WHITEPAPER

# Digital Twins for Passenger Experience


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*October 2024*


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Advancing Infrastructure

## EXECUTIVE SUMMARY

Quality passenger experience is essential to every airport's success. Travelers expect a seamless journey every step of the way, but few recognize the complex, interconnected systems that undergird daily operations. Meanwhile, global market trends and evolving consumer preferences present challenges to operators who want to improve passenger experience and their airport's overall performance.

To meet these challenges and deliver on passengers' high expectations, airports must advance their digital transformation with new technology. Digital twins are the solution. This technology connects airport infrastructure, aviation authorities, and operating entities, as well as their data, enabling professionals to collate and analyze the massive amount of information generated by airports and leverage it for decision-making in real time.

In this paper, Bentley explores four key ways that digital twins can transform airport passenger experience:

- Streamlining operational efficiency
- Improving enterprise data management
- Ensuring safety and regulatory compliance
- Supporting sustainability goals

In each of these categories, digital twins enable airports to over-deliver on passenger experience while managing the long-term goals and day-to-day operations of the airport. By connecting data from across the airport ecosystem, professionals can ensure a smooth, safe, and swift journey for all travelers.

## AIRPORTS CAN AND MUST UPGRADE PASSENGER EXPERIENCE

Passenger experience is the north star for every airport. Millions of travelers pass through airports every day, and they expect to move swiftly and smoothly through the facility and arrive at their destination on time. Aviation authorities and operating entities need to deliver on this expectation. It's the key factor behind their profitability, their public perception, and their very purpose.

But as every airport professional knows, seamless passenger experience is easier said than done. Airports are miniature cities, with their own complex intersection of operational, regulatory, and commercial concerns that shift constantly. And the best airports are akin to 15-minute cities—an urban planning model in which every amenity or service a city-dweller could regularly need exists within a 15-minute walking radius. Rather than "operation-based" areas, which are discrete financial, entertainment, or parks districts as separate enclaves within a big city, 15-minute cities are hyper-localized to include food, retail, business, entertainment, education, and outdoor recreation all within the same neighborhood. The result is reduced carbon emissions, optimized resource usage, and better quality of life.

Consider one day at a hypothetical airport: an operator may have to deal with ongoing construction in one of their terminals, an impending storm, and disruptions on the runway. Passengers also expect to find fully functional services, from plumbing to dining options. Management faces additional challenges a level above daily operation: ensuring safety, guaranteeing regulatory compliance, and, increasingly, monitoring the carbon footprint of their operations. All the while, thousands of passengers—the most important stakeholders—are moving through the facility. They have little visibility into the complex functions and factors at play behind the scenes, such as the new builds and renovations, the extreme weather, and air traffic control, but everything converges in passenger experience. Disruptions may be out of operators' control, but passengers can and do hold them accountable. This is presenting a challenge to airports globally.

Surveys suggest overall passenger satisfaction is holding steady. A study by Airport Dimensions found hat 70% of passengers are satisfied with their airport experience, while JD Power found that 60% of North Americans somewhat or strongly agree that they enjoy spending time in their airport.[1,2] But there are challenges lurking beneath the surface of these overall metrics.

1 Airport Dimensions. "Airport Experience Research 2024. AX24: The Age of Airport Experience." April 2024.

2 J.D. Power. "Overcrowded and Overpriced Yet Enjoyable: North American Airports Defy Conventional Logic To Keep Travelers Coming Back for More, J.D. Power Finds." 18 September, 2024.

Airport traffic increased 30.6% in 2023, and projections indicate further growth in 2024, with as many as 9.5 billion travelers.[3] While this return to pre-pandemic levels is encouraging, it also presents a challenge for airport operators, because overcrowding causes passenger satisfaction to plummet.[4] And even when aviation operations improve, it doesn't always lead to clear improvements in passenger experience. Consider that in the United States, the flight cancellation rate was just 1.2%, the lowest in a decade, but customer complaints to airlines actually rose 13%.[5,6] While airports may not bear the immediate brunt of those customer complaints, unhappy passengers ultimately drag down satisfaction and loyalty at any airport.

