



Airline Solutions



aviasolutions
A GE Capital Aviation Services affiliate



AviaSolutions is a leading aviation strategy consultancy business and a division of GECAS.

Delivering value to your business

AviaSolutions' goal is to position airlines, airports, investors in aviation and governments so that they can achieve a distinct and sustainable competitive advantage in their operating environments.

AviaSolutions was founded in 2001 and since then, has conducted hundreds of advisory projects in 40 countries around the world.

Our consulting team is made up of aviation industry professionals, enabling us to bring 'hands on' experience to client projects. Our reputation is based on deep knowledge and experience of the sector combined with an excellent track record of delivery for clients worldwide.

AviaSolutions is based in London, UK and has established an emerging markets footprint with a presence in Dubai, UAE.

Client sectors include:

- **Airlines** – projects span new airline feasibility, business planning, network improvement, aircraft fleet planning to investment analysis, covering the full spectrum of airline business models and regions.
- **Airports** – ranging from the global hubs of 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 every major 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.



AviaSolutions offers a range of core advisory 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 to airlines, avoiding the need to retain multiple advisory support when implementing major projects.

Airline Strategy

Advising airline leadership teams with detailed decision planning aids in key areas such as corporate strategy, business model selection and feasibility studies.

Business Planning

Experienced in the specialist field of airline business planning, having created expert and detailed plans for many different business models, outlining the strategy to execute.

Airline set-up planning

Assisting your new airline project with proven set-up planning, methodology and tools that assist aircraft selection, airline AOC award and service launch.

Traffic Forecasting

Fundamental to creating business value and informing key strategic decisions, one of the world's leading traffic forecasting teams supported by an array of traffic data and tools.

Airline Finance & Budgeting

Core competence in building airline economic models, budgeting, aircraft financing and the key revenue and cost drivers, delivered with proven methodologies.

Network Strategy

Projects from new airline business planning, network change, aircraft fleet planning to investment analysis, and covering the full spectrum of airline business models and regions

Aircraft Evaluation & Fleet Planning

A thorough understanding of aircraft performance, aircraft economics and the lease/finance sector that is essential to the fleet planning decision, utilising in-house customized fleet evaluations models.

Alliance and Competition Evaluation

Understanding the ever-changing landscape of codeshares, revenue sharing, alliances and partnerships.

Cargo Advisory

Advising airlines, airports and other stakeholders on strategies to enhance revenues and profitability from cargo operations either through using dedicated freighters or the belly hold of passenger aircraft.

Policy, Planning & Consultation

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



Advising airline leadership teams with detailed decision planning aids in key areas such as: corporate strategy, business model selection and feasibility studies.

Airline strategy

Airlines are one of the most complex businesses in the world to manage, combining a highly capital-intensive model with a perishable service, cyclical demand (by day, week, season) with complex operating regulations, fossil fuel dependency and constrained airport capacity.

The industry is also one of the most exciting and challenging; merging advanced technology with long-distance travel, a global marketplace and emerging markets with local characteristics.

AviaSolutions supports all areas of an airline's business with management consulting and business transformation services for national carriers, commercial airlines, regional airlines, cargo airlines and aviation investors worldwide.

We also support strategic decision making and investment assessments for a broad scope of aviation businesses. We can advise airline leadership teams with detailed decision strategy and planning aids in areas including:

- Corporate strategic planning
- Business model selection
- Business and industry analysis
- Feasibility studies
- Traffic forecasting
- Project management
- Market expansion studies
- Market segmentation analysis
- Alliance selection studies
- Development of privatization strategy
- Public policy/economic research
- Management/Process Improvement
- Decision analysis
- Investment and break-even analysis
- Scenario analysis
- Distribution strategy
- Litigation support



GE Capital Aviation Services

GECAS: Our Parent Company

AviaSolutions is a company of GE Capital Aviation Services (GECAS), a leading global player in commercial aircraft leasing and financing, with over 1,700 owned and managed aircraft and approximately 235 customers in over 75 countries. GECAS has one of the world's largest fleets of commercial aircraft including widebody and narrowbody commercial jets from Boeing and Airbus and 50-90-seat model regional aircraft from Bombardier and Embraer. It provides commercial operators around the world with passenger and cargo fleet solutions, as well as specialty aircraft for government/VIP use. GECAS is a full life-cycle aviation player, providing leasing and financing options for commercial operators, engines and parts. GECAS maintains a strong global presence with 24 client offices in 16 different countries around the world. GECAS is a business of GE Capital. From everyday lightbulbs to fuel-cell technology to cleaner, more efficient jet engines, GE has continually shaped our world with ground-breaking innovations for more than 130 years.

Global strength. Local expertise.



