



Airport Solutions



aviasolutions
A GE Capital Aviation Services affiliate



AviaSolutions is one of the world's leading air transport consultancies. Our reputation is based on deep knowledge and experience of the sector combined with an excellent track record of delivery for clients worldwide.

Delivering value to your business

Our team is made up of industry professionals – rather than career consultants – ensuring we bring direct ‘hands on’ experience to your project.

Our philosophy is simple. We work with you to add value to your business.

With project experience gained working in over 40 countries worldwide, we have become the advisor of choice for many clients.

Regardless of whether we work on large complex projects or the provision of ad hoc services, our focus is to work in partnership with you.

We constantly seek to identify value and opportunities. We are proud of our reputation for not only delivering quality, but also for ensuring we are responsive to meeting your needs in a rapidly changing world.

The advice we provide is backed by extensive, up to date databases of airport and airline information.

Client sectors include:

- **Airports** – ranging in size and complexity from global hubs like Heathrow, Chicago O’Hare and Abu Dhabi to regional airports which face different, but no less challenging issues.
- **Airport Investors and Financial Institutions** – providing a complete package of due diligence services. We have worked on nearly every significant airport transaction since 2004 representing buyers, vendors and debt providers.
- **Government and Public Sector** – we have helped inform the development of national aviation policy and worked to implement specific policies in the UK, Europe and North America.
- **Airlines** – projects ranging from specific route analysis through to full strategic reviews for a range of carriers, covering all airline types.



We offer a range of core services, all supported by our specialist teams which have direct industry experience.

Core advisory services

By combining our service offerings, we can offer coherent and integrated advice, avoiding the need to retain multiple advisory support when implementing major projects.

Transaction Support & Business Planning

A world class reputation developed through supporting clients with the acquisition, disposal or refinancing of aviation related assets.

Traffic Forecasting

Fundamental to creating value and informing key business decisions, supported by a highly experienced traffic forecasting team.

Route Development

Supporting the development of new air services through a combination of detailed analysis, market research and co-operation with airports, airlines and wider stakeholders.

Our in-depth knowledge of the airline sector significantly enhances our ability to create compelling route development cases for airports.

Commercial & Retail Enhancement

Working with airports and commercial partners to enhance income generating opportunities from retail, property, car parking and other non-aeronautical activity.

Infrastructure Planning & Development

Working at each stage of the project process, from scoping of infrastructure through to operation.

Policy, Planning & Consultation

Supporting the development and application of national and regional aviation policy objectives through positive engagement with key stakeholders.

Regulation

Supporting both the regulator and regulated airports in countries worldwide.

Airline Support and Business Planning

Industry professionals with an extensive knowledge that can provide high level strategic or detailed business planning advice.



We offer a comprehensive package of business planning and transaction support with expertise across each of the key airport business drivers.

Transaction support & business planning

The key airport business drivers include: traffic forecasting, regulation, aeronautical revenues, non-aeronautical revenues, operating expenditure and capital expenditure.

We have extensive experience of airport due diligence and refinancing. We have delivered a range of bespoke business planning projects including the implementation of commercial strategies, benchmarking studies, risk planning and the development of aeronautical pricing models.

Depending on the nature of the engagement, we can provide detailed short-term forecasts to support business planning processes and long-term forecasts to support a transaction or refinancing process.

A Tailored Approach

Unlike many of our competitors, we don't believe in a 'one-size fits all' approach to our analysis. The analytical techniques that we use will always be designed to ensure that the unique circumstances of each airport are taken into consideration, with focus on the most important value drivers.

To support our work, we have developed extensive in-house databases and models covering a range of financial and operational performance indicators.

Example Projects:

We have worked on virtually every significant airport transaction since 2004, including:

- Vendor Due Diligence supporting the sale of equity in BAA, London Gatwick and Birmingham airports.
- Investor Due Diligence supporting bidders for airports worldwide including; Auckland, Chicago Midway, Budapest, Brussels, Rome, St Petersburg, Mumbai, HNA Airport Group (nine airports in China) and Hochtief (six airports).
- Refinancing of airports including Bristol, Brussels, Copenhagen and BAA Ltd.

Most recently AviaSolutions supported:

- GIP in their acquisition of Edinburgh.
- AMP in their acquisition of Newcastle.
- MAG & IFM in their acquisition of Stansted.

Examples of bespoke business planning projects include:

- A study of the financial impact of a landside shopping development at Larnaca Airport on retail revenues.
- Development of aeronautical pricing models for hub airports in Europe and the Middle East.
- Business plan for a large Middle East airline to support raising of debt.



Arrivals

We offer a highly experienced team of air traffic forecasters, producing robust, insightful passenger and cargo projections.