Consumer preferences are also colliding with global trends with lasting implications for the aviation industry. In addition to growing traffic, airports are also dealing with macroeconomic factors such as inflation and geopolitical conflict. Passengers may experience rising prices most acutely when they book their tickets, but they also impact their experience with airport retail. Customer spending within airports is down, with travelers spending $3.53 less per trip than historic averages.[7] Inflation also impacts airports' ability to expand and deliver new offerings due to rising material and labor costs. At the same time, global sustainability directives such as the Paris Climate Accords and industry commitments, such as the International Civil Aviation Organization's Fly to Net Zero initiative, are forcing aviation authorities to adapt. And all the while, airports are rushing to implement technological innovations like artificial intelligence and the Internet of Things (IoT) in their operations.

In other words, there's no simple day at an airport. To uphold customer experience in the midst of disruption and macro-trends, airport authorities need technology that can level up their operations and provide the visibility necessary to deliver efficiently and consistently. Digital twins are that technology.

## DIGITAL TWINS FOR PASSENGER EXPERIENCE

Airport professionals can leverage digital twin technology to preserve and enhance passenger experience. A digital twin is an evergreen model of an asset informed and updated by real-time data, allowing you to monitor and operate with the most current data possible. Much more than a simple 3D model, digital twins incorporate a wide range of information specific to the asset—from engineering models and weather conditions to passenger volume projections and maintenance surveys—to provide a current picture of how an asset exists in the world, with engineering precision.

This 360-degree, real-time visibility across the entire lifecycle of an airport enables operators to manage and improve the most important aspects of passenger experience. Specifically, digital twins enable superior delivery and performance across four categories that impact operations and profitability:

- **Operational efficiency**—Whether it's check-in or a terminal expansion, digital twins enable airport professionals to work collaboratively, efficiently, and cost-effectively.
- **Enterprise data management**—Airports generate vast quantities of data. By unlocking and reusing this data, professionals can improve their offering with new technologies like IoT and AI.
- **Safety and compliance**—Professionals can guarantee a safe, speedy journey for travelers when they integrate and contextualize security workflows into the larger framework of the facility.
- **Sustainability and resilience**—Environmental concerns have more impact on passenger experience than ever, whether through customer preference for sustainable initiatives or through responsiveness in the face of extreme weather.

Digital twins improve performance across all these functions, leading to better passenger experience, higher volume, and boosted revenue.

3 International Airport Review. "CI World predicts 10% passenger traffic growth in 2024." 24 September, 2024.

4 J.D. Power. "Overcrowded and Overpriced Yet Enjoyable: North American Airports Defy Conventional Logic To Keep Travelers Coming Back for More, J.D. Power Finds." 18 September, 2024.

5 Bureau of Transportation Statistics. "Air Travel Consumer Report: December 2023, Full Year 2023 Numbers." March 1, 2024.

6 The Associated Press, FORTUNE. "Complaints about air travel have soared to nearly 100,000—even as flight cancellations decline." July 5, 2024.

7 Doerer, Kristin. Customer Experience Dive. "Travelers are satisfied with airports despite record crowds and rising costs." September 18, 2024.

## OPERATIONAL EFFICIENCY BENEFITS PASSENGERS AND AIRPORTS ALIKE

For passenger experience, efficiency is everything. The International Air Transport Association (IATA) reported last year that speed and convenience are the top two priorities for passengers.[8] 74% of passengers say that if they're only traveling with a carry-on, they expect to get from curb to gate in 30 minutes or less.[9]

That journey involves numerous operations. From arrival to take-off, passengers want to minimize their travel time and enjoy a smooth and productive airport experience. Passengers don't view airports as the multimodal infrastructure hubs they are, requiring easy means of access for cars, rail, and buses. Aviation professionals and engineers curate every part of their airport journey, from elevators and moving belts to smart luggage handling and airport transportation. A thoughtfully designed airport with accessible facilities and easy-to-navigate, spacious terminals can ensure there are no interruptions or delays from passenger overloading in the airport. A seamless journey can boost passenger loyalty and satisfaction, but congestion-caused delays or long lines can sour an airport's reputation among travelers. Passengers aren't necessarily thinking about how their positive or negative experience is tied to the infrastructure of the airport, but aviation professionals know it's the key to keeping lifelong customers.

