

Regional GATEWAY

Dedicated to regional and business airports

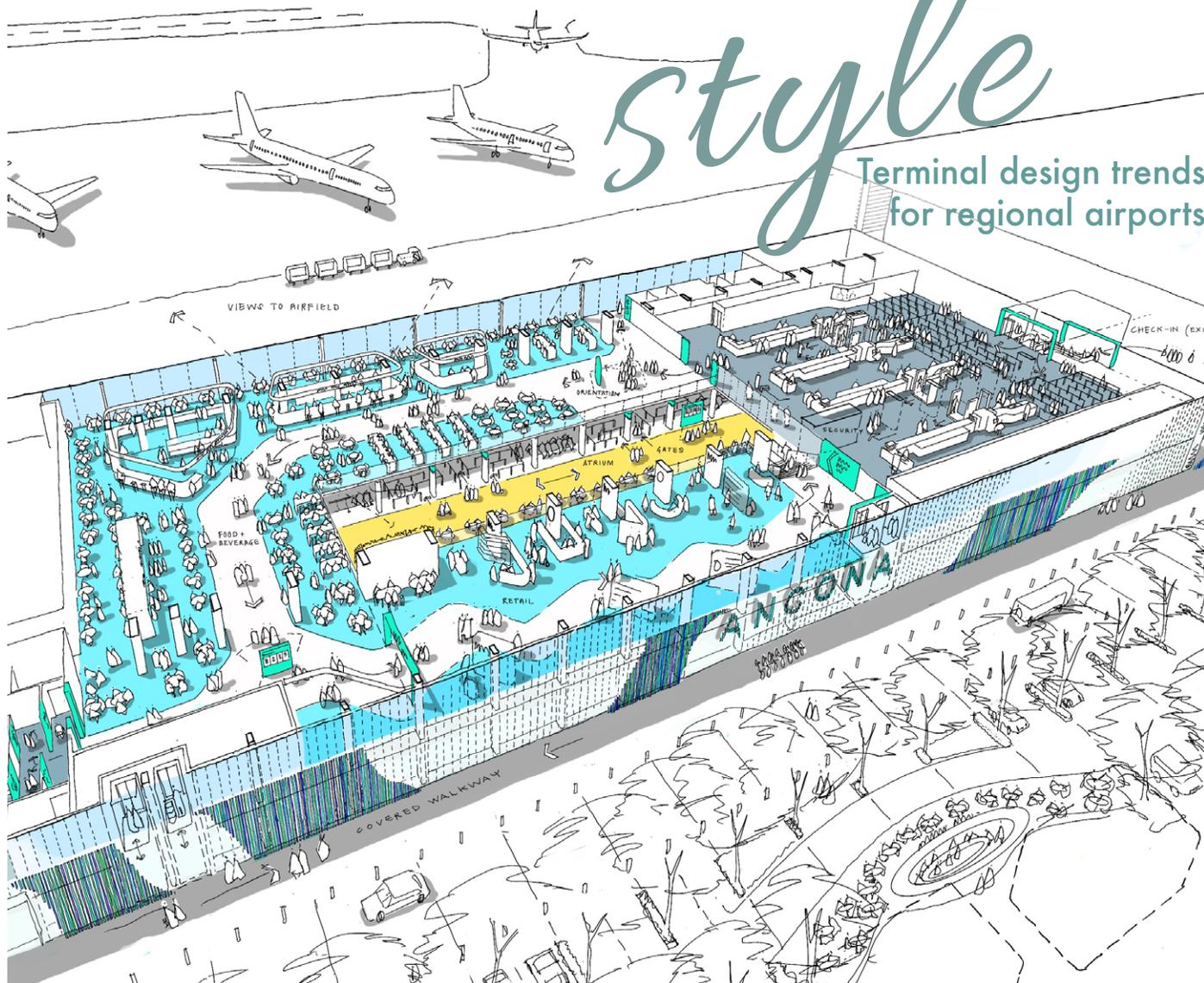
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Fundi Sithebe's
View from the top

