

SAFE CARE

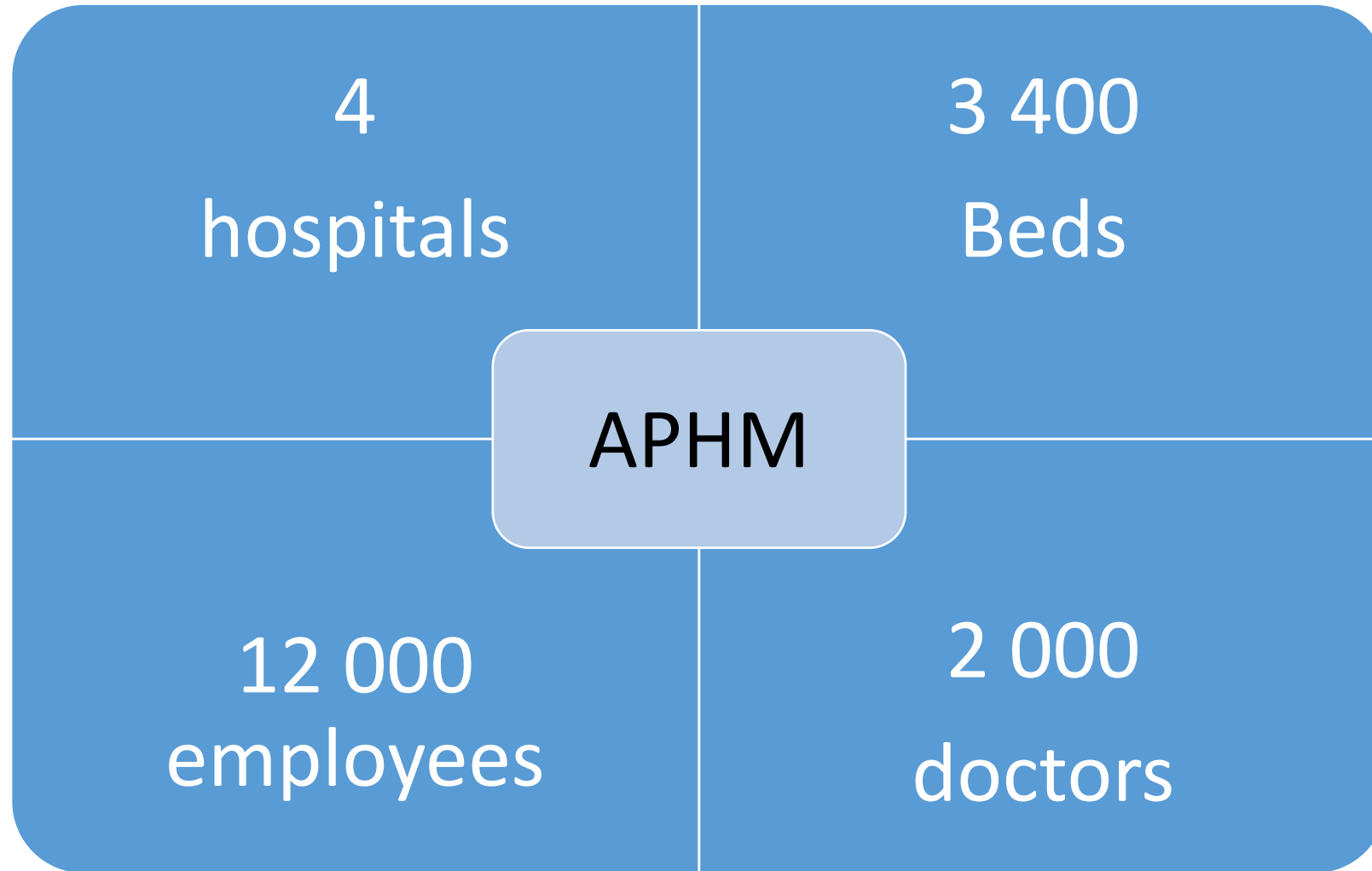
Integrated cyber-physical security for health services



SafeCare Solutions for Mitigation / Response End-user perspective

Philippe Tourron (APHM), Frédéric Nodot (APHM), Philippe Hennebert (FMI)