Consider a common challenge that many passengers overlook: wildlife management. Wildlife can seriously disrupt takeoff and landing procedures, causing delays and costs to ripple through the airport ecosystem. Bird strikes are the most common concern, but deer, foxes, and even bears have been known to wander onto runways without warning.[10] This is more than an inconvenience to passengers—it's costly for the aviation industry. 96% of wildlife strikes happen in the immediate vicinity of airports, costing roughly USD 36,000 per strike. That cost isn't just reflected in aircraft repair, but in the impact on passengers (cancellations, rebookings) and in operational costs (engineering personnel, inspections).[11] One study estimated that wildlife hazards have cost the U.S. civil aviation industry USD 54.3 million a year between 1990 and 2018.[12] Runway and airfield safety is usually kept at bay through regular inspection and maintenance, as well as constant communication. Even the most compliant airports can't guarantee that an animal won't stop a flight from taking off on a runway if they don't have access to the most current information available.

This problem means airports must monitor wildlife closely and constantly, even if it isn't an obvious aspect of passenger experience. These initiatives should include real-time monitoring of runways and airspace, as well as the analysis of historic wildlife patterns. All that information must inform the broader operation of the airport, from assigning runways to setting departure times.

Alternatively, consider development and expansion of an airport's physical infrastructure. To keep up with the rising number of passengers, airports require massive, short-term investment, including everything from runways to terminals to integrations with local transit systems. The Airports Council International of North America estimates that due to aging infrastructure, American airports are depreciating an astounding USD 8 billion internationally and require USD 151 billion of investment over the next three years.[13] That amounts to a massive amount of development, which will undoubtedly impact passenger experience. Repairing or replacing a moving walkway adds time to a passenger's journey to their gate. Building a new terminal may require the temporary closure of another. Airport professionals need to understand the complete implications of their development plans on their facilities and their passengers.

That understanding requires full visibility into the entirety of an airport's ecosystem. Aviation authorities need to understand how a project can impact passenger experience by the minute. Full visibility also ensures more timely project delivery. Professionals can project completion with greater accuracy, respond to setbacks, and manage costs.

8 International Air Transport Association. "Speed and Convenience Top Priority for Passengers." October 25, 2023.

9 Ibid.

10 Zielinski, Sarah. Science News. "Flight delayed: There's a coyote on the runway." April 14, 2015.

11 Pest Control Technology. "Birds and Wildlife Pests Pose Numerous Aircraft Hazards." July 16, 2024.

12 Altringer, Levi, Jordan Navin, Michael J. Begier, Stephanie A. Shwiff, and Aaron Anderson. Transportation Research Part D: Transport and Environment. "Estimating wildlife strike costs at US airports: A machine learning approach." August 2021.

13 Airports Council International - North America. "2023 U.S. Airport Infrastructure Needs Report: Growing Needs Heighten Urgency to Modernize America's Airports." March 2023.

Crucially, both these examples ladder up into one larger system. A flock of birds and a new tram system both impact an airport's efficiency and how quickly a passenger gets to their final destination. All the functions in an airport interact with one another in complex workflows, and if one isn't accounted for, a domino effect of poor passenger experience can ensue.

Digital twins provide the visibility and the interoperability necessary to maximize efficiency. Applications running on a digital twin platform feed all their inputs into one central evergreen model. By integrating workflows from across the airport, digital twins break down silos and allow professionals to understand, simulate, and respond with speed. And speed is the essence of passenger experience.

## DATA MANAGEMENT AT SCALE

All the aforementioned functions necessary for operational efficiency generate a massive amount of data—as much as 150 million individual pieces a day.[14] It comes from a myriad of information sources, from tagged baggage to connecting to WiFi, as well as backend operations. All these outputs have the potential to shape airport performance and passenger experience minute to minute. Data can be woven into a "golden thread," a continuity of the many different types of data that can be captured and leveraged within an infrastructure digital twin across every stage of the asset lifecycle without data loss from handovers.

But a recent study found that one-third of airport leaders say they do not have real-time data analytics insights that would allow them to improve operational responsiveness, and 60% recognize that not investing in these technologies now poses a significant risk to their operations in the next 12 months.[15]

That means airports are failing to tap into their data's potential. Bentley estimates that across infrastructure sectors, only 5% of engineering data is reused. The rest languishes in functional silos instead of informing daily performance. But if airport professionals can leverage the vast amounts of data that they generate each day, they can achieve better insights, advance their digital transformation, and elevate passenger experience. To do that, they need a way to effectively collate and analyze this data in a single connected environment.

