



WEBINAR II: OUR REQUIREMENTS

Project VERIFIED

DLR procurement process for building vertiport infrastructure

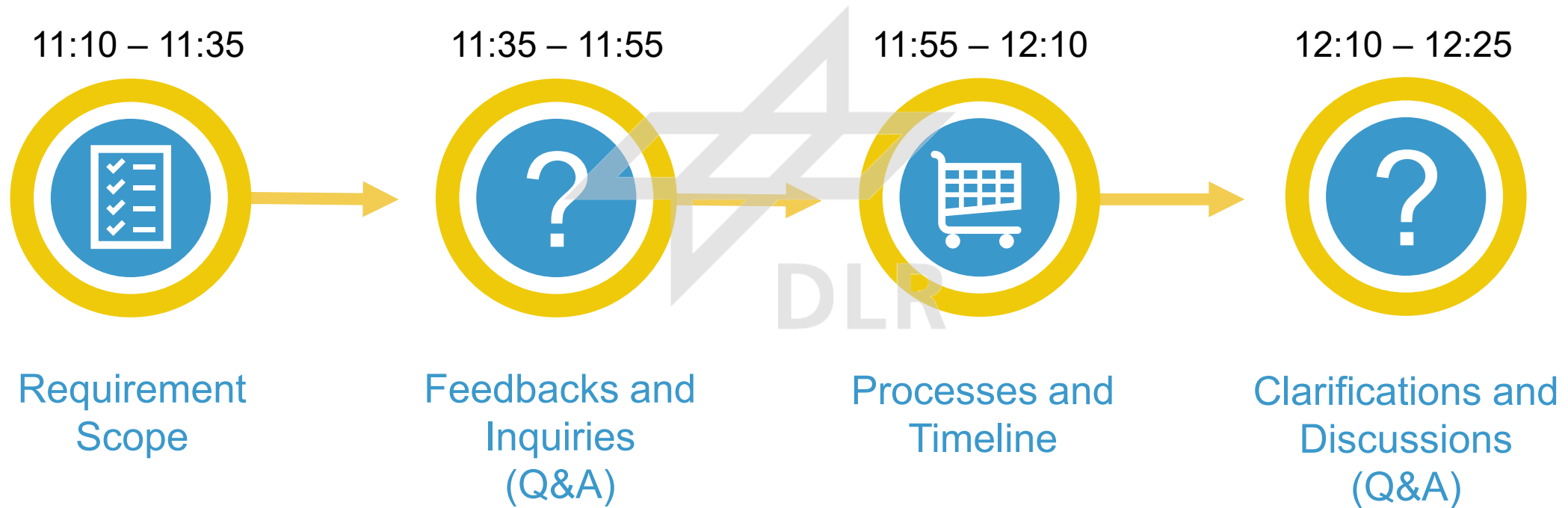


Agenda

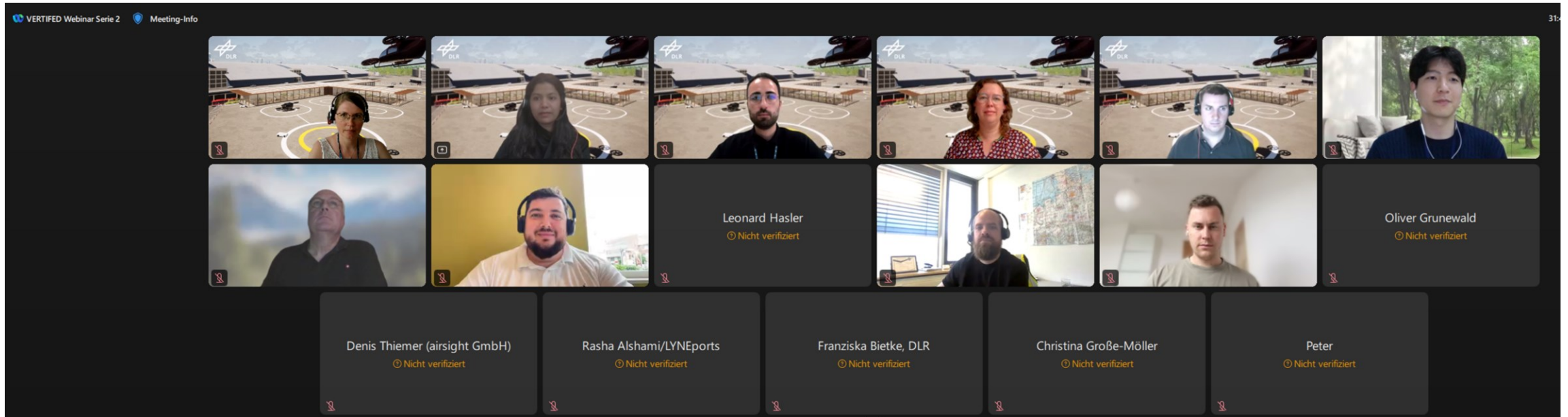
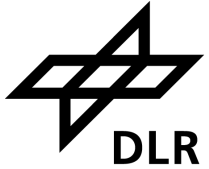