APHM in figures

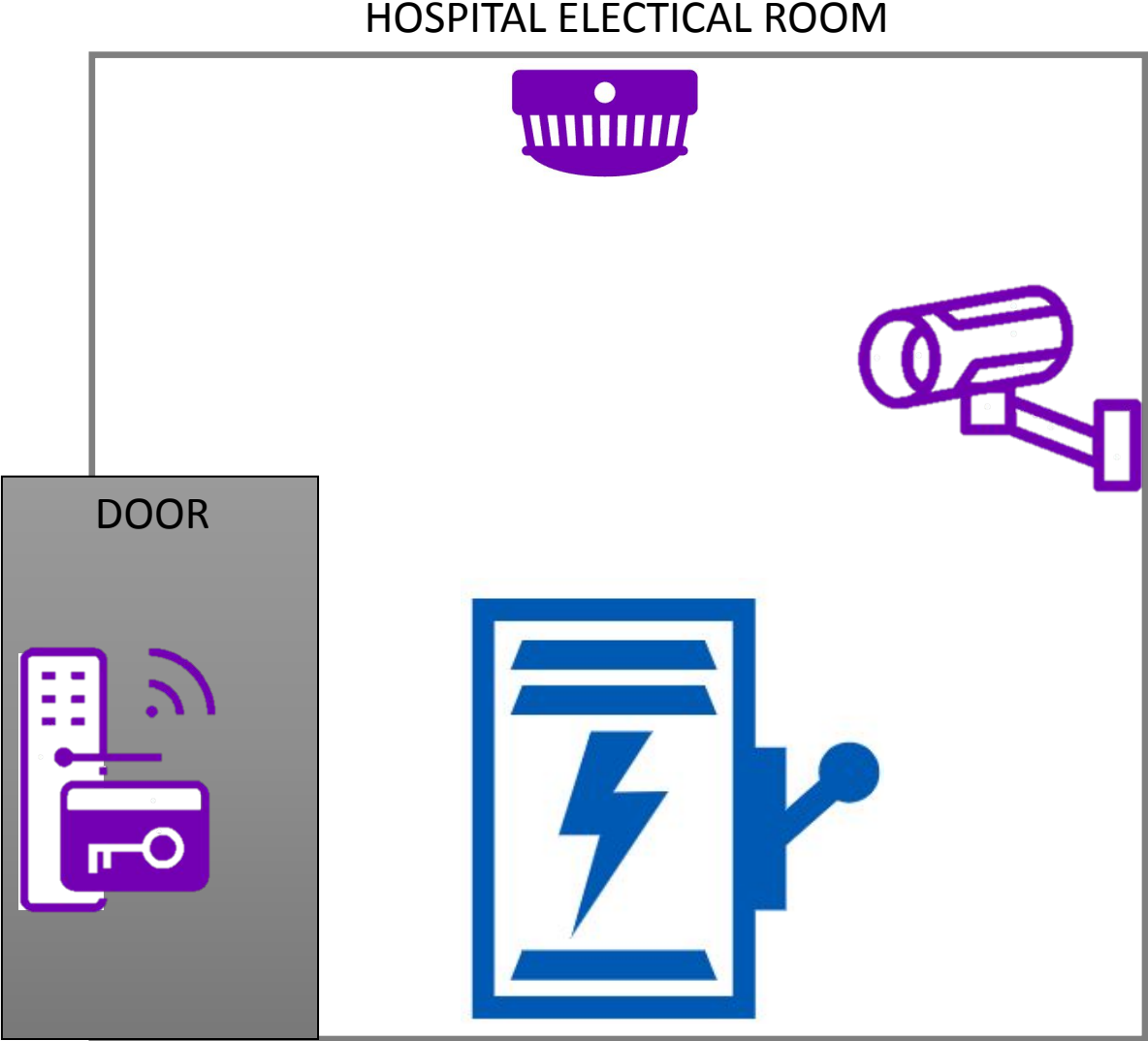


How to mitigate threat at the hospital?

