

A wide-angle aerial photograph of a vast sky filled with various types of clouds, from wispy cirrus to denser cumulus. The lighting is dramatic, with the sun low on the horizon, casting a warm, golden glow across the lower clouds and creating long shadows. The upper portion of the sky is a clear, pale blue.

# MHIRJ AERO ADVISORY SERVICES



AERO ADVISORY  
SERVICES

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HEAVY INDUSTRIES GROUP



# YOUR AVIATION ADVANTAGE

As part of the world's leading industrial firm, our team of knowledgeable aviation professionals combines vast experience in both aircraft development and aircraft operations. This unique industry position and unmatched perspective enable us to understand how aircraft OEMs develop products and services, how airlines grow fleets and networks, and how the aviation market must evolve to meet the needs of an ever-changing world.



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## A MARKET LOOKING FOR A NEW SET OF SKILLS

“ Commercial aviation is a complex industry.

In an environment where our customers constantly make long-term strategic and capital-intensive decisions, not only do they need additional capabilities to analyze and understand all the complex data that is becoming available, but they also need to rely on people who can help them see the full aviation sector picture.

Through advanced data analytics interpreted by people who have a 360° view on the business, MHIRJ Aero Advisory Services provides objective perspectives: from analyzing future market requirements to supporting a fleet in service, from understanding airlines' key success factors to making the right aircraft financing decisions.

All this without being partial.”



**PATRICK BAUDIS**

Vice President  
MHIRJ Commercial and Aero Advisory Services

## A UNIQUE OFFERING AND AN INDEPENDENT VIEW

### A STRONG ANALYTICAL EXPERTISE

Our team of aviation experts have an in-depth knowledge of the industry from both an OEM and an airline standpoint, with many years of expertise on how an aircraft OEM develops products and services, how airlines grow fleets and networks, how the aviation market evolves and what trends emerge.

In-depth industry knowledge on:

- ▶ How OEMs develop products and services.
- ▶ How airlines grow and optimize fleets and networks.
- ▶ How the aviation market evolves and what trends emerge.

### A VAST COMMERCIAL EXPERIENCE

Aircraft transactions may be infrequent and complex, while at the same time carrying a disproportionate impact on airlines' long-term success. Our aircraft acquisition team members come from OEMs, airlines and lessors, bringing years of seasoned negotiation expertise from both the "buy-side" and "sell-side".

- ▶ An aircraft trading team with OEM, airline and lessor backgrounds.
- ▶ Understanding of all aspects of purchasing, negotiating, financing and leasing aircraft.
- ▶ Over 350 years of combined commercial aviation experience both from the "buy-side" and the "sell-side".

### MITSUBISHI HEAVY INDUSTRIES, A UNIQUE PLAYER

As a major aircraft OEM with an extensive MRO and in-service fleet experience and the backing of one of Japan's largest industrial groups, MHIRJ is well equipped to support commercial aviation businesses worldwide with all the necessary data and market knowledge they need to grow and prosper successfully.

- ▶ A major aircraft OEM with an extensive MRO and in-service fleet experience.
- ▶ Backed by one of the largest industrial Japanese groups.
- ▶ Well equipped to support commercial aviation businesses all over the world with all the necessary data and market knowledge needed.



YOUR AVIATION ADVANTAGE

## HELPING SOLVE WHAT'S MOST IMPORTANT

We deliver advisory services that meet your critical needs, help you grow, and unlock your company's true potential.

- ▶ **AIRLINE NETWORK STRATEGY**
- ▶ **AIRLINE FLEET & PRODUCT STRATEGY**
- ▶ **AIRLINE COST & REVENUE OPTIMIZATION**
- ▶ **BANKS & LESSORS FLEET AND MARKET STRATEGY**
- ▶ **AIRPORT DEVELOPMENT STRATEGY**
- ▶ **OEM AND AVIATION VENDORS MARKET STRATEGY**
- ▶ **ENGINEERING SUPPORT**
- ▶ **TRAINING & EXECUTIVE SEMINARS**

YOUR AVIATION ADVANTAGE

## STRATEGICALLY LOCATED TO BE CLOSE TO OUR CUSTOMERS

From locations in North America, Europe, Asia, the Middle East and Australia, we leverage our experience to create the best outcomes for our customers.





