

AVIATION

Planning /
Design /
Management

wsp.com/aviation



Delivering World-Class Aviation Solutions

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With continued growth in global air travel demand, airport owners and operators need cutting-edge technologies, flexibility and capacity to remain efficient and competitive. They also need reliable solutions to meet growing security requirements and sustainability ambitions.

With our understanding of the challenges and pressures being faced in the industry, we can design, plan, advise or manage airport development projects anywhere around the world.

We provide support to:

- Governments and regulatory agencies
- Airport owners and operators
- Airlines
- Contractors
- Architects

Our focus is to become your trusted advisor and partner to build a long-term relationship. We offer reliable, flexible and integrated world-class services.

WSP also provides expert advice on sustainability. We are administrators of ACI's Airport Carbon Accreditation program, which has certified to date more than 200 airports around the world.

Services

**Strategic Consulting / Program Management /
Planning / Design / Construction Management /
Asset Management**



75+

Years of Experience

5,000+

*Aviation Projects
Worldwide*

Top 2

*International Design
Firms - Aviation*

Key Specialties

We help you expand, reconfigure and modernize existing airport infrastructure as well as develop new ones.

1 / Airport Buildings

**2 / Airport Cities, Free Trade Zones
and Aerotropoli**

3 / Landside Infrastructure

4 / Airside Infrastructure

5 / Regulatory Programs

6 / Aerospace



Specialized Services

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Airport Cities, Free Trade Zones and Aerotropoli

Bonded warehousing
Express logistics facilities

Airside Infrastructure

Airfield pavements and apron systems
Aeronautical ground lighting
Signage and markings
Ground support and associated facilities
Surface and foul water drainage
Pits and ducts infrastructure
ATC tower sight-line studies
Approach lighting systems
Air navigation coordination
Obstacle navigation surfaces
Aircraft instrument approaches
Meteorological facilities

Landside Infrastructure

Roadways
Railways
Automated people mover systems
Bridges
Tunnels
Parking
Utilities
ConRAC

Airport Buildings

- Passenger flow analysis and simulation
- Functional planning
- Engineering (civil, structural, mechanical, electrical, façade)
- Vertical transportation
- Baggage and other specialist systems
- Fire engineering and life safety
- Specialist lighting design
- Communications and IT networks

Aerospace

- Cargo centres
- Paint hangars
- Maintenance hangars
- Specialist engine testing facilities
- Fixed base operator facilities
- Surface-level and roof-top heliports
- Flight path and obstruction zoning analysis

Master Planning

- Capacity analysis and development
- Terminal and facility planning
- Airfield planning
- Phasing
- Simulation and modelling
- Demand forecasting
- Environmental and sustainability
- Goods in and waste management

Business and Regulatory Advice

- Regional and national policy studies
- Social and environmental impacts
- Simulation and modelling
- Regulation and performance reviews
- Economic analysis
- Research and benchmarking
- Due diligence
- Tender management
- Privatization, finance and funding
- Airport safety and security
- Airport operations advisory

Marseille Provence Airport / *France*

06 Designed by Foster + Partners, the
Marseille Provence Airport extension
project covers the expansion and
creation of a new terminal core,
07 regrouping all MP1 terminal functions
and businesses. WSP will provide
all the technical expertise required
at the building and infrastructure
level. The team will also oversee the
implementation of environmental
components. The project also includes
airside infrastructure work, with the
rehabilitation of the C5/C6 taxiways
and the creation of additional aircraft
ramps.

Services
Design





LaGuardia Airport / Central Terminal B *United States*

The new Central Terminal B will provide world-class facilities for passengers and airlines at LaGuardia Airport. Developed through a public-private partnership (P3) of the Port Authority of New York and New Jersey and LaGuardia Gateway Partners, the new 35-gate terminal includes a central hall, garage, roadways and supporting infrastructure. WSP, in joint venture, serves as designer for the CAD 5 billion project.