Webinar 2: DLR Vertiport Requirements

29th June 2026, 11:00 – 12:30 CET



Before we start...



...let's take an e-photo

Retrospective Briefing from Webinar 1



VERTIFIED (Vertiport Research Infrastructure for Innovation Exploration and Demonstration)

- Development and implementation of flexible, modular vertiport research infrastructure
- Urban and airport integration of vertiports with U-space at DLR Cochstedt
- Flight testing for passenger and cargo use cases

Defined requirements and designed concepts

- Identified categories: hardware, software, communication and service facilities
- Envisioned vertiport operations, simulations, and placement at the DLR site in Cochstedt
- Three illustrative concepts each for urban vertiport and vertiport at the airport

Aimed research capabilities

- Optimizing approach and departure paths, conceivable mobile vertiport configurations and vertipad placements, information flow between parties, communication and safety protocols, and many more..

Requirements & Scope



DLR

What we'll cover today



Two modular demonstrators at Cochstedt, urban and at the airport. **Today: the five requirement areas.**

- 1 **Landside Infrastructure (non-flight operational areas)**
- 2 **Airside Infrastructure (flight operational areas)**
- 3 **Weather & Environmental Systems**
- 4 **Security, Surveillance & Digital Systems**
- 5 **Charging Infrastructure**



Framework

How to read this tender?



Scope

Planning, delivery, integration, assembly, commissioning and ready-to-operate handover

Technology-open

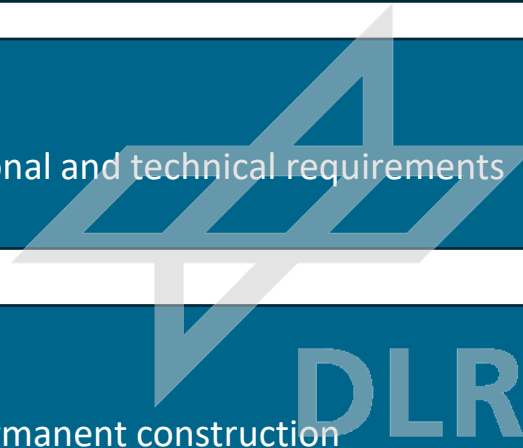
Propose any solution that meets the functional and technical requirements

