



**ICAO EUR/NAT and ACI EUROPE**

**REGIONAL GREEN AIRPORTS SEMINAR**

**Hosted by the Ministry of Transport  
Republic of Kazakhstan**

# Pathways to Zero-Emission Airports: A Sustainable Future in Aviation



ICAO



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**Groupe ADP**

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**Groupe ADP**

# Presentation Overview

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- 2 Sustainability Management System Governance
- 3 Energy Management & Decarbonization Practices
- 4 Solar Power Project (SPP)
- 5 Data Collection
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1  
Introduction



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## Introduction

- Alignment with global aviation sustainability frameworks like **ICAO guidelines and ACI Airport Carbon Accreditation (ACA)**.
- Commitment to **Net Zero emissions by 2050**, with significant progress by 2030.
- Achieving **Carbon Neutrality by 2030**, following the rigorous standards of the **ACI ACA Program**.
- Focus on **actionable energy management solutions** and **carbon reduction strategies** for the aviation sector.

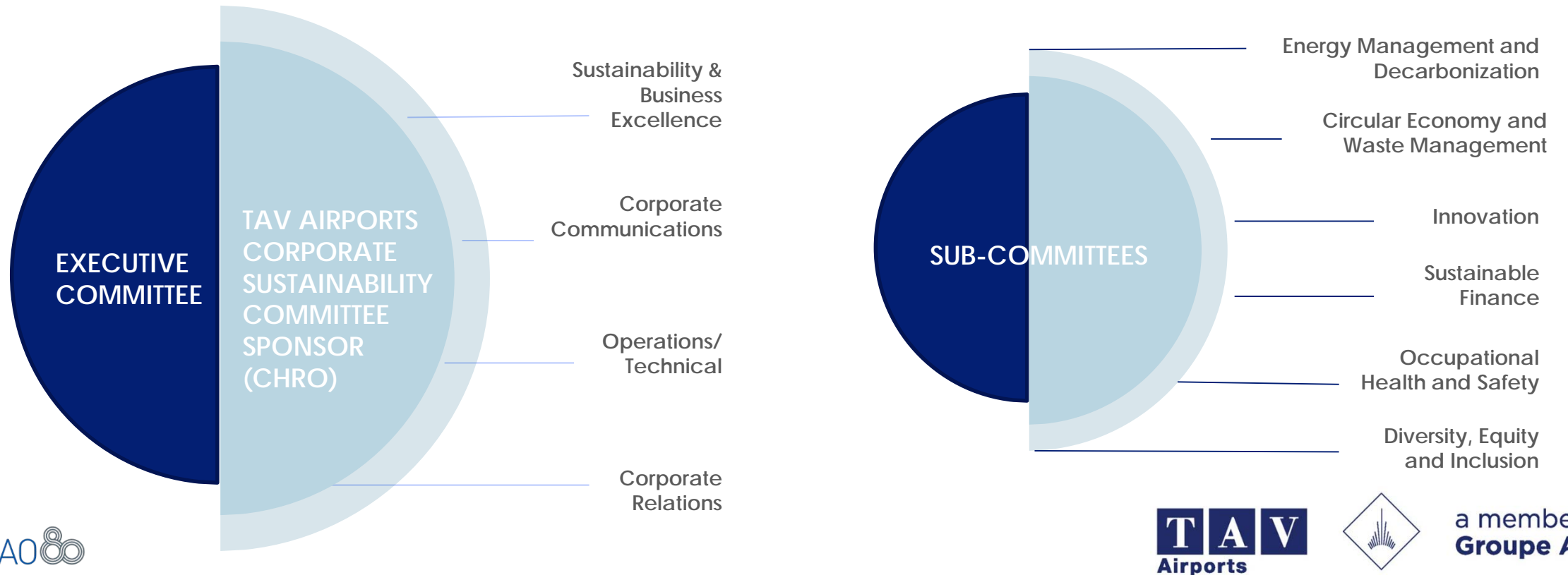
2  
Sustainability  
Management  
System  
Governance



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# Sustainability Management System Governance

The **Corporate Sustainability Committee**, supported by the **Executive Committee**, leads TAV Airports' sustainability efforts.