SUSTAINABLE

style

Terminal design trends
for regional airports



Baggage handling • Fuelling FBOs • Counter-drone technologies
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Smart sustainable design



Terminal design and seating

Red wedge: Georgia's stunning and sustainably smart terminal at Kutaisi Airport, designed by Dutch architects UNStudio.
Kutaisi Airport, UNStudio®, Nakanimamasakhlisi

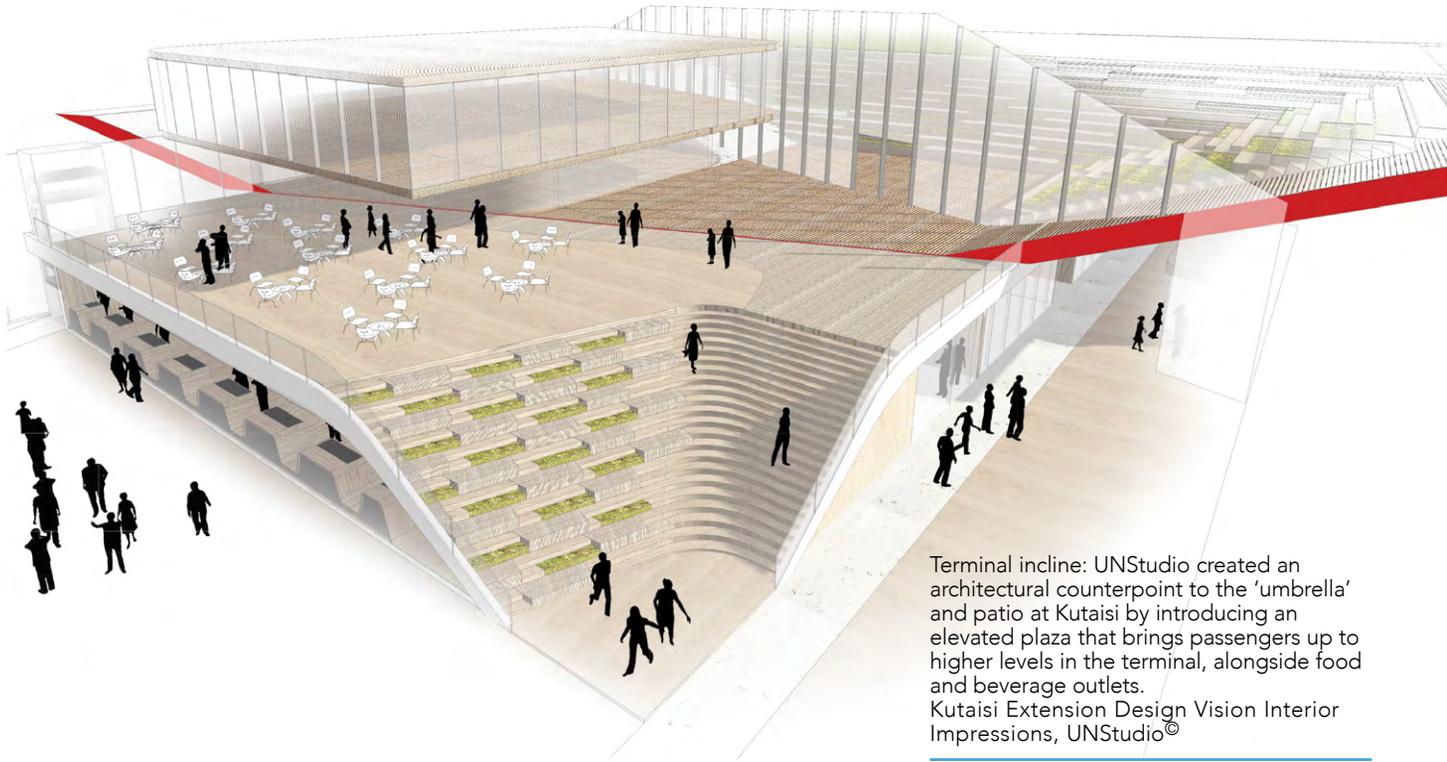


With modest budgets compared to their mega-hub counterparts, regional airports need to be nimble with resources and agile in their use of space. Paul Sillers talks with architects and designers whose recent projects encapsulate the prevailing trends in terminal design.