Modular and mobile

Combine, transport and rebuild without permanent construction

Research Platform

Research and demonstration platform, not a fixed commercial installation

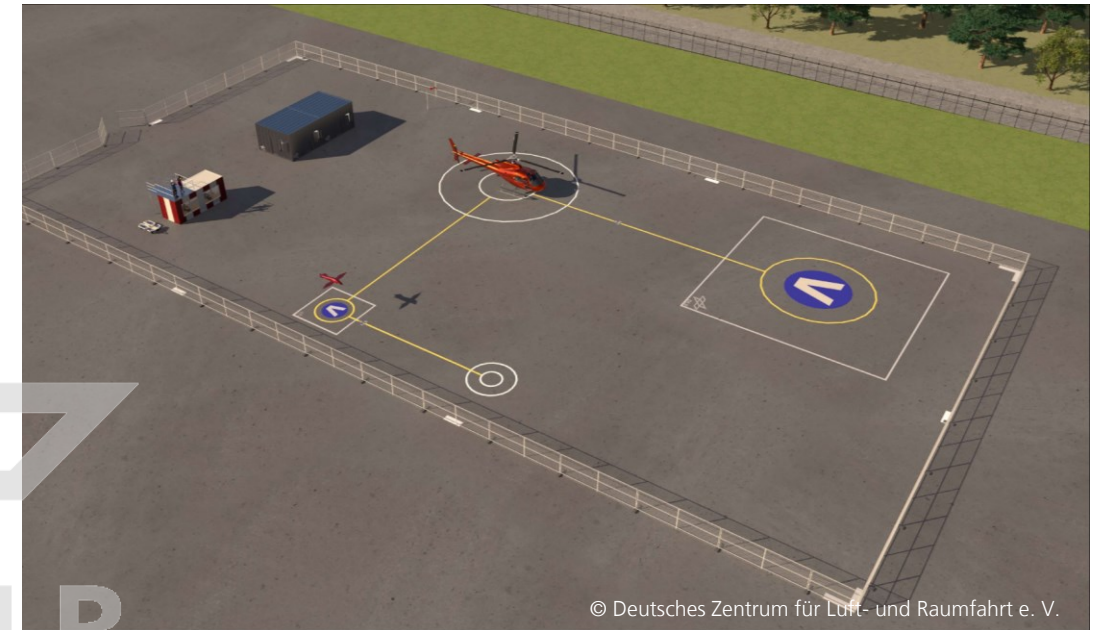


Two Vertiport Demonstrators at Cochstedt



Urban vertiport demonstrator

- Operating under limited-space conditions
- Realized in a modular model-city setup
- Elevated / rooftop-like operating areas

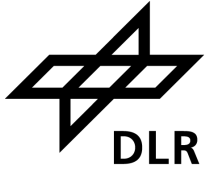


Airport vertiport demonstrator

- Vertiport integrated into an existing airport environment
- Ground-level operating areas on the airport apron
- Interaction with existing airport infrastructure and operations

Landside Infrastructure

Functional Areas



- Non-flight operational areas that support the landside processes
- Covering passenger, cargo and security handling, operational coordination
- Enabling process validation at both demonstrators
- Modular and reconfigurable functional units

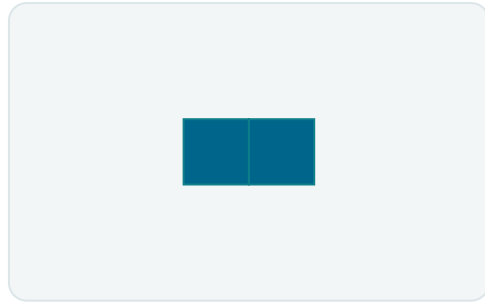


Functional area	Purpose
Security Terminal	Passanger and baggage screening
Waiting Lounge	Passenger arrival, information, waiting and transition to the airside
Cargo Handling	Acceptance, storage, handling and handover to airside
Mission Control Center	Monitoring, coordination and execution of operations
VCA Workshop	Preparation, checks, light maintenance and system adaptation

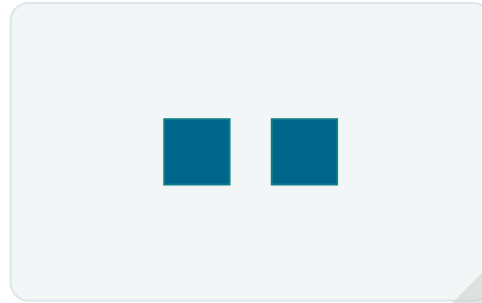


Landside Infrastructure

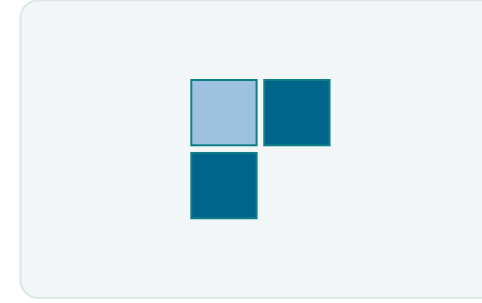
Modularity and Implementation



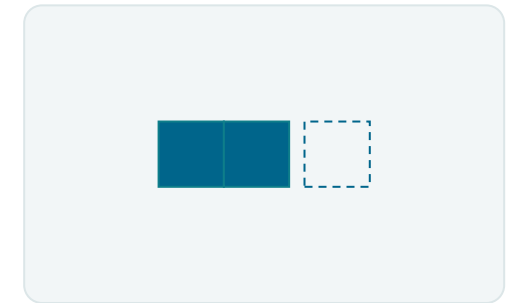
Combine



Separate



Rearrange



Extend

Modularity & Reconfiguration

- Flexible arrangement of units
- Combination, separation or repurposing
- Reusable and transportable design