## Energy & Climate Change Policy

- **Commitment to reducing greenhouse gas emissions** across the value chain.
- Enhancing **energy efficiency** while maintaining service quality.
- Compliance with national and international environmental standards (**IFC, EBRD, Equator Principles**).
- Integration of **climate change risks and opportunities** into business strategy.
- Development of emission inventories and long-term **Net Zero targets**.
- **Transparent communication** with stakeholders on climate goals and performance.
- Collaboration with stakeholders on **climate change prevention and adaptation**.
- Implementation of **ISO 50001 Energy Management System** at all airports.





3  
Energy  
Management &  
Decarbonization  
Practices

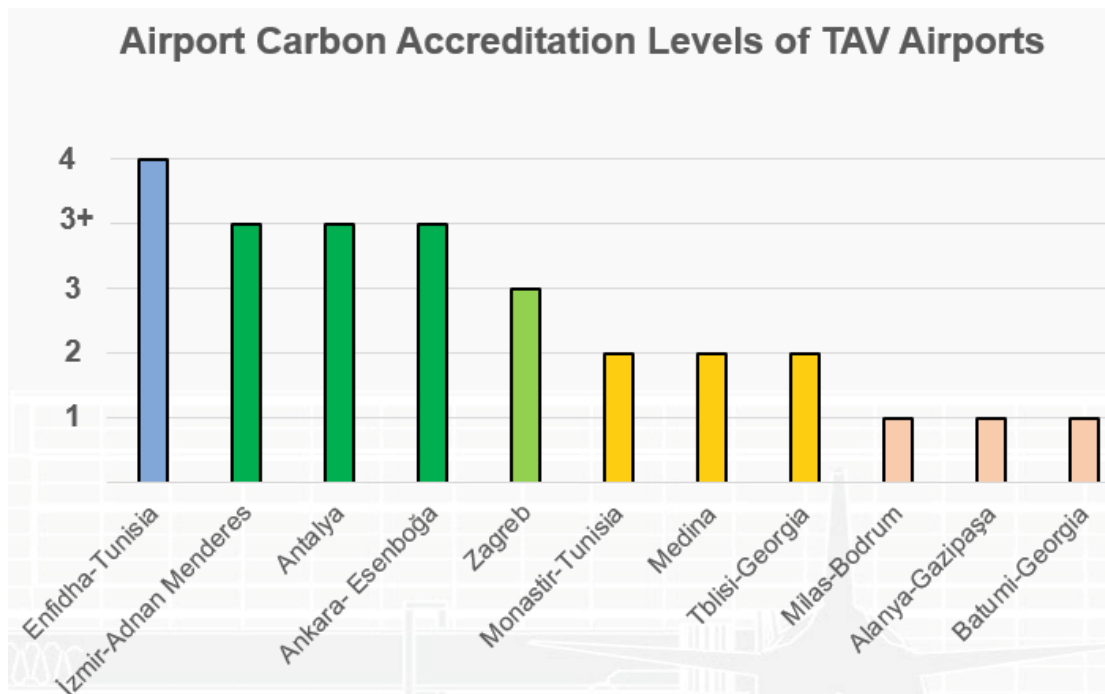


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## Energy Management & Decarbonization Practices

- Significant investments in **solar energy, waste management, and energy-efficient systems** at multiple airports.
- **Solar panel farms** to be implemented at **Esenboğa, Adnan Menderes, and Milas-Bodrum** airports by 2025, with an annual reduction of 7,350 tons of CO<sub>2</sub>e.
- Focus on **renewable energy purchases and automation systems** to enhance energy efficiency as part of TAV's broader sustainability strategy.
- Implementation of **ISO 50001 for energy management and ISO 14064 for greenhouse gas emissions accounting**.
- Currently planning an **energy tracking project** with a start-up for **Esenboğa Airport**.

