VISA

Visa Consulting & Analytics (VCA)

Enriching the airline network planning data for a true understanding of passengers' demand

Our innovative approach for more accurate network planning analytics

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Changing dynamics in the aviation industry require an innovative approach

Airline Network Planning and Airport Aeronautical Revenue teams hold a critical role in the aviation industry. Their primary business objectives are centered around optimizing network routes and maximizing revenue while ensuring passenger satisfaction and meeting regulatory requirements.

Airline Network Planning teams focus on designing and managing the airline's route network to ensure profitability. This involves analyzing market trends, passenger demand, and competition to make informed decisions about where and when to fly. They are responsible for assessing the viability of new routes, frequency adjustments for existing routes, and the type of aircraft to be deployed.

Airport Aeronautical Revenue teams are tasked with driving revenue from aeronautical activities. This includes landing fees, terminal rents, and charges for passenger services. These teams work closely with airlines, regulatory bodies, and internal stakeholders to set competitive yet profitable pricing structures. They also play a key role in negotiating contracts and agreements with airline partners.

Both teams heavily rely on data and analytics to make strategic decisions. However, the rapidly changing dynamics of the aviation industry, compounded by factors such as fluctuating fuel prices, evolving consumer behavior, and unforeseen events like the COVID-19 pandemic, are making it increasingly difficult for these teams to accurately predict passenger demand and optimize revenue.
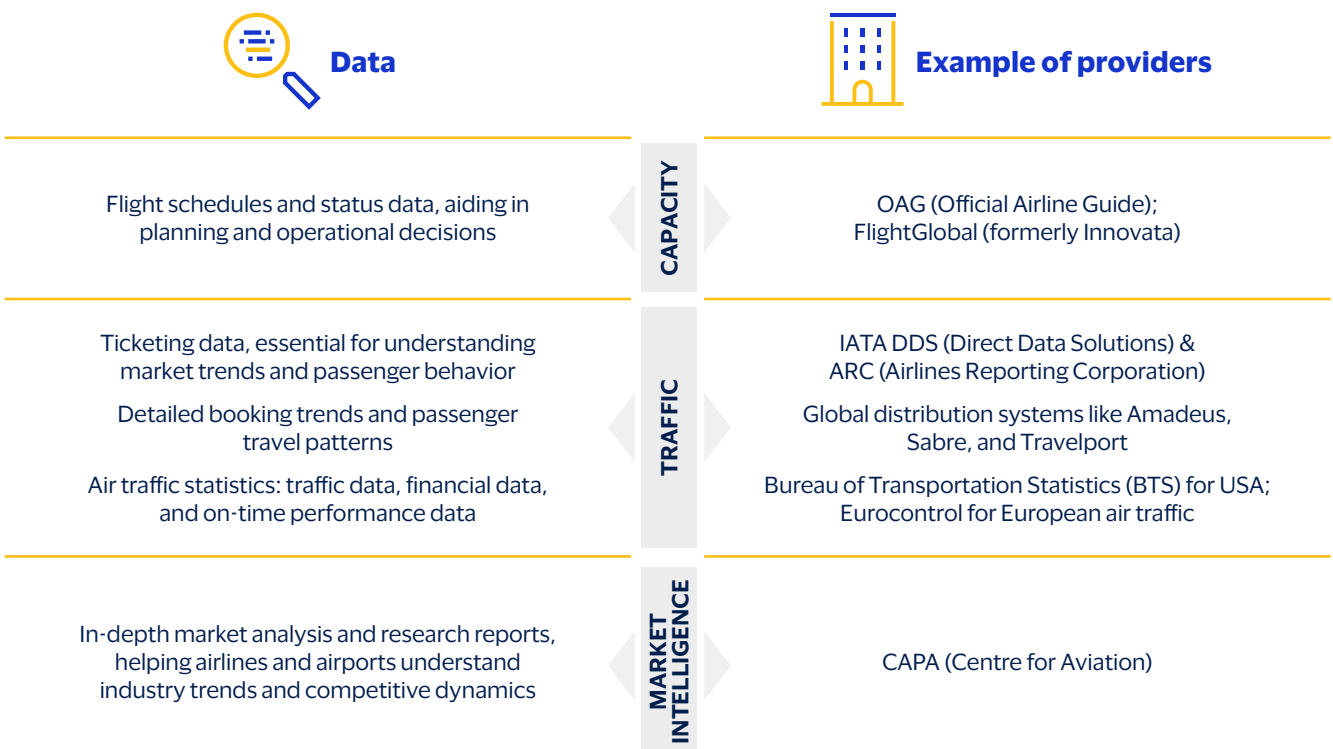
This is where Visa Consulting & Analytics (VCA) comes into the picture. By offering innovative data solutions and expertise, we can enhance their existing business models, add new dimensions to their analysis, and improve the accuracy of their forecasts. This white paper will further explore how VCA can be an innovative partner for Airline Network and Airport Aeronautical Business Development teams.

