

Development of innovative EV component design environment utilizing metamaterials

(Nature Architects, Inc.)



City	Year of Establishment	Founder
Tokyo	2017	Taisuke Ohshima

Partner VC	Latest round of Fundraising	Valuation
—	Series B	Non-Disclosure

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○ Business Plan

We aims to revolutionize product design in the manufacturing industry based on our proprietary design technology that utilizes metamaterials called DFM (Direct Functional Modeling).
By utilizing DFM, it is possible to realize functions that surpass those of conventional products in products involving physical phenomena such as deformation, vibration, acoustics, and heat, and to design products that take manufacturing costs and mass production into consideration.
DFM can be applied to a wide range of products, including automobiles, industrial machinery, and aerospace.

○ Research Outline

Targeting the development of EV, this R&D aims to establish a design environment for the development of components with excellent electrical cost efficiency, thermal management, and noise reduction by utilizing our technology.

- ① Establishment of basic shape search technology
- ② Establishment of detailed shape optimization technology
- ③ Establish DB/visualization technology for design shapes
- ④ Modeling of prototypes that can be proposed to future collaborative partners.

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Information & Communication	PCA 2023～2024FY	JPY 300 million	United States, Europe (Italy, German, UK)

○International collaborative technology demonstration

- Relationship development with potential local partner

Local partners overseas will take the lead in researching EV development trends, interviewing major OEMs and Tier 1 manufacturers, and introducing potential customers. Specifically, we will conduct initial interviews to see if it is possible to develop new products by utilizing our technology, and if full-scale collaboration is to be pursued, we will aim to connect our Japanese team with potential customers.