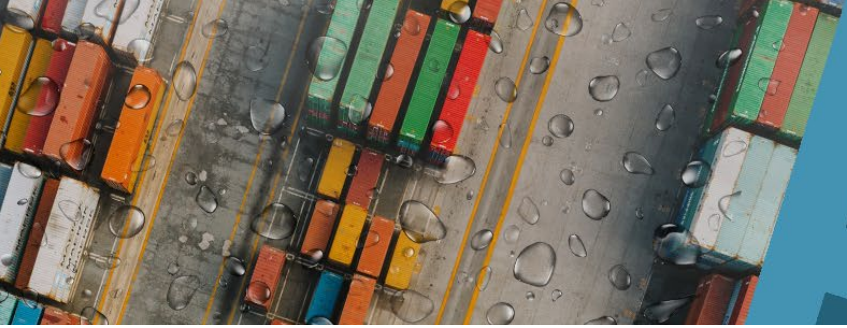
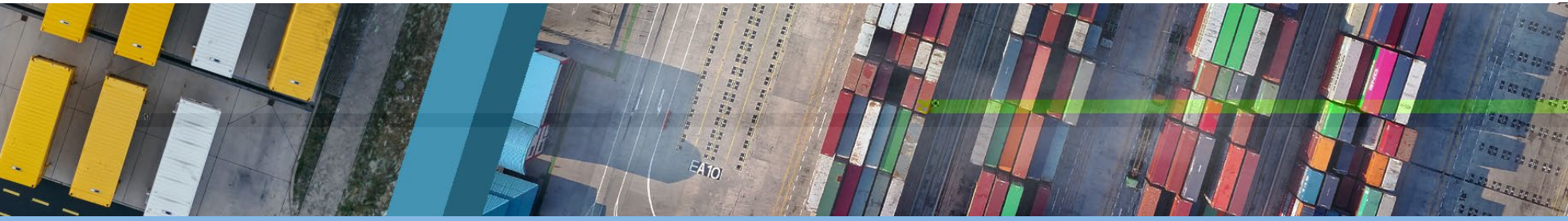


IPIC 2021, 15-16 June 2021

AWARD

Scaling autonomous logistics



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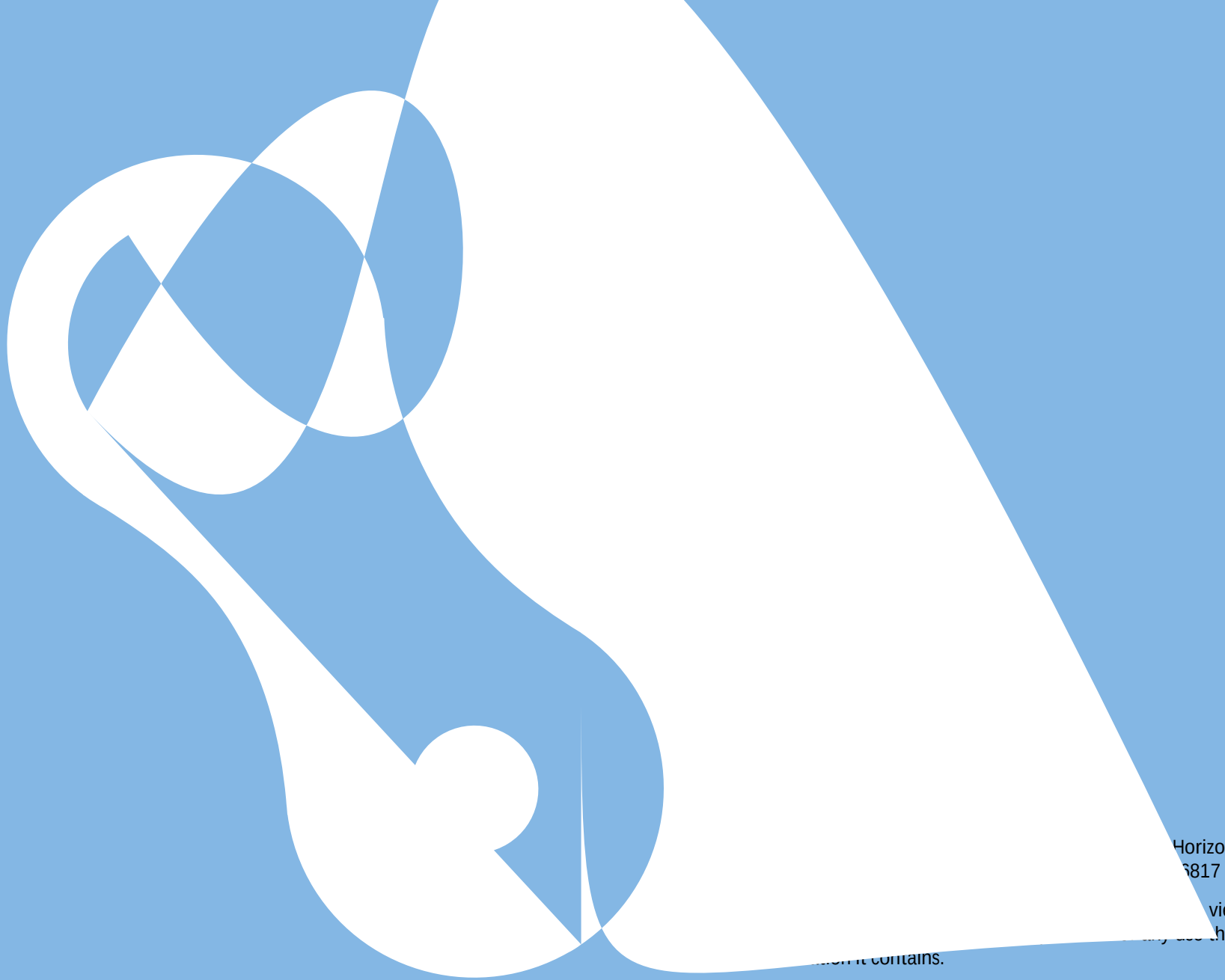

