

# AIRPORT WORLD

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**In the spotlight:** Land development

**Airport report:** Edmonton

**Review:** 28th ACI Europe/World General Assem

**Congress & Exhibition**

**Plus:** Social media, Security & Airport design



## Land development: Growing the business



# Smart airports

**MXD Development Strategists' president and CEO, Chris LeTourneur, considers the trends driving the development of airports as living labs for innovation.**

**A**irports are becoming living labs for adopting next generation development formats and concepts in and around their terminals, as well as on their commercial properties.

The most progressive airports are tracking fundamental shifts in how we work, move around, eat, purchase goods and share information. These airports have recognised how to incorporate these larger trends that are affecting property development, economic activity and community planning beyond airport boundaries, to embrace disruption and remain resilient.

Innovation and technology are changing everything. At the SMART Airports & Regions Conference and Exhibition in Charlotte last year, the Pre-Conference Discovery Workshop saw over 60 industry professionals share their experiences for embracing innovation to adopt technologies.

This included Smart Airport Terminals; Next Generation Autonomous Mobility and Transportation; Cyber Security and Artificial Intelligence; Communications; Social Media; Big Data; Agri-Business; Perishables; Bio-Science; e-commerce; and the Sharing Economy.

At this year's SMART Airports & Regions Conference and Exhibition in Edmonton, Canada, the Pre-Conference Discovery Workshop will further explore 'Being Resilient' in adapting to Innovation, Technology and Disruptive Change.

Five major trends are having profound implications on real estate development, and airports are realising the trickle down of these trends for airport terminals and properties. These include:

How We Move Around & Next Generation Mobility; Changing Nature of Workplace; Rise of Technology Innovation Incubators; Creative Food & Beverage Driving Development; and the Rapidly Evolving e-commerce Supply Chain.

## How we move around and next generation mobility

Mobility is fundamentally transforming. Travellers and commuters are demanding transportation options that provide fast, convenient, affordable, comfortable and flexible alternatives.

Additionally, social media innovations and preferences of the rising millennial age segment (born between 1982 to 2000) demonstrating less dependency on car ownership, are inducing demands for alternative mobility platforms.

These platforms, referred to as Mobility-as-a-Service or 'MaaS' are re-defining transportation systems, facilitating seamless mobility and unlocking development opportunities.

Connected consumers are embracing 'On-Demand Mobility' options through ridesharing apps such as Uber and Lyft. Uber has expanded to more than 300 international airports and averages 40 million rides across its global network each month. These same organisations, in conjunction with the automobile industry, are moving towards utilising Autonomous Vehicle (AV) technology for ridesharing.

Ridesharing services and AVs are expected to reduce demand for parking, including at and around airports, a trend that is already apparent at many North American airports. However, the overall need for airport parking will not likely completely diminish as many airports, including Toronto Pearson's intermodal 'Mega Hub', have begun embracing designated flexible areas for the loading and unloading of passengers and adaptive re-use of parking facilities.

This trend indicates that airport parking lot footprints may gradually become smaller, resulting in alternative development parcels adjacent to airport and ground transportation terminals.



Airports including Hartsfield-Jackson Atlanta, Dallas/Fort Worth, Denver and Pittsburgh are embracing ridesharing into their terminal area development plans, to facilitate seamless multi-modal alternative mobility.

Edmonton International Airport (EIA) and the City of Edmonton, in partnership with the University of Alberta, have become a leading innovator of AV mobility in establishing their Four-Season AV Testing Program. Additionally, a proposed AV transit and logistics route connecting the city with the airport has been identified, and EIA is creating a five-acre AV Commercial Vehicle Test Track and 20,000 square foot AV Educational Facility, uses which are in absolute alignment with the development of airport properties.

Bruno Peters, director of smart cities and deputy regional director for Canada West at IBI Group says: "Smart Cities that leverage data and disruptive technology enable us to build infrastructure that is smarter and more resilient. Edmonton's ACTIVE-AURORA smart mobility data and technology programme represents Canada's first connected vehicle test bed for facilitating data sharing between vehicles and the roadway system."

These rapidly changing ways of how we move around are accelerating development opportunities at airports and on their strategic properties by facilitating forward-looking multi-modal connectivity.

### Changing nature of workspace

Already constituting 35% of the workforce, millennials will soon dominate the labour pool, transforming the nature of workspace. Millennials demand amenity-rich collaborative workspaces involving connected technology, dining alternatives, social spaces and fitness facilities.

As a result, multi-use urban districts are rapidly eclipsing suburban business parks as preferred work locations in most North American metropolitan cities.

The move towards flexible, technologically-enabled spaces that foster a collaborative entrepreneurial environment is shifting demand away from traditional single-purpose office space formats.

Companies such as Amazon, Google and Apple have recognised the value of creating 'creative collaborative' workspaces that incorporate the amenities necessary to foster innovation and attract talent. At the same time, many international companies are scaling

back their traditional office space footprints by taking positions in "itinerate business centres" in amenity rich urban locations.

Next generation companies including WeWork, The Wing and Denver/Phoenix-based Galvanize are responding to this shifting demand for transitional workspace by providing flexible leases, collaborative co-working space and shared amenities that accommodate the diverse needs of start-up businesses and international companies looking to establish presence and scale-up. This innovative, diverse and transient employment base represents a significant opportunity for airports to embrace.

