

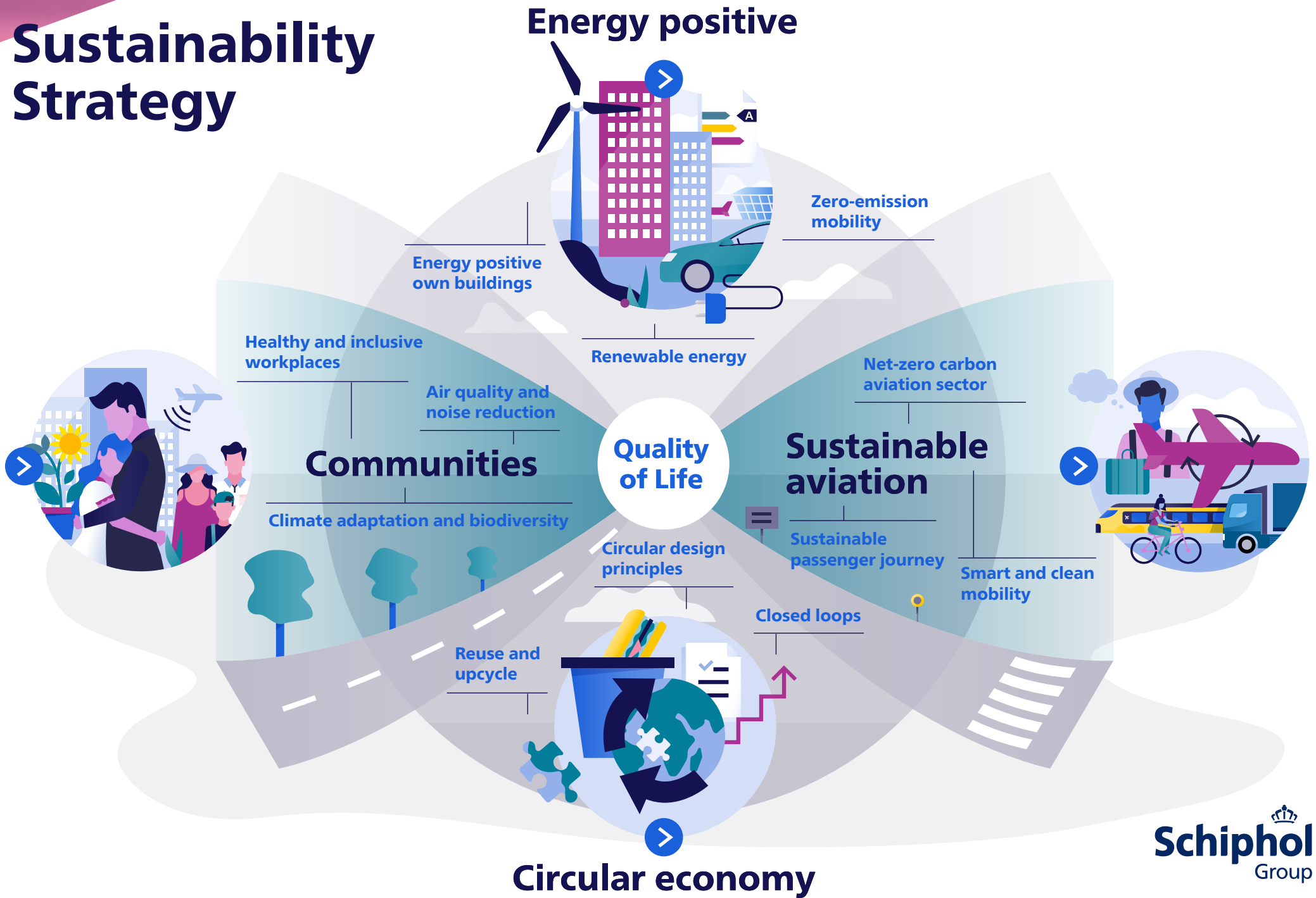


# Annual Review 2022

Roadmap most sustainable airports



# Sustainability Strategy





# Energy positive



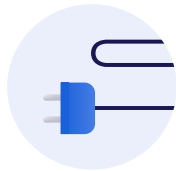
# Energy positive (1)