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Contents

- H2020 context
- AWARD approach
- Support us !

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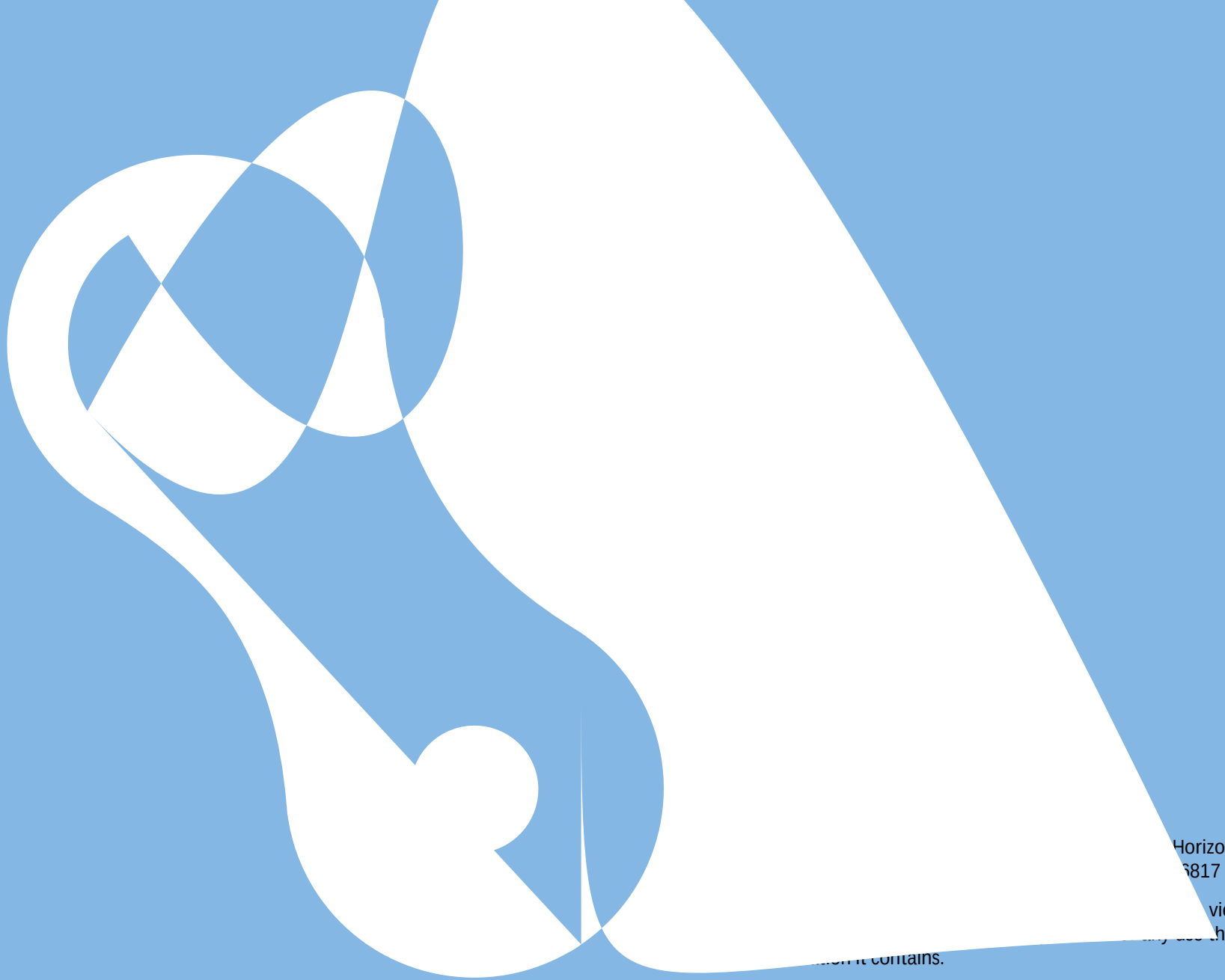

