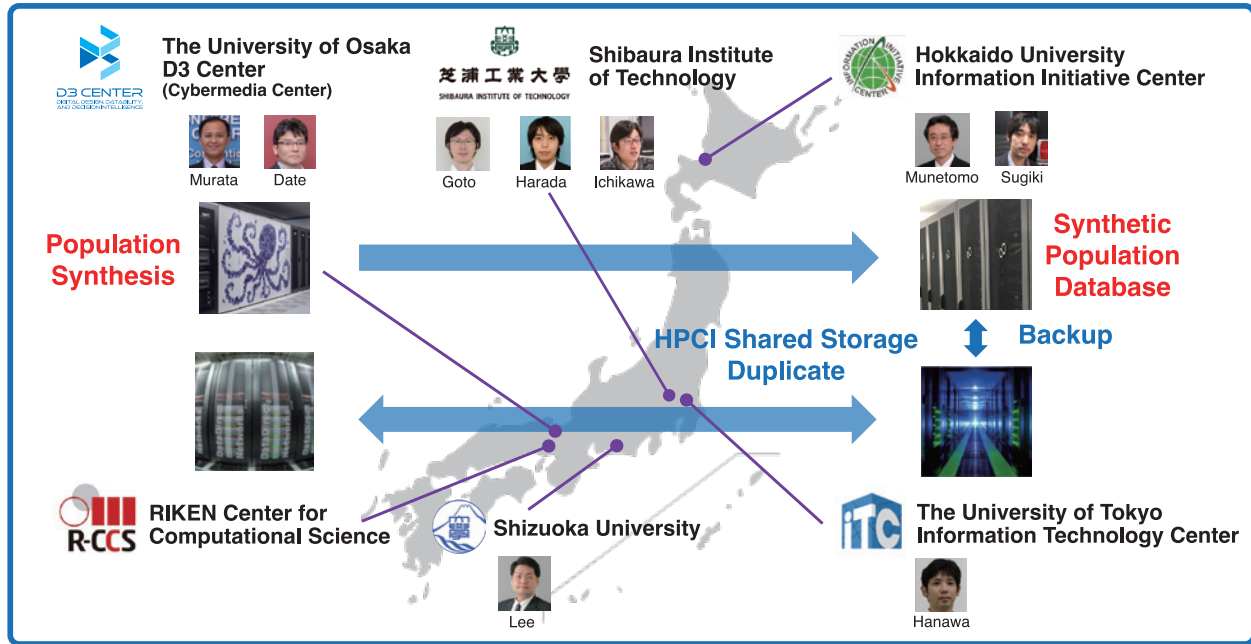


Synthetic Population for Real-Scale Social Simulations

HPCI
High Performance
Computing Infrastructure

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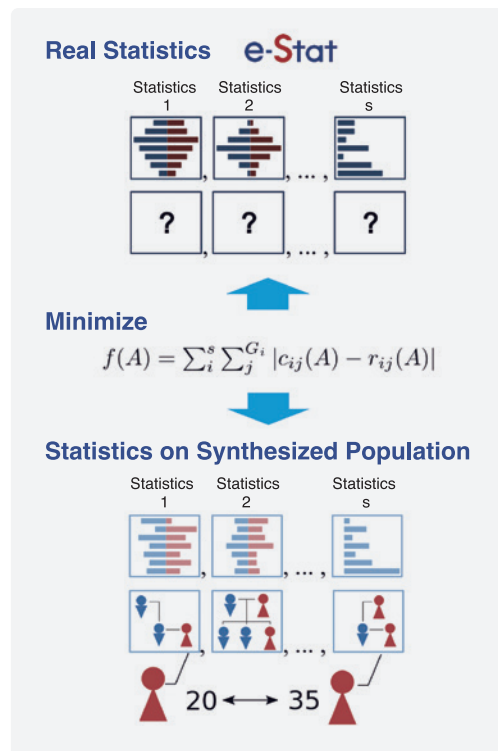


Synthetic Populations (SPs)

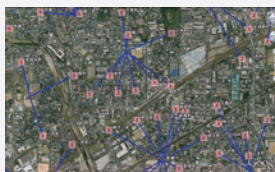
Synthesize Japanese populations using Census for 2000, 2005, 2010, and 2015. Working on 2020 now ^{A,B}

Real-Scale Social Simulations Using SPs

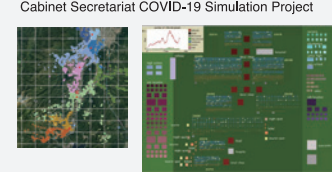
Conduct simulations using attributes of Synthetic Populations **X** survey data collected by researchers.



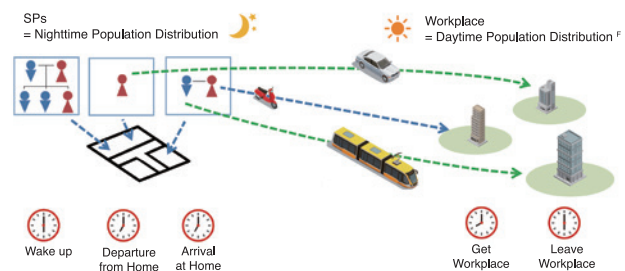
Voting Simulation in Takatsuki, Osaka with 350,000 population ^{C,D}
Age, Distance to polling station
X Interest to election by age



COVID-19 Infection Simulation in Myoko, Niigata with 30,000 population ^E
Age, Industries
X Infection Rate by Age



SPs With Short Time Movement Using Working Place



Estimate Daily Activity Schedule for Each Agent based on Statistics ^G



A) Murata, Masui, Harada (2017), B) Harada, Murata (2017), C) Konishi, Murata (2010), D) Murata, Hamaguchi (2017), E) Kurahashi (2020), F) Murata, Iwase, Harada (2023), G) Matsumura, Murata (2025)
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