Possible Construction Solutions

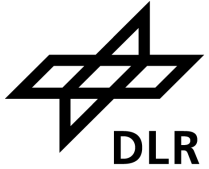
- Container-based modular units
- Modular timber, steel or hybrid structures
- Comparable reusable system solutions

Equipment & Interfaces

- Furniture, workstations, displays, storage
- Power, data and communication interfaces
- Lighting, HVAC

Airside Infrastructure

General Requirements



Functional scope

- FATO, TLOF, stand/gate and movement areas for safe airside operations
- Integration of markings, lighting and visual guidance elements
- Clear separation and controlled interaction with landside areas

Core requirements

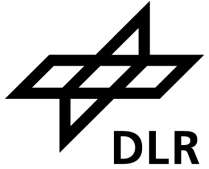
- Modular, scalable and reconfigurable layouts
- Suitable for UAS and larger VCA/eVTOL scenarios
- Safe, robust and suitable for outdoor operation
- Adaptable to different research and demonstration scenarios

Possible implementation

- Surface-based airside layouts
- Elevated or raised-platform layouts
- Portable or reconfigurable lighting and marking systems
- Technology-open construction and system solutions

Airside Infrastructure

Urban Vertiport Demonstrator



Implementation approach

- Elevated / rooftop-like operating areas
- Standalone load-bearing platform or support structure
- Safe access via stairs, lifts or equivalent access systems
- Fall protection through safety nets or edge guards

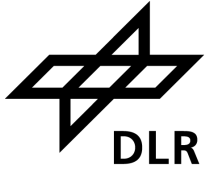


Dimensioning (Small UAS, Large VCA/eVTOL)

Dimension	Small UAS	Large VCA/eVTOL
Characteristic dimension D	3.2 m	15 m
FATO (1.5 D)	4.8 m	22.5 m
TLOF elevated (1.0 D)	3.2 m	15 m
Stand / Gate (1.2 D)	3.84 m	18 m
Safety area around FATO	3 m	3 m
Maximum mass	~100 kg	~3.500 kg

Airside Infrastructure

Airport Vertiport Demonstrator



Implementation approach

- Ground-level operating areas
- Within the existing airport and apron environment
- Clear separation of operating zones



Dimensioning (Small UAS, Large VCA/eVTOL)

Dimension	Small UAS	Large VCA/eVTOL
Characteristic dimension D	3.2 m	15 m
FATO (1.5 D)	4.8 m	22.5 m
TLOF ground-level (0.83 D)	2.66 m	12.45 m
Stand / Gate (1.2 D)	3.84 m	18 m
Safety area around FATO	3 m	3 m
Maximum mass	~100 kg	~3,500 kg