1. *By detecting and alerting automatically*
... and warn early

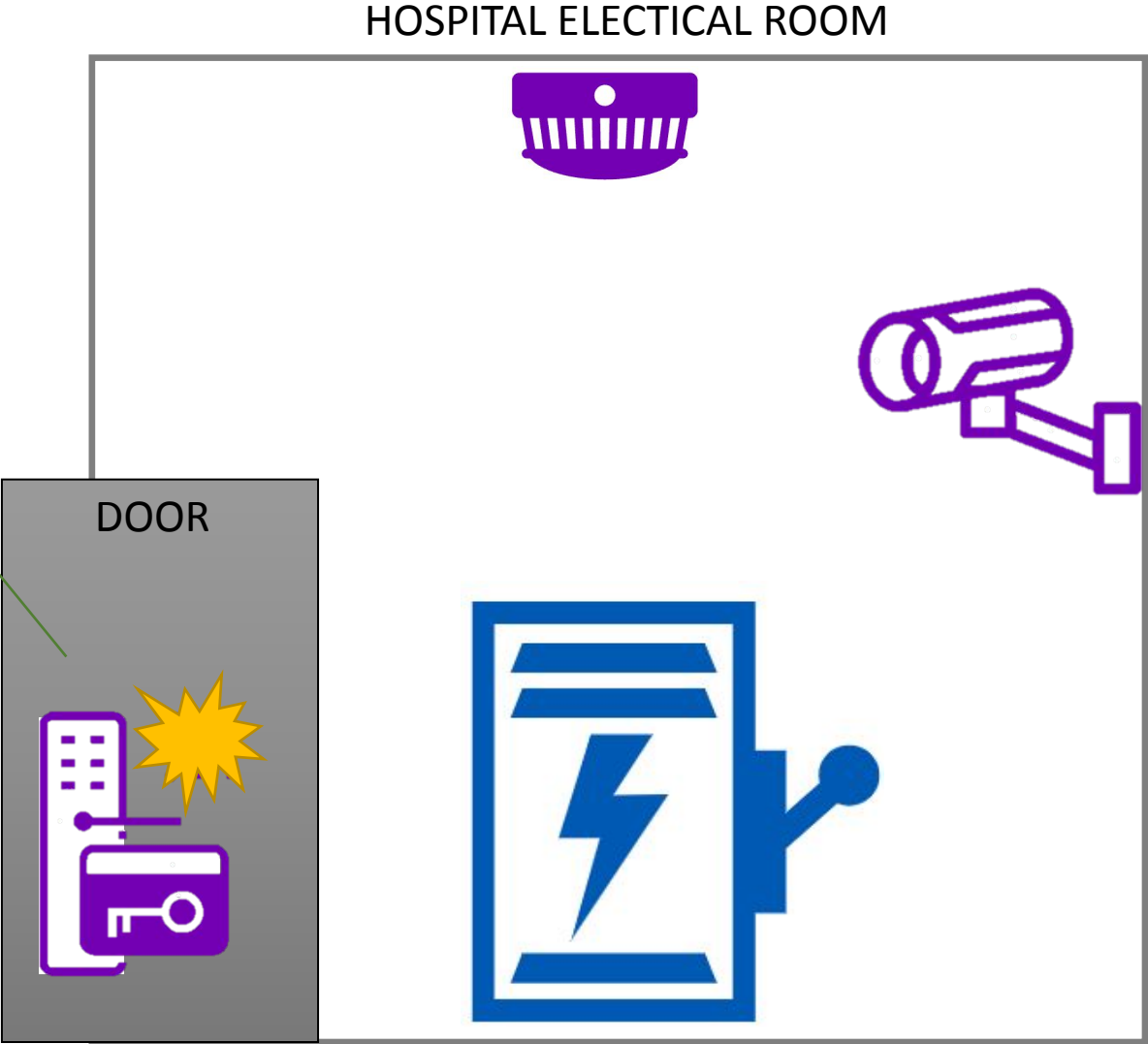


How to mitigate threat ? – *By detecting and alerting automatically*

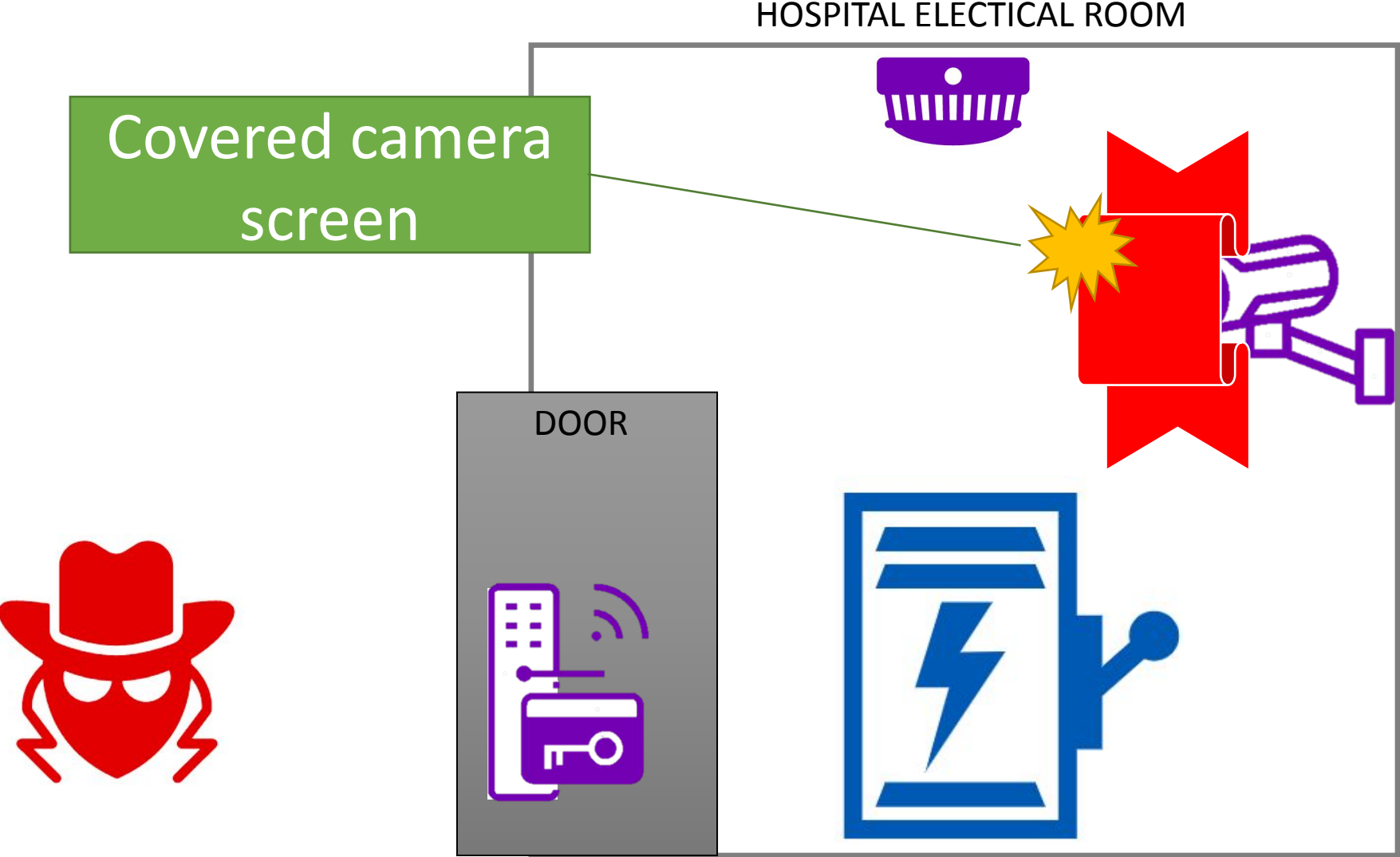


