

Protecting the Critical Airport Infrastructure

As one of the world's most critical industries, air transportation is an important enabler of global and regional economic activity. With automation and digitization boosting air transport initiatives, availability and security of airports has increasingly become top priority.

Global air traffic on the rise

- Air travel has become a crucial part of the global economy. The IATA projects that with global air transport and trade policies in place, passenger numbers will exceed 11 billion by 2039
- The increase in air traffic means an increase in utilization of airport infrastructure. Airports must find ways to become smarter and more efficient in their operations as infrastructures expands and passengers increase.
- It's imperative to ensure 24 x 7 availability of radars and watch towers as any minute of downtime can have an adverse domino effect on travel and access points.

Modern and Efficient Airports

- From self-check in counters to self-service immigration kiosks, passenger experience at the airport has transformed from long queues to increasing convenience. As airport operators leverage on modern technologies to streamline operations, this increases reliance on critical infrastructure that processes the data of passengers.
- From the control room to security cameras installed across the facility, a reliable and secure network and infrastructure must be in place to support operations.
- The rise of IoT, it's used in passenger monitoring and provides a lot of sensory and meta data back to local servers. This will require Data Center infrastructure
- Also IoT can be used to improve Air Side operations and maintenance schedules

Creating Personalized Experiences

- Forrester Research estimates that airlines who are not improving their customer experiences are leaving as much as $1.4 billion in annual revenue. Thus, there is growing activity among airlines to improve CX across the passenger journey – including check-in.
- Key technological applications such as artificial intelligence, machine learning and virtual reality are now being explored to enhance the overall passenger experience. Given passenger expectations, airports must ensure that the infrastructure handling passenger information is reliable enough to provide immersive experiences at every touchpoint.

AIRPORT INFRASTRUCTURE CHALLENGES AND CONSIDERATIONS



Keeping the lights on

- As most international airports run 24/7/365, power outages are not an option. Interruptions can undermine key systems and components, putting personnel and passengers in great inconvenience or even danger. Blackouts can translate to delayed or cancelled flights, lost profits, and a damaged reputation.
- The inherent pressure of airports to be “on” all the time stresses the importance of reliable back-up equipment to ensure that critical physical and virtual operating systems continue running.



Mobility-as-a-Service

- Sustainable growth in aviation is putting mobility front and center. Mobility services like railway lines and transport interchanges are staple solutions, but new innovations like low carbon emission and autonomous vehicles are also being tested for airport applications to make it more sustainable.
- Airport infrastructure needs to be cognizant of such developments when considering technology infrastructure investments. These critical mobility systems should be properly supported to allow a seamless experience for passengers.



Scalable deployment

- The demand for digital, seamless and personalized engagement is driving digitization across the airport space. It has become a testbed for new technologies, such as passenger identification systems, mobile applications, connected cameras to create a unique experience for passengers. This will create an influx of data points for collection and processing at different airport locations, such as retail and food spaces.
- IT infrastructure needs to be then deployed in line with these technological advancements. Data analytics at the edge can be facilitated in security checkpoints, restaurants and retail spaces, while maintaining a solid IT back-office infrastructure to host IoT and AI applications for control towers, check-in area or luggage belts.

VERTIV SOLUTIONS



SmartAisle™

- Pre-configured, rapidly deployable integrated IT infrastructure for core deployments
- Replaces traditional bricks-and-mortar design with flexible, efficient solutions



SmartRow™ Plus

- Rapidly deployable IT infrastructure for core or branch deployments
- Integrated with full suite of power, cooling and monitoring solutions for maximum efficiency and availability
- Expandable and flexible depending on IT requirements



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Efficient and Flexible Power-Optimized For Medium-Size UPS Applications



Avocent MergePoint Unity™ KVM over IP Switch
Avocent MPU digital KVM switches provide remote management to access and control servers in data centers and branch offices. The switch enhances in-band management by providing secure and remote out-of-band connections directly to the KVM, USB and serial ports.



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(5 - 20kVA)
Compact, Efficient & Robust UPS For Critical Applications



Liebert® APT™
Adaptive and Insightful Power-train



Liebert® EPK™
Innovative solution to enable Business Critical Continuity



Liebert® EXM™
Efficient and Flexible Power-Optimized For Medium-Size UPS Applications



Liebert® APM
The Compact Row-Based UPS With FlexPower Technology™



Liebert® CRV4
4th Generation Row-Cooling with Elevated Performance



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High-performance cooling applications for small computer rooms and network closets



Vertiv™ VE Rack
Features

- Strong and durable nine-folded solid frame profile which can hold a static load of up to 1,600 kg
- 75% open high perforated doors for optimal air flow
- Convenient tool-less installation of cable and air flow management
- Internal and external battery configurations for optimized back up time management
- Fast deployment leveling feet Heavy duty caster wheels for easy movement