The need for real-time data is urgent. Today, engineering firms and aviation authorities alike are rushing to adapt to a wave of technological innovation that has the potential to improve and streamline the overall passenger experience. Specifically, owner-operators and their engineering partners are looking to leverage biometrics, AI, and IoT to advance automation capabilities, improve safety, streamline operations, and personalize passenger experiences. This evolution requires a more advanced approach to data management.

Biometric data presents an especially strong opportunity for airports. Indeed, the industry is already evolving in this direction. The first wholly biometric airport terminal is already operational in Hartsfield-Jackson Atlanta International Airport, and similar systems are in place at Dubai International Airport.[16] Oliver Wyman predicts that by 2030, biometrics will have largely replaced paper passports and boarding passes thanks to the efficiencies that they create for passengers. The process is fast, noninvasive, and unbiased.[17] With facial recognition software and a robust biometric database, passengers can move quickly through check-in, boarding, and immigration. This aligns with the customers' top priorities: speed and efficiency, which is why 73% of passengers today say they are willing to share their biometric data to expedite airport processes.[18]

However, biometric data is highly sensitive. To be used to its fullest potential, it must be integrated into the appropriate workflows efficiently, securely, and consistently. Airports must be able to verify and cross-check passengers' biometric data at key checkpoints. They must also be able to readily access this information quickly and accurately at any point. This accessibility requires a strong technological foundation with the necessary digital infrastructure.

14 Flanagan, Ben. WIRED Middle East. "The mind-blowing amount of data airports like DXB collect in just 24 hours." September 12, 2024.

15 AeroCloud. "Getting on the Runway to Growth." November, 2023.

16 Liddell, Devin. Fast Company. "The future of artificial intelligence in airports." April 24, 2019.

17 Lunter, Jan. International Airport Review. "How biometrics is driving innovation in airports despite legislative restrictions." September 13, 2024.

18 Oliver Wyman. "The Evolution of Airports: A Flight Path to 2050." June 2023.

The same applies to AI, which is poised to transform passenger experience in numerous ways. AI travel bots can provide personalized travel assistance, help travelers navigate airports with real-time information, and provide language support in airports' inherently multilingual settings.[19] Imagine customized retail experiences and 24-hour travel agent support, all available from a passenger's mobile device. AI can also enhance airport professionals' work in ways that may be invisible to passengers but improves their experience all the same. Generative AI can inform the design of physical airport infrastructure—an optimal layout for a new terminal, or roadside pickup informed by real-time data. AI also has the potential to improve security operations, identifying potential risks and flagging them to the appropriate personnel before a human could ever detect them.[20]

But none of that is possible without the foundational data on which AI is built. Professionals need to be able to connect, combine, and manage enterprise and operational data from across the airport to successfully implement AI. This works best on a cloud-based platform, which can handle the volume of data and enable professionals to access information quickly and flexibly.

Digital twins make large data management possible. They consolidate engineering, spatial, and enterprise data from across airports in one connected data environment, allowing it to be leveraged for real-time insights. This in turn enables airport owner-operators and professionals to collaborate, make data-driven decisions, and implement the technological innovations that are reshaping the aviation landscape.

## ENSURING SAFETY, NAVIGATING REGULATIONS

Safety is fundamental to passenger experience and table stakes for aviation authorities. All operations must be viewed through the lens of safety and compliance to ensure legal standing, consumer trust, and passenger (and employee) well-being. These concerns manifest across the airport, from security checkpoints to construction sites. Fortunately, the efficiencies and technological advances enabled by digital twins and connected data environments improve safety and regulatory outcomes across the board. By advancing their digital transformation for passenger experience, airports become more secure.

Biometric data doesn't just reduce wait times for passengers—it's more secure. Unlike analog identification methods, it's not susceptible to counterfeiting or identity theft.[21] AI has other security applications, such as threat detection and predictive analysis. The TSA is already using AI to make baggage screening more accurate, cost-effective and convenient through the Electronic Baggage Screening Program (EBSP).[22] And by integrating IoT into a digital twin, professionals can work from an accurate, real-time rendering of their assets, ensuring safe conditions across the airport and minimizing disruptions.

This visibility also simplifies compliance for airport professionals. Aviation professionals operate under a wide-ranging, strict set of regulations that vary region to region. These include security requirements for passengers, safety standards and emergency protocols for passengers, crew, and ground staff as set by the International Civil Aviation Organization and various regional authorities, consumer and accessibility law, and data protection. Environmental regulations also evolve frequently, requiring aviation authorities to reevaluate their project plans and operations.