How to mitigate threat ? – *By detecting and alerting automatically*

Break-in



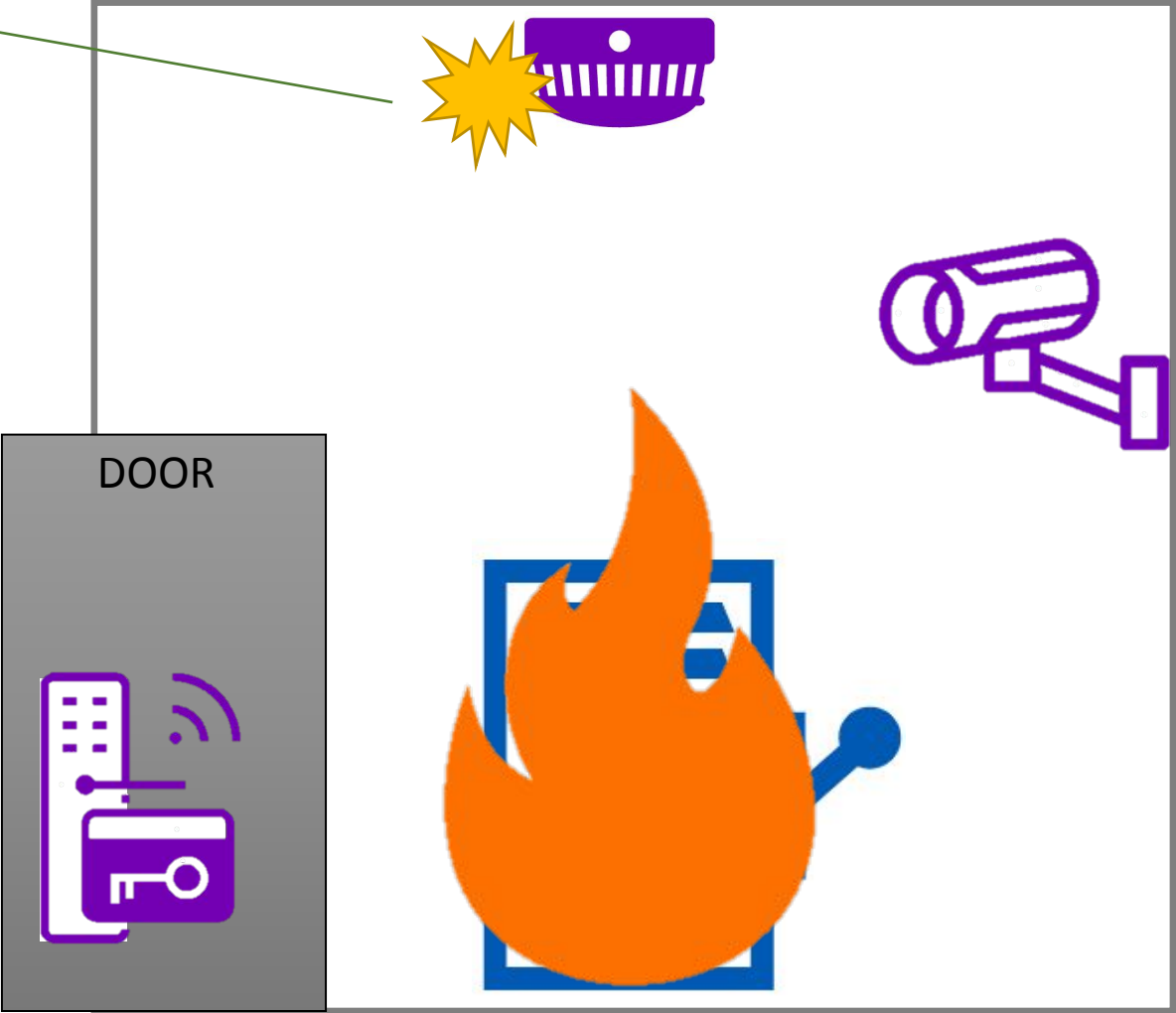
How to mitigate threat ? – *By detecting and alerting automatically*



