The Gloucester Smart House for People with Dementia

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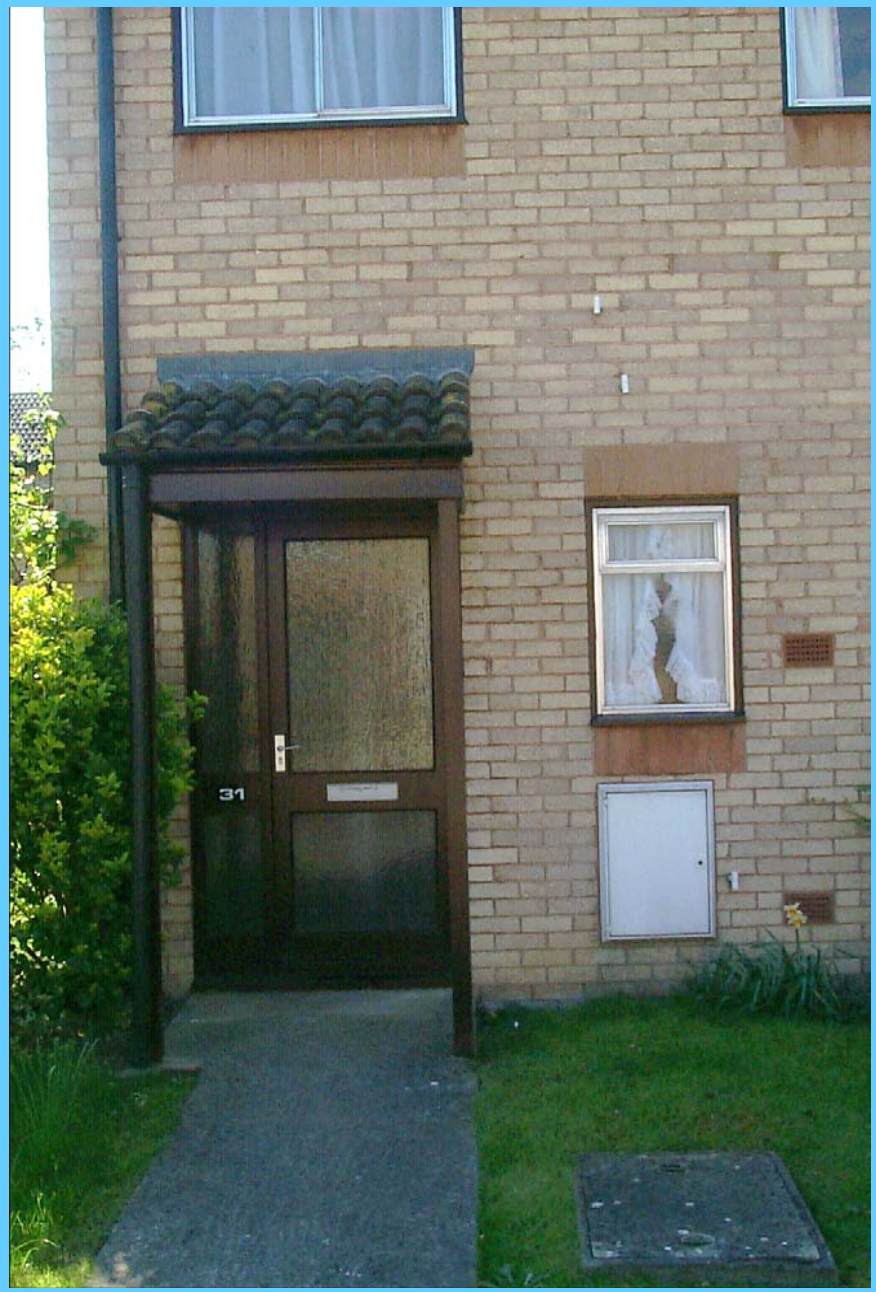

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The collaborating team

Dementia Voice

Housing 21

Bath Institute of Medical Engineering

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User Involvement

- Discussions with care professionals
- Survey of needs with carers
- Discussions with carers
- Evaluations with carers and users