The interoperability, visibility, and data analytics provided by digital twins make airport regulatory compliance easier for operators to manage. Professionals can clearly understand how various aspects of the airport ecosystem are operating. This understanding in turn allows them to anticipate and prevent unsafe events while guaranteeing compliance. Real-time analysis provided by IoT technology allows airport authorities to take corrective actions swiftly, minimizing the risk of regulatory breaches. And clear visibility into the airport's operations allows for better stakeholder communication, allowing aviation authorities to share up-to-date information with passengers and regulatory agencies alike.

19 Vaamonde, Alfredo. Airports International Council. "Understanding how AI will impact Passenger Support and the Overall Traveling Experience." March 13, 2024.

20 Aravind, Kanu. Airport Technology. "The critical role AI plays in reshaping airports." March 18, 2024.

21 Pichler, Laura and Ute Barth. International Airport Review. "The role of biometrics at Munich Airport." July 5, 2024.

22 Pik, Eugene. Journal of Transportation Security. "Airport security: the impact of AI on safety, efficiency, and the passenger experience." March 7, 2024.

## SUSTAINABILITY AND RESILIENCE ARE PART OF PASSENGER EXPERIENCE

Every industry is adapting to the new climate paradigm, and airports are no different. Airports are working to operate more sustainably, become more resilient in the face of extreme weather, and respond to shift environmental regulations. But climate adaptation isn't only an environmental initiative—it's an increasingly important aspect of passenger experience. Government and regulatory bodies are requiring airports to become more sustainable and resilient. But perhaps more importantly, passengers want this evolution now.

Sustainability and resilience are key issues for passengers. According to Booking.com's annual sustainability survey, 83% of global travelers reported that sustainable travel is important to them, and 75% say that they want to travel more sustainably over the next 12 months.[23] More specifically, passengers expect sustainability commitments to come to life through technical developments and design decisions. One study found that 63% of travelers value sustainable design in aviation and 61% expect transparent communication about sustainability guidelines.[24]

Digital twins can help airports meet these expectations in three ways. Climate adaptation will require substantial investment and development from airport operators. The World Economic Forum estimates a need for USD 1.7 trillion in capital investment across the value chain by 2050 to facilitate the aviation industry's transition to hydrogen and electric fuel craft, for example.[25] Digital twins can enable engineering and airport professionals to plan for and deploy this investment intelligently and efficiently. Second, digital twins can optimize resource usage and monitor environmental impact, allowing airports to understand and reduce their carbon footprint and maintain compliance with green standards. Lastly, they provide an accessible 360-degree of the airport's entire lifecycle, enabling aviation authorities to track their performance against short- and long-term sustainability goals, then communicate their progress clearly to both passengers and regulatory authorities.

Resilience is just as important as sustainability, and has a more obvious and immediate effect on passenger experience. Simply put, extreme weather is becoming more frequent and causing flight delays and cancellations. In Europe in 2023, weather was the main reason for en route air traffic flow management delay for the first time in history.[26] Weather delay as a proportion of overall delay has increased from 11% in 2012 to almost 30% in 2023.[27] Last year in Europe alone, passengers lost 90,000 hours to weather-related travel delays.[28]

Airports need better technology to fully prepare for these events and respond promptly when they inevitably occur. Digital twins can enable operators to deliver more resilient airport infrastructure and perform reliably in the face of adverse weather. By leveraging the collaborative, data-driven capabilities of digital twins from the outset of the design process, professionals can build resilient assets efficiently and cost-effectively. And by integrating historic and real-time weather data into a single platform, they can anticipate disruptions and get passengers to their destinations as promptly as possible.

23 Booking.com. "Latest Booking.com Sustainable Travel Data Reveals Ongoing Challenges for Consumers & Highlights a Heightened Opportunity for Cross-Industry Collaboration." April 22, 2024.

24 Keiser, Dennis, Birte Pupkes, and Michael Freitag. Transportation Research Procedia. "Passenger Expectations towards a Sustainable Aviation Industry." 2023.

25 World Economic Forum and McKinsey & Company. "Target True Zero: Delivering the Infrastructure for Battery and Hydrogen-Powered Flight." April 2023.

