

**The Journey is as important
as the destination**



CGI IN AVIATION

CGI

Experience the commitment®

Preface

The aviation sector has faced some significant challenges in recent years with declining passenger numbers and increased regulation, particularly in the area of security. It has also been impacted by some exceptional natural events from ash clouds to snow further denting passenger confidence.

Both airlines and airports are seeking new ways to increase operational efficiency and improve the passenger experience in order to attract travellers back to air travel. The market has also seen some major changes in terms of mergers, acquisitions and divestments. Major airline groups are looking to benefit from economies of scale and shared services, whilst Governments look to increase competition and service quality through privatisation of airports.

Information technology needs to be at the hub of these industry changes, so it's hardly surprising that our services and solutions are at the heart of many international airlines, airport operators and air traffic management companies. From application management to security, we work to ensure that the passenger has the smoothest and safest journey – and the organisations they rely on enjoy the greatest possible operational and business efficiencies.

We have designed our services around the key industry themes – Passengers, Operations, Assets and Services. This brochure outlines these service offerings, together with our extensive industry experience.

We bring a commitment to innovation and quality, together with an open and collaborative approach. We have a wealth project delivery talent, together with an enviable partner ecosystem that we are able to draw upon. We understand the way aviation works and we are focused on making it work even better.



Jeremy Springall
Global Head of Aviation



Our Industry Experience

CGI works across the aviation sector from airports and airlines to air traffic control and regulation.

Airports

CGI has over thirty years experience working with major airport groups such as BAA (including Heathrow), Gatwick Airport, Amsterdam Airport Schiphol, Aéroports de Paris, Hong Kong, Kuala Lumpur, Swedavia, Finnavia, and ANA Aeroportos de Portugal.

Our capability includes:

- airport operational systems, including 'GO' – our next generation airport management system
- asset and real-estate management solutions
- passenger services such as self service check-in, passenger information, way finding and boarding
- security solutions from biometric border control to cyber security
- retail solutions to optimise yield from your retail space
- master systems integration in support of airport transformation projects
- Applications management and outsourcing ensuring high availability and efficiency of your operations.

We understand the unique aspects of delivering services to airports and how critical systems are to their safe and efficient operation.

Airlines

CGI supports many of Europe's leading carriers including Air France KLM, Lufthansa, BA, TAP, Iberia, Finnair and Ryanair.

We have a track record in developing innovative solutions for our airline customers. From advanced rostering systems for staff, to innovative on-board duty free retailing systems, CGI is a trusted partner to airlines.

Our expertise covers:

- in flight retailing – our market leading Prologistica back-office solution manages the end to end process from stock management to payment processing
- advanced staff rostering
- cargo management
- MRO and engineering systems
- revenue accounting
- applications management and IT outsourcing
- HR services including payroll.

Aviation Services

The aviation industry relies on a wide range of supporting services from baggage handling and catering to parking and taxi services.

CGI has worked with many of these specialist service companies providing a wide range of solutions including:

- in flight and back-office retail solutions for the industry's biggest catering and duty-free companies, such as Gate Gourmet and Alpha Retail
- innovative loyalty solutions, such as the Privium service at Schiphol Airport which uses iris recognition to speed passengers through border control
- vehicle tracking solutions, using GPS and RFID, to help service companies track their vehicles to improve service and reduce costs
- intelligent parking solutions
- public transport solutions, such as journey planning and ticketing, to help passengers travel to the airport
- advanced telematics solutions, such as our EMO system which monitors vehicle emissions and driver behaviour to reduce carbon and fuel costs
- mobile workforce solutions to improve operational efficiency.

Travel Services

A lot of hard work goes into leisure – and don't you know it. That's why we have lots of ideas to minimise your effort and maximise your profits.

We work with tour operators, Global Distribution System (GDS) providers, hotel companies, retailers and every other kind of travel and leisure organisations to improve efficiency, cut costs and increase customer satisfaction.

Our capability includes:

- working with major GDS providers, such as Amadeus, to develop efficient and innovation systems – we therefore have an essential insight to the end to end ticketing and reservations process used by the travel sector
- developing web and mobile retailing solutions for tour operators
- using social media, such as Twitter and Facebook, to engage with customers in different ways.



Air Traffic Control

CGI has long been associated with Air Traffic control within Europe and we are familiar with the safety and regulatory impact of systems.

Our reputation for quality and our expertise in Systems Engineering has helped CGI to deliver systems which control European airspace to the highest requirements.

CGI has also been a leader in mission-critical software systems for the space industry for over 40 years and we are at the heart of how advanced satellite navigation will change air traffic control now and in the future.

Our expertise includes:

- implementing the central control and monitoring system for NATS
- supplying systems, such as EGNOS, that validate GPS navigation messages, ensuring their safe use by the aviation industry
- delivering the Galileo satellite constellation control facility that will control all Galileo's 30 satellites – Europe's most significant new satellite control system in the last 10 years
- implementing and supporting the back-office systems used by the air traffic control industry.

Regulation

Regulating a global industry such as Aviation has its challenges. Whether it's co-ordinating and ensuring air safety standards, encouraging competition or protecting consumers, the role of the regulator is paramount in this safety critical industry.

CGI supports regulators in maintaining the systems needed to monitor and regulate the Aviation industry.

Our experience covers:

- supporting the application estate for the UK's Civil Aviation Authority (CAA)
- providing expert advice, for example CGI provided advice and a risk assessment for the UK CAA on the capital investment plans of NATS
- providing the back-office systems required by regulators
- delivering training services to support regulators both internally and externally
- working with regulators from diverse markets including rail, telecoms and utilities.

MRO

Maintenance, Repair, Overhaul (MRO) of aircraft is a demanding, safety critical and quality focused specialism. Whether providing line or base maintenance services, or repair of rotating mechanical parts in the hangars, the processes involved present a challenge, not only to the engineer who performs the engineering, but also for those delivering IT solutions.

CGI works with some of the world's largest MRO and aircraft engineering organisations including Lufthansa Technik, KLM Engineering, and Airbus.

Our capabilities include:

- MRO process knowledge like master data management or maintenance programme management
- implementing quality management methodologies and tools to ensure process compliance and safety, such as the IQ MOVE solution we delivered for Lufthansa Technik which visualises processes and enables certification and audit control
- pioneering the use of RFID technology to track assets and certify the calibration of tools, thereby leading to lower lead times
- providing IT application management and outsourcing services.

Aircraft Manufacturing

CGI works with many of the world's leading aircraft and engine manufacturers including Airbus, Rolls-Royce, SAFRAN, Dassault Aviation, Volvo Aero Corp and BAE Systems.