# AIRLINE NETWORK STRATEGY

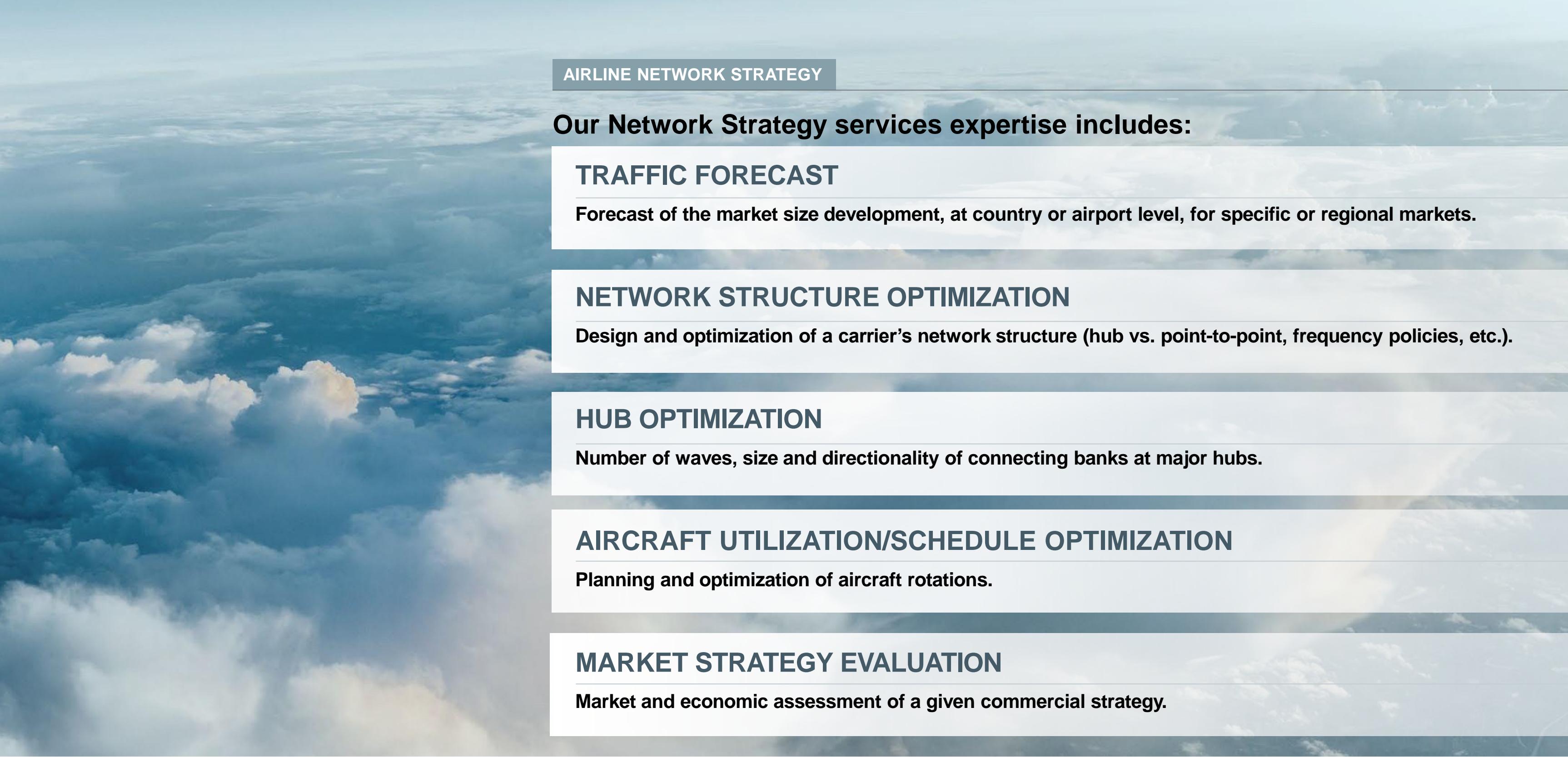
## DEFINING THE PATH FORWARD

The key to every airline's success and profitability is its network strategy. From developing entirely new networks to optimizing existing ones and more, at MHIRJ Aero Advisory Services, our professionals have developed effective network strategies for airlines worldwide. By defining or refining a carrier's network strategy, we'll also help you form the basis for many other critical strategic decisions, including fleet planning, mergers/acquisitions, restructuring and strategic partnership evaluations such as global alliance membership.



