The Digital first world
A paradigm business landscape shift is distinctly witnessed due to...

Shrinking profit pools, increased competition, savvy consumers and rapidly evolving technologies.

- New channels / changing customer behaviours
- Changing face of Loyalty / Increased competition
- Technology driven innovation / improvements

- Personalized travel experience the new norm
- Less loyalty, more cherry-picking
- Assessment through digital cues
- Influencing preferences through offers
- Decline in institutional trust
- Non-traditional alternatives
- Tech giants posing threat by leveraging data
- Smaller, nimbler non traditional players offering focussed products and services

- Smart operations using real-time data
- Platform-based business models
- Seamless data transfer and data modelling
- Sustainable industry footprints using innovations
Aviation industry is also witnessing impact of digital

Key trends in aviation industry

- Growth in the aircraft leasing market
- Rising focus on millennial consumers
- Increase in privatizing the airports
- Rise of Digital Customer Journey
- Increasing market consolidation
- Increasing Passenger Traffic & Airfreight Volume
- Increasing focus on low-cost long-haul airlines
- Ancillary Revenue options gaining Traction
- Shift from condition-based maintenance to predictive and prescriptive maintenance

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Drivers of disruption for the Aviation ecosystem

**CONNECTIVITY**
Connected ecosystem affecting the bottom line – Seamless in-flight/on ground experience, safety factors, and operational efficiency.

**SUSTAINABILITY**
Sustainable footprints making air travel more cleaner, quieter and fuel-efficient minimizing environmental impacts from air travel.

**TECHNOLOGY**
Disruptive technologies are undermining traditional company’s business model. Digital disruption will displace approximately 40% of incumbent companies.

**DIGITALIZATION**
Digitalization is changing aviation industry and changes start with companies being more willing to partner, build systems & processes.

**EMERGING COMPETITORS**
Tech giants leveraging customer data are rising as new competitors.

**PARTNERSHIPS**
Partnerships with third party service providers in linking airline, airport and entire travel journey.
88% of airline executives say personalization for customers will matter by 2021.

26% or more of leisure passengers and one in five business passengers will be “mobile only” by 2021.

45% of bookings are expected through direct digital channels of airlines by 2021.

$305 billion of value for the industry through increased profitability created by digitization.

$700 billion worth benefits for customers and wider society through a reduced environmental footprint, improved safety and savings for consumers created through digitization.

Source:
World economic forum
The future of airline distribution, IATA
Technology is creating newer opportunities in Airline sector

- **Wayfinding tools**
  Augmented reality technology enabled wayfinding tools guiding passengers through terminals.

- **Social platforms**
  Social platforms enabling airlines to create brand equity through innovative campaigns and also understand customer’s perspective.

- **Chatbot Assistance**
  Chatbots providing information and assistance related to passenger basic details, flights, bookings and updates in bookings etc.

- **Baggage - Digital luggage tag**
  Electronic tag that enables integrated mobility solution for luggage which will help in real-time accurate baggage tracking.

---

- **Growing demand for travel**
  Is the forecast share of global airline travel that emerging markets will account for by 2034.

  - 70%

- **Rise of digital consumer**
  Of airline travelers with an online presence in 2014, compared to a global average of 6.5% for other industries.

  - 37%

- **Dominance of digital platforms**
  Proportion of large enterprises creating and/or partnering with industry platforms in 2018.

  - 50%

- **Rise in Intelligent automation**
  Approximate number of connected devices by 2020 – equivalent to 6.6 per person.

  - 50 billion

Source: World economic forum
Digital Transformation
Digital themes and initiatives in aviation and travel industry

The industry has been at the forefront of digital disruption in recent years, changing the way people travel. However, the sector should brace itself for another wave of digital transformation.

