

REGIONAL GREEN AIRPORTS SEMINAR

Hosted by the Ministry of Transport of the Republic of
Uzbekistan



VINCI Concessions Hydrogen Strategy





Samy BEN-OTHMAN

Hydrogen Infrastructure Engineer / PhD Candidate

samy.ben-othman@vinci-concessions.com

AGENDA

01 VINCI / VINCI Concessions
introduction

02 Presentation of the Clean H2
Infra Fund

03 Lyon Saint Exupéry Airport
Hydrogen initiatives

04 Other Hydrogen initiatives

01

VINCI / VINCI
Concessions
introduction



VINCI, a global player in concessions, energy and construction

285 000
employees
in 2024

€71,6 bn
revenue
in 2024

4 000
business units

373 000
worksites



Concessions

VINCI Concessions

VINCI
Autoroutes

VINCI
Airports

VINCI
Highways

VINCI
Railways

Other
concessions

Energy Solutions

COBRA
IS

VINCI
Energies

Construction

VINCI
Construction

VINCI
Immobilier

VINCI Concessions: a world leader



Airports



334 M

passengers
in 2025

+70

airports
in 14 countries

1st private operator
in the world



Highways



100 M

transactions/month

8 193 km

in 14 countries

1st concessionaire
in France, Germany, Greece,
Czech Rep & Slovakia



Rail



+140 M

passengers since 2017 for
LGV SEA

302 km

of high-speed rail

99,7%
regularity rate in 2023



Stadiums



2 stadiums

61 000 capacity

128 events
in 2024

VINCI Concessions: a world leader



Airports



334 M

passengers
in 2025

+70

airports
in 14 countries

1st private operator
in the world



Highways



100 M

transactions/month

8 193 km

in 14 countries

1st concessionaire
in France, Germany, Greece,
Czech Rep & Slovakia



Rail



+140 M

passengers since 2017 for
LGV SEA

302 km

of high-speed rail

99,7%
regularity rate in 2023



Stadiums



2 stadiums

61 000 capacity

128 events
in 2024

02
CLEAN
HYDROGEN
INFRA FUND



CLEAN HYDROGEN INFRA FUND

CLEAN H2 INFRA FUND

an initiative of



Asset manager



20 Bn€ investment stream by 2028

Multiplying outreach via minority investment
2 bn€ equity => 20 bn€ investment power
10 to 12 years maturity



Investment from
other shareholders

Project Financing
(Banks, bonds + subsidies)

UNIT COSTS IMPACTS

Nearly 2 billion EUR invested through 9 companies:

1 HY2GEN



- Segment: Upstream
- **Sector: Green hydrogen & derivatives / E-fuels**
- Countries: Europe (55%) & North America (45%) + Germany (HQ)
- Type: New facilities
- Initial investment: Minority

4 H2MOBILITY

- Segment: Downstream
- Sector: Distribution Network
- Country: Germany (HQ)
- Type: Existing installations & extension
- Initial investment: Minority

7 H2green steel

- Segment: Upstream & Downstream
- Sector: Green hydrogen for steel industry
- Countries: Europe (Sweden)
- Type: New facilities
- Initial investment: Minority

2 enagasrenovable

- Segment: Upstream
- Sector: Green hydrogen + Renewables & Biomethane
- Country: Mainly Spain (HQ), options in LATAM & Morocco
- Type: New facilities

5 Everfuel

- Segment: Upstream
- Sector: Green hydrogen
- Country: Denmark (HQ)
- Type: New facilities
- Initial investment: Minority

8 HYSETCO

- Segment: Upstream & Downstream
- Sector: Green hydrogen for light mobility
- Countries: Europe (France)
- Type: Taxis, HRS, New facilities
- Initial investment: Minority

3 Elyse



- Segment: Upstream
- **Sector: SAF & E-methanol**
- Country: France & Spain
- Type: New facilities
- Initial investment: Minority

6 InterContinental Energy

- Segment: Upstream
- Sector: Green hydrogen + Renewables
- Country: Mainly the Middle East
- Type: New facilities
- Initial investment: Minority

9 StormFisher

- Segment: E-fuel & Hydrogen
- Sector: E-Methanol + E-methane
- Countries: USA
- Type: New facilities
- Initial investment: Minority

03

Lyon Saint Exupéry Airport Hydrogen initiatives



LYON SAINT EXUPÉRY AIRPORT

Projects descriptions

Hympulsion Station at Lyon-Saint Exupéry (LYS)

- Inaugurated in June 2025, distributing green hydrogen for light vehicles.
- Pilot site for VINCI Airports' decarbonization strategy.