We have a number of Centres of Excellence across the Globe with specialist knowledge and expertise and one of the largest dedicated manufacturing consultancy practices globally totalling some 1,300+ sector specialists. Our experience in implementing complex, multi-national manufacturing solutions also enables us to offer repeatable solutions, so our clients benefit from both critical mass and economies of scale.

Our experience includes:

- Manufacturing Execution Systems (MES)
- Product Lifecycle Management (PLM)
- Advanced Planning and Scheduling (APS)
- Supply Chain Management (SCM)
- Application Management.



Our Services

CGI is in its fifth decade supporting the aviation industry. We bring both specialist knowledge of the systems which are vital to the operation of airlines, airports, regulators and aviation services, together with an understanding of the way in which each member of the aviation community works.

We have a number of service offerings focused on:

Passengers - from on-line booking through to travel information, enhancing the passenger experience

Operations - enabling real-time operations in safety-critical environments

Assets - from MRO to property management, optimising your investment in your infrastructure and aircraft

Services - including business consulting, systems integration and back-office operations including HR services and applications management

These service offerings are described on the following pages.



Operations:

- Airport Operations
- Airline Operations
- In Flight Retailing
- Security
- Border Control
- Air-Traffic Control

Services:

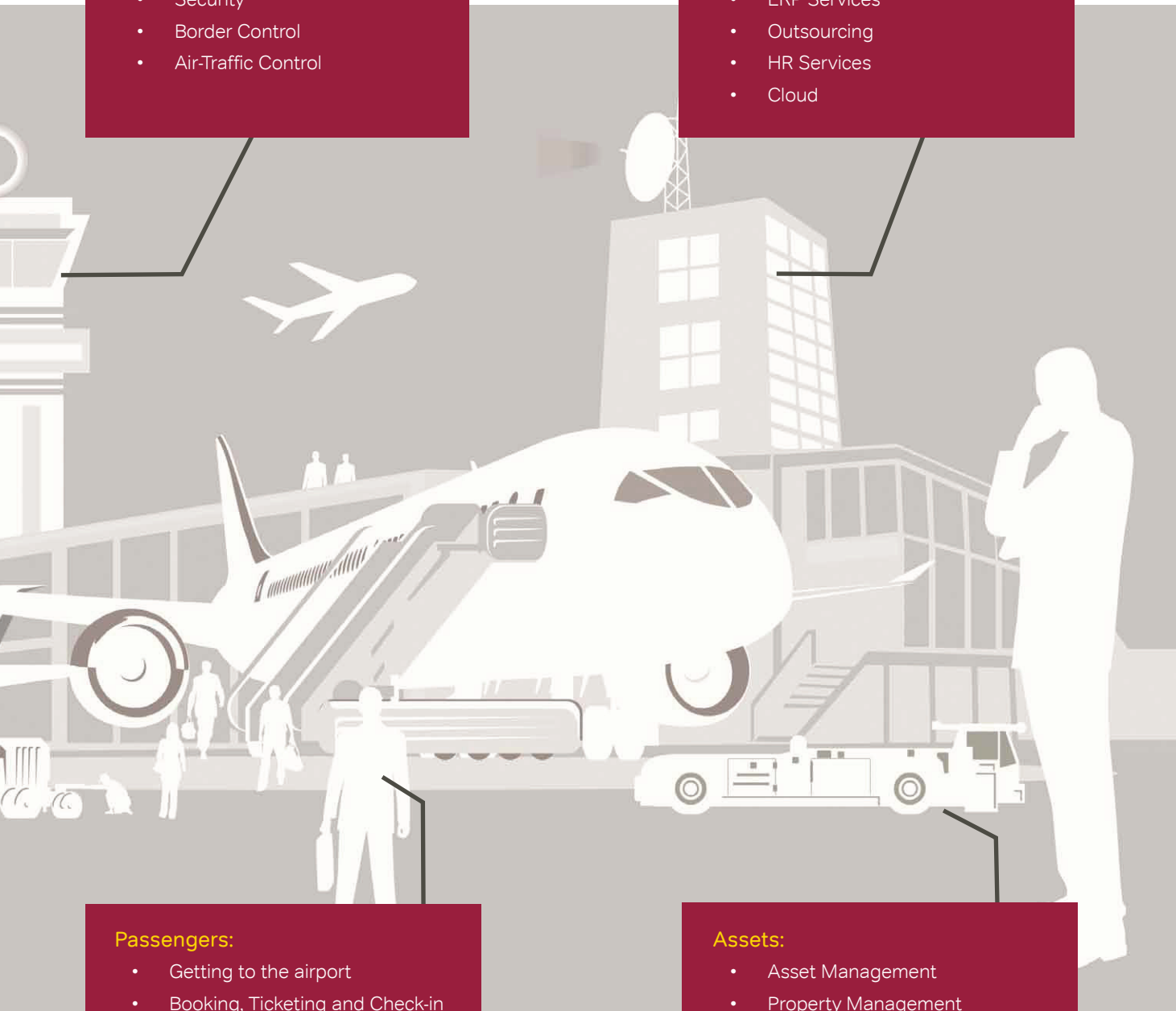
- Business Consulting
- Systems Integration
- Sustainability
- ERP Services
- Outsourcing
- HR Services
- Cloud

Passengers:

- Getting to the airport
- Booking, Ticketing and Check-in
- CRM & Loyalty
- Passenger Experience
- Applied Customer Insight

Assets:

- Asset Management
- Property Management
- MRO & Engineering



Passengers

Getting to the airport

Good connections to and from airports are vital. In a recent CGI survey 62% of passengers said traffic or public transport delays getting to the airport were one of their biggest concerns about using air travel.

CGI works with airports, airlines, highways authorities and public transport operators to take the stress out of the journey.

Our Smart Travel solutions include:

- journey planning – our Navici real-time multi-modal journey planner, used throughout Europe and North America, enables passengers to plan their journey to and from the airport using real-time travel information. It covers multiple modes of transport and incorporates way finding at interconnections
- smart ticketing – CGI is a leading provider of smartcard and e-ticketing solutions to public transport and rail operators
- informed traveller – our informed traveller solution monitors the passengers journey and provides real-time alerts to keep them informed as they make their journey
- parking and electric vehicle (EV) charging – CGI's parking and EV solutions enable passengers to book their parking or EV charging point in advance and provide innovative payment options.