**Living Travel Experience**

Travelers will experience seamless journeys tailored to their habits and preferences, and travel will blend seamlessly with other everyday activities. Important initiatives are 
- Travel Centricity
- Seamless Customer Journey
- End-to-End Propositions

**Enabling Travel Ecosystem**

Digital platforms enabling ecosystem alliances will continue to emerge, as asset-and information-sharing become increasingly important from a B2B perspective. Key initiatives are
- Ecosystem Convergence
- Battle for Customer Mindshare
- Diffusion of Ownership

**Digital Enterprise**

Innovations such as 3D printing, artificial intelligence, IoT, virtual reality and digital platforms will transform operations and the workforce. Key initiatives include
- Smart Manufacturing
- Intelligent Assets
- Next Generation Workforce

**Safety and Security**

As identity management transitions to digital, a collaborative effort to boost cybersecurity and protect traveller data privacy will be crucial to maintain customer trust and public safety. Major initiatives are
- Data Dilemma
- Modern Security Environment
- Ubiquitous Tourist Safety
Airlines across the globe are now walking the Digital mile….

For airlines, more relevant recommendations before, during and after flights are expected to expand ancillary revenue per passenger by 20% in 2025.

Finnair chatbots are expected to respond in less than 10 seconds and provide a resolution rate of 70% across all chats.

A series of customer service initiatives launched to enhance brand reputation by Ryanair has reflected traffic growth by 50%.

- Scanning customer boarding passes and guiding through gates
- Understanding group behavior and proactive response to situations.

Spencer – the Robot Guide for Passengers Making Flight Connections

- Improving the Travel Experience through Personalization
- Providing customers seamless, hassle-free experience across locating programs.
- Allowing airlines high brand value, high margins and low costs.
- High security enabling Information sharing across only pre-approved entities.

- Qantas has created a data hub center on customer preferences and behaviors to improve customer experience and loyalty.
- Qantas also has a smartphone application with a personalized interface to streamline the day-of-travel experience for customers.

In-flight entertainment systems are used by airlines such as Air France, KLM, Virgin Atlantic and Finnair which allow passengers to determine estimated time of arrival to airport.

- Integrated partnered transportation booking services.

“AirCraft to door” ancillary revenue opportunities

- KrisFlyer Block chain based Loyalty Ecosystem

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Digital Transformation – The Connected Enterprise
From experience to operations, emphasizing the client need to connect

Digital has shifted from a focus on the front to the whole value chain and execution

1st transformation wave: Digital Engagement
- Digital customer experience
- Activity was centered on front office and customer experience
- Organizations pursued digital opportunities through strategic acquisitions (e.g., start ups)
- Startups entered the market & played a big role

2nd transformation wave: Digital Operations
- Digital marketing
- Mobile
- A digital focus on just the front office will not provide sustainable competitive advantage
- Organizations focus on restructuring operations beyond customer-facing functions to enable enterprise-wide digital transformation
- Organizations spend more on digitizing operations in the middle and back office

Next wave: Connected Execution
- Omni-Business
- Enterprise digital transformation
- Digital supply chain
- Digital business strategy
- Streamline back office
- Disruptive business models
- KPMG Connected Enterprise

2019+
- Brands will build holistic customer experiences that transcend touch points.
- Digital enterprises will accelerate work to break down their silos between customers’ digital and offline engagement.
- They will also break down the silos between functions and create a Connected Enterprise
Discover the needs of your customers and markets

Define a winning business model for the digital age

Design your business from the outside-in

Develop your future workforce and intelligent digital platforms

Deliver end to end transformational change
The Connected Enterprise Model – An approach to Digitally transform

Connected Enterprise is KPMG Advisory’s digital transformation proposition. It enables businesses to better connect with customers, employees, suppliers and partners to drive profitable growth in the digital age.

**Insight led**

- **Discover**: Market Data - Customer Data – Employee Data – Operational Data

**Innovative**

- **Define**: Business Models – Economic Models – Products, Prices and Channels

**Designed**

- **Design**: CX Design – Service Design – UX Design – Interaction Design

**Responsive**

- **Deliver**: Supply Chain – Operations - Manufacturing

**Digitally Enabled**

- **Develop**: Mobile - Cloud Apps - AI – API Interfaces– DevOps - Secure

**Empowered**

- **Develop**: Empowered Colleagues– Agile Culture – Fluid Workforce
Eight capabilities are transformed into sources of competitive advantage

**Insight-led**: The ability to enable, activate and harness data, analytics and actionable insights to develop a real-time, multi-dimensional view of the customer to inform a customer strategy and personalization approach.

