# AMORPH.aero

## Airport Transport Industry Solutions

April 2021

Solution by

**AMORPH** systems

# Company Overview

Amorph Systems was founded in 2013 with headquarters

in Stuttgart, Germany and development locations in Romania.

Amorph Systems currently has around 40 employees, working in two major business domains.

Amorph Systems is 100% owned by its founders and managing partners.

The company has achieved steady growth over the past 7 years both in terms of employees and revenue.

In 2017, the company received funding from the EU Horizon 2020 SME program for the further development of their airport products.
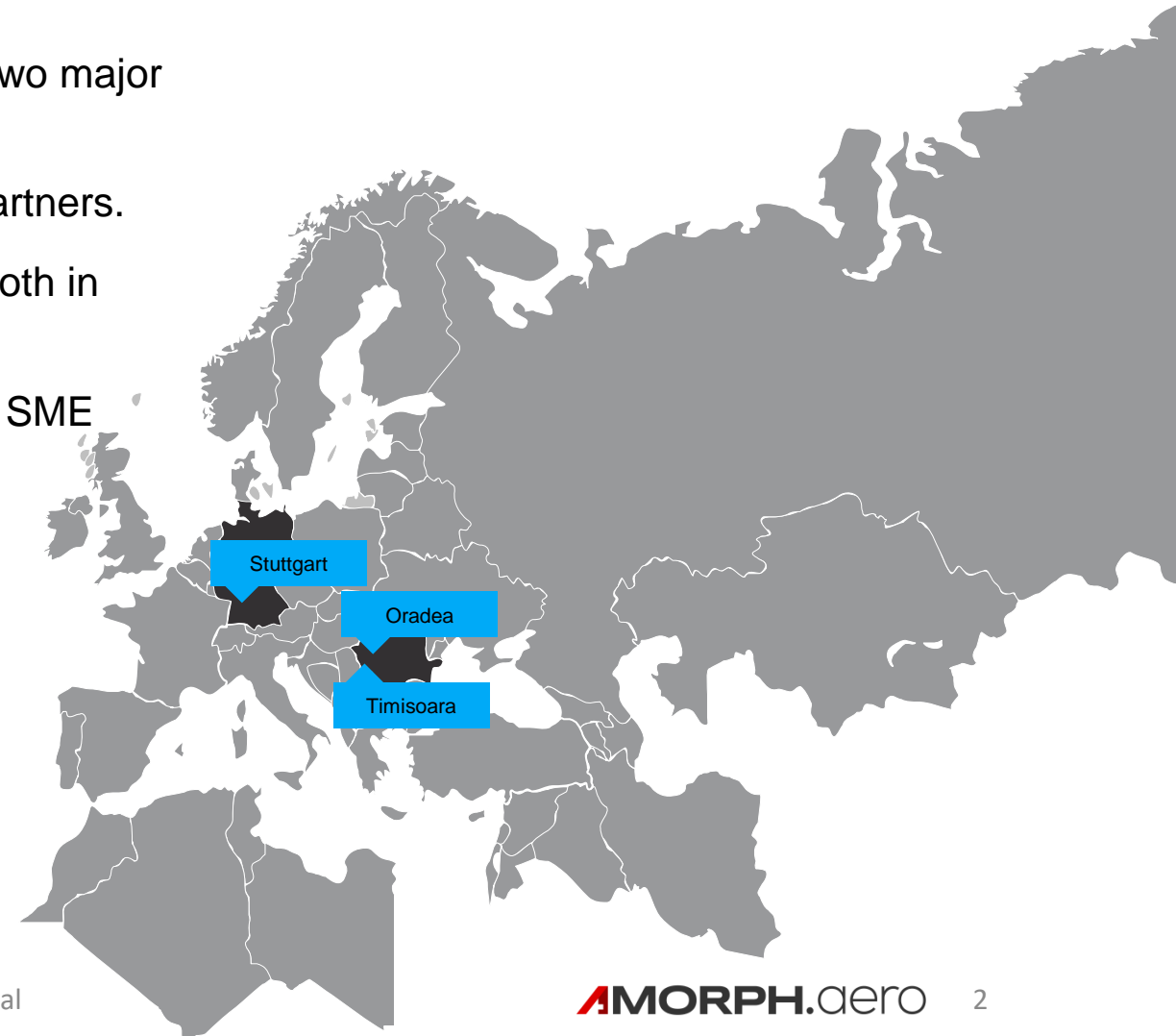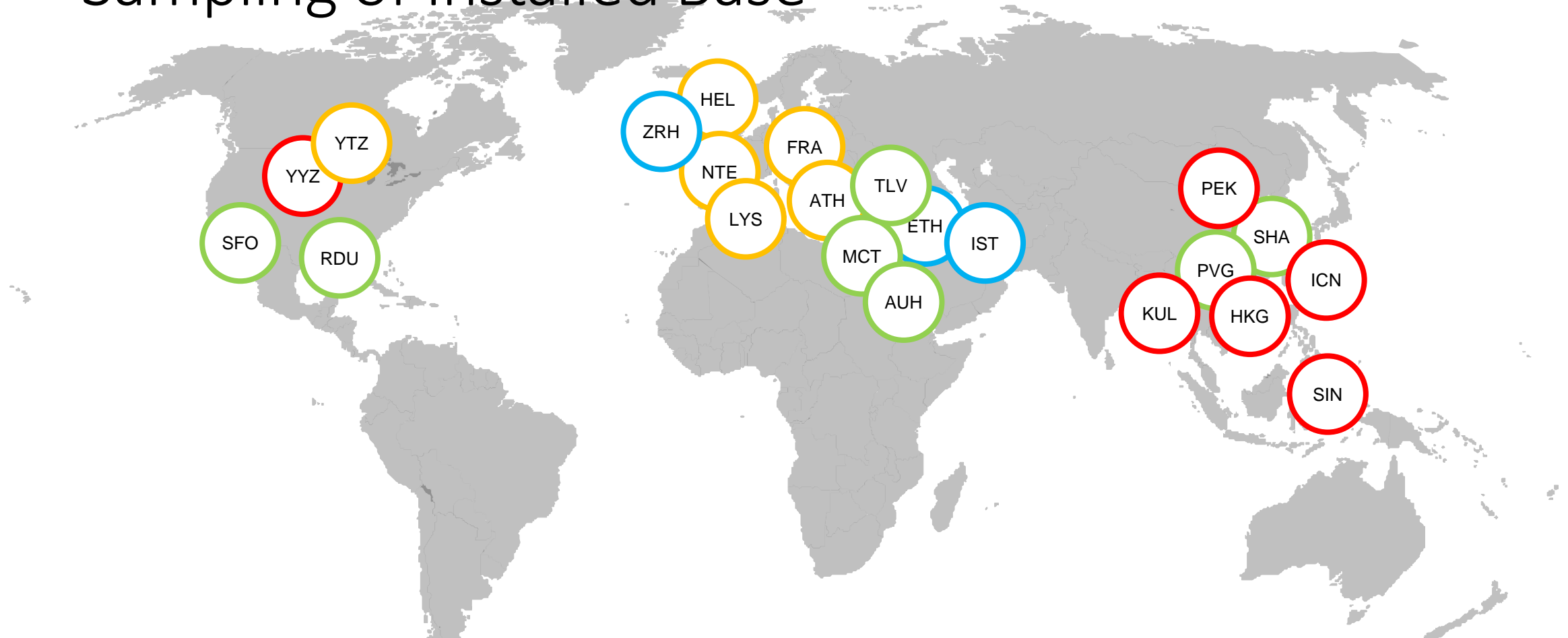
Key Business Domains:



Airport Solutions

Production Solutions

Stuttgart

Oradea

Timisoara

# Sampling of Installed Base



**FLOW PREDICTIONS & PAX FORECASTING**
Frankfurt, Helsinki, Toronto City, Nantes, Lyon, Athens

**CAPACITY PLANNING & ANALYSIS**
Lyon, Nantes, Athens, Zurich, Eilat, Istanbul

**AIRPORT MAP**
San Francisco, Raleigh, Muscat, Istanbul, Abu Dhabi, Tel Aviv

**BUSINESS ANALYTICS**
Incheon, Kuala Lumpur, Singapore, Hong Kong, Beijing, Toronto
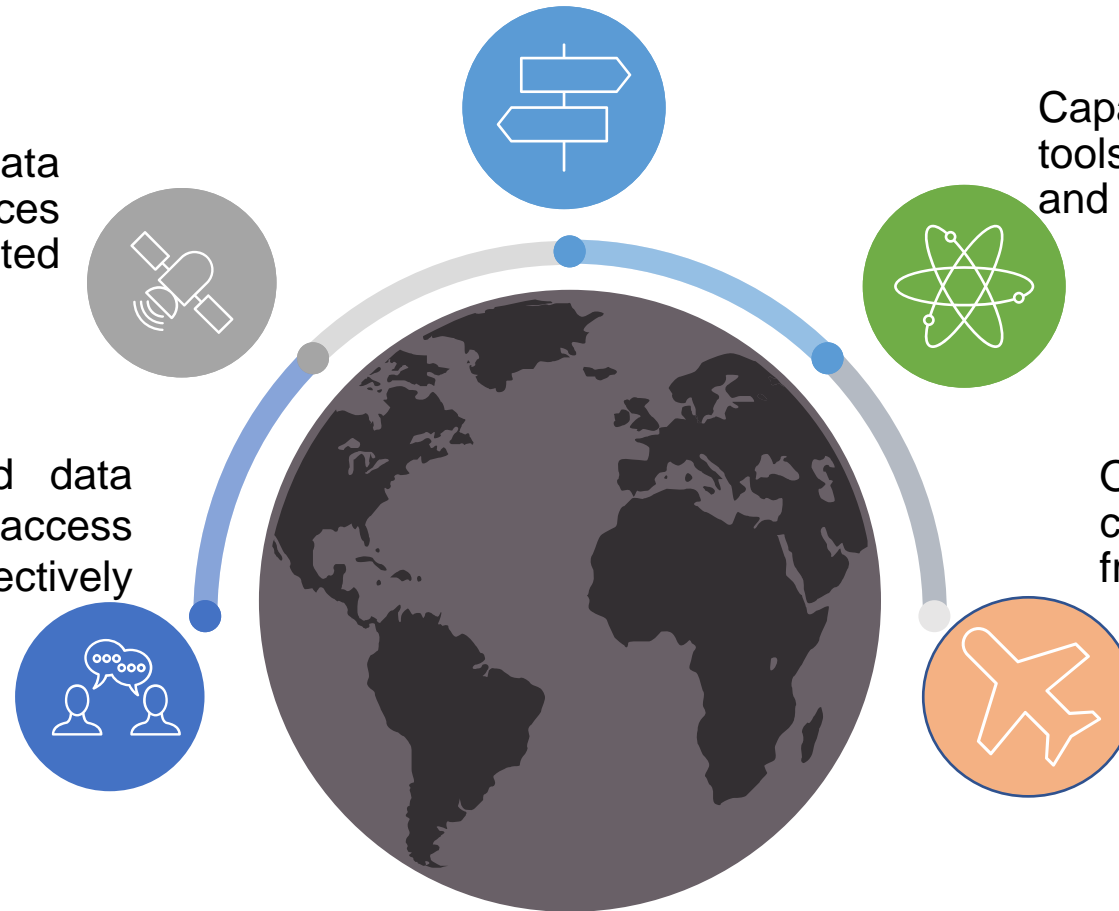
# Airport Management challenges we address

Planning and coordination is complex, with shared resources and multiple stakeholders. Reliable prediction of passenger flows enables timely action to avoid disruptions.

Capacity planning and management tools improve Operational Efficiency and balance costs and service.

Large scale integration of data from systems and devices provides access to a consolidated view of disparate data

Shared access to consolidated data enables multiple stakeholders to access the information they need to effectively coordinate operations

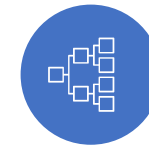Our digital platform in the cloud enables access to anything from anywhere.

# User Interface and Features

Data consolidation and information sharing platform for multiple stakeholders at one or more airports.