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H2020 objectives – Innovation for the Industry

1. Contribution to the **accelerated deployment of innovative connected and automated freight transport solutions in Europe**

2. Contribution to the **increase of the overall safety and efficiency of freight operations** of individual trucks or fleets in confined areas and in mixed traffic (hub to hub) **through innovative connected and automated driving systems**

3. Actions will show the **uptake of new business models**

4. Actions will seek to reach a **total cost reduction of operations and logistics and supply chain**, leading to improved competitiveness of the European transport and logistics industry

"Our focus is to develop, test and demonstrate connected and **automated** systems for **heavy commercial vehicles** in **real logistics operations**."

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AWARD response

H2020 framework

- **2018-2020** : Digitising and Transforming European Industry and Services: Automated Road Transport
- **DT-ART-05-2020** : Efficient and safe connected and automated heavy-duty vehicles in real logistics operations

AWARD : All Weather Autonomous Real logistics operations and Demonstrations
Project Coordinator : EasyMile
Partners : 29
Start of the project : 1st of January 2021

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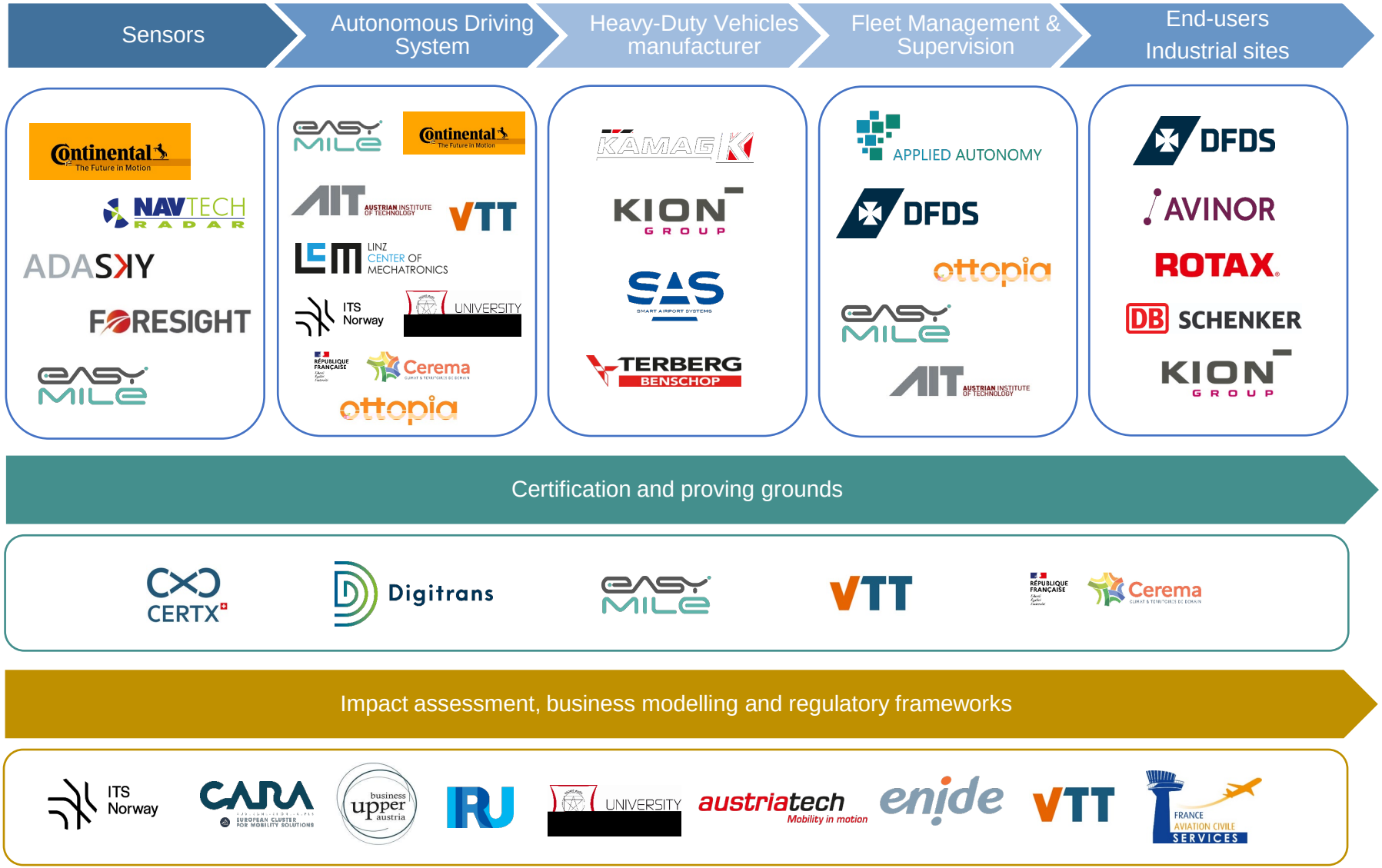
Complementary-skilled Consortium