Case Study – Helsinki Journey Planner

The Helsinki Regional Transport Authority selected CGI to implement a door-to-door Journey Planner to help people find the most efficient and carbon neutral way to get from A to B.

We implemented the Navici journey planning solution which finds the best options using any travel combination from walking and cycling to trains and ferries.

The journey planner has won several awards and has been rated Finland's second most valued Internet brand.



Booking, Ticketing and Check-in

Online and self service booking and check-in has been one of the biggest industry changes over the past decade – in fact in a recent **CGI** survey on-line booking was identified as the largest single improvement to the passenger experience. However the same survey identified further areas for improvement as mobile technologies continue to advance.

CGI's experience in this field ranges from working at the heart of the industries global distribution systems (GDS) through to the implementation of new self service and mobile technologies for both airlines and airports:

- **CGI** has worked with airlines and travel companies to develop new and innovative web and mobile channels
- we are a major supplier to Amadeus, one of the largest Global Distribution System (GDS) providers in the industry, and therefore have an essential insight to the end to end ticketing and reservations process
- we work with airports to implement, integrate and support common use self service and terminal equipment (CUSS and CUTE).

Case Study – Air France KLM Check-in and Electronic Booking

Air France KLM needed to stabilise the support and operation of their electronic booking and on-line check-in applications. These systems allow customers to go online to book and pay for their flight tickets, rent a car, book a hotel room, select their seats and print their boarding cards. **CGI** was selected to provide ongoing application management, including the further development of the services.

CRM & Loyalty

In the competitive world of aviation, passenger loyalty is a key element of your business plan.

CGI works with major airlines, airports and specialist loyalty scheme providers, such as Airmiles and Miles & More, to create and retain passenger loyalty. We help our clients achieve increased revenues, improved customer satisfaction, greater brand differentiation and reduced cost to serve by helping them understand their individual customers' behaviours and enabling them to deliver a personalised customer experience across all touch points.

Our expertise includes:

- Using social media, such as Twitter and Facebook, to engage with customers in different ways.
- Developing world leading loyalty schemes, such as our work at Schiphol Airport to introduce Privium, an innovative premium loyalty scheme which incorporates iris biometric technology to speed passengers through border control.
- An understanding of the embedded technology within the booking & sales environments which we have crafted for both our airline clients and Amadeus.
- Introducing CRM tools to enabling a more personalised level of service.

Case Study – Miles & More on-line Auction Portal

Lufthansa Miles & More is the largest frequent flyer programme in Europe. Miles & More wanted to build a new online portal for auctions to promote specific marketing campaigns. **CGI** was selected to define and implement the system.

Passenger Experience

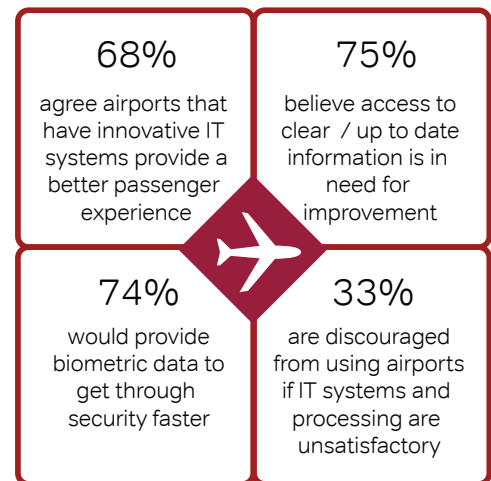
Passengers are increasingly exercising choice and the passenger experience, before, during and after-flight, is an essential differentiator.

When addressing the passenger experience you need to understand the different types of passengers – this is not just about whether they are travelling for business or pleasure, but also how they feel about flying. In a recent CGI survey the following types of passengers were identified:

- 43% of passengers enjoy flying and the airport experience, including shopping and eating out. These passengers want to feel safe and comfortable at the airport and during the flight and therefore the quality of service and thoroughness of security are important issues.
- 48% were functional flyers who see flying as a means to an end and want a quick and painless journey. Therefore speed of check-in and baggage delivery are important issues.
- 9% were stressed travellers who find flying stressful and airports busy and confusing. They are looking for ease of booking and speed of check-in so they feel more relaxed travelling.

The one area consistently highlighted by all 3 groups is access to clear and up to date information - in the 'mobile digital' age, customers expect more information and to be able to act on it, particularly when there is a delay.

Other findings included:



CGI is at the forefront of new innovations such as location based services and total itinerary management enriching the passenger experience.

Case Study – Finnair.com

Passenger satisfaction and service quality are central to Finnair's service concept and on-line self service is key to this. The majority of Finnair's flights are booked through a web portal and they provide a strong portfolio of innovative solutions to customers, including mobile services, to access services from anywhere and at any time.

CGI was selected to redevelop the Finnair.com services using new advanced technology to provide an even better quality of service and reduce the complexity of the on-line experience.

Applied Customer Insight

Gaining a greater insight into your passengers will enable you to improve operational efficiency and improve the passenger experience.

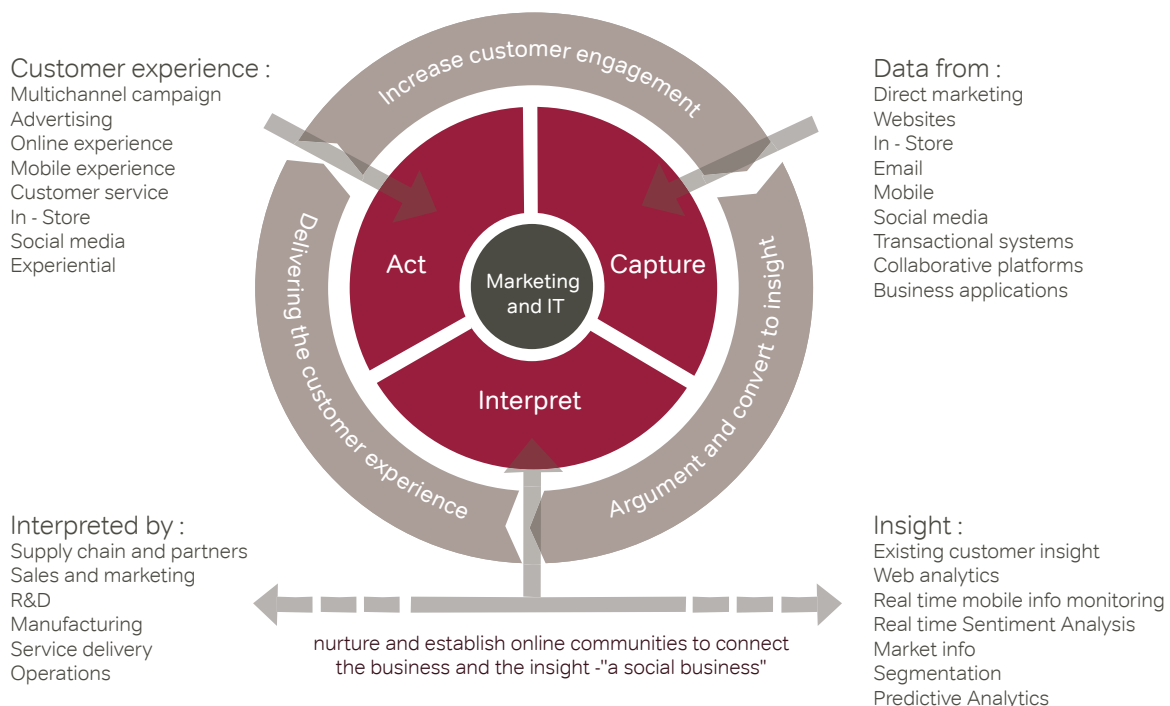
Applied Customer Insight (ACI) captures, interprets and acts upon real-time data acquired from multiple sources and applies insight collaboratively across the whole business operation. This results in an improved passenger experience, increased revenues, enhanced brand equity, customer loyalty and reduced costs.

