

PASSENGER TERMINAL WORLD

APRIL 2023

Flight path

THE E-VTOL ECOSYSTEM SET TO
BOOST THE DEVELOPMENT OF
ADVANCED AIR MOBILITY
INFRASTRUCTURE

Meet the Megatrends

Discover 12 trends that are set to change the travel landscape by 2023

Non-aeronautical revenue

Boost passenger spend with innovative activities and one-of-a-kind shopping experiences

Project NAPKIN

The challenges of replacing the UK regional fleet with zero-emission aircraft by 2040





Speed. Security. Scale.

Leidos facilitates secure, efficient passenger movement while enhancing passenger experience through fully-integrated security detection solutions in airports worldwide.

- ▶ Mosaic – Enterprise Solutions
- ▶ ClearScan – CT Scanner
- ▶ B220 HT – Trace Detection
- ▶ Pro:Vision – People Scanner
- ▶ ProPassage – Automated Tray Return

[Leidos.com/security-detection](https://leidos.com/security-detection)





4

UPDATE

- 4 **Building big**
Auckland Airport confirms multibillion-dollar investment plans
- 6 **Fuel for thought**
ZeroAvia and Fortum to explore hydrogen airport refueling infrastructure across the Nordics
- 8 **Award winner**
Changi Airport triumphs at the 2023 Skytrax World Airport Awards
- 10 **Overcome barriers**
Accenture's Prasanna Ellanti outlines how border agencies are adapting to industry challenges

REGULARS

- 78 **Now arriving**
New technologies, systems and projects
- 80 **Back chat**
The role of sustainability in airport lounge design



14



34



52
Cover story



10

FEATURES

SITA MEGATRENDS

- 14 **Trend setters**
PTW explores 12 trends from SITA's *Meet the Megatrends* report that are set to change the travel landscape by 2033

CASE STUDY: BOSTON LOGAN INTERNATIONAL

- 20 **Center stage**
The modernized Terminal E will provide a big American welcome through its iconic design and eco-friendly approach

AIRPORT PARKING

- 26 **Value for money**
Advanced technology and innovative design are making car parking a top non-aeronautical revenue earner

INTERVIEW: SFO & WELL

- 34 **Heart of the matter**
Why promoting the health and well-being of staff and passengers is integral to the future of the airport industry

PROJECT NAPKIN

- 40 **Energy switch**
Project NAPKIN partners share what needs to be done to ensure the rollout of zero-carbon emission aircraft in the UK by 2040

NON-AERONAUTICAL REVENUE

- 46 **Money well spent**
Airport operators can boost passenger spending through innovative activities and one-of-a-kind retail offers

COVER STORY: ADVANCED AIR MOBILITY

- 52 **Integrating innovation**
VPorts is developing an eVTOL ecosystem to nurture the collaboration between manufacturers and traffic management authorities

INTERVIEW: SCOTT BROCKMAN

- 58 **Lead the way**
The 2022 Director of the Year talks about his achievements, how the industry has evolved and what makes a great airport leader



58

IN THIS ISSUE...

PASSENGER TERMINAL EXPO 2023 SUPPLIER INTERVIEWS

64 Airport Intelligence

A fully commercialized software system helps airports operate at maximum efficiency

66 Schiphol Group

Aviation Solutions

Using artificial intelligence to improve the passenger experience, drive operational efficiencies and meet sustainability goals

68 Starglide

The latest belt-based moving walkway design improves the passenger experience, maintenance and energy performance

69 Siemens Logistics

Baggage handling solutions that boost operational efficiency and sustainability

SUPPLIER INTERVIEW

70 SITA

The future of universal digital travel, from everywhere to anywhere, powered by digital identities

DESIGN AND TECHNOLOGY

73 A New Jersey journey

Moment Factory

74 A holistic vision

IDOM

75 On the rise

Green Furniture Concept

76 Problem solved

Zafire

77 Progress report

Hamad International Airport



EDITOR'S COMMENT

Passenger Terminal Expo and Conference welcomed thousands of visitors to Amsterdam on March 14, 15 and 16. Unfortunately, after several canceled flights owing to bad weather, I couldn't attend the event myself but the feedback has been brilliant. The event was jam-packed with innovations from across the industry, as well as plenty of insightful conference sessions to get delegates talking, and you can read about some of those innovations in our exclusive Passenger Terminal Expo 2023 supplier interviews on pages 64-69.