When Adelaide-based architect Ashley Halliday clinched the contract to design the Kangaroo Island Air Terminal located off mainland South Australia, he set about creating something “different, innovative and unexpected,” that would “immerse people in KI’s unique natural environment and enchant them with

serendipitous moments of discovery, surprise, peace, and tranquility”.

The terminal, completed in 2018, greets arriving passengers with a striking curvilinear weathered timber façade, “detailed to express and celebrate the effects of weather and time – an authentic and defining aspect of



Terminal incline: UNStudio created an architectural counterpoint to the 'umbrella' and patio at Kutaisi by introducing an elevated plaza that brings passengers up to higher levels in the terminal, alongside food and beverage outlets. Kutaisi Extension Design Vision Interior Impressions, UNStudio®

We asked the University of Tbilisi to dig wells underneath the airport to find the water we needed for drinking water, but also for cooling down and heating up the airport in a sustainable way.

Frans van Vuure, Director and Senior Architect, UNStudio

Kangaroo Island's weather-beaten character and resilience". The architecture is "more 'nature-lodge' than 'commercial terminal'," says Halliday, adding that health and wellbeing are promoted in the terminal through an intelligent ESD (Environmentally Sustainable Design) approach.

"Highly innovative energy, natural ventilation and dynamic thermal modelling assessment influenced the building's geometry, envelope, façade porosity, materiality and indoor climate strategies," says Halliday, aiming to achieve net-zero carbon emissions through the deployment of a 70 kW solar photovoltaic (PV) system, which aligns with the island's electric-car-charging network initiative.

Smart, sustainable terminal design is also about leveraging provincial assets. A compelling example can be found at Georgia's Kutaisi Airport, designed by Amsterdam-based UNStudio. The original terminal was designed by the firm eight years ago, and it was reappointed to build a new extension that's currently in the works.



Kutaisi Airport, UNStudio®, Nakanimamasakhlisi



Terminal design and seating



At Kutaisi Airport, we created this kind of lobby space where you feel comfortable, and everything is about health and relaxing oneself.

Frans van Vuure, Director and Senior Architect, UNStudio

“When we started the Kutaisi project, we said to the client: if you have local resources, use them,” says Frans van Vuure, Director and Senior Architect.

“We asked the University of Tbilisi to dig wells underneath the airport to find the water we needed for drinking water, but also for cooling down and heating up the airport in a sustainable way.”

Also drawing on local resources, the architects worked with local suppliers for the structure of the terminal, whereby, van Vuure says, “the wood used to create the ‘umbrella’ structure in the terminal roof comes from a local plant in Kutaisi.”

A SMART AND FLEXIBLE GATEWAY

The successful uptake of passenger traffic at Kutaisi has been enabled through inbuilt design flexibility as well as through empathy with the local culture, says van Vuure.

“If you connect flexibility with programming, it creates versatility, with



Celebrating the effects of weather and time: Ashley Halliday Architects’ Kangaroo Island Kingscote Airport terminal greets arriving passengers with a striking curvilinear timber façade evocative of the natural environment.

which you can grow or shrink different areas within the terminal envelope. At Kutaisi Airport, we created a buffer zone between the Departures Hall and the Arrivals Hall, which became our Central Concourse. This has a specific function, whereby the airport operator can adapt the capacity of the departures hall according to the airport’s changing flow of passenger traffic.”

Embracing the region’s heritage was intrinsic to its design: At the project’s inception, UNStudio agreed with the client that the terminal would represent a ‘lobby’ for the country.

“In Tbilisi, you have old mansions, with opulent lobbies. They’re derelict now, but they symbolise the heritage of Georgia’s hospitable culture. At Kutaisi Airport, we





It's key for regional airports to be able to quickly modify their spaces to accommodate changes, from regulator requirements, airline needs and types of passengers.

Office of McFarlane Biggar

created this kind of lobby space where you feel comfortable, and everything is about health and relaxing oneself."