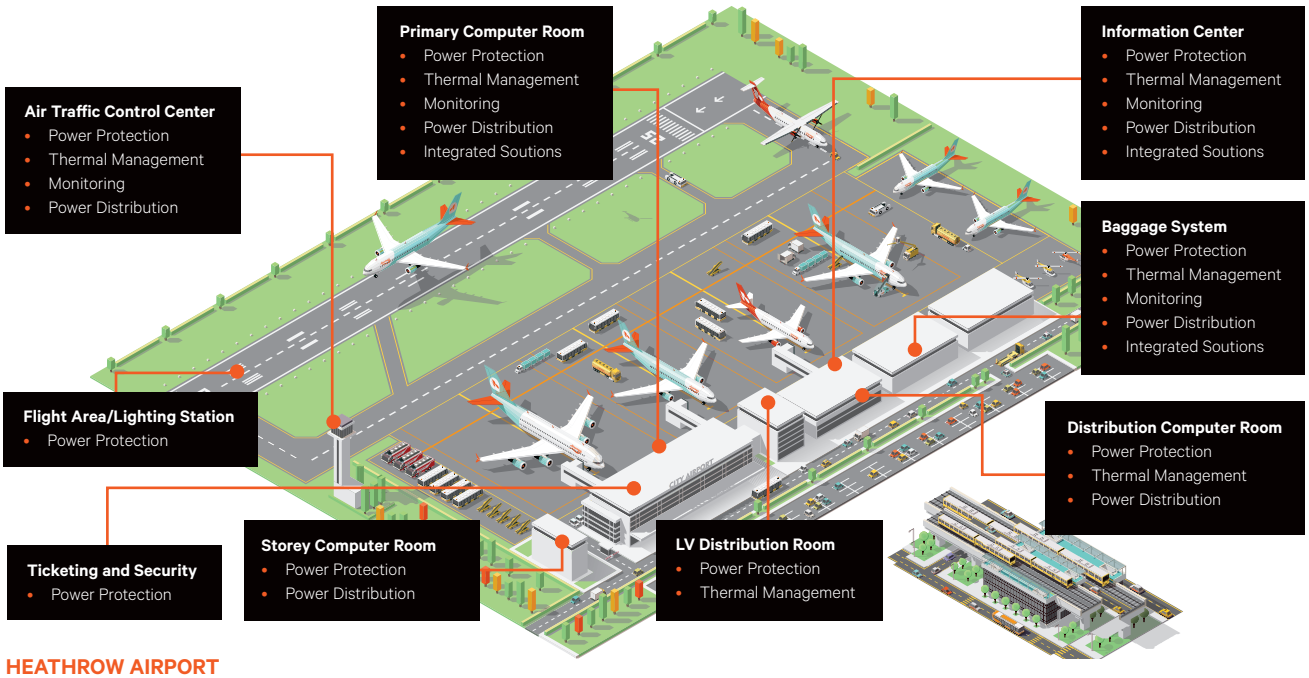


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Geist PDU
Reliable power distribution helps manage power capacity and increase functionality

Vertiv in the Airport Infrastructure | Case Studies



HEATHROW AIRPORT



Challenge:
Heathrow Airport's Terminal 5 (T5) is one of Europe's largest construction projects. It is made up of the main terminal building, two satellite buildings, 60 aircraft stands, a new traffic control tower, car park, hotel, a new spur road from the M25 and over 13km of bored tunnel, including extensions to the Heathrow Express and Piccadilly Line services.

The Vertiv Difference:
As well as providing support for a variety of T5's critical systems, Vertiv has also secured a framework agreement for the supply of the remainder of T5's UPS over the next few years. Against strong competition, Vertiv won the various contracts thanks to its wide experience and established relationship with BAA, its quality products, unmatched level of service and technical expertise.

Vertiv Solution
- Chloride® Industrial UPS

MAJOR AIRPORT IN CHINA



Challenge:
The customer is one of the largest airports in the world, handling up to 45 million passengers a year. With this, it is looking to upgrade its IT infrastructure within the airport to better manage the influx of passengers as well as ensure availability of operations.

The Vertiv Difference:
Vertiv has deployed a range of critical infrastructure solutions within the airport to support its continuous improvement initiatives, including the Vertiv SmartAisle, which allowed the customer to process more data with a rapidly deployable new data center. Vertiv also installed uninterruptible power supply (UPS) solutions to ensure availability of critical services, as well as monitoring solutions for ease of management.

Vertiv Solution
- Vertiv™ SmartAisle
- Vertiv™ AC UPS
- Vertiv™ Battery Cabinets
- Vertiv™ Precision Air Conditioning Units

REGIONAL AIRPORT IN INDIA

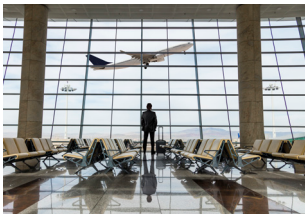


Challenge:
The customer is one of India's busiest airports with 25 million passengers annually and 600 aircraft movements a day. It embarked on a modernization effort, upgrading its ageing IT infrastructure to help enhance efficiency of services to support the growth of passengers.

The Vertiv Difference:
Vertiv supplied UPS solutions to the customer to minimize or completely avoid downtime and support its expansion efforts.

Vertiv Solution
- Liebert® APM
- Liebert® Hipulse
- Liebert® SX

MAJOR AIRPORT IN INDIA



Challenge:
The customer is one of the world's busiest airports both in terms of passengers and cargo. It recently embarked on an expansion program to increase airport capacity that will allow it to handle 100 million passengers by 2030. In this regard, it needed a strong suite of solutions to support this huge expansion.

The Vertiv Difference:
Understanding the huge challenge posed, Vertiv supplied the customer with a full suite of uninterruptible power supply (UPS) solutions that were deployed in its main terminal building, cargo and baggage area, ticketing areas and main data center to ensure that operations go unhampered with the expected surge in passengers.

Vertiv Solution
- Liebert® APM
- Liebert® Hipulse

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