The explosion of online social networking has created a very porous boundary between an organisation and its customers, radically transforming how and when to engage with customers. Smart mobile devices have created an 'always on' customer base, providing a great platform to deliver a fantastic customer experience.

Allied to this, real-time location and presence information enables organisations to offer the right product, in the right place and at the right time.

CGI has successfully applied customer insight in many different industries, including aviation. We help our customers:

- Increase revenues through selling more to existing customers and identifying and engaging with new clients
- Grow profitably by identifying the most profitable channels and customers
- Reduce costs through more effective marketing
- Reduce churn by identifying the propensity to churn early and applying insight to reduce churn
- Increase competitive advantage through applying insight and adapting strategies in near real time.



Operations

Airport Operations

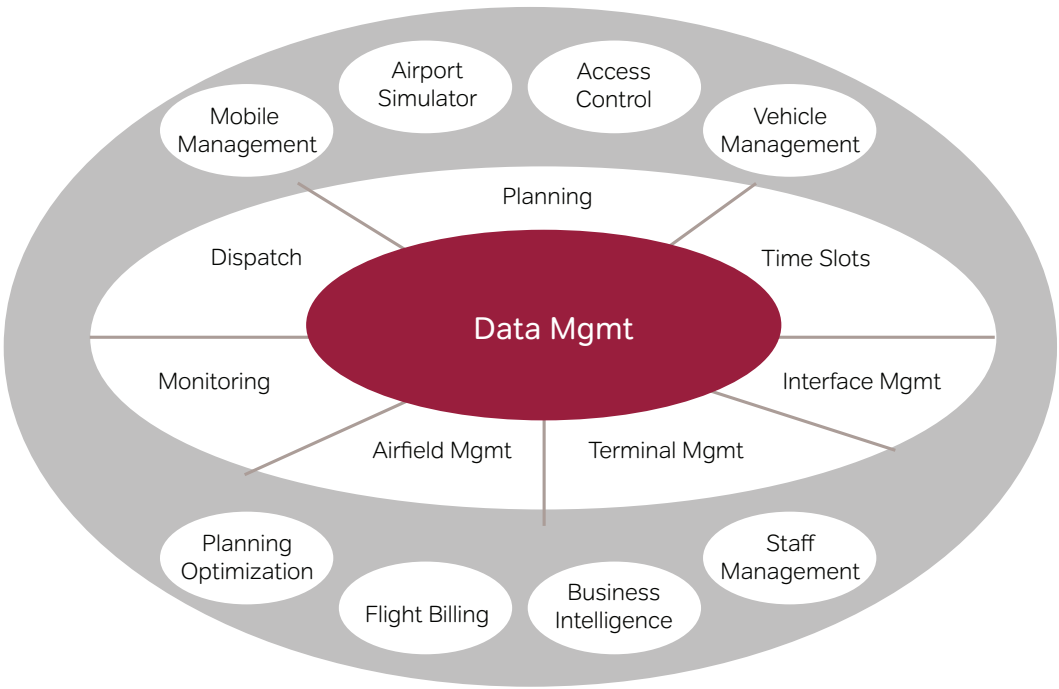
In 1998, CGI began work on its first Total Airport Management system for Kuala Lumpur International Airport. Since then CGI has built experience in bringing together and providing support for all the systems which an airport needs for managing an effective operation.

This experience has culminated in 'GO' – our next generation airport management system which we have developed working in collaboration with ANA, the Portuguese airport group. GO was built by operations, for operations and offers extensive and optimised support for airport operations management, including:

- accurate and complete information about every flight, resource and detail of the daily operations plan
- fully customisable Public Information System that shows all available flights and planning information to inform passengers and stakeholders

- graphical displays, that allow for a 'big picture view' and a dynamic 'drag and drop' user interface
- the latest standard, web-based interface allowing information to be distributed to third parties
- full reporting capabilities and a built-in operational dashboard
- exception display that emphasise resource allocation conflicts and missing information – if everything looks OK it's because it is OK.

The scope of the GO AODB covers the entire airport operations, as shown in the diagram below:



Case Study – ANA Airports Operational Management System – ‘GO’

ANA is the state owned operator of 10 airports in Portugal, including Lisbon airport. In 2007 ANA commenced a transformation programme to improve the passenger experience and enhance operational efficiencies by standardising operational processes across all airports. A key element of this was the replacement of its varied local airport management systems with a single, common product.

ANA selected CGI as the Master Systems Integrator to implement and support the new airport operational system / database. Following a review of ANA's vision and requirements, it was agreed to design and develop a new Airport Operational System. CGI established a partnership with ANA, to develop a product, called GO, for managing airport operations that are at the heart of airport infrastructure. GO, is now live in 10 ANA airports providing significant operational improvements to its users.

Case Study – BAA Projects Framework

In 2005 BAA selected CGI as their framework supplier for Systems Integration and Consulting services. Since then we have delivered over 200 projects across their airport operations. In 2008 the service was expanded to include Applications Management of around 400 of BAA's operational and business systems, including the successful transfer and integration of 80 staff from BAA to CGI.



Airline Operations

CGI supports many leading European carriers including Air France KLM, Lufthansa, TAP, Ryanair and Finnair.