How to mitigate threat ? – *By detecting and alerting automatically*

Fire

HOSPITAL ELECTRICAL ROOM



How to mitigate threat ? – *By detecting and alerting automatically*

**PHYSICAL
DETECTION**

Breaking through access control key

Covered camera screen

Fire

**CYBER
DETECTION**

Remote VPN connection

Malicious Link

Network services scanning

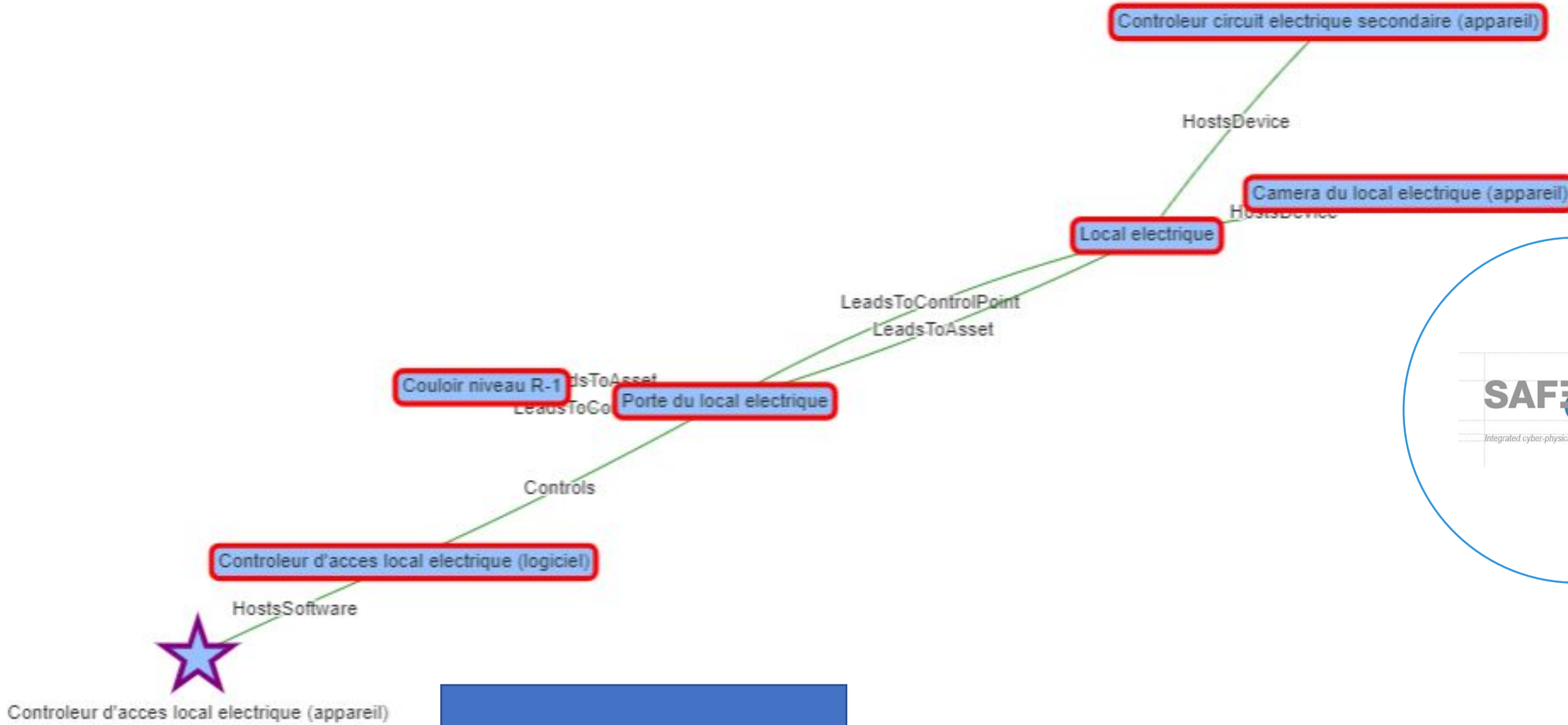


How to mitigate threat at the hospital?

1. *By detecting and alerting automatically
... and warn early*
2. *By providing context
... and identify quickly the cascading impacts*



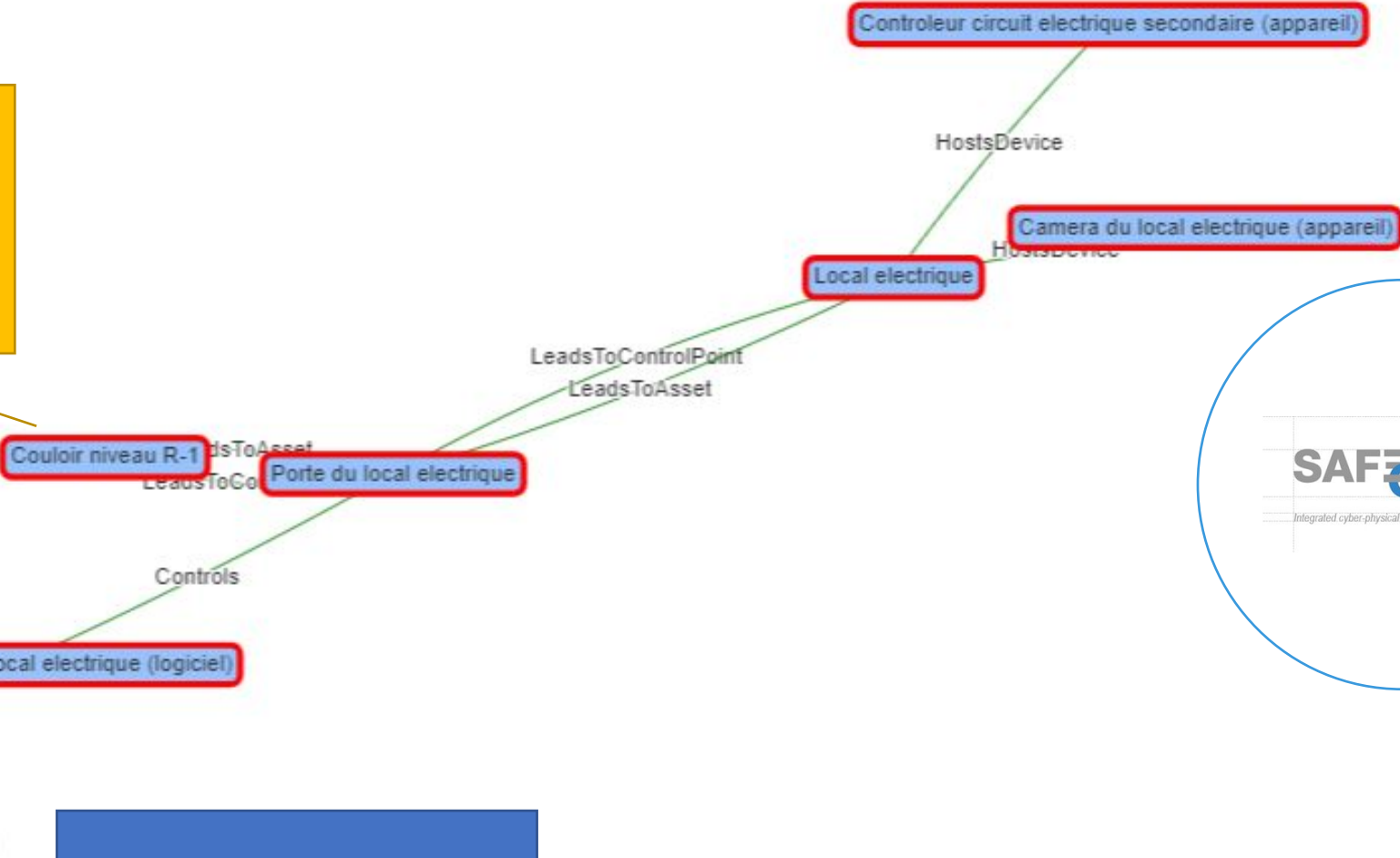
How to mitigate threat ? – *By providing context*



