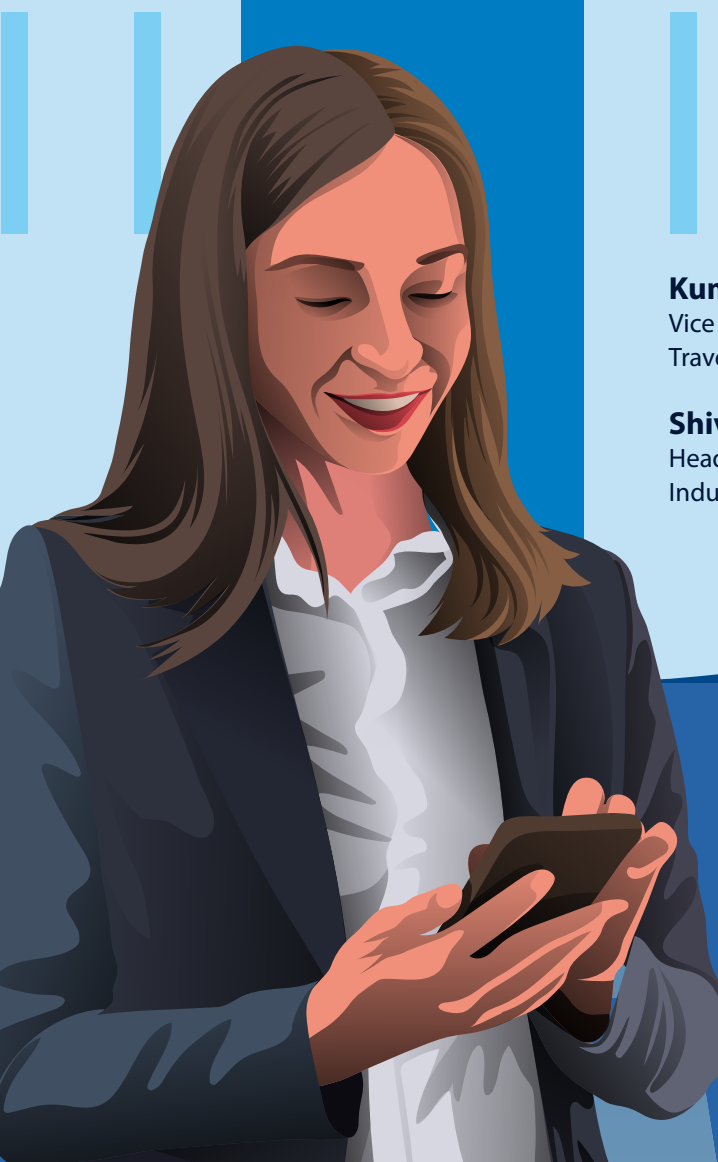




INFOSYS COBALT AIRLINE CLOUD

For Connected Experiences, Efficient Operations and Accelerated Sustainability



Kumar Paramasivam

Vice President and Portfolio Head,
Travel and Hospitality and Professional Services

Shivani Sharma

Head of Cloud Economy,
Industry Cloud Services, Utilities, Resources and Energy

The aviation sector is at a stage of rapid innovation and has seen far-reaching technological advancements in the last few years. Digital technologies are making passenger journeys frictionless and improving experiences and efficiency for both passengers and airline crew alike.

The advent of the digital era has led to an influx of the petabytes of data gathered via sensors, devices, and platforms, the analysis of which helps us identify patterns and draw meaningful insights. Insights that can help airlines answer a few pertinent questions:



How can travel be more personalized?



How can disruptions, delays, and schedule changes be handled during the busy season without impacting customer experiences?



How can network schedules be dynamically adjusted to track changing travel patterns?



How can decarbonization commitments of Net Zero Emissions by 2050 be met?



How can airlines keep up with the increased demand for cargo post the pandemic?

