

NEWS RELEASE

September 6, 2024

Mizuho Bank, Ltd.

Mizuho Bank invests in 3DEO, Inc. **Transition initiative for innovation in Japanese manufacturing**

Mizuho Bank, Ltd. (President & CEO: Masahiko Kato) has made an investment of USD 3.5 million in 3DEO, Inc. (Head Office: California, USA), a company engaged in the development of metal 3D printers, the design and development of functional metal parts, and the contract manufacturing of metal parts. This investment was carried out through Mizuho Bank's Transition Investment Facility.¹

3DEO, founded in 2016, is a startup based in California that offers comprehensive services for the design and manufacturing of metal parts in small to medium lots, using its proprietary production process technology, "Intelligent Layering". The company aims to expand the applications for its high-precision metal parts, which are manufactured using metal 3D printers developed in-house, and its innovative metal parts, which are based on its extensive expertise in design for additive manufacturing (DfAM),² into a wide range of areas, such as aerospace, medical and healthcare, and semiconductors.

In Japan, which is facing a declining birthrate and aging population, a shortage of workers at production sites has become a challenge. Especially in processes requiring craftsmanship skills in the machinery and metalworking industries, the aging and retirement of skilled workers and the discontinuation of skills transfer have become problematic. Mizuho Bank believes that implementing metal additive manufacturing,³ which has high compatibility with digitalization and generative AI, will formalize the knowledge that was previously held by specific skilled workers, thus contributing to the transfer of craftsmanship skills.

Additionally, design using DfAM allows for the manufacturing of metal parts that were previously impossible to create. This leads to a reduction in fuel consumption through weight reduction as well as decreased energy consumption through enhanced heat exchange functions using lattice structures,⁴ thereby contributing to the reduction of greenhouse gas emissions throughout the supply chain. These factors are behind the decision for this investment.

With this investment, Mizuho Bank will support the growth of 3DEO in collaboration with Seiko Epson Corporation, Development Bank of Japan Inc., and Okazaki Shinkin Bank, which have also invested in 3DEO. Mizuho Bank will promote the widespread adoption of 3DEO's technology and expertise within Japan, support the development and growth of the domestic metal additive manufacturing market, and facilitate innovation in Japanese manufacturing.



Innovating today. Transforming tomorrow.

Mizuho Bank aims to support clients' undertakings in transition fields by strategically investing in projects related to these areas, including those at the seed and early development stages. Through these strategic and agile investment decisions, Mizuho Bank will share business opportunities and risks with clients and co-create social value that contributes to the sustainability of the environment and society.

1: Transition Investment Facility

A framework for strategic and agile equity investment in projects related to transition fields that clients are undertaking at seed and early development stages. To make strategic and agile investment decisions, Mizuho leverages the industrial and environmental technology expertise it has cultivated over many years, particularly at the Mizuho Bank Industry Research Department and Mizuho Research & Technologies.

2: Design for additive manufacturing (DfAM)

A design method using additive manufacturing techniques optimized for 3D printing.

3: Metal additive manufacturing

The manufacturing of metal parts through multilayer metal manufacturing or 3D printing.

4: Lattice structure

A structure that creates a three-dimensional object by repeatedly arranging a branched lattice.

Overview of 3DEO

Company name:	3DEO, Inc.
Headquarters:	California, USA
Established:	2016
Representative:	Scott Dennis
Business activities:	Development of metal 3D printers and manufacturing of metal parts
Website:	https://www.3deo.co