WHAT:
Breaking through
access control key

How to mitigate threat ? – *By providing context*

WHERE:
Electrical room



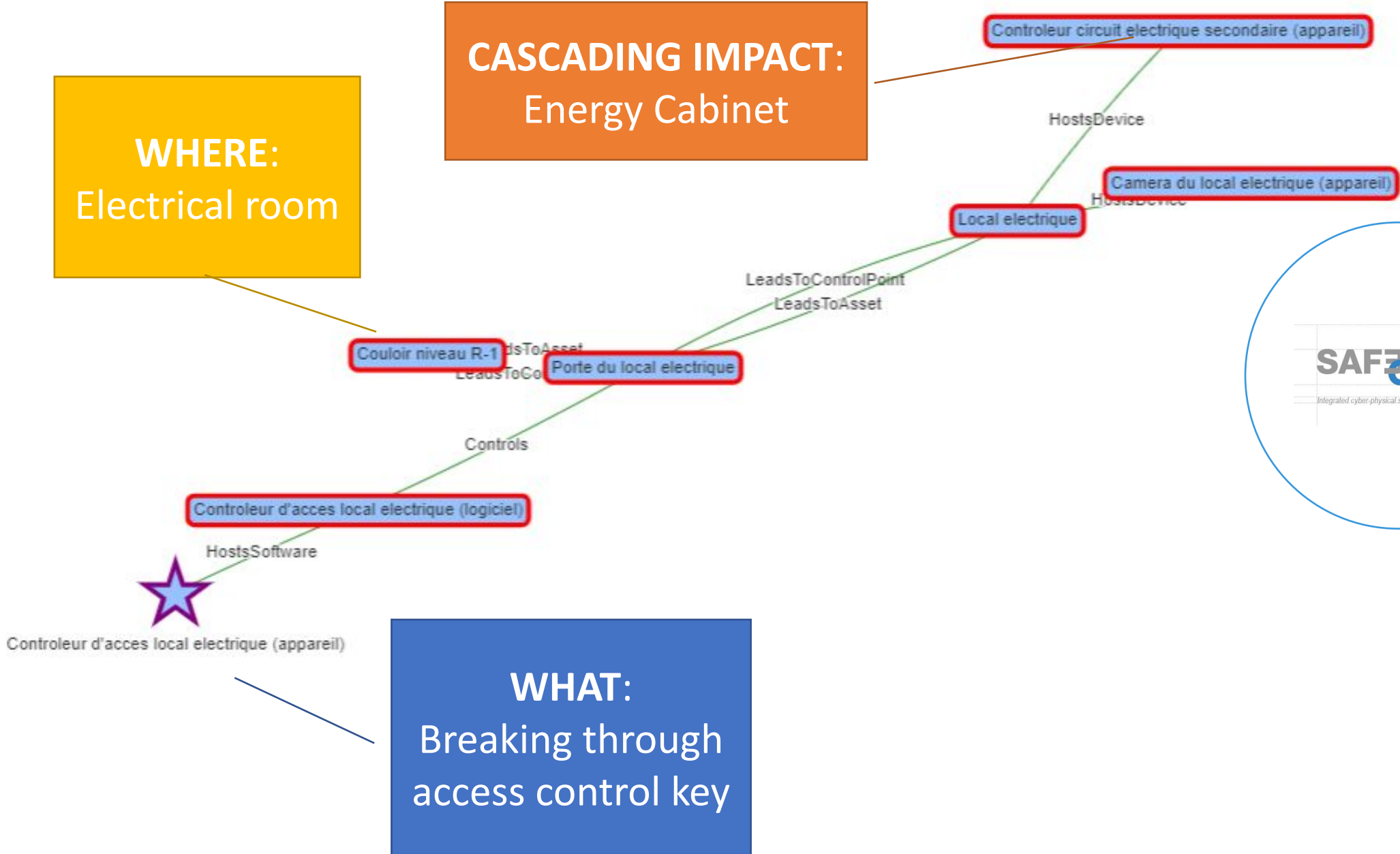
WHAT:
Breaking through
access control key

Controleur d'acces local electrique (appareil)