Amidst the growing clamor for sustained benefits, the airline industry continues to seek new ways to improve business performance goals. Running efficient operations when dealing with priorities that have so many moving parts requires agility – agile business teams working with agile systems that can ensure consistent performance. Cloud is a business technology that offers airlines an integrated ecosystem, adding agility, elasticity, efficiency, and resilience to their business.

By leveraging its experience and expertise, Infosys has built the Infosys Cobalt Airline Cloud (ICAC) to provide the industry with a model office for airline business on the cloud.

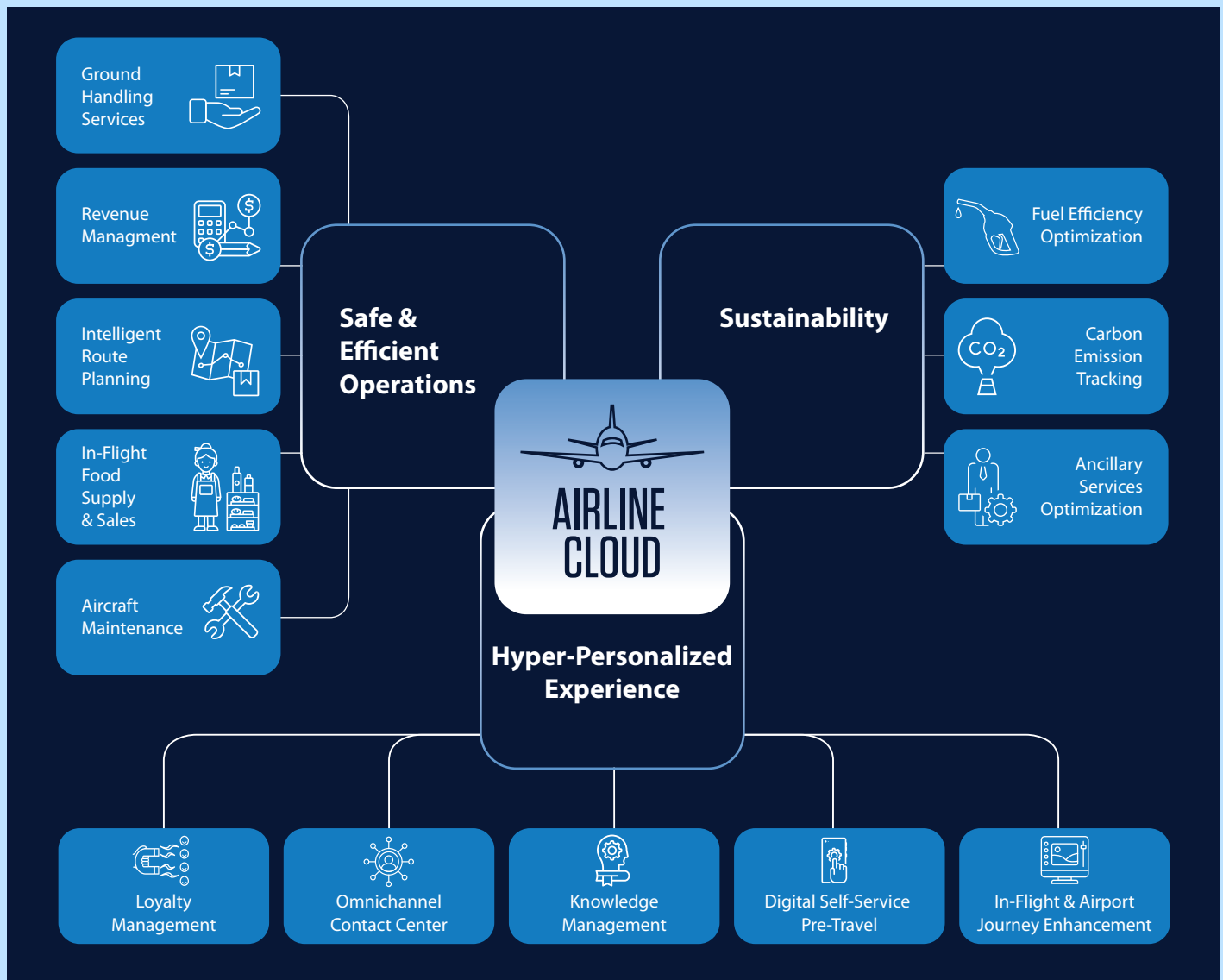


Possibilities Take Flight

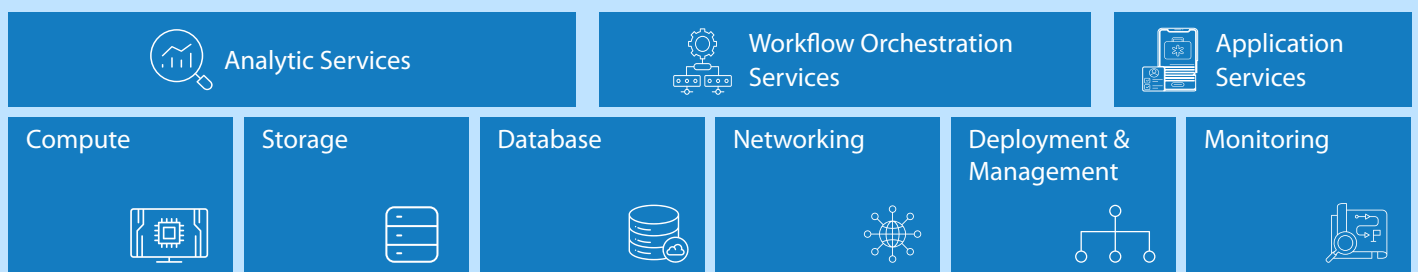
ICAC is unifying the digital fabric designed to meet airline business needs that remain unmet by standard cloud capabilities. Built with an objective to help accelerate cloud transformation, the suite consists of cloud-native business solutions that cater to different users in the airline industry namely – authorities, passengers, and

airline and airport staff. The solutions that are part of ICAC will offer airlines:

- A frictionless travel experience for passengers
- Safe, reliable, and secure flight, cargo and ground operations
- The ability to accelerate decarbonization initiatives



CLOUD SERVICES



The scalable systems and cognitive backbone of the ICAC platforms facilitate seamless onboarding of cloud providers, open-source components, off-the-shelf third-party products, and data management tools. It allows airlines to adopt innovative use cases, add new service domains, and incorporate advanced features to realize tangible benefits such as personalized marketing, accurate baggage sorting, and fuel efficiency.

The Infosys Cobalt Airline Cloud automates processes and provides actionable insights to manage tasks with zero or minimal human intervention. It recreates scenarios, enabling operations control teams at airports and airlines to make informed decisions.

Further, cloud-based sales and distribution grow ancillary revenue streams via omnichannel retailing and partner integration. In addition, AI-based sales and distribution dynamic pricing, mitigate risks due to unsold or oversold inventory. Most importantly, the integration of customer touchpoints across the journey and ML-driven recommendations ensure targeted on-air and non-air offers to maximize revenue per passenger.



