## (6) Development on the efficiency and reliability of the maintenance cycle

## **Research Summary**

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Currently, aging of public infrastructure has been progressing rapidly. The serious damage due to deterioration occurred in Sasago tunnel and it caused the accidents. Aging of social capital has become major social problem.

In order to respond to these challenges, we need to implement maintenance cycle without fail and ensure to keep the health of social capital.

In this research we work to solve the following technical problems that we face at each phase of maintenance cycle (inspection, investigation, diagnosis, measures (repair and reinforcement)).

 Inspection/Investigation: technology to improve efficiency and reliability of monitoring and investigation contributing to improvement of the reliability at time of diagnosis

- (2) Diagnosis: determining methods to identify area/parts where countermeasures are needed and the degree of urgency (priority)
- (3) Countermeasures: optimal maintenance and repair method (evaluation of new technologies) appropriate for previous events and on-site conditions

We also work on the development of maintenance technology appropriate for the various management levels, such as consideration for the service level of properties that the municipality managements control.

Thus, we will continue to contribute to the health of the social capital in order to achieve a spiral up in the technical aspects of the maintenance cycle.