



#### Principal Investigator

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#### Adopted Theme

Concept verification of digital twin system contributing to the improvement of nuclear power plant decommissioning processes and the improvement of decontamination and reactor core dismantling technologies

#### Subject of Research

**Concept verification of digital twin system contributing to the improvement of nuclear power plant decommissioning processes and the improvement of decontamination and reactor core dismantling technologies**

#### Overview



We are leveraging digital technology to tackle the efficient, safe and rapid decommissioning of conventional nuclear power plants (NPPs). For the purpose, we will develop a digital twin (DT) system of NPP that utilizes a macroscopic database of knowledge and expertise on the latest decontamination and reactor dismantling technologies, alongside microscale simulations. Achievement of our goal, rapid and efficient decommissioning, will contribute to global environmental issues, and brings new industrial creation to local area through the expansion of the nuclear supply chain.

#### Business Models (when applying)

Our business models assume the following two elements. One is the "Robot as a Service" and "Software as a Service", where we provide our products to engineering companies. The other is an engineering business in which we offer our own decommissioning engineering services. Based on the outcomes of the GTIE project, we will proceed with the development of both a decommissioning management system optimizing the value chain and a remote dismantling system including remote dismantling robots.

#### Activity Planning (when applying)

1. Overall achievement goals is to secure investment intentions from venture capital through the accomplishment of targets related to business development, research and development and promotion system.
2. Achievement goals for business development is to obtain Letter of Intent (LOIs) from potential customers and formulate a business plan.
3. Achievement goals for research and development is to identify issues with the decontamination and dismantling technologies, and to build a database of these technologies, and to complete the prototype of the DT system for decommissioning.
4. Achievement goals for the promotion system is to form agreements on participation with the prospective management candidates (CEO/CTO/COO) and to formulate a business plan and capital policy.