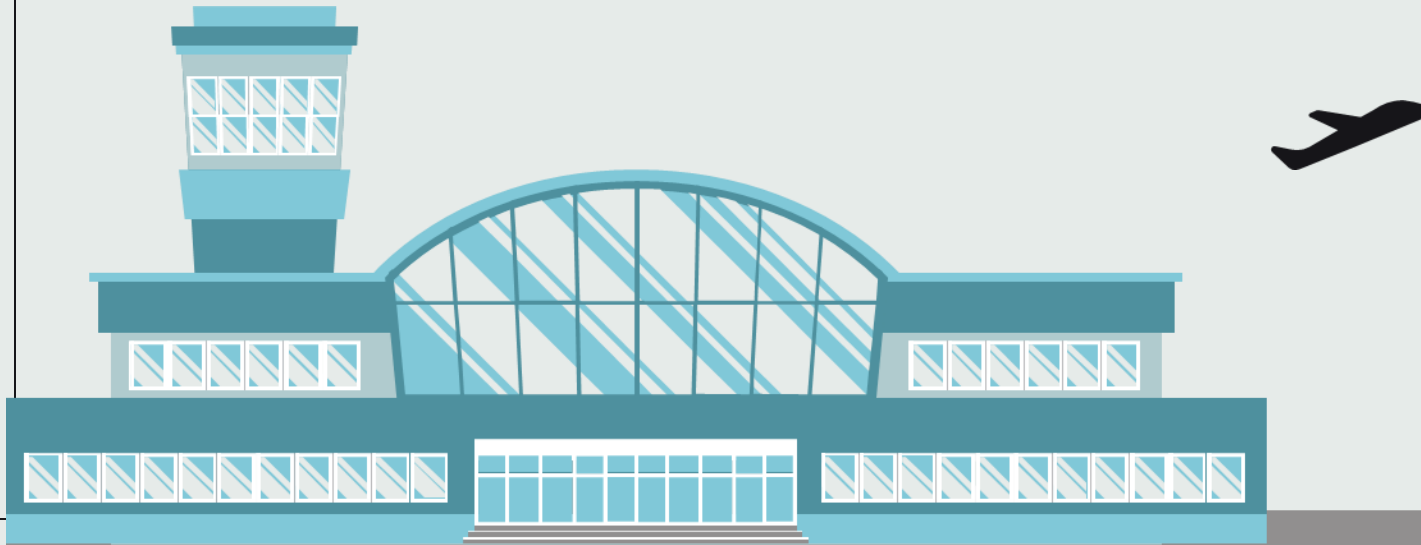
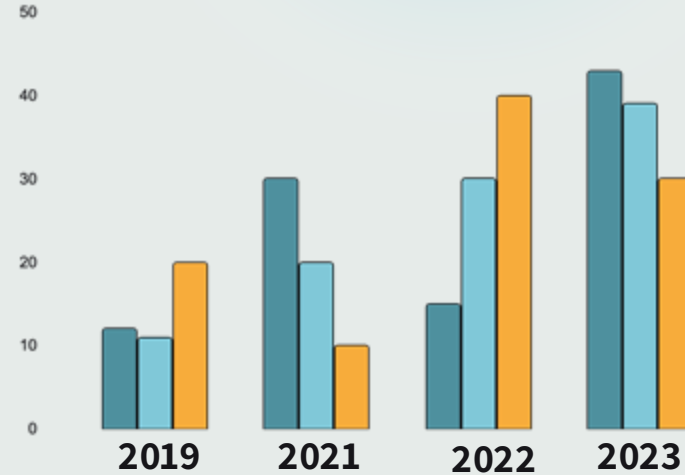


INTRODUCTION AND OVERVIEW TO FUTURISTIC SYSTEMS OF AIRPORTS



WHAT ARE AIRPORTS ? AND STATUS DURING PANDEMIC

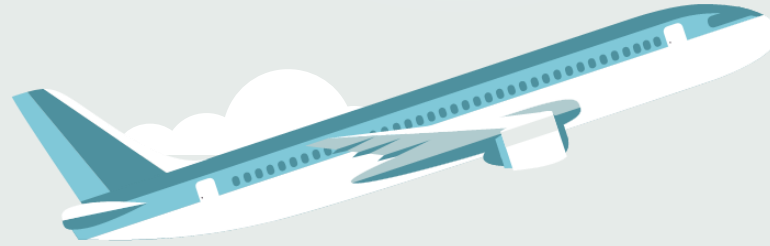
- **Vital Hubs:** Airports connect cities, countries, and continents.
- **Post-Pandemic Recovery:** Air travel is rebounding with increased passenger traffic.
- **Passenger Experience:** Improved facilities and streamlined security processes.
- **Integrated Travel Experience:** Airports are enhancing their role beyond transit points.