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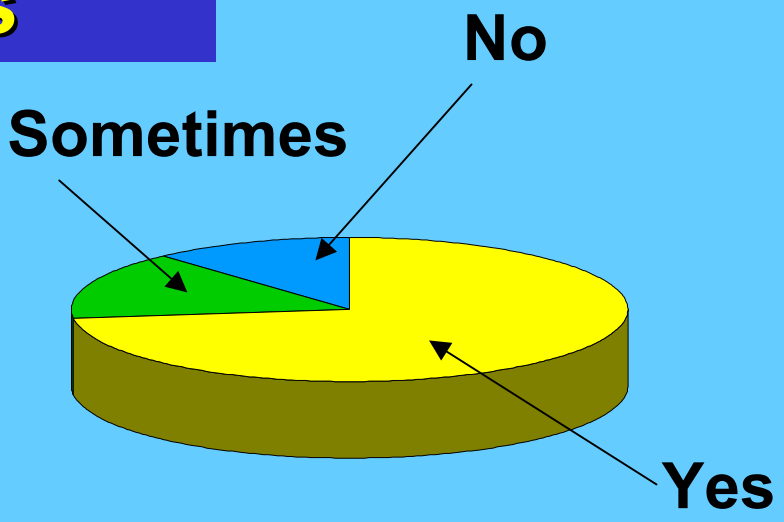
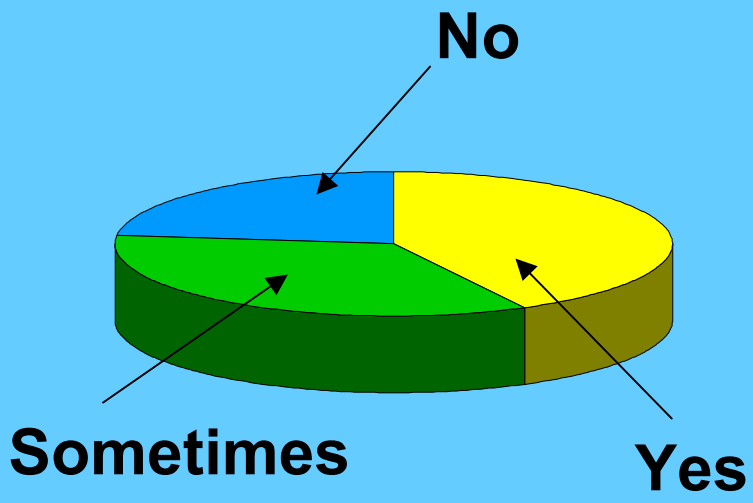
Survey of needs

"Does the person you care for have difficulty using appliances to prepare food?"





"Does the person you care for have problems recognising written signs?"

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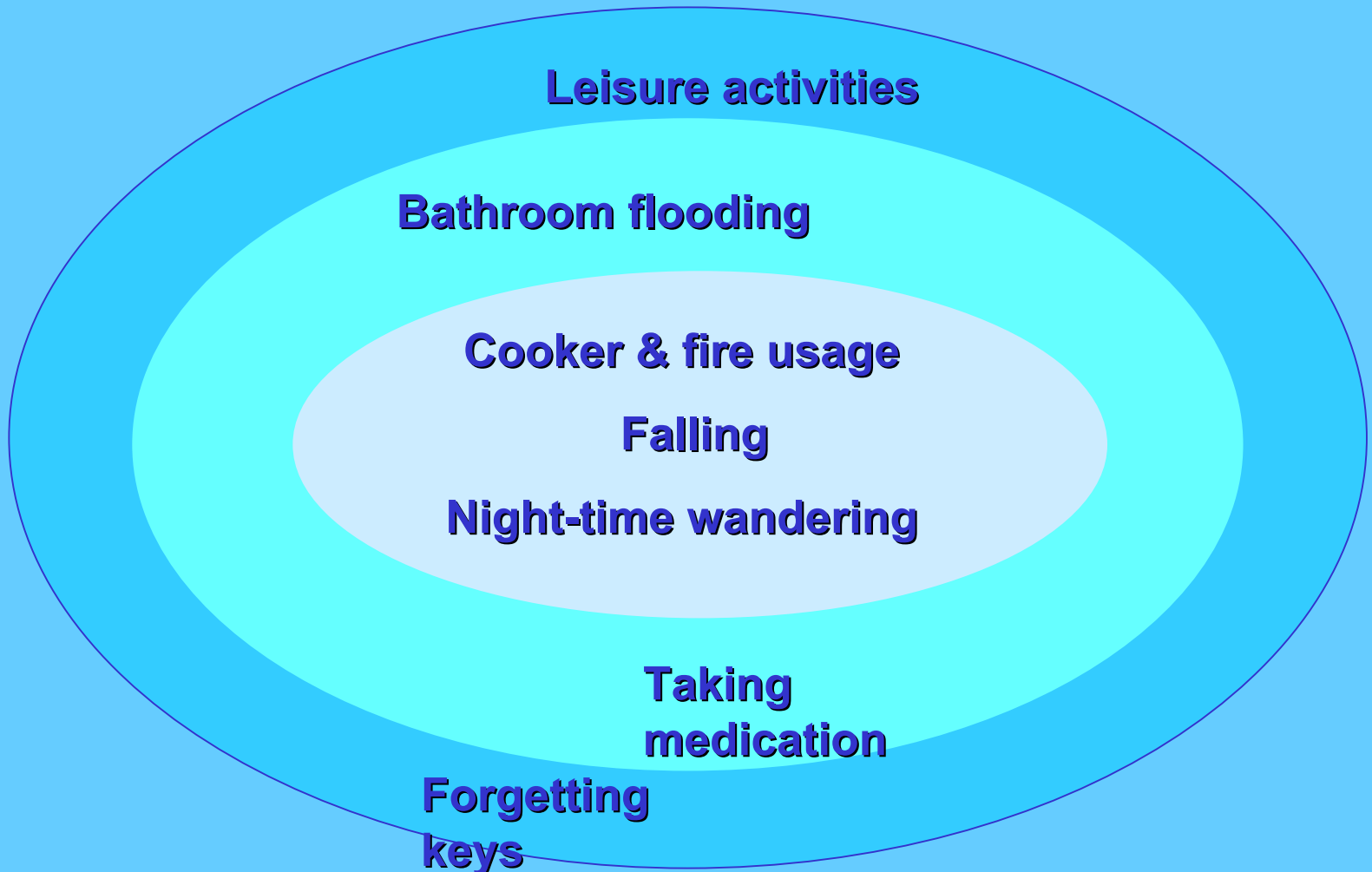
Priorities