Services
Project Management /
Design

Toronto Pearson International Airport / *Canada*

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In a long-standing association with Canada's largest and busiest airport, we served as the lead firm on the CAD 3.3 billion Terminal Development Project during its 10-year modernization. WSP provided overall program management plus civil, mechanical, electrical, and structural design services for the 120,000 m² terminal, the hotel, and office buildings, as well as airside and groundside infrastructure.

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Services

**Program Management /
Design / Construction
Administration**





Hartsfield- Jackson Atlanta International Airport / *United States*

WSP leads the joint venture that is providing program management support services for the ATLNext program, an ambitious CAD 7.5+ billion program of improvements to enhance the passenger experience, increase service capacity and optimize airport operations at the world's most traveled airport. The joint venture is responsible for program/project management support, quality management, safety oversight, project controls, contract administration, document control, invoice compliance, constructability reviews and supplier diversity outreach, monitoring and reporting.

Services
Program and Project
Management

Queen Alia International Airport

Jordan

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Designed by Foster + Partners, the new terminal was delivered as a P3 and increased the airport's passenger capacity from 3.5 to 12 million people with the completion of phase 2, in September 2016. WSP provided expert technical advice on both airport design and construction-related matters. We also monitored construction progress and managed mediation when needed.

Services

Project Management

(Independent Engineer Services)





London Heathrow / Terminal 2B *United Kingdom*

Terminal 2B, a world-class award-winning project, is one of the largest privately funded construction projects in the UK. We delivered complete building services, ICS designs and digital services, respecting stringent regulations and standards developed by the client to meet resilience, security and maintenance requirements while providing a best-in-class passenger experience.

Services
Project Management / Design

San Francisco International Airport / *United States*

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The Airport's RSA Improvement Program involved enhancements to runways in order to comply with Public Law 109-115. Since SFO is one of the 10 busiest airports in the US, the improvements had to be completed with minimal impact to airport operations while maintaining safe conditions for aircraft operations.

Services

**FAA Coordination /
Construction Management /
Project Controls**





A380 Final Assembly Plant / *France*

This CAD 625 million project was designed and developed in less than three years. We also worked with Airbus design team to develop a new industrial assembly concept. We have since built a strong relationship with Airbus, allowing us to work with them year after year. Projects include long-range painting halls, delivery center and headquarters.

Services

**Project and Construction
Management / Planning /
Design**

Taoyuan International Airport /

Taiwan

Terminal 3 is the flagship of the Taoyuan Aerotropolis Plan, and considered Taiwan's most important construction project at present. It will include a new terminal building, aprons, concourses, multifunctional building, and energy center. WSP also helps the client develop an ICT digital strategy in order to build the first smart airport in East Asia.

Services
**Planning / Project and
Construction Management**





Lyon Saint-Exupéry Airport / Terminal 1 *France*

To support the economic development and international influence of Lyon and its region, Aéroports de Lyon aims to eventually become the second most popular airport in France and the main departure point for the south-east of France. For this Design-Build project, WSP collaborated with Bouygues Bâtiment Sud-Est, as the General contractor. Using BIM, we are responsible for the mechanical engineering of the project, including HVAC and fire protection.

**Services
Design**

Hamad International Airport / Airport City Qatar

16 Opened in 2014 south-east of Doha,
this airport is experiencing rapid growth
in line with the unprecedented demand
17 increase in Qatar Airways traffic.

Our role has evolved from developing
a masterplan for a major new airport
city to planning and designing immediate
and long-term elements of the airport
expansion, including aspects related
to the 2022 FIFA World Cup. We have
been involved in a wide range of feasibility
and proof of concept studies in connection
with both masterplanning and engineering
design.

Services
Planning / Design





Billy Bishop Airport / *Canada*

WSP has been involved in projects at Billy Bishop Toronto City Airport since the 1990s and has been a frequent contributor to the significant transformation of the airport since then. Our team is currently providing planning, design and construction inspection services for one of the largest projects in the airport's history, the ongoing three-year Airfield Rehabilitation Program.