THE INCREASING IMPORTANCE OF TECHNOLOGY IN AIRPORTS

- PASSENGER EXPECTATION
- OPERATIONAL EFFICIENCY
- SECURITY AND SAFETY
- COST MANAGEMENT
- CRISIS MANAGEMENT
- INTEGRATION OF SERVICES





EVOLUTION OF AIRPORT TECHNOLOGY

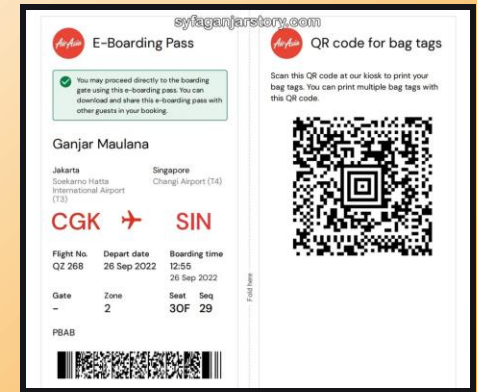
EARLY AIRPORT SYSTEMS

(includes manual check-ins, basic security systems)



TRANSITION TO MODERN DAY SYSTEMS

(online booking , digital boarding passes , automated security).

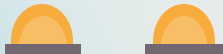
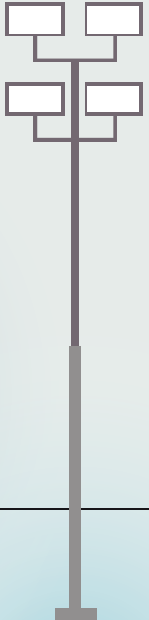


FUTURISTIC SYSTEMS OF AIRPORTS



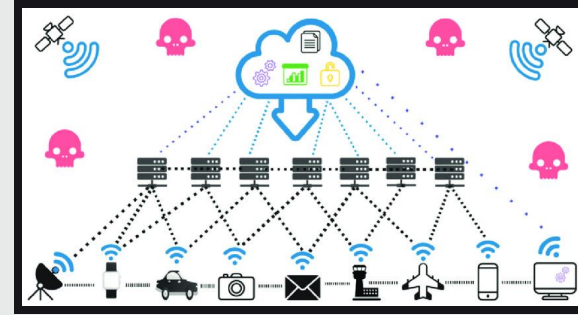
FURISTIC SYSTEMS OF AIRPORTS

- SMART INFRASTRUTURE
- BIOMETRIC SECURITY SYSTEMS
- AUTONOMOUS OPERATIONS
- ROBOTIC ASSISTENSE



SMART INFRASTRUTURE

- USE OF IOT (INTERNET OF THINGS) FOR SEAMLESS COMMUNICATION BETWEEN AIRPORT SYSTEMS



- SMART INTERMINAL WITH AUTOMATED CLIMATE CONTROL , LIGHTING AND REAL TIME DATA ANALYTICS FOR EFFICIENCY

BIOMETRIC SECURITY SYSTEMS

- FACIAL RECOGNITION , FINGERPRINT SCANNING AND IRIS RECOGNITION FOR FASTER AND MORE SECURE PASSENGER VERIFICATION.



- ELEMINATION OF TRADITIONAL BOARDING PASSES .

AUTONOMOUS OPERATIONS

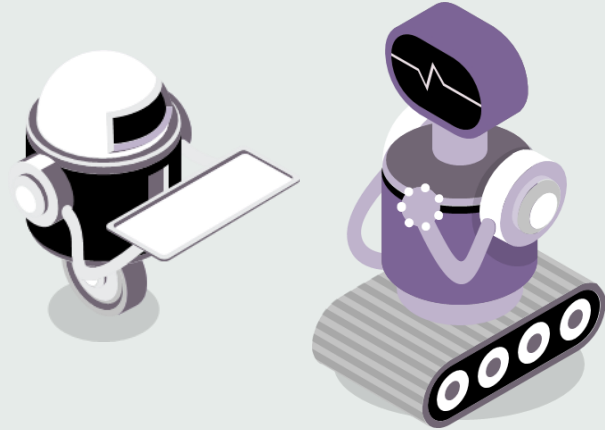
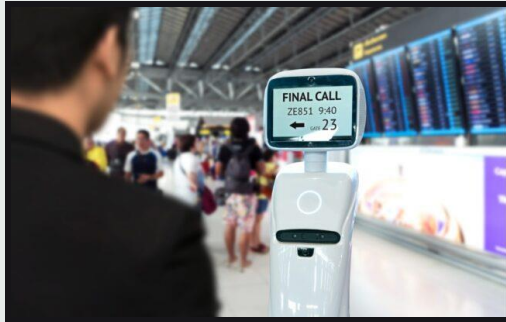
- USE OF AUTONOMOUS VEHICLES FOR BAGGAGE HANDLING, RUNAWAY.



