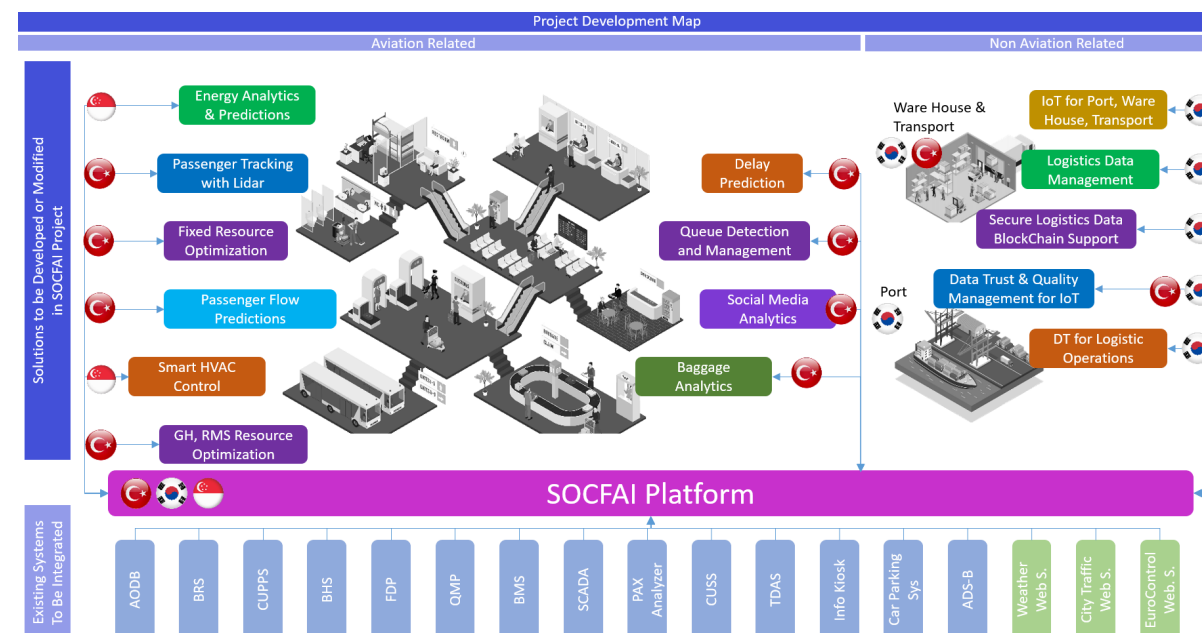




SOCFAI

SOCFAI project focuses on airports and addresses the problems caused by the collaborative and multi-stakeholder nature of their operations. This is providing new ways to manage the operations cycle, enable real-time common situational awareness of all aspects of airport operations, optimise different core processes, enable predictive and fully integrated operations management and facilitate customer service management and orientation, all while trying to improve overall customer satisfaction levels by introducing an open-source framework equipped with technologies such as AI, Computer Vision, VR, IoT, LIDAR, etc.



Rationale of the SOCFAI



Resource Inefficiencies

Resource inefficiencies in airport operations occur when there is a mismatch between available resources such as gates, runways, and staff, and the demand for those resources, leading to underutilization or overloading. This can result in longer waiting times for aircraft, passengers, and baggage, causing delays, congestion, and increased operational costs.



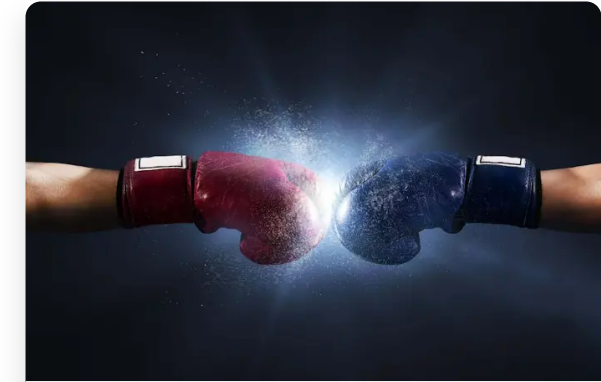
Flight Delays

Flight delays in airport operations can stem from factors like adverse weather conditions, air traffic congestion, and technical issues. These delays can disrupt schedules, increase operational costs, and lead to passenger frustration, affecting overall customer satisfaction and potentially causing cascading delays throughout the aviation network.



Lack of Communication

The absence of real-time communication between operational stakeholders in airport operations can lead to misalignment and coordination breakdowns among various entities such as airlines, ground handling services, and air traffic control. This can result in inefficient resource allocation, longer turnaround times for aircraft, missed opportunities for optimizing operations, and ultimately, delays in flights, negatively impacting passenger experience and the overall operational efficiency of the airport.



Stakeholder Conflicts

Operational stakeholders conflicts in airport operations arise when different entities, such as airlines, ground handling services, and security, have divergent goals or incompatible processes. These conflicts can lead to inefficient resource allocation, delays in operations, compromised safety measures, and strained relationships among stakeholders. Such conflicts can disrupt the smooth functioning of the airport, resulting in operational inefficiencies, decreased customer satisfaction, and potential financial losses.



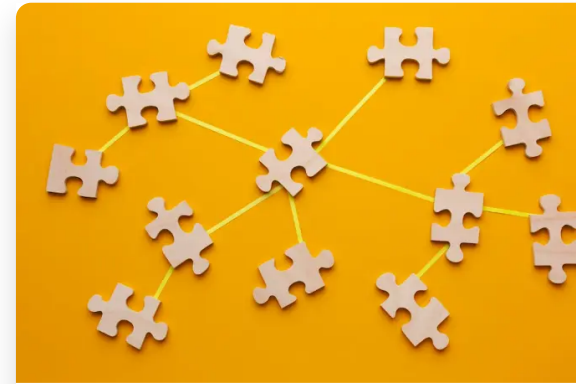
Environmental Effects

Environmental factors in airport operations refer to the natural elements and conditions that can impact airport activities. These factors include weather conditions (like fog, snow, and storms), air quality, noise pollution, and wildlife presence. These environmental factors can lead to flight delays, cancellations, and diversions, as well as increased fuel consumption due to longer flight paths or extended waiting times. Moreover, noise pollution can affect nearby communities, leading to public complaints and potential regulatory restrictions. Addressing these environmental challenges is crucial for maintaining safe, efficient, and sustainable airport operations.



Regulation Differences

Regulation differences between countries in the airport business can encompass varying safety standards, operational procedures, and infrastructure requirements. These discrepancies pose challenges for technology providers who need to develop adaptable solutions that meet different regulatory demands, increasing development complexity and potentially limiting market expansion due to the need for customization and compliance adjustments.



Integration Complexity

Integrating a technology solution into airport operations involves navigating intricate processes like coordinating with existing airport systems, ensuring compatibility with diverse hardware and software setups, and accommodating specific operational workflows. Additionally, addressing security concerns, regulatory requirements, and the need for seamless data exchange adds complexity, demanding thorough testing, customization, and collaboration with various stakeholders for successful implementation.



Energy Waste

Energy waste in airport operations refers to the inefficient use of energy resources within the airport infrastructure and processes. This can occur due to factors like outdated equipment, poor energy management systems, excessive lighting or HVAC usage, and inadequate insulation. Energy waste not only leads to increased operational costs for the airport but also contributes to higher carbon emissions and environmental impact, undermining sustainability goals and posing financial and ecological challenges in the long run.

Process



Project Partners