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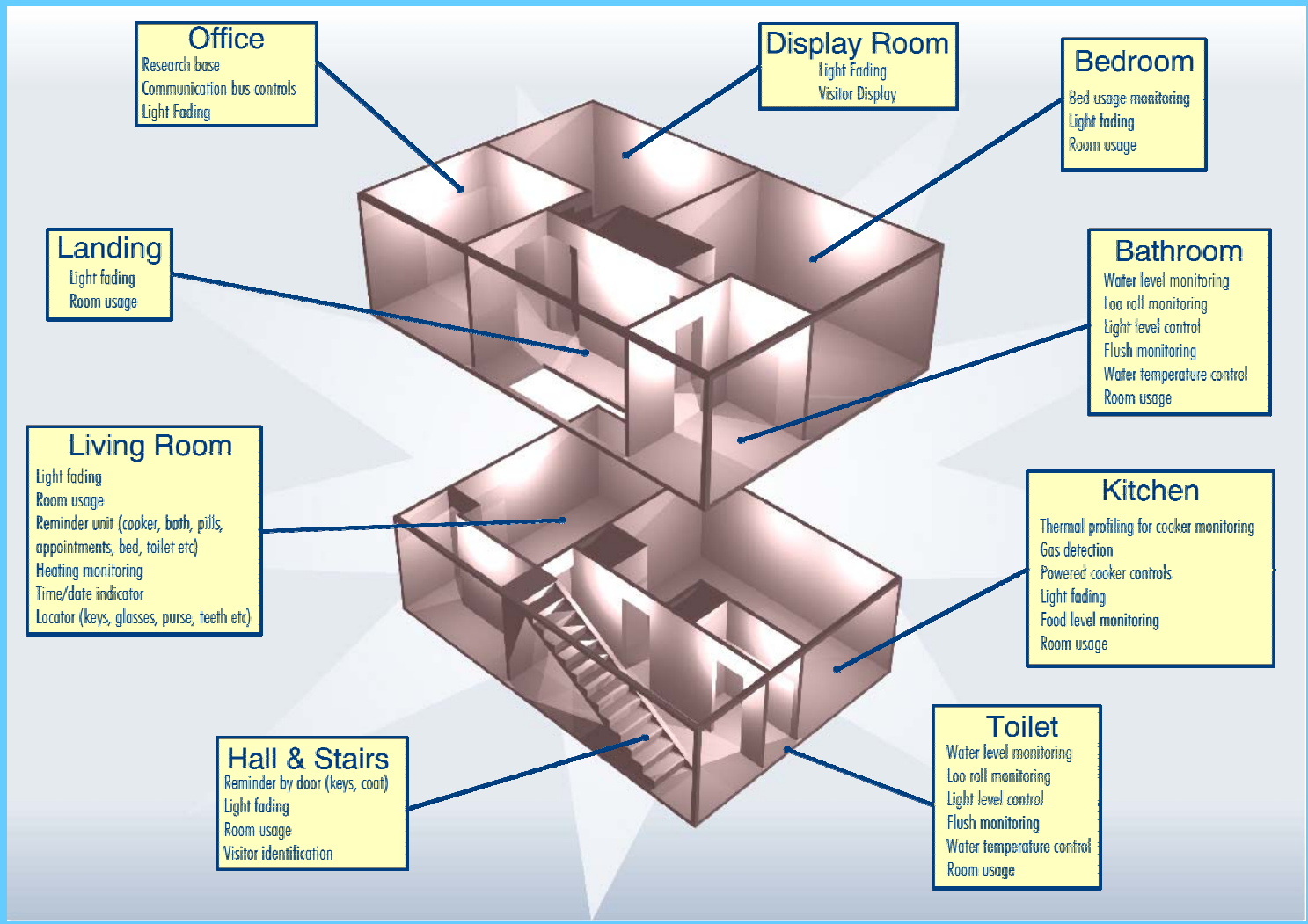
Smart house rooms