Authorities



Passengers



Ground staff & Agents



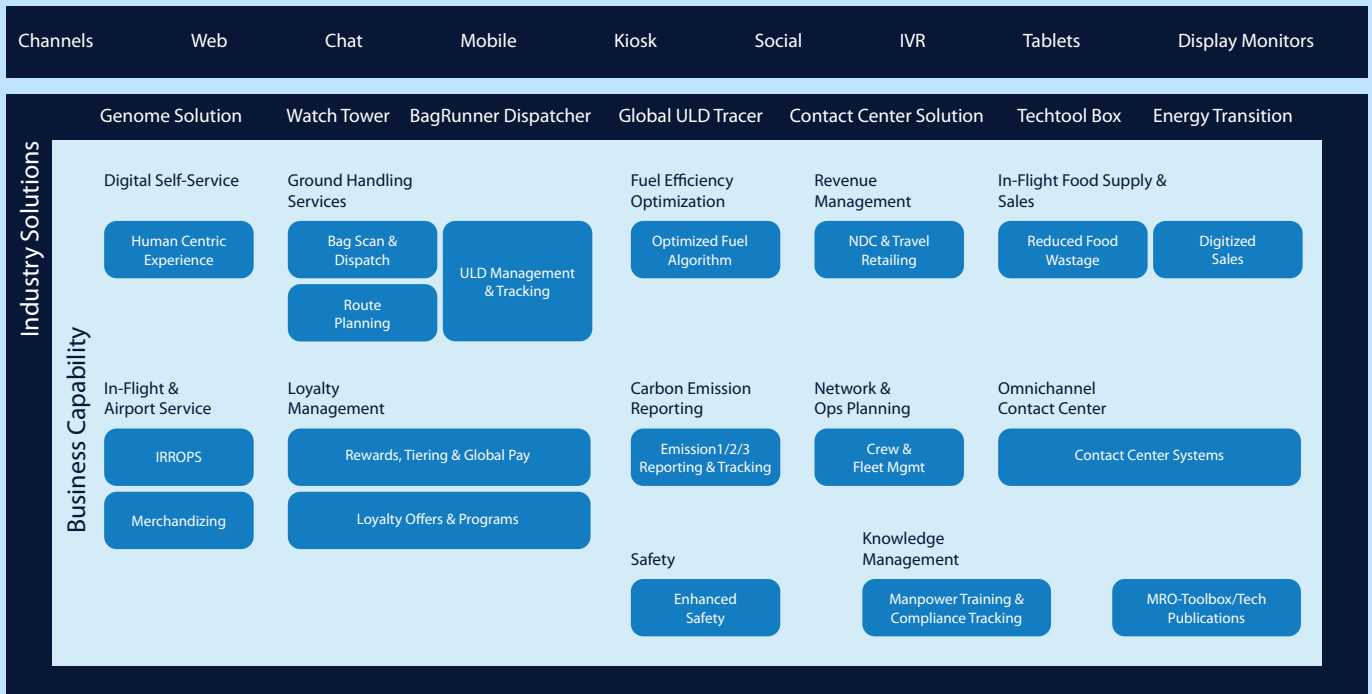
Airline & Partner Airlines (mgmt, crew, sales, etc.)