Experienced in the specialist field of airline business planning, having created expert and detailed plans for many different business models, outlining the strategy to execute, and followed the process through implementation.

Business planning

Your airline needs clear visibility of where it wants to be in the next 3, 5 and 10 years and a plan of how to get there. Airlines that operate to a clearly defined strategy are proven to be significantly more successful than those that do not.

Business planning is not a once-off activity, but rather it is a 'live' process, so an airline's planning horizon should always be current and continuously up-to-date based on real world results, events, trends and market forces.

Our team is experienced in the specialist field of airline business planning, having created expert and detailed plans for many different operator business models. An AviaSolutions business plan provides leadership teams with reliable and robust advice to adequately plan for the airline's future and success.

These plans outline to airline leadership teams the strategy to execute, the critical business decisions to be made, the timelines, and the business plan implementation stages along the way. They include elements such as:

- Market positioning strategy
- Investment requirement
- Project Implementation schedule
- Route network and schedule
- Fleet plan and aircraft introduction
- Budget and financial planning
- Manpower requirements and planning
- Aircraft acquisition strategy (lease or buy)
- Aircraft financing solutions

Example Projects

- **Aer Arann:** Business Plan Review for Fleet Financing – review of revenue projections, capacity and volume assumptions, yield assumptions.
- **Air Ivoire:** Development of a high level business plan based on client's audit for the airline.
- **Air Berlin:** Business Model Assessment – Due diligence study to understand Air Berlin's value to a large Middle East carrier in terms of synergies and cooperation.
- **China Start-Ups:** Full Business Plan consulting services for two major new carriers to be launched in Eastern China in 2014.



Assisting your new airline project with proven set-up planning,
methodology and tools that lead to aircraft selection, airline
AOC award and service launch.

Airline set-up planning

Pioneering investors and leaders are always seeking niches for new airlines to establish strong, profitable and defendable market positions.

In developed markets, innovative business models are allowing savvy airlines to stand apart from their peers and occupy more profitable market niches. Some established airlines are evolving towards portfolio approaches, using different business models within a group to address distinct market needs.

In emerging markets, rising personal incomes are creating opportunities for people to fly and experience the value of air travel. Those carriers which gain first mover-advantage will be best positioned to reap the benefits.

We can assist your new airline project with proven set-up planning, methodology and tools. We set out to fully understand the market potential through detailed traffic, yield and cost analysis. Our market analysis is designed to understand how any new airline should be competitively positioned. Our fleet plan advice will set out a feasible aircraft acquisition and introduction strategy. We will build a cost and revenue structure based on our aircraft and airline economics expertise.

Detailed project management timelines will indicate the key decisions and tasks to be undertaken by the new airline's leadership team once it comes onboard.

Implementing an AviaSolutions airline set-up plan will allow a new airline management team to work toward Air Operator's Certificate application, fleet introduction, technology roll-out and service launch date.



Arrivals

Fundamental to creating value and informing key business decisions, supported by one of the world's leading traffic forecasting teams.

Traffic forecasting

We offer one of the world's leading air traffic forecasting teams producing robust, insightful passenger and cargo forecasts.

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 over 100 major traffic forecasts worldwide. Major forecasting projects include:

- Airline network studies (e.g. Etihad).
- 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).



Understanding the dynamics of network strategy – whether for low cost carriers, regional airlines or hub-and-spoke carriers.

Network strategy

At the heart of every airline's planning process lies its network strategy. Whether you are a low cost carrier operating on a purely point-to-point basis, or a hub carrier managing connectivity at one or more bases, each and every route of the network should be contributing to the bottom line.

Network management is a complex process that must combine a strategic focus with a tactical flexibility to achieve business plan goals. Changes must be made to operations based on real-time performance and market reaction. Routes cannot be analysed in isolation but must be considered in terms of the value contributed to overall network profitability.

AviaSolutions provides network planning analysis that is market-based and data-driven. Using our own in-house tools and models (such as QSI and Traffic Forecaster) combined with access to real-time market data to understand point-to-point demand patterns as well as airline capacity changes over time, we work with you to improve the profitability of your route networks.

Parameters to fully understand in an airline's network strategy include:

- Market Analysis
- Traffic Forecasting
- Connectivity Analysis
- Competition Analysis
- Fare Analysis
- Codesharing
- New Route Feasibility

Project Examples

- **easyJet:** New Bases Evaluation – Schedule analysis, route performance reporting, process mapping/re-design.
- **CityJet:** Network Expansion Analysis – to help define the size, shape and timing of Cityjet network expansion, capacity and competition analysis, passenger traffic forecasting model.
- **Flybe:** New Bases Evaluation – individual market studies for new routes/bases with regional aircraft.
- **Ukraine International Airlines:** New Route Forecasts – analysis of potential new routes and additional services to CIS and Russia.
- **BMED:** Route Evaluation and Market Analysis – new route evaluations (2006) and investigation into route performance.
- **airBaltic:** Long Term Traffic Forecasts – independent traffic forecasts at airBaltic's main base.
- **City of Chicago:** New Route Development – strategic advice/network diagnostics with client airlines to evaluate route potential, network development (use of QSI model and connection builder to calculate fair market share), market analysis (O&D market size analysis, economic analysis).



