Overview

Airline Services
Interiors
Airline Services Group

• In the aviation business for nearly 30 years
• Now owned by LDC (part of Lloyds Banking Group plc)
• Significant managerial and operational changes
  – New CEO, CFO, Business Unit Management
  – Number of key other management changes
  – Implemented a number of operational improvements
• Group Turnover: £54m
• Employees: 1,000
• Refocused and repositioned into 2 Businesses
  – **Airline Services Handling** – Ground Handling, Aircraft Presentation and De-icing
  – **Airline Services Interiors** – Design, Manufacture, maintenance and repair of cabins
  – Airline Services Components – Sold in 2015
Airline Services Group

Manchester
HQ & Soft Furnishings

Manchester
Seating Overhaul Centre

Manchester
Manufacturing, Design & Engineering

Stansted
Galley, Avionic & IFE
Managed Solutions…concept to delivery

We create and deliver cost-effective, quality and timely customised solutions for redesign, refurbishment or upgrade of Cabin Interiors.

Specialising in IFE and In-Seat Power integration.

Innovative Interiors Design
Comprehensive Manufacturing
Experienced MRO Capability
Dedicated Part 145 Maintenance and Refurbishment.
Tailored services to meet our customer’s time and cost constraints.

- **Passenger Seating at Manchester**
  - Extensive seat repair capability
  - Cabin interior trim replacement

- **Cabin Electrical at Stansted**
  - Beverage Makers, Boilers & Ovens
  - Trash Compactors
  - IFE Equipment
  - Emergency Medical Kits

Through Life Support… economical and efficient
Seat Overhaul Workshop’s
Engineered Products… quality delivered

High quality, cost effective spares
- Managing obsolescence
- Product improvements to address reliability
- Reduce total cost of ownership

Soft Furnishings
- Antimacassar
- Cabin Curtains
- Crew Rest Sound-Proof Curtains
- Literature Pockets
- Seat Covers
- Valises

Seat Components
- Armcaps
- Bumpers
- Escutcheons
- Mealtrays
- Shrouds
- Video Garages

Cabin Interiors
- Brand Panels
- Crew Rest Mattresses
- Galley Tops
- Mirrors

Furniture
- Dogboxes
- Monuments
- Stowages
- Windbreaks
Design and Engineering… Innovative and Flexible

- Minor mods and certification
- Complete cabin re-design
- IFE and seat integration
- Layout of Passenger Accommodations
- Repair Schemes
- Soft Furnishings Development
- Passenger Seat Component Design
- Cabin Component Design
Certification... we test to the limits

Abuse Loads
De-lethalsation
Endurance
Flammability
Finite Elements
Static Structural

Airline Services Interiors
Engineered Products... created

End-to-end process for the design and manufacture of a replacement part:

- Replication of products and rapid prototyping
- Utilising laser scanning and 3D printing
- Design of new component
- In house manufacture of non-structural plastic and metal components
- In-house tooling manufacture
- Testing and certification services to meet regulatory standards
- Provision of EASA Service Bulletin to allow the installation of the parts on your fleet
Engineered Products… quality delivered

- Brand Promotion, Jet Mirror Replacement, Lightweight Parts, Obsolescence Solutions, Significant OEM savings.
Engineered Products… quality delivered

- Galley Tops, Escutcheons, Seat Bumpers Tray Tables, Seat levers, Significant OEM savings.
Our Customers…
Our Approvals…

EASA Part 21 Manufacturing Approval Ref. EASA UK.21G. 2342
C2 Production of Components – Aircraft Cabin Interiors, Cabin Dividers, Seat components excluding primary structure, Non-Structural Cabin Components including floor coverings, IFE Systems including associated harnesses and cables, Baggage bay flooring & Soft Furnishings
Manufacture of ATA Chapter 25 Soft Furnishing Components, including floor coverings, Plastic & Metallic passenger seat & Cabin Non-Structural Components