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## AIRLINE NETWORK STRATEGY

**Our Network Strategy services expertise includes:**

### TRAFFIC FORECAST

**Forecast of the market size development, at country or airport level, for specific or regional markets.**

### NETWORK STRUCTURE OPTIMIZATION

**Design and optimization of a carrier's network structure (hub vs. point-to-point, frequency policies, etc.).**

### HUB OPTIMIZATION

**Number of waves, size and directionality of connecting banks at major hubs.**

### AIRCRAFT UTILIZATION/SCHEDULE OPTIMIZATION

**Planning and optimization of aircraft rotations.**

### MARKET STRATEGY EVALUATION

**Market and economic assessment of a given commercial strategy.**

# AIRLINE FLEET & PRODUCT STRATEGY

## HELPING YOU CHOOSE THE RIGHT AIRCRAFT

Although aircraft transactions can be infrequent, they are complex and can substantially impact an airline's long-term success. For that reason, it's vital to have an experienced partner on your side. Through an aircraft acquisition team consisting of professionals who come from OEMs, airlines and lessors, we bring seasoned negotiation expertise from both the "buy-side" and "sell-side". Leveraging our experience and knowledge, we help client management teams make fleet and product decisions aligned with their financial and strategic goals.



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## Our Fleet & Product Strategy services expertise includes:

### AIRLINE COMPETITIVE ASSESSMENT

Complete assessment of an airline market environment.

### AIRCRAFT SELECTION & ACQUISITION

Support for the selection and purchase of aircraft.

### AIRCRAFT RE-MARKETING & TRADING

Spotting and negotiating the right aircraft to acquire or finding the best customers for assets to be disposed of.

### AIRCRAFT CABIN LAYOUT OPTIMIZATION

Optimizing the passenger accommodations to maximize revenue.

# AIRLINE COST & REVENUE OPTIMIZATION

## DRIVING GREATER ECONOMIC EFFICIENCIES

Backed by our proprietary network planning tools, our in-depth understanding of market dynamics, competitive positionings, underlying market sizes and traffic flows, allows us to deliver immediate short-term and longer-term cost and revenue improvements as well as comprehensive multi-year revenue forecasts.



## Our Airline Cost & Revenue Optimization services expertise includes:

### FLEET MIX OPTIMIZATION

Flying the right aircraft on the right segment and evaluating the best fleet mix to reduce operating costs for a given network and revenue strategy.

### REVENUE IMPROVEMENT

Route profitability assessment and identification of the right-size aircraft to generate maximum revenue and profit.

### START-UP BUSINESS PLAN

Design of a 5-year roadmap describing the optimal network (destinations and frequencies) and associated fleet. Evaluation of different scenarios and strategies, including detailed forecasts on traffic, market share, and load factor.

### STRATEGIC PARTNERSHIPS

Evaluation of the network and commercial impact of strategic partnerships with other airlines.



# BANKS & LESSORS FLEET AND MARKET STRATEGY

## DELIVERING CLARITY TO THE COMPLEX

Our team is comprised of ex-senior executives of aircraft manufacturers and former executives from well-regarded airlines and lessors. Their depth of knowledge and past experience enables them to understand the complex interactions between network and fleet planning, and quickly assess the potential implications of various fleet strategies such as the introduction of new and / or replacement aircraft types.



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## Our Banks & Lessors Fleet and Market Strategy services include:

### MARKET TRENDS AND BUSINESS OPPORTUNITIES

- ▶ Analysis of airlines' business models evolution.
- ▶ Analysis of fleet & network evolution and market trends.

### AIRCRAFT AND ENGINE SELECTIONS

- ▶ OEM Analysis: evaluation of aircraft types, supply/demand of aircraft, lessor positions, production rates, gathering of market intelligence.
- ▶ Monitoring of OEMs' technology roadmap and impact on future fleet development.