With a thorough understanding of aircraft performance, aircraft economics and the lease/purchase decision that are all essential to the fleet planning process, we can run customized fleet evaluations.

Aircraft evaluation & fleet planning

The core revenue/profit contributor for any airline is delivered by operating its aircraft fleet. Therefore, evaluating, selecting and managing the optimum fleet, matching capacity to demand and making smart purchase/lease decisions are central to an airline's success.

The challenge is that at most airlines, major fleet evaluations take place only once every few years or every decade. Therefore, the necessary new fleet analysis competencies and processes are often not held in-house, and may not be keeping up with developments within the industry.

Operators must consider many factors when selecting a new or replacement fleet:

- Match capacity to demand
- Optimum number of fleet types
- Fleet commonality
- Aircraft payload range capability
- Aircraft take-off performance
- Relative fuel consumption
- Relative revenue driven by seat count
- Maintenance cost and support capability
- The value of passenger comfort
- Cargo capacity
- Old versus new trade-offs
- Aircraft pricing/lease rates
- Aircraft buy versus lease trade-offs
- Availability and affordability of financing etc.

Often, an aircraft type that wins on some of the above factors will lose on others. An objective comparative analysis is essential to finding the most appropriate answer to your specific fleet question, addressing both economic and non-economic factors, using net present value analysis to decipher which solution delivers the best return on investment.

We have hands-on experience leading aircraft evaluation projects on behalf of client airlines and managing aircraft marketing campaigns for leading aircraft OEMs. Our advisory team offers a unique blend of consultants with aircraft manufacturer and airline experience, together with a strong aircraft lessor knowledge base. We bring valuable expertise and knowledge to your aircraft evaluation and fleet planning challenge.

AviaSolutions has a thorough understanding of aircraft performance, aircraft economics and the lease/finance sector that is essential to the fleet planning decision. With a set of unique in-house tools for aircraft performance, traffic analysis, aircraft values and maintenance costs not available at other consultancy firms, we can run customized evaluations using the latest industry knowledge.

Example Projects

- **Etihad:** Size and Shape Review – Identifying optimal fleet for Etihad over the long term and providing financial implications of fleet choices.
- **Asian regional airline:** Network analysis, aircraft evaluation and economics comparison to determine the optimum mix of fleet for 3 separate sub-networks.



Assisting new airline projects with proven set-up planning,
methodology and tools.

Budgeting, cost improvement & financial management

Expert budgeting, cost management and financial management provide an airline with the confidence to make the right strategic and tactical decisions, giving your management team an accurate dashboard of information focused on your planning horizons.

Budgeting

We have valuable experience in the specialised area of airline and aircraft economics. We build airline budgets; provide scenario analysis, run sensitivity analysis for various cost parameters (such as fuel burn, interest rates, maintenance costs etc.) and revenue parameters (ticket yields, demand, cargo etc.) as well as growth rates and other elements. This is communicated in straight forward and transparent budget documents.

Cost Improvement

Effective cost improvement is essential to any airline's success story. A pledge to continuously seek cost reductions is what separates the successful carriers from their peers. AviaSolutions can help your airline achieve dramatic reductions in the levels of key cost drivers – such as crew costs, fuel, maintenance costs and aircraft lease costs. We benchmark client costs and productivity levels to best practices at other airlines worldwide. We can provide negotiation support advisory services to ensure you are getting the best possible outcome in your procurement activities. Our analytical capabilities, coupled with strong industry knowledge, can help organize airlines for the financial challenges of today's market and secure a competitive edge.

Financial Management

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

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 airline are taken into consideration, with focus on the most important value drivers. Our due diligence efforts focus on the airline's financial condition its operations and its commercial performance. To support our work, we have developed in-house databases and models covering a range of financial and operational performance indicators.

AviaSolutions also advise airlines on buy or lease decisions concerning new aircraft. For airlines wishing to buy aircraft using financing, we are well placed to suggest the most suitable and cost efficient financing vehicles.