Our expertise includes booking and ticketing for airlines - including the development of self service sales and check-in websites - CGI is at the forefront of providing the passenger experience off airport.

Developing and supporting the IT systems which help these groups operate efficiently, securely and effectively, CGI can showcase pioneering projects as well as 'business as usual' services.

From intelligent rostering to revenue accounting, CGI is at the forefront of Airline Operations.

Case Study – Air France KLM Cargo / Martinair Revenue Accounting System

Caraib is the Air France KLM SAP based solution supporting Cargo and Mail Revenue Accounting. Martinair and AF/KLM agreed to harmonize revenue accounting business processes and to migrate to one Sales & Revenue accounting system.

CGI was selected to carry out a high level pre-study to understand the impact of the CARAIB implementation for Martinair. The service defined the high level definition of the CARAIB configuration and interfaces and assessed the macro-level consistency, timing and architecture of CARAIB for Martinair.



In-Flight Retailing

In flight retailing has traditionally had many challenges. Manual on-board sales create inefficiency, stock losses are high due to lack of audit trails, money may be missing due to fraud and managing 3rd party bonds is time consuming and expensive.

CGI is a global leader in in-flight retailing solutions. Our Pro Logistica solution has been developed together with many catering and duty-free service providers and has proven itself in practice to be robust and highly reliable in everyday use.

Pro Logistica is a single integrated solution covering:

- warehouse management
- packing
- on board sales
- payments and reconciliation
- full audit trail enabling loss and theft control for both products and money
- a rich set of operational and MIS reports.

Case Study – KLM Tax Free

KLM Tax Free had an outdated IT environment. They wanted to build a comprehensive and centralised system to manage an expanding business and to reduce the number of standalone applications. They also wanted quick and reliable access to data in real time.

KLM Tax Free replaced its old systems with CGI's Pro Logistica platform, providing real-time warehouse, packing and reconciliation management to support on-board retail. Utilising Pro Logistica, KLM efficiently controls processes that enable accurate sales forecast and minimised waste.

Case Study – Alpha Retail

Alpha Retail wanted to enhance efficiency by moving to a single integrated solution instead of multiple standalone applications. They also needed to remove manual processing and automate the management of large volumes of information. CGI's Pro Logistica has now been implemented at 59 packing locations in 7 countries, enabling a more accurate operation with increased efficiency and productivity.

Security

Security is so much more than the visible x-ray machines within an airport. The interconnected world is home to international cyber criminals and terrorists, who may attack 24 hours a day, in the physical or digital world. CGI is the foremost provider of information security services in Europe and has been advising clients on security matters for over 40 years.

Our security professionals have supported the aviation industry with:

- biometric border control, such as the Privium iris recognition system at Schiphol Airport
- staff security solutions, again using biometric technology, providing identity and competence management
- CCTV and passenger movement monitoring
- PCI-DSS financial security
- data security, securing personal data of customers and employees alike, as well as your critical business data.

Immigration authorities, airlines and airport operators trust our innovative developments to take care of their security agenda.

Case Study – ANA Staff Security System

ANA wanted to enhance airport security by replacing multiple separate staff security and identification cards into a single multi-function ID card covering physical access, identification, driving licence, and attendance.

CGI was selected to design and implement the new multi-function smart ID card system across all of ANA's airports. The solution uses a card with iris biometric recognition to identify employees. Fixed and portable card and biometric readers are used throughout the airport.

Border Control

Border control is changing. New technologies such as E-passports have been introduced which provide opportunities to increase security whilst minimising queuing. Automated gates and the use of biometrics are bringing significant advantages but also challenges in terms of privacy, security, interoperability and systems integration.

CGI works with border agencies, airlines and airports, and has experience of the identity, security and system issues which underpin successful border control systems. Our credentials include the Privium solution at Schiphol Airport which was the first biometric border control solution in Europe.

Case Study – Privium Biometric Border Control

CGI was selected as system integrator for the Privium service at Schiphol Airport. Privium users are provided with a smartcard which holds their biometric information. When they pass through border control they use a special lane where their iris is scanned to validate identity.

This was the first biometric iris recognition border control solution in Europe. It demonstrated that Biometrics was both affordable and did not compromise security. Frequent travellers passing through Schiphol airport have reduced wait times. Customer service has also been enhanced.

Air Traffic Control

CGI has long been associated with Air Traffic control within Europe and we are familiar with the safety and regulatory impact of systems.

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Case Study – NATS NERC Central Control & Monitoring System

As part of the implementation of the New En-Route Centre (NERC) in Swanwick, NATS wanted to manage and control its Air Traffic Control systems from a single centralised location. Prior to this, system control engineers faced difficulties in operating multiple systems with a variety of different user interfaces. NATS also wanted fault reports logged in a standard format in a single message log.

CGI successfully delivered the Central Control and Monitoring system to NATS covering voice communications, radar, building management services, support information database and air traffic control workstations. We also delivered the user interface design and safety and hazard management.



