Global Report
2015
A business, financial and sustainability overview
3. Business lines and highlights 2015

3.1 Distribution
3.2 IT Solutions
3.3 Diversification into new areas
3.4 Financial performance
Amadeus offers a comprehensive range of innovative technology solutions and services for travel businesses all over the world. We facilitate complex transactions between travel providers and travel sellers, and provide them with mission-critical IT solutions.

Amadeus serves airlines, airports, car rental agencies, leisure and corporate travel specialists, cruise operators, ground handlers, hospitality businesses, travel agencies, railway companies and more, operating two complementary businesses with significant commercial and technological synergies:

_**Distribution**_
We act as a connected and collaborative platform offering comprehensive, neutral, real-time search, pricing, booking, ticketing and processing solutions that enable commerce and transactions among travel providers and travel sellers worldwide.

_**IT Solutions**_
We offer a broad and growing set of technology solutions that enhance a wide variety of travel-related business operations such as sales, analytics, inventory and revenue management, payments and advertising.

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**We help our customers and partners**

**Connect**
to the entire travel ecosystem and to travellers at every stage of the journey, allowing them to increase revenue

**Manage**
their businesses more effectively, allowing them to reduce costs and increase operational efficiency

**Serve**
travellers better than ever, allowing them to improve customer experience and brand loyalty
Amadeus business model

Travel providers in Amadeus

- 709 airlines
- 379,000+ hotel properties
- 233 tour operators
- 43 car rental companies
- 50 cruise and ferry lines
- 90 rail operators
- 16 insurance provider groups
- 200 airport operators
- 95 ground handlers

Distribution
Provision of indirect distribution services

IT Solutions
Including direct distribution technology

Travel agencies
Online and offline travel agencies

Travel buyers
General public
Corporate travel departments
3.1 Distribution

The traveller’s needs are at the centre of our thinking
Computer Reservation Systems (CRSs) provide a computer network connecting travel providers with travel agencies. CRSs deliver an integrated interface displaying a wide variety of available choices, prices and itineraries, through which corporations and travellers can access travel content in a neutral and transparent manner. In addition to offering CRS technology, Global Distribution Systems (GDSs) like Amadeus make broad geographical reach an important element of their value proposition. The ample range of travel content available in Amadeus creates a powerful network effect, attracting a large number of travel agents and airline sales offices spread around the world.

Amadeus creates value for travel providers by extending their market reach to countries and customer segments not easily accessible through other means.

Amadeus creates value for travel sellers by providing them with access to the world’s most diverse travel network. Through a simple interface with enhanced functions, Amadeus allows travel sellers to offer an extensive variety of choices, prices and itineraries, customised to the needs of their customers – namely business and leisure travellers. Amadeus also offers products and services to travel sellers that enable them to increase their revenue, manage their costs and optimise their efficiency, as well as build their brand and improve customer loyalty.

Amadeus’ Distribution business also encompasses numerous related services for both travel providers and travel sellers. These include solutions enabling not only the booking of services, such as hotel, car rental or rail, but also solutions for airline providers, allowing revenue maximisation through the sale of ancillary services, such as extra baggage or priority seating.

### Amadeus total bookings* (figures in millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Air bookings</th>
<th>Non-air bookings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>402</td>
<td>61</td>
</tr>
<tr>
<td>2012</td>
<td>417</td>
<td>61</td>
</tr>
<tr>
<td>2013</td>
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<td>2014</td>
<td>467</td>
<td>59</td>
</tr>
<tr>
<td>2015</td>
<td>505</td>
<td>61</td>
</tr>
</tbody>
</table>

* Bookings processed by travel agencies using the Amadeus distribution platform.
Multiple distribution business solutions

Today’s traveller is more demanding and less loyal than ever. Travellers expect more personalised offers from an increasingly complex and broad travel supply. They are connected 24/7 and thus have a fragmented approach to travel shopping. Amadeus offers several business solutions to help travel sellers find and cater to this empowered traveller, regardless of which stage of the travel experience they are at. For example:

- Awareness and demand generation: targeted advertising solutions allowing sellers to reach potential travellers and offer a product tailored to their profile
- Lead generation: reliable referrals resulting in high conversion ratios
- Selling: solutions for the display of rich content (such as photos) and merchandising in the GDS, as well as booking and ticketing capabilities
- Cross-selling, servicing and social: a portfolio of solutions and services designed to maximise traveller expenditure, such as the purchasing of ancillary services after the reservation

These innovative business solutions allow the seller to understand the traveller better and improve the process of finding and retaining customers.
Amadeus’ product offer is extensive. To access the new commercial list of travel agency products and services, we created the Amadeus Portfolio Essentials information website. Below are two of the core solutions of our portfolio, which can be adapted to the specific needs of our customers.

- **Amadeus Selling Platform Connect** frees travel agencies from technological constraints so that they can focus on their mission of creating and selling the best travel options. Through Amadeus Selling Platform Connect travel agents can sell a worldwide offer of travel content and merchandising options. The interface can be customised to specific needs.

- **Amadeus Web Services** is an Application Programming Interface (API) that delivers individual Amadeus functions via SOAP messages. Amadeus Web Services offers a cost-effective way to build and update any customised travel booking applications, and it is easy to implement and integrate with existing systems. Concretely, it allows travel sellers to integrate travel-related functions into any application, such as a booking engine, website, travel agency front-office, corporate self-booking or robotic tool. Amadeus Web Services’ latest-generation technology offers unparalleled connectivity from a single point of access to the entire range of Amadeus’ comprehensive content.

Some of the main challenges and opportunities faced by Amadeus in the distribution sector include:

- **The increasing importance of direct distribution channels** connecting the travel provider with the traveller, without any intermediary. Disintermediation has been an important characteristic of low-cost carriers, which typically distribute a large proportion – or the total – of their content through direct channels. Low-cost carriers typically adopt an indirect channel distribution strategy as they grow and mature, seeking to access higher-yield customer segments.

We believe that distribution through GDS platforms continues to be the most efficient means for airlines and other travel providers to gain reach and distribute their travel content. In countries where a travel provider has reduced brand awareness (for example, outside its home market), a GDS platform offers a cost-effective means of accessing these markets. Additionally, as long-haul and corporate travel tickets and itineraries with high booking complexity are channelled predominantly through travel agencies using a GDS platform, indirect distribution tends to provide higher-yield tickets for airlines than direct channels.

Amadeus provides indirect distribution to over 80 low-cost carriers across the globe, including easyJet and Ryanair, who have been able to tap into a new side of their market potential by targeting the higher-yield business traveller with the GDS.