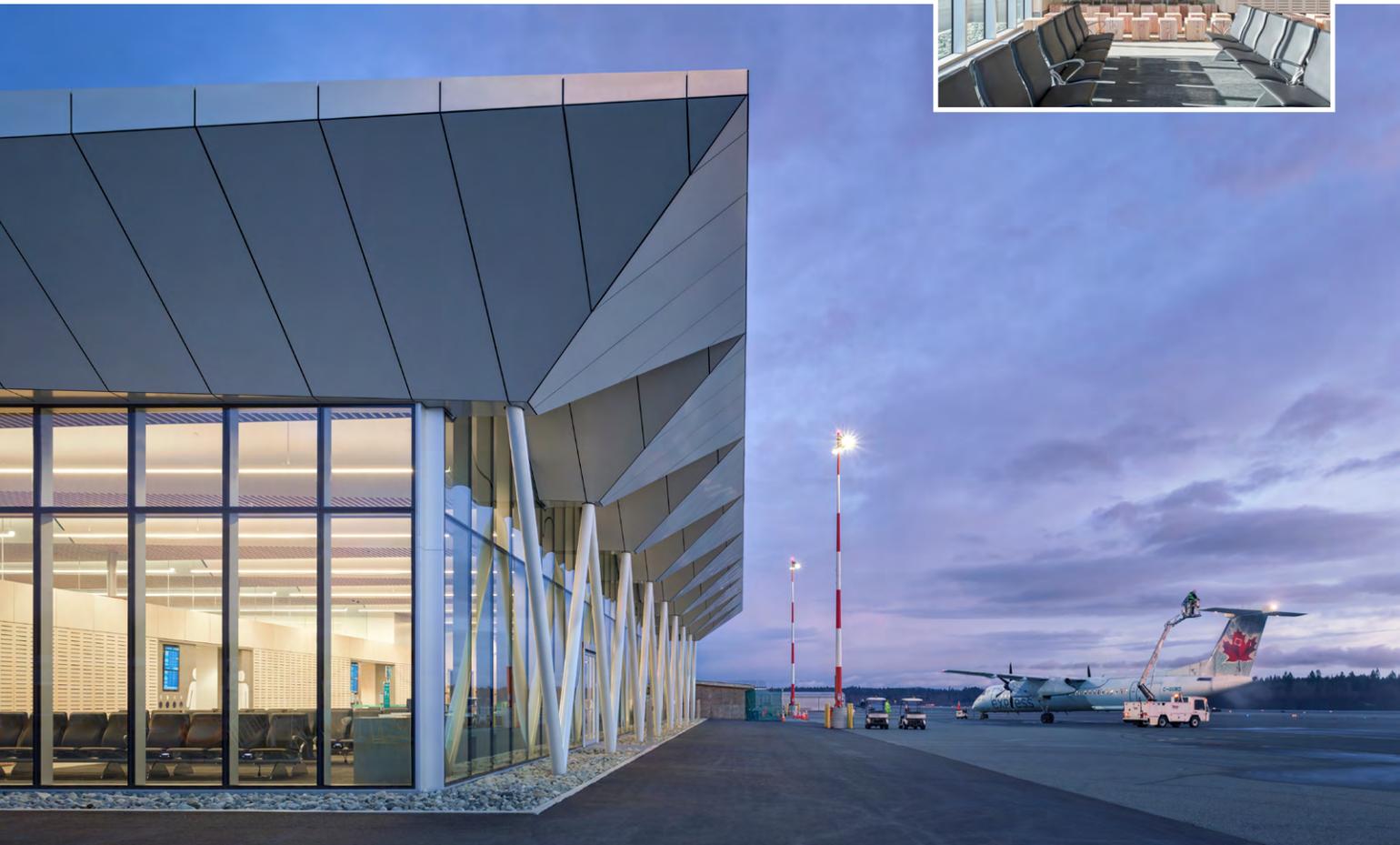
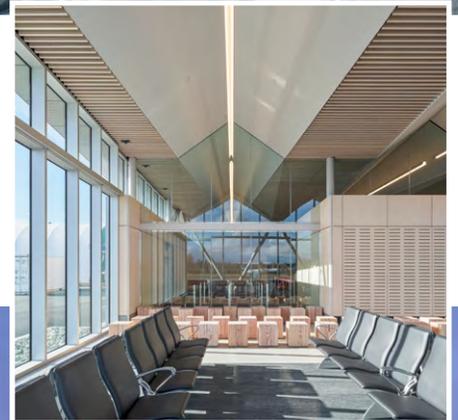
To implement this, the architects created an external patio space, so that departing passengers can venture outdoors before they leave the country, taking in the scenic Caucasus Mountains on the horizon. In the extension, UNStudio created an architectural counterpoint to the 'umbrella' and patio by introducing an