Airside Infrastructure

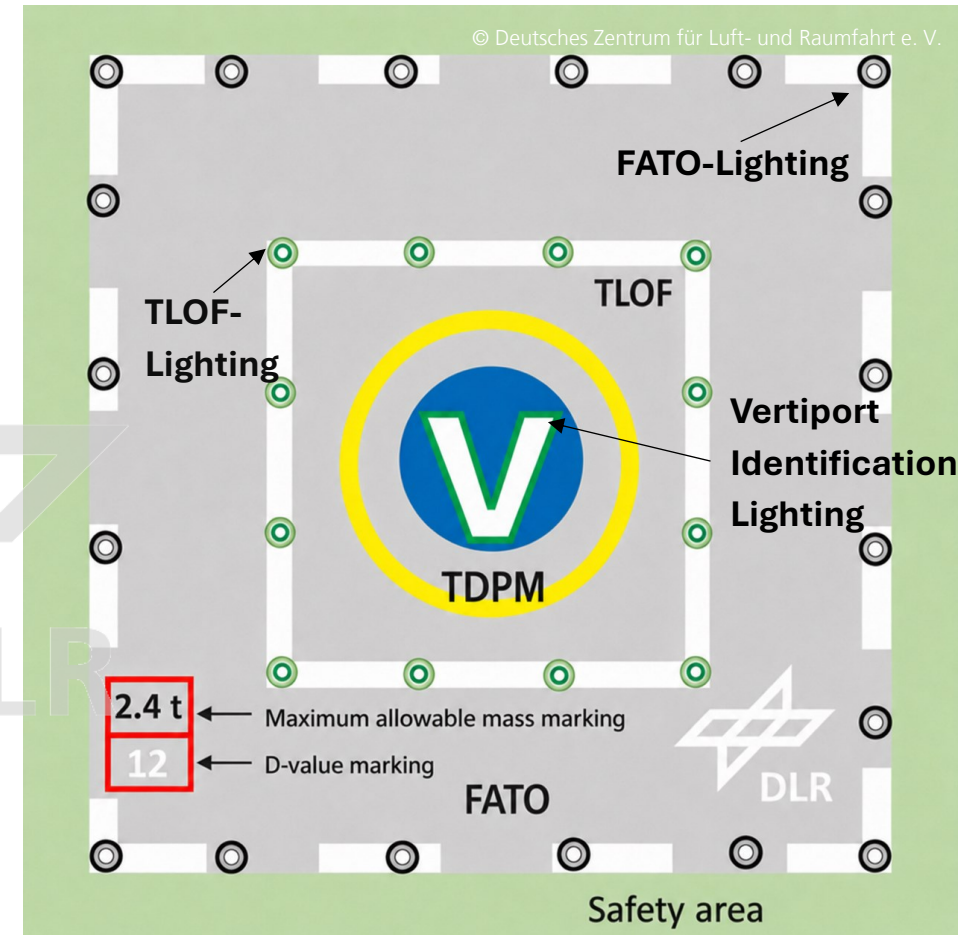
Markings and Lighting

Markings

- Markings for landing and take-off areas, including FATO, TLOF and TDPM
- Vertiport identification, D-value and maximum mass markings
- Adaptable to different layouts and aircraft sizes; no permanently fixed solutions

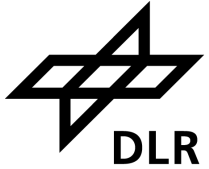
Lighting & visual guidance

- FATO, TLOF and vertiport identification lighting
- Aligned with EASA PTS-VPT (E.760–E.800); FATO white, TLOF green, V-marking green
- No fixed wiring that limits reconfiguration; portable or reconfigurable lighting systems
- Applicable to ground-level and elevated operating areas



Weather and Environmental Systems

Measurement Scope



Measurand	Reference sensor
Wind speed and direction	Ultrasonic anemometer
Temperature and humidity	Thermo-hygrometer
Air pressure	Barometer
Precipitation	Precipitation sensor
Visibility	Visibility sensor
Cloud base	Ceilometer

Operational use

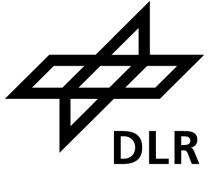
- Operational safety assessment
- Flight preparation and mission planning
- Monitoring during demonstrations and test operations

Reference examples; technology-open, equivalent systems accepted.



Weather and Environmental Systems

Micro-Weather & Data Integration



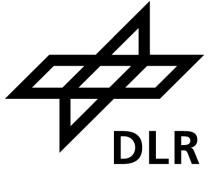
Micro-Weather Focus

- Local wind fields in approach and departure areas
- Gusts, wind shear and local wind gradients
- Vertical wind profiles and turbulence-related wind effects



Safety, Monitoring and Digital Systems

System Scope



Ground monitoring, security and emergency provisions for safe operation

Ground Monitoring

- Camera, LiDAR or comparable sensor systems
- Monitoring of operational, movement and safety areas
- Detection of obstacles, FOD, unauthorized persons and blocked areas
- Status information on free, occupied or restricted areas
- Interfaces to common ground picture and monitoring systems

