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IWMA
International Water Mist Association

Water Mist for sheltered / social Housing

Yusuf Muhammad (Plumis)



Webinar Series April 2021



Yusuf Muhammad & William Makant Cofounders of Plumis Ltd



The Telegraph

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Sir James Dyson backs kitchen taps to save lives and launches 2010 competition

Royal College of Art graduates create fire extinguishing system using water mist sprayed from kitchen taps and plan to launch the product by the end of the year thanks to a £10,000 award from Sir James Dyson

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The innovators: mist system offers a safer way to control fires

The creators of Automist explain how a fine mist can cool and suppress fires more effectively than sprinkler systems, especially when caused by chip pans



Red Dot 2016 Product Design Winners Announced

BY JANA PERKOVIC | MARCH 31, 2016

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Red Dot Gala in the Aalto-Theater in Essen, Germany
(Courtesy Red Dot Awards)

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Red Dot Design Museum

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The winners of the prestigious Red Dot Awards 2016 have been announced in the category of Product Design.

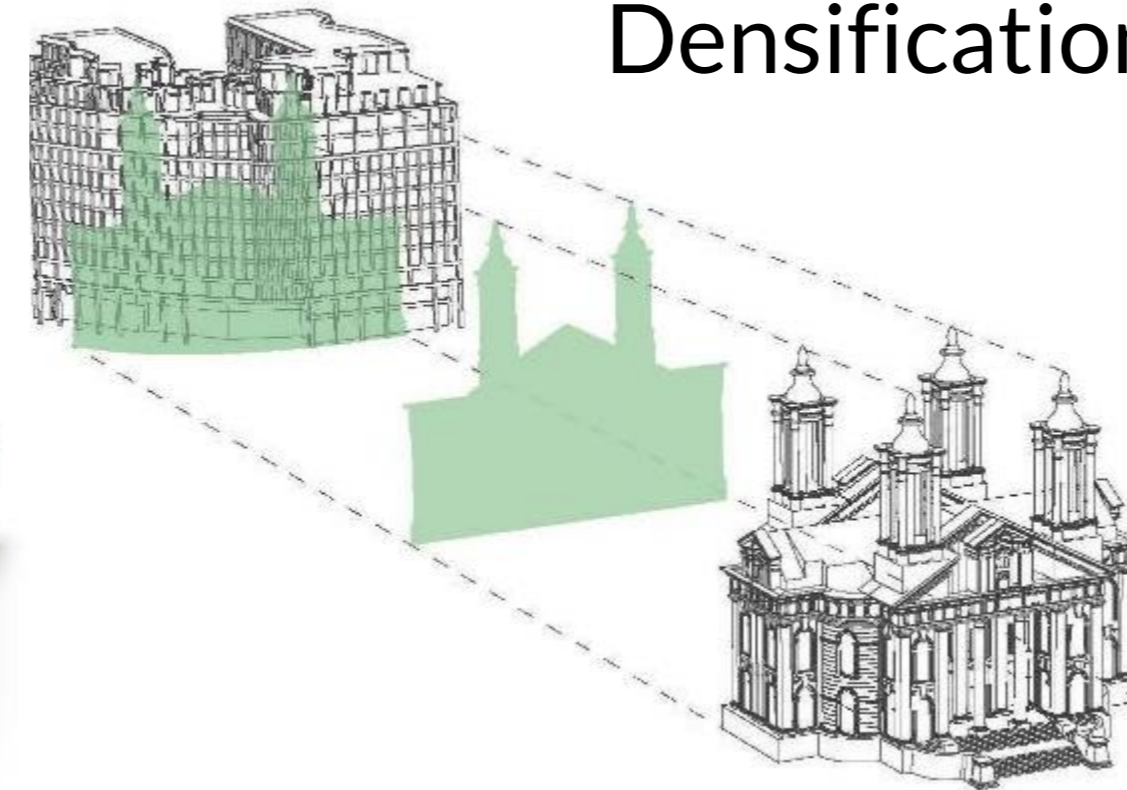
A record 5,200 products were submitted this year in the Product Design category, including firms and designers from 57 countries. The jury, consisting of 41 experts, was also the biggest ever, assembling in the Ruhr area of Germany to assess *in situ* every object submitted for the award.