### COMMERCIAL & OPERATIONAL FIT INDEX (COFI)

- ▶ Best Aircraft type to fit into an Airline Strategy and Planning.
- ▶ Assessment of the adequacy between an aircraft type and an airline network, providing a view on the operational contribution and importance of an airline fleet.



# AIRPORT DEVELOPMENT STRATEGY

## CREATING NEW MARKET OPPORTUNITIES

Air service development has become one of the most competitive segments in the aviation industry. As a result, more airports and their communities today find themselves vying for business from airlines with greater intensity than ever before. Airports of all sizes understand the need to pro-actively communicate with airlines in their efforts to attract new flights and maintain existing services. We can help airports create and implement successful air service development strategies through our depth of airline experience and detailed knowledge of how airlines make route decisions.



## Our Airport Development Strategy services include:

### AIRPORT STRATEGY

Analysis of strategic developments in the areas of privatization / concession, capacity development, financing, new airport site selection, airport fees policy, and airport slot policy.

### MARKET AND AIRLINES INSIGHT

Creation of market studies for air traffic development report as well as passenger flows, route dependency and contribution to external network assets (hub, sub-fleet, other routes, ...), feed analysis, etc.

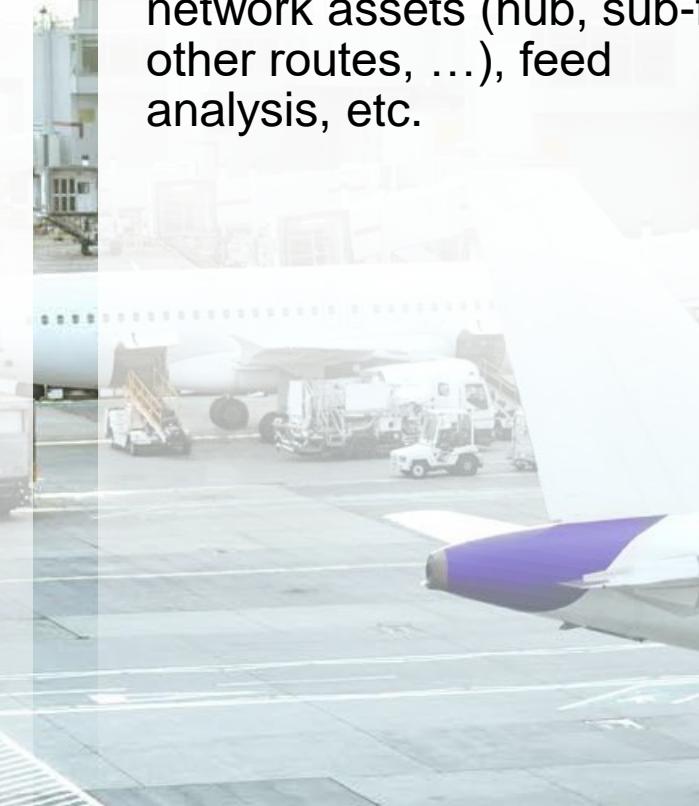
### AIR SERVICE DEVELOPMENT

Identification on a case-by-case basis of potential route openings, and creation of business cases for each route / airline candidate pair (traffic, load factor, cost and revenue projection, frequency and aircraft type requirement).

Elaboration of argumentation to convince airline customers and secure their business.

### TRAFFIC FORECAST

Creation of market potential analyses, establishment of traffic forecast and definition of infrastructure requirements. Different levels of segmentation possible (International / Domestic, by aircraft category / ICAO Cat.).



# OEM AND AVIATION VENDORS MARKET STRATEGY

## HELPING YOU MAKE THE BEST PRODUCT DEVELOPMENT DECISIONS

To say that launching a new aircraft program or a derivative is a complicated and costly endeavour is an understatement. These types of decisions are critical and will have a lasting impact up and down the value chain.

That is where we can leverage our vast experience and understanding of the market to help aircraft supplier management teams make the best product development decisions.



## Our OEM Suppliers Market Strategy services include:

### MARKET TRENDS & STRATEGIC MARKET DEVELOPMENTS

Forecast of market evolutions such as scope clause agreements, new regulations, governmental policies. Fleet and network evolutions analyses, impact of crises and upturns, identification of market challenges and opportunities, market potentials linked to fleet developments.