elevated plaza that brings passengers up to higher levels in the terminal, alongside food and beverage outlets.

DEFINING AN EXPANSION STRATEGY

In Vancouver, multidisciplinary design practice OMB (Office of McFarlane Biggar) uses a contextual design approach to regional airport terminal design, where "each project is an opportunity to create something

In space : OMB used a contextual design approach for Vancouver Island's Nanaimo Airport. "It's key for regional airports to be able to quickly modify their spaces to accommodate changes, from regulator requirements, airline needs and types of passengers."
Photos: Andrew Latreille Photography





Terminal design and seating



Fly another day: Pascall+Watson has set about repurposing the original old terminal at Ancona Airport which had been mothballed a decade earlier.



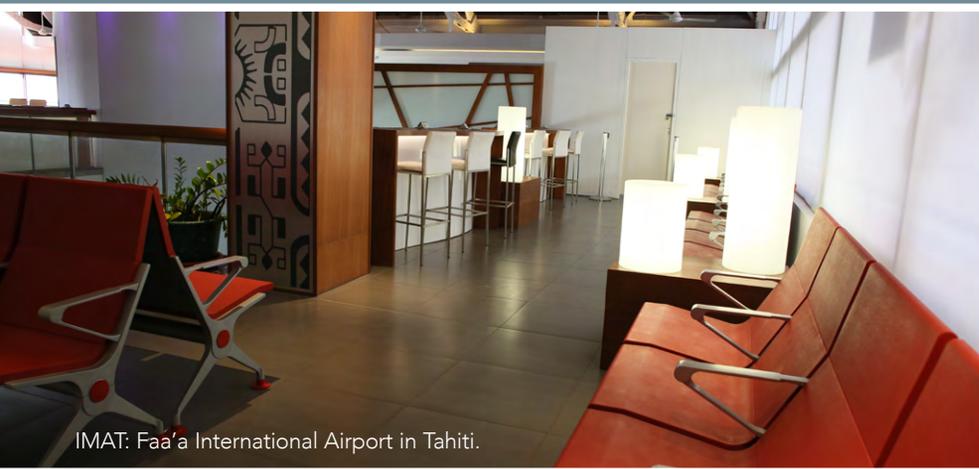
meaningful: to define the needs and aspirations of a community”.

Having designed a number of Canada’s airports, OMB says “it’s key for regional airports to be able to quickly modify their spaces to accommodate changes, from regulator requirements, airline needs and types of passengers”.

The firm recently designed Vancouver Island’s Nanaimo Airport with a modular approach: “For Nanaimo, the building’s overarching structural module and integrated mechanical and lighting module are fixed, but partition walls and cellular elements are changeable, should the airport need to alter the interior significantly.”

As a general trend, OMB says that it is hoping that in the future the footprint requirements of security screening at regional airports on the land-side will get smaller, enabling more space for

Smart sustainable seating



IMAT: Faa’a International Airport in Tahiti.

can be disassembled – nothing is welded; the metallic frame is assembled by means of screws. Every component used is recyclable: Aluminium and steel can be re-cast, and polyurethane foam can be reprocessed for use as sound insulation in buildings.”

As for flexibility, Herreria says IMAT’s modular seating means “all configurations of seats, armrests and tables are allowed,” for future layout changes. In the current climate, the designs have been augmented with signs and tapes prohibiting sitting, and incorporation of methacrylate panels between passengers to ensure social distancing.