The evolution of the fire problem

Modern Methods of Construction



Housing
Densification



Ageing population



1990



↓ Smoking



↓ Chip pans



↑ Electrical



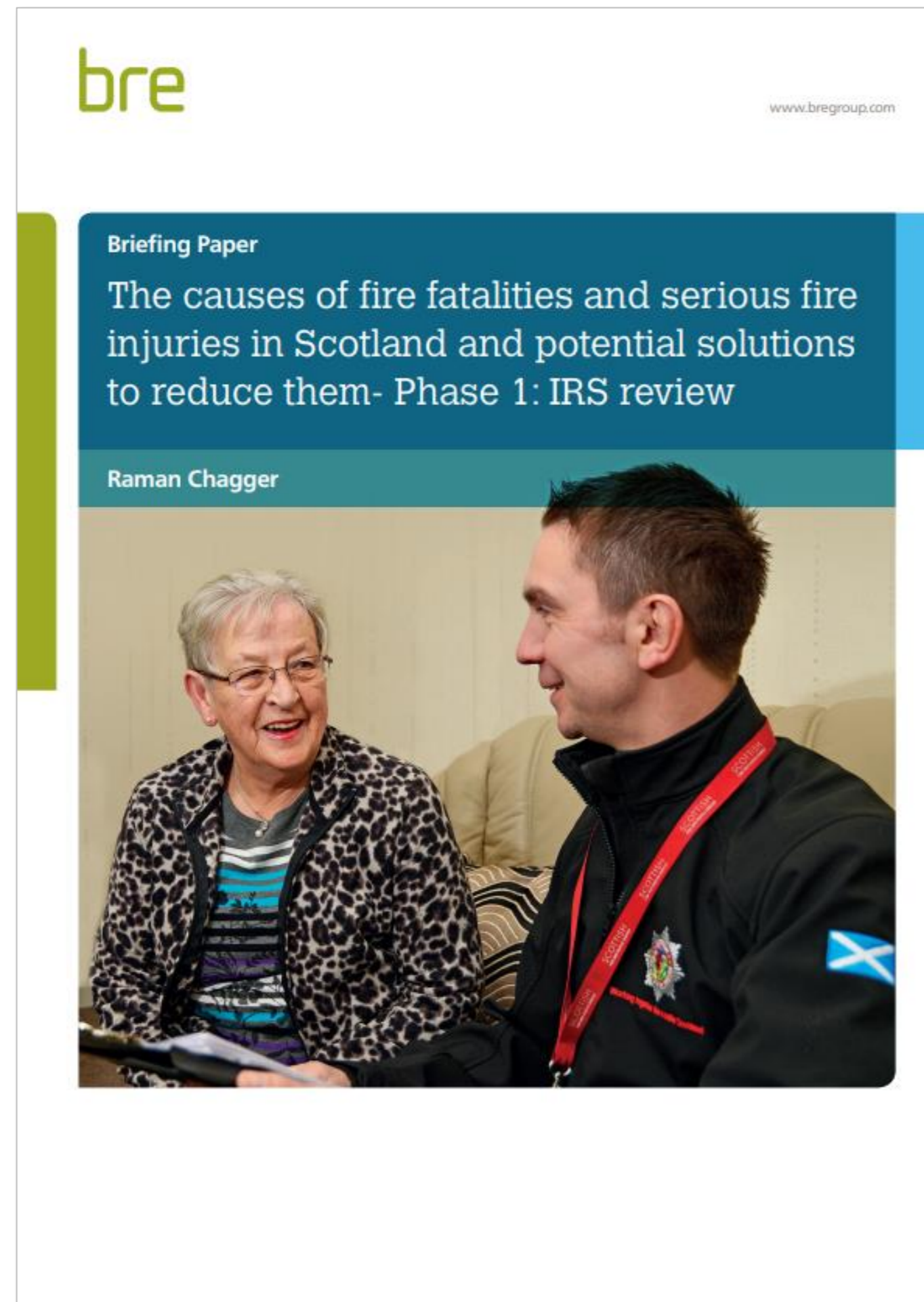
↑ White goods

Today

Nest



BRE Research



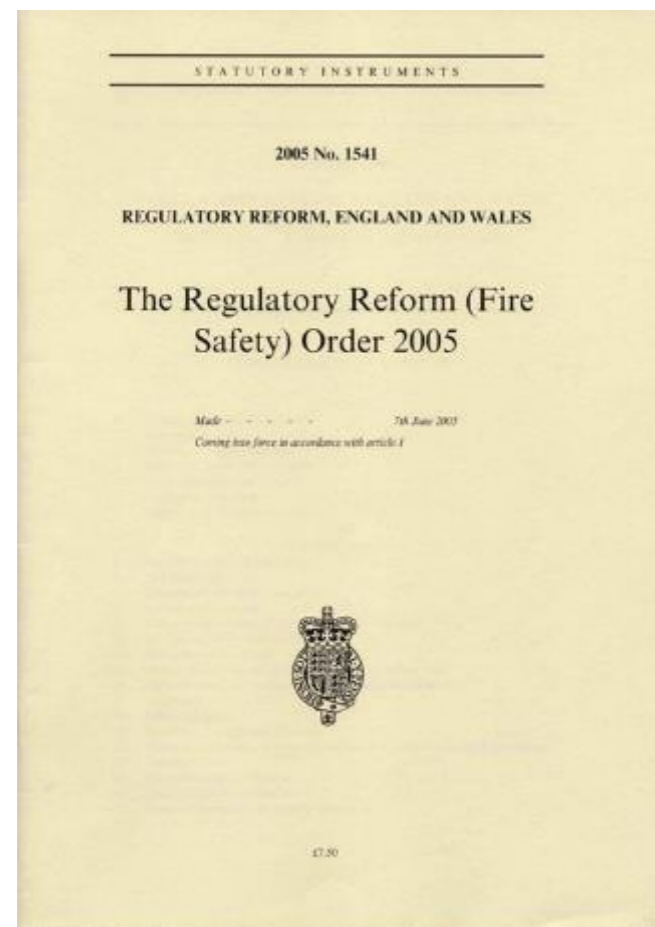
Current technologies and approaches may provide insufficient protection

An ageing population with increased vulnerabilities, will need protecting in ways that are increasingly more sophisticated

Reliable early detection and suitable intervention, to either delay the development of the fire or to notify people

Elective fire safety upgrade

Enhancement to a building with an otherwise code compliant fire safety design



Places the responsibility on **individuals** within an organisation to carry out risk assessments to **identify, manage and reduce the risk**

Article 33 - Person charged to prove that s/he took all reasonable precautions and **exercised all due diligence** to avoid the commission of such an offence.

Elective fire safety upgrade? Consider?