From multiple horizons

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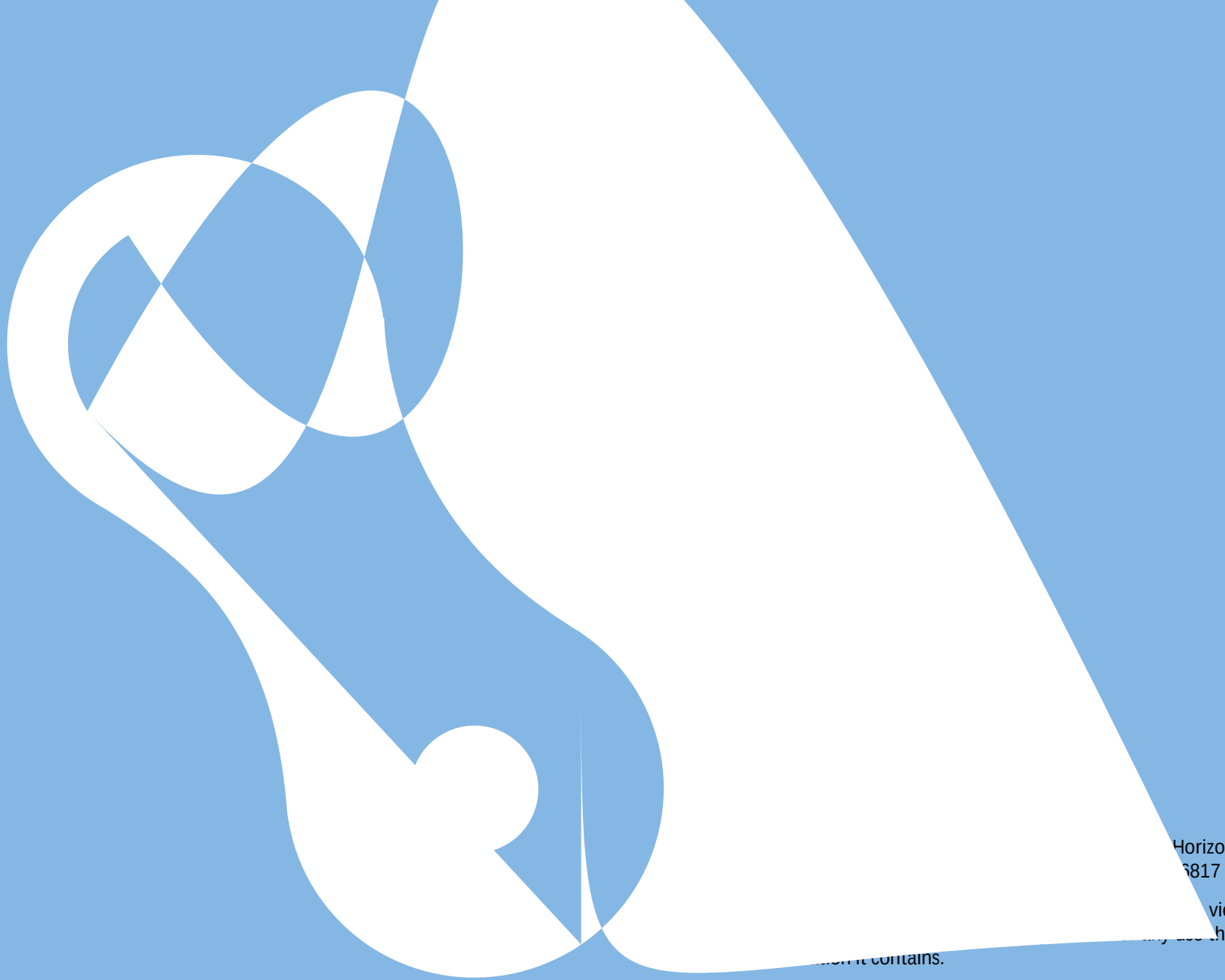