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Design philosophy

Example: Tap monitor

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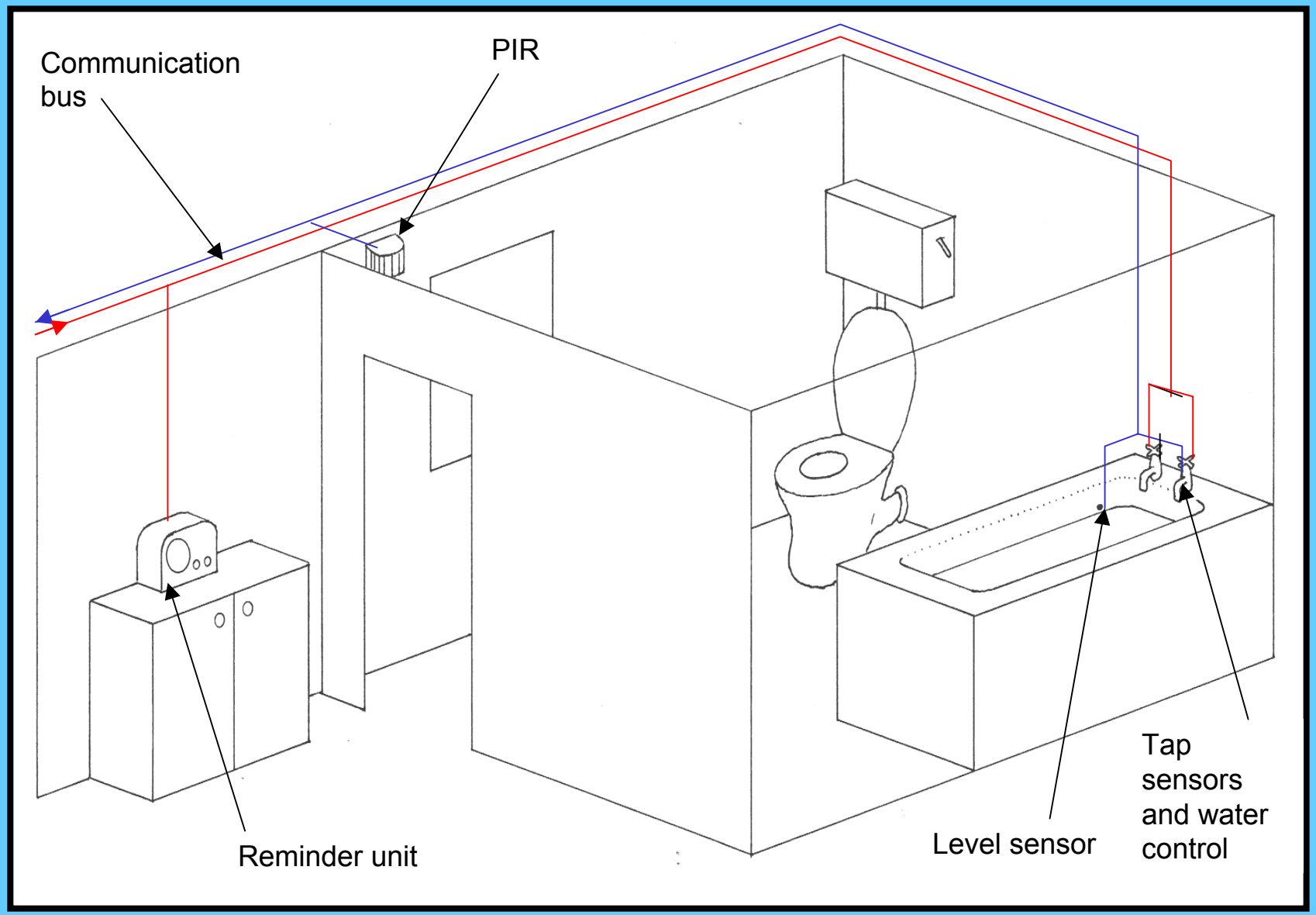

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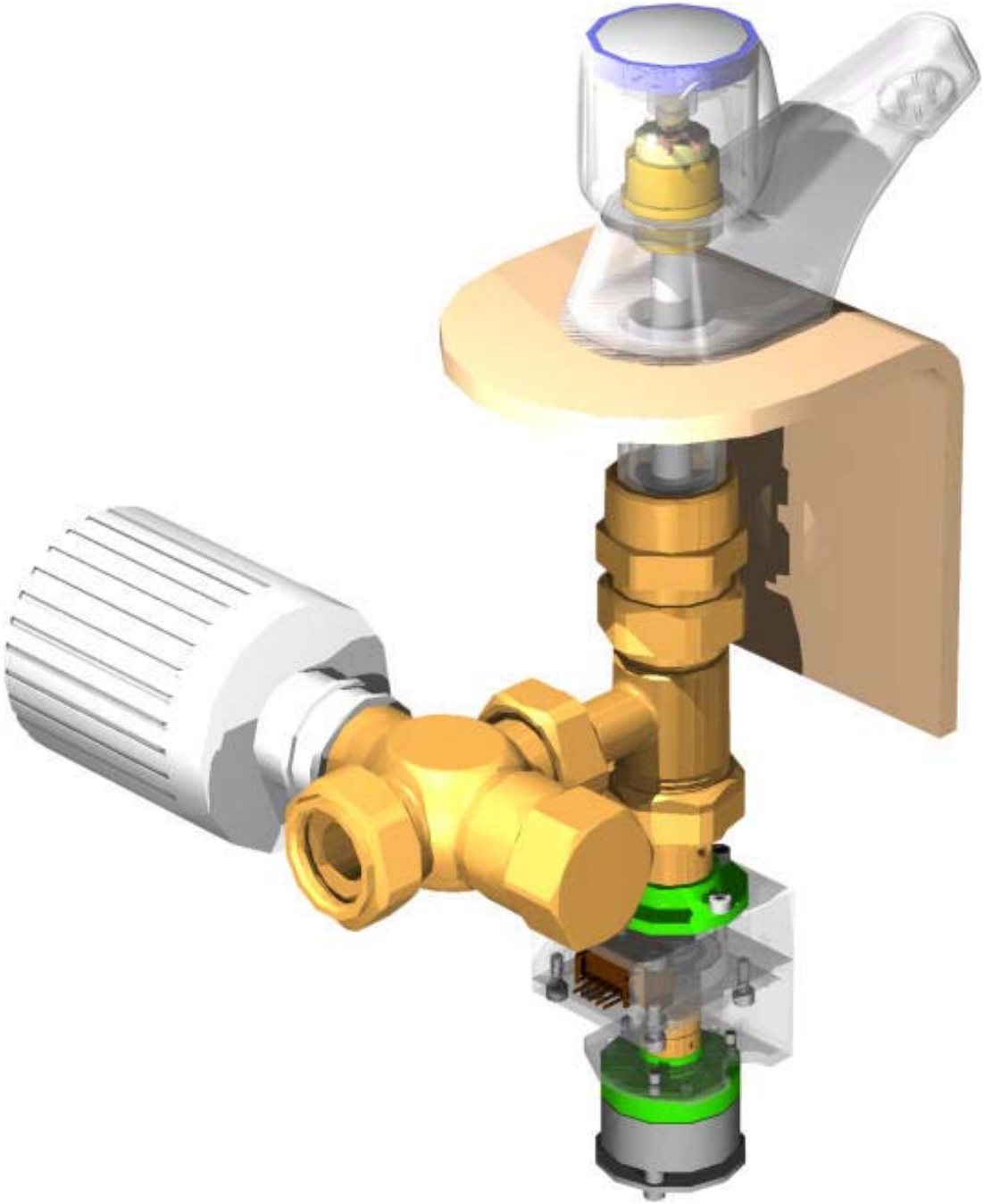

