GREEN CABIN ALLIANCE

TODALY'S PANEL:

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Our Mission

The Green Cabin Alliance brings the aircraft interiors industry together around a shared mission to reduce the environmental impact of aircraft cabin interiors.

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Sustainability today:

- Current sustainability initiatives are fragmented

- The industry needs a shared vision

- This will set the direction of travel for GCA members

- To make sure we're all working towards the same goal

By 2040 Sustainable Cabin Will Offer:

- Exceptional pax experience

- Premium look & feel

- Natural cabin evolution

As well as:

- Better Business Model for purchase & production

- Supply chain to enable responsible End-Of-Life

- Better for the planet

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In service

Design &
Manufacture

End of Life

Recycling

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Game changers:

- Business Models
- Circularity
- Use of Data

Business Models

Strategy / Mindset-shift

- The driver is: Airlines have pledge to become Net Zero by 2050.
- The aviation supply chain needs to contribute to airlines reaching this goal.
- It will require high level strategic, mindset-shift to achieve this transition to Net Zero.
- Legislation and government incentives are a catalyst for the change required.

EU Corporate sustainability reporting directive (CSRD)

- This legislation aims to improve the quality, reliability and accessibility of sustainability information.
- Sustainability reporting will become the fourth factor in corporate accounting alongside revenue, cost, and capital.
- Sustainability reporting is also set to become a major factor in defining business risk.

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Business Models

Reducing carbon footprint
- Companies begin to calculate carbon footprint using the Greenhouse Gas Protocol's Scope 1, 2, and 3 definition.
- To reduce this carbon footprint, corporations can reduce the emissions generated by their own production as well as emissions from purchased energy sources and those from upstream and downstream supply chain.

Ownership or take back models
- The debate is starting about who is responsible at End-of-life for cabin products.
- The aim is to reduce material ending up in landfill but more importantly to recover and retain as much raw material as possible at its highest commercial value in the value chain.
- Models of leasing, subscription and take-back programmes are being explored in consumer electronics, automotive and textile industries.
- In addition to reducing the consumption of virgin raw material, take back models contribute to a reduction in energy use and pollution linked to the production of new items.

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Business Model Vision

Support Airlines to achieve their pledge to become Net Zero by 2050.

Embrace sustainability reporting as a fourth factor in corporate accounting, alongside revenue, cost, and capital . To provide transparency to airlines, passengers, and investors alike.
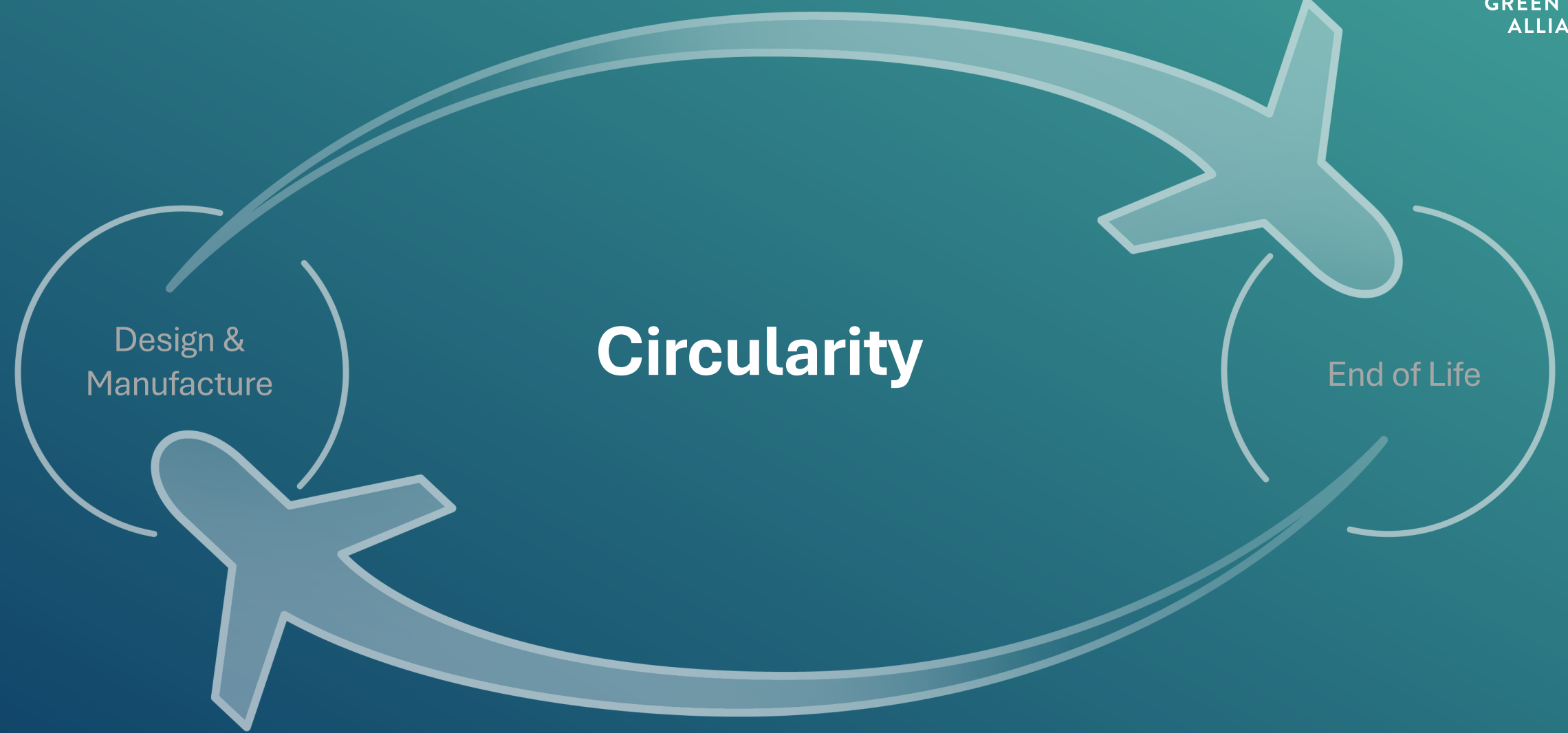
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Circularity

