Software to patrol bridge

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When you drop a cigarette butt on the Sydney Harbour Bridge, you’re being watched by about 100 closed-circuit television cameras. And soon a computer using artificial intelligence will monitor the vision and decide whether you’re just a litterbug or a terrorist threat.

The security upgrade coincides with a four-year, $1.1 billion national security program announced in Tuesday’s federal budget and ASIO’s detailing of 24 “vitality important” pieces of infrastructure to protect.

Using artificial intelligence, the new Australian-made software system draws upon its experience of monitoring the busy bridge scene to pick up any anomalies, particularly objects that have stopped moving for a specific period of time.

It uses its understanding of perspective, shape and size to eliminate small objects such as cigarette butts as a potential threat and highlight more threatening ones. The human brain has trouble processing loads of information on people’s actions in crowded places amid rapid traffic movement.

But fear not. The security of the bridge will not be left entirely in the hands of a faceless robotic system. An alarm will ring to alert human monitors and a red outline on the screen will pinpoint the object of concern.

The security patrols that have been present on the landmark since the terrorist attacks of September 11, 2001 will, also be retained to investigate alerts and make a final call on the level of the threat.

The chief executive of Sydney-based software provider iOmniscient, Rustom Kanga, said the bridge system was unique because it worked on non-motion detection of objects in a busy scene and did not depend on human detection.

“If an intruder leaves a suspicious object or if a car stops in a no-parking zone on an area of the Sydney Harbour Bridge, in complete darkness, the technology and thermal imaging equipment will pick up their presence as if it were daylight,” he said.

Other applications for the technology include airports and the detection of unattended bags.

The federal government has been increasing pressure on businesses recently to improve the security of critical infrastructure.

ASIO has compiled a database of the top 2000 critical infrastructures.

The assets have not been publicly identified but are likely to be considered for major vulnerability assessments being overseen by the Attorney-General’s Department and the Defence Signals Directorate.

The NSW Roads and Traffic Authority would not comment on the security upgrade, which is being managed by Chubb Australia.