**Innovative**: The ability to develop innovative business models and compelling customer value propositions including pricing, products and services to target the most attractive customer segments to drive profitable growth.

**Intentional**: The ability to design and orchestrate a seamless and personal customer, employee and partner experience that incorporates CX economics, underpins the customer value proposition and nurtures loyalty across all touch points.

**Integrated**: The ability to interact and transact with prospects and customers across marketing, sales and service domains and channels in a trusted, personalized and integrated manner enabling a seamless experience.

**Responsive**: The ability for the organisation to effectively execute on the customer strategy and brand promise in an agile, consistent and operationally efficient manner underpinned by advanced analytics.

**Empowered**: The ability to create a customer centric organization and culture which is supported by ongoing skills development and a nimble, empowered workforce with aligned performance management.

**Digitally-enabled**: The ability to architect and engineer intelligent digital services, technologies and platforms to deliver on the customer promise in an agile, cost effective and scalable manner while maintaining security.

**Extended**: The ability to effectively identify, integrate and manage third-parties to increase speed to market, reduce costs, mitigate risks and supplement capability gaps in delivering the customer promise.
### 8 Critical Capabilities

- **Insight-driven strategies and actions**
- **Innovative products and services**
- **Experience-centricity by design**
- **Seamless interactions and commerce**
- **Responsive operations and supply chain**
- **Aligned and empowered workforce**
- **Digitally enabled technology architecture**
- **Integrated partner and alliance ecosystem**

### 5 Sub-Capability per Capability

<table>
<thead>
<tr>
<th>8 Critical Capabilities</th>
<th>5 Sub-Capability per Capability</th>
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<tr>
<td><strong>Data Collection &amp; Enrichment (DCE)</strong></td>
<td><strong>Data-Driven Decisions (DDD)</strong></td>
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<tr>
<td><strong>Innovation (I)</strong></td>
<td><strong>Product, Pricing &amp; Promotion Strategy (PPPS)</strong></td>
</tr>
<tr>
<td><strong>Experience Strategy (ES)</strong></td>
<td><strong>Experience Design &amp; Delivery (EDD)</strong></td>
</tr>
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<td><strong>Customer Journey &amp; CRM (CJC)</strong></td>
<td><strong>Customer Communication &amp; Content Mgmt. (CCCM)</strong></td>
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<tr>
<td><strong>Asset Strategy &amp; Operations (ASO)</strong></td>
<td><strong>Operational Excellence (OE)</strong></td>
</tr>
<tr>
<td><strong>Organization Design &amp; Governance (ODG)</strong></td>
<td><strong>Culture (CU)</strong></td>
</tr>
<tr>
<td><strong>Flexibility &amp; Scalability (FS)</strong></td>
<td><strong>Enterprise Architecture (EA)</strong></td>
</tr>
<tr>
<td><strong>Partner Strategy &amp; Design (PSD)</strong></td>
<td><strong>Digital Disrupters (DD)</strong></td>
</tr>
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</table>

A connected maturity model approach helps assess capabilities across the enterprise.
The Digital Journey
We help organizations generate value from Digital by prioritizing speed in the design and deployment of ideas, de-risking implementation through our ecosystem of experts, and enabling focus through ‘deal-speed’ financial rigor.

Success factors

- Focus on value creation in alignment with corporate strategic goals
- Transforming the business is a balancing act between ‘what’, ‘why’ and ‘how’
- Digital Leadership and Culture is an integral part of the transformation
- Balance varying perspectives: a clear picture of the future industry and a solid starting point
- We strongly believe in working collaboratively with a structured but agile approach
We assist in building your capability to help on this transformative journey...

**Customer Experience**
We bring intelligent, tech-enabled customer experience insights, design and analysis capability to reimagine your customer experience and unlock potential revenue.

**Economics**
We understand where to invest to drive profitable customer experiences, and help you model the financial impact of design decisions.