- AI BASED TRAFFIC CONTROL SYSTEMS

ROBOTIC ASSISTANCE

- ROBOTS FOR INFORMATION DESKS LUGGAGE HANDLING AND CLEANING SERVICES



- AI CHAT BOTS FOR COSTUMER SERVICE AND IN-TERMINAL GUIDANCE.



PASSENGER EXPERIENCE ENHANCEMENTS



PASSENGER EXPERIENCE ENHANCEMENTS

- SEAMLESS CHECK IN & BOARDING.
- AUGMENTED REALITY (AR) FOR NAVIGATION.
- PERSONALISED SERVICES.

SEAMLESS CHECK IN & BOARDING.

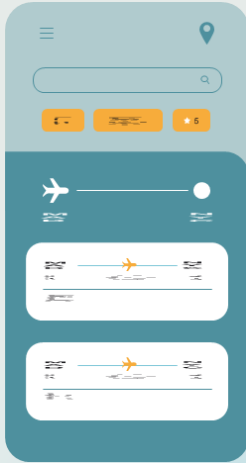
- AUTOMATED KIOSKS FOR PERSONALISED SERVICES AND FAST CHECK INS.



- BIOMETRIC BOARDING WITHOUT PHYSICAL DOCUMENTS

AUGMENTED REALITY (AR) FOR NAVIGATION & PERSONALISED SERVICES

- AR APPS AND DEVICES TO GUIDE PASSENGERS THROUGH AIRPORTS REDUCING STRESS AND CONFUSION .



- AI DRIVEN RECOMMENDATION FOR RESTAURENTS , SHOPPING AND SERVICES BASED ON PASSENGER PREFERENCES.

SUSTAINABILITY & GREEN AIRPORTS



SUSTAINABILITY & GREEN AIRPORTS

1. SUSTAINABLE DESIGN AND ENERGY
EFFICIENCY
2. ELECTRIC GROUND VEHICLES
3. REDUCTION IN CARBON EMISSION



SUSTAINABILITY DESIGN AND ENERGY EFFICIENCY

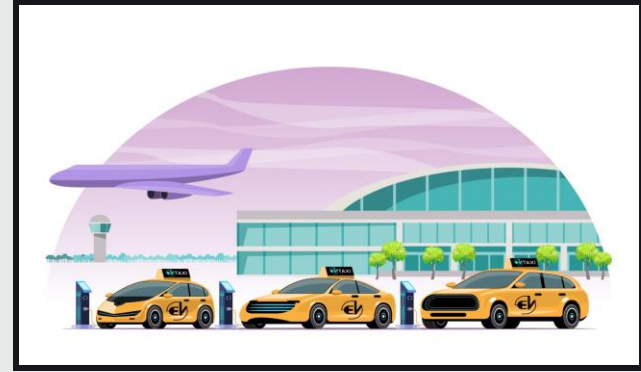
- USE OF RENEWABLE ENERGY SOURCES (SOLAR ,WIND) FOR AIRPORT OPERATIONS.



- GREEN BUILDING MATERIALS AND DESIGN FOR ECO FRIENDLY TERMIONALS.