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Project ambitions

Ambition 1

AWARD ADS architecture **offers a unique set of sensors that enables 24/7 availability** (night and day, good or bad weather conditions), **within an extended ODD**

ODD = Operational Design Domain

Ambition 2

By addressing 24/7 availability, the fully automated HDV will be **deployed over key pilot projects that are highly scalable and replicable** over warehouses, factories, airports and ports, **in mixed traffic in confined areas and on public roads**

Ambition 3

The new **fleet management system** will integrate **data from vehicles, logistics systems and the road infrastructure**, coordinating exchanges with different data providers to ensure economic viability of data-related business models, **while providing high-reliable and secured tool that optimizes logistics flows and ensures safety for other road users**.

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Global approach

Development of the ADS

Able to **handle adverse environmental conditions** such as heavy rain, snowfall, fog

Targeting compliance with **ISO 26262** and taking into consideration **SOTIF recommendations**

Integrating **multiple sensor modalities and an embedded teleoperation system to address 24/7 availability**

Optimized fleet management & supervision system for logistics use cases

Integration into HDV

KION

KAMAG

TLD

TERBERG

Demonstrations

Industrial autonomous loading & unloading operations

Hub to hub autonomous logistics on public roads

Airport autonomous ground support equipment

Port Trailer autonomous transfer operations

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Use Case 1: Autonomous loading & unloading forklift operations

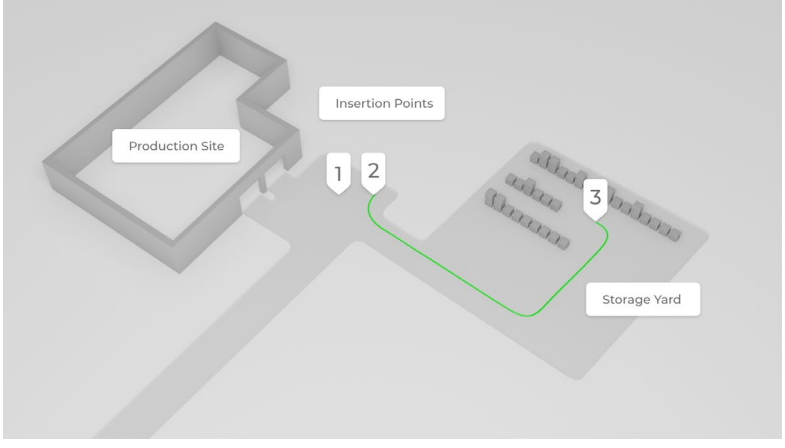
Site

Linde Aschaffeburg Material handling

Private site

Objective

To demonstrate gitter boxes transport and yarding on Linde Aschaffenburg site, using an autonomous counter-balanced forklift vehicle.



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Use Case 2: Hub-to-hub shuttle service from warehouse/production site to logistics hubs

Site

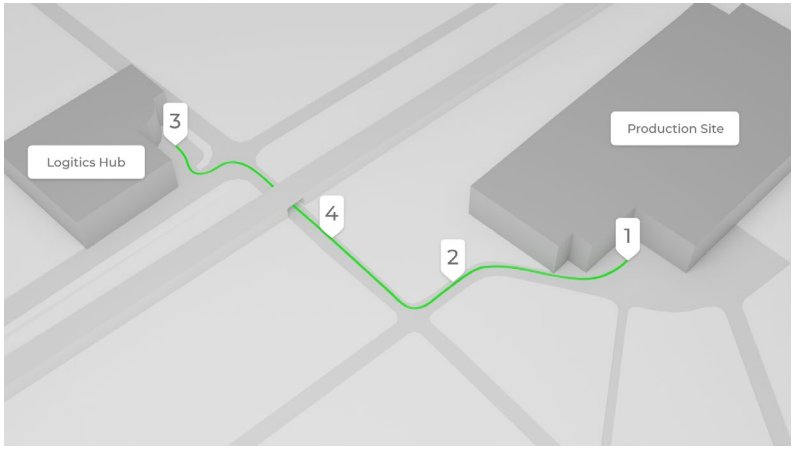
Engine Factory of BRP-Rotax

Logistic Hub of DB Schenker

Public & private site

Objective

To demonstrate highly automated, continuous, hub-to-hub freight transportation between both sites, which are connected via public side roads, public crossing areas and a public main road.



