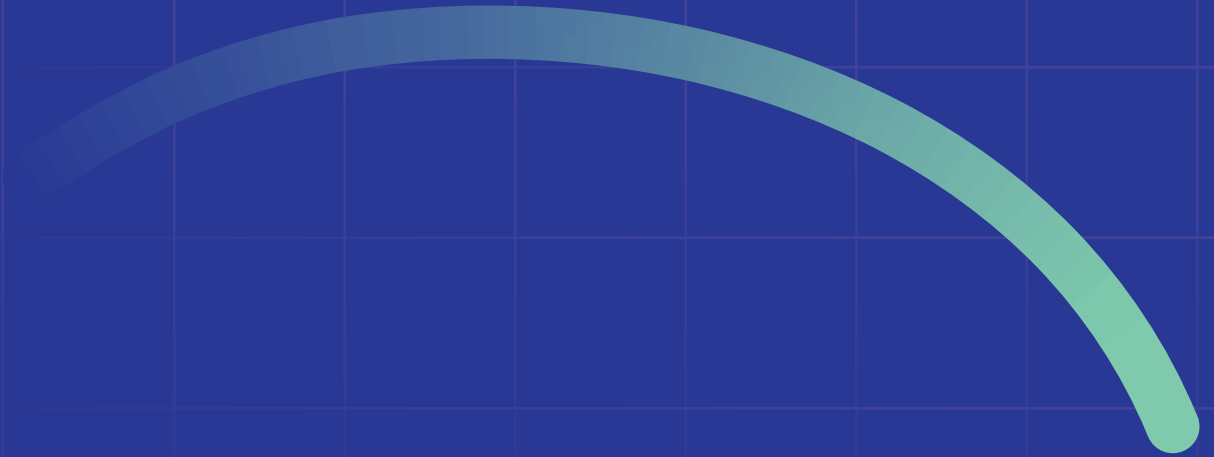
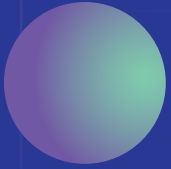




Engineering data-driven operations

Leverage your data to revolutionize
existing operational processes



Airlines and airports today produce a vast amount of data. This data flows in from all directions, be it passengers, flight schedules, or internal systems. A majority of it remains untapped and much of the critical information, that can be used to derive valuable insights, is lost in the data ocean. Also, airlines and airports, due to lack of resources or knowledge, are unable to tap the potential of this data.

At Nagarro, our aviation experts have designed smart solutions by harnessing cutting edge technologies that helps structure and channelize the data generated. The insights drawn can be used to completely transform the way airlines and airports operate, resulting in better accuracy, revenue, and efficiency.



Want to know more?

Read on to understand how you can reinvent your data journey.



Why do you need to harness your data?

Smart and intelligent data solutions help you:

- Enhance customer experiences throughout the journey
- Drive productivity across all the entire ecosystem
- Make meaningful predictions with accuracy
- Upscale your operations across the value chain
- Take quick and error-free complex business decisions
- Ensure better stakeholder collaboration

Six key elements to power data-driven operations



Customer genome

Deploying the right customer segmentation techniques for hyper-personalization, and real-time contextualization through 'aMerchandizer', an intelligent merchandizing engine



Sales & distribution

Upgrading eCommerce platforms with user-friendly, smart workflows powered by API Management for generating higher sales across the distribution channels



Digital workforce

Understanding workforce distribution, identifying personas, and blending the workforce with digital applications



Integrated airport operations

Building real-time operational insights for all airport processes across landside and airside, data sharing with all stakeholders, and managing airport facilities better



Decision support systems

Enabling quick decision-making by analyzing data sets across various sources to provide the best available options for tackling business problems



Smart data narrative

Summarizing huge volumes of data through BI reports/dashboards, self-service capabilities with descriptive, predictive, and prescriptive analysis



Customer genome

Decoding customer preferences through our aMerchandizer accelerator



What is aMerchandizer?

An intelligent merchandising engine, aMerchandizer is built on a customer genome platform along with data science technologies like AI/ML. aMerchandizer helps airlines in creating customer engaging experience.

By leveraging aMerchandizer, you can target the right customer segment with the right offers at the right time using the right channel with the best suited packages. The engine creates a knowledge graph for each persona to understand their affinities towards ancillaries and then evaluates the data with real-time context like load factors, routes, and flight duration. It also gives revenue managers a multi-dimensional insight on the sales activities across all channels.