- **Corporate travel IT**. Corporations are making increased efforts to actively manage their travel and expense budgets. They are under more pressure than ever to demonstrate a return on investment on travel expenditure, while ensuring the security and comfort of their travellers. They need to achieve efficiencies both through direct savings (e.g. lower fares/room rates, demand management) and reduced internal processing costs of travel bookings and expense claims (e.g. online booking, manual expense submission, approval and audit).

At Amadeus, we are committed to helping corporations identify opportunities for savings using the best technology, enabling those responsible for travel and expense management to meet these objectives. Amadeus provides corporations with market-leading travel booking and expense management capabilities, regardless of which Enterprise Resource Planning system they might be using or how they decide to set up their travel policy. Our global presence allows us to support even the largest corporations in their markets.

We see a significant opportunity in helping corporations satisfy the travel needs of their employees, even in case of the occasional travel disruption, and to minimise the work involved in the processing of expense claims.
The travel distribution industry

Interaction between multiple players, for which the GDS remains the most efficient solution.

Providers

Intermediaries

Travelers

Indirect distribution

Direct distribution

Brick & mortar travel agencies
Travel management companies
Corporate tools
Online travel agencies
Metasearches

AmaDEUS
2015 Distribution highlights

- On average, over 80% of the airline bookings made through the Amadeus system worldwide are made with airlines that have a content agreement. During 2015, new signings or renewals of existing content agreements were reached with 37 carriers, including Air Canada, which serves 38 million passengers a year, Aeroméxico, the largest airline in Mexico, Czech Airlines and Air Europa.

- Customers have continued contracting Amadeus’ merchandising solutions. As at year-end, 135 airlines had signed up to Amadeus Airline Ancillary Services, with 101 customers having implemented the solution, which supports airlines in deploying ancillary services in almost every market around the world.

- Amadeus Fare Families Solution, which allows airlines to distribute branded fares, had 29 airline contracts in place, while 22 customers had already implemented the solution in 2015. Etihad Airways, the national airline of the United Arab Emirates, announced that it would become the first Middle Eastern carrier to implement Amadeus Fare Families in the indirect channel.

- Lufthansa and Austrian Airlines also implemented the Amadeus Fare Families Solution. They joined other Lufthansa Group airlines, Swiss International Air Lines and Brussels Airlines as the first airlines to go live with ATPCO (Airline Tariff Publishing Company) Branded Fares – a technology that Amadeus was the first provider to support. Amadeus subscribers can book Lufthansa and Austrian Airlines’ new branded fares, Light, Classic and Flex, across the direct and indirect channels through all Amadeus retailing interfaces and points of sale.

- Travel agencies are playing a greater role in the sale of ancillaries as the number of online travel agencies with airline ancillaries integrated into their systems tripled year-on-year during 2015. Amadeus saw a near 100% increase in travel agency sales of ancillaries in 2015. For certain carriers, up to 40% of bookings distributed by online travel agencies included an ancillary sale.

- Amadeus Selling Platform’s latest module enables travel agents to sell airport express tickets as they book a flight or hotel. London’s Heathrow Express became the first to launch this Amadeus tool, to be followed by the Airtrain in Brisbane in 2016.

- In 2015, Amadeus acquired 100% of the voting rights of Pyton Communication Services BV and subsidiaries, a Netherlands-based leisure travel technology specialist. The acquisition of Pyton, which has been in partnership with Amadeus since early 2013, enables travel agents to broaden their offering to include the key low-cost carrier segment.

See acquisitions map in ‘Amadeus people’, p. 96.
2015 operating performance

Amadeus’ pricing model for Distribution is based on transaction fees, principally booking transactions. The pricing level depends on:

- The location where the booking is made with respect to the prime market of the provider
- The type of technological access to Amadeus’ platform
- The level of functionality that the provider selects

The model links the pricing level of the booking fee to the economic value generated for the travel provider. The highest value is provided when Amadeus facilitates sales for the travel provider to customers that would otherwise be difficult or costly to reach. During 2015, Amadeus air bookings grew by 8.3% and our competitive position improved by 1.7 percentage points.

In turn, with respect to the global trend, air travel agency bookings increased by 3.9% in 2015. All regions performed positively in 2015, except for Latin America, mainly driven by the economic difficulties in Brazil and Venezuela. The Middle East and Africa started reporting positive growth in the second half of the year, recovering from geopolitical issues, and closed the year with an increase in volumes versus the previous year. The European region also posted limited growth overall, impacted by the macro-economic context, political issues and terrorism. In turn, North America had a solid performance during the year. Finally, Asia-Pacific was the fastest growing region.

With respect to Amadeus’ performance, North America and Asia-Pacific were the best performing regions in 2015, benefiting from underlying growth, customer wins in the US and the migration of Topas in South Korea to the Amadeus platform. Our air bookings in Central, Eastern and Southern Europe as well as Latin America were negatively impacted by the industry decline in the second half of 2015. Finally, the industry weakness in Western Europe (and in particular the volume declines of certain countries where Amadeus has a significant presence, such as Germany, France or Spain), the Middle East and Africa led to limited bookings growth in 2015 in these regions.

In non-air distribution, volumes reached a 3.1% growth in 2015, driven by the positive performance of rail, hotel and car bookings.

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4 The competitive position is calculated based on the total volume of travel agency air bookings processed by the global or regional Computer Reservation Systems. It excludes air bookings made directly through in-house airline systems or single-country operators, the latter primarily applying to China, Japan, Russia and South Korea (until the migration of Topas’ connected travel agencies to Amadeus at the end of the third quarter of 2014).
3.2 IT Solutions

The traveller’s needs are at the centre of our thinking

Business management solutions
- Offer management
- Business intelligence
- Services
- Flight sequence optimisation
- Resource optimisation
- Passenger verification
- Contract & billing
- Weight & balance
- Merchandising
- Flight management
- Revenue management
- Revenue accounting
- Content management

Solutions to serve travellers
- Trip management
- Customer management
- Point of sale
- Distribution
- Baggage reconciliation
- Self-service bag drop
- Self-service check-in
- Loyalty
- e-Commerce
- Mobile
- Reservation
- Property management
- Payments

Our customers
- Airlines
- Hotels
- Ground handlers
- Airports
- Railways

Travel experience

Pre-trip

On-trip

Post-trip

Inspire

Shop

Book
IT Solutions for airlines

Amadeus develops state-of-the-art IT solutions and services to address airlines’ key operational requirements in the areas of reservation and ticketing, inventory management, departure control, retail and e-commerce, merchandising, revenue management and financial solutions.

With 132 airlines contracted for Amadeus Altéa Reservation and Amadeus Altéa Inventory, Amadeus is the market leader in Passenger Service Systems (PSSs). Of these 132 airlines, 120 were contracted to use the full Altéa Suite, which additionally includes Altéa Departure Control.