Assets

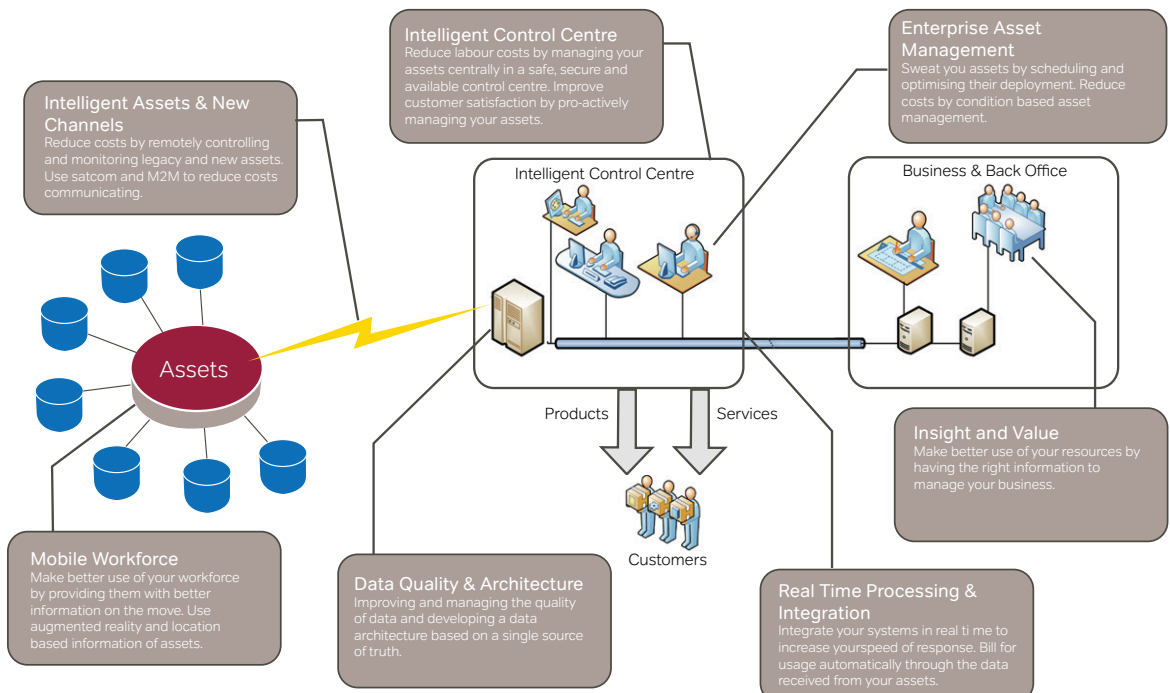
Asset Management

Aviation is an asset intensive industry.

CGI supports airports and fleet operators optimise their assets. Our solutions range from the successful set-up of capital project management through to effective use and proactive maintenance of new and legacy assets. Our customers save time and money, gain new levels of control and insight and enhance the effective value of their business.

CGI's asset management offerings include:

- Intelligent and Smart Assets which reduce costs through remote condition monitoring and control
- Intelligent Control Centres providing real-time proactive asset management
- Enterprise Asset Management (EAM) systems such as Maximo and SAP to enable you to sweat your assets and optimise whole life costs
- Mobile workforce solutions to improve workforce efficiency including the use of Augmented Reality (AR) technology
- Real-time processing and integration which joins up your operational and business processes to improve business agility
- Insight and value enabling you to make better, more informed decisions on the operation of your assets.



Case Study – KLM Vehicle Tracking

KLM is responsible for a common pool of vehicles at Schiphol Airport. Due to the size of the airport they wanted to manage the location of their vehicles more effectively. This would create efficiencies through a lower vehicle pool size and greater asset optimisation.

CGI was selected to develop and implement a real-time RFID-based solution to track and monitor vehicles at the airport. The CGI solution combined RFID with sensors, wireless communication, GPS and GEO-ICT.

The real-time visibility of all vehicles has enabled better asset and human resource management.

Case Study – Gatwick Airport Maximo

As part of a wider Applications Management service, CGI provides support and development of Gatwick's Maximo asset management system.

The system has been extended to include support for their mobile workforce using an innovative SMS based solution for work management.



Property Management

Airports have evolved in recent years and the concept of an 'Airport City' is now common as a broad range of aviation and non-aviation businesses are attracted around the airport. Managing airport terminals has also become more complex as airports undertake large capital programmes to improve efficiency and enhance the passenger experience.

CGI has significant experience in providing property management solutions which:

- Support the operational running of the property from managing maintenance activities to full building management systems
- Control costs, including full audit capabilities
- Maximise property and retailing revenues from different types of customers from cargo and warehousing to hotels and retailing
- Manage customer relationships and contracts
- Reduce the environmental impact of the property
- Provide regulatory reporting.

Case Study – Aéroports de Paris SAP Real-Estate

Aéroports de Paris wanted to increase revenues from the airport estate, align the assets to meet customer needs and facilitate financial communication to stakeholders.

CGI implemented a flexible real estate solution based on SAP including a GIS based user interface to enable staff to see a “map based” view of the airport estate.

This solution increased efficiency, revenues, security, and reliability through integration with AdP's central information management system and back office functions.



MRO and Engineering

Maintenance, Repair, Overhaul (MRO) of aircraft is a demanding, safety critical and quality focused specialism. Whether providing line or base maintenance services, or repair of rotating mechanical parts in the hangars, the processes involved present a challenge, not only to the engineer who performs the engineering, but also for those delivering IT solutions.

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- Pioneering the use of RFID technology to track assets and certify the calibration of tools, thereby leading to lower lead times
- Providing IT application management and outsourcing services.

Case Study – Lufthansa Technik Process Re-Design

Lufthansa Technik is the world market leader in the MRO of commercial aircraft, their engines and components. To maintain their market leadership Lufthansa Technik wanted to redesign their operational processes. This would ensure process compliance for engineering and support processes in case of major incidents in flight operations. They also wanted to reduce editorial effort for process documentation.

CGI's solution for Lufthansa included the conceptualisation and design of a new process and quality management methodology with an integrated requirement management solution called IQ MOVE. We also implemented a web-based process management system.



Services

Business Consulting

CGI supports clients from many industries deliver real business improvements, enabling them to run their business in a more efficient, sustainable way.

CGI has an in depth insight into the aviation industry and the challenges faced by airlines, airports and aviation services sectors. We champion sustainable business eco-systems and deliver real business value through technologies.

Our business consulting experience in aviation includes:

- Running the security awareness programme for a global airline group
- Managing the business change component of an ERP programme for a major airport
- Defining the information strategy and business processes for an MRO organisation
- Improving customer retention and retail revenues
- Providing expert advice and business risk assessments for aviation regulators.

Sustainability

Sustainability is a key issue for the aviation sector, not just in terms of the environmental responsibilities but also the benefits aviation can bring in terms of delivering sustainable supply chains and economic growth.

The industry is embracing greener technologies and fuels, investing in new ways to cut noise and air pollution and reducing energy consumption through the use of more effective monitoring and smart meters. At the same time you also need to manage the impact of regulations whilst minimising risks and costs.

CGI is a recognised leader in sustainability – in fact Gartner rank us as #1 for Sustainability Advisory Services (SAS) in Western Europe.

We'll work with you to build the business capability essential to achieve sustainability. Our approach covers:

- Powering – supporting renewable energy, greener fuels, smart grids & meters, micro-generation and energy efficiency services
- Mobilising – enabling greener supply chains, electric vehicles and efficient driving behaviour
- Catalysing – providing carbon accounting, new sustainable services, micro-finance, energy efficient lighting control, sustainable services via cloud and green IT
- Financing - enabling a cashless society, sustainability mobility payments, energy efficiency loans and risk assessments for current and new sustainable assets.

Systems Integration

CGI has over forty years experience as a Systems Integrator in the aviation sector covering areas as diverse as Passenger Management, Airfield Management, Asset Management and Operations Management.