Zero carbon  
emissions  
2030

Energy-  
positive  
airports  
2050

## Zero emissions mobility



- Introduction of License to Operate with handlers (AMS)
- Pilot e-GPU has been finalised for narrow-body and wide-body aircrafts (AMS)
- Schiphol can monitor emissions of commuter traffic thanks to Schiphol Go app (AMS)
- HVO100 has been tested in the snow removal fleet (ASM)
- Test with HVO100 for emergency generators (EIN)
- RTM has implemented 100% HVO100 for all ground vehicles and equipment (RTM)
- 3 out of 10 e-GPUs are delivered and are being used by Aviapartner (RTM)
- Transitioned to 100% HVO100 for all ground vehicles and equipment (LEY)

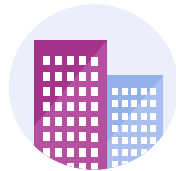
# Energy positive (2)



Zero carbon emissions  
2030

Energy-positive airports  
2050

## Energy positive own buildings



- 100% green gas at RTM, EIN, LEY, 10% green gas at AMS (RSG)
- From medio March the heating in terminal and offices was 1 degree lower to reduce gas consumption. Main reason was the war in Ukraine, also visible in TPI Sustainability performance (AMS)
- Tenants have received a request to be prepared to reduce 20% less natural gas, in case of a deficit of natural gas in the winter (AMS)
- Crucial investments relating to phasing out natural gas and electrification were earmarked in Take-off 2.0 (AMS)
- Improved heat pumps in hotel and smarter temperature settings in offices (EIN)
- Removal of 2 gas connections, leading to 50% reduction of natural gas consumption compared to 2021 (RTM)

# Energy positive (3)



## Renewable energy

- ISO 50001 Energy Management certificate renewed (RSG)
  - Schiphol solar programme has been set up in order to reach 2030 goal (AMS)
  - AMS and EIN achieved ACI Airport Carbon Accreditation level 4+ (AMS, EIN)
  - Subsidy granted for research into expanding solar panels and ways energy can be generated, including airside (EIN)
- The solar farm is operational, it produces 11 GWh solar energy (RTM)

Zero carbon emissions  
2030

Energy-positive airports  
2050



# Sustainable aviation



# Sustainable aviation (1)



Aviation CO2 emissions reduced to 2005 levels  
**2030**

Net-zero-carbon aviation sector  
**2050**

## Sustainable aviation



- Advocacy on national, European (fit-for-55) and global level to spur sustainable aviation policies (RSG)
- Contributed to multiple studies: Mission Possible Partnerships, WEF Target True Zero and ACI & ATI on hydrogen and SAF (RSG)
- Progress report on joint action plan Smart and Sustainable Aviation published (RSG)

- Sustainable Aviation Fuel (SAF) incentive for airlines effective since April. 20,000 tonnes SAF has been uplifted by airlines at Schiphol in 2022 (AMS)
- RSG has acquired 2 Taxibots to continue testing with sustainable taxiing at Schiphol. Heron subsidy for sustainable taxiing has been granted (AMS)

- Sustainable Landing and Take-off charge per 1-4-2023 (EIN)
- LEY joined the Flevoland Hydrogen Valley consortium to further investigate H2 energy transition (LEY)
- LEY joined the Power Up initiative, focused on electric flying (LEY)



# Sustainable aviation (2)



Aviation CO2 emissions reduced to 2005 levels  
**2030**

Net-zero-carbon aviation sector  
**2050**

## Smart and clean mobility



- 10,000 extra charging stations will be installed at Schiphol (AMS)
- Preparation for Zero Emission Zone for delivery vans and lorries at Schiphol Centre (AMS)