Security & Access

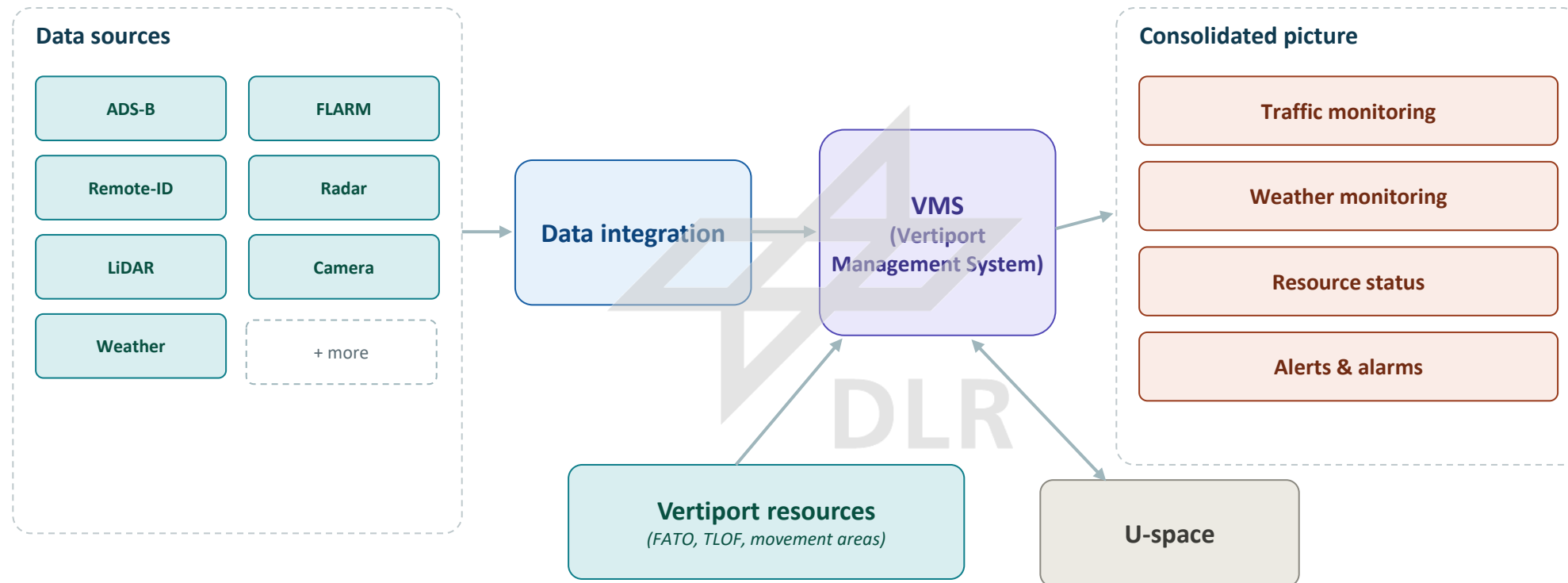
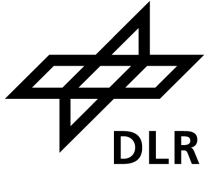
- Controlled separation between landside and airside areas
- Access control for restricted and operational areas
- Defined access points, transition areas and safety boundaries

Emergency & Rescue

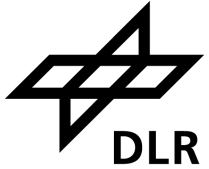
- Rescue and firefighting provisions according to ICAO heliport guidance
- First-aid and emergency equipment according to site safety requirements

Safety, Monitoring and Digital Systems

Vertiport Management System – Data Integration Concept



Charging Infrastructure



Charging capability

- Charging for electrically powered aircraft
- Support for different charging powers and connector concepts
- High-power DC charging capability
- Compatible connector concept, e.g. CCS2 or equivalent
- Technology-open solution with safe handling of high charging currents