Evaluations

Example: Night lighting

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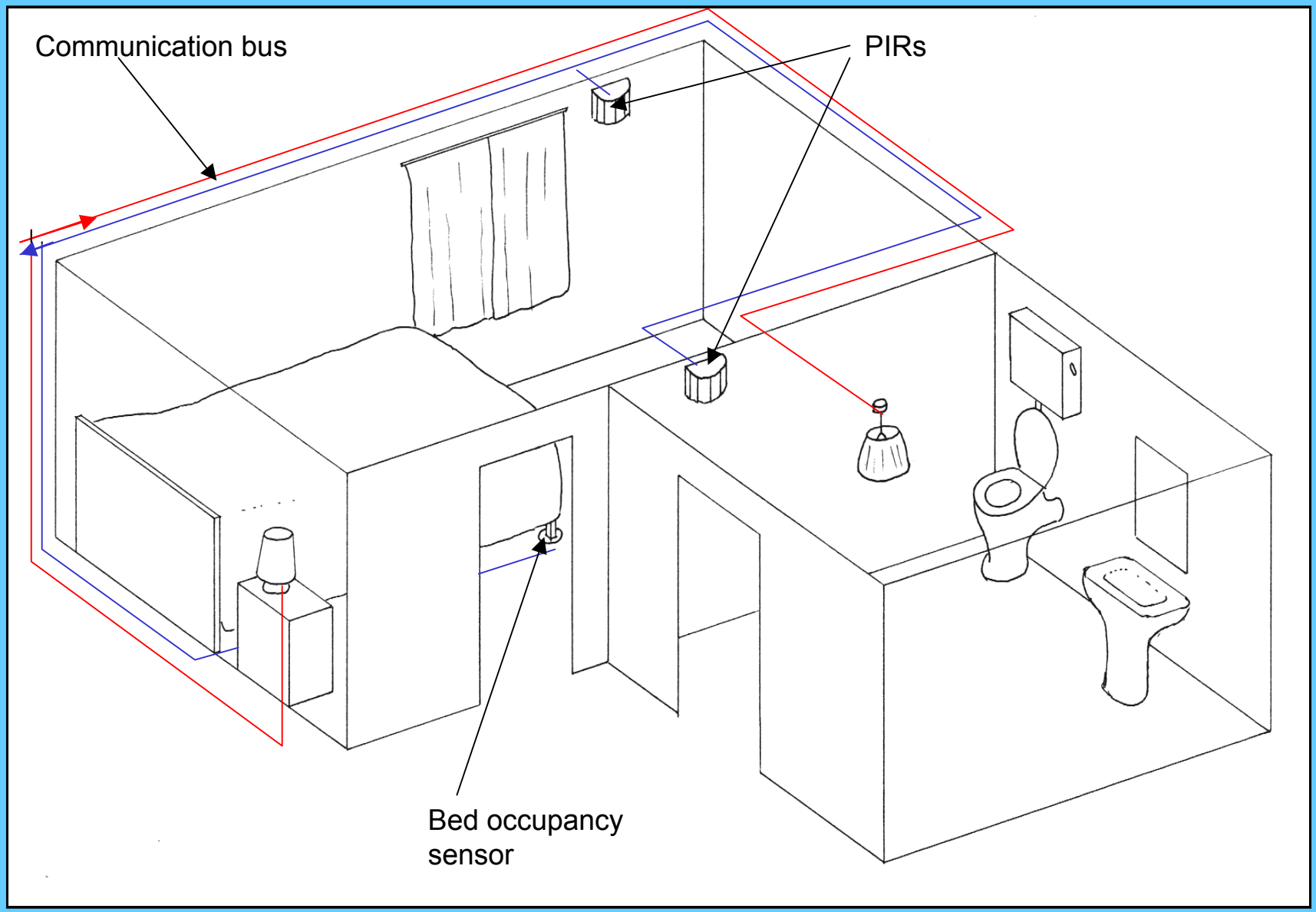