## TAV Airports Holding: Leading by Example



**Level 4** - Transformation

**Level 3+** - Carbon Neutralized

**Level 3** - Optimization

**Level 2** - Reduction

**Level 1** - Mapping

- By 2025, **Esenboğa, Adnan Menderes, Antalya, and Enfidha** airports will achieve Level 4+ accreditation.
- Several other airports, including **Monastir, Almaty, Skopje, Ohrid, Tbilisi, Batumi, Milas Bodrum, and Gazipaşa** are aiming for Level 3+ accreditation.
- By 2030, most of these airports will move to Level 4 accreditation, including **Almaty, Tbilisi, and Milas Bodrum**.
- The ultimate goal is for all these airports to achieve **Level 5** accreditation by 2050, with **Esenboğa, Adnan Menderes, Antalya, and Enfidha** leading the way.
- This accreditation pathway supports the commitment to achieving net-zero emissions by 2050.

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## Solar Power Project (SPP)

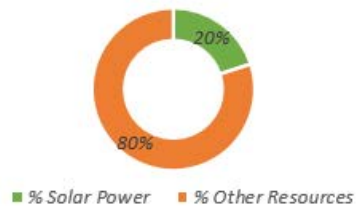


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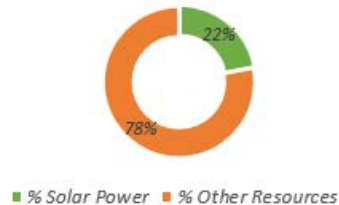
## Solar Power Project (SPP)



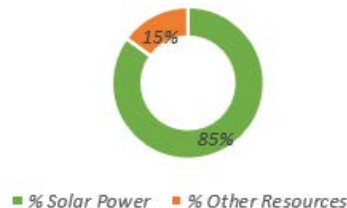
ESB Solar Power %



ADB Solar Power %



BJV Solar Power %



- Solar panel farms are being established at **Esenboğa, Adnan Menderes, and Milas-Bodrum** airports by 2025.
- With Solar Panel investments, it is expected that **27.3 MWh** of annual electricity consumption will be shifted to green resources.
- The total investment cost of the project is **USD 20,000,000**.

# 5 Data Collection



# Data Collection

- TAV collects **ESG data** from its service companies and airports, consolidating the data for reporting purposes.
- The online platform is used for data management, providing a **live, self-updating dashboard**.
- Investors and stakeholders can track ESG data in real-time through this platform, enhancing **transparency and engagement**.

CLIMATE

**CARBON OFFSETS/CREDITS**

Antalya Airport has procured 1,725 tons of CO2e worth of Verified Carbon Units (VCUs) from Verra for the year 2023.

Additionally, TAV Holding has offset its 2022 emissions at Ankara, Izmir, and Enfidha airports by retiring 21,603 carbon credits from two Verra-licensed projects, reinforcing its commitment to carbon-neutral operations.

**CLIMATE EMISSION (tCO2e)**

TAV Holding

TAV Holding	
CO2 EQUIVALENT EMISSIONS DIRECT, SCOPE 1	30,532.32
CO2 EQUIVALENT EMISSION INDIRECT SCOPE 2 MARKET-BASED	17,263.92
CO2 EQUIVALENT EMISSION INDIRECT SCOPE 2 LOCATION-BASED	51,557.92
CO2 EQUIVALENT EMISSION INDIRECT SCOPE 2 WITHOUT BIFURCATION	51,557.92
CO2 EQUIVALENT EMISSIONS TOTAL MARKET-BASED	47,796.24
CO2 EQUIVALENT EMISSIONS TOTAL LOCATION-BASED	82,090.24
CO2 EQUIVALENT EMISSIONS TOTAL WITHOUT BIFURCATION	82,090.24
CO2 EQUIVALENT EMISSIONS INDIRECT, SCOPE 3	722,122.29
UPSTREAM SCOPE 3 EMISSIONS BUSINESS TRAVEL	107.06
UPSTREAM SCOPE 3 EMISSIONS EMPLOYEE COMMUTING	97.51
UPSTREAM SCOPE 3 EMISSIONS PURCHASED GOODS AND SERVICES	183,851.32
UPSTREAM SCOPE 3 EMISSIONS CAPITAL GOODS	11,856.56
TOTAL CO2 EQUIVALENT EMISSION SCOPE 1, 2 AND 3 MARKET-BASED	769,918.53
TOTAL CO2 EQUIVALENT EMISSION SCOPE 1, 2 AND 3 LOCATION-BASED	804,212.53
TOTAL CO2 EQUIVALENT EMISSION SCOPE 1, 2 AND 3 WITHOUT BIFURCATION	804,212.53

