

## Shifting perspectives: Assessing closed-circuit television surveillance in food manufacturing

Emma J. Samuel\*, Ellen W. Evans and Elizabeth C. Redmond  
\*emsamuel@cardiffmet.ac.uk

### INTRODUCTION:

- Closed-circuit television (CCTV) is not mandatory in food manufacturing but often installed to monitor security or encourage productivity.
- From a single viewing platform, CCTV provides evidence of due diligence, identifies training opportunities, deters criminal activity and monitors multiple food production lines at once.
- Once installed, CCTV systems are rarely reviewed for efficacy.

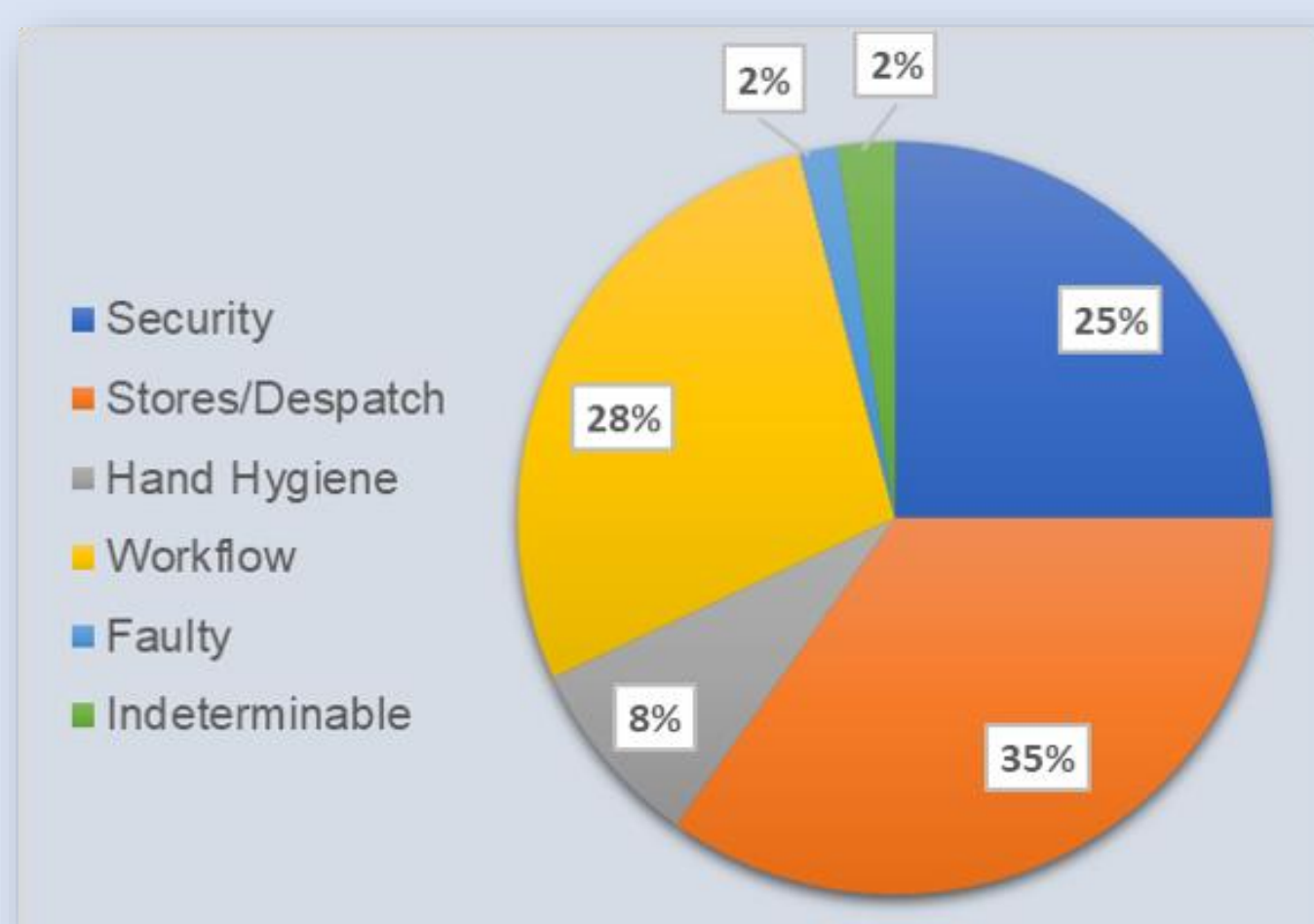
### AIM:

- To evaluate CCTV camera positions and assess field of views for potential system refinement in three food manufacturing sites (raw meat, cooked meats and ready to eat foods).

### METHODS:

- In total, 122 on-site camera viewpoints were assessed individually via company surveillance software.
- Recorded determinants included food hygiene behaviour, security, production workflow and vantage points.