- Real-time updates on flight status
- Highlight changes from previous data
- Flight data history
- Alerts on exceptional situations
- Web-based Cloud Application
- Mobile friendly
- Updates and Notifications in Real-time
- Runs in Microsoft Azure, integrated with Office 365

Can be extended with other use cases providing:
- Event management
- Queue monitoring and management

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# Self Bagdrop analytics example



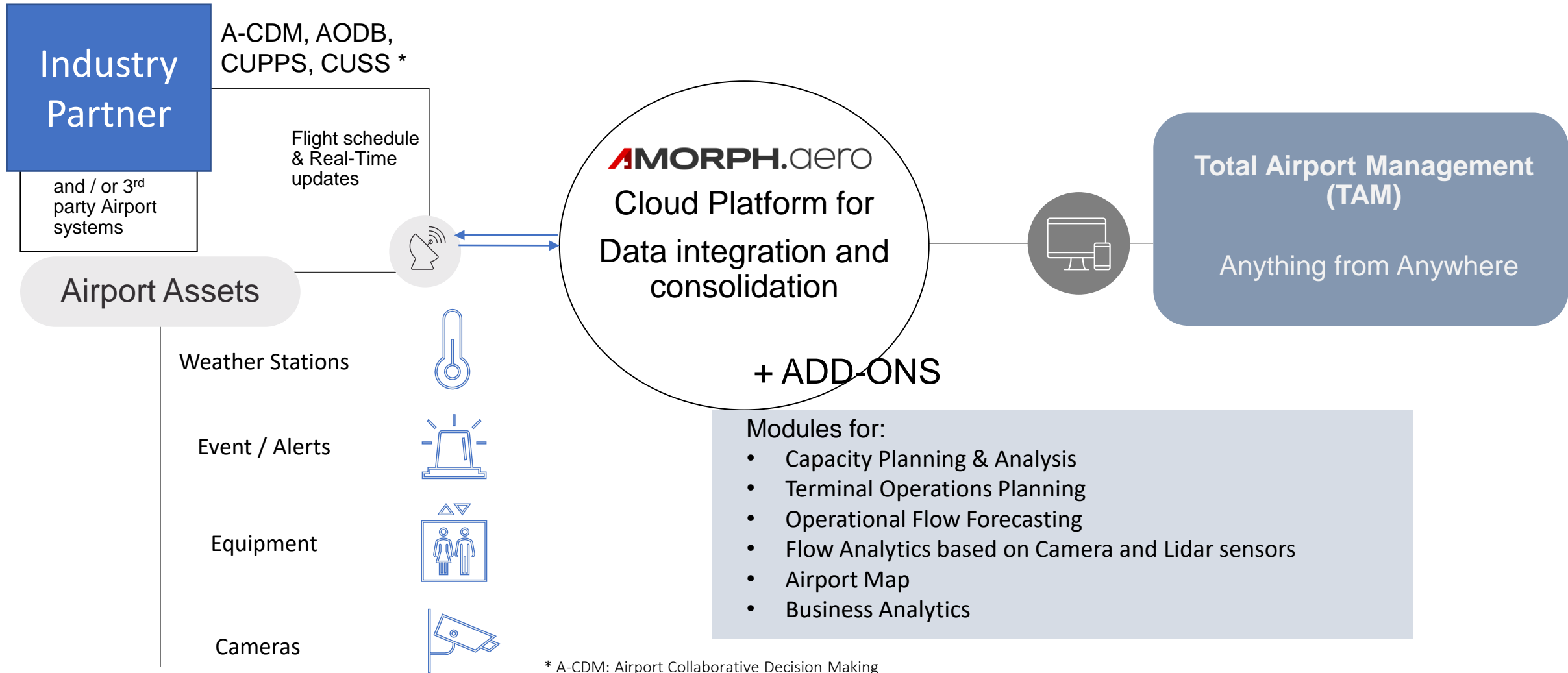- Data is ingested directly from Self Bagdrop equipment via API to the analytics database in the cloud
- Deployed for Airport and/or Airline users
- Installed at 40 sites
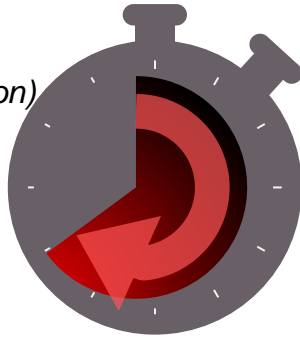
# Commercial Partnership Model