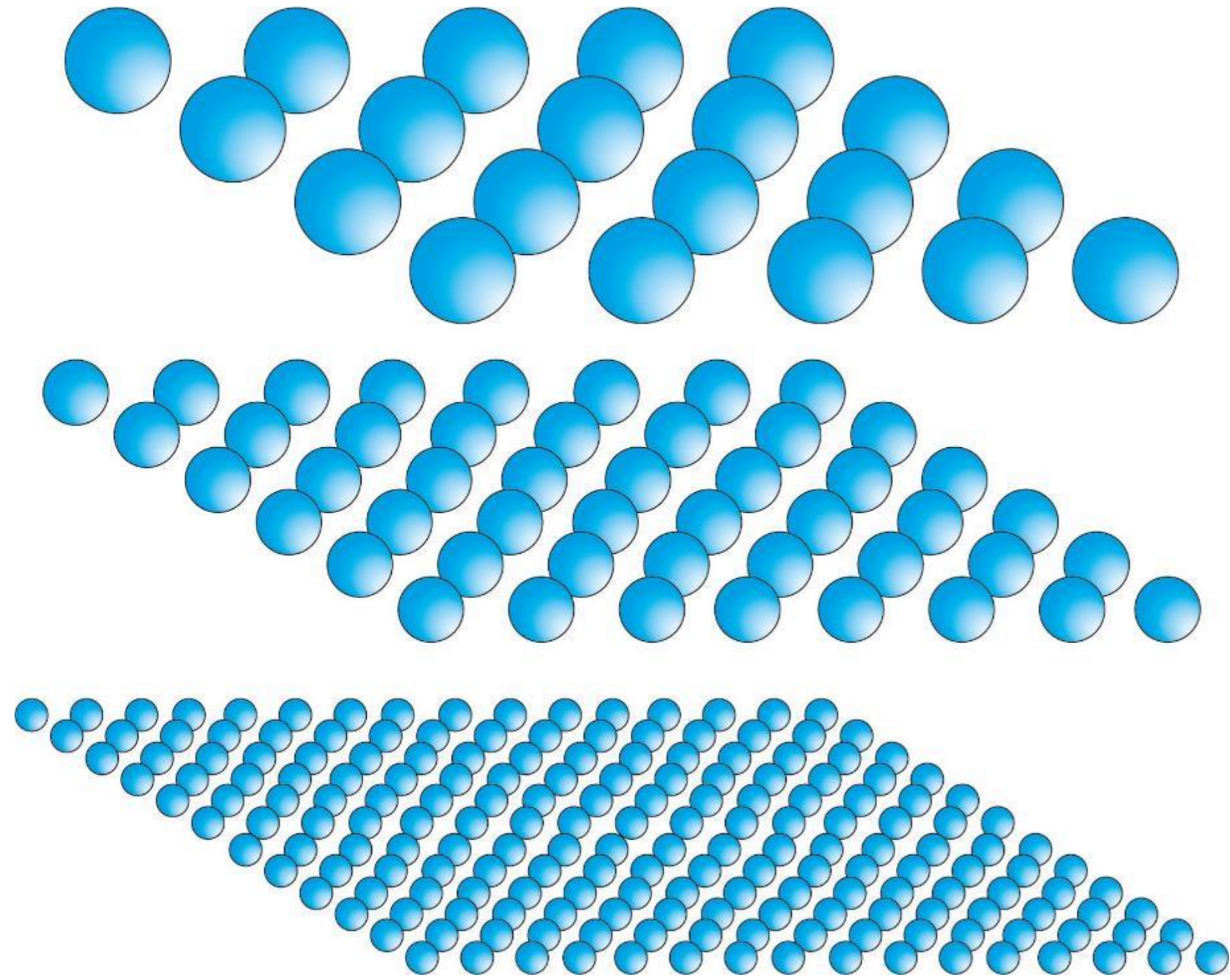


Housing stock type & characteristics

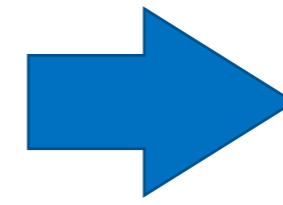








Type of occupants

Watermist

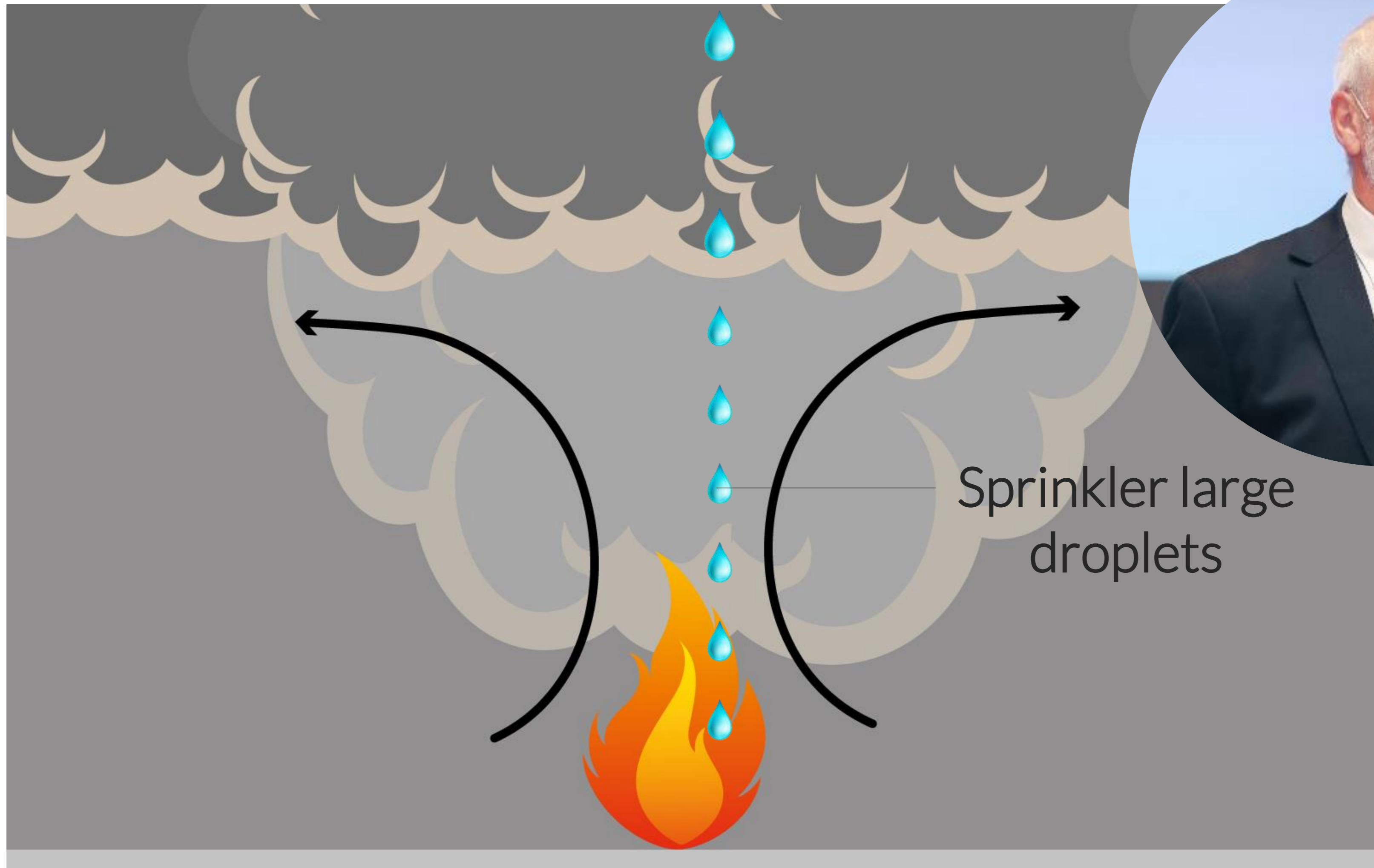


Large surface area

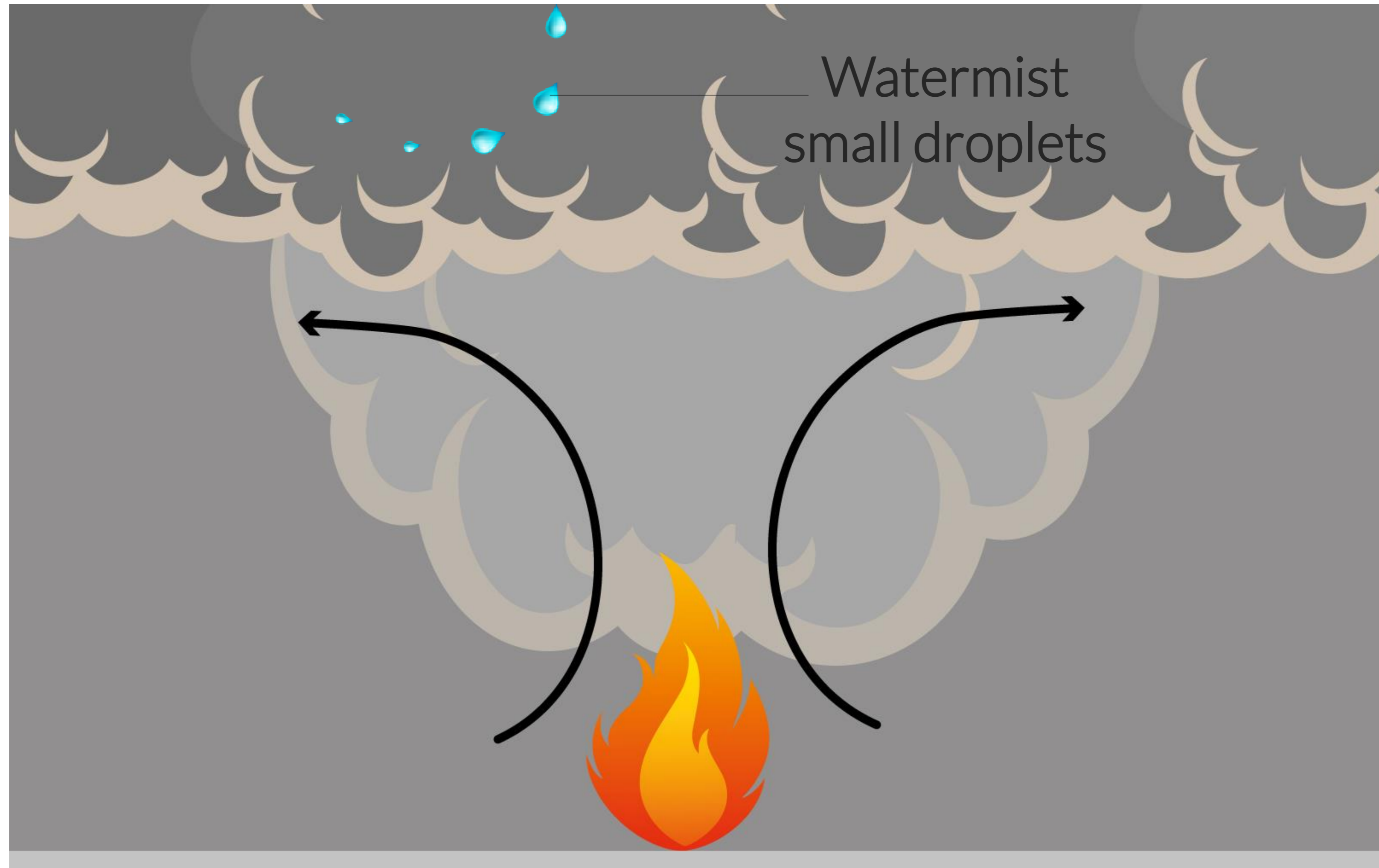


Which extinguisher for which fire?		 A	 B	 C	 D		 F
		Wood, paper, textiles and other carbonaceous materials.	Flammable Liquids, petrols & spirits	Flammable Gases (Propane, butane)	Fires involving burning metals	Fires caused by an electrical fault where electric current may be present.	Cooking oils and fats. For example olive oil, or lard
Water Mist		✓	✓	✓	✗	✓	✓
Water	Red	✓	✗	✗	✗	✗	✗
Foam	Yellow	✓	✓	✗	✗	✗	✗
Powder	Blue	✓	✓	✓	✗	✓	✗
M28/L2	Blue	✗	✗	✗	✓	✗	✗
CO2	Black	✗	✓	✗	✗	✓	✗
Wet Chemical	Yellow	✓	✗	✗	✗	✗	✓