EASA Part 21 Design Approval Ref. EASA UK21J.129
UAE GCAA Design Organisation Approval Ref. DOA/130
Design of Components
Design of ATA Chapter 25 Soft Furnishing Components including floor coverings, Plastic & Metallic passenger seat & Cabin Non-Structural Components
Cabin re-configuration LOPAs
Structural Components

EASA Part 145 Maintenance Approval Ref. EASA UK.145.00305
FAA Repair Station Approval Ref. 4A4Y963B
TCCA CAR 573 Maintenance Organisation Approval Ref. 808-19
C3 Comms & Nav - Maintenance & Overhaul of ATA Chapter 23 In-flight Entertainment Systems
C4 Doors – Hatches
C5 Electrical Power - Maintenance & Overhaul of Galley & Cabin Electrical Systems & Components
C6 Equipment - Maintenance & Complete Overhaul (On & Off wing) of Passenger & Crew Seats, including electrical Flight Deck Crew Seats
C13 Indicating / Recording Systems
C18 Protection ice / rain / fire
C20 Structural

UKAS Test House Laboratory Accreditation Ref. 2776
Burn Testing of plastics & Fabrics i.a.w. Regulation CS/FAA 25 853
Overview

Further more…Taking you further, giving you more

Managed Solutions…concept to delivery
Creative and comprehensive project management
- Cabin re-design, refurbishment or upgrade
- IFE seat integration
- Mid-life upgrade and re-branding

Through Life Support…economical and efficient
Tailored and cost-effective cabin lifecycle management
- Lease/ownership transition
- Engineering & design services
- Modification kitting
- Complete cabin maintenance capability
- Passenger seats
- Galley equipment – ovens, boilers, coffee makers, trash compactors
- Emergency medical kits

Engineered Products…quality delivered
Cost effective quality manufactured parts
- Rapid prototyping, product improvement and manufacture
- Injection moulded or vacuum formed plastics
- Complex machined components
- Seat covers
- Curtains
- Carpets
Delivering On Our Promises…

Further **more**…

**Taking you further** **giving you more**
Examples Refurbishment Projects
British Airways B747…IFE and refurbishment

First Class, Business Class, Premium Economy and Economy Class
Design, certification and manufacture of modification kits to integrate new Panasonic IFE
New universal power sockets at every seat in World Traveller Plus and individual USB sockets
New back foams and fitted seat covers to improve comfort and appearance

*The lightweight design of the system helps to save fuel, while offering customers over 1500 hours of entertainment programming on larger, hi-resolution screens featuring tablet style touch and swipe controls.
British Airways… Economy Before / After
British Airways B747… Economy Class delivered
British Airways…Premium Economy Before / After
British Airways B747... Premium Economy delivered
British Airways B747... Business Class delivered
British Airways B747…First Class delivered
BA Project Timeline… 245 days from ITCM to 1st kit

All kits delivered on-time, in-full.
Lufthansa... Economy Class IFE and Refurbishment

Design, Certification, Manufacture, Kit, EY Recaro Seat Integration
Integration of Zodiac RAVE in-flight entertainment system and in-seat power
Lufthansa A340 and B747...delivered
Aer Lingus B757… Business Class delivered

Economy and Business Class
Design, Certification, Manufacture, Kit
Integration of Zodiac RAVE in-flight entertainment system and in-seat power
Design and manufacture of seat covers, curtains and plastics
Design and manufacture of wardrobe monuments and windbreaks
New emergency escape path lighting
Aer Lingus B757… Business Class delivered
Aer Lingus B757 … Economy Class delivered
Aer Lingus B757… Business Class delivered
Aer Lingus B757... Business Class delivered
Air Berlin A340 Refurbishment...delivered

Full Mid Life refurbishment and re-brand of Sogerma seats
Design, Certification, Manufacture, Kit, Seat Integration
AirBerlin Sogerma Business Class...delivered
After Sales Commercial Support

An example Care Kit:
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