeing B777 – are being modernized with a new interior.
- The contract involved the following products and services:
 - Project management, design and manufacturing
 - Ready-to-install seat covers for Economy and Business Class
 - Pneumatic Comfort System in Business Class, integrated in Thompson Aero Seating Vantage seats
 - Literature pockets in leather with embroidered logo
 - Pleated curtains as cabin dividers



Some reference projects

Turkish Airlines



- Initial provisioning of 105 new aircrafts – Boeing 777 and Airbus A330 – and the refurbishment of the existing fleet of 149 jets with a total of more than 20'000 seats.
- Lantal's parts and services:
 - Project management, design and manufacturing, engineering and certification services
 - Ready-to-install leather seat covers
 - Seat cover fabrics
 - Leather headrest, logo embossed
 - Tulip-theme laser-cut and pleated curtains
 - Class dividers also laser-cut and pleated
 - Carpets



Some reference projects

Edelweiss Airlines

- Development and production of the whole interior of its long-haul jets. In total 617 seats, 25 curtains as well as a full complement of carpets were involved
- The project comprised the following Lantal parts and services:
 - Project management, design and manufacturing
 - Lightweight seat covers, delivered in yardage, composed of wool and polyamide
 - Steam-pleated curtains, ready-to-hang
 - Carpets with outstanding longevity



Some reference projects

Alitalia, Etihad



- Refurbishment of two A330 from Etihad to Alitalia design
- Lantal's parts and services:
 - Project management, design, engineering and certification services (MCA)
 - Ready-to-install seat covers with integrated literature pockets for Economy and Business Class
 - Pleated curtains as cabin dividers



Some reference projects

Alitalia



-
- Refurbishment of ten A330:
 - Lantal's parts and services:
 - Project management, design, engineering and certification services (MCA)
 - Ready-to-install seat covers with integrated literature pockets for Economy and Business Class
 - Pleated curtains as cabin dividers



Some reference projects

Etihad Regional



- Refurbishment of Saab 2000
- Lantal's parts and services
 - Project management, design, certification, manufacturing and engineering services (MCA)
 - Ready-to-install seat covers
 - Flight attendant seat covers



Some reference projects

Aircalin



-
- Refurbishment of an A320:
 - Lantal's parts and services:
 - Project management, design, certification, manufacturing and engineering services (MCA)
 - Ready-to-install seat covers
 - Pre-cut carpets
 - Seat covers



Your benefits of going with Lantal at a glance

- Single point of contact, means risk minimization
- Reducing total costs of ownership
- Consulting and support over the whole value chain
- High-quality and ecologically products
- Unique product & service packages
- Partner with vast know-how in design, textiles and also the aircraft industry