Mobile setup

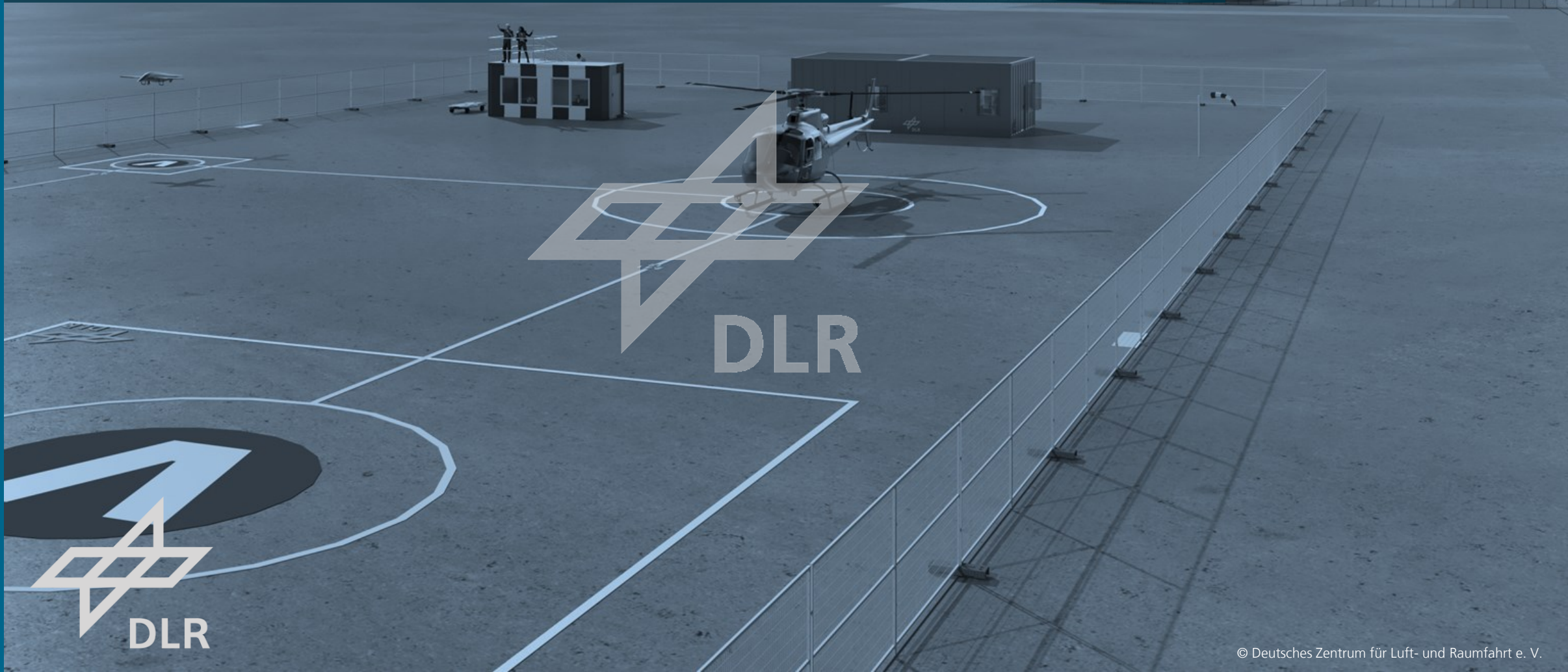
- Mobile, portable and modular charging equipment
- Defined charging areas within the demonstrator layout
- Flexible positioning within the demonstrator layout
- Safe cable management and operational handling

Key idea: mobile high-power charging that can be repositioned and safely integrated into different demonstrator layouts.