Our experience includes:

- Kuala Lumpur International Airport where CGI was the Master Systems Integrator (MSI) for the Total Airport Management System in support of a five-fold increase in air-traffic
- ANA Aeroportos de Portugal where CGI is MSI for a new Airport Operational System
- BAA where we have delivered around two hundred projects including the implementation of an enterprise service bus, integration testing for T5C, airline terminal relocations, security patrols, and RFID aeronautical ground lighting.
- Amsterdam Airport Schiphol where we were the MSI for the first biometric border control system in Europe and SI for an innovative RFID and GPS based airfield vehicle tracking system.

Case Study – BAA / British Airways T5C Systems Integration Testing

In 2010 BAA selected CGI to manage the end to end systems integration testing of the new T5C terminal at Heathrow prior to it's opening in mid 2011. The service covered both British Airways and BAA systems including check-in, passenger conformance checking, boarding gate checking, baggage, flight information displays (FID) and passenger way finding, airport operational systems (including IDAHO), track transit system (TTS), airside access doors, lifts, security, alarms and the building management system. The service monitored the complete passenger and bag journey for direct, transferring and arriving passengers.

Case Study – ANA Airport Operational Systems

ANA selected CGI as the Master Systems Integrator to implement and support a new airport operational system / database. Following a review of ANA's vision and requirements, it was agreed to design and develop a new Airport Operational System, GO. The system is now live in 10 ANA airports providing significant operational improvements to its users.

Case Study – Amadeus

Amadeus is the leading Global Distribution System (GDS) and the biggest processor of travel bookings in the world. CGI has worked for Amadeus for many years and has delivered systems integration on a wide range of services. Over 100 CGI staff are involved in the development, integration and support of solutions such as CRM and business intelligence.



ERP Services

CGI has an impressive track record in deploying and supporting ERP systems across the aviation sector including BAA, Air France KLM, Aéroports de Paris, NATS, Gatwick Airport and ANA.

Our knowledge of aviation and experience of how ERP 'fits' within the systems landscape of each type of player within the aviation sector gives us the ability to 'fast track' customers to successful deployment.

We are global alliance partners with the major ERP vendors such as SAP, Oracle and Microsoft:

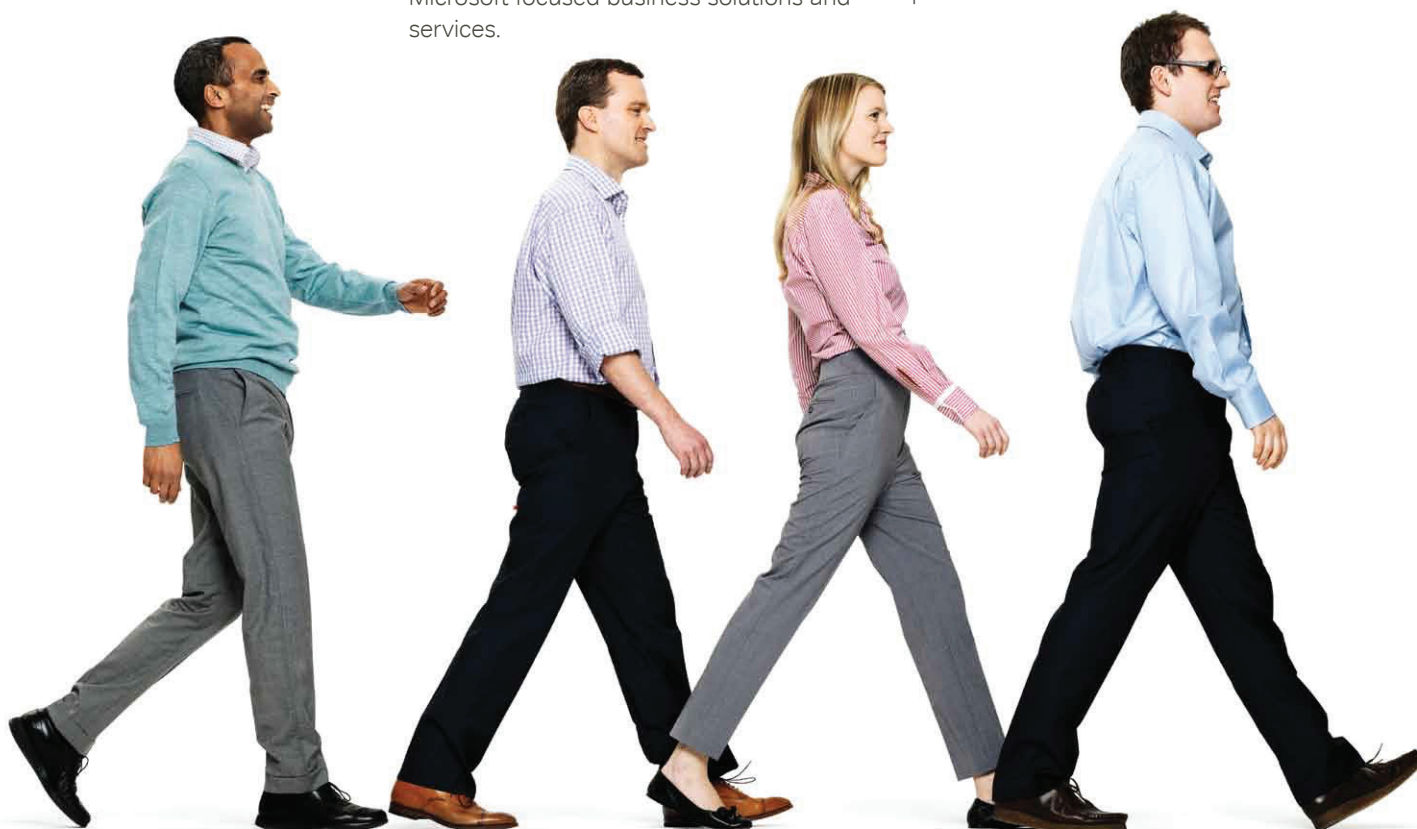
- We have delivered more than 2,000 SAP-based implementations globally and our dedicated SAP business practice has 3,600 SAP consultants across 18 countries and 4 continents
- We have over 1,400 Oracle application specialists across Europe
- We have over 6,000 people in 18 countries specialising in the delivery of Microsoft-focused business solutions and services.

Case Study – Air France KLM SAP

Air France KLM use SAP across their business. CGI has been engaged on a number of their key SAP projects including the implementation and support of their SAP HR environment and delivery of their Cargo revenue accounting solution. These projects have enabled Air France KLM to reduce costs and improve operational efficiencies through functions such as employee self service.