Services
**Planning / Design /
Construction Management**

Kalmar Airport / *Sweden*

18 The business community is acutely
19 aware of the importance of modern and
ambitious company policies for sustainable
business travel – for employees as well
as clients. Air travel is challenged, but
still a time-effective option in a highly
competitive business environment. WSP
was commissioned by Kalmar Airport
to evaluate how using biofuels could
potentially impact demand. Would
business travel increase, and what price
elasticity can be expected?

Services

**Environmental and
Sustainability / Strategic
Consulting**





The Future of Regional Airports / *Sweden*

As the Swedish parliament considers implementing a tax on air travel as a means to reduce emissions, WSP has performed an innovative and advanced econometric study in order to investigate the effects and implications of such a policy on the demand for travel from smaller regional airports. Reduced demand and passenger volumes would jeopardize operations on several smaller regional airports. A closure of any regional airport would bring adverse effects on regional accessibility and ultimately regional growth and prosperity.

Services
Strategic Consulting

Stockholm Skavsta Airport / *Sweden*

20 Stockholm Skavsta Airport will, with
substantial infrastructure investment
plans, become an intermodal transport
21 hub connecting air, high-speed rail
and road accessibility. WSP has been
commissioned to develop a strategic master
plan examining the prerequisites for the
localization and development of a dynamic
and vibrant business community. Taking
into account site-specific conditions, what
businesses are likely to benefit the most
from interactions with the airport and each
other? What land use policies should be
adopted?

Services
Strategic Consulting





Chicago O'Hare International Airport / *Modernization Program* *United States*

WSP is serving as construction manager for the O'Hare Modernization Program (OMP), a CAD 10 billion program to reconfigure the airfield at Chicago O'Hare International Airport to reduce delays and increase capacity to meet future aviation needs at one of the nation's busiest airports. The OMP is constructing/ rehabilitating/ reconfiguring more than 20 miles of airfield to create a more efficient runway/taxiway system, accommodate larger A380 aircraft, and reduce impacts on communities surrounding the airport.

Services
Construction Management

Columbus Regional Airport Authority / *United States*

We have been providing airport financial consulting services to the Columbus Regional Airport Authority for over 30 years. Our services include rates and charges analysis, financial feasibility studies, organizational reviews and benchmarking analysis to support negotiation of airline use and lease agreement.

Services
Strategic Consulting





Munich Airport / *Germany*

Over the years, we have greatly contributed to Munich Airport's development, now accredited to a level 3 Optimization airport by ACI Europe. Our involvement started with Terminal 1 and then continued to Terminal 2. We also participated in the development of the Munich Airport Centre, the largest roofed outdoor area in Europe.