**Transformation**
We believe that great consultants are those that inject new skills and capability. We build the CX and transformation capability of our clients - leaving you set up for long term success.

---

**Vision & Strategy**

**Insights & Excellence**

**Intelligent Journey Mapping**

**Market Sizing and Prioritization**

**360° Experience Design & Innovation**

**Roadmap & Transformation**

**Implementation**

**Measurement & Monitoring**
More than 30% of organizations have an enterprise-wide digital strategy and accounts for a significant spend within IT Strategy. We help the CXO community in understanding future technology requirements, and defining and delivering necessary changes required to make IT organizations digital ready:

Digital Transformation Focus Areas

1. **Digital Maturity Assessment**
   - KPMG’s maturity assessment helps organizations determine digital maturity, identify digital opportunities and align their digital ambition with tech strategy and roadmap.

2. **Shape Digital Strategy**
   - Set vision & strategy for emerging tech, ideate & assess opportunities in alignment with business objectives.
   - Design digital target operating model, digital sourcing strategy and governance structure.

3. **Enable Digital Transformation**
   - Architect & design solutions for conventional and digital initiatives.
   - Devise tech architecture considering new age channels and platform integrations.

4. **Embed Digital Capabilities**
   - Build tech capabilities, services & processes for digital transformation.
   - Incubate agile culture and design IT for the maturing digital world.

Digital Transformation Focus Areas:

- **Ecosystem**
  - Customers
  - Employees
  - Suppliers & Partners
  - Regulators
  - Communities

- **Business Functions**
  - Finance
  - Human Resources
  - Operations
  - Supply Chain Management
  - Sales & Marketing
  - Legal & Compliance

- **People and Organization**
  - Digital Organization
  - Digital and Agile Culture
  - Digital Skills
  - Governance Structure

- **New Digital Growth**
  - New Age Channels
  - New Markets
  - Platforms Integration
  - Innovative Products

Value Driven Program Management Office

Process Digitization

Change Management

Ideation and Prototyping
### Using our Digital Maturity Assessment Model to assess opportunities

<table>
<thead>
<tr>
<th>Clusters</th>
<th>Dimensions</th>
<th>Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Maturity Assessment</td>
<td>Strategy</td>
<td>The extent that the organization has identified a <strong>vision, goals, opportunities and initiatives</strong> to maximize business benefits of Digital initiatives to the business.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Vision &amp; Strategic Planning</strong></td>
</tr>
<tr>
<td></td>
<td>Customer</td>
<td>The extent with which the organization effectively engages with and manages their customer <strong>interactions and relationships</strong> through Digital channels and media.</td>
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<tr>
<td></td>
<td></td>
<td><strong>Engaging Customers</strong>&lt;br&gt;<strong>Managing Customers</strong></td>
</tr>
<tr>
<td></td>
<td>Process</td>
<td>The extent to which the organization puts <strong>structure and governance</strong> around Digital activity, while also using Digital to drive efficiencies.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Governance &amp; Management</strong>&lt;br&gt;<strong>(BAU &amp; Change)</strong>&lt;br&gt;<strong>Operational Effectiveness</strong></td>
</tr>
<tr>
<td></td>
<td>Organization</td>
<td>The extent to which the organization has the right Digital <strong>leadership, structure, employee engagement</strong> in place to ensure Digital is embedded into the business.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>People &amp; Capabilities</strong>&lt;br&gt;<strong>Digital Structure</strong></td>
</tr>
<tr>
<td></td>
<td>Enablers</td>
<td>The extent of capability across <strong>Technology, Digital Security and Data &amp; Analytics</strong> to enable Digital to support and drive the overall business strategy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Digital Security</strong>&lt;br&gt;<strong>Technology</strong>&lt;br&gt;<strong>Data &amp; Analytics</strong></td>
</tr>
</tbody>
</table>
.. and our Digital Architecture model to define Target Digital Operating Model.

