



# CASTLE

CBRNE Assessment Science & Technology Laboratory at ECBC



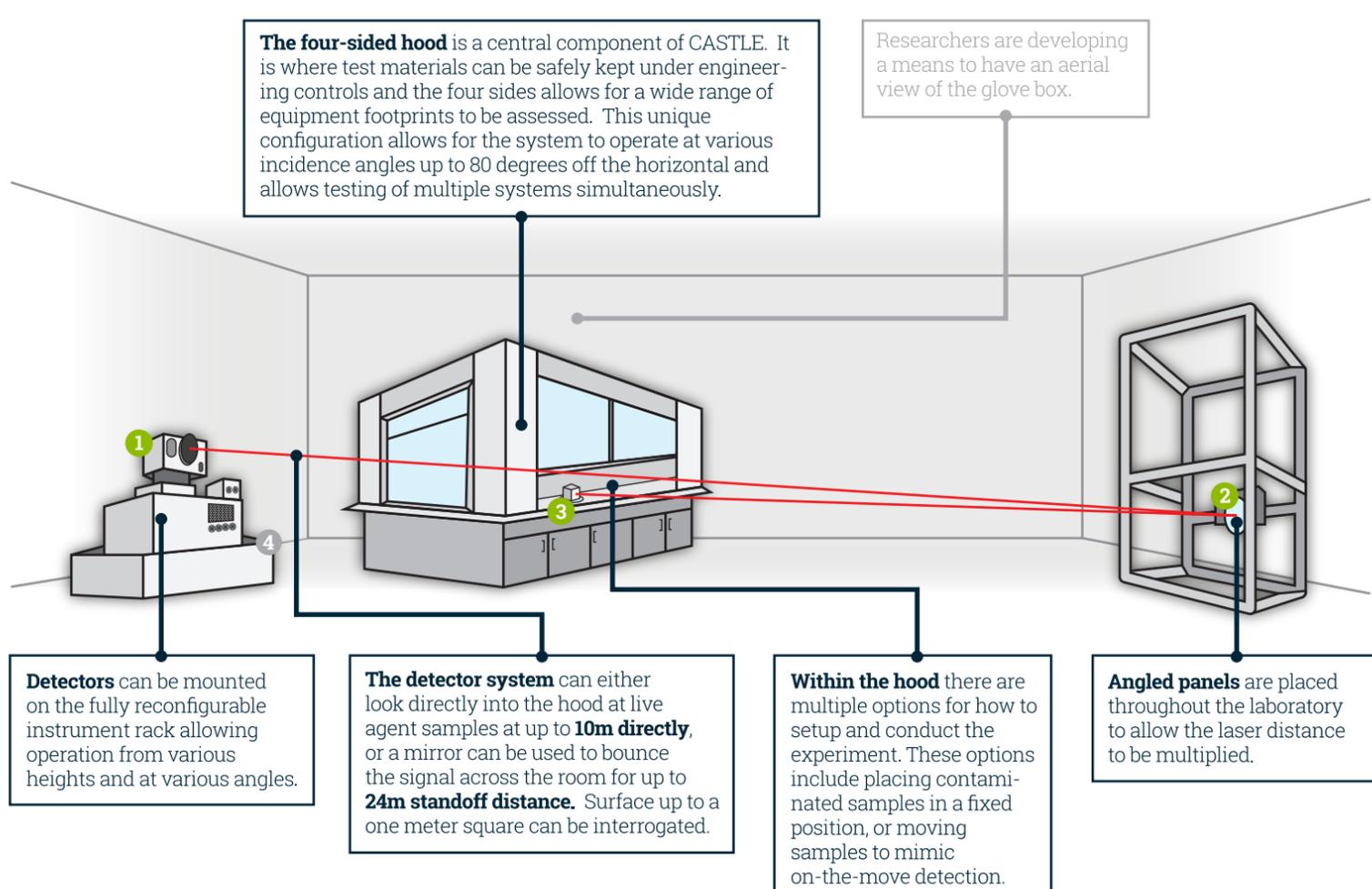
## What is it?

CASTLE supports the assessment and development of proximal, (tens of centimeters to tens of meters) detectors in a state-of-the-art, adaptable surety laboratory where emerging detection systems can not only be evaluated, but challenged against live chemical agents, Biosafety level 2 biological threats, and energetics in various scenarios. This capability addresses current efforts for the development of enhanced surface detection systems that need to be assessed before moving closer into the hands of users.

## How does the lab work?



## The Major Components



## CASTLE Creation Timeline



## Upcoming Projects



### Next Generation Chemical Detector (NGCD)

This is a Joint Program Manager for Nuclear Biological and Chemical Contamination Avoidance program to develop and field a handheld sensor for surveying surfaces to locate areas of contamination.



### Wide Area Mapping and Identification Program (WAMID)

This project integrates two orthogonal technologies and leverages the strengths of each to rapidly map surface contamination and then zero in and identify the specific contaminants.



### Standoff Covert Eyesafe Explosives Detection System (SCEEDS)

This is a Defense Threat Reduction Agency funded effort to improve the sensitivity of a standoff bulk explosives detection system.



### Raman Agent Monitoring System (RAMS)

This is an international project with the Republic of Korea to develop a UV system to detect chemical agents at proximal ranges. Efforts in CASTLE include: examine the photochemical effects of DEEP UV sources and their implications on detection systems, quantify the utility of single pixel versus multi-pixel systems, and collect the library signatures of toxic industrial chemicals.