Ancillary Services Suppliers



Airport



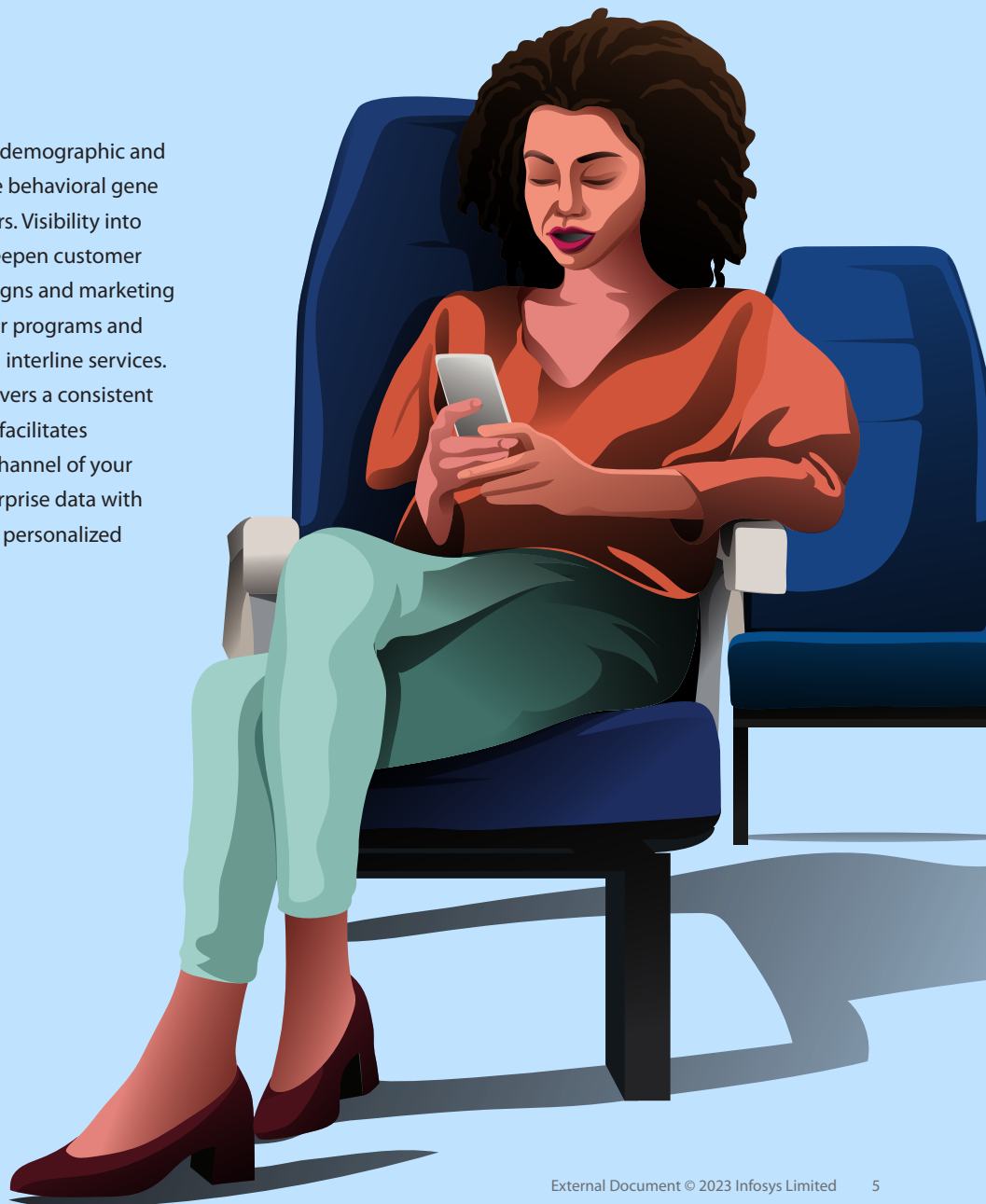
ICAC is built on composable architecture principles, providing business capabilities such as Unit Load Device (ULD) management, smart monitoring alleviating security concerns, personalized human-centric experiences and seamless loyalty management, among others. Infosys' serverless platforms reduce the time to build by providing:

- Modernization services such as APIs and re-usable script templates, allowing re-platforming of existing legacy workloads onto a cloud platform of choice, breaking monolithic applications into microservices and ready-to-consume terraform scripts for ICAC and automating the tasks

- Inbuilt Airline Solutions developed utilizing file storage, Aurora and S3 for Datastores, Web App, REST APIs for application services, secrets manager, data encryption for IAM, SageMaker for ML Models such as intrusion detection, fire and smoke detection, among other components
- Built-in compliant APIs to connect with partner solutions such as Datalex, Amadeus, and others

Genome Solution

The Infosys genome-based solution leverages demographic and transactional data stored in the cloud to create behavioral gene blocks and distill personal attributes of travelers. Visibility into personal attributes empower enterprises to deepen customer engagement. It also supports targeted campaigns and marketing plans to grow the membership of frequent-flier programs and maximize revenue from ancillary products and interline services. Infosys Genome Solution delivers a consistent passenger experience across touchpoints and facilitates interaction via the preferred communication channel of your customers. Further, it combines historical enterprise data with insights from behavioral gene blocks to create personalized notifications and offers.