RESOURCE USE

Statistical Data (GJ)

TAV Holding		2023
ENERGY USE TOTAL GJ	1,509,705.38	
ENERGY PURCHASED DIRECT GJ	1,988,228.92	
ENERGY PRODUCED DIRECT GJ	1,227,760.80	
ELECTRICITY PURCHASED GJ	439,897.39	
ELECTRICITY PRODUCED GJ	106,775.05	
RENEWABLE ENERGY USE GJ	43,198.80	
RENEWABLE ENERGY PURCHASED GJ	160,646.40	
RENEWABLE ENERGY PRODUCED GJ	3,606.00	
TOTAL RENEWABLE ENERGY GJ	164,252.40	

Statistical Data (MWh)

TAV Holding		2023
ENERGY USE TOTAL MWH	419,362.61	
ENERGY PURCHASED DIRECT MWH	552,285.81	
ENERGY PRODUCED DIRECT MWH	341,044.67	
ELECTRICITY PURCHASED MWH	122,193.72	
ELECTRICITY PRODUCED MWH	29,659.74	
RENEWABLE ENERGY USE MWH	11,999.67	
RENEWABLE ENERGY PURCHASED MWH	44,624	
RENEWABLE ENERGY PRODUCED MWH	1,002	
TOTAL RENEWABLE ENERGY MWH	45,625.67	

Statistical Data (tCO2e)

TAV Holding		2023
NOX EMISSIONS	1,183.00	
SOX EMISSIONS	193.00	
VOC EMISSIONS	1.00	

# 6 Reporting





## Reporting

- TAV discloses its ESG data to **CDP** and **Refinitiv** (LSEG).
- Preparations are underway for reporting under **Turkey's Sustainability Reporting Standards**.
- As a subsidiary of Groupe ADP, TAV also reports data for the **Corporate Sustainability Reporting Directive (CSRD)** to Groupe ADP, ensuring alignment with global sustainability frameworks.
- TAV Airports is preparing to commit to the **Science-Based Targets Initiative (SBTi)** by 2024.
- Successfully prepared and submitted our **Communication on Progress report to the UN Global Compact**.

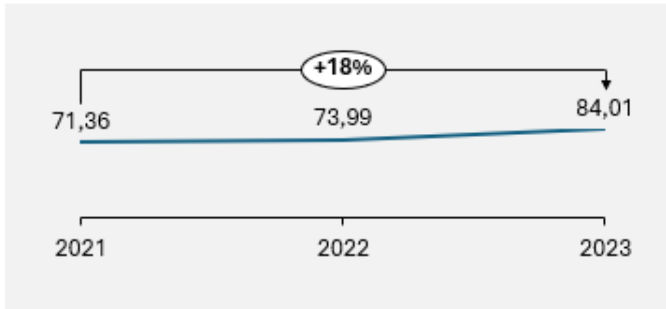


LONDON  
STOCK  
EXCHANGE



## ESG PERFORMANCE

TAV AIRPORT ESG SCORE (2021-2023)



ESG SCORE TOP 10 COMPANIES 2023



- TAV Airports has achieved **the highest ESG performance in the airport category on LSEG**, formerly known as Refinitiv.
- Particularly notable is our high score in the **"Emissions"** section, where we received a remarkable 83 points.

ESG Score	Environment Pillar ...	Resource Use Score	Emissions Score
84.01	69.59	77.37	82.63

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# Innovations and Technologies



## Innovations & Technologies

- TAV Airports is adopting **AI-supported building management systems** for energy optimization, aiming for energy-efficient and sustainable operations.
- Targeting **Zero Waste certification** by 2025 with initiatives focused on recyclable materials and reducing single-use items.
- Collaborating with a startup on a **water management project at Bodrum Airport** to digitize and optimize water and wastewater systems, enhancing efficiency and reducing costs.
- Partnering with another startup at **Bodrum Airport to improve waste management** processes using digital tools, boosting operational efficiency and environmental performance.