We serve the largest portfolio of the world’s top airline alliances. Amadeus Altéa Suite is used by two-thirds of Star Alliance members, three-quarters of oneworld carriers and over half of the members of SkyTeam. Amadeus Altéa Suite facilitates closer integration between partner airlines that need to share availability, fares and passenger and booking information, enabling a seamless passenger experience across members.

The Amadeus Altéa community platform embraces airlines from every part of the world. This common platform approach entails continuous upgrades, not only to incorporate new industry mandates but also to fulfil emerging needs within an evolving market. We continue to expand and integrate new customers into this unique platform, to reap the benefits of integration and seamless management of the full customer travel experience.

Amadeus Altéa airline customers span all sizes and levels of sophistication, ranging from airlines carrying 70 million to below 1 million passengers annually, including both well-established airlines and start-ups. As at 31 December 2015, 110 airline clients were using our merchandising and retailing solutions, including more than 25 of the top 50 International Air Transport Association (IATA) airlines (measured in terms of total annual passenger numbers).

Amadeus’ pricing model for IT solutions is primarily based on a fee per transaction processed. Most of the transactions billed are linked to air traffic volumes – for example, airline Passengers Boarded (PBs) in the case of Amadeus Altéa Suite, or Passenger Name Records (PNRs) in the case of our e-commerce solutions. By operating a transaction-based revenue model, our returns are linked to the operational volumes of the airlines. In addition, our pricing per transaction has a modular approach, so our airline customers can incorporate specific modules, paying only for the tool used.

* Passengers boarded onto flights operated by airlines using at least Amadeus Altéa Reservation and Inventory modules.

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**Passengers boarded* (figures in millions)**

<table>
<thead>
<tr>
<th>Year</th>
<th>Passengers Boarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>439</td>
</tr>
<tr>
<td>2012</td>
<td>564</td>
</tr>
<tr>
<td>2013</td>
<td>616</td>
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<tr>
<td>2014</td>
<td>695</td>
</tr>
<tr>
<td>2015</td>
<td>747</td>
</tr>
</tbody>
</table>

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* Passengers boarded onto flights operated by airlines using at least Amadeus Altéa Reservation and Inventory modules.
The Amadeus Airline Core Systems cover essential IT functions for any airline. They consist of the Altéa Passenger Service System Suite, combined with revenue management and financial solutions.

These core systems provide airlines with a truly end-to-end, real-time solution that covers the entire customer journey and optimises revenue growth. They can integrate complex travel arrangements across multiple airlines.

The Amadeus Altéa Suite is a complete Passenger Service System that offers full reservation, inventory and departure control capabilities, delivering a unique, integrated solution.

Airline Passenger Service Systems are mission-critical and highly complex platforms. To effectively migrate and operate such systems requires a particularly high level of technical expertise. At Amadeus, we create a detailed migration plan to ensure a low-risk implementation process, protecting the airline’s key business functions at each stage of the cut-over.

Following the exponential growth in technology solutions and the increased options available to travellers, Amadeus has developed IT solutions addressing the complexity of the new environment and the needs of airlines and travellers. Some of the solutions available include:

- Digital and Direct Retailing Systems, enabling airlines to provide their customers with a rich, tailored offer, enhancing the shopping experience for travellers.
- Global Merchandising Systems, enabling airlines to reach more travellers, deliver on travellers’ expectations across all phases of the travel experience and maximise revenue opportunities.
- Travel Intelligence and Personalisation Systems, providing airlines with unique business insights that help the airline to deliver a customised passenger experience. Personalisation Systems include customer loyalty solutions, corporate programmes and customer experience management.

For more information on Amadeus products and services for airlines, visit www.amadeus.com/airlines.

See ‘Travel Intelligence’, p. 40.

### Community Platform Model

- Significant economies of scale: core platform designed to support multiple customers.
- Customisation capability: individual customers identify functional requirements and contribute to the platform’s funding.
- New customers are attracted by the functional richness of the platform.
- Seamless integration with alliances and partners.
- Automated, flexible, modular and easy to evolve.
- Single data source: simplified processes and increased operating efficiency, improved customer service and significant revenue opportunities.
Challenges and opportunities in the IT solutions business

Travel providers are experiencing competitive and cost pressures, and as a result, many are increasingly looking to replace in-house legacy systems. By outsourcing certain mission-critical processes to third-party vendors that offer standardised and scalable next-generation technology platforms, such as Amadeus, customers are able to enhance the quality and functionality of their product and service offerings while reducing their risks and expenditure on systems development and ongoing maintenance.

On the other hand, the IT solutions marketplace is highly fragmented, with several players focusing on specific subsectors and operating different business models. Providers of IT solutions typically operate under one of three distinct business models:

_ ‘One-to-One’ Application Hosting Model_
The outsourcing partner develops and deploys a system on a one-to-one basis with the customers, and hosts such a system in a third-party data centre. Remuneration is typically on a transactional or licensing fee basis.

_ System Outsourcing Model_
The outsourcing partner operates and manages the customer systems through a simple application hosting environment. Customisations and further developments are undertaken by the travel providers. Remuneration is generally on a fixed-price or cost-plus basis.

_ Community Platform Model_
The outsourcing partner provides, manages, customises and continually develops the technology system using a standardised platform shared by all customers connected to its IT solutions. Remuneration is typically on a per transaction basis.

We believe that the Community Platform Model is the most cost-efficient IT business model because:

1. Customers benefit from common development costs
2. Its transaction-based pricing model allows customers to transform what would otherwise be a fixed cost to a variable cost
3. Continuous development by the IT provider ensures that the customer always enjoys state-of-the-art solutions, reducing the risks associated with large IT infrastructure fixed costs
4. The Amadeus Altéa Suite is offered as a Software-as-a-Service (SaaS) delivery model, reducing IT infrastructure and support costs to our customers

We expect an increasing number of travel providers to choose to externalise their systems as they make investment decisions on next-generation technology systems.
2015 IT Solutions highlights

In 2015, 132 airlines were contracted to use both Altéa Reservation and Altéa Inventory, 120 of which for the full Altéa Suite that additionally includes Altéa Departure Control. By the end of the year, 124 airlines had already been implemented for Altéa Reservation and Altéa Inventory, 105 of which were already using the full Altéa Suite. The Altéa Suite facilitates closer integration between partner airlines that need to share availability, fares and customer and booking information, thus enabling the same customer experience across alliance members.

The latest customer to contract the Altéa platform in 2015 was Brussels Airlines. The airline carries approximately 7.5 million passengers on a yearly basis, and it implemented Altéa Reservation and Altéa Inventory in January 2016, in parallel with Swiss International Air Lines.

