

# Freedom of Mind and Value Co-Creation through Decentralized Data Management



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leader's institution

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#### R&D institutions

Keio University Meiji University The University of Tokyo Kvoto University Osaka University

### Summary of the project

Centralized AI (CAI) and the attention economy threaten freedom of mind and democracy, and inhibit value creation by personal data (PD). By demonstrating that decentralized PD management (DPDM) in which only the personal AI (PAI) of the individual makes full use of her PD create higher added value, we will spread DPDM together with democratic governance of PAI to replace CAI with PAI and to ensure authenticity and diversity of information. This will defend the freedom of mind, promote value co-creation, and enhance democracy and economic performance at the same time.

## Milestone by year 2032

Improve the functionality of PAI and realize decentralized governance of PAI, by building a decentralized data infrastructure for human research and extending it into open citizen science.

#### Milestone by year 2027

Demonstrate the value of DPDM and socially implement decentralized matching by PAI.

## R&D theme structure of the project

R&D Theme 1: Decentralized PD management

HASHIDA Koiti: The University of Tokyo YAMAMOTO Tatsuhiko: Keio University

TOYA Keiko: Meiji University

R&D Theme2: Decentralized data infrastructure for human research

HIRAKI Kazuo: The University of Tokyo MORIGUCHI Yusuke: Kyoto University KANAKOGI Yasuhiro: Osaka University

customer contact individual/ point of P<sub>1</sub> ··· P<sub>n</sub> embeds K<sub>1</sub> ··· K<sub>n</sub> uses D<sub>1</sub> ··· D<sub>n</sub> (PD PAI 2 used by  $P_1 \cdots P_n$ embed embed

servicer Pn

servicer P1

PAI will spread because its added value increases nonlinearly with the diversity of connected services (left figure).

Explore the risks of PAI undermining mental freedom and the role of open citizen science in an AI-integrated society, and clarify the ethical and social relevance of DPDM.

#### decentralized PD mgmt.

security, privacy, scalability

decentralized data infrastructure PAI & decentralized data decentralized for human research infrastructure for governance human research 2027~

reduce unfair intervention in mind info. authenticity and diversity

freedom of mind and value cocreation

- Extend the decentralized data infrastructure for human research to open citizen science, enabling R&D to improve PAI and establishing decentralized governance of PAI.
- Replace CAI with PAI and reduce unfair intervention in the mind.
- Create a sustainable mechanism of decentralized PD management and utilization for research.
- Build a foundation for advanced human research by developing a fair and efficient mechanism for collecting PD in DPDM from many people.
- Use the research results to support human intellectual activities and increase the authenticity and diversity of information.