## Sustainable passenger journey

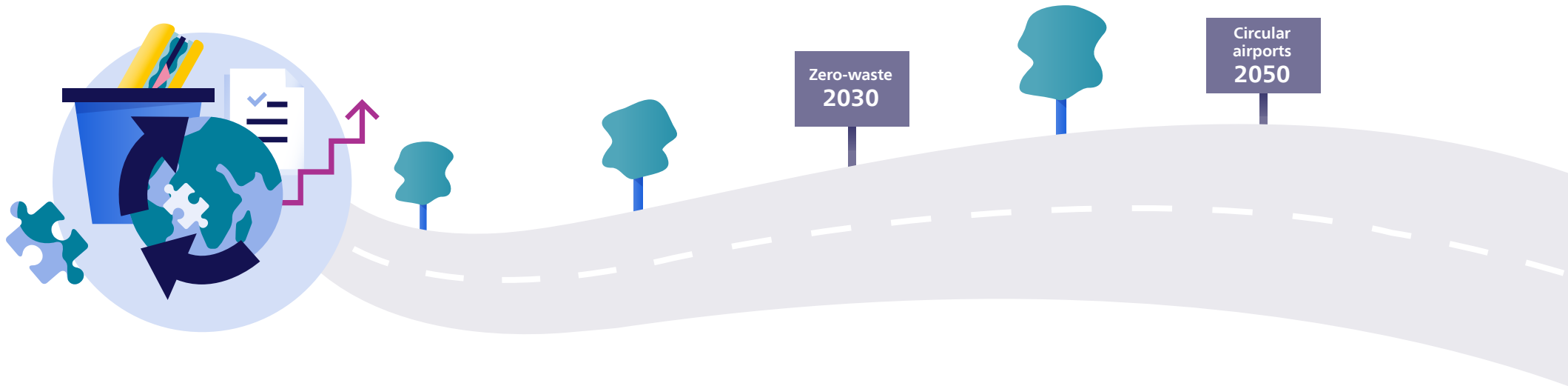


- Support the campaign on forced marriage in the terminal during the Summer holiday (AMS)
- Fly on SAF programme launched. Passengers can buy SAF credits to lower the environmental impact of their flight (RTM)

# Circular economy



# Circular economy (1)



## Circular design principles



- Testing the BCI score and the BCI Buildings has continued (AMS)
- Improvement of circularity requirements in projects (AMS)

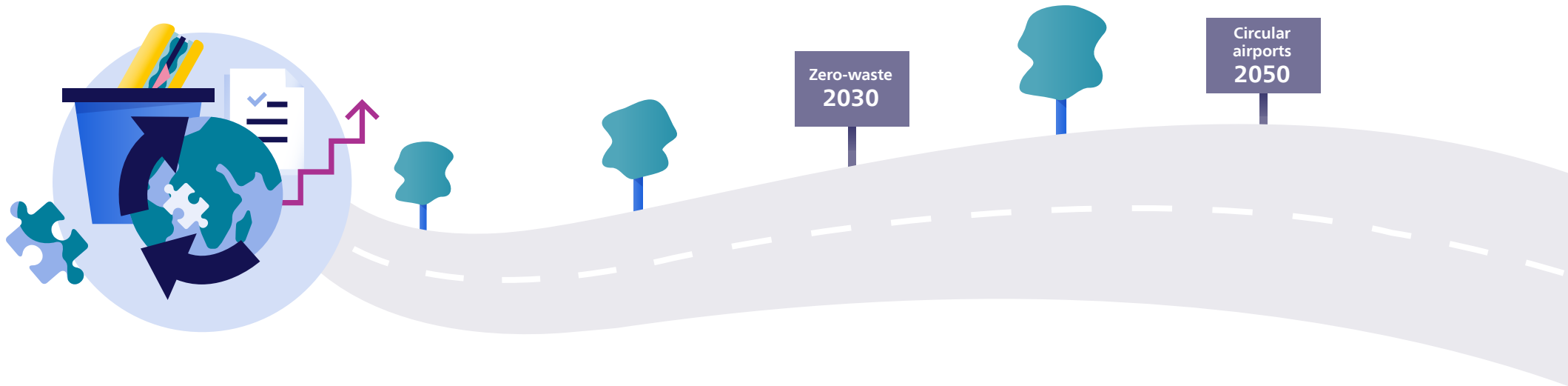
## Closed loops



- The Material Management Flow Tender concluded in December 2022. Renewi/ Seenons is the winning party for AMS and RTM and Remondis is the new partner for EIN (RSG)



# Circular economy (2)



## Reuse and upcycle



- Improving separation rate of cabin waste with airlines and waste handler and IATA statement signed to improve reuse and recycling of cabin waste (RSG)
- Continuous innovation on the asphalt and concrete used in projects, to make them more sustainable (RSG)
- Pilot plastic road (airside) started (AMS)
- Much work done on gathering data, and improving data quality (AMS)
- Preparations has been started for a new environmental area on airside. Main goal is to improve separation of residual flows (EIN)
- Introduction of return vending machines with option to donating the money to a charity (EIN)
- New furniture in the terminal is made of old paper (RTM)