Traffic forecasting

Our passenger and cargo traffic forecasts are used to support a variety of business decisions. These include long-term new route assessments for airlines, long-term masterplans for airports and financial transactions (airport or airline acquisition, disposal and refinancing).

We tailor our forecast output to your needs, with segmentation aligned with key value drivers. As part of our analysis, we undertake market analysis to assess potential upside or downside risks, as well as general macroeconomic and market positioning factors.

Passenger, Cargo, ATM and Secondary Forecasts

We use a variety of analytical techniques to produce robust, realistic and defensible forecasts. The approach undertaken will reflect the particular circumstances of the market in question, as well as the nature of the required forecast output.

These include:

- Econometric modelling, incorporating macroeconomic factors (e.g. GDP), microeconomic factors (e.g. fares and taxes, fuel cost, emissions trading, etc.) and traffic elasticities.
- Bottom-up forecasts (by route, airline, aircraft, frequency).
- Traffic allocation modelling (passenger choice between competing airports).
- Connections modelling (QSI).
- Scenario testing and sensitivity analysis. Peak period and design day modelling, used to inform terminal and airfield masterplanning, surface access development and environmental assessment.
- Non-aeronautical forecasts (e.g. car park occupation).

Example Projects

We have undertaken traffic forecasts at over 100 airports worldwide. Major forecasting projects include:

- Country level national traffic forecasts (e.g. Mexico). Forecasts for major airports (e.g. Berlin Brandenburg).
- Forecasts for specific infrastructure developments (e.g. Runway 3 at London Heathrow, 2nd Runway at Stansted and T2 Abu Dhabi).
- For airport masterplans (e.g. Bahrain, Riga).
- Transaction vendor forecasts (e.g. London Gatwick, Almaty and Riviera Maya).
- Buy side or refinancing forecasts (e.g. Budapest, Chicago Midway, Brussels, Copenhagen, Auckland, Mumbai, St. Petersburg).
- Airline network studies (e.g. Etihad).



We have an outstanding track record of delivering new air services for airports. Our unique insight into both airport and airline operations & planning enables us to focus on the swift implementation of profitable routes.

Route development

Our support covers the entire network development process. For airports, this includes airport network analysis, route specific engagement and commercial negotiations with airlines.

Route Development

A targeted and effective route development strategy is vital to securing long-term growth for airports. Working on behalf of airports or governments, we engage with airlines to secure new air routes. Our airline industry contacts allow us to access key decision makers, facilitating the efficient presentation of convincing arguments for new routes supported by detailed market analysis.

Airport Network Development and Gap Analysis

Our route development process is multi-staged. Benchmarking studies identify gaps in the airport's network and determine target markets and ideal airlines to fill the gaps. We then use our in-house QSI model to produce indicative route passenger and revenue forecasts, including the potential for transfer traffic. Finally, we develop a business case for presentation to a target airline, supported by detailed market analysis.

Route Specific Airline Engagement

Airlines always have a choice as to which destination to serve. Answering key airline questions, such as 'why should I fly here?' and 'why are you better than the next airport?' is fundamental to securing a new route.

Successful engagement with airlines needs to be focused on: identifying and introducing the opportunity; providing robust traffic and yield forecasts and; setting out key economic and/or leisure indicators that will underpin the proposed services. We have insights into airline route economics to ensure the route can become financially sustainable within a reasonable timeframe.

Commercial Negotiations With Airlines

We offer assistance with commercial negotiations on airport fees and charges for the new route(s). We aim to maximise the value for an airport whilst ensuring that existing income is not diluted.

Example Projects

- Detailed market analysis and engagement with airlines on behalf of City of Chicago. A significant number of new routes and additional frequencies to key long-haul markets have been secured.
- Supported Scottish Enterprise in developing the network of services from all Scotland's major airports. As part of this role, we were instrumental in delivering over 40 new routes, including Glasgow-Dubai and Edinburgh-New York.
- We undertook a similar role in Northern Ireland, assisting with the establishment of an international base at Belfast by easyJet and the launch of a daily service to New York by Continental.



Our team provides retail and commercial insights to optimise non-aeronautical revenue performance. This is based on direct experience of airport retailing at some of the world's leading airports.

Commercial & retail enhancement

We offer a range of services which include the analysis of concession sales and income using relevant KPI's to support future investment or scenario planning. We have experience in developing plans to optimise retail and F&B performance including space and category planning. We can also work with you to develop your car parking product, along with yield management and sales channel optimisation.

Performance Analysis

Using a combination of experience and statistical analysis, we are able to produce insight for each of the main commercial activities, including detailed benchmarking against relevant peers. This knowledge can be integrated with traffic projections and segment growth forecasts to develop credible revenue growth targets and implementation of strategies.