26 Canso. "The weather impact on global Air Traffic Management operations and how to solve it." June 8, 2024.

27 International Air Transportation Association. "Weather-related operational disruptions are rising." March 29, 2024.

28 Ibid.

## CASE STUDY: SEATTLE-TACOMA INTERNATIONAL AIRPORT

**Bentley software has saved airports around the world over 5,000 hours of labor and over USD 1 million in operating expenses per year while improving the overall passenger experience.**

*SeaTac Airport International Arrivals Facility. Image courtesy of Clark Construction Group, LLC.*

In the face of growing demand for international travel, the city of Seattle needed to update the 71-year-old Seattle-Tacoma International Airport. The Port of Seattle initiated the most complex and expensive development in the airport's history, with the goal of updating 1970s-era facilities with a three-story grand hall building, a new connecting international corridor, and the world's largest pedestrian aerial walkway—without sacrificing passenger experience. To do it, they used Bentley's SYNCHRO™ 4D and digital twin technology.

SYNCHRO 4D enables construction contractors to leverage construction data from design and produce 4D construction simulations for better-informed planning and execution decisions. The software enabled the construction team to visualize and analyze the existing site and bridge structure, and fully understand every detail needed to determine how to optimally plan and construct the aerial walkway. They modeled the site, remote assembly of the bridge span, and on-site pier supports using laser scanning and point clouds to ensure accurate bridge measurements and determine a safe transport route along the busy airport grounds without disrupting current passenger foot and air traffic.

SYNCHRO 4D brings every step of the construction sequence, including schedule simulations, site utilization, optimizations, and logistics planning, to life without needing to physically be at the site. This capability allows construction contractors to visualize the most complex steps of the design process with no impact on the existing passenger experience. The application can allow for many digital iterations, so contractors have an exact plan of how they are going to move the world's largest passenger walkway from the remote prefabrication area on airport property, down the correct taxi lanes and runways, all while avoiding active airport traffic and parked airplanes to get the structure lifted into place.

The construction contractors seamlessly delivered a digital twin with 18 standard attributes per asset that Seattle-Tacoma International Airport can use for facilities management and ongoing operations. With this live data, the airport can be one step ahead in elevating its passenger experience.

SYNCHRO 4D supported the successful execution of the technically complex maneuver that demanded meticulous planning. The digital applications provided accurate measurements and visualization to safely transport and install the 3-million-pound span structure three miles through an active airport, without any interruption. This world-class expansion project sets a benchmark for digitalization in the industry. It's a model for how digital twins can bring complex airport construction projects to life, elevating passenger experience in the future without compromising in the near-term.

## CONCLUSION

Supporting passengers isn't a one-time function. It requires a sustained commitment to an airport's physical infrastructure and digital transformation. Updating, renovating, and expanding airports is a years-long and investment-intensive undertaking.

Fortunately, digital twin maturity isn't binary. In building toward a digital twin, aviation authorities can immediately leverage an evergreen model as they work towards more advanced applications, much like Seattle Tacoma Airport. Bentley can support airports with the technology and expertise necessary to upgrade passenger experience no matter where they are in their digital transformation.

Bentley's airport solutions enable improvements to passenger experience across all four categories:

- Digital twins enable the interoperability necessary for maximum efficiency.
- Digital twins enable advanced data management capabilities necessary for new innovations like AI and IoT integration.
- Digital twins make airports safer and simplify regulatory compliance.
- Digital twins enable more sustainable and resilient airports from design and building for project delivery through operating and maintaining for ongoing performance.

Digital transformation doesn't only benefit passenger experience. The full visibility, interoperability, and data fluency of a digital twin benefits the complete lifecycle of an airport across project delivery and asset performance. They're also cost effective, enabling airport operators and professionals to visualize the impact of infrastructure improvements, upgrades, and overhauls before breaking ground. And with support from the wider Bentley portfolio, digital twins can integrate seamlessly with adjacent infrastructure and facilities.

Ultimately, passengers want a safe, smooth, and swift experience at the airport. In a complex airport environment, generating terabytes of data across multiple systems, that can be hard to deliver. But aviation professionals can provide that experience if they connect and leverage their data in a digital twin. In a rapidly evolving industry with strong consumer preferences, airports must leverage this technology now.

**Learn more about Bentley's Airport Planning and Coordination Solution**