Project Examples

- **British Airways/Hesketh:** Due Diligence for Potential Acquisition of BA Gatwick – high level network review of BA Gatwick operation and evaluation of its current costs/revenues.
- **AirAsia X:** High Level Due Diligence for Potential Investor – assessment of credibility of proposed network, review of yield and cost positioning, fleet planning review, benchmarking of cost/revenue assumptions.
- Vendor Due Diligence supporting the sale of equity in BAA, London Gatwick and Birmingham airports.
- Refinancing of airports including Bristol, Brussels, Copenhagen and BAA.



Understanding the ever-changing landscape of codeshares,
revenue sharing, alliances and partnerships.

Competition and alliance evaluation

The airline industry has been burdened with a less than fully efficient structure for many decades, due mostly to foreign ownership limitations and a proclivity to protect national flag carrier interests.

Global airline alliances emerged as a kind of an interim solution to these constraints and have delivered certain value – some economies of scale and connecting passenger revenues have accrued - but they have been less successful in achieving real gains in costs.

These global alliances are only steps on the path toward a more consolidated global airline structure, which will accelerate as government attitudes move towards liberalisation and protectionism of flag carriers becomes secondary to a new awareness of national interests, in terms of better transport access and ensuing economic growth.

So, the landscape of airline competition, cooperation and alliances is changing. Airline management teams need to make smart decisions as to the value of codeshares, revenue sharing, alliances, partnership, minority shareholdings and mergers, and choose the mix that best suits their particular circumstances:

- Unaligned airlines that see no value in alliance membership.
- Aligned airlines, some of which have jumped from one alliance to another.
- Airlines that have snubbed global alliances and instead built their own customised virtual ties.
- Aligned airlines that have forged new ties with non-aligned carriers, in parallel to their alliance ties.
- Aligned airlines that have forged new ties across alliances.

In this ever changing partnership landscape, understanding the real bottom-line value of alliances and partnerships and the threat/opportunity of competitors are vital elements to the airline strategic planning process – as they lead directly into network, pricing and fleet selection decisions.

AviaSolutions can assist your planning team with traffic, capacity and pricing analysis and can help inform decisions towards alignment, separation or mergers. Using in-house data, tools and processes, we have the required analytical resources and experience to ensure your airline is making smart partnership decisions that add shareholder value.



Advising airlines, airports and other stakeholders on strategies
to enhance revenues and profits from cargo operations.

Cargo advisory

AviaSolutions provides a broad range of cargo expertise to airports, airlines and financial institutions across the globe.

The first stage of market development is to undertake a complete market analysis. We review the local and extended airport catchment, the current cargo market and the industrial sectors driving cargo demand. We also assess how cargo is being carried from the catchment, and how consolidation can be encouraged at the client's airport – rather than cargo taken by road to other airports/airlines.

We have unparalleled cargo contacts at executive level and interview key decision makers as part of our investigation of opportunities. Once a short list of realistic prospects has been identified, we develop compelling pitches to airlines.

Cargo Forecasts

- We have expertise in both passenger and cargo sectors.
- Given the linkages between the two, we are able to provide clients with a joined-up set of forecasts, taking into account developments in both areas.

Master Planning

- We ensure that cargo masterplans reflect the sometimes conflicting requirements of the passenger and cargo segments. Our masterplans involve safeguarding for expansion but allow for phased development, minimising upfront investment.

Example Projects

- We have reviewed the business plans of a range of cargo airlines, including carriers in Europe, Middle East and Africa, both income and cargo volume forecasts and market share analysis.
- AviaSolutions has worked on cargo projects for some of the world's leading airports including London Heathrow, Bahrain, Berlin, Riga and Moscow Sheremetyevo as well as various Mexican and CIS airports.
- Projects include development and implementation of strategic plans for the expansion of cargo including associated traffic forecasts, financial projections and layout plans.
- AviaSolutions performed a high-level due diligence of ACT Cargo Airlines (Turkey) for an investor.



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

Policy, planning & consultation support

Understanding the policy context within which aviation operates 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.

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.



We offer a range of services from airport business planning and route development through to master-planning, all supported by our specialist teams which have direct industry experience.

Airport Solutions summary

We offer a range of services to airport and airport investor clients, all supported by our specialist teams which have direct industry experience.

By combining our airline and airport service offerings, we can offer coherent and integrated advice, avoiding the need to retain multiple advisory support when implementing major aviation 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 one of the world's leading traffic forecasting teams.

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.

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.

CONTACT DETAILS

AviaSolutions

Links 2
Links Business Centre
Old Woking Road
Old Woking
Surrey
GU22 8BF
UK

T: +44 (0) 1483 227 080
F: +44 (0) 1483 227 081
info@aviasolutions.com
www.aviasolutions.com

AviaSolutions

GE Tower #18
PO Box 11549
Dubai Internet City
Dubai
United Arab Emirates

T: +971 4 454 6980
info@aviasolutions.com
www.aviasolutions.com



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