NABLA Mobility Inc.

Company Description

NABLA Mobility Inc. is a Japanese deep-tech company dedicated to tackling the complex challenges facing airline operations by applying next-generation AI/ML technology, operating under the mission "Lower Emissions. Higher Efficiency." Founded in 2021, the company is rooted in Japan but boasts a world-class team of experts, including those specialized in aeronautics, meteorology, and machine learning, distinguishing itself as a truly unique entity. NABLA Mobility moves the flight management domain—which traditionally relied on legacy systems and the experience of skilled personnel—toward a data-driven paradigm of optimization and prediction.

The modern aviation industry faces severe operational pain points: increasing complexity due to rising demand, fragmented information hindering fast decision-making during disruptions, escalating costs driven by fuel price volatility and decarbonization mandates, all while safety remains non-negotiable. NABLA Mobility addresses these issues by leveraging its proprietary set of predictive algorithms, "Untangle." This core technology predicts high-uncertainty factors like turbulence and air traffic flow variations, enabling the provision of solutions that enhance operational resilience and efficiency without compromising safety.

The company offers a portfolio of AI-powered solutions. The flagship product is **"Weave,"** a fuel optimization tool designed for pilots in the form of a lightweight Electronic Flight Bag (EFB). Weave utilizes the latest weather and aircraft performance data to provide real-time cruise recommendations for optimal altitude and speed, regardless of cruise distance. This capability has been proven to deliver consistent fuel savings, directly contributing to reduced operational costs and CO2 emissions. A key feature is its ability to operate offline, only requiring a data sync before departure. For operations coordinators, the **"Operational Forecaster"** anticipates potential flight schedule delays and visualizes cascading impacts across the network, allowing proactive intervention hours before disruptions occur. Additionally, **"OBST"** is provided for performance engineers and dispatchers. It semi-automates expert obstacle NOTAM (Notice to Air Missions) analysis, drastically reducing manual workload and freeing technical resources to focus on critical decision-making.

NABLA Mobility differentiates itself by offering the world's first solution capable of managing uncertainty and optimizing performance across the **entire airline network**, not just individual flights. This effort is critical for the industry's structural transformation, supporting global goals like the International Civil Aviation Organization (ICAO)'s target of net-zero CO2 emissions by 2050. The company’s technological expertise and market potential have been internationally recognized, highlighted by securing approximately 320 million JPY in a pre-Series A funding round from investors including The Boeing Company in 2023. By deeply integrating aeronautics, meteorology, and machine learning, NABLA Mobility is poised to lead global decarbonization efforts in the aviation sector.

Company Details

Head Office
Japan

Main Business
AI/機械学習（ML）技術を活用した航空会社向け運航最適化ソフトウェアソリューション（Weave、Operational Forecaster、OBSTなど）の研究・開発・提供。航空業界の脱炭素化と運航効率化の推進。

President
田中 辰治 (Shinji Tanaka)

Established
2021年4月

Capital
4,149万円

Number of Employees
11 - 50

URL
https://www.nabla-mobility.com/

Offices

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