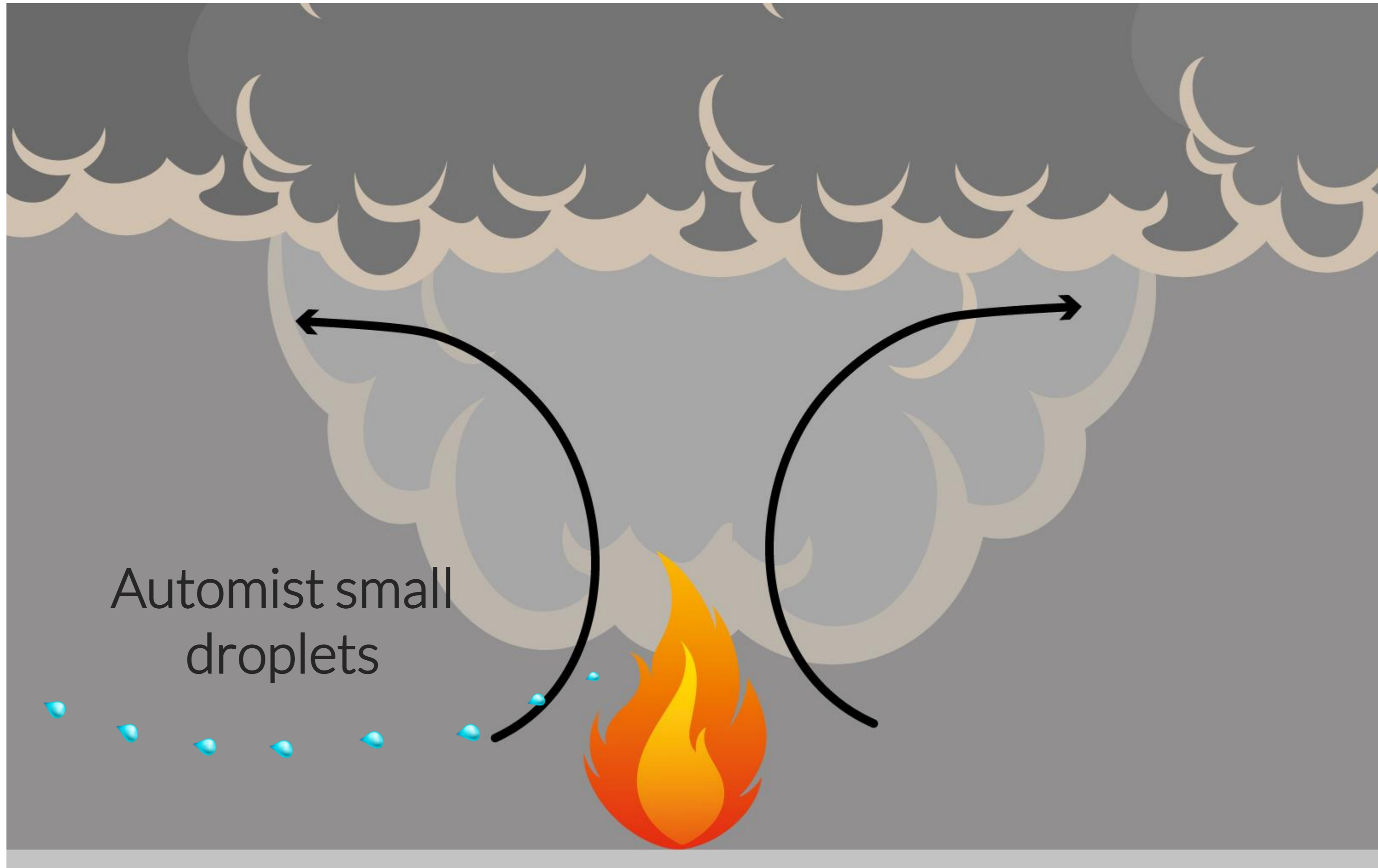
Newton in practice



Newton in practice



Archimedes in practice

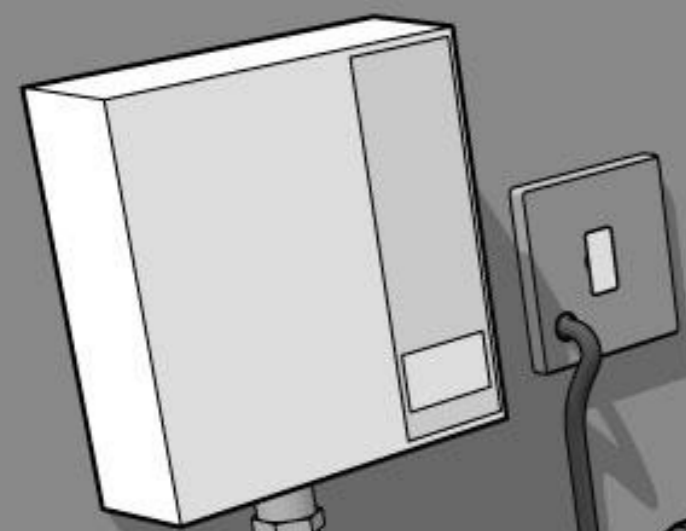




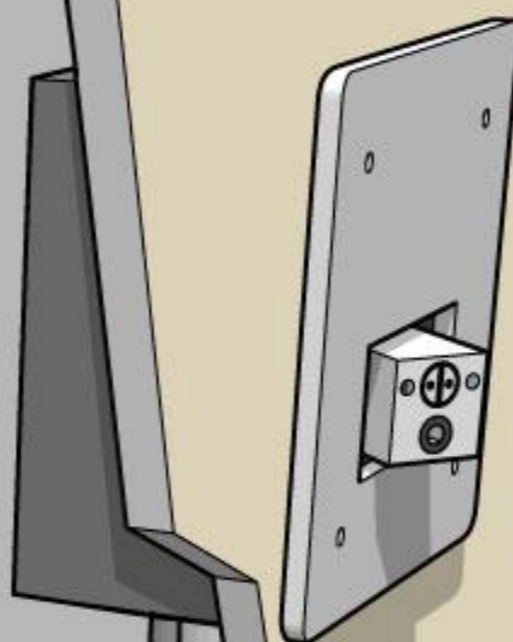
outomist

KEEP CLEAR · DO NOT COVER

Controller

