Case Study:

ADLC

Petrochemical Sample Transport with Drones

FOUNDERS: **Rayan Quintaes,** Managing Director; **Grégoire Moreau,** Managing Director; **Marc Kegelaers** Chairman

LOCATION: Antwerp, Belgium

TEAM SIZE: 10

SET-UP: Port, Suburban

SYSTEM READINESS LEVEL (SRL): 7

FOUNDING YEAR: 2022

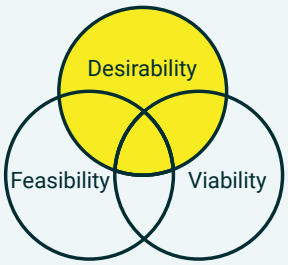
adlc.eu

At a Glance

ADLC is - A Drone Logistics Company - specializing in drone logistics for the industrial sector, offering fast, efficient, and sustainable solutions for transporting petrochemical samples and other critical materials. Based in Antwerp, ADLC operates a Drone Delivery Network that provides real-time cargo transport, enabling seamless integration into port logistics. Notably, ADLC became the first company in Europe approved to transport petrochemical samples by drone, marking a significant milestone in industrial drone applications. The company is planning to expand its delivery services to industrial labs located in suburban and urban areas.

In addition, ADLC successfully executed a BVLOS (Beyond Visual Line of Sight) drone flight between a residential care center and a general hospital, establishing a milestone for medical transport. This achievement underscores ADLC's commitment to revolutionizing logistics not only in the industrial sectors but also in healthcare.

Use Case: Petrochemical samples transportation



ADLC developed a drone transport service for SGS, the world's leading testing, inspection, and certification company, from BASF Antwerp site to SGS testing laboratories in the Port of Antwerp- Bruges. Traditional road transport is often subject to traffic delays and natural barriers, but ADLC's drones bypass these challenges, ensuring timely delivery of the samples. The drone network spans 12.5 km,transporting cargo weighing up to 15 kg, with operations authorized for both day and night.

Regulatory:

ADLC operates under strict Beyond Visual Line of Sight (BVLOS) and Dangerous Goods (DG) Transport regulations set by EASA, following a Specific Operational Risk Assessment (SORA). This compliance enables highly automated, long-range cargo drone flights without the need for on-ground observers.

"We are delighted with the success of SAMPLIFLY'S first flight. This technology has the potential to transform the way ports manage shipments, offering a swift and cost-effective solution that can greatly reduce the environmental impact of port logistics."

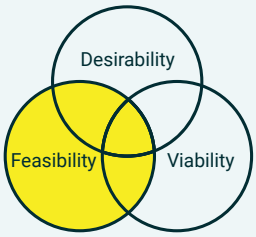
Rayan Quintaes, Co-founder

Technology

Drones

- ADLC utilizes VTOL (Vertical Take-Off and Landing) drones, including the PW.ORCA from Phoenix-Wings, which is optimized for long-range industrial logistics.
- ADLC partners with other drone companies to tailor services to specific use cases.

Network



- The network includes landing pads, communication infrastructure, and a centralized Operations Control Center (OCC) that oversees every flight in real time. ADLC's proprietary OCC platform integrates with UTM systems and existing logistics platforms, enabling seamless coordination and monitoring.

Logistic Platform

- ADLC Portal gives customers full control over their delivery experience. Through this single point of contact, customers can request a delivery and track its progress until completion.

Business Model

Pay-per-Delivery
Charges are applied on a per-delivery basis.

Consultancy & Custom Drone Applications
Developing innovative drone delivery services tailored to clients' specific use cases.

Impact

The drone logistics service helped SGS reduce transport time of analysis samples by up to six times, boosting operational efficiency for both BASF Antwerp and SGS while cutting CO2 emissions by up to 80%. ADLC's drone delivery service unlocks economic opportunities, minimizes delays, and reduces carbon emissions, offering a faster, more sustainable alternative to road transport, aligning with the sustainability goals of BASF and SGS.

> "Yes, cleaner logistics cannot wait. And the good news is, technological solutions are within reach and can be deployed now!."
>
> **Rayan Quintaes,** Co-founder

Conclusion

ADLC's innovative use of drones for petrochemical sample transport is setting a new standard for industrial logistics. With its Drone Delivery Network fully operational by 2024, ADLC is positioned to expand its services, offering faster, safer, and more sustainable logistics solutions for the oil, gas, chemical industries, and beyond.