Your Perspective Matters

Questions • Feedback • Ideas

Outlook procurement-process



Procurement Framework



Planned procurement for modular urban and airport vertiport demonstrators

INVESTMENT VOLUME

1 M€

EXPECTED TENDER PUBLICATION

July 2026

OPEN TO

International

all countries eligible

PROCUREMENT PROCEDURE

Competitive Dialogue

Complex and innovative project benefiting from market expertise



DLR

Areas of Expertise of Potential Contributors



Vertiport Infrastructure Development

Modular Buildings & Facilities

Airside Infrastructure & Lighting

Meteorological & Environmental Systems

Safety, Security & Monitoring Systems

Energy & Charging Infrastructure

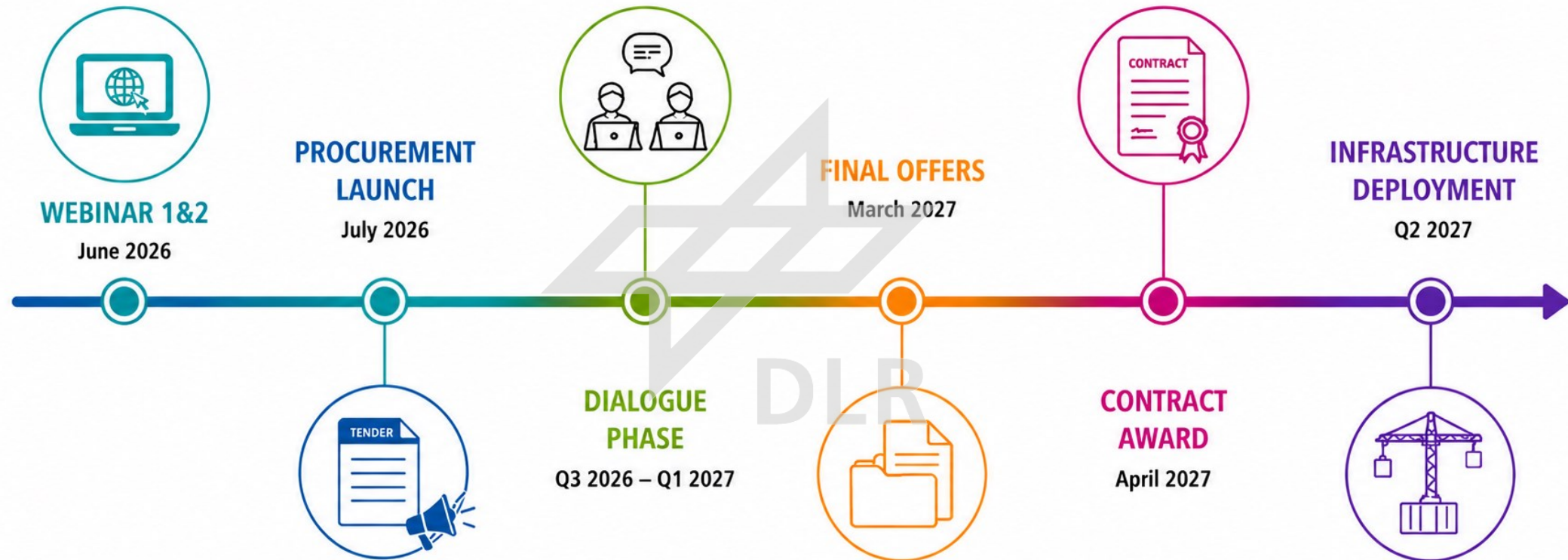
Software & Digital Integration



Joint bids are welcome!
Multiple companies may submit a joint proposal



Planned Procurement Roadmap



Note:

Dates beyond the webinars are indicative and subject to change

Next steps for interested companies



1 Follow Official Tender

Monitor and follow the official tender publication closely to stay informed of all updates and announcements

2 Review Requirements

Review the published requirements and procedural documents to ensure full understanding of the scope and expectations

3 Submit Application

Submit a participation application within the defined deadline

4 Dialogue Phase

Selected candidates will be invited to participate in the structured dialogue phase for further evaluation and alignment

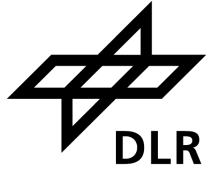
5 Final Offers

Final offers will be requested from participants upon successful completion of the dialogue phase.

Your Perspective Matters

Questions • Feedback • Ideas

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KEY TOPICS INCLUDE



Vertiport
Infrastructure



U-space
Integration



Innovative
Air Mobility



Regulatory
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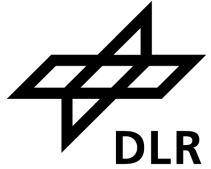
Project website [VERTIFIED](#)

Contact iam-news@dlr.de



Thank you for joining!

Impressum



Thema: Webinar 2 – Our Requirements

Datum: 29/06/2026

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Institut: FL, UX, UC

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