How to mitigate threat ? – *By providing context*

CASCADING IMPACT:
Energy Cabinet

WHERE:
Electrical room

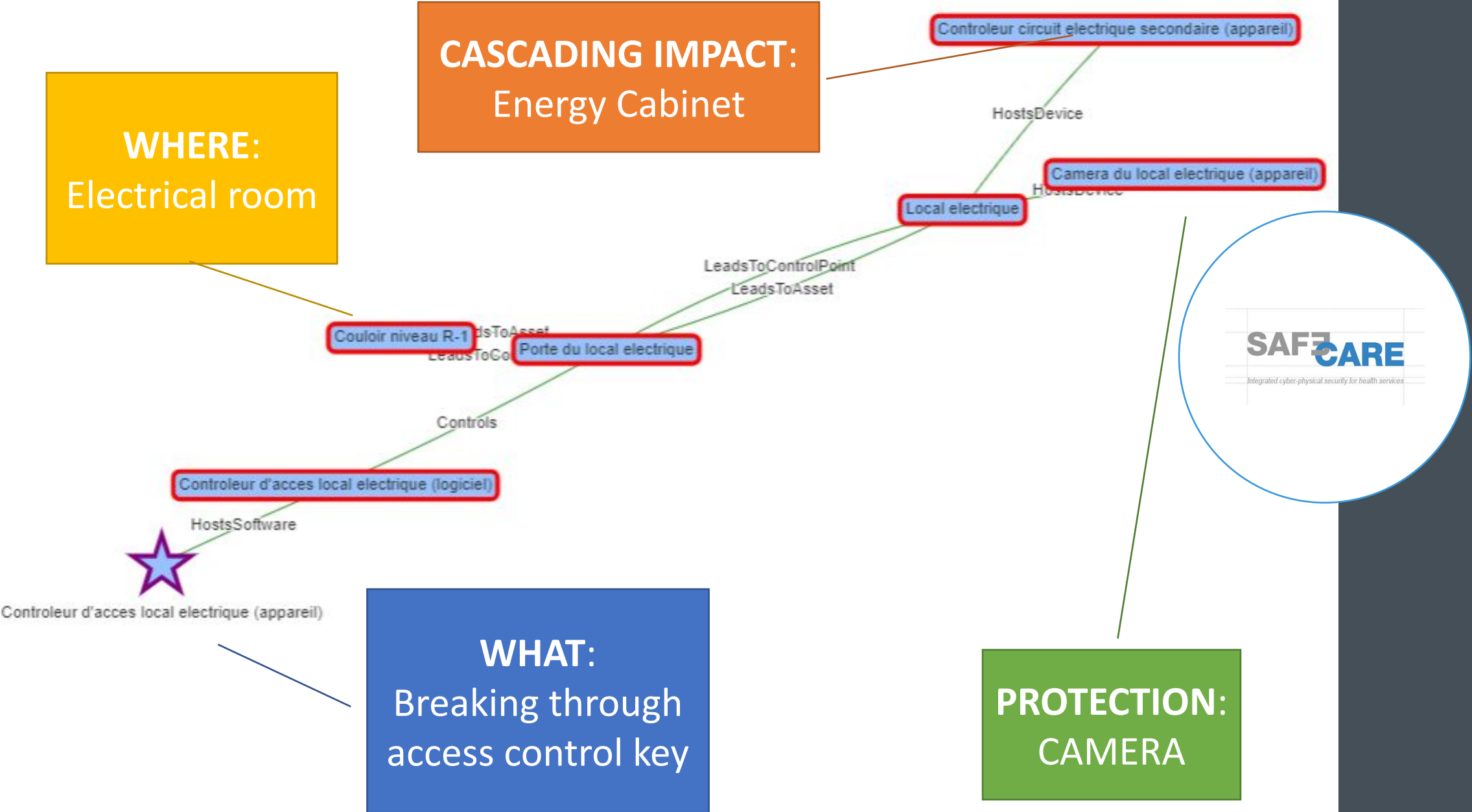


WHAT:
Breaking through
access control key

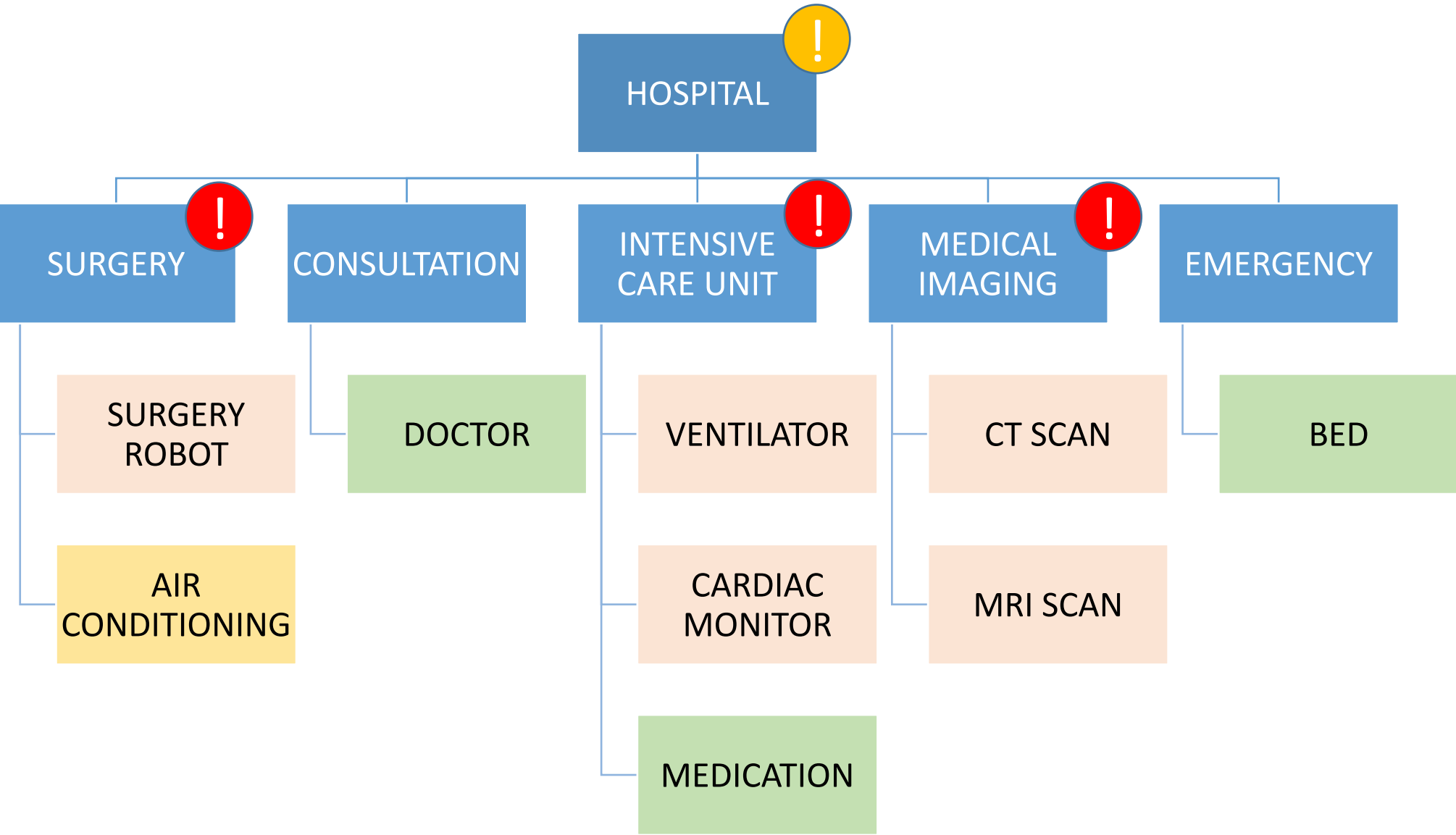
How to mitigate threat ? – *By providing context*

CASCADING IMPACT:
Energy Cabinet

WHERE:
Electrical room



How to mitigate threat ? – *By providing context*



How to mitigate threat at the hospital?