Services
Construction Management

Indira Gandhi International Airport / *India*

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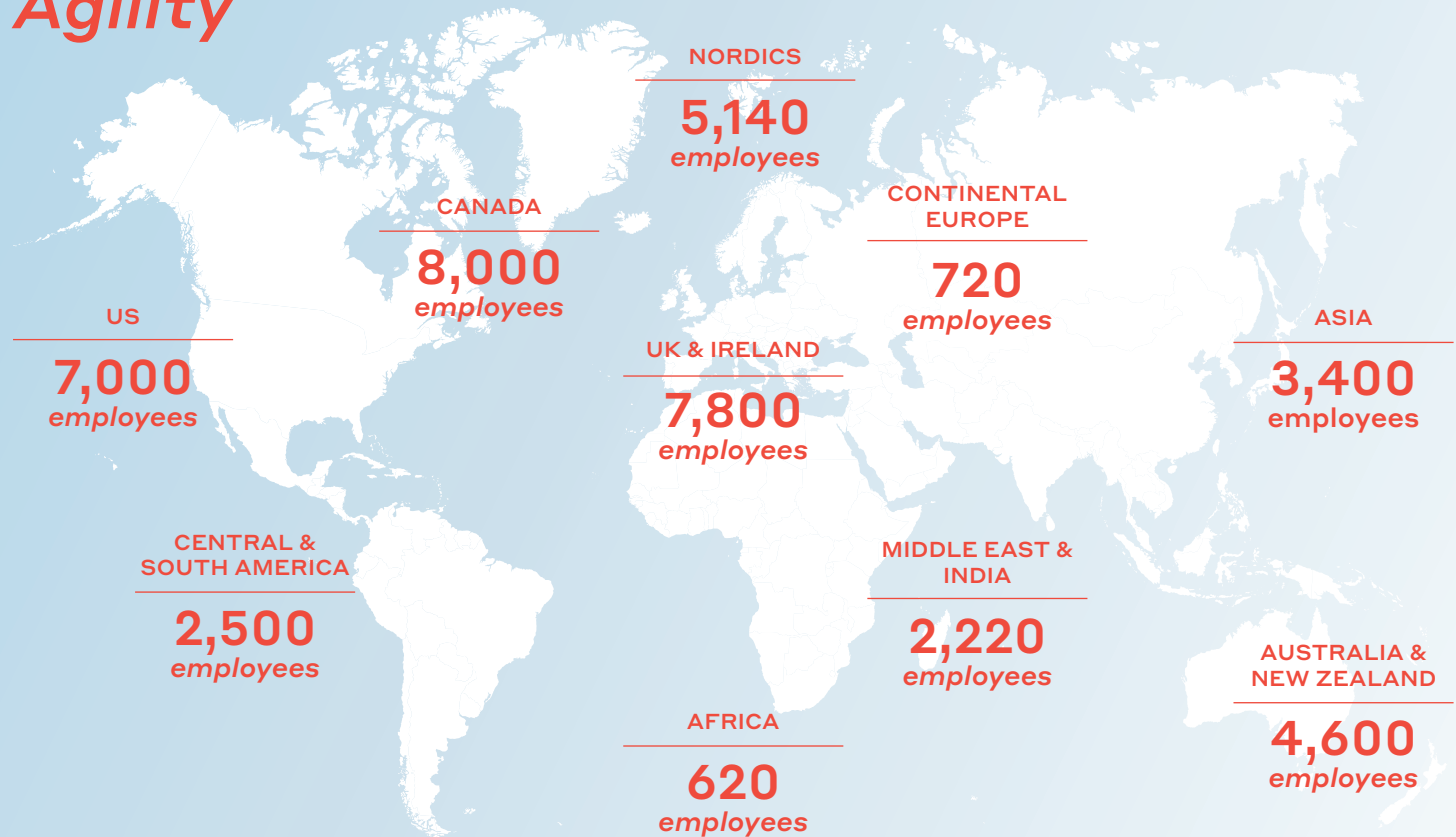
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This airport is the busiest and largest in India. The P3 Delhi International Airport Limited completed an award-winning, massive, fast-track modernization program to expand airport capacity, improve operational efficiency, and enhance passenger experience. Features include a complex of restaurants, hotels and shops, as well as additional landside and major airside improvements.

Services
Design / Project
and Program Management



International Agility



Figures at December 31, 2017

Our Global Aviation Community



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GL-MK-AV-BR-002-EN-201802



WSP is one of the world's leading engineering professional services consulting firms. We are dedicated to our local communities and propelled by international brainpower. We are technical experts and strategic advisors including engineers, technicians, scientists, architects, planners, surveyors and environmental specialists, as well as other design, program and construction management professionals. We design lasting solutions in the Property & Buildings, Transportation & Infrastructure, Environment, Industry, Resources (including Mining and Oil & Gas) and Power & Energy sectors as well as project delivery and strategic consulting services. With approximately 42,000 talented people in 550 offices across 40 countries, we engineer projects that will help societies grow for lifetimes to come.

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