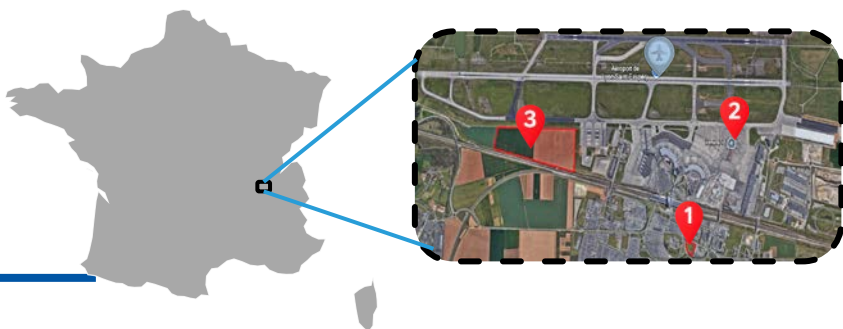
GOLIAT Project Demonstration

- Demonstration focuses on developing and validating liquid hydrogen (LH2) refueling technologies for future large commercial aircraft.
- Includes ground operations of an LH2-powered aircraft (HY4)
- First H2 aircraft taxiing test with Airbus at LYS planned by 2027.
- Also aims to establish standardization and certification frameworks for LH2 operations.

Connection to European Hydrogen Backbone (EHB)

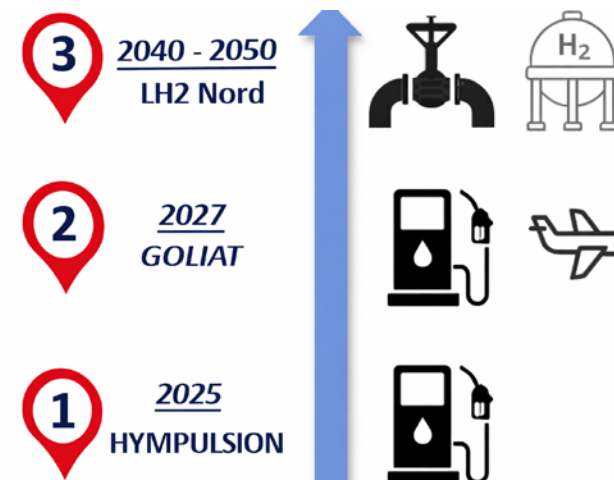
- Possible connection with the European Hydrogen Backbone to have hydrogen at the Airport, Horizon 2040-2050

Map



- 📍 Site
- 📍 Lyon Saint Exupéry Airport

Timeline



Lyon Saint Exupéry Airport

Hydrogen

Actors



GOLIAT - Ground Operations of Liquid hydrogen Aircraft

Project description & objectives



Models

Assessment of hydrogen demand at airports in Europe

Hydrogen supply chain model and costs evaluation



Refuelling Technologies

Innovative high-flow ground-based refuelling systems for liquid hydrogen

Development and tests of large scale LH2-refueller and A/C refuel system



LH2 A/C Demonstrations

Demonstration of LH2-powered aircraft ground operations at three EU airports

Operations of parking, taxiing, manoeuvring, refuelling



Framework

Guidelines covering Standardisation & certification of LH2 refuelling operations and equipment