1. *By detecting and alerting automatically
... and warn early*
2. *By providing context
... and identify quickly the cascading impacts*
3. *By escalating to the right people with the right info
... and deliver appropriate threat response*



How to mitigate threat ? – *By escalating to the right people with the right info*

Security guard mobile phone

WHAT: Breaking through access control key

WHERE: Door of electricity room, basement, main building

Incident details

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How to mitigate threat ? – *By escalating to the right people with the right info*

Security guard mobile phone

WHAT: Breaking through access control key

WHERE: Door of electricity room, basement, main building

RISK LEVEL: high

TARGET: Electricity cabinet

Incident details

Cascading impact

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How to mitigate threat ? – *By escalating to the right people with the right info*

Security guard mobile phone

WHAT: Breaking through access control key

WHERE: Door of electricity room, basement, main building

RISK LEVEL: high
TARGET: Electricity cabinet

ACTION: Take in charge or decline?

Incident details

Cascading impact

Acknowledgement



How to mitigate threat ? – *By escalating to the right people with the right info*

Police mobile phone

WHERE: Timone
Hospital, Marseille

WHAT: Break in the
electricity room.

Summarized
information

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How to mitigate threat ? – *By escalating to the right people with the right info*

Police mobile phone

WHERE: Timone Hospital, Marseille

WHAT: Break in the electricity room.

VIDEO:



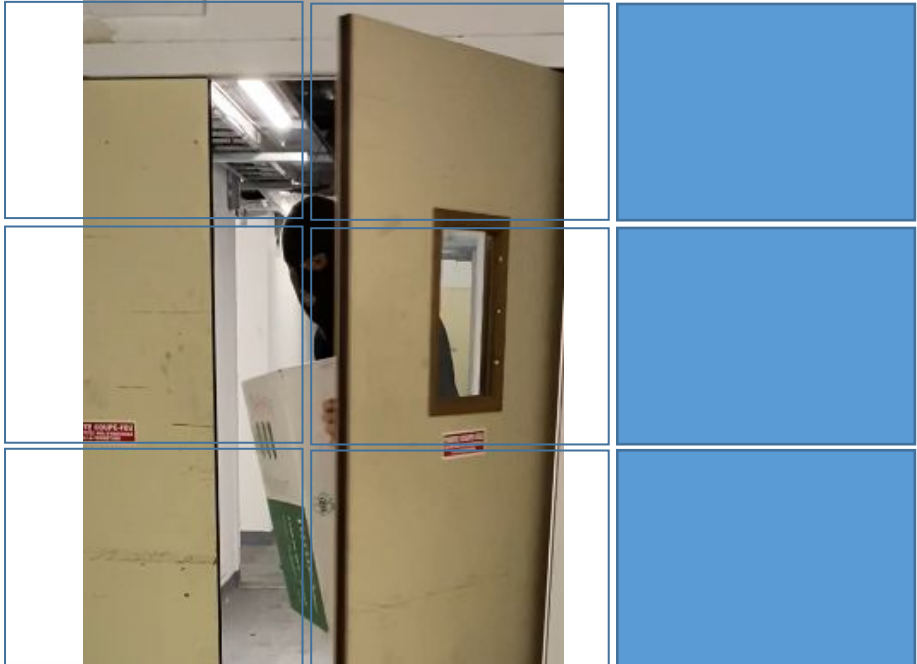
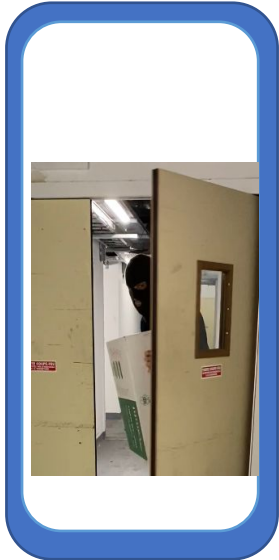
Summarized information

Doubt removal

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How to mitigate threat ? – *By escalating to the right people with the right info*

Video Wall Information and Command Center





Szkoła Główna
Służby Pożarniczej

SAFEguard of Critical heAlth infrastructure (SAFECARE)

Solutions for mitigation and response
in SAFECARE Project
– a perspective of fire brigade

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Szkoła Główna
Służby Pożarniczej

Solutions for mitigation and response in SAFECARE Project a perspective of fire brigade

Terrorist enters the hospital grounds and sets fire to the electrical cabinet

Scenario 1 – A physical terrorist attack
targeting power supply of the hospital

Mitigation	Response
The shorter time of fire, the less amount of toxic smoke is generated	Indication on the need for medical transport to alternative surgery location
The shorter time of fire, the lower risk that the hazard interrupts power supply	Easier to optimize first responders' tasks
Limitation of fire duration reduces risks related to blackout in hospital (in relation with patients' evacuation)	Actual view on the situation (cameras, smoke detectors)
Verification that the fire alarm is a true positive (cameras)	Moderation of the response cooperation basing on actual situation (no information delays)
	SAFECARE desktop as a tool for fire brigade commander





Szkoła Główna
Służby Pożarniczej

Thank you for your attention

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