**Business Architecture**

- Core Functions
- Support Functions

**Application Architecture**

- Enterprise Operations Applications
- Enterprise Technology Applications
- Customer Facing Applications

**Things**
- Operating System
- Wireless Protocols
- Modules
- Analogue Signal Chain
- Power Management
- Sensing & Sensors
- MCU/CPU
- Connectivity
- Passives
- Connectors
- Semi Conductors
- API Management
- Blockchain Platform

**Network**
- Operating System
- Wireless Protocols
- Security
- Gateway
- Modules

**Cloud**
- Analytics
- Predictive Maintenance
- Operating System
- Security
- Data Centre
- Storage

**IT Governance**
- Repository Management
- Business Activity Monitoring
- System Management
- Backup & Recovery
- SOA Governance
- Service Policy
- Service Repository
- Service Registry

**Enhanced Applications**

- New Business Model
- Customer Experience
- Financial Performance
- Operations & Security
- IT Economics

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Thank you
Appendix
In order to truly transform, it is necessary to think big and holistically.

![Diagram showing the impact of digital transformation and the score of digital adaption for organizations.](https://via.placeholder.com/150)

- **Pervasive**
  - Digitalization
  - Organizational change
  - Customer centric business
  - Digital transformation

- **Limited**
  - Digitization
  - Digitizing information
  - Automated processes
  - Operational efficiency

- **Score of digital adaption for organization**
  - Low
  - Medium
  - High

- **Impact of digital transformation**
  - Increased revenue
  - Agility
  - Acquiring skills
  - Reassessed value proposition
  - Adapting new technologies
Digital Adoption Maturity across Sectors
Typical Digital Transformation Journey that companies follow...

Secure senior management commitment → Set targets → Secure investment

Start with multiple lighthouse Projects → Appoint launch team → Leverage agile ways of working

Build capabilities → Adopt new operating model → Sequence initiatives for quick returns

Defining Value

Launch & Acceleration

Scaling Up

Where they lack:

Focus only on technology, not people and processes

Transformation only involves replacing outdated technology

Lack of adequate change management

No inclusion of digital culture

Hurried vendor selection

Undefined roadmap

KPMG helps organizations overcome these challenges by designing a industry specific approach, tailored to our clients requirements, and by leveraging our vast experience in this sector.
Digital Maturity Assessment Model - Dimensions & Attributes

**Strategy**
- Vision & Strategy
  - Vision
  - Position of Digital in the Organization
  - Strategic Planning & Investment
  - Strategic Refresh & Ongoing Monitoring

**Customer**
- Engaging Customers
  - "Omni" Experience Delivery
  - Content Strategy
  - Digital Marketing
  - Single Customer View
  - Personalization

- Managing Customers
  - Use of Mobile with Customers
  - Use of Social Media with Customers
  - Customer Satisfaction/Feedback

**Process**
- Governance & Management
  - Governance Framework
  - Measurement & Reporting
  - Risk Management
  - Digital Change Management
  - Worker Mobility Enablement

- Operational Effectiveness
  - Process Digitalization
  - Incident Management
  - Content Management

**Organization**
- People & Capabilities
  - Employee Digital Engagement
  - Structure & Responsibilities
  - Cross Functional Working

- Digital Structure
  - Digital Leadership
  - Structure & Capabilities

**Enablers**
- Digital Security
  - Access Management
  - Transformation Capability
  - Emergency Crisis Management

- Technology
  - Business Alignment
  - Platform Strategy

- Data & Analytics
  - Privacy Management
  - Data Strategy
  - Analytics
  - Insights
  - Performance
  - Quality of Service
  - Governance
  - Organization

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The Big Five Club
Airline passenger traffic is projected to double over the next two decades. Today, leading airlines are exploring how AI can help them keep pace with customer demand and improve operational efficacy, speed and customer satisfaction.

