

Commercializing technology  
to create & augment  
non-aeronautical value  
in airports business



**M**odern airports are large machinery in a perpetual state of controlled chaos. Considerable management goes in adhering the regulatory norms, following the security protocol of the various agencies for passenger and aircraft safety and ensuring smooth run of the day-to-day operations. An operational focus leads to oversight of potential opportunities to generate unique business value through non-aeronautical activities. Non-aeronautical activities include the transactions occurring before passenger movement through the boarding gates in the airport terminal—in a passenger’s journey through the airport. The time-share of a passenger within airport geographical limits and outside the terminal buildings is miniscule. Consequently, the non-aeronautical value contributed by the passengers in an airport is rooted in the airport’s terminals.

### Passenger journey

A typical airline passenger’s journey & flying experience for outbound flight begins when the passenger starts planning to depart from the source. Few considerations a passenger evaluates before leaving for the airport are ETA to the airport, mode of transport, luggage weight limitations, restricted items avoidance, peak hours traffic at check-in, airport cut-off for check-in, etc.

The passenger decides with the limited information one has and decides on the mode of transport and departure time. Passenger movement could be through up to six stages of queues at the airport:

- Terminal entry gates
- Luggage check
- Airline check-in
- Security check
- Immigration
- Boarding

## Stakeholders, their pain, and resolution



### Passengers

They are travelers who are on a public or a private conveyance other than the pilot, copilot and the crew. Airline passenger expectations that translate into their experience:

- Minimize ETA from a source location to the airport premises and sequentially to the terminal entry gates
- Minimize transaction & dwell time at the airport
- Faster movement through the various stage gates at the airport
- Active engagements and activities during wait times
- Diversified offerings at the retail/lounge area
- Personalized offerings at the airport

Reducing passengers’ time in queues and outside of the terminal entry and funneling rapidly towards the boarding gates reduces the customer dwell time through the various stage gates and, consequently, reduces waiting times at the airport. Targeted promotion and offerings in the retail area of the airport would ensure higher engagement and improved overall passenger satisfaction.

Modern technologies empower real-time passenger flow management and improvisation through the airport. Fleet management systems reduce the turnaround time for the aircraft, minimizing deviations and delays. Retail solutions profile individual passengers and help retail in targeting their audience accurately.



### Airline operator

Airlines want to maximize aircraft utilization and minimize the cost of procuring a customer. The airlines realize the maximum value when the increased aircraft utilization leads to a reduction



## A transparent system could help the airlines improve CSAT score and improve aircraft utilization.

in the number of trips. Airlines typically spend between the US \$30 to \$50 <sup>[2]</sup> in marketing and promotion per customer acquisition. Most are willing to pay up to \$10 to retain the customers. Airlines want to be able to engage further with the customer at the airport—to improve loyalty. Even though a well-oiled machine, airlines sometimes have to go through exceptions to enable passengers to board their flights, like when a passenger has arrived at the last moment at the airport. A transparent system could help the airlines improve CSAT score and improve aircraft utilization.

Passenger movement, aircraft readiness status, and luggage tracking together allow the airline to be flexible in their flight operations without delays or incurring additional costs.



### Retail

Retailers have two fundamental business motivations: maximize revenue & minimize operating costs. To improve revenue, the retailers:

- Want to outreach to a more relevant customer group
- Want to be able to plan and execute targeted promotion
- Understand the changing customer needs to manage their inventory effectively

d. For more prominent establishments, diversifying into newer segments, audiences, categories, etc., would align with business strategy

Using trend and predictive analytics, retail businesses effectively plan their marketing strategy in conjunction with inventory planning. The business's goals and targets are course-corrected using advanced passenger insights.



### Passenger drop-off

The passengers want to minimize their time spent through the airport premises all the way to reach their boarding gate. Apart from personal transport, passengers' arrival at the airport is primarily through three modes of transport:

- **Private vehicles or taxis/cabs** – Cabs want to have the visibility on the schedule of arriving flights to plan churn. Also, they would want a faster turnaround at the airport
- **Public transport** – Passengers intend to drop-off closest to the terminal building
- **Layover/transfers** – Rapid transfer to the departure lounge.

Most airports have multiple arrival lanes and terminal departure gates. Informing the passenger of the closest drop point in case of cab drops and offering visibility to parking lot

slots would offer convenience to the passengers arriving at the airport and reduce the turnaround of the cabs to move between terminals or exit the airport. At airports that permit non-passengers inside the terminal (subject to submission to the security check proceedings), specialized amenities for greet, farewell, etc., improves their experiences.

Passenger tracking, aircraft readiness status in real-time helps in minimizing exit time from the airport terminal. Parking management and passenger habit together help in passenger flow for the exit.



### Passenger pickup

A pickup at the airport could be just in time for pickup or have a wait time ahead of the passenger pickup. They would want a simplified waiting process for improved experience:

- Have real-time visibility of flight & passenger arrivals
- Park vehicles for pickups with longer waiting time
- Have amenities to engage in
- The pickup vehicles would also want to exit the airport quickly after passenger meetup

The arriving passenger and the pickup person can have explicit instruction and guidance on the exact rendezvous. Particularly for international travelers, such instruction & information exchange dramatically reduces pickup ETA and turnaround time while also improving customer satisfaction.

Pickups have visibility on arriving passengers' ETA to the curb, pinpointed pickup point drive greater churn rate, minimize congestion, and wait times. For pickups passengers coming well in advance, targeted amenities help in engaging them.

Passenger flow & movement through the airport coupled with real-time luggage tracking provides

accurate ETD from the terminal and onto the curb. Vehicle positioning empowers rendezvous with the passenger. Technology empowers parking suggestions to the waiting cars and guides them to the retail outlets.

### Summary: Airport operator

39.8% <sup>[1]</sup> of airport revenue comes from non-aeronautical sources. An airport operator intends to maximize the number of flyers in addition to non-flyers at the airport to increase the transactions with retail stores (airport revenue usually is percentage sales of the retail stores). The airport intends the passengers to maximize their time spent in the areas with high value to their airport experience, intends the TG to move towards higher profitability areas and monetize the same. Further, airports aspire to have improved control on costs and optimize them without adversely affecting the customer experience.

Airports are the single point owner of diversifying, flights, retail, ground operations, and road transport data & integration. This provides the airports a vantage point to influence and create value for all stakeholders.



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Ashish heads the Smart City and IoT at Wipro Limited and plays a key role in consulting and solutioning for IoT and Smart City, covering integration, management and business operations. He has 25 years of experience with proven track record for customer centricity and passion for excellence. His current focus is on new technologies and solutions, especially around IT-OT convergence.

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## References

1. <https://concessionaireanalyzer.com/airport-non-aeronautical-revenues-growth-2017/>
2. <http://iosrjournals.org/iosr-jbm/papers/Vol9-issue4/C0941533.pdf>



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