- The current linear take, make, dispose model is not sustainable - it uses loads of vital raw materials, and creates a lot of waste.

- Circularity means 2 things:

  - keeping the product and materials in-use for as long as possible, through design for longevity, focusing on reliability, durability, and modularity. This lengthens the life span of the product, making it need fewer repairs, be more upgradeable and reduces waste from spares.

  - joining up that end of life with the start of life - making sure the materials, once they're no longer in active service, can return into the manufacturing stream and be used again.

Circularity cont'd

- The key is that materials need to stay in what we call a "high value" state - that means plastic sheets can be reformed into plastic sheets, aluminium can make new aluminium, composite can make composite again. And that's tough - generally parts are "downcycled" where they make less valuable items like filler or road aggregate.

- Normally its not known exactly what they are made from, they're bonded together with other parts, its logistically too difficult or they simply dont have the properties to be used again.

- We need to make choices at the design stage such as design for disassembly, materials choice and putting in place the right systems to allow materials to be re-used.

Circularity vision

Every part in the cabin designed for a long life - modular, repairable, upgradable.

Every material selected to minimize its impact on the planet and identified with a digital passport so that at the eventual end of life the materials become resources again, not waste.

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Use of Data

- Until now, design has always been quite an emotive, qualitative subject. Its about how the products make you feel, and that translates into physical spaces, materials, lighting. However in order to achieve sustainability, we need to bring in data.

- With all the focus on "sustainability" at the moment, there's a lot of misconceptions out there - just because something is made of pineapple skin, or beetroot leaves, it must be better right? Well not always - it depends on what you're measuring, whether its carbon footprint, waste, fossil fuel use, societal impact.

- That's where using data to inform design decisions is crucial - You have to choose your areas of impact, get a baseline, and then compare your options to make sure that you're actually making a difference where it matters.

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Use of Data cont'd

- In order to change business models, move towards a circular economy, we need data to open up all these possibilities.

- Once of the most useful forms of data available are Life Cycle Assessements (LCAs). These are performed on products and they reveal the environment impact over the products life.

- An LCA measures 10s of environmental impacts, such as carbon, water use, and allow you to see which materials are impacting what, and where in the lifcycle the biggest impacts are happening.
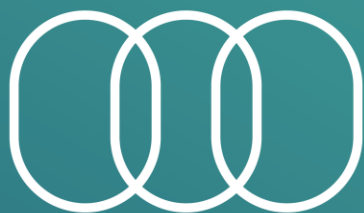
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Use of Data vision

Data such as LCAs, on every material and company, is freely

available and easy to access, like financial data is now.

Products all have LCAs, PEFs, material passports and EPDs

so that designers and airlines can choose the most

appropriate ones for their sustainability goals

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