

Aviation - Data Odyssey

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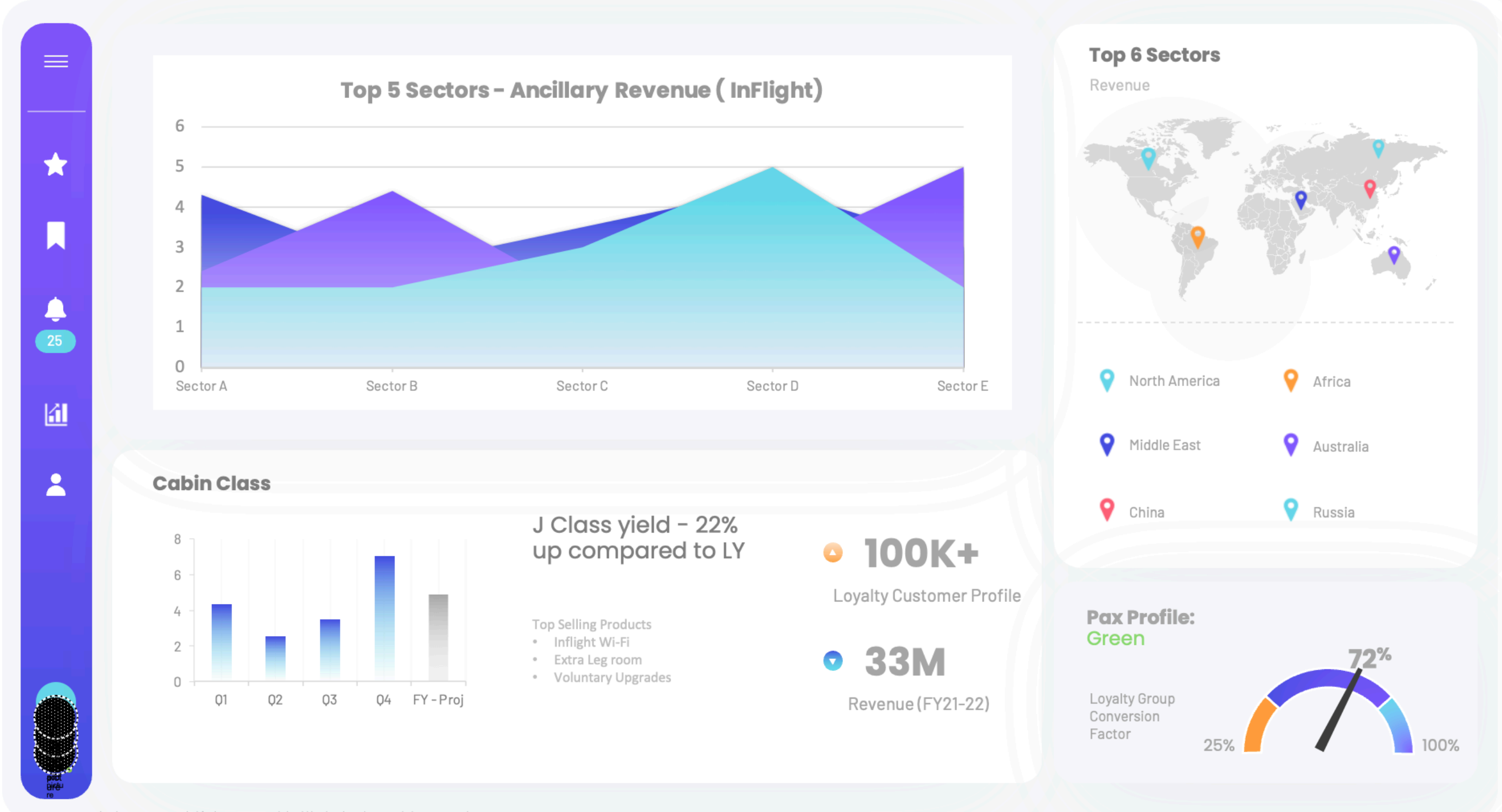


Context

- Airlines are increasingly using data to optimize operations, enhance customer experience, and improve profitability.
- Data-driven insights are transforming the industry, empowering airlines to make more informed decisions and stay ahead of the curve.
- Understanding the customer journey is vital to pinpoint opportunities for enhancing the passenger experience.
- The airline industry is rapidly evolving, with artificial intelligence (AI) at the forefront of innovation, from automating maintenance to enhancing passenger experiences, AI is revolutionizing every aspect of air travel.