### RESULTS:

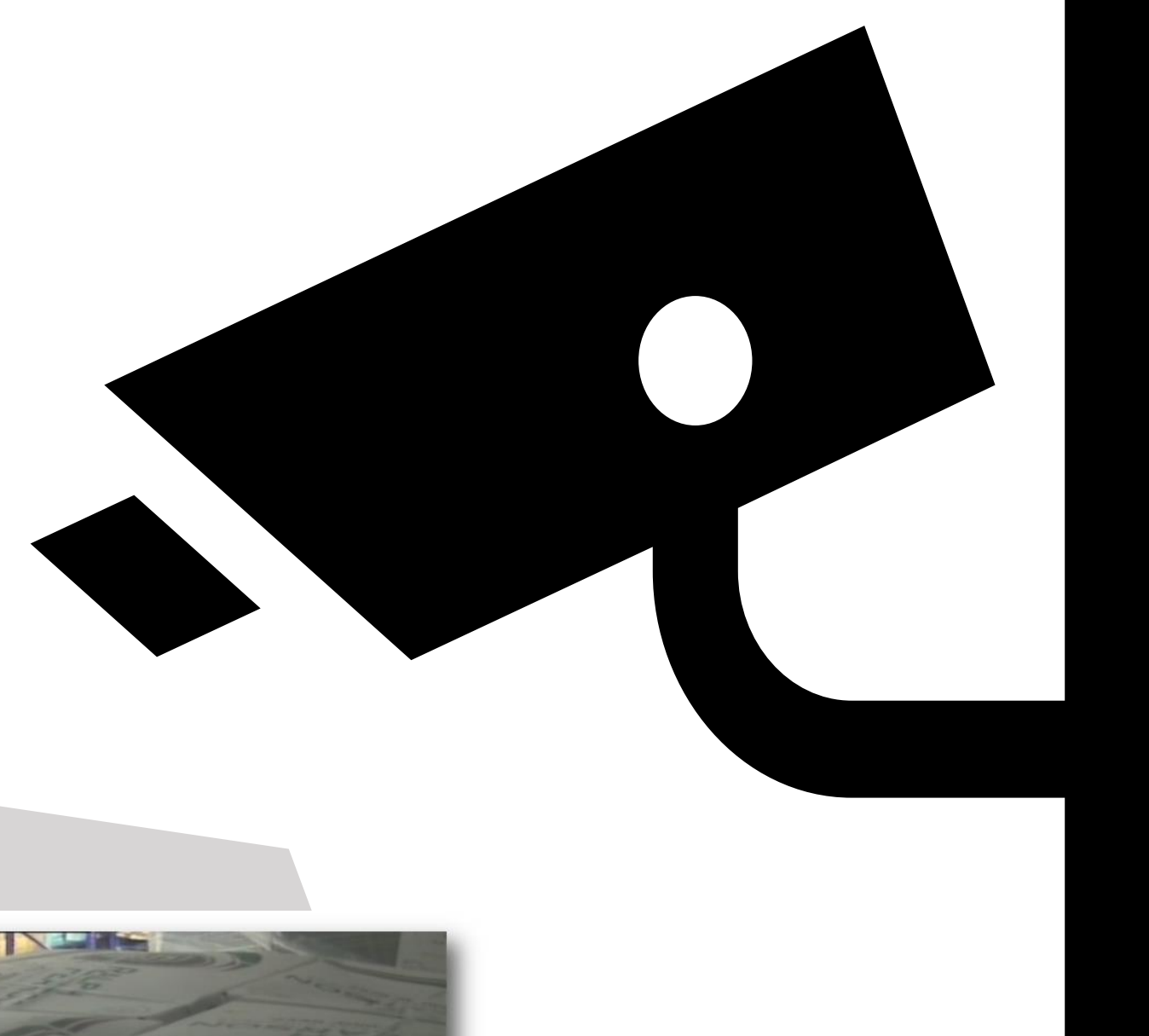


- Predominantly, 60% ( $n=72$ ) of cameras focused on security and safety related factors including areas populated by food-handlers the least (e.g. image 5).
- Obscured field of views (e.g. image 1 and 4) as a result of production reconfiguration offered little value from a security or observational perspectives.
- Hand hygiene facilities appeared in 8% ( $n=9$ ) field of views although precise behaviour would be difficult to observe as demonstrated by images 2 and 3.
- Minor adjustment to camera positions would increase handwashing observation vantages by 7%; covering 16 out of 24 sinks present.

### SIGNIFICANCE:

- Regular CCTV system review is practical to identify camera positions no longer viable.
- Consideration of the CCTV purpose at the design stage would ensure field-of-views are relevant to need and not a catch-all.
- Opportunities exist to develop food industry guidance to support CCTV surveillance system installation incorporating production assimilations that are informative.
- A risk assessment approach to installation will capitalise on existing controls and avoid duplicity and unsatisfactory outcomes.

# Positioning of CCTV in food manufacturing is critical to optimise value for food safety monitoring as well as mitigating business risks.



1



2



3



4



5