The current data landscape

In the aviation industry, both Airline Network Planning and Airport Aeronautical Business Development teams utilize a variety of data sources to inform their strategic decisions. These data sources range from internal operational data to market research, competitor data, economic and demographic data, industry reports, social media, and regulatory data.

However, to gain more specific and actionable insights, specialized data providers are often relied upon. Here are some of the key providers along with a brief description of each.

Data		Example of providers
Flight schedules and status data, aiding in planning and operational decisions	CAPACITY	OAG (Official Airline Guide); FlightGlobal (formerly Innovata)
Ticketing data, essential for understanding market trends and passenger behavior Detailed booking trends and passenger travel patterns Air traffic statistics: traffic data, financial data, and on-time performance data	TRAFFIC	IATA DDS (Direct Data Solutions) & ARC (Airlines Reporting Corporation) Global distribution systems like Amadeus, Sabre, and Travelport Bureau of Transportation Statistics (BTS) for USA; Eurocontrol for European air traffic
In-depth market analysis and research reports, helping airlines and airports understand industry trends and competitive dynamics	MARKET INTELLIGENCE	CAPA (Centre for Aviation)

While the data sources used by airlines and airports provide valuable insights, they also have certain limitations which can hinder their ability to fully meet the needs of the aviation industry.

1. The lack of granularity in identifying individual passenger behavior, especially when an itinerary is broken.
For instance, if a passenger books separate flights with multiple airlines, or combines flights with other forms of transportation, it is challenging to link these separate bookings to a single passenger using traditional data sources. This makes it difficult to understand the true demand and travel patterns of passengers.

2. These data sources primarily focus on the airline booking and spending, which can result in a self-fulfilling prophecy. The data reflects demand based on the availability designed by the airlines. Therefore, it might not accurately represent the true demand, if the availability does not match the passenger's preferences or needs. For example, if a preferred route or schedule is not available, a passenger might choose a second-best option, which then gets recorded as the 'demand'.

3. These data sources lack information on broader consumer spending behavior. Understanding where passengers spend their money, outside of booking flights, can provide valuable insights into their preferences and behaviors. This in turn can inform strategic decisions around route planning, in-flight services, partnerships, and more.

Leveraging sophisticated data analytics capabilities drives an in-depth understanding of customers

VisaNet, Visa's global processing network, provides a unique data source that can address several of the limitations inherent in traditional data sources used by the aviation industry.

VisaNet's transactional data provides a deep and comprehensive understanding of passenger behavior, enabling airlines to make more informed decisions, tailor their services, and ultimately drive business growth. Our data provides a wealth of information that can reveal new insights into the passenger journey and customer segments in several ways.

INSIGHT #1

Understanding the Full Passenger Journey

VisaNet captures transactions made throughout a passenger's journey, from the moment they book their flight, to their spending at the destination, and even after they've returned home. This can reveal patterns and preferences that are not visible through flight booking data alone.

VisaNet data can provide insights into passenger behavior even when itineraries are broken or involve multiple modes of transportation. Traditional data sources often struggle to link separate bookings to a single passenger, making it difficult to understand true demand and travel patterns. However, VisaNet data, by tracking individual transactions, can help link these separate bookings to a single passenger. This can provide a clearer picture of true demand and travel patterns, helping airlines to better understand and cater to passenger needs. For instance, if a passenger frequently books separate flights with multiple airlines to reach a particular destination or continues to the final destination by train.

INSIGHT #2

Uncovering Partnership Opportunities

By analyzing spending patterns, airlines can identify potential codeshare and interline opportunities. For instance, "airline A", flying out of its hub to "destination B", can analyze all the connecting opportunities with other airlines and match them with the "card present" transactions for the cards issued in its own home country. Final destinations with a higher spend can provide valuable insights to prioritize the interline/codeshare pipeline, and can even lead to marginal changes of the arrival time.

INSIGHT #3

Holistic View of Consumer Behavior

Unlike traditional data sources, VisaNet captures a wide range of consumer transactions, providing a more holistic view of passenger behavior. This includes not just aviation-related spending, but also broader spending patterns across a variety of sectors such as accommodation, dining, retail, and entertainment. This rich data can provide deeper insights into passenger preferences and behaviors, helping airlines to understand their passengers beyond the flight experience. For example, knowing the percentage of affluent traffic on different Origins and Destinations (O&Ds), can help airlines prioritize their network development and prepare business cases with more accurate projection of the future average fare evolution.

INSIGHT #4

Identifying Customer Segments

VisaNet data can help airlines identify different customer segments based on their spending patterns and their cards. For example, a route or an O&D with a higher percentage of corporate card transactions will highlight a stronger likelihood of business traffic, regardless of the cabin flown.