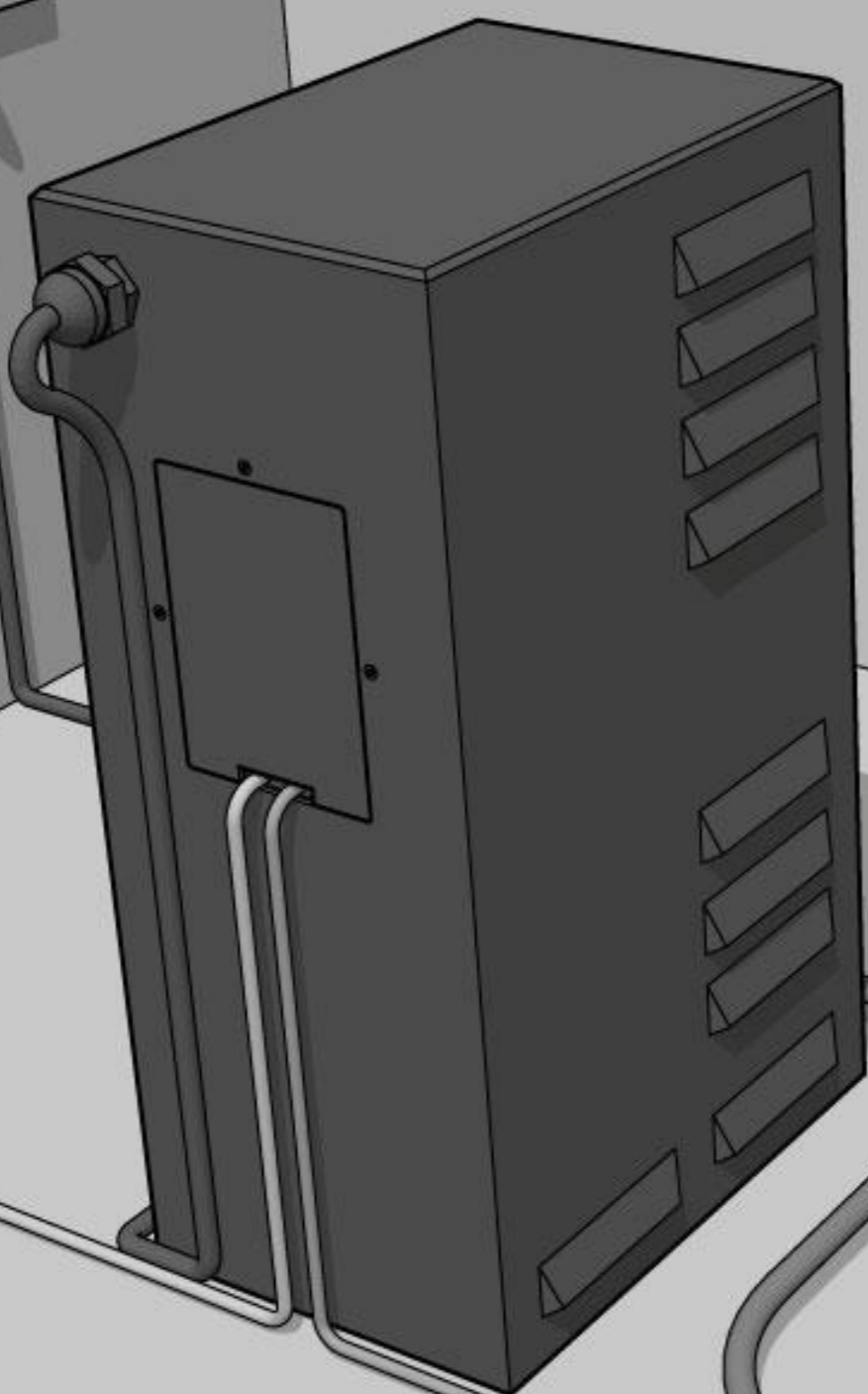


Head



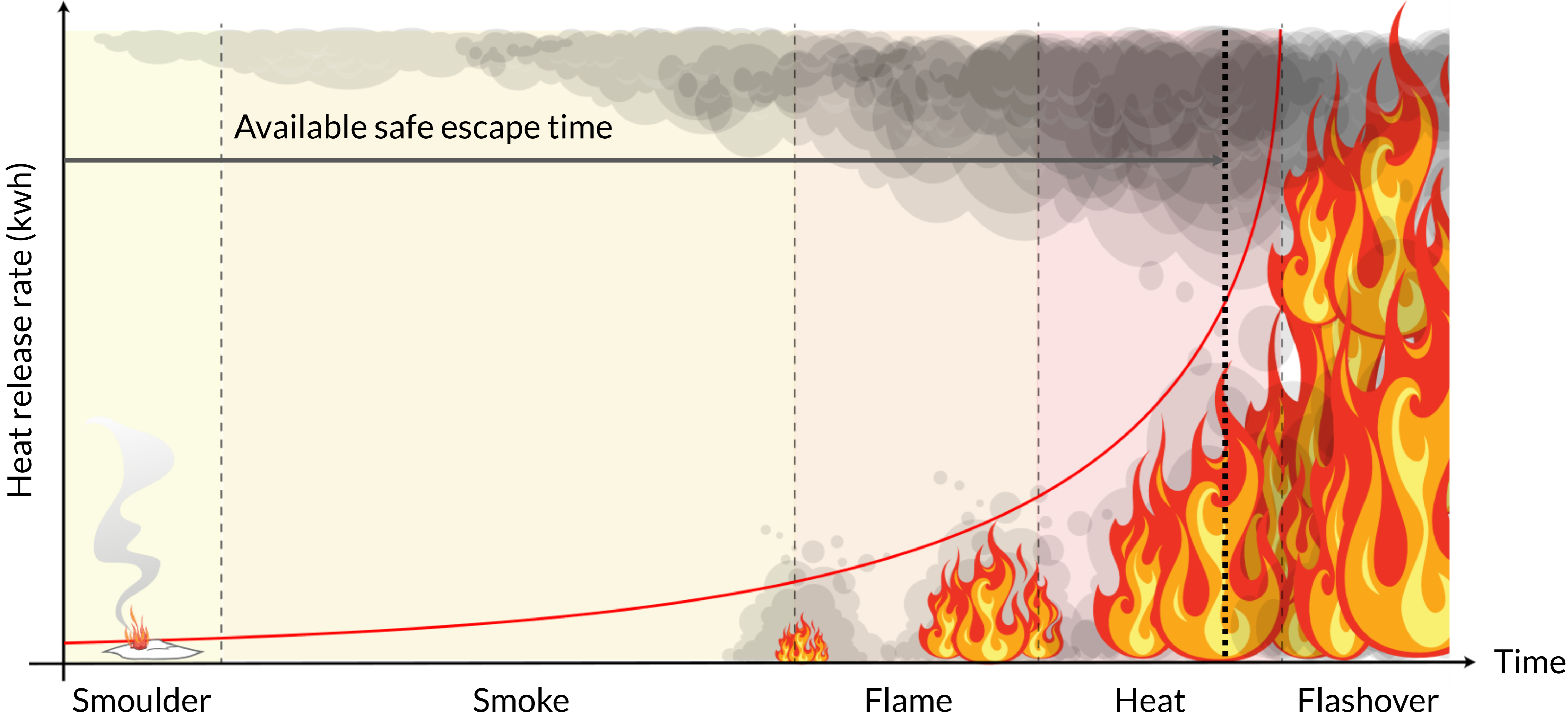
Hose

Pump

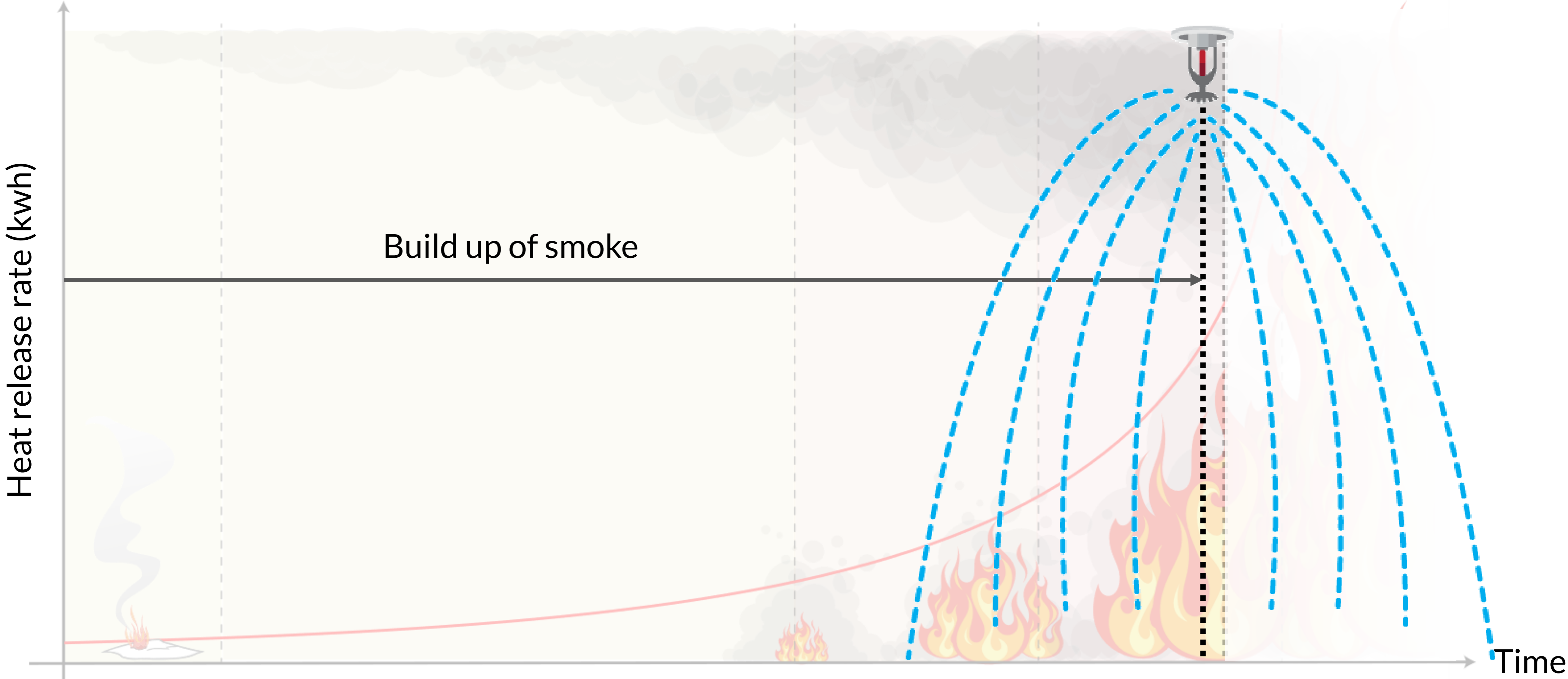


Alarm

Smoke

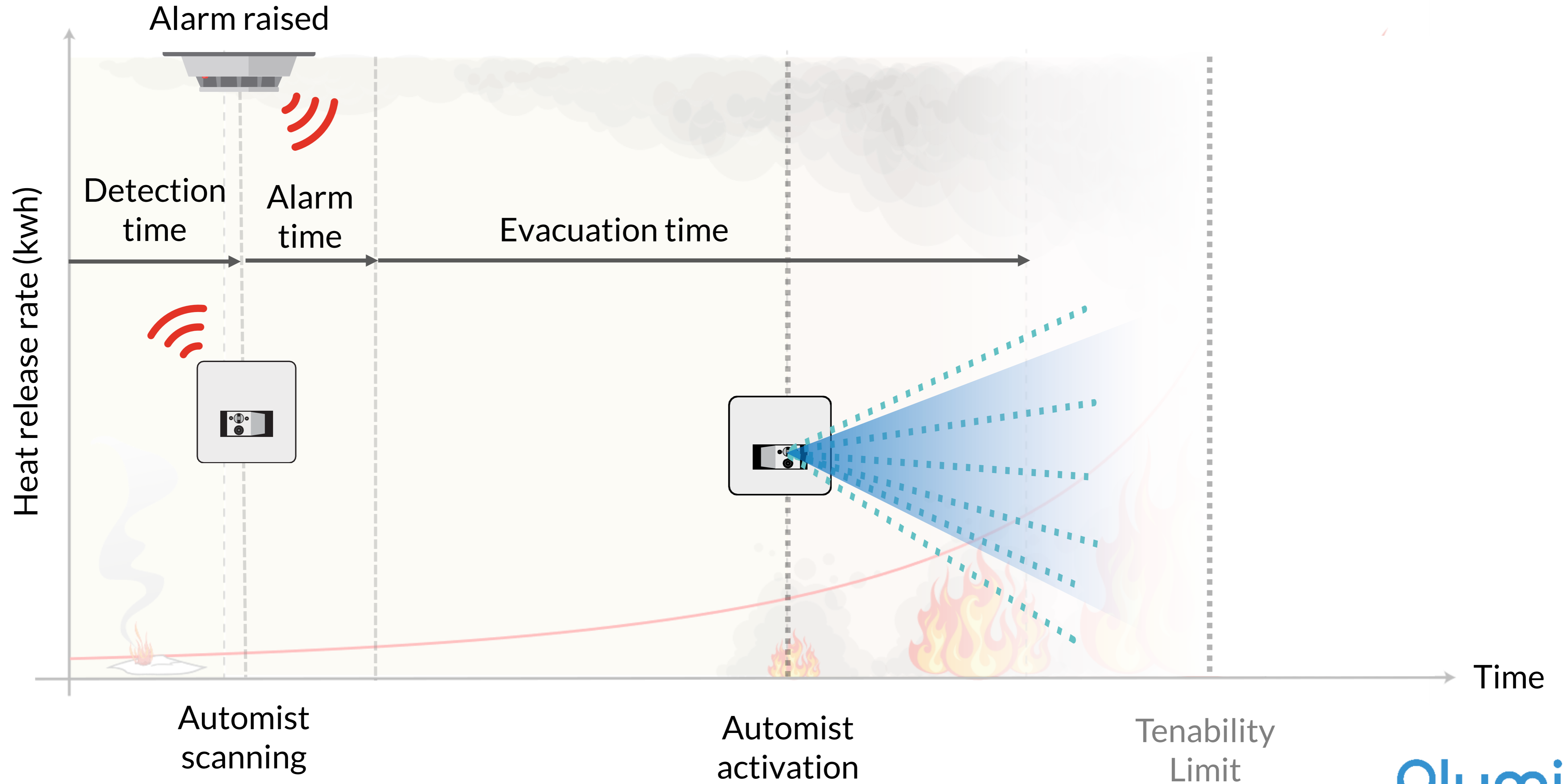


Smoke



Sprinkler
activation

Smoke kills