Scandinavian Airlines (SAS) migrated to Amadeus Altéa Revenue Management Suite. This followed a strategic partnership established in 2013 that saw SAS’ highly experienced revenue management experts join Amadeus to create a groundbreaking ‘Centre of Competence’.

Lufthansa became the first airline to select Altéa Corporate Recognition, which allows airlines to identify corporate bookings at the moment of reservation. By providing tailor-made offers across all stages of the journey and enhancing both total spend and the travel experience, airlines can actively focus on the needs of corporates and offer services such as additional baggage and preferential seat options. This service is complemented by Amadeus’ existing loyalty and personalisation solutions – Loyalty Management Suite and Altéa Awards Suite.

In response to the challenge of ever-increasing flight search volumes – airline ‘look-to-book’ ratios can now easily run to 1,000:1 – Amadeus launched Airline Cloud Availability, a cloud-based dynamic availability solution that also applies dynamic revenue management strategies. This followed a successful pilot with Lufthansa and Google Cloud Platform.

On 26 January 2016, Amadeus announced that, following regulatory approval, it had closed the deal to acquire Navitaire, a provider of technology and business solutions to the airline industry, from Accenture for €766.5 million. The addition of Navitaire’s portfolio of products and solutions for the low-cost segment complements Amadeus’ Altéa Suite of offerings for its largely full-service carrier customer base, giving the company the ability to serve a wider group of airlines. Amadeus will market and sell the two product portfolios separately and will continue to invest in both platforms, enhancing services and functionality to all types of carriers.
In our IT Solutions business, we continue our diversification efforts, expanding our initial Airline IT portfolio with new initiatives focused on Hotel IT, Rail IT, Airport IT and Travel Payments. During the year 2015, the volume of passengers boarded reached 747.3 million, 7.5% higher than in 2014, fuelled by the 2014–2015 migrations to Amadeus Altéa and 2.2% organic growth.

During 2015, the weighting of Asia-Pacific relative to total passengers boarded increased significantly, supported by the contribution of new airlines migrating to the Altéa platform (mainly Korean Air and All Nippon Airways – international passengers business). The 2014 implementations of Southwest (international passengers business), Seaport and Cape Air also led to an increasing – though limited – weighting of North America. The weightings of both regions will continue to increase in the coming years with the migration of Japan Airlines and Southwest (domestic passengers business). Latin America performed positively in the year in spite of the economic deterioration in Brazil. Meanwhile, political instability remained a concern for many regional carriers in the Middle East and Africa throughout 2015. Finally, the macro-economic situation, strikes and terrorist attacks in Europe affected the performance of our European client base in terms of passengers boarded.

### 2015 IT Solutions operating performance

<table>
<thead>
<tr>
<th>Region</th>
<th>2014</th>
<th>2015</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>Western Europe</td>
<td>318.7</td>
<td>324.2</td>
<td>1.7%</td>
</tr>
<tr>
<td>Asia-Pacific</td>
<td>166.6</td>
<td>201.3</td>
<td>20.8%</td>
</tr>
<tr>
<td>Middle East and Africa</td>
<td>100.5</td>
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<td>3.2%</td>
</tr>
<tr>
<td>Latin America</td>
<td>73.2</td>
<td>77.4</td>
<td>5.7%</td>
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<tr>
<td>Central, Eastern &amp; Southern Europe</td>
<td>35.6</td>
<td>37.0</td>
<td>4.0%</td>
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<tr>
<td>North America</td>
<td>0.8</td>
<td>3.8</td>
<td>n.m.</td>
</tr>
<tr>
<td><strong>Total passengers boarded</strong></td>
<td>695.4</td>
<td>747.3</td>
<td>7.5%</td>
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<tr>
<td><strong>Airlines migrated (as at December)</strong></td>
<td>124</td>
<td>124</td>
<td></td>
</tr>
</tbody>
</table>

*A Airlines migrated to at least the Amadeus Altéa Inventory module, in addition to the Amadeus Reservations module.*
3.3 Diversification into new areas

In addition to our Airline IT portfolio of solutions, we are expanding into the provision of IT solutions to other travel industry players. Building on our unique experience of delivering mission-critical systems for airlines, Amadeus is working in partnership with other providers to develop next-generation solutions for them. We leverage our technology base, shared community IT platform and expertise in the travel industry to expand our portfolio to new business areas.
Travel Payments

Payments are fundamental to commerce – but the seemingly straightforward business of making and receiving payments is complex and challenging for travel merchants such as airlines and travel agencies. Amadeus Travel Payments provides the expertise and solutions to simplify payments in travel.

The payments ecosystem is in continual flux as new providers emerge, established providers consolidate and key players such as card issuers evolve their terms and conditions. Continuous innovation in payment products means that there are always more ways to pay. For any sector, staying on top of the complexity of payments is demanding in terms of management time and transaction costs. In the travel sector, the picture is even more complex. Global travel merchants such as airlines and travel agencies require payment solutions that work securely and on a global scale across different countries and currencies. They have to comply with the requirements of national and transnational regulators, as well as a travel-specific regulator in the form of the International Air Transport Association (IATA). Then there are various processes specific to travel, such as the fact that tickets are issued many months before the service is delivered.

It is complicated and expensive for airlines and travel agencies to connect their systems with this complex and shifting environment. Dealing with the challenge of day-to-day management means they may not always be able to act on new opportunities created by fast-changing payments environments. Amadeus Travel Payments brings together cross-domain payments and travel and technology expertise to make payments simpler for travel merchants. The Travel Payments team, based in seven locations around the world, has over 100 specialists dedicated to keeping customers ahead of fast-paced change.

Amadeus’ core proposition is to simplify payments in travel. For travel merchants, who must receive payments cost-effectively from their customers, Amadeus has built a payment hub that provides travel merchants with a single connection into an end-to-end payments environment that encompasses acceptance, settlement, reconciliation and security. The hub brings together over 320 banks, 20 Payment System Providers and 50 partners including fraud solutions vendors on a single platform customised for the travel sector. Amadeus has added to this proposition by building a portfolio of solutions to help travel agencies pay their suppliers, be they airlines, hotels or other travel suppliers. With a single platform, travel agencies can access multiple providers of virtual card payment solutions, enabling them to make secure, efficient payments to their suppliers.

In 2015, we added 13 new payment industry partners to the payment hub, including the fraud management company Accertify and the global payments provider Elavon. Elavon works with more than 50 of the world’s leading airlines and is the top global acquirer for the travel industry. Amadeus has integrated Elavon’s acquiring capabilities into the Amadeus Payments Platform, which is used by more than 300 airlines and ensures a fast and easy authorisation process integrated into ticketing and selling. In addition to this, Amadeus implemented 32 new travel merchants on the hub in 2015.