INSIGHT #5

Predicting Future Behavior

Historical transaction data can help airlines predict future passenger behavior. Through the monitoring of card transactions, an airline can better understand travel and purchase patterns, this data can be used to inform the publication of a new schedule or to modify the frequency/day of operation of its flights.

In conclusion, integrating VisaNet data can offer unrivalled customer behavioral insights, which significantly enhance the network planning process. With a more comprehensive understanding of passenger behavior and demand, network planning teams can make more accurate forecasts and strategic decisions. This leads to improved route planning, flight scheduling, capacity management, and market stimulation, all of which contribute to an average fare and revenue increase.

Using data analysis builds an in-depth understanding of the aeronautical landscape

In the dynamic and competitive landscape of the aviation industry, airlines are constantly seeking innovative ways to understand their passengers better and optimize their network planning, while airport aeronautical development teams are constantly seeking innovative ways to attract more airlines, expand to more destinations, and increase flight frequencies.

At VCA we have a proven track record of interacting with airlines and airports around the world on a daily basis. We have used our knowledge and expertise to create a comprehensive offer and taken an innovative approach to address the most relevant use cases. The following case studies illustrate how airlines can successfully partner with VCA to enhance their network planning and drive business growth.

Use Case	Airline Network Planning	Airport Aeronautical Business Development
Full O&D demand mapping	✓	✓
New routes evaluation	✓	✓
New operating base	✓	✓
Frequency increase	✓	✓
Hub connectivity optimization	✓	✓
Multi-brand capacity assignment (LCC vs. FSC)	✓	
Cabin configuration	✓	
Interline opportunities	✓	
Virtual multi-carrier hub		✓
New Air Service Agreements (ASA)	✓	✓
Impact of new routes to local economy		✓
Passenger profile vs. competitors	✓	✓

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Network planning teams need to adapt to the changing landscape in order to succeed

We have identified five key network planning learnings that we believe teams need to take into account.

LEARNING #1   Enrichment is needed

Today, more than ever before, current airline and airport data sets have limitations, which are:

1. The increased share of direct sales through airline websites

2. The growth of low-cost carriers' capacity share

3. The rise of passengers' savviness in combining multiple separate bookings to create their own itinerary.

LEARNING #2   End-to-end journey is key

Given the post-COVID resurgence of travel demand, it's essential that airlines prioritize their capacity recovery and (re-)launch new routes. To maintain and increase profitability, and attract carriers to operate new routes, and increase frequencies, airlines and airports need to understand the true end-to-end passengers O&D journey. This includes combining segments through multiple forms of transportation and one-way itineraries.

LEARNING #3   Knowing the passengers

Understanding passengers' profile, purchase and travel behaviors is extremely valuable, not only for marketing related purposes, but also for network planning and demand forecasting.