Space Planning

Airports can optimise returns from terminal space by adopting a systematic and objective approach to the allocation of space to retail categories. Our industry knowledge and performance benchmarking allows us to provide expert guidance and advice on concessions planning and execution, from retail layout planning and design through to revenue optimisation modelling.

Retail Contracts

The contract between airport and retailer underpins a relationship which may last for many years. We offer a range of services from a complete tender management process to advice on existing contract terms and options to improve profitability.

Car Parking

Airport car parking has become increasingly sophisticated in recent years. Advance booking allows passengers to make informed choices before travelling to the airport and decisions are often determined by online access and availability as well as price and convenience. We offer a complete package of advisory services to maximise car parking revenues.

Example Projects

- Working with a major airport investor/operator to estimate the sales impact of a proposed landside shopping and entertainment mall on the incumbent retail and F&B operators in the airport .
- Producing detailed retail layout and category/merchandise plans in support of investment proposals (including Chicago Midway and Belfast City Airport).
- On behalf of a major European airport we analysed retail performance over time seeking to establish the nature and scale of independent variables that determined retail performance (including space, exchange rates, inflation and passenger/airline mix).
- Supported Morgan Stanley Infrastructure's acquisition of a stake in SAVE SpA by completing a full review of the airport's in-house retail operator and specialist shops strategy.



Ensuring cost effective and fit for purpose infrastructure is critical to the success of any airport. Our experienced team develops operationally efficient and commercially optimised capacity plans for airports worldwide.

Infrastructure planning & development

We assist in specifying the appropriate level of airport infrastructure and the timing of its implementation.

We define the scope of development required and assist in the procurement of design teams and contractors to deliver the infrastructure. We provide support at each stage of the project process, from inception to commissioning and operation.

Masterplanning and Project Evaluation

Airport facilities must meet the needs of the market they serve, whilst being flexible enough to adapt to market changes.

Using proven capacity modelling techniques, benchmarking databases and direct experience of airport infrastructure development, we ensure the proposed developments are fit for purpose. This includes the airfield, terminal retail, car parks, surface access and related activities.

Project Scope Definition

A clear project scope and design brief is critical in determining the size and shape of infrastructure developments. Our development briefs are clear, concise and aligned with IATA planning standards and detailed space-facility requirements.

Financing Options

We assess all instruments for financing an airport's development to identify the most appropriate option. This can include private sector involvement, ranging from concessions to BOT-type structures to outright privatisation. Additionally, we have extensive experience of working with financial institutions and other providers of finance.

Programme Management, Implementation and Delivery

We provide programme management services to ensure that your interests are served in the context of individual airport projects. Our team includes experienced airport infrastructure programme managers, with a deep understanding of how cost effective capacity is delivered within a live airport operational environment.

Example Projects

- A detailed review of interim capacity solutions prior to the opening of a new midfield terminal complex at Abu Dhabi International Airport.
- A long-term masterplan for Bahrain Airport, including traffic forecasting, capital development and business planning.
- Capital investment reviews for a number of major airports including London Gatwick (as part of the sale process).
- Review of London Heathrow's 10-year capital investment plan on behalf of airline customers.



Understanding the policy context within which airports operate is critical to business success. We have a strong track record of supporting airports, airlines and governments in the development and application of aviation policy.

Policy, planning & consultation support

Understanding national policy drivers, local planning issues and the views of external stakeholders is critically important. We have direct experience of working with both the public sector and industry within the policy and planning arena.

Policy

Our team has first-hand experience of the formulation of air transport policy and its implementation. This includes working for national and regional government, and a wide range of public sector organisations.

Planning

Our team has advised airports on developing strategies within complex policy frameworks to manage detailed and contentious planning applications. This often involves working with external stakeholders to ensure the risk of challenge is mitigated.

Public Consultations

Aligned with policy and planning is the need to manage and implement public consultation. We have managed a wide range of consultations supporting policy development and planning applications. We have analysed and reported on the responses received. We have the knowledge and systems in place to enable detailed analysis of large and technically complex submissions, as well as more simple questionnaires.

Example Projects

- Advised the Mexican Government on the development of a national aviation policy framework.
- Supported the UK Department for Transport through management of a wide ranging public consultation on future provision of airport capacity during the development of the Air Transport White Paper.
- Supported several major UK airports with the preparation of planning applications for airport development.
- Four major studies for the European Commission, including a detailed analysis of the financing of aviation security and a study of air transport infrastructure issues in the EU new Member States.
- Wide ranging public consultations regarding airport development and/or mitigation of impacts at Heathrow, Stansted and other airports in the UK.



