

# Green Computing and DX

**R&D Project Title : Electronics with spontaneous phenomena based on circulation**

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## Summary :

Biological tissues are an efficient regenerative system based on circulation, adapting to its environment and on-site update. In this study, we will develop the technology and science to incorporate circulation into electronics by dividing into single devices, circuits, and the background theory. This project aims to construct technologies and theories to incorporate circulation into electronics.

By proposing electronics based on the thermodynamic mechanism that biological phenomena follow, we are going to construct a concept of electronics with circulation. The main discussion will be how to formulate an energy-efficient system described in nature exhibited by non-equilibrium open systems to electronics technology via materials science, circuits, and theory.

By breaking away from the current electronic systems, which have been maintained by mass consumption of materials and energy, and by creating a concept of electronics based on the spontaneous generation of electronic parts based on circulation, our society would be able to save a huge amount of energy and materials. Our project proposes a new approach to reduce carbon emissions by changing the social structure of energy conservation and material consumption by regeneration and spontaneous development based on recycling.