Data Driven Insight



Quarter - Sector - Revenue - Products - Ancillary - Flight Number - Registration Number (Tail Number) - Cabin Class - Wireless Access Point - Seat Utilisation & Charges

Data Driven Action: Maintenance in an Adhoc Manner on a specific aircraft
 (work order created with its SLA, before next schedule)



What is Data ?



1

1950s: Manual Records

Airlines relied on paper-based systems for reservations and passenger manifests. Each booking was a time-consuming process, prone to errors and inefficiencies.

2

1960s: Early Computerization

The introduction of computer reservation systems like SABRE revolutionized the industry, allowing for faster and more accurate bookings.

3

1980s: Frequent Flyer Programs

Airlines began collecting and utilizing customer data to offer personalized loyalty programs, marking the beginning of data-driven marketing in the industry.

4

2000s: Web Revolution

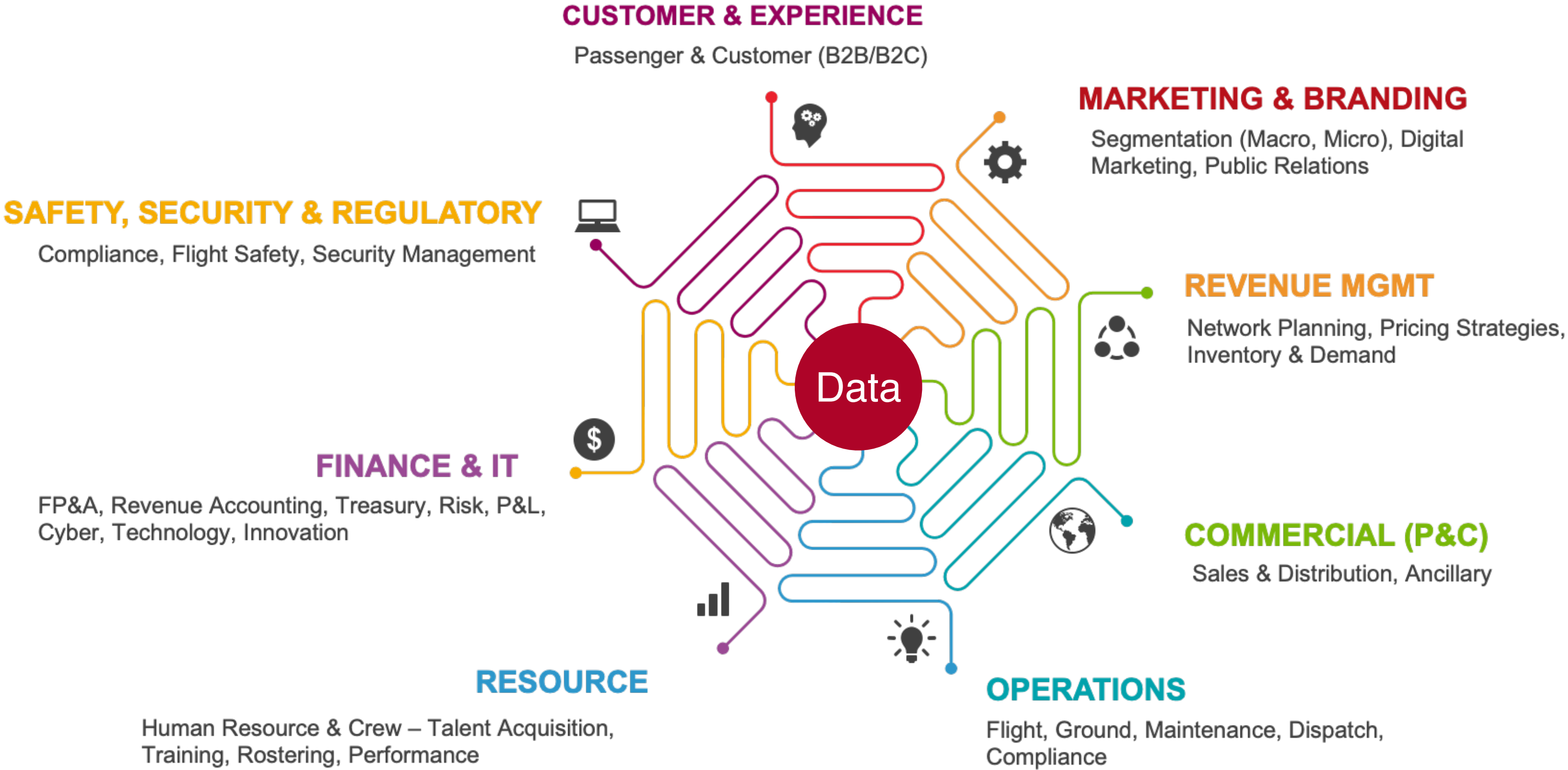
The rise of online booking platforms and e-tickets transformed data collection and management, providing airlines with vast amounts of digital passenger information.