The solution can be easily integrated with any PSS and RM systems and is scalable to any data and ancillary products.

Benefits of aMerchandizer:

- 1.** Knowledge graph-based customer segmentation
- 2.** Real-time contextualization based on the scoring mechanism
- 3.** Omnichannel experience for customers
- 4.** Real-time sales performance reports for revenue managers
- 5.** Highly scalable to any ancillary type and data context



Sales and distribution

Leveraging NDC and APIs to create next-gen airline distribution systems

Through our deep understanding of the aviation ecosystem, we help airlines transition from legacy distribution to the NDC world and build an API-based architecture.

New Distribution Capability (NDC)

The contemporary, feature-rich and personalized approach to create tailored offers, simplify operations, and increase flexibility.

Strategy, consulting and custom solutions

- Impact analysis of existing legacy systems and the corresponding requirement for integration streams
- System architecture consulting to ensure minimal impact on the ecosystem
- Rapid proof of concepts for custom solutions, as needed

Middleware development

- Schema transformation for consumer-facing applications
- NDC message orchestration across relevant systems
- Integration with legacy systems to ensure business continuity
- Data streaming and processing

API Management

Creates new opportunities for rapid innovation and third-party interaction and opens new revenue streams, while improving cost efficiency, agility, and time-to-market.

APIM strategy and APIM design & implementation

- API strategy development, matching the company's business vision
- APIM platform provider selection advisory
- Design, mock, discuss and validate APIs

What we offer

APIM operations

- API management platform operations, including automation
- Managed operations, including KPI reporting
- Scaling the adoption and usage of API management platform throughout the organization



Digital workforce

Ensuring lean and agile operations with automation and digital personas

We help build a blended digital workforce by defining digital personas and automating processes with selective human intervention across business functions.

Our digital workforce solutions:

Smart crew

Transforming manual cabin operations and empowering crew by digitizing processes

HuBot customer service

Bridging the gap between customers and service agents by adding digital overlay

Connected AME

Shifting towards a paperless & smart way of aircraft maintenance & engineering

Digital ramp-agent

Digitizing monitoring and recording activities for ramp staff via a cloud-based mobility solution

Our Connected Worker accelerator

Enables your global workforce to connect, share data, and collaborate seamlessly. The solution works both offline and online and uses assisted reality technology on devices such as smart glass, mobile, tablet, and HoloLens.

Key features:

- Easy access to data/data mobility for your operations
- Image and video capturing
- Digitized operational workflows
- Real-time data exchange (online mode)
- Hands-free operation
- Speech to text conversion



Integrated airport operations

Optimizing airport decision-making through our iADAP accelerator

What is iADAP?

An intelligent airport data and analytics platform, iADAP generates real-time operational insights (descriptive, diagnostic, predictive, and prescriptive) by synchronizing and optimizing various airport processes both at the landside and airside. This leads to easy information-sharing for all stakeholders, and facilitates collaborative decision-making.

iADAP utilizes data sets across various processes to build a smart narrative on major airport KPIs like wait times, throughputs, punctuality, and recovery times. Data from operational systems is analyzed in various ways to provide actionable insights for taking the right decisions to meet the KPIs.

The different processes across which iADAP can be implemented:



Planning



Check-In & Bag Drop



Security



Immigration



Gates & Stands



Runway



Baggage Reclaim



Maintenance



Decision support systems

Enabling intelligent decision-making with AI

What we offer?

With our smart algorithm-based models you can apply cognitive technologies on various data sets derived from different internal and external systems. The result? Smart narratives, patterns, and trends that help business users make decisions backed by strong inferences.

How do we do it?

Define the problem

Identify the data sources and data sets

Integrate information

Build intelligence

Design

Deliver

Where do we apply it?

1. Meal menu optimization

Optimize meal planning with AI-based catering solution that uses digital display to understand food preferences and provides automated inspection to help you optimize the menu.

2. Route profitability

Simulate, evaluate, and decide optimum pricing strategies based on thousands of user-configurable business rules and data sets.

3. Flight turnaround

Use the computer vision- and ML-based accelerator that automatically collects reliable turnaround time stamps and checks apron positions for each activity by combining real-time events with historical data.



Smart data narratives

Unlocking the power of real-time information through modern business intelligence



By leveraging AI, NLP, and data potentials, we are aiding airlines and airports to discover, interpret and conclude the information their data holds. Using Modern business intelligence (BI), we help prioritize self-service analytics and empower business users by extracting full value from data without any dependency.