Industry Partner

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AMORPH.aero Cloud Solution
+ AMORPH.aero APIs

Software License,
Training, Support

Customization,
Integration,
Operation Support

All Airport Assets

Airports, Airport Operators

# Technical integration / Data flows

**Industry Partner**

and / or 3rd party Airport systems

A-CDM, AODB, CUPPS, CUSS *

Flight schedule & Real-Time updates

**Airport Assets**

Weather Stations

Event / Alerts

Equipment

Cameras

**AMORPH.aero**
Cloud Platform for Data integration and consolidation

+ ADD-ONS

**Total Airport Management (TAM)**

Anything from Anywhere

Modules for:
- Capacity Planning & Analysis
- Terminal Operations Planning
- Operational Flow Forecasting
- Flow Analytics based on Camera and Lidar sensors
- Airport Map
- Business Analytics

* A-CDM: Airport Collaborative Decision Making
  AODB : Airport Operations Database
  CUPPS: Common Use Passenger Processing Systems
  CUSS : Common Use Self Service
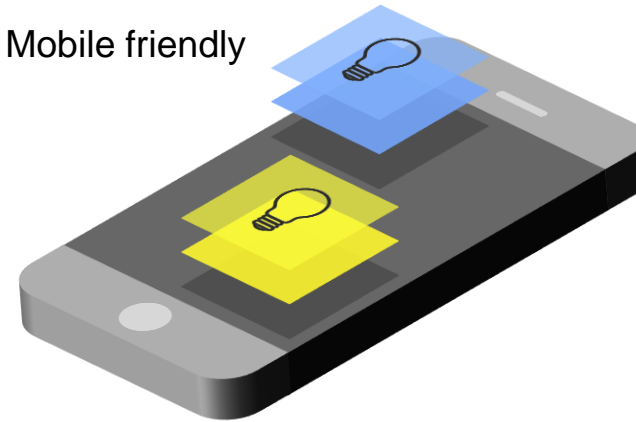
# Deployment & Subscription

Available within a few days to enable immediate benefits
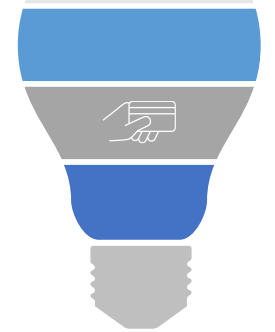*(Even faster* with *AODB, CUPPS & CUSS pre-integration)*

Consolidated view of the released plans merged with real-time updates

Mobile friendly

Try before you buy

Fast and scalable delivery of the AMORPH.aero cloud platform

Easy integration of additional modules for planning, prediction, flow simulation, event management and dashboard views.

Software-as-a-Service (SaaS) as a monthly subscription with minimum upfront investment.

# Reference Cases

## Fraport AG

| Date |
| --- |
| 2013 - today |

| Implemented Functionalities |
| --- |

Operational Flow Forecasting

Capacity Planning & Analysis

| Key achievements |
| --- |

- 20% Reduction of waiting times
- 10% Increase in passenger satisfaction
- 10% Improvement of missed connections

## Nantes Airport

| Date |
| --- |
| 2017 - today |

| Implemented Functionalities |
| --- |

Terminal Operations Planning

Capacity Planning & Analysis

| Key achievements |
| --- |

- 50% Reduction of workload
- Improved transparency on shared results
- 10% growth in passengers and still respected SLA´s at security (95% under 10 Minutes)

## Helsinki Airport

| Date |
| --- |
| 2016 - today |

| Implemented Functionalities |
| --- |

Operational Flow Forecasting

Terminal Operations Planning

Capacity Planning & Analysis

| Key achievements |
| --- |

- 15% growth, remaining the high level of service at every check-point (98% under 10 mins)
- Improvement of boarder control waiting times
- Establishment of a shared APOC with Finnair for passenger handling

## Zurich Airport

| Date |
| --- |
| 2015 – today |

| Implemented Functionalities |
| --- |

Capacity Planning & Analysis

| Key achievements |
| --- |

- Establishing a planning process covering the entire season
- Reduction of the planning cycles by 30%
- Better transfer management planning

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## Thank you!

We look forward to further discussions