One of the major themes at the conference was 'commercial development, retail, concessions, media and experience' – a vital revenue source for airport operators. As Errol McGlothlan, managing director of EMEA & APAC at Airport Dimensions, which specializes in operating airport lounges and experiences, says in *Money well spent* on page 46, "A happy passenger is a spending passenger." Providing innovative activities and exclusive shopping experiences for passengers is imperative for airports looking to boost non-aeronautical revenue, especially as the industry continues to recover from Covid-19.

Airport parking is an oft-overlooked area for non-aeronautical revenue growth. On page 26, Kevin Rozario explores the technologies being developed to enhance the parking experience for travelers and examines how the design of airport parking facilities is changing.

Elsewhere at Passenger Terminal Expo, there were discussions around the development of advanced air mobility (AAM) and vertiports. On page 52, our assistant editor, Elizabeth Baker, talks to VPorts about the establishment of an AAM integrator world center in Dubai, in partnership with the UAE General Civil Aviation Authority (GCAA) and the Mohammed bin Rashid Aerospace Hub (MBRAH) at Dubai South.

This issue also looks at hydrogen fuel developments in the UK as part of Project NAPKIN (page 40) and explores 12 trends from SITA's *Meet the Megatrends* report that are set to change the travel landscape by 2033 (page 14). I'm sure these trends and many others will be up for discussion at the next Passenger Terminal Expo and Conference, in Frankfurt, Germany on April 16, 17 and 18, 2024. I hope to see you there!

Hazel King, editor



Providing innovative activities and exclusive shopping experiences for passengers is imperative for airports looking to boost non-aeronautical revenue



LEARN MORE ABOUT OUR ADVERTISERS NOW!

Scan QR code or visit www.ukimediaevents.com/info/ptw to request exclusive and rapid information about the latest technologies and services featured in this issue



**FREE SERVICE!
SCAN QR CODE**

EDITORIAL

Editor: **Hazel King**
(hazel.king@ukimediaevents.com)
Production editor: **Alex Bradley**
Sub editors: **Sarah Lee, Alasdair Morton, Mary Russell**
Web editor: **Dan Symonds**
(dan.symonds@ukimediaevents.com)
Assistant editor/web writer:
Elizabeth Baker

DESIGN

Art director: **Craig Marshall**
Art editor: **Nicola Turner**

PRODUCTION

Head of data and production:
Lauren Floyd
Production assistants: **Dylan Botting, Amy Moreland**

ADVERTISING

Publication director: **Aboobaker Tayub**

CEO: Tony Robinson

Managing director, magazines:

Anthony James

General manager:

Ross Easterbrook

CONTACT US

Passenger Terminal World,
Abinger House, Church Street,
Dorking, Surrey, RH4 1DF, UK
Tel: +44 1306 743744
Email: ptw@ukimediaevents.com

Follow us on **LinkedIn**
at **PassengerTerminalToday.com**

PUBLISHED BY

UKi Media & Events, a division
of UKIP Media & Events Ltd
www.ukimediaevents.com



PRINTED BY

William Gibbons & Sons Ltd,
26 Planetary Road, Willenhall,
West Midlands, WV13 3XT, UK

Passenger Terminal World USPS 013954
is published quarterly by UKi Media & Events,
Abinger House, Church Street, Dorking, Surrey,
RH4 1DF. Airfreight and mailing in the USA by
agent named World Container Inc 150-15, 183rd
St, Jamaica, NY 11413, USA. Periodicals postage
paid at Brooklyn, NY 11256. POSTMASTER: Send
address changes to Passenger Terminal World, Air
Business Ltd, c/o World Container Inc, 150-15 183rd
St, Jamaica, NY 11413, USA. Subscription records
are maintained at UKi Media & Events, Abinger
House, Church St, Dorking, Surrey, RH4 1DF, UK.

Member of Audit Bureau of Circulations.
Average net circulation per issue from
January 1 to December 31, 2022: 9,979



Print publication: ISSN 1362-0770
Online publication: ISSN 2397-6470

This publication is protected by copyright ©2023

Moving on?

To amend your details, or to be removed from
our circulation list, please email datachanges@ukimediaevents.com. For more information about
our GDPR-compliant privacy policy, please visit
www.ukimediaevents.com/policies.php#privacy.
You can also write to UKi Media & Events, Abinger
House, Church Street, Dorking, RH4 1DF, UK, to be
removed from our circulation list or request a copy
of our privacy policy

A holistic vision

IDOM believes the success of the advanced air mobility sector rests on collaboration between industry stakeholders and intelligent, futureproof vertiport design

Advanced air mobility (AAM) promises to shake up the transportation of people and goods by offering faster, cleaner and more flexible air travel. Electric vertical take-off and landing (eVTOL) aircraft are set to revolutionize aviation and promote sustainable air transportation. Despite some challenges to be overcome, leading OEMs anticipate obtaining eVTOL type certificates by 2024 or 2025.