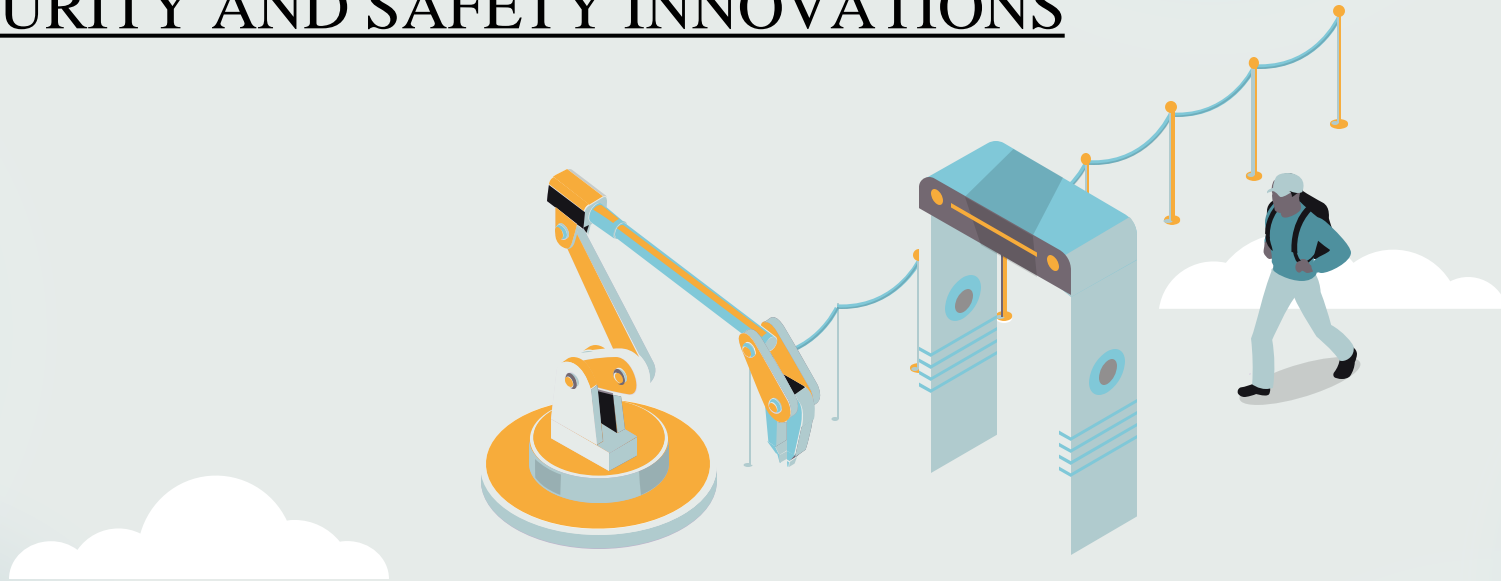
ELECTRIC GROUND VEHICLES & REDUCTION IN CARBON EMISSION

- ADOPTION OF ELECTRIC OR HYDROGEN POWERED GROUND TRANSPORTATION .



- LOW EMISSION AIRCRAFT AND IMPROVED AIR TRAFFIC MANAGEMENT SYSTEMS TO REDUCE FUEL CONSUMPTION

SECURITY AND SAFETY INNOVATIONS



SECURITY AND SAFETY INNOVATIONS

- AI POWERED THREAT DETECTION
- CYBERSECURITY
- PREDICTIVE MAINTENANCE



1. AI POWERED THREAT DETECTION

- MACHINE LEARNING ALGORITHMS FOR MORE ACCURATE THREAT DETECTION IN AND PASSENGER SCREENING



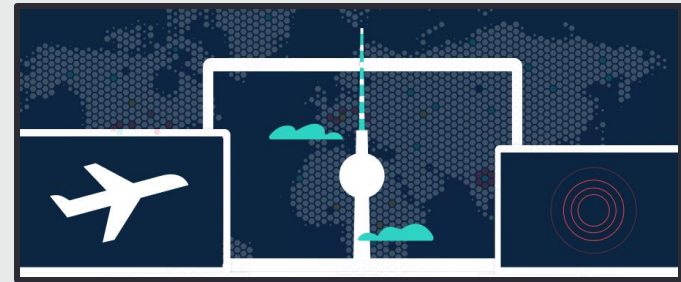
2. CYBERSECURITY

- IMPORTANCE OF PROTECTING AIRPORT SYSTEMS FROM CYBER ATTACK AS RELIANCE ON TECHNOLOGY GROWTH.

Eg- SEA

3. PREDICTIVE MAINTENANCE

- USE OF AI TO PREDICT AND PREVENT EQUIPEMENT FAILURES BEFORE THEY OCCUR ENSURING SAFETY AND EFFICIENCY.



CHALLENGES IN IMPLEMENTING FURTISTIC SYSTEMS

- HIGH COST OF INFRASTRUCTURE DEVELOPMENT AND TECHNOLOGY IMPLEMENTATION.
- REGULATORY HURDLES AND GLOBAL STANDARDS FOR TECHNOLOGY ADOPTION.
- PRIVACY CONCERN WITH BIOMETRIC AND SURVELLIENCE SYSTEMS.
- RESISTANCE TO CHANGE FROM TRADITIONAL SYSTEMS AND WORK



SUMMARY

- INTRODUCTION
- EVOLUTION OF AIRPORT TECHNOLOGY
- FUTURISTIC SYSTEMS OF AIRPORTS
- PASSENGER EXPERIENCE ENHANCEMENTS
- SUSTAINABILITY & GREEN AIRPORTS
- SECURITY AND SAFETY INNOVATIONS
- CHALLENGES IN IMPLEMENTING FUTURISTIC SYSTEMS



THANKYOU

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