### Rise of technology innovation incubators

Airports have always been testing grounds for aviation innovation. Recent trends have seen airports and their surrounding areas become living labs for advanced research and development initiatives that cross pollinate between aviation, technology and the urban development.

Innovation incubators are spaces that foster and develop start-up businesses, providing them with the resources needed to launch new technologies and concepts. They involve co-work space as well as the 'supporting ecosystem' for cultivating innovation, involving affordable rent, management and marketing support, venture capital (VC) funding, facilitating collaboration.

Atlanta is leading the 'incubation of innovation' with the creation of Technology Square at the Georgia Institute of Technology's (Georgia Tech's) Midtown Atlanta Technology Square.

H Wayne Hodges, vice president emeritus, Georgia Institute of Technology and senior associate of the Pendleton Group, has been a driving force for establishing these innovation incubator initiatives in Atlanta and notes that "Delta Airlines, Boeing, Honeywell, Georgia Power and various Fortune 1000 companies participate alongside Georgia Tech in the incubation of new concepts at Technology Square's ATDC Incubator at the Centergy One Building, providing collaborative workspace, mentoring and venture capital assistance to launch new technologies".

Picking-up on this energy, Hartsfield-Jackson Atlanta International Airport has just announced its interest in exploring the establishment of an innovation presence at the gateway.

In June 2015, the Alberta Aerospace and Technology Centre was created at Edmonton International Airport to establish an Aerospace Technology Cluster at the gateway. The technology centre involves a



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partnership between EIA, Edmonton Economic Development Corporation, the Government of Alberta, and private sector companies including Canadian North Airlines and Canadian Helicopters. The first two projects of the technology centre have been high-tech flight simulators for training.

In Asia, Singapore Changi has partnered with the Singapore Economic Development Board to invest \$50 million into its 'Living Lab Programme', an innovation incubator to develop and test new products and technology solutions at the airport involving Automation, Data Analytics, Internet of Things, Non-Intrusive Security and Smart Infrastructure.

### Creative F&B driving development

Restaurants and dining experiences have come to dominate the retail landscape in cities, shopping centers, resorts, transportation hubs and airports. Over the past decade, F&B has absorbed a larger share of commercial space due to the limited growth of traditional bricks and mortar retail shops. In the USA, food and beverage saw 4% average annual growth between 2000 and 2015.

According to the Urban Land Institute (ULI), restaurants account for almost 50% of new retail space in the USA, up from 33% in 2009, demonstrating the value consumers place on culinary experiences.

Trends in urban culinary development that airports have begun to include in their culinary mix include restaurant clusters, food halls, culinary incubators, craft breweries and distilleries, food trucks, pop-up food stalls, urban farms and farmer markets.

Reflecting San Francisco's amazing food experiences (including the busy Embarcadero Ferry Building), San Francisco International Airport is currently creating a 3,200 square foot food hall called 'The Manufactory', which will feature three dining concepts including a full-service bar, bakery counter, along with grab-n-go options. Local authentic restaurateurs will operate in the food hall, providing a unique 'SF' experience.

Minneapolis-St Paul International Airport (MSP) and Houston George Bush Intercontinental Airport (IAH) have taken a whole new F&B approach, working together with OTG to create diverse culinary experiences involving a diversity of local and international cuisine. To deliver this elevated fast casual dining experience, OTG has implemented on-demand digital touch screen technology to accelerate ordering and food preparation.

Airports will need to continue to fine tune their F&B experiences to successfully respond to these trends, as evidenced by the constant line-ups at the Shake Shack at New York's JFK International Airport.

### Rapidly evolving e-commerce supply chain

The rise of e-commerce has had a profound impact on real estate development and supply chain management, placing an increasing emphasis on local distribution agility, referred to as the 'last mile'. Airports and their properties play a critical role in this last mile movement of goods, being strategically positioned between air and ground transportation networks.

Charlotte Douglas International Airport and the City of Charlotte just announced that Amazon will develop their new 2.5 million square foot Project Quattro e-commerce fulfilment complex on 100 acres of airport property, facilitating direct connectivity between the airport, the Norfolk Southern intermodal rail facility and Interstate freeway system, to accelerate regional deliveries.

At Memphis International Airport (MEM), FedEx announced a \$1 billion investment to its world hub, to further facilitate e-commerce as well as perishable and Bio-Life Science goods. These improvements will grow the established Bio-Life Sciences cluster around MEM, which includes technology companies such as Medtronic, Smith-Nephew and McKesson, which rely on just-in-time delivery systems.

While the 800,000 square foot Aurora Sky robotically-automated medical cannabis production facility at EIA demonstrates the role of technology in diversifying the Edmonton regional economy, while stimulating cargo activity at EIA.

Myron Keehn, EIA's vice president of commercial development and air service, says: "Aurora Sky is inducing EIA's air and ground cargo shipment volumes with light weight high value commodities, while leveraging state-of-the-art technologies for Agri-Business and supply chain management".

### Outlook

Reflecting on these trends, airports represent distinct opportunities for embracing forward thinking development trends as a platform for Innovation and real estate development to facilitate next generation concepts affecting how we live, work, play and move around.

It's no surprise that seven out of the ten shortlisted North American Amazon Head Quarter Two (HQ2) candidate cities feature a progressive, innovative, multi-modal connected airport!