### COMPETITIVE ASSESSMENT

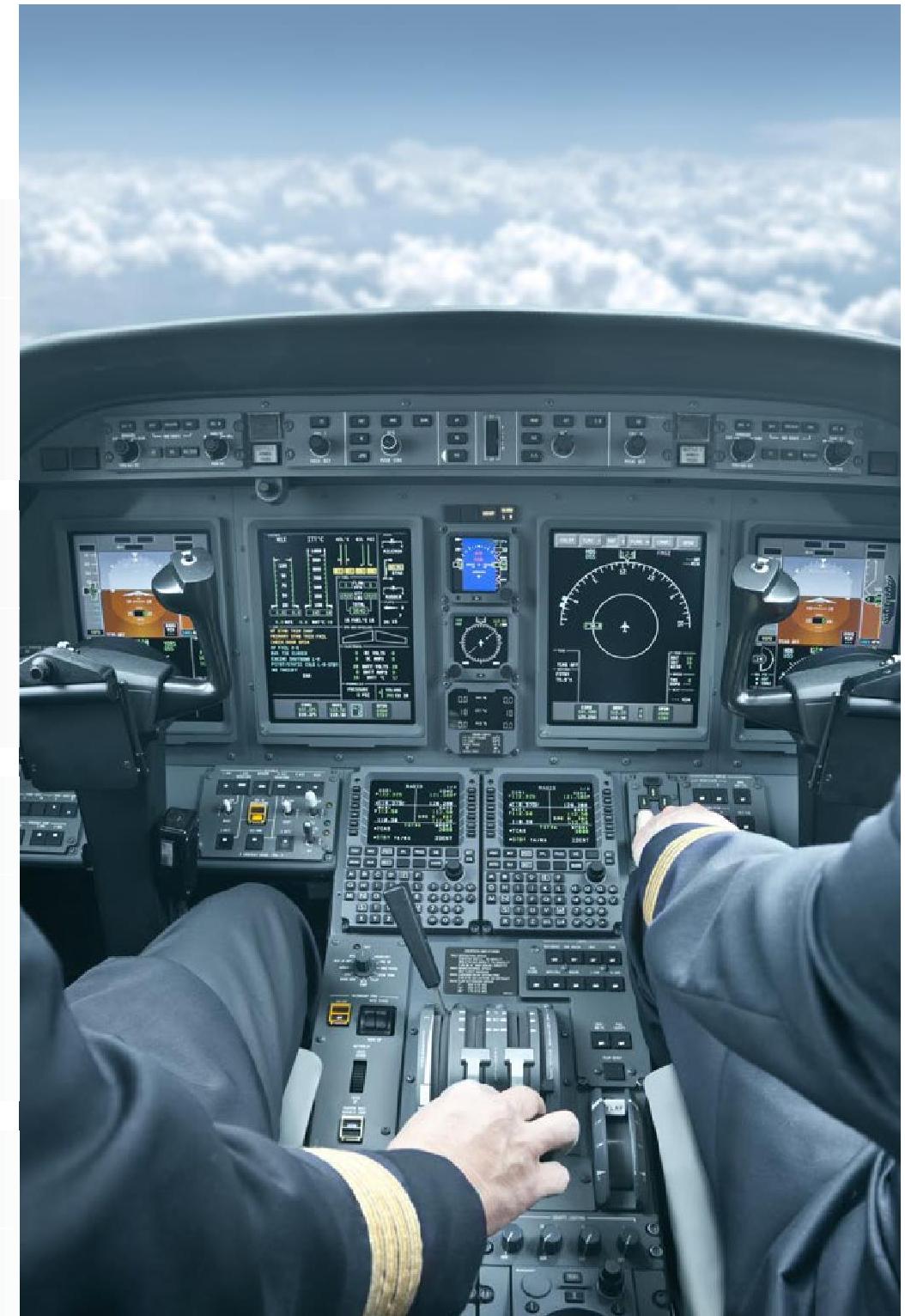
Identification of product/aircraft strengths and weaknesses relative to competition and market needs, evaluation of market potential for new aviation products or services.

### PRODUCT STRATEGY ADVISORY

Consolidation of customer requirements to adapt services and product features, analysis of product positioning, definition of top-level aircraft requirements, elaboration of business cases for new developments. Evaluation of product development processes and identification of solutions to better achieve market-matched products or services.