The Dawn of Airline Data (Paper to Pixels)

Commercial & Customer



Airline - Line of Business



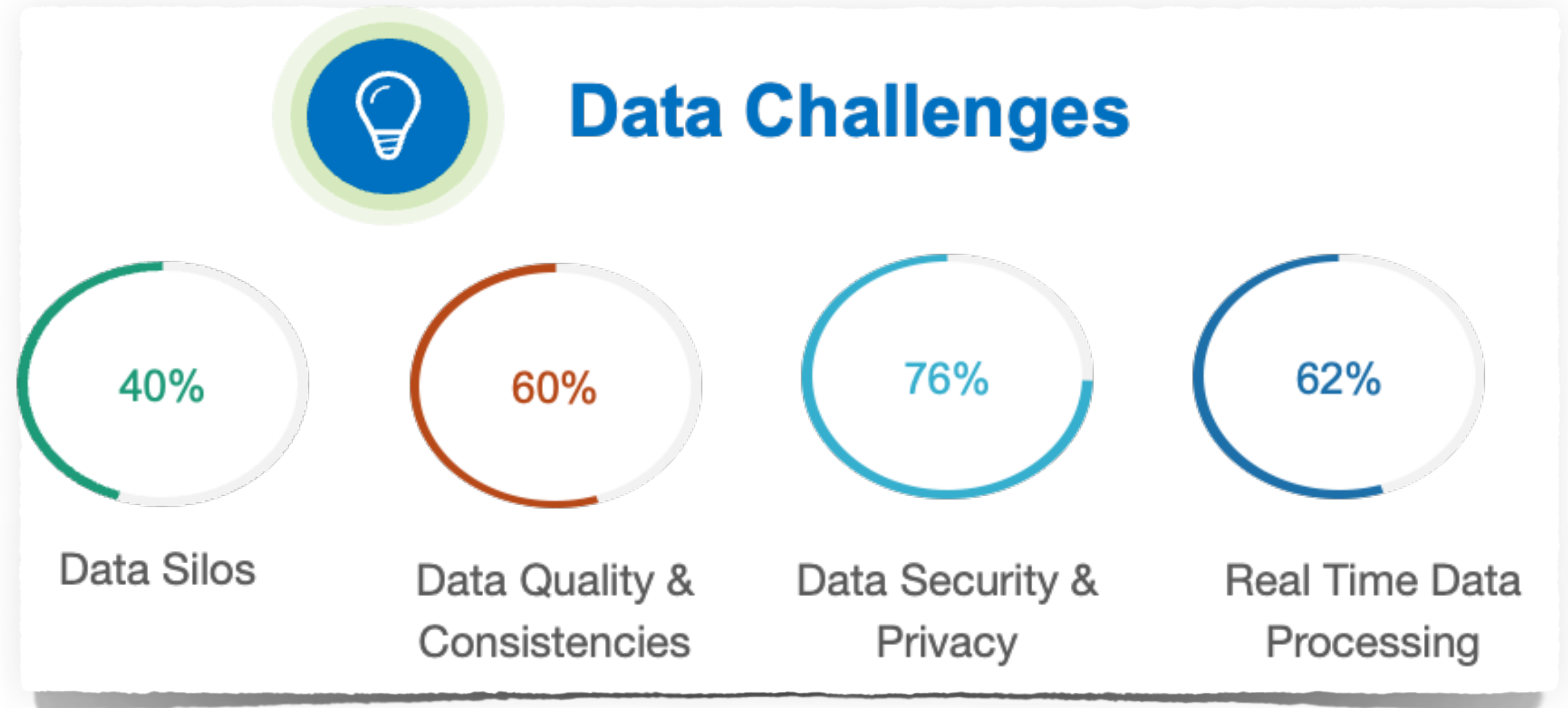
Importance of Data in each Portfolio

Data & Information - Domains & Products





Navigating Turbulences



40% Fragmented data across different departments and legacy systems hindering a unified view

60% Ensuring accurate and consistent data across various touch points, impacting decision-making and customer experience.

76% Increasing cyber threats and stringent regulations like GDPR, airlines face the complex task of protecting sensitive passenger data

62% Need for instantaneous data analysis and decision-making areas like dynamic pricing and disruption management,