“In the current situation, airport terminals are paying strict attention to cleaning and disinfection of furniture elements, including seats for waiting areas. Therefore, the importance of seats with non-porous surfaces that are easy to clean and maintain should be stressed,” Ignacio Herreria, Sales Manager at

Spanish seat manufacturer IMAT, tells Regional Gateway. IMAT’s seats are manufactured using polyurethane foam, avoiding the use of textile fibres and vinyl, leather or other material coatings, which make stain-removal difficult.

Addressing recyclability, Herreria says the key is that “all IMAT seating systems

WHY WOOD IS A NATURAL CHOICE

As we reimagine airport interiors after COVID-19, an important factor to consider is the choice of materials used in furniture design. With wood being one of the highest trending materials,

revenue-generating facilities, such as car valeting, lounge access and fast-track boarding.

“Typical for all our terminals, the seating and furniture are always flexible and movable. Often this requires flexibility for how power and data are provided to seating. We look to accommodate this through either a raised floor, such as the check-in area in the Fort McMurray Airport or a basement which allows access to move services from below any seating and processing areas, which we did at Victoria Airport.”

Prepping for the future, OMB is working with several regional airports where it anticipates a transition, in respect of passenger parking and valet services, to accommodate charging infrastructure for electric and eventually self-driving vehicles.

Another angle on regional airport design and sustainability is terminal recycling. When London-based airport designers Pascall+Watson designed the new terminal at Ancona Airport in Italy, the brief was to create a sustainable airport with a low (preferably zero) carbon footprint.

To achieve this Pascall+Watson set about repurposing the original old terminal which had been mothballed a decade earlier, when two newer terminals, for arrivals and departures either side of the older terminal, had been constructed.

“We’ve brought back to life the existing building, and it’s currently going through the contract stage of procurement,” says James Speed, Director and architect at Pascall+Watson. The newly recycled terminal building that was sandwiched between the two new terminals “now

provides more gates, more passenger facilities, more retail, more security”.

Another discernible trend, Speed observes, is the boom in sales of food and beverage at airports as airlines drastically reduce onboard catering: “Having meals on the plane is a previous generation’s aspiration. That’s not what people want these days. When you walk through an airport retail environment, it should be much more based on the Amazon Go-type model.”

Speed says airport operators have wised up to the fact that around 50% of travellers are millennials: “The Instagram generation don’t want to spend too much time in airports that look like shopping centres. They want seasonal change, and prefer retail environments with ‘updatable spaces’ – they’re interested in the experience of shopping, not just the products themselves.” ■

Green Furniture Concept sees it as an easy and natural choice when designing airport seating.

“Wood feels goods,” says Sandra Afeyan, Director Sales and Marketing – Americas, for Green Furniture Concept. “If a wooden seat has been designed to properly contour the shape of a body, it offers an exceptionally comfortable and supportive seating experience, despite its hard appearance,” she offers.

Wood is also naturally antiseptic and antiviral. “In other words, wood has the ability to naturally prevent the growth of disease-causing microorganisms,” adds Afeyan. “Green Furniture Concept takes comfort in knowing that wood is one of the safest materials for public places.”

In terms of durability, wood has proven the test of time over centuries and unlike most other materials used in furniture design, wood ages with dignity. “In fact, the older wood gets, the more interesting and complex it looks,” says Afeyan. And from an environmental perspective, the fact that wood is a renewable material is, of course, key. Green Furniture Concept

Wood has the ability to naturally prevent the growth of disease-causing microorganisms.

not only uses responsibly sourced and certified timber to ensure environmental sustainability, but it also plants a tree for every product sold. In addition to the cyclical nature of wood, the processing of it to make furniture has far fewer environmental implications than that of man-made materials.

And if all that isn’t enough, then studies have identified that the presence of wood indoors is associated with an enhanced feeling of physiological and psychological wellbeing. “It can lower blood pressure and heart rates, reduce stress and anxiety and increase positive social interactions, thus enhancing the overall passenger experience,” concludes Afeyan. ■



Wood, glorious wood: Green Furniture Concept seating at Nice Côte d'Azur Airport.