**AI Assistants**
- Responding to inquiries for flight info and ticket availability

**Fuel Efficiency Optimization**
Airlines use AI systems to estimate fuel requirement by analyzing data on route, distance, altitudes, aircraft type, weight, weather

**ID Verification + Baggage Identification**
- Facial recognition technology for customer id verification and to match passengers to their luggage through kiosks

**Customer Service**
- AI systems allow airlines to react to customers faster in a synchronized, aligned way that is on-brand and consistent with the business’s values

**Airplane Maintenance & Air Safety**
- Deploying predictive maintenance solutions can reduce expenses connected with overtime compensation for crews & unplanned maintenance

**Real-time operations monitoring**
- Airlines are leveraging time series analysis and pattern recognition to enhance data mining capabilities, identify trends, glitch identification

**Revenue Management**
- AI is used in revenue management to define destinations, adjust prices for markets, find efficient distribution channels, seat management
By effectively utilizing IoT, airlines have the tools to greatly reduce or even eliminate the causes of some of the most common complaints in the industry, such as lost bags, flight delays, and customer service issues.

**Connected fleets**
- Airlines are adopting IoT connected fleets and cargo equipment to provide real-time data, allowing them to solve mechanical issues before they occur.

**Fuel Efficiency**
- Airlines are using IoT Flight Efficiency Services which help follow precise navigation routes, analyzes flight data to optimize aircraft utilization and fuel use.

**Baggage Tracking**
- Using IoT & mobile apps, airline passengers can track their baggage location on the way to the aircraft, on the plane, and up to baggage claim.

**Automated Check-In**
- Carriers are using IoT to automate check-ins. After booking, customers are automatically issued a ticket and given a seat 24 hours before takeoff.

**Better Maintenance**
- Aircraft maintenance companies use IoT smart sensors and data analytics to enable greater efficiency and less downtime for aircraft fleets. This improves overall operational and flight safety.
Since the value chain across the aviation industry involves many partnerships between providers, Blockchain has a high potential to enable streamlining of business to business interactions.

Ticket Sale
- Through the use of smart contracts, airlines can add business terms & conditions of ticket sale & use. This enables tickets to be sold by different partners, and in real time.

Travel Distribution Network
- Airlines are using a decentralized open-source blockchain-based travel distribution network to make travel more profitable for B2B customers & providers.

Asset Tracking
- Blockchain with IoT facilitates tracking of the status and location of baggage, cargo & spare parts reliably & immutably as these assets change custody.

Managing Maintenance Logs, Data Sources
- Blockchain is transforming maintenance logs, and helps ensure that parts procured are legitimate & can offer a “virtual copy” immutable record of data of all parts on the plane.

Data Security & Identity Management
- Blockchain with a security wrapper allows effective management & sharing of passenger, flight & crew information, through the use of authorized access requirements.

Loyalty Systems
- By tokenizing loyalty points on the Blockchain, travelers get an easier, more relevant & faster-to-use program.

Digital Opportunities - Blockchain
As cloud provides a platform for delivering common business applications, ensuring adherence to accepted standards and practices of the industry, airlines are adopting cloud services across interfaces.

**Data Accessibility**
- Airlines are using cloud technology to store & process & access data generated from check-ins, bookings & reservation systems.

**Availing Analytics & Computing**
- By adopting cloud tech, airlines are able to access ML & powerful analytics & tools that automatic identification of increases in demand for flights, & anticipated schedule changes.

**Wind speed Predictions**
- Augmenting the real-time data collected from IoT sensors from the cloud, airlines are able to predict the wind speed to an accuracy 10x better.

**Mitigation of System Downtime**
- Cloud platforms mitigate the risk of downtime with redundancies & multiple data backup options, & airlines can focus on problems that can cause profit loss.
Analytics can save airlines millions of dollars per year, since even an hour that an aircraft is not in operation costs an average of $10,000 (USD).

**Crew Performance & Ground Handling**
- Analytics provides insights on What-if scenarios, optimized rosters and real-time alerts on crew data behavior, which helps improve resource utilization.

**Yield Management & Pricing**
- Insights from data sources help airlines understand competitive actions, price sensitivity, patterns & to balance profitability & load.

**Customer Experience & Loyalty**
- Airlines are investing in creating data modelling, Balanced Scorecards and retention analytics for tracking Loyalty value and passenger engagement.

**Airline Maintenance**
- Predictive Analytics helps Airline Carrier in conductive prognostic maintenance. This improves procurement & fleet reliability.