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Use Case 3: Automated baggage tractor on airside in Avinor OSL Gardermoen airport

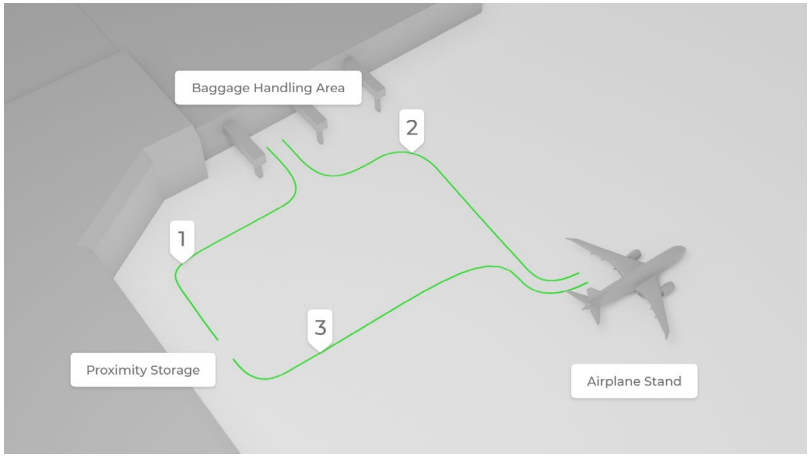
Site

OSL Gardermoen aiport

Private site

Objective

To demonstrate automated baggage tractor transportation under harsh-weather conditions from proximity storage to the makeup area, and from the makeup area to the aircraft stand.



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Use Case 4: Container transfer operations and automated boat loading in Rotterdam port

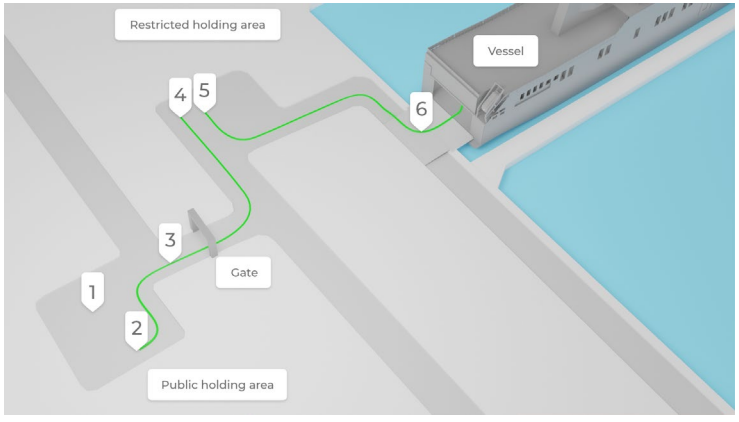
Site

Rotterdam port terminal

Restricted site

Objective

To demonstrate and validate AWARD technology on a busy Roll-in/Roll-off terminal in Rotterdam (NL). The objective is to integrate automated trailer transfer with DFDS terminal systems and operate in a live environment with other vehicles and people



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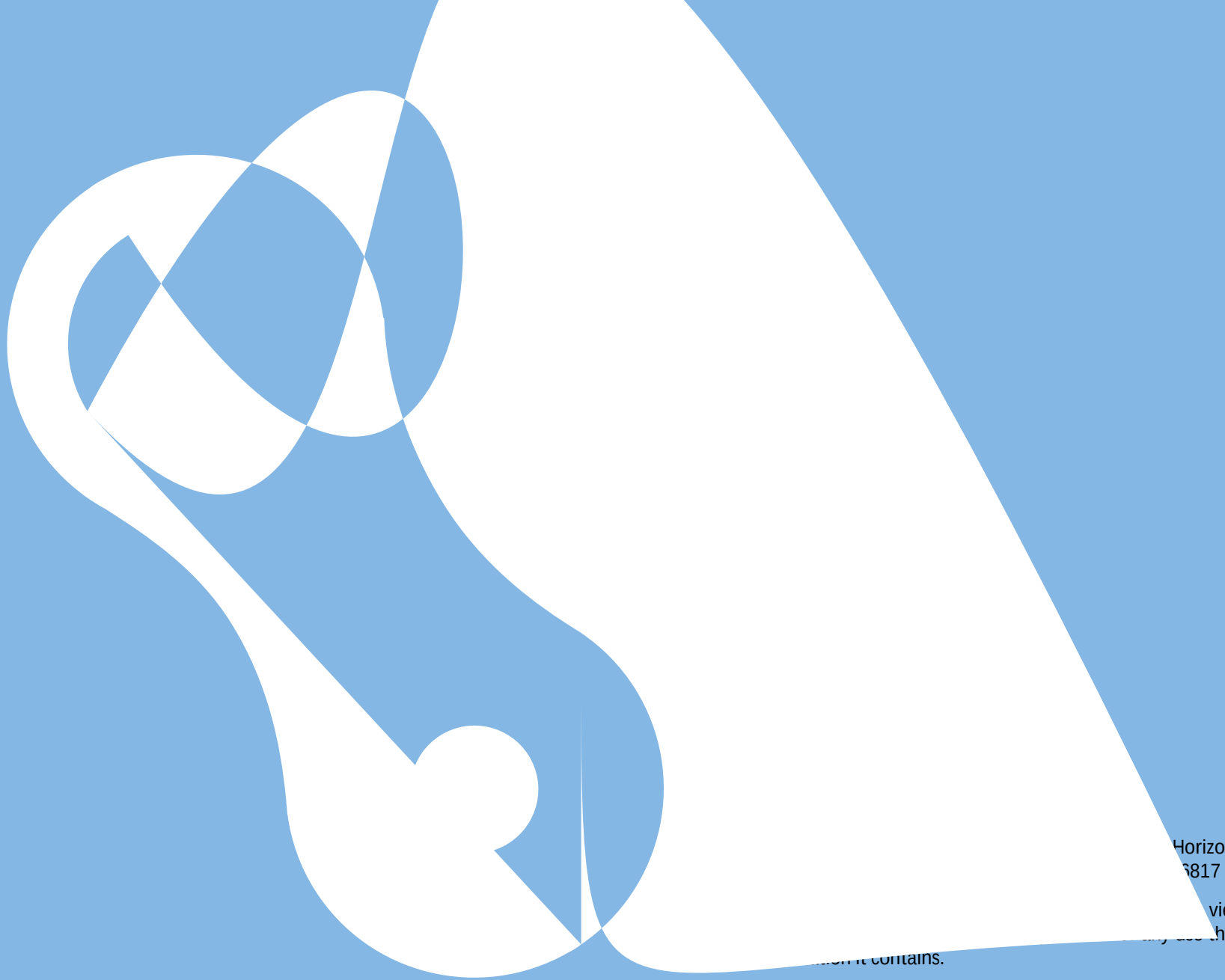