Case Study – BAA Oracle Multi-Org

As part of the programme to divest Gatwick Airport, BAA wished to create a separate organisation within their Oracle eBusiness Suite. CGI was commissioned to provide a solution, making use of the Multi-Org capability of the Oracle eBusiness Suite, that would create a Gatwick specific operating unit fully populated with historical BAA data relating to Gatwick, while maintaining confidentiality for both parties. The project went live on time supporting the successful divestment of the airport.



Outsourcing

The aviation sector is a complex industry and outsourcing of non-core activities is now common place.

CGI has significant experience of delivering outsourcing services to the aviation sector including IT outsource contracts at Finnair, Gatwick Airport and Swedavia, and HR outsourcing at Martinair and Schiphol Airport.

CGI's outsourcing capability includes:

- Applications Management where CGI has one of the foremost global teams of aviation application specialists to manage your operational and business systems
- Service Management where we take end to end responsibility for the management of your IT service and 3rd party suppliers using ITIL aligned standards
- Infrastructure Management where we provide high availability services for your IT infrastructure – from check-in to data centres
- HR outsourcing services where CGI is one of the largest HR & Payroll outsourced service providers in Europe. Our people have deep experience of every aspect of HR - from talent management to remuneration
- Business Process Outsourcing including both front line and back-office business processes.

For situations where a total IT management approach is inappropriate, CGI tailors and integrates services to fit our customer's IT portfolio.

Case Study – Finnair IT Outsource

Finnair wanted to improve the quality and efficiency of its IT services and modernise its IT architecture. CGI provides a complete service for Finnair including workstation support services for 9,000 Finnair staff, service desk, maintenance, data security, and application and file server management.

Case Study – Gatwick Airport Service and Application Management

Following its divestment from BAA, Gatwick Airport had the challenge of separating a complex IT landscape and establishing new IT services to support the business. CGI enabled the successful migration and separation of 140 IT systems from BAA and we now provide Applications Management services for GAL's airport applications. We also transitioned, and now operate, the Service Desk, introducing new service management processes based on ITIL best practice standards.

Case Study – Swedavia IT Outsource

In 2006, Swedavia, the Swedish airport operator, wanted a cost effective operation and transformation of an old and mixed IT-platform. CGI was selected as the outsourcing partner for all Desktop Services, including Service Desk, On-Site Support, self-service portal, Asset Management and a central Management Server platform. The service has since been expanded to include both Server and Application Management.

HR Services

Get your people management right and you can harness the talent that drives organisations forward through the toughest times and ensure sustainability and growth.

Our framework of services is designed to optimise the efficiency and cost-effectiveness of your HR function and ensure you get the most out of your workforce. Our flexible approach means we can start the journey from wherever you are now and fulfil a range of different roles, depending on your needs.

You might want support in developing your HR vision. Or we can help you run a change programme or evaluate new HR technology. And because we're technology agnostic, we can deliver a range of implementation, systems integration or outsourcing services across a range of platforms, including Oracle and SAP.

Our HR services:

- Can help you transform your HR operation. We'll optimise your transactional processes – and keep on improving them.
- Allow you to make the best use of the employee data that flows through your HR processes, so you gain useful insights into your workforce.
- Can save you up to 30 per cent of your current HR total cost of ownership. We can help you to reinvest some of that saving, so you make further improvements to both your operating model and employee services.
- Use business process management (BPM) to ensure effective control, integration and automation of your key processes. That means your processes are efficient, properly monitored and continuously improved.

Case Study – Martinair HR Administration

In 2008 CGI signed a five year contract to deliver payroll and HR services to Martinair. Six of Martinair's salary and HR experts joined CGI as part of the contract.

The salary and HR administration of the airline transferred to CGI in two steps. From 1 November 2008, salaries of flying crew members, ground staff and the management team were handled by CGI. From April 2009 a range of additional HR administration services transferred to the CGI service.

The service includes the delivery of an HR administration service desk plus a self service system for the management team and the workforce.

Case Study – Schiphol Airport HR Services

Schiphol airport provides employment for over 60,000 people of which 2,200 are staff of the core Schiphol Group, the Airport operator. The group had 130 different HR processes with multiple policies and wanted to improve the efficiency and effectiveness of their HR services & processes in addition to standardising the HR approach across the business.

CGI was engaged for its deep expertise in HR services. We recommended a SAP solution to build on the ERP platform already in place. Using SAP's Employee Self Service (ESS) & Management Self Service (MSS), CGI upgraded the existing base SAP HR system and deployed these additional modules. The whole project took less than a year and provided self service portals for staff to register details, seek standardised advice on policy & initiate processes such as leave requests etc. After deployment the running of the systems was outsourced to CGI.

Cloud

The aviation industry changes rapidly and it is essential businesses reduce costs, increase flexibility and lower time to market of new products. Real-time collaboration between organisations is also paramount in order to improve efficiencies and enhance the passenger experience.

Cloud services can help you achieve this, but you also need to understand and be prepared for issues such as security, complex integration, business transformation and service management. We'll streamline and combine your business systems in a workable format, using private and public cloud applications to lay the foundations for a hybrid cloud environment. We'll also work with you to harness that environment – transforming how you interact with ecosystems of customers and partners, growing your business.

Your profitability improves, yet never at the expense of the smooth running of your organisation.

Case Study – LFV Cloud Services

LFV is a public enterprise with 1,400 employees that operates air navigation services for civil and military customers at over 40 locations in Sweden.

As part of CGI's overall IT Outsourcing contract with LFV we provide a range of cloud services for LFV including 'Infrastructure-as-service' solutions using CGI's Private Cloud environment and 'Software-as-a-service' (SaaS) solutions in areas such as HR.



We are ONE CGI

CGI overview

CGI is a business and technology service company, employing 70,000 people. It provides business consulting, systems integration and outsourcing to clients around the world, including many of Europe's largest businesses. CGI creates value for clients by successfully integrating people, business and technology. It is committed to long term collaboration, applying insight to create innovative answers to clients' business needs.

CGI in aviation

CGI is in its fifth decade supporting the aviation industry. We bring both specialist knowledge of the systems which are vital to the operation of airlines, airports, regulators and aviation services, together with an understanding of the way in which each member of the aviation community works.

Our expertise extends across:

- Passenger services from on-line booking through to travel information, enhancing the passenger experience
- Operational services enabling real-time operations in safety-critical environments
- Asset services from MRO to real-estate management, optimising your investment in your infrastructure and aircraft
- Back-office operations including HR services and applications management.

CGI history in aviation - notable achievements