Global ULD Tracer

The Infosys asset tracking solution provides real-time visibility into the location, status, condition, and movement of Unit Load Devices (ULDs), including food trolleys. It can be configured for RFID, Bluetooth and camera systems installed at checkpoints in unloading and loading stands as well as ramps, gates, and pathways. The Infosys Global ULD Tracer reads the ULD ID tag for passenger baggage and cargo, and automatically updates asset management systems, which drives prompt maintenance, reduces asset loss, and improves ULD utilization. Further, the automated solution forecasts the ETA of ULDs for each flight departure, helping airlines avoid delays due to unavailable and misrouted ULDs.



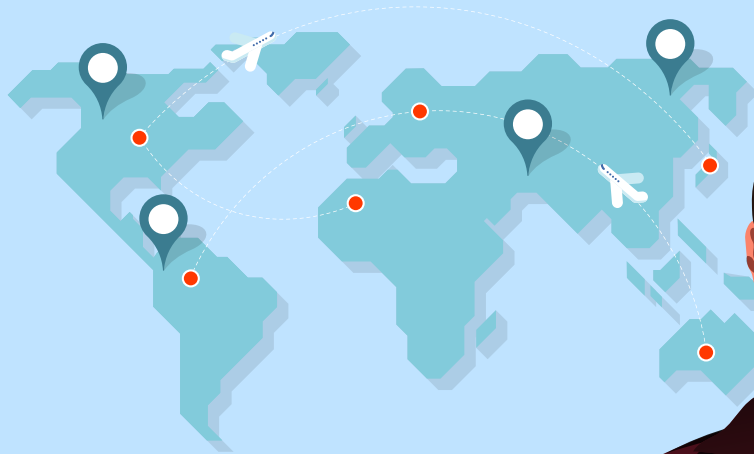
WatchTower

Our low-code / no-code solution is an algorithms marketplace for airport safety and security. The highly configurable AI workflows and multiple data ingestion modes of the solution support numerous use cases, including passenger queue monitoring, fire and smoke detection, wildlife attack and intrusion prevention, vegetation management, pipeline fault discovery, etc. Infosys WatchTower undertakes continuous monitoring, real-time threat assessment, and risk mitigation. It uses inputs from thermal cameras, LiDAR and sonar systems, drones, and sensors for surveillance and incident management. Notably, it incorporates knowledge inference and predictive analytics to enable data-driven decisions for mitigating security risks at airlines and airports.



BagRunner Dispatcher

Our baggage tracking and handling solution automatically assigns bags for transfer from arrival and departure terminals to the nearest available dispatch runners. It reassigns bag delivery to the next available runner when an assigned dispatcher does not pick it up within the predefined time frame. The Infosys BagRunner Dispatcher sends push notifications and alert messages to loaders and runners, and tracks each bag transfer assignment in real time. This ensures accurate and efficient handling at busy airports with narrow margins for baggage errors. The solution offers intuitive dashboards that enable supervisors to track every stage of the bag handling process, prioritize baggage for loading, and monitor the performance of ramp personnel.



Integrated NetZero Platform

Infosys Integrated NetZero Platform for airlines addresses all the major impact elements ranging from sustainable waste management to reducing energy consumption. The solution covers smart operations, smart routes, smart spaces, energy efficiency management, emission management and sustainable transport.

The aviation industry can usher in a new era of growth, operational efficiency and delightful travel experiences by leveraging the multiplier effect of cloud-hosted data systems. The Infosys Cobalt Airline Cloud facilitates convenience and seamless air travel with cloud-native smart technology solutions and data-driven strategies.

For more details, write to us at TravelPractice@infosys.com

For more information, contact askus@infosys.com



© 2023 Infosys Limited, Bengaluru, India. All Rights Reserved. Infosys believes the information in this document is accurate as of its publication date; such information is subject to change without notice. Infosys acknowledges the proprietary rights of other companies to the trademarks, product names and such other intellectual property rights mentioned in this document. Except as expressly permitted, neither this documentation nor any part of it may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, printing, photocopying, recording or otherwise, without the prior permission of Infosys Limited and/ or any named intellectual property rights holders under this document.