The degree and form of economic regulation can be a key value driver for airports. Our extensive experience of airport regulation allows us to guide clients through complex regulatory issues and ensure alignment with their strategic goals.

Regulation

As part of bespoke regulatory projects or wider transactional support, our experience extends across the globe to diverse jurisdictions including the UK, Continental Europe, Middle East, Australasia, the US and Latin America.

A key feature of our experience is that we have undertaken work on behalf of both regulators and airports that are subject to regulation. We are aware of the major regulatory objectives for each party and the best approaches to achieving regulatory goals.

An Integrated Approach

Regulatory models typically rely on a number of different 'building block' inputs, both operational (e.g. traffic volumes, commercial revenues, capital expenditure plan) and financial (e.g. WACC, cost of capital). Our expertise in each of the operational building blocks allows us to provide an integrated approach to regulatory model development and advice.

To complement our work, we have established successful partnerships with specialist economic consultancies which can provide detailed financial input to regulatory models (e.g. asset valuation, cost of capital calculations, etc.).

Example Projects

- Manchester Airport Group (MAG) – developed analysis to inform its submission to the Office of Fair Trading's market study into UK airports. This enabled MAG to make a successful case for de-designation.
- Mexican Government – worked on behalf of the DGAC (the Regulator) to undertake a regulatory review of the ASUR airports group. Our report informed the five year regulatory settlement of the ASUR group.
- Detailed examination of regulation and impact on future value at a wide range of airports worldwide as part of transaction due diligence for potential investors or vendors – including BAA's £1.5bn divestment of Gatwick, Ferrovial's planned 10% equity sale in BAA and the \$1bn refinancing of Copenhagen Airports Denmark.



An extensive track record of delivery for major clients around the world.



Case studies

AviaSolutions has worked for most of the major infrastructure investors on virtually all of the recent major airport transactions.

A few examples are highlighted here.

Bid support for MAG and IFMs acquisition of 100% of Stansted Airport for £1.5bn

- Detailed review of all revenue/cost drivers of Stansted Airport.
- Development of detailed due-diligence report, including assessment of traffic forecasting, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure.

Bid support for acquisition of 49% stake in Newcastle Airport

- Detailed review of all aspects of Newcastle Airport.
- Development of detailed due-diligence report, including assessment of traffic forecasting, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure.

Bid support for acquisition of 100% stake in Edinburgh Airport

- Detailed review of all aspects of Edinburgh Airport.
- Development of detailed due-diligence report, including assessment of traffic forecasting, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure.

VDD for Sale of BAA London Gatwick

- Detailed review of all aspects of **Gatwick Airport's** business for **BAA Ltd.**
- Development of detailed VDD report, including assessment of traffic forecasting, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure.

Bid support for acquisition of long term concession in San Juan, Puerto Rico

- Detailed review of all aspects of San Juan Airport in Puerto Rico.
- Development of detailed due-diligence report, including assessment of traffic forecasting, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure.

VDD for 5.88% equity sale of BAA Ltd.

- Detailed review of all aspects of the 6 airports in BAA for **Ferrovial Aeropuertos.**
- Development of detailed VDD report; assessment of traffic forecasts, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure for each airport.



Our highly qualified team address challenges throughout the airline's value chain - from business model selection to traffic analysis, network development and fleet selection.

Airline solutions summary

AviaSolutions offers a suite of consulting services, techniques and tools tailored towards the changing demands of the airline business. Our highly qualified team address challenges throughout the airline's value chain - from business model selection to traffic analysis, network development, fleet selection and acquisition analysis.

Our goal is to deliver practical, appropriate and innovative solutions to your airline challenge. This starts with selecting a business model and market positioning strategy that will engender shareholder returns and growth.

The aviation industry attracts some of the most talented leadership teams in the world. For those people running the world's airlines, the challenges faced get more complex every day:

- Delivering sufficient shareholder returns in an environment of high fuel prices and flat economic growth.
 - Managing legacy airlines when new competitors engage with lower cost structures.
 - Managing the slowing penetration rate in developed markets of the once all-conquering low cost carrier business model.
 - An airline alliance and partnership landscape that is ever evolving, with long-term consequences on traffic flows.
 - The constant growth of Middle East and Asian sixth-freedom hub carriers, with long-term consequences on traffic flows.
- Providing the infrastructure in emerging markets in order to convert the undoubted opportunity into profitable growth.
 - Handling fleet strategy when new aircraft types promise new efficiencies but have been delayed by development challenges.
 - Raising finance that can enable more efficient and capable fleets at competitive pricing.
 - Brand propositions that often need to re-engage with their customers.
 - Environmental concerns that are adding cost structure for minimal added value to date.

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