The Amadeus payment hub brings together 320+ banks, 20 Payment System Providers and 50 partners, including fraud solutions vendors.
Amadeus believes that the successful airport of the future will be one that most efficiently and cost-effectively provides a world-class experience for passengers and airlines alike. Our portfolio of solutions for the industry is targeted at doing just that. In the two years since our launch, we have successfully helped a number of customers work towards those goals, and we are committed to investing in innovation that will benefit the air transport community.

The airports and ground handlers looking to the future today recognise that the environment is changing. They have a clear commitment to optimise operations and enhance the overall passenger experience, and Amadeus’ cloud-based common use and other next-generation products are helping to make this a reality.

**Airport IT**

Amadeus Sequence Manager, the first of the airport IT solutions developed with Munich Airport, is now in service 24/7, providing greater functionality, notably for the aircraft de-icing process in bad weather conditions. The solution improves flight departure sequencing and runway capacity to reduce environmental impact, bringing benefits to the whole airport ecosystem. After a first winter season operating with Amadeus Sequence Manager as part of their forward-looking Airport Collaborative Decision Making strategy, Munich Airport observed positive benefits, such as runway waiting times reduced by 50% and inbound flight delays reduced by 24%, while flight slot adherence improved by 22%.

Airports are looking into ways to optimise the use of their fixed resources such as aircraft parking stands, gates and baggage carousels. Copenhagen Airport, rated year after year as the most efficient airport in Europe, is no exception. The Amadeus Fixed Resource Management System, a new solution developed in co-operation with Copenhagen Airport, was fully commissioned in 2015. This solution is designed to determine the best possible allocation of aircraft parking stands and gates according to the flight schedule and the business drivers of individual airports. Optimised allocation of stands and gates means shorter transfer times – very important at hub airports such as Copenhagen – resulting in an enhanced travel experience. It could also mean that aircraft are strategically parked based on ability to generate passenger traffic close to retailing areas of the airport, or on an easier, quicker loading of transit passengers’ luggage.

Copenhagen Airport has the vision to become the leading air transport hub for Northern Europe. It has a long-term plan to increase capacity from 25 million to 40 million passengers per year. Unlike many ambitious expansion projects, the plan does not include building a new terminal. Rather, the airport’s board decided to optimise the existing terminals and invest gradually as the airport expands with efficient processes and scalable technology. Further to the project of deploying a new resource management system, in 2015, Copenhagen Airport and Amadeus embarked together on a 10-year agreement to replace the airport’s legacy management system platform, as part of its development plan. Copenhagen Airport’s new Air Traffic System, to be provided by Amadeus, will transform operations across a diverse range of areas, leveraging nine separate Amadeus solutions.

More and more airports are embracing the latest technologies across all aspects of their businesses as they strive to continually enhance the passenger experience. The intelligent use of next-generation, common use technologies is one way in which airports are achieving this. Innsbruck is one example of an airport pioneering new technology in the airport ecosystem. Five months after announcing Innsbruck...
Airport as the first customer for the Amadeus Airport Common Use Service (ACUS), we secured a nine-year deal with Norwegian airport operator the Avinor Group. Avinor’s deployment of ACUS will initially cover 8 of their 46 airports, namely Oslo, Bergen, Trondheim, Stavanger, Tromso, Bodo, Alesund and Kristiansand airports, extending to over 20 airports during the contract period. This agreement will enable the Avinor Group to provide its airports with an innovative technology solution at a 25% cost reduction, compared to its previous service. In addition, the Amadeus platform is expected to help Avinor reduce CO₂ emissions by 5,000 tonnes annually, by cutting down the amount of energy used at the airports.

Perth Airport has entered into a new long-term partnership with Amadeus to implement ACUS and other next-generation solutions to provide a higher level of customer experience. ACUS will give Perth Airport the flexibility to introduce more automation into its passenger processing as it implements next-generation facilities such as self-service bag drop or auto boarding. ACUS helps reduce CO₂ emissions and brings clear financial and structural benefits, as airlines operating at Perth Airport will benefit from a 26% reduction in passenger processing costs. The agreement marked Amadeus’ continued expansion of Airport IT business in the Asia-Pacific region, with Perth Airport as its first customer in Australia.

Ground handling

Amadeus maintained its position as the industry’s leading provider of ground handler solutions in 2015. The Amadeus Altéa Ground Handler Departure Control Suite attracted 15 new ground handlers, bringing our total customer base to 95. New customers include GH Italia, RAM Handling in Morocco, BTS Aero in Slovakia, Celebi in Turkey and Swedavia in Sweden.

As the IT provider for airlines in the Star Alliance, Amadeus is now the main Departure Control System deployed in Heathrow’s new Terminal 2, which opened in 2014. Amadeus Altéa Departure Control is supporting airlines and the ground handler Aircraft Service International Group to successfully process passengers and traffic at this terminal, which is home to 23 Star Alliance members.

Ground handlers are increasingly taking an innovative perspective on IT and are disposed to invest in new technologies, resulting in requests for product packages, which is promising for ongoing growth.

Amadeus Airport IT ended the year with a customer base of over 200 airport operators, ground handlers and airlines, including the customers gained through the acquisition of AirIT.

AirIT acquisition

Following the integration of airport technology provider UFIS in 2014, Amadeus announced the acquisition of Air-Transport IT Services Inc. (AirIT) in 2015. With this acquisition, we can significantly expand our presence and capabilities to serve the North American market, the largest airport IT market globally. Currently 30 of the top 50 busiest airports in the US use AirIT’s solutions, along with a strong customer base of more than 70 airport operators in the US, Canada and the Caribbean.

Our existing offering will be complemented by AirIT’s PROPworks® portfolio, a revenue management solution for airports of all sizes that handles the management of contracts, invoices, sales, tenants and more. Airports often look for property and revenue management systems in conjunction with airport management systems, so this solution will help us to be more responsive to customer needs.

Amadeus Airport IT ended the year with a customer base of over 200 airport operators, ground handlers and airlines.

See acquisitions map in ‘Amadeus people’, p. 96.
Hotels

Amadeus Hotel IT

The current fragmented technologies predominantly used by hoteliers have proved to be an impediment to scalability, reliability, localisation, simplicity and speed to market. As a result, hoteliers are looking for more integrated, cloud-based solutions that give them a single view of their guests and their business. The Amadeus Hotel IT vision is to bring together the key components of the hotel technology infrastructure – Central Reservation, Property Management, Revenue Management, Sales & Catering and others – into one guest-centric community platform enabling hotels and chains of all sizes to have access to a single view of the guest and a unified view of their business.

