



# Monitoring the health of structures

Using sensing, continuous monitoring and advanced data analysis techniques we support civil and industrial asset managers to make more informed maintenance decisions.

## A race against the clock

Assets such as buildings and bridges are typically maintained when something goes wrong or according to preventative maintenance schedules. However, these approaches don't make the best use of limited maintenance resources.

Reacting to problems when they occur means assets operate at reduced service levels until resources are mobilised to repair the problem. Preventative, or time-based, maintenance is an improvement though it is often inefficient as maintenance is either too early or too late.

## Collecting and analysing data to improve maintenance schedules

We have developed structural health monitoring technology to enable maintenance to be scheduled based on actual asset condition, increasing productivity and extending asset life.

Our approach to informed maintenance decision-making is underpinned by:

- Sensing and data acquisition: Sensors and distributed processing capabilities are deployed to suit large and small structures.
- Data analytics: Analytical techniques developed by our team provide information for specific situations such as damage detection, condition assessment, loading assessment and maintenance prioritisation.
- A continuous monitoring service: Our service applies data management and the analytical techniques to provide asset managers and engineers with situational awareness and the information they need to make decisions.

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Through the continuous monitoring of the structural health of each of the 800 steel and concrete supports under the roadway, Roads and Maritime Services NSW can undertake condition-based and predictive-based maintenance to reduce their costs and minimise interruptions to bridge traffic.



### CONTACT US

t 1300 363 400  
+61 3 9545 2176  
e [csiroenquiries@csiro.au](mailto:csiroenquiries@csiro.au)  
w [www.data61.csiro.au](http://www.data61.csiro.au)

### WE DO THE EXTRAORDINARY EVERY DAY

We innovate for tomorrow and help improve today – for our customers, all Australians and the world. We imagine. We collaborate. We innovate.

### FOR FURTHER INFORMATION

Peter Runcie  
New Industries and Platforms Leader  
t +61 2 9490 5940  
e [peter.runcie@data61.csiro.au](mailto:peter.runcie@data61.csiro.au)  
w [www.data61.csiro.au](http://www.data61.csiro.au)