Automist Smartscan Hydra



Sidewall Sprinkler



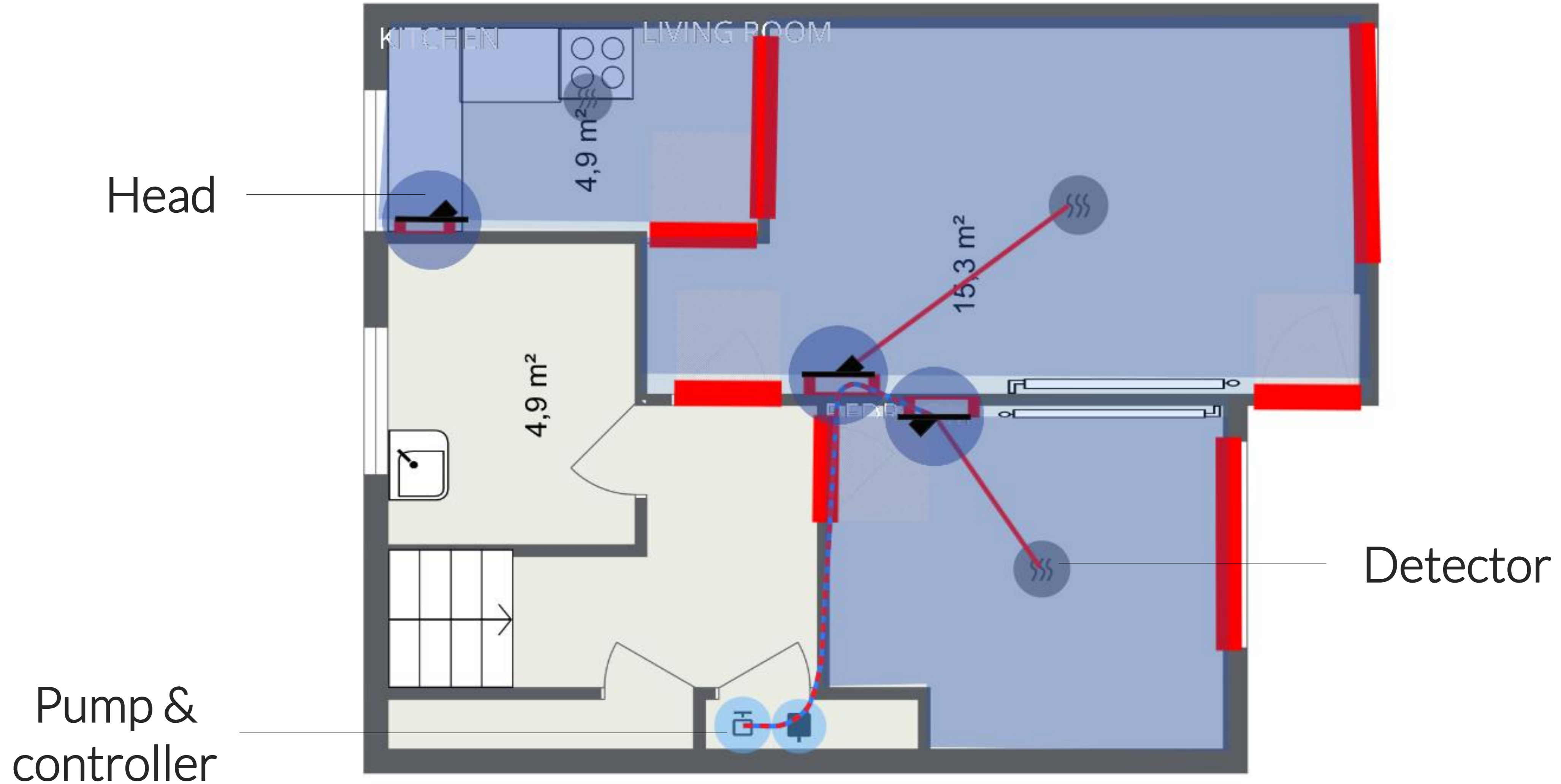
Sheltered / Social Housing Case Study



Lower water demand

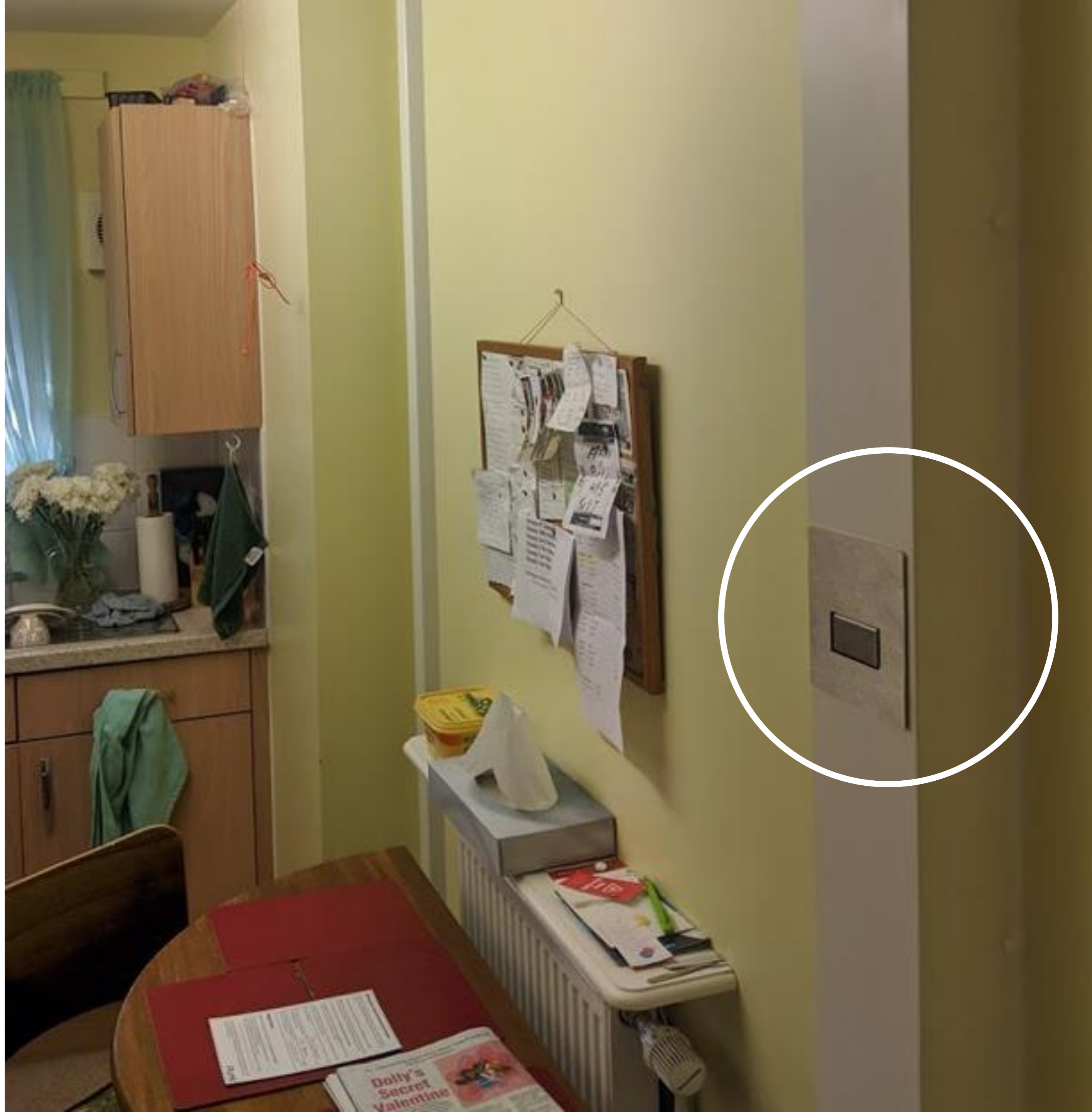
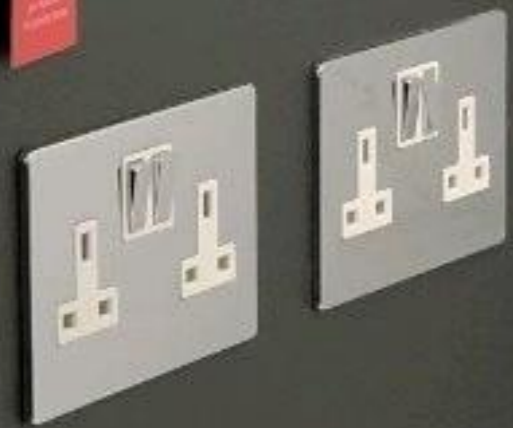
Minimum Guaranteed UK Supply by the Office of Water Services (<u>OFWAT</u>)	Automist's Water Usage	Traditional Sprinkler's Water Usage
9 litres per minute	5.6 litres per minute	60 litres per minute (per nozzle)
1 bar pressure	1 bar pressure	approx. 2 bar pressure