The combination of Amadeus’ core infrastructure and community model approach – backed by the Amadeus company Newmarket’s award-winning customer service and support, the addition of Itesso’s cloud-native Property Management System (PMS) capabilities and the expansion of sales and catering solutions – helps customers improve guest loyalty and share of wallet. Amadeus is deeply committed to the hospitality industry and is focused on delivering a single set of modular, yet tightly integrated, end-to-end solutions.6

Guest engagement through service optimisation

In an age of prolific social feedback, providing great service delivery and recovery is critical. Amadeus supports hoteliers by providing the technology that enables them to gather, store and share information internally on individual guest preferences and makes service vastly more efficient. From the moment guests arrive at a property, creating a sense of ‘home away from home’ should be the goal. Amadeus’ Service Optimisation and Housekeeping solutions help hospitality organisations provide unsurpassed guest experiences.

Helping hospitality organisations globally to optimise sales and catering

In 2015, Delphi.fdc, Newmarket’s end-to-end cloud-based sales and catering solution, continued to grow. With the latest developments expanding the capabilities of the system, many large hospitality organisations have made the choice to implement the solution to effectively sell and manage meeting and event space. Whether in a hotel, stadium, restaurant or convention centre venue, Delphi.fdc assists sales and catering teams to execute events successfully.

Partnership with InterContinental Hotels Group

In 2015, the InterContinental Hotels Group and Amadeus announced a partnership to develop a next-generation Guest Reservation System that will revolutionise the technological foundations of the global hospitality industry. Working on a new cloud-based ‘Community Model’ similar to the model Amadeus developed for the global airline industry, the system will be a first in the hotel sector.

6 For more information on Amadeus products and services for hotels, visit www.amadeus.com/hotels.
Amadeus Hotel Distribution

Amadeus connects thousands of independent hotels and the world’s leading hotel providers (chains, representation companies and hotel aggregators) with its global network of travel agencies. In addition, we offer high-value marketing and promotional solutions for hotel providers to reach the right booker with the right offer at the right time. We give our booking customers access to 379,000 unique hotel properties, via custom-built reservation applications tailored to the way our business partners operate. Listed below are some of Amadeus’ solutions for hotel distribution.8

Amadeus Hotels Plus

Professional travel bookers have access to Amadeus’ hotel content via Amadeus Hotels Plus. This solution gives travel professionals access to a vast world of hotel content via a single hotel sourcing platform that allows for mark-up and commission comparison in a single merged display, bringing important productivity benefits to travel agents.

Amadeus Value Hotels

In 2015, Amadeus launched a new offer for travel agencies: Amadeus Value Hotels. In addition to being able to rely on Amadeus for access to an inventory of hotel content from hundreds of providers worldwide, Amadeus agencies also have access to exclusive hotel net rate content and contracting and payment models. This gives them greater control over their mark-up and allows them to make the hotel choices that are most profitable for their business. Amadeus Value Hotels acts as a merchant of record of the transaction, which means that Amadeus handles all payments on behalf of the travel agencies. In addition, Amadeus takes care of all fulfilments and offers round-the-clock support to travel agency customers, as well as additional out-of-hours support to travellers.

Amadeus LinkHotel

Amadeus LinkHotel gives any hotel anywhere in the world the ability to distribute, market and sell its rooms to a global audience. Through Amadeus LinkHotel, we connect independent hotel properties and smaller chains to the online travel community.

Amadeus hotel web services

As consumers increasingly turn to online services, we see more uptake of our hotel web services around the world by companies who want to build their own websites and sell hotels. During 2015, Amadeus brought forward more attractive and profitable hotel content, which has contributed to helping online players expand globally with a strong focus on non-air products. This activity translated into outstanding growth in hotel API (Application Programming Interface) and web services transactions in 2015.

Acquisition of Hotel SystemsPro and Itesso BV in 2015 ➔

Together, these two acquisitions help Amadeus to unite an array of systems (Central Reservation, Property Management, Revenue Management, Sales & Catering and others) into a cloud-based platform that is centred on the guest experience.

The acquisition of Hotel SystemsPro (HSP) by Newmarket expanded Amadeus’ presence in the hotel sales and catering sector. HSP delivers high-performance, ASP-based7 enterprise and property solutions to more than 4,500 hotels in North America and beyond. The flagship product, Hotel SalesPro, automates the entire sales administration and catering delivery process, increasing sales efficiency and customer service at hospitality venues, with a specific focus on mid-tier properties.

Amadeus further expanded its technology offering to the hotel industry with the acquisition of Netherlands-based Itesso BV, a provider of cloud-native PMSs. With its new cloud-native Enterprise Lodging System, the company is leading the industry towards a new generation of property management solutions. Itesso currently provides PMS technology to 1,800 properties worldwide via a highly experienced team of approximately 100 hospitality professionals.

8 For more information on Amadeus products and services for hotels, visit www.amadeus.com/hotels.
Harnessing data and analytics helps travel companies thrive in today’s marketplace. Amadeus established its Travel Intelligence business unit to take its expertise and use it to help customers enhance the traveler experience while improving the profitability of their business. Amadeus Travel Intelligence focuses on the use of data and deep technical analysis to better understand and shape the future of travel. We offer next-generation business intelligence products, solutions and services designed primarily for the travel industry, transforming raw travel data into meaningful insight for each customer, and facilitating strategic, tactical and operational decisions.

Amadeus has always been in the business of big data. The Amadeus Data Centre processes 2.6 billion transactions\(^9\) a day. The Amadeus Travel Intelligence Engine is the latest pillar in our IT environment. The architecture provides vast scalability, enabling us to process millions of data records in hours or even minutes. This ensures that the insights we deliver to our customers are continuously enriched with Amadeus, industry and external data. More than 100 specialists are dedicated to the Travel Intelligence business. Our regional sales staff and travel intelligence business model mirror the requirements of our customers, and our data scientists deliver personalised services and consulting to address each customer’s specific needs.

\(^9\) A transaction is defined as a single message received from a user that requires one or more responses to be sent. A user can be a person or a computer system.
Business intelligence in the travel industry

The travel industry is exceptionally complex, operating across borders, seas and continents. This means that it has to make the most of technological advancements to ensure continued business success and satisfied customers. Business intelligence has a key role to play: by enabling travel companies to process greater amounts of data in ever-shorter time frames and provide meaningful output, business intelligence allows for the kind of informed, proactive business decisions that make for success stories.