Need of an Enterprise Data Foundation



Enterprise Data Foundation

Airline Data Landscape - Platforms and Technologies

Source of Truth

Airlines to collect data from various sources (source of truth) across all portfolios which covers the capabilities of business process

Data Platforms

Investing in modern cloud based data platforms enabling airlines to store, process, and analyze vast amounts of data, facilitating data-driven decision-making

Technologies

Technologies such as data warehousing, real time analytics, machine learning software, data lakes, and cloud computing provide the foundation for effective data management and analysis.

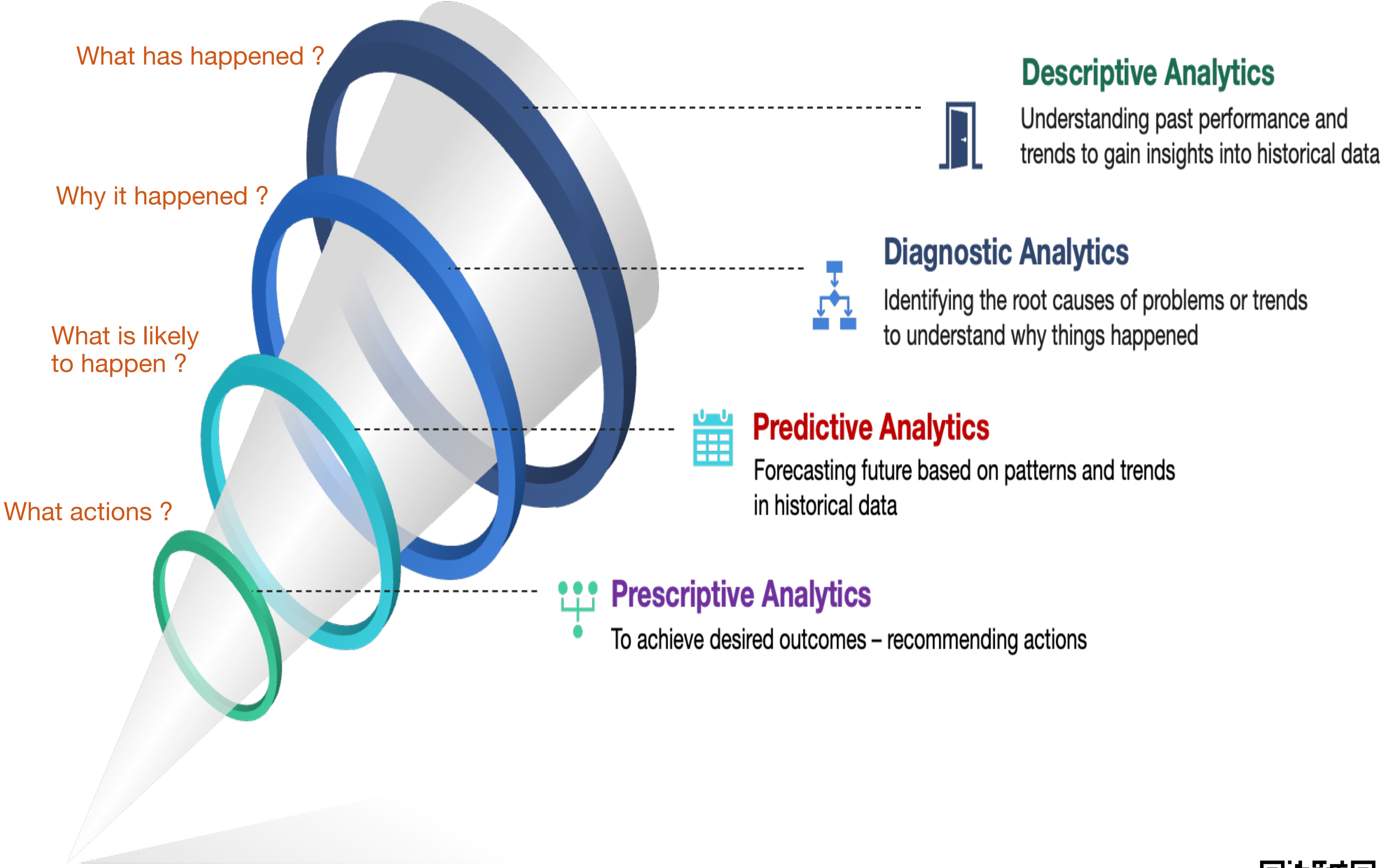
Data Classification - Keys to effective data management