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Monitoring user behaviour

Example: Cooker monitor

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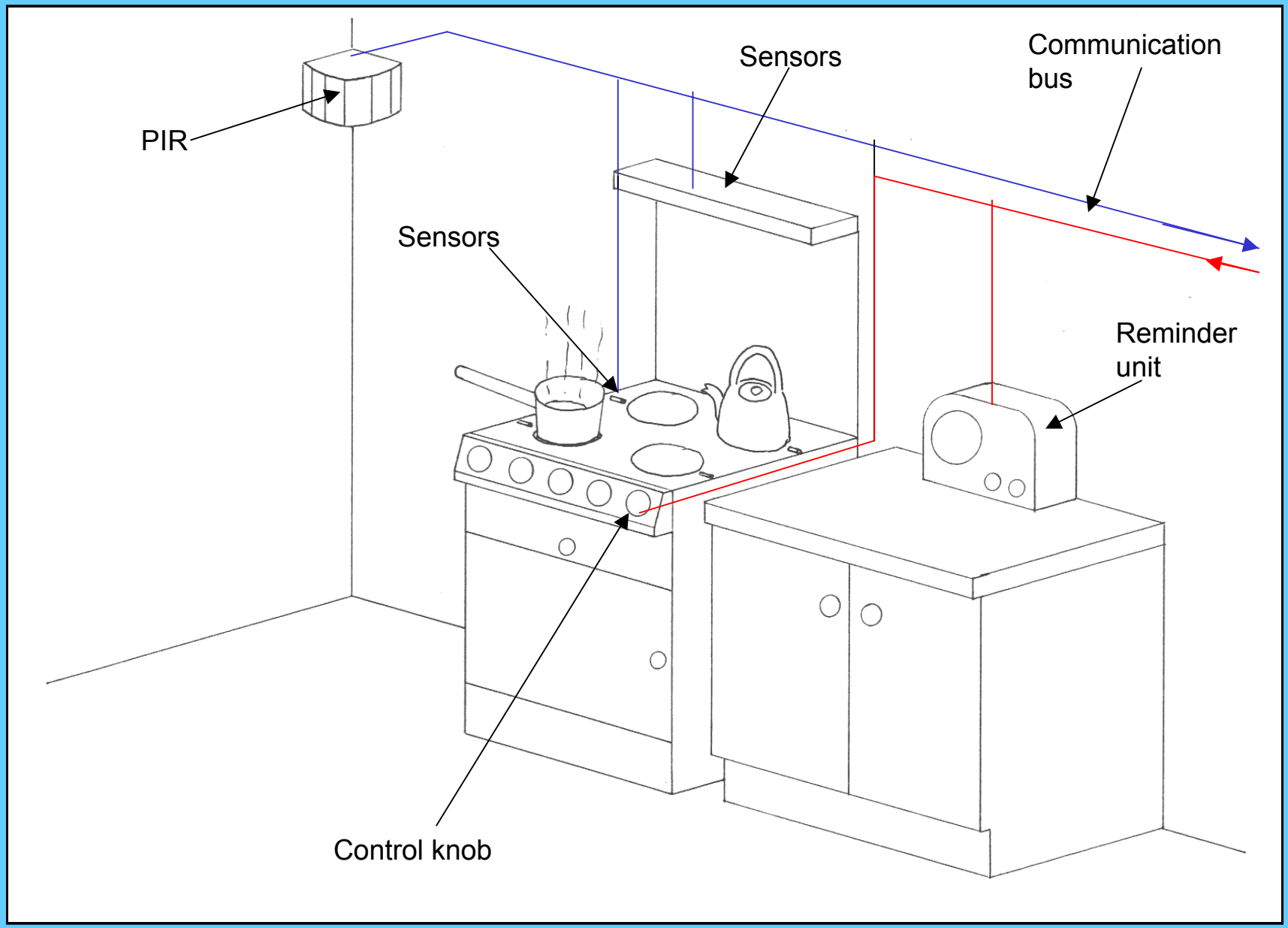

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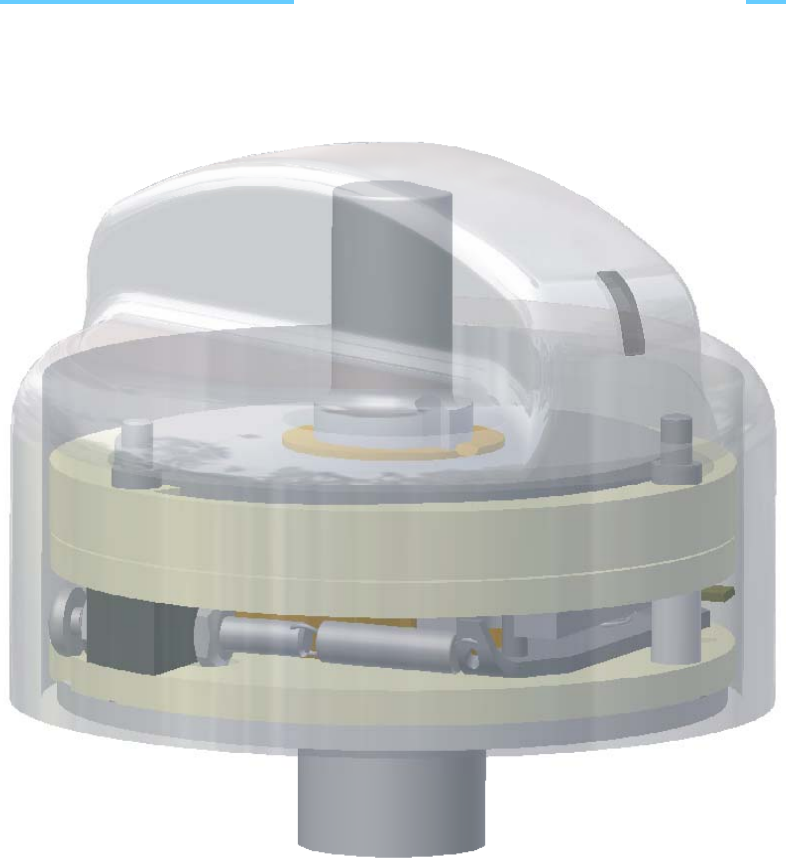
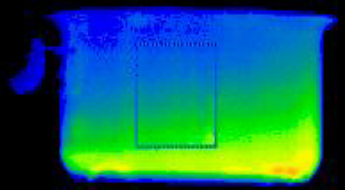
enable