# Innovations & Technologies

## WHY CHOOSE «SUSTAINABILITY» AS THE FIRST CANVAS OF INNOVATION?

### GLOBAL CONTRIBUTION AS TAV AIRPORTS

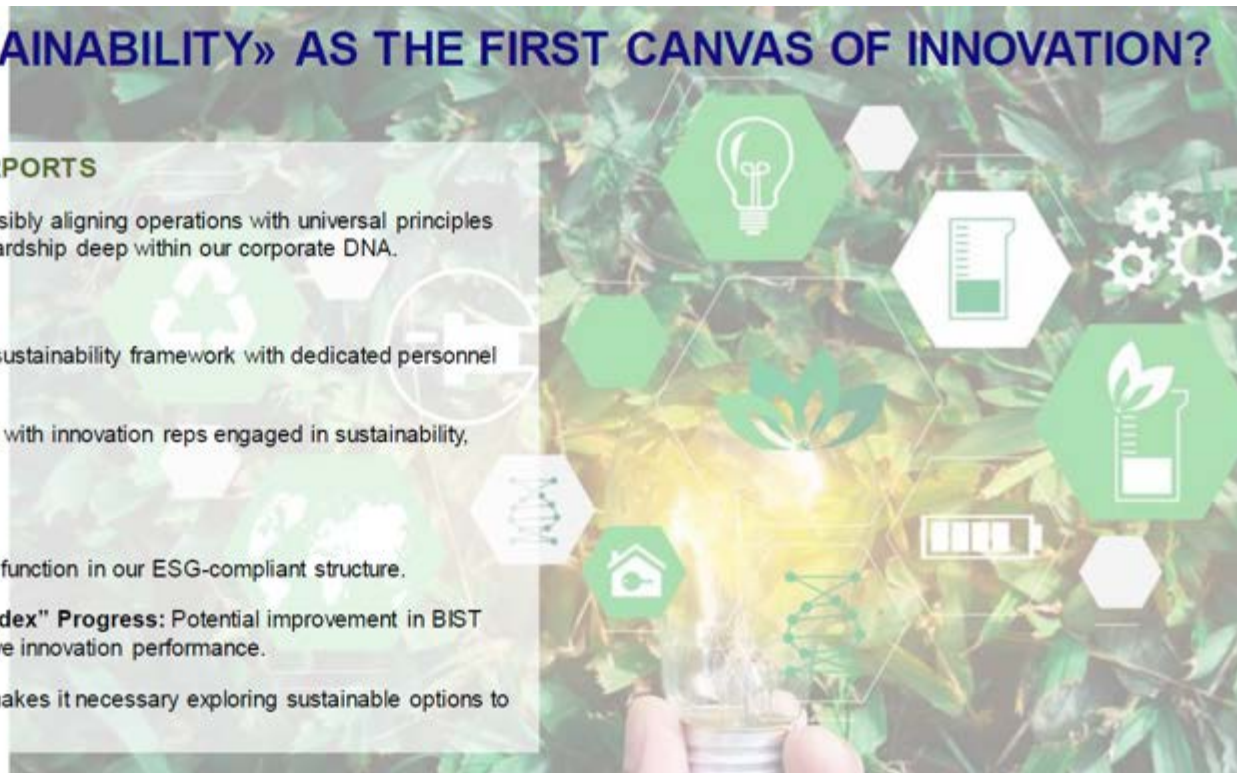
- **Contributing Global Goals:** Responsibly aligning operations with universal principles while embedding environmental stewardship deep within our corporate DNA.