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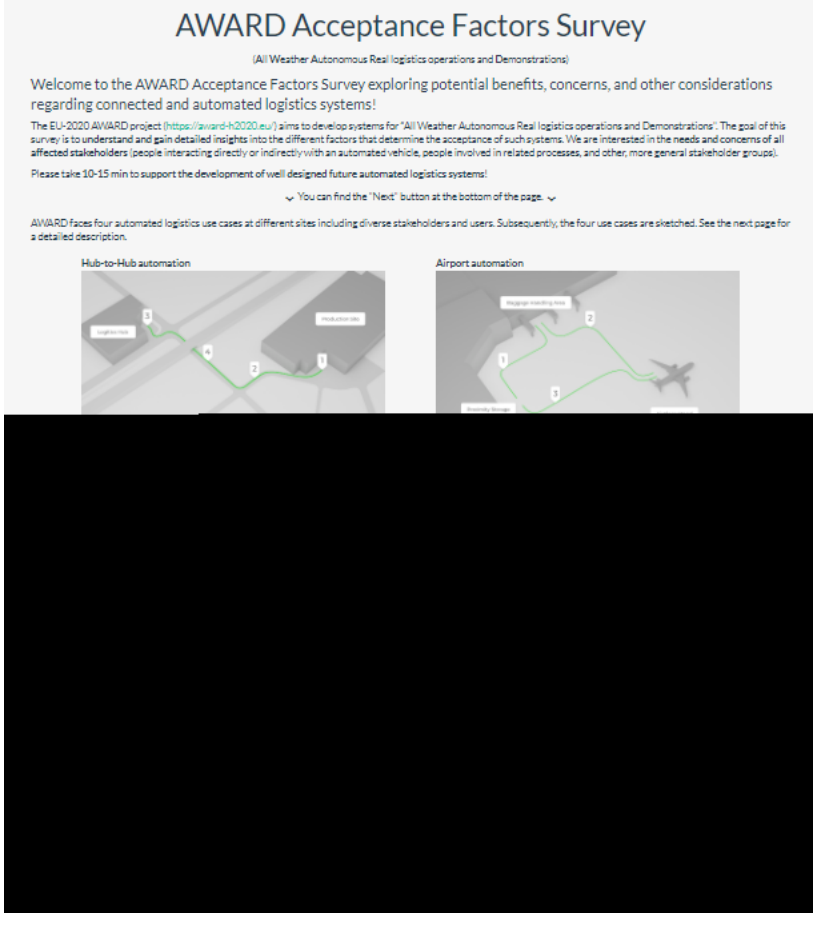