Business intelligence can bring value at all levels of the industry, from predicting initial customer behaviour and booking patterns to route optimisation, flight aggregation and sentiment analysis of customer reviews and feedback. In addition, travel companies can use business intelligence to gain an in-depth understanding of the market and make better predictions of market trends and customer travel intentions.

At the same time, as the travel industry moves away from the traditional business/leisure travel segmentation, customers expect a more personalised experience. This requires a single view of the customer, which can be developed by harnessing data from across the entire travel ecosystem.

Amadeus Travel Intelligence portfolio

By extracting and utilising data from multiple sources across the entire travel ecosystem, Amadeus can help travel providers gain market insights, monitor their performance and better analyse traveller behaviour. Amadeus Travel Intelligence puts the traveller at the centre of the travel ecosystem and can help each customer merchandise and personalise their products more intelligently, define their strategy and increase their operational efficiency.

Our offer is adapted to every customer’s maturity in business intelligence. We provide our customers with the capabilities and expertise they need to succeed, at any stage of the business intelligence value chain and whatever their current investment in business intelligence.

In 2015, Amadeus launched two new travel intelligence solution suites for airlines and travel agents:

- **Amadeus Schedule Recovery** helps airlines overcome disruptions to minimise the impact on their operations and customers. In case of events such as bad weather or air traffic congestion, Amadeus Schedule Recovery uses data analytics to recommend the best course of action, such as the delay/cancellation of flights or the request of alternative landing slots. This solution was launched with Australia’s largest carrier, Qantas Airways.

- **Amadeus Agency Insight** helps travel agencies make sense of the data they collect and improve their position in the marketplace. It includes modules that give travel agencies instant insights into the travel intentions of consumers or provide analytics on bookings, revealing trends on growing origins and destinations and on the market positions of agencies.

Travel Intelligence offer

10 For more information on Amadeus’ solutions, visit www.amadeus.com.
Rail and ground travel

The rail industry is undergoing a significant period of change: consumer appetite for rail travel is growing, high-speed rail networks around the world are expanding and rail is taking centre stage as the global travel industry seeks to achieve a door-to-door journey for the traveller. In this context, Amadeus is playing a key role in making rail and ground travel the mode of choice for travellers. We see great progress as we integrate more operators into our distribution platform, and research and develop new solutions to better meet customer needs. The airport services operators Heathrow Express and Brisbane Airport’s Airtrain have joined the 90 rail companies around the world that benefit from Amadeus’ global network of travel sellers (including business, leisure, online and offline travel agencies, corporations and other rail companies).

Portfolio11 and 2015 business highlights

- Amadeus Total Rail is our suite of solutions for rail and ground travel operators.
- Amadeus Rail Display is the rail booking solution available in the Amadeus Selling Platform to our global network of travel agencies, giving them the ability to book rail operators, including SNCF, Eurostar, Thalys, Lyria, Trenitalia, Thello, Deutsche Bahn, SJ and MTR. It can reduce up to half of the overall booking time and cut down travel agents’ manual processes by 90%.
- Amadeus Rail Web Services facilitates the issue of rail tickets online and also builds rail packages. In 2015, Deutsche Bahn, one of the leading transportation and logistics companies worldwide, which carried 4.3 billion passengers in 2014, renewed its existing agreement with Amadeus for another three years. With this new agreement, online travel agencies worldwide are able to access Deutsche Bahn’s full range of routes and fares via Amadeus Rail Web Services.
- Amadeus Air–Rail Display is an industry-first solution that allows air–rail comparison with the option of booking rail services from the same screen as flights, enabling railways to be sold as an alternative or complement to a flight. It has been adopted by Trenitalia, Thalys and Eurostar as well as content aggregators AccesRail and Hahn Air.

Launched in 2015, a new airport express pop-up in the Amadeus Selling Platform alerts travel agencies when an airport express train ticket is available at the traveller’s destination at the moment of booking an airline, thus bringing the door-to-door experience one step closer to reality.

Finally, we have built – with close customer input – a technology that enables railways to manage their offer effectively, from schedules, inventory, fares and pricing to reporting, hosting and business intelligence – in order to improve merchandising and enhance their customers’ experience. We have worked together with our partner BeNe Rail International to develop a unique IT platform that will provide multiple railways with all of the coordinated end-to-end processes they need to meet customer needs, lower their costs and grow their business.12

11 For more information on Amadeus’ portfolio, visit www.amadeusrail.net.

12 See www.amadeusrail.net/case-studies to find out more about Amadeus Rail’s partnerships with Key Travel, Eurostar and BeNe Rail.
Mobile

With mobile phones, travellers are more connected than ever before, empowered with a vast amount of choice and growing expectations. Faced with these new demands, travel companies feel the pressure to diversify and extend their service offering into the digital mobile world. The challenge is to provide travellers with the right information and the best service at each stage of the journey.

Mobile requirements vary among Amadeus’ customers. As a technology provider for the industry, Amadeus is improving the travel ecosystem with competitive and scalable mobile solutions that are enabling its customers to better serve their own customers.

Amadeus mobile portfolio

Our flagship business-to-traveller application, CheckMyTrip, is used by thousands of travel agencies worldwide, providing their travellers with active itinerary management, including additional services such as tours and hotel recommendations, bookable straight in the app.

Many travel partners require greater brand awareness and additional features, such as search and book capability or other web services. The Amadeus Mobile Platform includes our white label solution, based on CheckMyTrip, which allows partners to craft their own branded application and further expand bookable services and Application Programming Interfaces (APIs) to enhance their mobile offer.

Travel partners requiring solutions for managed travel have access to mobile applications that ensure in-policy air, rail and hotel bookings and/or re-booking through their mobile devices. They can also optimise duty of care by providing travellers with relevant and timely information in case of disruptions, as well as expense management features.

Region-specific mobile solutions

Understanding that travel content and feature sets may vary in different parts of the world, we also provide region-specific mobile solutions.

For travel partners in Europe, for example, we have white label mobile solutions for business and leisure travel agencies. We also create bespoke leisure-based native applications for iPhone, iPad and Android that have search and book capabilities.

Furthermore, as of 2015, travel agencies in Western Europe are offered an Amadeus-branded mobile solution: Mobile Traveller by Amadeus. The white label mobile solution for travel agencies in the Middle East and Africa is now available in countries such as Bahrain, Jordan, Lebanon, Kenya, South Africa and Sudan.

Mobile solutions for airlines

Amadeus’ mobile solutions ensure that airlines can quickly adapt to emerging needs in the digital space and continue to service their customers with an enhanced experience right at their fingertips. In 2015, 13 new airlines implemented Amadeus mobile solutions, bringing the total number of contracted customers to 42. Overall, airline mobile bookings in Amadeus have grown by over 100% year-on-year.