Customer, Commercial, Financial, HR, Facilities, P&L, Operational





Unlocking Insights for Decision Making



Stakeholder Adoption: Data Driven Business Decisions



Data Driven Success

Embrace Data Culture

Airlines must foster a data-driven culture across all levels of the organization, encouraging data literacy and evidence-based decision-making

Invest in Infrastructure

Robust data infrastructure and advanced analytics capabilities are crucial for airlines to stay competitive in the data-driven future of aviation

Prioritize Data Ethics

As data becomes more integral to operations, airlines must prioritize ethical data use, transparency, and privacy to maintain customer trust

Continuous Innovation

The journey of data in the airline industry is ongoing. Continuous innovation and adaptation to emerging technologies will be key to long-term success



Business Value - Successful Adoption

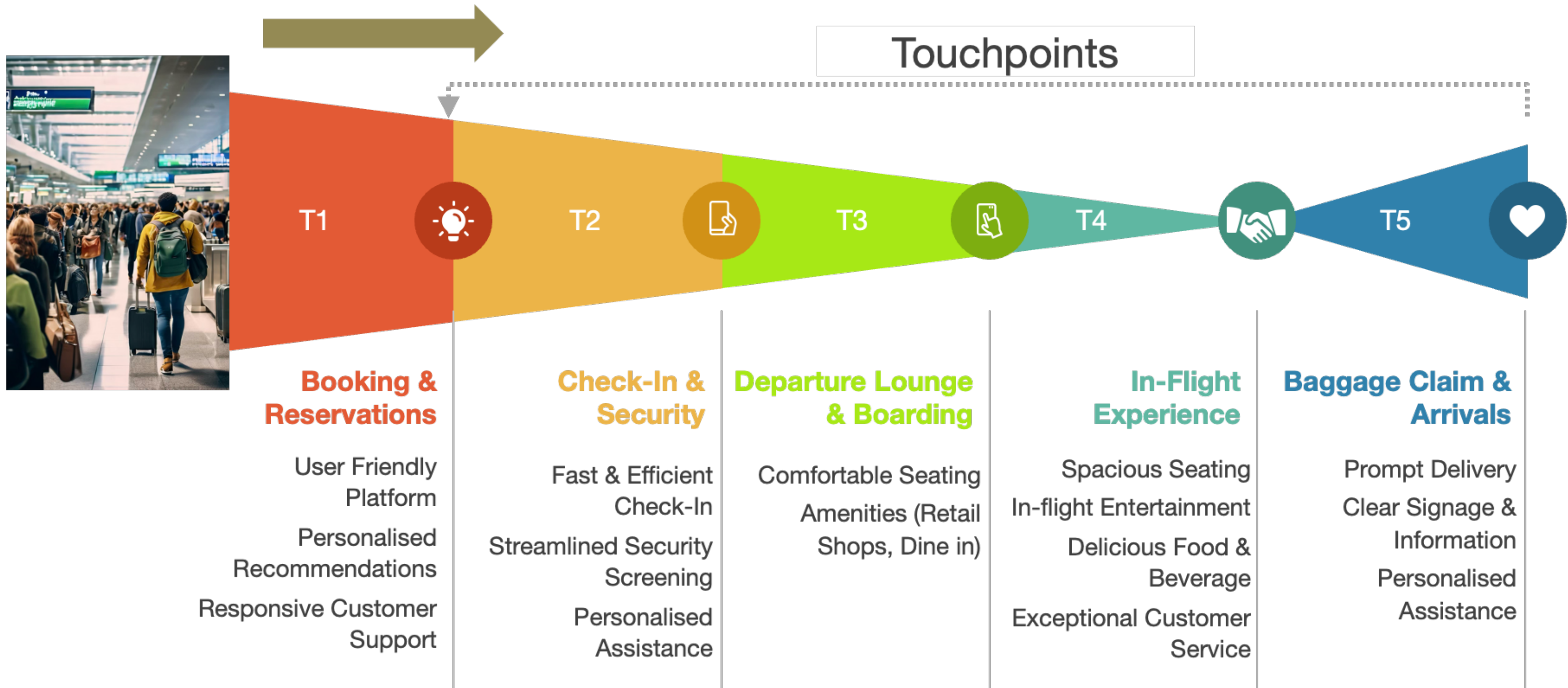
Revenue Management & Optimisation

Strategy	Data Used	Impact
Dynamic Pricing	Demand forecasts, competitor prices, historical data	Up to 10% revenue increase
Ancillary Revenue Optimisation	Customer preferences, purchase history	15-20% boost in ancillary sales
Network Planning	Route profitability, market demand, operational costs	5-8% improvement in network efficiency
Overbooking Optimisation	No-show rates, cancellation patterns	Reduced denied boardings by 30%

Commercial Portfolio



Improving Customer Experience



Customer Satisfaction

Surveys and feedback to gauge overall satisfaction with the travel experience

On-Time Performance

Tracking flight delays and cancellations to ensure punctuality

Net Promoter Score (NPS)

Measuring customer loyalty and willingness to recommend the airline

