

IRROPS Passenger Management

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OPERATIONAL CONTEXT

IRROPS (Irregular Operations) refers to unexpected events such as weather conditions, crew scheduling problems, or technical failures that disrupt the planned flow of flight operations. These situations lead to outcomes such as flight delays, cancellations, capacity changes, and impacts on connecting passengers.

As a result of delays, cancellations, or operational changes, flight schedules and associated passenger flows are restructured. During this process, Integrated Operations Control Centers (IOCC), ground handling teams, and customer service teams coordinate to maintain operational continuity, while passenger plans are updated accordingly.





How Are IRROPS Processes Managed?

In IRROPS situations, operations control teams reanalyze the current flight plan, assess operational impacts, and determine actions for passenger management.

The following criteria are considered in the decision-making process:

- Which alternative flights passengers should be reprotected onto based on available capacity.
- Passengers' fare class, loyalty program status, connection status, and special service needs.
- Minimum connection times, Actual Connection Time (ACT), and operational risk scores.
- Meal, hotel, transfer, or refund needs based on waiting time.
- Operational cost, revenue loss, capacity optimization, and passenger satisfaction impacts.
- Hub congestion, gate availability, and the sustainability of transfer operations.

How Might We Canvas

Who?

who are the stakeholders that get effected?

Passengers, Passenger Care Center, Hub Control, IOCC (Integrated Operations Control Center), Call Center, Ground Handling Teams, Revenue Management.

What?

what is the problem that needs to be solved?

In IRROPS processes, manually managing the operational flow and passenger reallocation alternatives slows down decision-making.

Why?

why is this problem worth solving?

As a result of fast and efficient operational decisions, costs will decrease and passenger satisfaction will increase.

How?

how can this problem be eliminated?

A decision support system can be developed that integrates diverse operational data sources (flight status, capacity, passenger profiles, etc.) and provides rule-based, data-driven recommendations.

Challenge:

How might we develop a decision support system that provides data-driven, rule-based recommendations to manage passenger rebooking, transfer handling, and passenger care operations in IRROPS more quickly and efficiently?