Amadeus Mobile Competency Centre

With the rise of the Internet of Things (IoT), we can only expect the use and application of mobile to grow in the world of travel. Through our Mobile Competency Centre, we are trialling new and innovative ways for our customers to offer even more in terms of on-the-go services.
3.4 Financial performance

Amadeus enjoyed a highly successful 2015 with strong operational and financial performance. We remained highly focused on technology and deployed a consistent strategy of investment throughout the year to support our long-term growth and profitability goals.

Distribution

Amadeus’ Distribution business posted solid growth during 2015, driven by higher bookings, a significant improvement in the company’s competitive position and an increase in the average revenue per booking, as well as growth in non-booking revenue. This positive performance was supported by foreign exchange impacts and the consolidation of the recent acquisition of i:FAO and Pyton.

Revenue

Revenue increased due to a 7.7% growth in the number of bookings and a 4.5% growth in the average revenue per booking. The increase in number of bookings was facilitated by the improvement of our competitive position, particularly in North America and Asia-Pacific, as well as by the organic growth of the industry. The revenue per booking benefited from the appreciation of the US dollar versus the euro.

On the other hand, the higher proportion of local bookings (bookings made in the home market of the travel provider) partially reduced the growth in revenue per booking, since these bookings have a lower fee than those performed outside the home market of the travel provider.

Non-booking revenue grew by 5.1% during the year, mostly supported by (i) search solutions provided to metasearch engines, (ii) enhanced features for travel agencies, travel management companies and corporations, (iii) data and advertising solutions, and (iv) the contribution of our acquisitions i:FAO and Pyton. This positive performance was partly diminished by a negative hedging impact.

### Revenue and contribution (figures in € million)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>2,455.1</td>
<td>2,737.8</td>
<td>11.5%</td>
</tr>
<tr>
<td>Booking revenue</td>
<td>2,113.5</td>
<td>2,378.6</td>
<td>12.5%</td>
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<tr>
<td>Non-booking revenue</td>
<td>341.6</td>
<td>359.2</td>
<td>5.1%</td>
</tr>
<tr>
<td>Contribution</td>
<td>1,082.1</td>
<td>1,177.0</td>
<td>8.8%</td>
</tr>
</tbody>
</table>

[See acquisitions map in ‘Amadeus people’, p. 96.](#)
Contribution

The contribution of both the Distribution and IT Solutions businesses is calculated after deducting from the revenue those operating costs that can be directly allocated to the Distribution business (variable costs, mainly related to distribution fees, incentives, product development, marketing and commercial costs).

The contribution of our Distribution business grew by 8.8%, leading to a total contribution of €1,177 million in 2015. This positive performance was the result of 11.5% revenue growth, offset by an increase of 13.7% in net operating costs (a combination of gross operating costs, which increased by 13.5%, and capitalisations, which increased by 8.6%).

Gross operating costs were negatively impacted by foreign exchange effects (with a particularly high impact on incentives) and certain provisions to cover potential collection risks. The underlying increase was triggered by:

- Growth in incentives and distribution fees, driven by higher volumes (over 8.3% increase in air bookings in the period) and an overall contained unit distribution cost increase
- Moderate growth in fixed costs, slightly ahead of inflation, driven by:
  - An increase in R&D expenditure dedicated to new products and solutions for travel agencies, corporations and travel providers
  - A limited increase in core commercial costs
  - The expansion of Amadeus’ activities, including the consolidation of i:FAO, increased resources dedicated to Travel Intelligence and higher costs related to services (consulting, training)
IT Solutions

Our IT Solutions business continued to deliver remarkable growth during 2015. IT transactional revenue benefited from growth in Passengers Boarded, higher revenue per transaction and growth in direct distribution revenue. Non-transactional revenue grew by almost 50%. The consolidation of our recent acquisitions and foreign exchange effects also positively impacted revenue growth. Growth in contribution was above double-digit, although below revenue increase. This was due mainly to foreign exchange fluctuations and the expansion of our services to new businesses, which enhance our value proposition but deliver lower margins.

Revenue

Transactional revenue

IT transactional revenue
Under this category, we include revenues derived from (i) the Amadeus Altéa offering for airlines, which provides reservations, inventory and departure control capabilities, (ii) e-commerce solutions, which provide online shopping and booking engines for airline websites, (iii) a range of standalone IT solutions, which are complementary to Altéa and (iv) revenue from the Airport IT, Payments and Rail IT units.

Excluding foreign exchange considerations, all main IT transactional revenue lines reported strong growth:

- Altéa: driven by an increase of 7.5% in Passengers Boarded (PBs), as well as a higher average revenue per PB due to the up-selling of new Altéa modules and solutions.
- e-Commerce: strong performance as a result of organic growth and new implementations, as well as a positive contribution from up-selling activities.

Non-transactional revenue

Non-transactional revenue refers to (i) the customisation and implementation fees of Altéa PSS solutions, (ii) the provision of bespoke services, application hosting and other customer support services to airlines and (iii) Hotel IT solutions.

Excluding foreign exchange impacts, the remarkable 49.3% growth of this line of revenue was a result of:

- Integration of new companies (Newmarket in 2014, SystemsPro and Itesso in 2015)
- Growth in revenue from bespoke services
- Increase in revenue from implementation fees

Revenue and contribution (figures in € million)

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2015</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>962.6</td>
<td>1,174.9</td>
<td>22.1%</td>
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<tr>
<td>Transactional revenue</td>
<td>794.4</td>
<td>923.9</td>
<td>16.3%</td>
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<tr>
<td>IT transactional revenue</td>
<td>689.7</td>
<td>809.6</td>
<td>17.4%</td>
</tr>
<tr>
<td>Direct distribution revenue</td>
<td>104.7</td>
<td>114.3</td>
<td>9.2%</td>
</tr>
<tr>
<td>Non-transactional revenue</td>
<td>168.2</td>
<td>251.0</td>
<td>49.3%</td>
</tr>
<tr>
<td>Contribution</td>
<td>651.0</td>
<td>760.8</td>
<td>16.9%</td>
</tr>
</tbody>
</table>
Contribution

The contribution of the IT Solutions business increased by 16.9%. This increase was the result of a 22.1% revenue growth, partially offset by an increase of 32.9% in net operating costs (which in turn was a combination of gross operating costs growing at 28.2% and capitalisations at 19.5%).

Growth in gross operating costs was negatively impacted by foreign exchange fluctuations. The underlying increase was mainly due to:

- An increase in R&D expenditure
- Increased commercial support addressing the diversification of Amadeus’ portfolio and the expansion of its customer base
- The increasing weight of new initiatives
- Consolidation of 2014–2015 acquisitions
- Annual salary and variable remuneration reviews