

TCS Aviana™

Reimagining Airline Operations | Enriching Customer Experience |
Enabling Digital Aviation Ecosystem



The challenges in airline operations are broad and deep, involving a complex set of time-critical processes, spanning ground and flight operations, above and below the wing tasks, flight and cabin crew operations and customer experience management. In addition, the industry is subject to a lot of uncertainties caused by external factors making it vulnerable to a multitude of elements such as flights getting rescheduled or cancelled causing financial and brand loss besides impacting customer experience. As operating models, business priorities and traveler expectations are rapidly changing, airlines are well positioned to play a pivotal role in shaping nimble ecosystems built on improved collaboration and interoperability.

TCS Aviana™, an AI/ML based solution suite, enables such transformations with comprehensive operations visibility, digital collaboration and augmented decisions through connected insights and intelligence.

Overview

The data and effort intensive operations of airline industry are highly dependent on close collaborations between various departments. Although some of these collaborations are automated, many others are still dependent on manual intervention and traditional mechanisms like communicating through walkie-talkies. This is because airline operations are riddled with legacy systems residing in silos and isolated single function processes which stand in the way of integration and highly efficient, real-time operations. Even the Integrated Operations Command Center (IOCC) which brings multidisciplinary teams together lacks a single, unified view of global network operations.

TCS Aviana™ is a unified, autonomous and digital airline operation solution that can help in mitigating operational inefficiencies, cumbersome information access/ exchange mechanisms, suboptimal decisions and their consequences – cost, disruption and customer dissatisfaction.

The foundation of TCS Aviana™ is a cloud ready New Core platform, a digital spine with high speed data processing, messaging and intelligence capabilities. It provides users with an unified, connected view of airline operations enabling early visibility of potential operational deviations. It empowers users by predicting critical elements such as estimated flight arrival, departure and potential misconnects.

Our Solution

TCS Aviana™ solution suite powered by the New Core platform comprises of the following key offerings:

- **Connected Journey Suite:** This suite enables airlines to enrich customer experience across passenger touch points such as airport, lounge and onboard. It empowers the frontline staff with passengers' travel history, preference and service requests enabling personalized experiences as well as proactively correct service deviations.
- **Smart Turn:** This solution leverages the Internet of Things (IoT), machine vision, and AI to provide full visibility of aircraft turn around operations, improving turnaround efficiency and on time departures.
- **Smart Maintenance:** This solution enables early visibility of maintenance operations, digital collaboration and prognostic capabilities to minimize Aircraft On Ground (AOG) incidents.
- **Resource Uberization:** This offering reimagines the management of airline resources. It leverages IoT and machine intelligence to optimize planning based on projected demand, and dynamically allocates resources based on factors such as best fit and proximity.
- **IOCC Discovery and Resolve:** This offering reimagines the airline network operations command center as a fully integrated and unified digital space. It gives a connected view of flight, ground and engineering operations for improved efficiencies and travel experience.



Benefits

TCS Aviana™ helps improve operational efficiency and enhance customer experience by improving operational metrics and empowers airline staff to make better decisions. The key outcomes include:

- **Responsive, rather than reactive, airline operations:** Timely alerts and contextualized information help respond to operational events faster and more effectively.
- **Lower employee stress and frustration:** Improved collaboration and productivity by providing information that was unavailable earlier.
- **Faster recovery:** In times of disruption, airlines are able to restore normal operations faster, thereby saving cost and minimizing impact on experience.
- **Improved On-time performance:** Reduction in boarding and turn around delays, better decisions thanks to real-time situational awareness, comprehensive visibility and enhanced collaboration.

The TCS Advantage

- **Accelerate the shift to nimble and resilient operations :** Our solution is playing a key role in reimagining operations, workplace and customer experience across multiple travel brands. Solution is underpinned by ethnographic research, human-centric design and field validation.
- **Seamless experience & accountability:** Strategic partnership covering wider range of services backed up by 25+ years of airline industry experience across 35 major airlines.
- **Best of breed ecosystem play enabling continuous innovation:** Leverages TCS' partnership with leading design studios, academia, start-up companies, and established technology players leading to cutting edge solutions.

Awards & Recognition



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