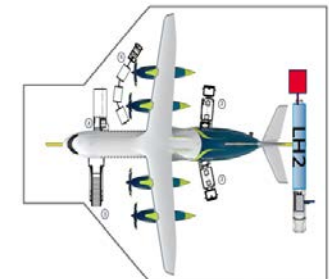
Actors



- Pilot at Saint-Exupéry Airport in 2027

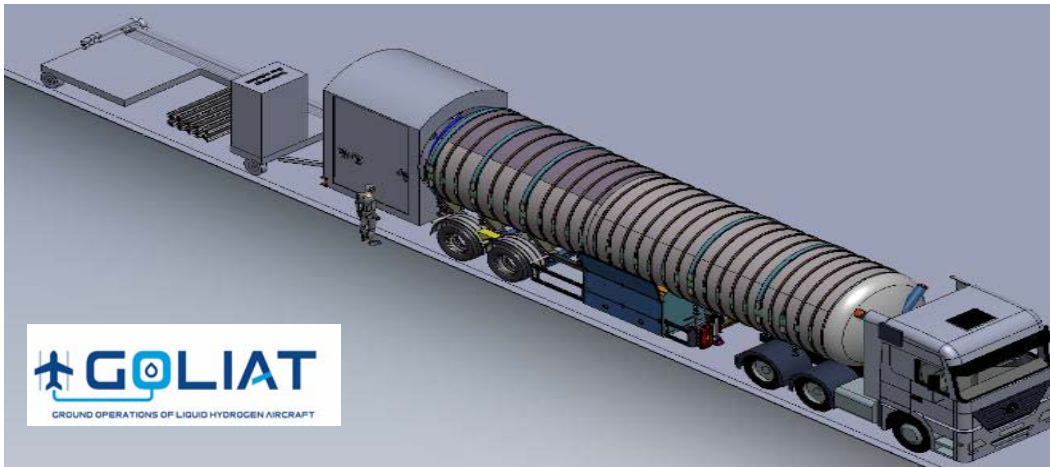
LYON AÉROPORT

- Identification of norms and standards applicable to LH2 refuel



GOLIAT - Ground Operations of Liquid hydrogen Aircraft

Key Achievements



Refuelling Side :

- Design validated by Chart
- Definition of a refuelling procedure (including time estimation)
- Functional specification of the LH₂ transfer system based on the aircraft completed



Airport Side :

- Feasibility studies for each airport demonstration completed
- Specification study on LH₂ refueller compatibility with airports on-going
- Evaluation and analysis of structured models on H₂ aviation airport impacts (operational, techno-economic, demand, costs and airport ground movement models) on-going

04 Other Hydrogen initiatives



London Gatwick Airport

London Gatwick Airport

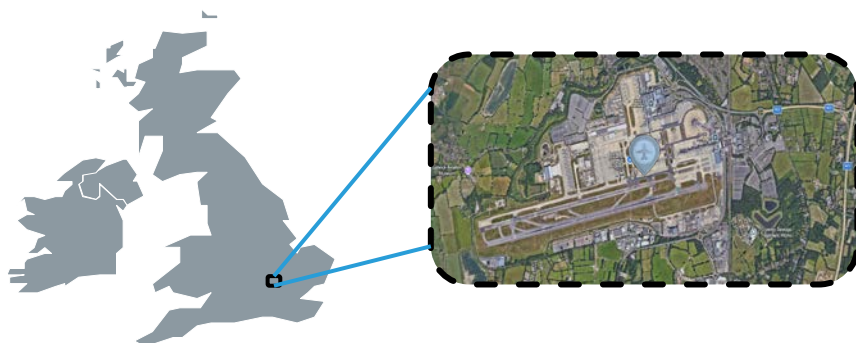
Hydrogen



Overview

- Vinci Airports became the majority shareholder of Gatwick Airport in 2019
- 2nd busiest UK Airport
- 10th busiest Airport in Europe
- Busiest single-runway airport in Europe
- Over 43 million annual passengers
- Approx. 280,000 annual flights movements

Map



London Gatwick
Airport

Project description

- Partnership formed in July 2024 between London Gatwick, Airbus, easyJet and Air Products
- Part of Airbus' "Hydrogen Hub at Airports" program, alongside Lyon-Saint Exupéry and Kansai.
- Covers liquid hydrogen supply & storage on-site, refuelling and ground handling of hydrogen aircraft.
- London Gatwick targets net zero for Scope 1 & 2 emissions by 2030, ten years ahead of its prior plan.
- Hydrogen is seen as a key lever to decarbonise Scope 3 emissions, especially for short-haul aircraft.

Actors



Kansai Airports

Kansai Airport

Hydrogen



Overview

- 80% owned by a consortium of Orix and Vinci Airports
- Kansai International Airports is the 3rd busiest Japanese Airport
- Over 54 million cumulative annual passengers
- Approx. 380,000 cumulative annual flights movements
- Operating H2 Fuel Cell Buses since 2022
- Hydrogen Ground Support Equipment in service :
 - Fuel Cell Forklifts
 - Zero Emission Vehicle

Project description

- Explores hydrogen use at 3 airports operated by Kansai Airports: KIX, Osaka Itami, Kobe.
- Airbus provides aircraft & ground-ops insight; Kansai Airports studies the required infrastructure.
- Airbus, Kansai Airports and Kawasaki launch a feasibility study for hydrogen aircraft operations.
- LH2 demand forecast: a few tons/day at start, rising to several hundred tons/day by ~2050
- Part of Airbus' "Hydrogen Hub at Airports" programme.
- Kansai Airports targets net zero GHG emissions by 2050 across the 3 airports it operates.

Map



Kobe airport

Kansai International airport

Osaka International airport



Actors

KANSAI AIRPORTS

VINCI CONCESSIONS

Kawasaki

AIRBUS

Rahmat
Раҳмат

—
Thank You