**Fleet Reliability**
- Parameters such as runway bandwidth, flight routes, types of aircraft, are being analysed to identify patterns.

**Fuel Efficiency**
- Airlines collect data directly from sensors, which can be fed into a platform that analyses data to search for patterns with the highest levels of trip profitability & fuel efficiency.
A connected enterprise approach takes care of the end to end digital execution

Top Obstacles to Success in Aviation in executing customer centric strategy

- Security and compliance concerns
- Technology and data silos
- Strategy misalignment
- Business silos
- People/process misalignment
# KPMG Connected Enterprise Architecture for Aviation

## Interaction Hubs

<table>
<thead>
<tr>
<th>Passengers &amp; Customers</th>
<th>Counterparties / Regulators</th>
<th>Workforce</th>
<th>Partners &amp; Suppliers</th>
<th>IoT Devices</th>
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<td>Third Party Requests</td>
<td>Market Data Exchanges</td>
<td>Partner Engagement</td>
<td>Service Request</td>
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<td>Outage Reporting</td>
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<td>Quotes / Contracts</td>
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<td>Workforce Reporting</td>
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<td>Billing / Service Issues</td>
<td>Dispute Resolution</td>
<td>Reporting</td>
<td>Dispute Resolution</td>
<td>Location &amp; Wayfinding</td>
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</table>

## Middleware

<table>
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<th>Process Automation</th>
<th>Business Rules</th>
<th>Decision Management</th>
<th>Counterparty / Regulator Interactions</th>
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<tbody>
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<td>Passenger &amp; Customer Interactions</td>
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<td>Supply Chain Interactions</td>
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<td>Internet of Things Interactions</td>
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<td>Third Party Interfaces</td>
<td>Electronic Data Interchange</td>
<td>Conditions Sensing</td>
<td>Device Connectivity</td>
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<tr>
<td>Device Management</td>
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<td>Technology Platforms</td>
<td>Internet of Things (IoT) Platform</td>
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<td>Remote Maintenance</td>
<td>Condition Sensing</td>
<td>Relationship Platforms</td>
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## Strategy

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Global experience

Select case studies
To improve their process efficiencies and make it future ready, KPMG performed technology assessment and designed digital strategy for Air India.

**Key focus area**

- Security Impact Analysis
- Monitor & Assess compliance and regulatory model
- Up skill the client’s customer journey mapping

**KPMG Approach**

- Global Maturity Assessment Tool Kit and Customer Experience Excellence framework
- Gap Analysis and Transformation Roadmap to reduce redundancy in business processes
- Define Target architecture and operating model including resource model

**Engagement Outcomes**

- To establish governance and operating model to effectively manage the program
- To strengthen client’s security posture by integrating threat analytics and monitoring systems
- Digital roadmap to protect critical target systems, drive operational efficiency and improve user experience
KPMG in Singapore has worked with Singapore Airlines (SIA) and Microsoft to develop the first airline loyalty program “digital wallet” based on block chain technology.

### Key focus area

- Successful POC Development
- Secure Payment Reconciliation Platform Development
- Easy usage of miles in customer Kris Flyer Accounts

### KPMG Approach

- Expertise in solutions architecture, application build and graphic design and cyber security
- Business value approach to maximize revenue for Kris Flyer members
- Loyalty Programs for merchants to connect with the program

### Engagement Outcomes

- Onboarding new partners and reconcile payments using block chain technology
- Customer transaction in real-time, which provides significant cost and time efficiencies
Transformation of the Procurement and Asset Management to become the best in class Asset Management Organization at competitive costs

**Key focus area**
- PMO Transformation for Asset Management Implementation
- Define AM Management Structure and Frameworks
- Increase User Adoption

**KPMG Approach**
- Organizational redesign to position asset management as a strategic discipline
- Implementing a total cost of ownership (TCO) methodology for assets
- Evaluating AMS asset investment plans aligning them with new TCO methodologies and the action plan to ISO 55001 gaps

**Engagement Outcomes**
- Well established AM structure and the framework to further develop process to pursue ISO 55001 certification
- The standardized approach has allowed AMS to better train staff on its AM program