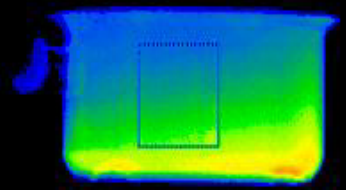
The BIME Cooker Knob for people with dementia



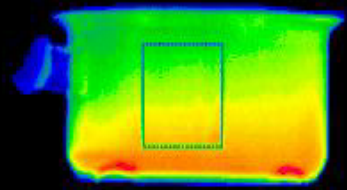
Thermal images of a pan boiling on a gas ring



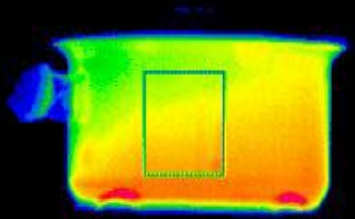
Heating up



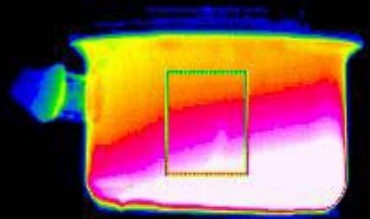
Heating up



Boiling



Boiling

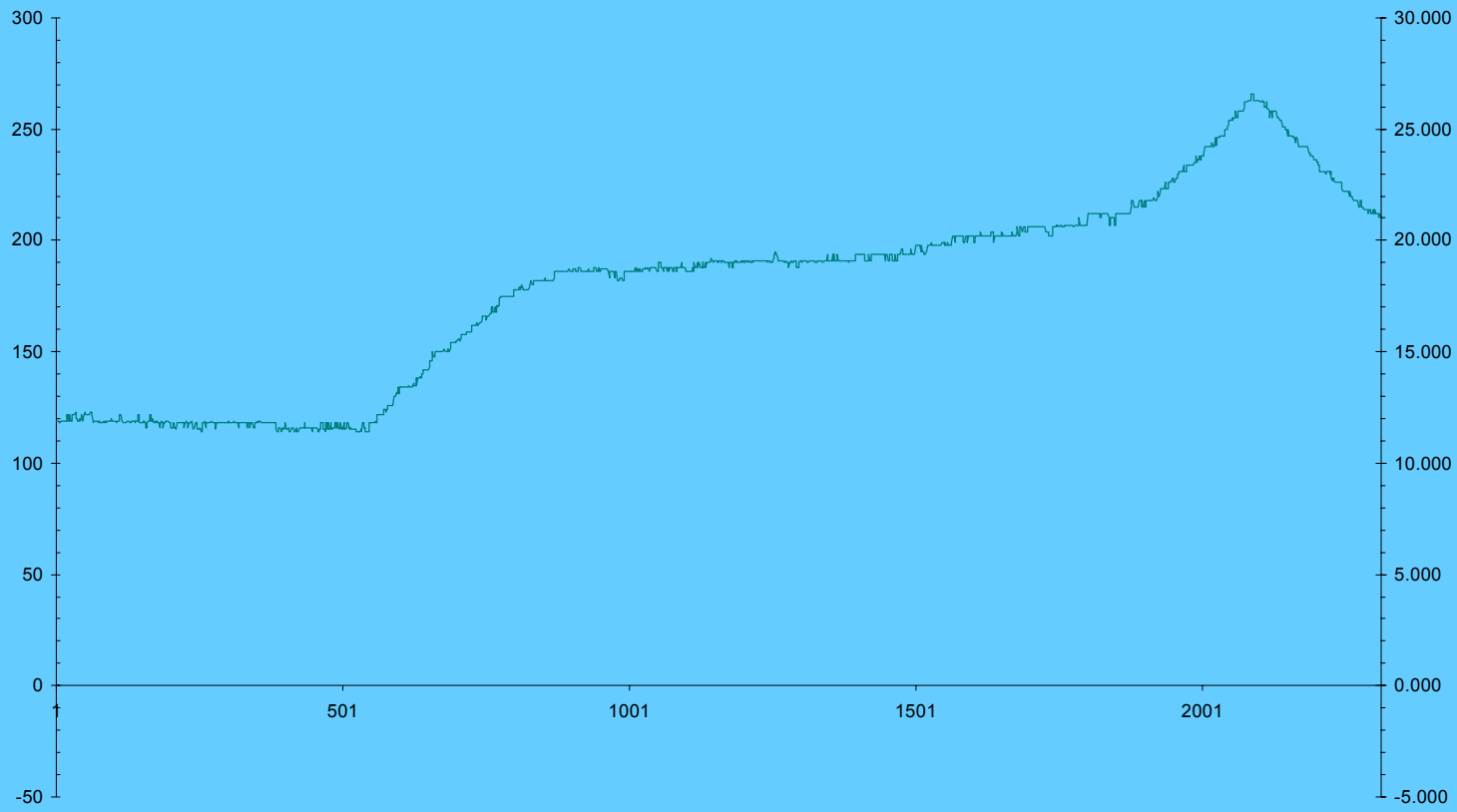


Boiled dry

Infra-red sensing

Sensor mounting

Typical raw data



Communication