Making AAM a reality

In addition to recent advances in vehicle technologies, AAM will require further development in two key areas: air traffic control and physical infrastructure in the shape of vertiports.

IDOM has been analyzing and conceiving a practical approach for the real application of these facilities since 2018, using information provided by OEMs. From 2018 to 2021, IDOM conducted studies and created preliminary designs for key AAM players, which allowed the company to contribute to the world's first design specifications for vertiports – the EASA Prototype Technical Design Specifications for Vertiports, released in March 2022.

Currently IDOM is working on feasibility studies concerning energy management – the biggest challenge in terms of the required ground infrastructure – and assisting in the delivery of the first ENVISION certification for a vertiport.

Overcoming the limits of traditional mobility

The arrival of AAM also calls for adapting our territories and urban fabric to the new infrastructure. For instance, good road connections and railways have historically led to growth, while less well-connected regions become isolated. Flexibility is key to overcoming the limitations of existing infrastructure and AAM has the potential to level up isolated areas, improving



THE EASA PROTOTYPE TECHNICAL DESIGN SPECIFICATIONS FOR VERTIPORTS WERE RELEASED IN MARCH 2022 WITH THE PARTICIPATION OF IDOM

mobility and fostering changes on a regional and urban scale. On-demand AAM would ensure sustainable territorial growth and avoid densification around land-based transport infrastructure.

Aiming to provide stakeholders with insight for future development, IDOM is developing research to propose a systematic approach to the categorization of AAM types, to analyze their implications at both urban and building scales. For example, existing unused infrastructure in suburban and rural areas can be repurposed for AAM implementation. Vertiports, located on low-value land, can transform areas into transportation and charging hubs.

In denser urban areas, AAM will contribute to solving the problems of traffic congestion and public transport overcrowding. This will require careful analysis for its implementation, looking at the best places from an urban perspective

ABOVE IDOM has worked with Ferrovial to envision a network of vertiports in Spain

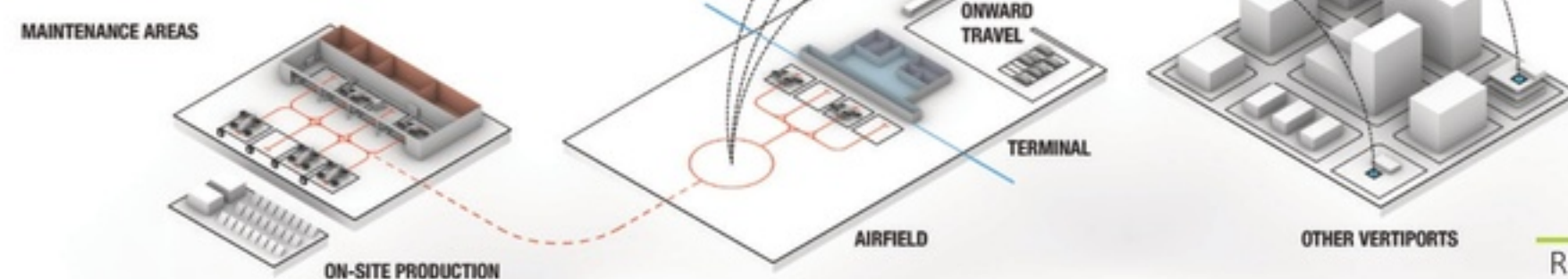
BELOW AAM will enable better connectivity on a regional and urban scale

as well as what is technically, environmentally and socially acceptable.

A new infrastructure typology

IDOM takes a holistic approach to vertiport network planning, negotiating requirements for successful location and operation. The nature of eVTOL high-tempo processes demands that vertiports are designed as timesavers. At infrastructural scale, IDOM is assessing how the different services can be automated, enabling successful complex operations in high-density AAM ecosystems. To achieve cost-effective operations, the company is exploring innovative solutions such as on-site energy generation, advanced energy management and storage systems. When combined with optimized management of eVTOL operations, these aim to help reduce peak power demand from the grid.

At the building scale, the architecture of the terminal must first adapt to the airfield, considering the as yet undefined details of eVTOLs. Vertiports must also easily adapt to the urban environment. IDOM is developing predesigned components to enable easy configuration of vertiports in various locations and urban environments. These components are further classified as front-of-house areas for passengers and back-of-house areas for staff and eVTOL vehicle maintenance, making it easy to adapt vertiports to the demands and type of operation.



IDOM
READER INQUIRY 102