### SOLUTIONS PROMOTION

Development of value-selling argumentations and impactful presentations to your customers.



# ENGINEERING SUPPORT

## COMPREHENSIVE ENGINEERING EXPERTISE

Whether for the development of a complex product or a simple one, we offer the skills and support of a comprehensive engineering team that's dedicated to helping you reach your goals efficiently and effectively. We offer full end-to-end service from initial concept to design, development, testing, and manufacturing planning to final certification.



## Our Engineering Support services expertise includes:

### TECHNICAL EXPERTISE IN ALL AVIATION DISCIPLINES

Structures, systems, flight science, product integrity, flight test, technical publications configuration control, avionics, propulsion, electrical, weight & balance, thermo, aircraft performance, integration, etc.

### ALL ASPECTS OF THE PRODUCT DEVELOPMENT LIFECYCLE

- ▶ Concepts, designs, testing, certification, safety, and reliability.
- ▶ Flight test planning, analysis and safety of flight.
- ▶ Technical publications – writing, authoring, publishing of aircraft manuals.
- ▶ Quality manufacturing system, and quality assurance.
- ▶ Manufacturing certificate, planning and approved build procedures.
- ▶ Repair, retrofit and life escalation.

### FULL DESIGN APPROVAL CAPABILITY

- ▶ Design approval delegates in all 24 regulatory disciplines.
- ▶ Benchmark proficiency in the development and customization of engineering procedures, standards and software applications, and quality assurance.



# TRAINING & EXECUTIVE SEMINARS

With a 360° view of commercial aviation that covers all stages of an aircraft's lifecycle, our team of experts at MHIRJ Aero Advisory Services can provide your company with a holistic as well as a regionally focused perspective on the aviation landscape.

Our commercial aviation seminars offer a deep understanding of how an aircraft OEM develops products and services, how airlines develop their fleet & networks, and what trends have emerged in commercial aviation in recent years.



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## Commercial Aviation Seminars

### AIRLINES' BUSINESS MODELS EVOLUTION

The core business of an airline is not to carry passengers; it is to make profit by carrying passengers. How do airlines maximize profitability? Does lower seat cost imply higher profit per pax? Which corporate culture is better suited to ensure a clear path to profitability?

### AIRLINES' FLEET & NETWORK EVOLUTION AND MARKET TRENDS

A network reflects an airline's product positioning and aircraft fleet mix.

OEMs provide aircraft. Airlines provide networks.

But what comes first, the aircraft or the network? How do airlines grow and optimize their fleets and networks? How do they adapt, leverage, anticipate continuously evolving market conditions?

### AIRCRAFT & ENGINE OEM COMPETITIVE BENCHMARK

Launching a new aircraft program or a new engine is a complex and costly endeavour. What lessons have been learned from the most recent program developments, what are the different technology roadmaps proposed today by the aircraft and engine OEMs, and what will be the impact on future fleet developments?

# OUR COMMITMENT

With a unique blend of consulting skills, market and OEM data and aircraft trading expertise, MHIRJ Aero Advisory Services brings advanced yet practical expertise to airlines, airport authorities, equipment manufacturers and others in the commercial aviation industry.

MHIRJ Aero Advisory Services helps its aviation clients react quickly and accurately to changing industry conditions and implement the most effective strategies and tactics.

## OUR COMMITMENT



### TRANSFER OF KNOWLEDGE AND EXPERIENCE

MHIRJ Aero Advisory Services has a unique positioning in the industry as a major aircraft OEM, a key aircraft financing player but also as an MRO with a vast in-service fleet, providing all the necessary data and market knowledge needed to develop new businesses in commercial aviation and to deliver value long after the project is complete.



### QUICK SOLUTIONS

Such extensive experience allows us to quickly identify critical challenges and opportunities and provide the best solutions using the right data, tools and techniques. Our unique set of tools will help our customers predict and monitor the impact of crises and upturns, identify fleet and network requirements or product development opportunities, and quickly determine market potentials linked to fleet developments or future market trends.

# CONTACT US



[www.mhirj-aero-advisory-services.com](http://www.mhirj-aero-advisory-services.com)



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