Social Media Sentiment

Monitoring online reviews and social media conversations to understand customer perceptions



Customer Portfolio

Increasing Operational Efficiency



Fuel Optimization

Data-driven strategies for optimizing fuel consumption and reducing operating costs



Baggage Handling

Real-time tracking and monitoring systems for efficient baggage handling



Flight Scheduling

Predictive analytics to improve flight scheduling and minimize delays



Turnaround Time

Data analysis to reduce aircraft turnaround time and improve operational efficiency

Operations Portfolio



Future Proofing - Innovation & Sustainability

1

Blockchain for Data Integrity

Blockchain technology is being explored to enhance data security, streamline loyalty programs, and improve tracking of aircraft parts and maintenance records

2

Biometric Data Integration

Facial recognition and other biometric data are set to revolutionize the passenger experience, from check-in to boarding, enhancing security and convenience

3

Digital Transformation

Embracing digital technologies to optimize operations, enhance customer experiences, and create new revenue streams.

4

Artificial Intelligence applied business process

Advanced AI will anticipate passenger needs and preferences, offering hyper-personalized experiences throughout the entire travel journey





Our Industry Cross Roads

Air Travel is pivotal at the moment

Data is transforming the airline industry, driving efficiency, profitability, and sustainability. By **embracing data-driven strategies** with apt Technology, airlines can optimize operations, enhance customer experiences, and secure a successful future

Opportunity to redefine the Flying Experience

Take Away - from this Conference