What we offer?

With our smart algorithm-based models you can apply cognitive technologies on various data sets derived from different internal and external systems. The result? Smart narratives, patterns, and trends that help business users make decisions backed by strong inferences.

Data integration

Ingestion of data from disparate data sources and bringing it together in a centralized platform by building efficient and scalable data integration pipelines.

Data science & AI

AI-driven data engineering for generating a multidimensional view of your data that helps you generate actionable insights for real-time decision-making.

Data management

Building scalable data repositories by implementing architectural patterns like data mesh and data warehouse that are cost-optimized (on both cloud and on-premise environments).

Data analytics & visualization

Ready-to-use reports and dashboards that generate actionable insights from historical datasets as well as real-time streaming datasets with self-service capabilities.



Why Nagarro?

20+
Years of travel & aviation experience

500+
Engineers globally

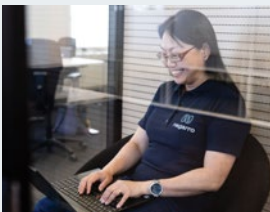
300+
Projects delivered

98.9%
Solutions offered match client's expectations



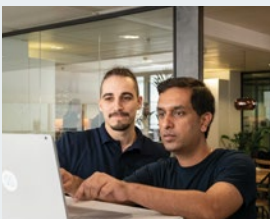
Deep industry expertise

From legacy modernization to enhanced passenger experience, we have vast experience in product-engineering in the airport technology landscape across distribution, service fulfilment, and IROPS handling.



Product engineering DNA

Our high customer satisfaction ratings stand testament to excellence at digital engineering and solving complex business challenges through agility and innovation.



Proven frameworks & accelerators

Our frameworks and accelerators are built keeping in mind the aviation industry needs and fit well into airports' IT ecosystem, making them easy to use across different business functions.



Thinking breakthroughs mindset

Expect us to go the extra-mile to ensure your vision is best manifested in the products and solutions we build—we are wired for design thinking to help our customers curate innovative solutions.



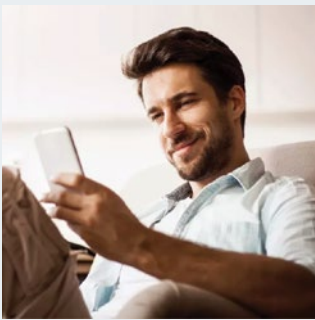
Success stories



Star Alliance

A mobile companion for Star Alliance customers

Star Alliance partnered with Nagarro to build an integrated mobile flight-and-fare search solution that supports the ability of customers to search flights, obtain pricing, make reservations and board planes across all 26 of their member airlines. A biometrics facial recognition system for different airport processes was also developed to be used on all participating airlines at airports worldwide.



Miles and More

A modernized app for enhanced user experience

Nagarro helped migrate the Miles & More mobile application to hybrid cross-platform technology on time and within the budget to create a transformative user experience for over 35 million end customers. With the new Miles & More loyalty program app built using Flutter technology, users were able to earn and redeem miles seamlessly across iOS and Android platforms.



Vienna International Airport (VIE)

Migrating core applications

Nagarro designed a true end-to-end, state-of-the-art automation testing framework that allowed VIE to easily upgrade their applications and switch interfaces targeted by the test and change automation tools. This has provided a very early warning system for quality issues and bugs, reduced the number of test cases by 87% and made the test execution cycles 60% faster.



Flyr

A 100% cloud-native digital-first airline

Nagarro's airline consultants helped Flyr identify the right tech products and evaluated the core commercial airline systems, such as revenue management, reservations, and departure control to create a 100% pure IATA ONE Order-based airline within just six months. Nagarro experts also contributed to quality assurance/testing and systems maintenance/operational support.

About Nagarro

We are shaping the company of tomorrow

Nagarro is a global digital engineering leader with a full-service offering, including digital product engineering, digital commerce, customer experience, AI and ML-based solutions, and CRM, SAP, CMS, ERP, and Salesforce capabilities. We help our clients become innovative, digital-first companies through our entrepreneurial and agile mindset, and we deliver on our promise of thinking breakthroughs.

We have a broad and long-standing international customer base, primarily in Europe and North America. This includes many global blue-chip companies, key airports, leading independent software vendors (ISVs), other market and industry leaders, and public sector clients.

Today, we are over 18,000 experts across 33 countries, forming a Nation of Nagarrians, ready to help our customers succeed.

Connect with our aviation experts at
tnl@nagarro.com



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