### STRUCTURAL ENABLERS

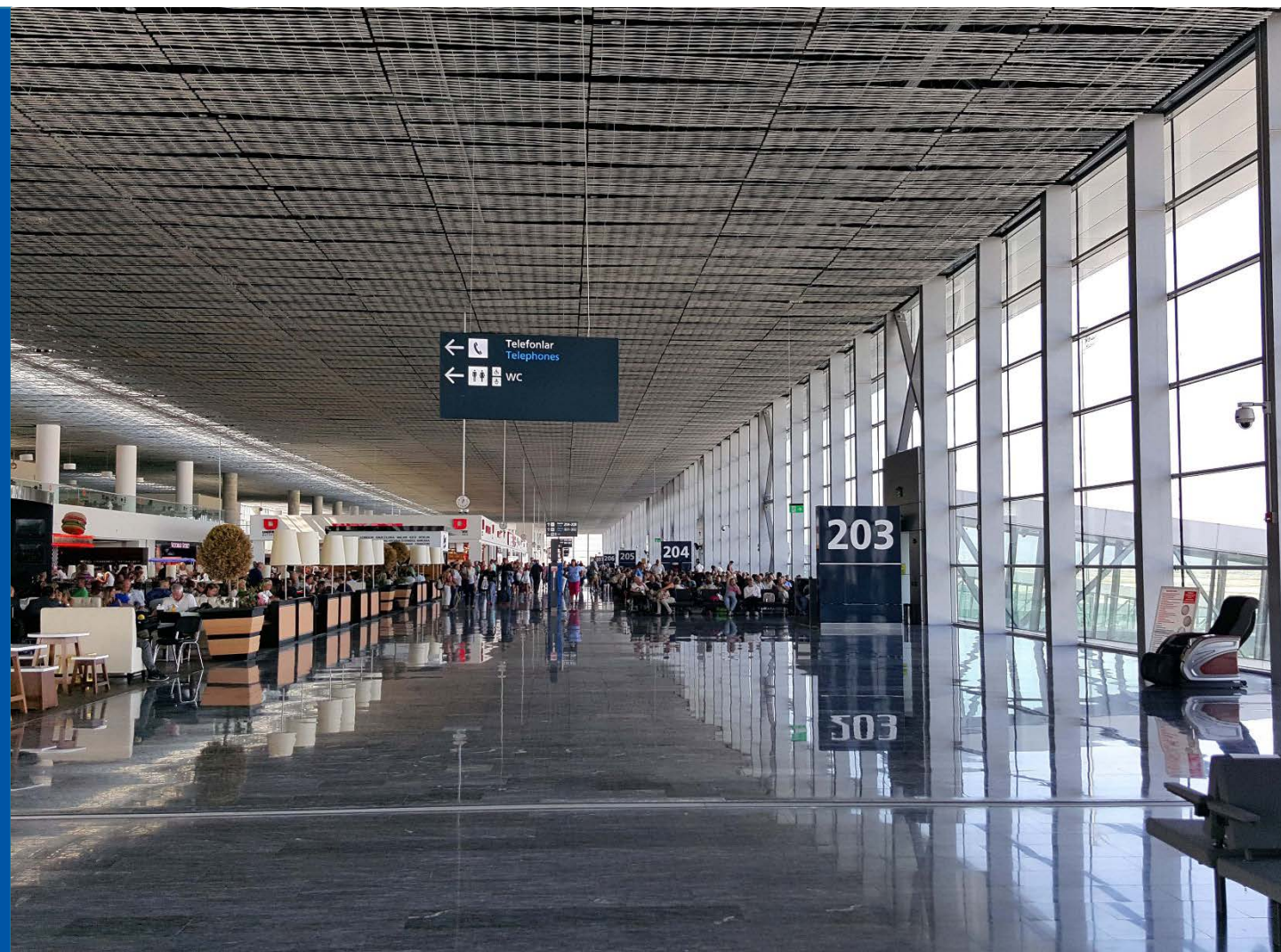
- **Framework & Staff:** An established sustainability framework with dedicated personnel could facilitate innovation.
- **Role Integration:** Roles are blended, with innovation reps engaged in sustainability, creating synergies.

### PERFORMANCE

- **ESG Support:** Innovation as support function in our ESG-compliant structure.
- **BIST “Environmental Innovation Index” Progress:** Potential improvement in BIST ‘innovation’ category, reflecting positive innovation performance.
- **Financial Imperative:** Rising costs makes it necessary exploring sustainable options to ensure financial stability.



# 8 Conclusion



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# Thank You