London Sheltered housing retrofit



Installation







Designing for the standard



The Standard

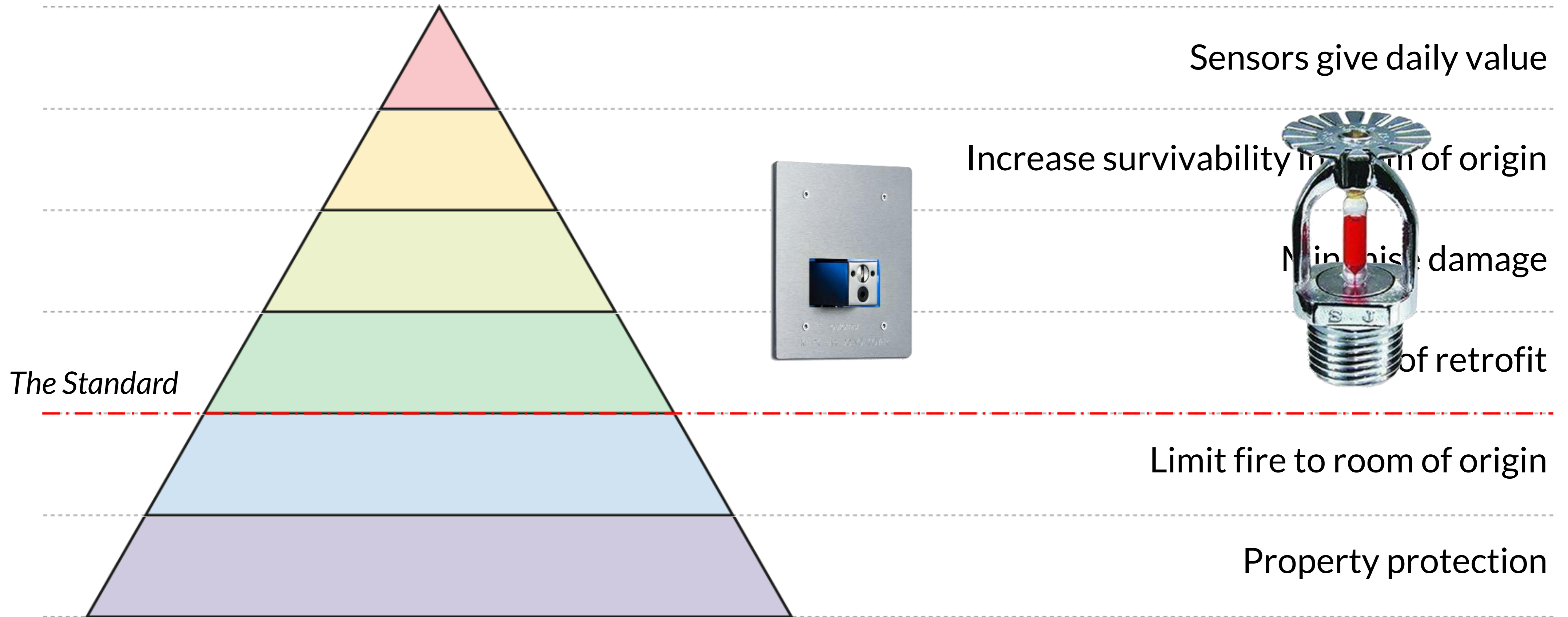


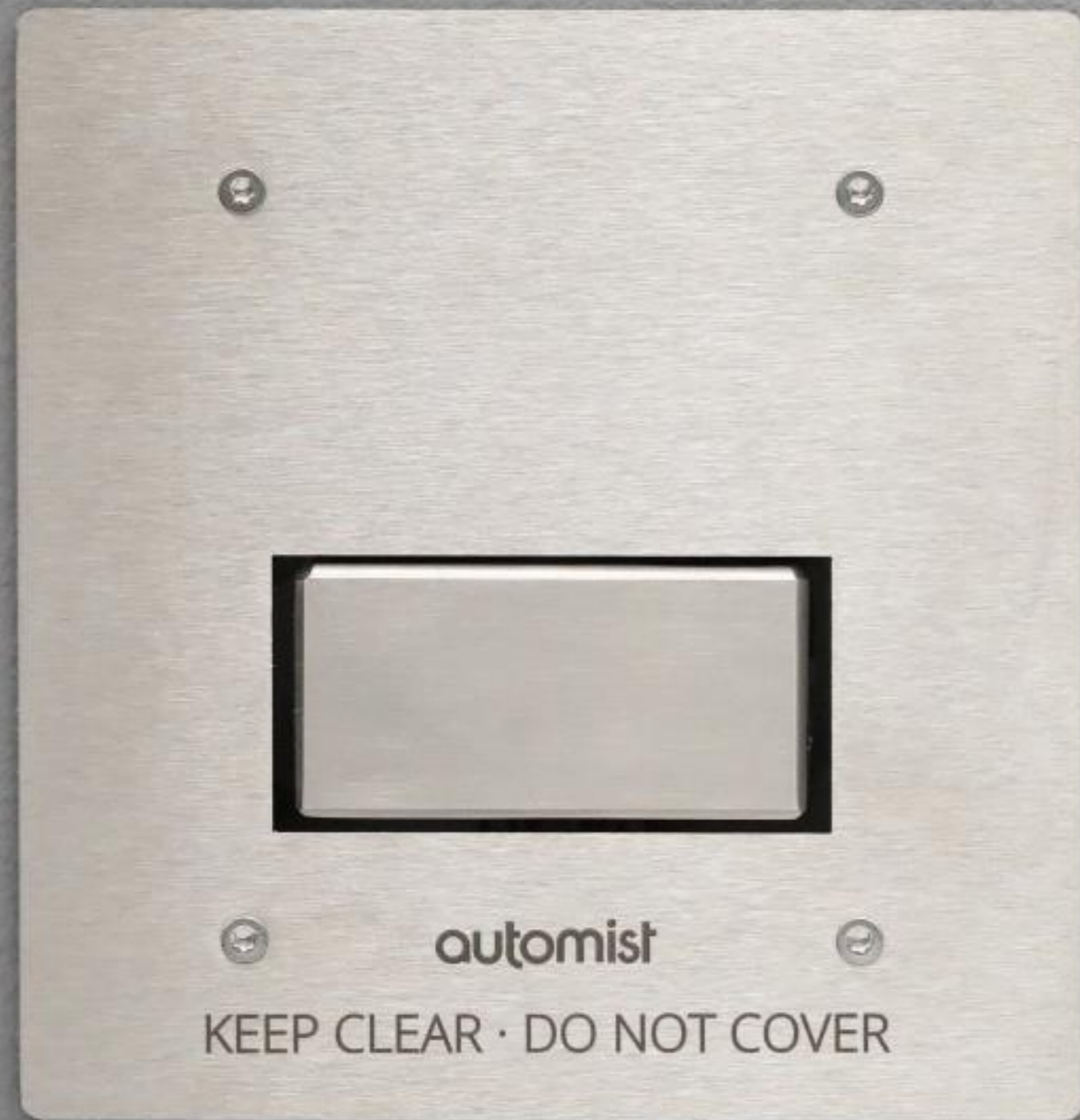
Limit fire to room of origin

Property protection

Designing for the objective, and not just the standard

The Objective





Thank you for listening

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