# Communities



# Communities (1)



Improved balance  
between communities  
and airports  
2030

Pleasant living and  
working environment  
around airports  
2050



## Air quality and noise reduction



- On-site measurements of UFP concentrations in collaboration with TNO done in 2021. In the Summer of 2022 an internal *blootstellingsonderzoek* (exposure study) was carried out together with KLM. Employers offer facemasks for employees to wear on the platform a voluntary basis. Executed first experiment to use water droplets as an innovate solutions to mitigate UFP at airside (AMS)
- Education programme for primary schools (groep 8) renewed (AMS)
- The stakeholder participation process for a new Airport Decree (Luchthavenbesluit), which included consultation of local inhabitants among others, has been completed (RTM)



# Communities (2)



Improved balance  
between communities  
and airports  
2030

Pleasant living and  
working environment  
around airports  
2050



## Inclusive workplaces



- Improved labour contracts with interventions as the Sociaal Akkoord with the *Zomertoeslag* and the *Arbeidsmarkttoeslag*. Job fair to attract new colleagues (June 2022) (RSG)
- Several initiatives on diversity and inclusion, including Iftar, Keti Koti gathering, mentor program Emma @ work and diversity day (AMS)

## Climate adaptation and biodiversity



- Climate adaptation strategy is developed (RSG)

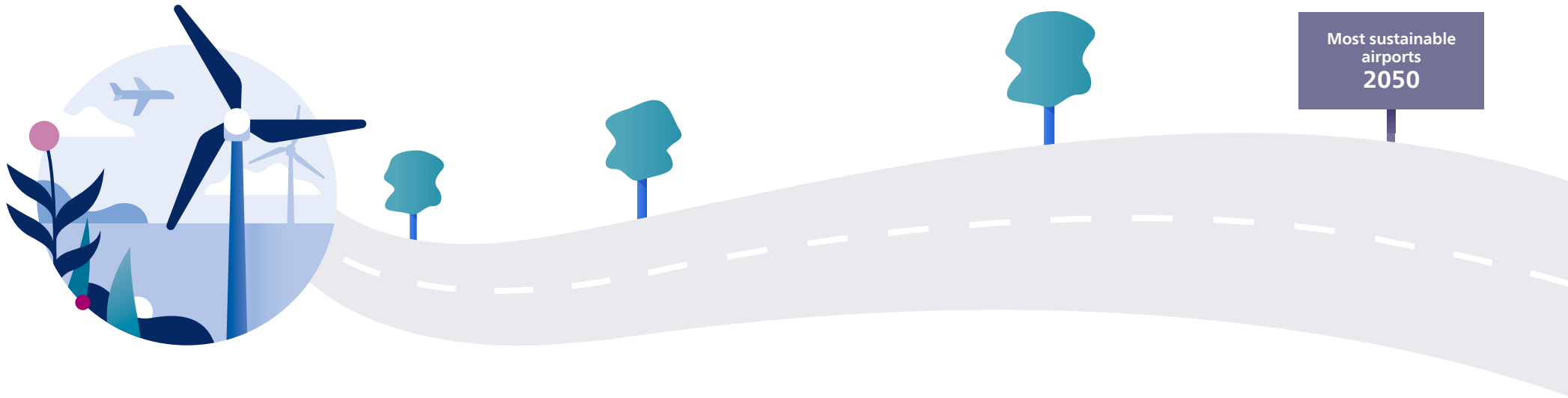
# Embedding sustainability



Welcome to Amsterdam

Sch

# Embedding sustainability



- Refined sustainability strategy published (RSG)
- TULIPS accelerates the implementation of innovative and sustainable technologies to reduce emissions at airports, supported by the EU with €25 million in funding. In 2022 TULIPS has been launched, and the first General Assembly, External Advisory Board and working group meetings have taken place (RSG)
- E-learning sustainability has been developed to create awareness on sustainability strategy is finished (RSG)
- The *Bouwen Zonder Afval* programme has been developed. The aim is to integrate circular economy principles in construction projects (AMS)
- Twin transition is developed, a synergy between IT and sustainability goals (AMS)



# Colophon

For further details, please visit the following websites:

- [Royal Schiphol Group](#)
- [Eindhoven Airport](#)
- [Rotterdam The Hague Airport](#)
- [Lelystad Airport](#)

If you have questions or feedback, please visit [schiphol.nl/nl/contact-schiphol](https://www.schiphol.nl/nl/contact-schiphol)

Royal Schiphol Group, March 2023

# Abbreviations

**RSG:** Royal Schiphol Group

**AMS:** Amsterdam Airport Schiphol

**EIN:** Eindhoven Airport

**RTM:** Rotterdam The Hague Airport

**LEY:** Lelystad Airport