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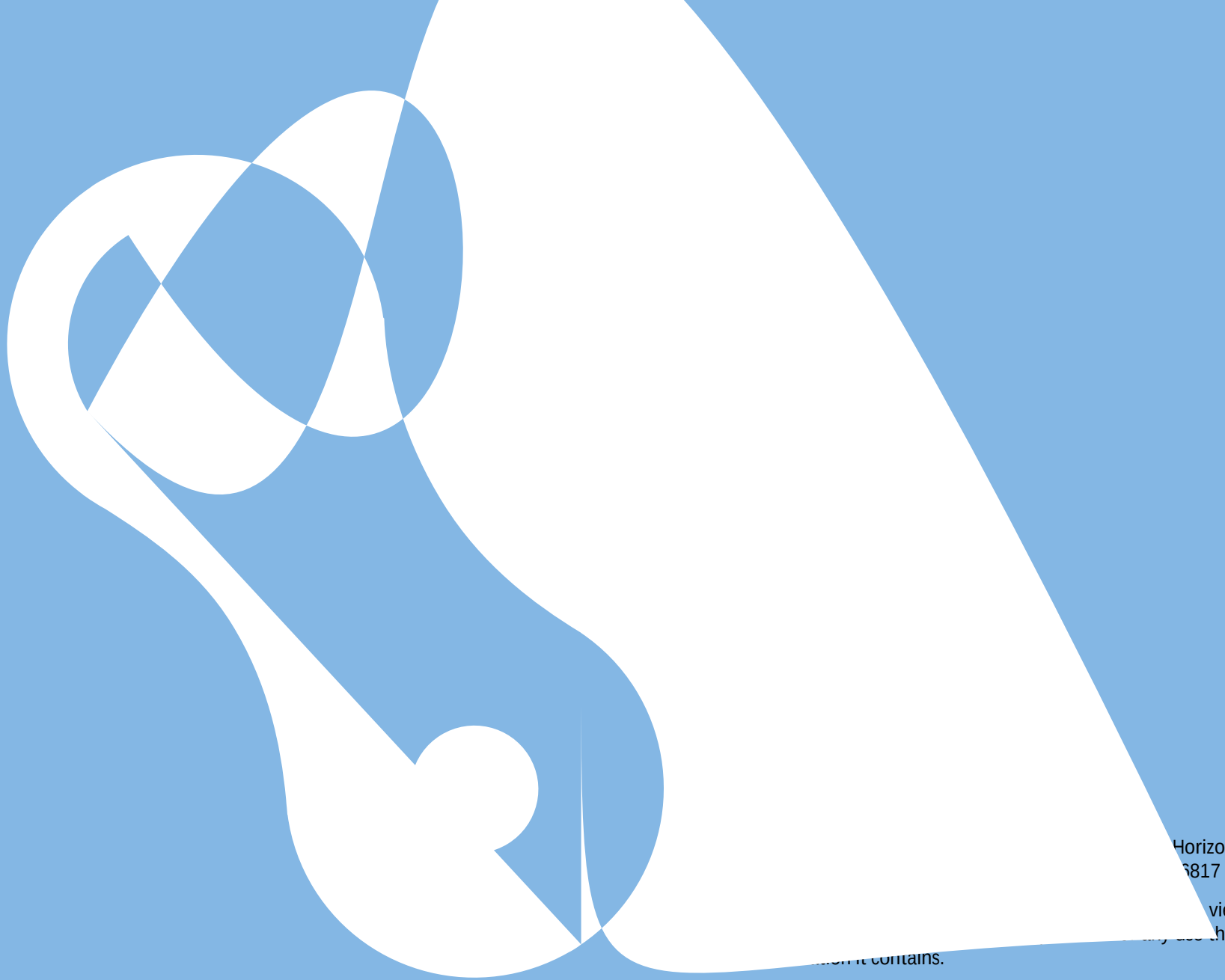

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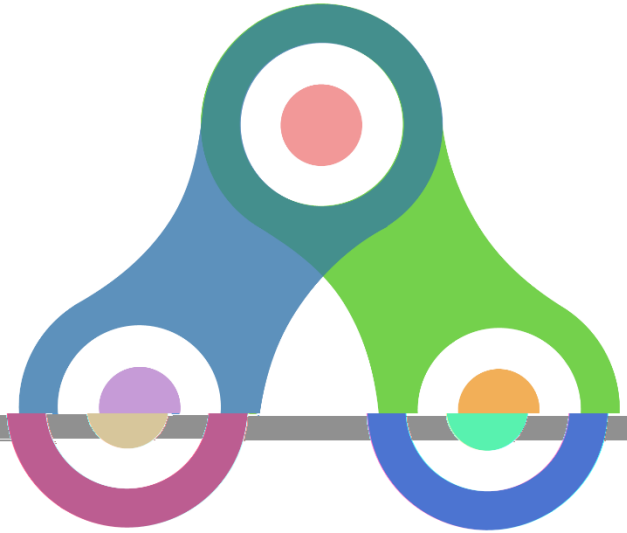

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