LEARNING #4   Integration is possible

Given the unrivalled power of VisaNet data in CEMEA and worldwide, VCA is the right partner to support airlines and airports to expand their business processes and create enriched, integrated data sets.
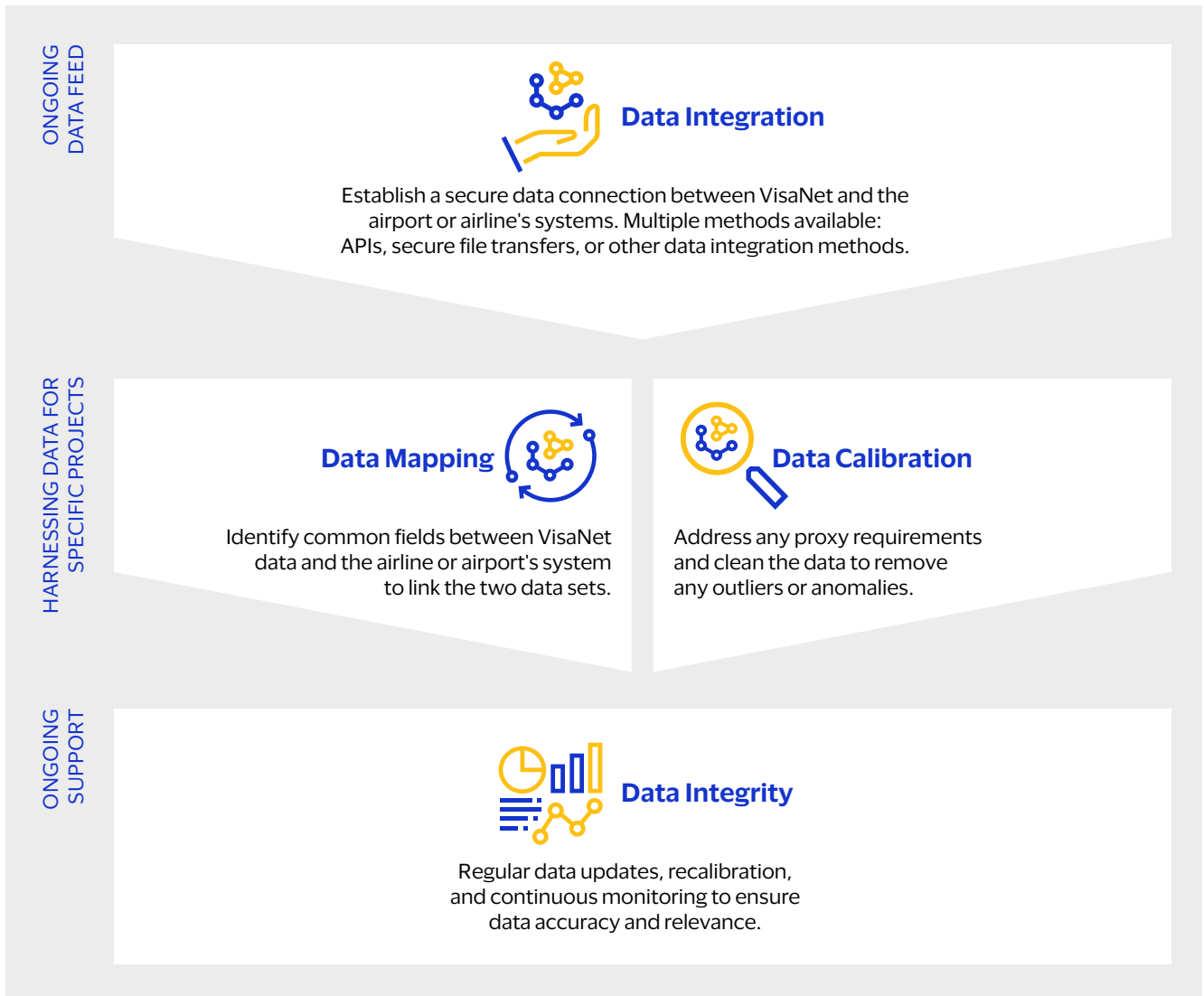
LEARNING #5   Competitive advantage

In today's market, the airlines that can adapt to meet the changing marketplace will acquire and maintain a significant competitive advantage versus "traditional" network planning carriers. Similarly, first mover airports will gain significant intelligence enabling them to outpace competitors in the same catchment areas and beyond.

Visa Consulting & Analytics can help you make better informed decisions

By integrating VisaNet data, airports and airlines can gain a more comprehensive understanding of their passengers, enabling them to make better informed, strategic decisions that enhance their services and drive growth. The detailed analysis of VisaNet data can reveal hidden insights and behaviors that would not ordinarily be identified. This deeper understanding of the customer enables improved customer profiling and segmentation which ultimately leads to more knowledgeable decision making.

VCA can support with the delivery of bespoke projects, address specific business challenges and use cases, or even establish a regular data feed from VisaNet to the airport or airline's systems through our Visa Managed Services (VMS) and Data Science teams.

ONGOING DATA FEED

Data Integration

Establish a secure data connection between VisaNet and the airport or airline's systems. Multiple methods available: APIs, secure file transfers, or other data integration methods.

HARNESSING DATA FOR SPECIFIC PROJECTS

Data Mapping

Identify common fields between VisaNet data and the airline or airport's system to link the two data sets.

Data Calibration

Address any proxy requirements and clean the data to remove any outliers or anomalies.

ONGOING SUPPORT

Data Integrity

Regular data updates, recalibration, and continuous monitoring to ensure data accuracy and relevance.

How Visa Consulting & Analytics can help

VCA has worked on a range of airlines, airports and travel industry projects, both within the CEMEA region and further afield. We can provide support across any of the use cases outlined in this paper and even develop bespoke ones to meet your specific needs. To find out more, get in touch with one of your local VCA representatives, or contact our subject matter experts directly (see opposite).

Alternatively, you can reach out to your Visa Account Executive, send an email to **VCA@Visa.com** or visit us at **Visa.com/VCA**.

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About Visa Consulting & Analytics

We are a global team of 1000+ payments consultants, data scientists and economists across six continents.

- Our consultants are experts in strategy, product, portfolio management, risk, digital and more with decades of experience in the payments industry.
- Our data scientists are experts in statistics, advanced analytics, and machine learning, with exclusive access to insights from VisaNet, one of the largest payment networks in the world.
- Our economists understand economic conditions impacting consumer spending and provide unique and timely insights into global spending trends.

The combination of our deep payments consulting expertise, our economic intelligence and our breadth of data allows us to identify actionable insights and recommendations that drive better business decisions.