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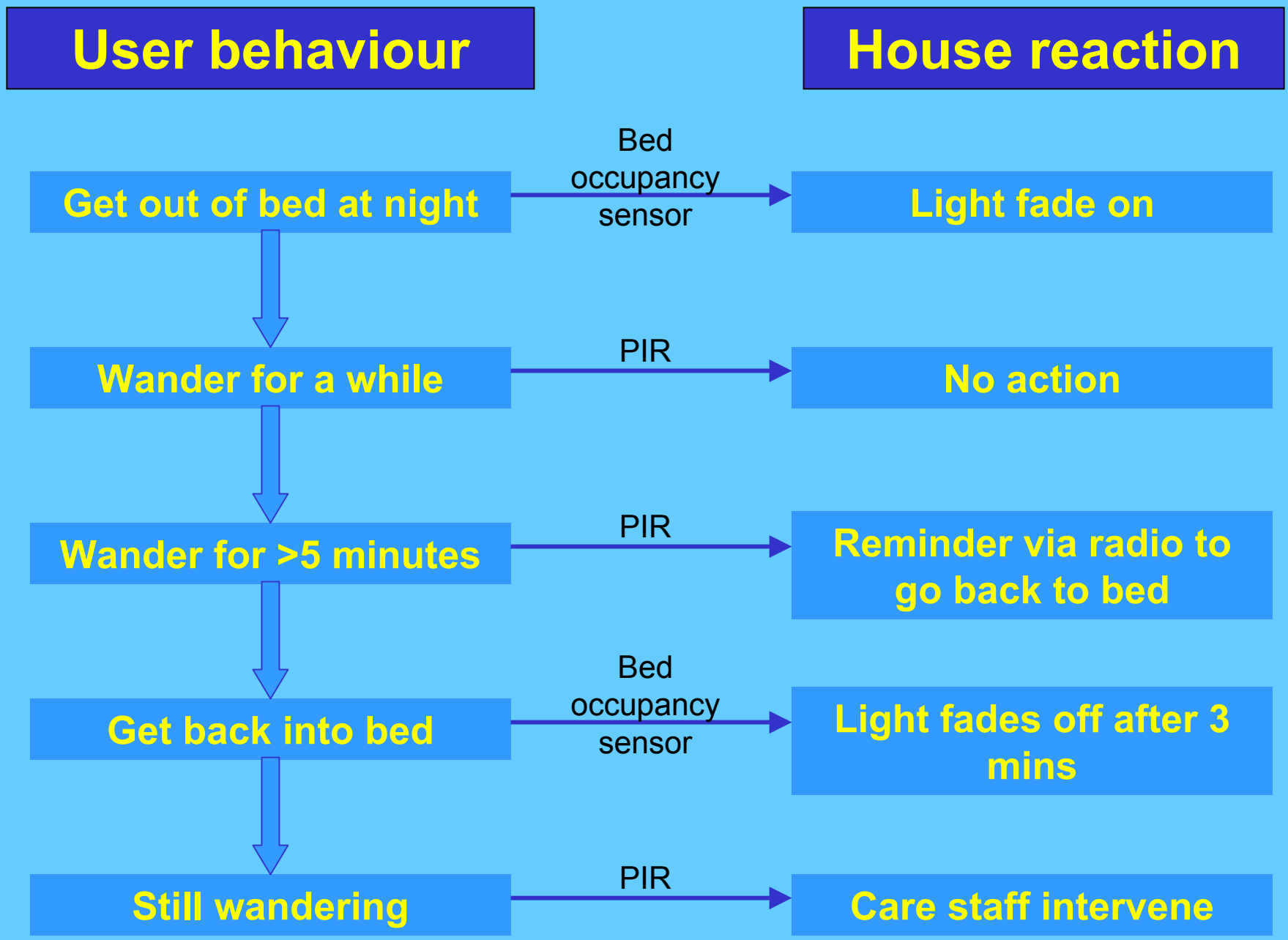
User behaviour
House reaction
Get out of bed at night
Bed occupancy sensor
Light fade on
Wander for a while
PIR
No action
Wander for >5 minutes
PIR
Reminder via radio to go back to bed
Get back into bed
Bed occupancy sensor
Light fades off after 3 mins
Still wandering
PIR
Care staff intervene

Complex user reactions

Example: Locator for lost objects

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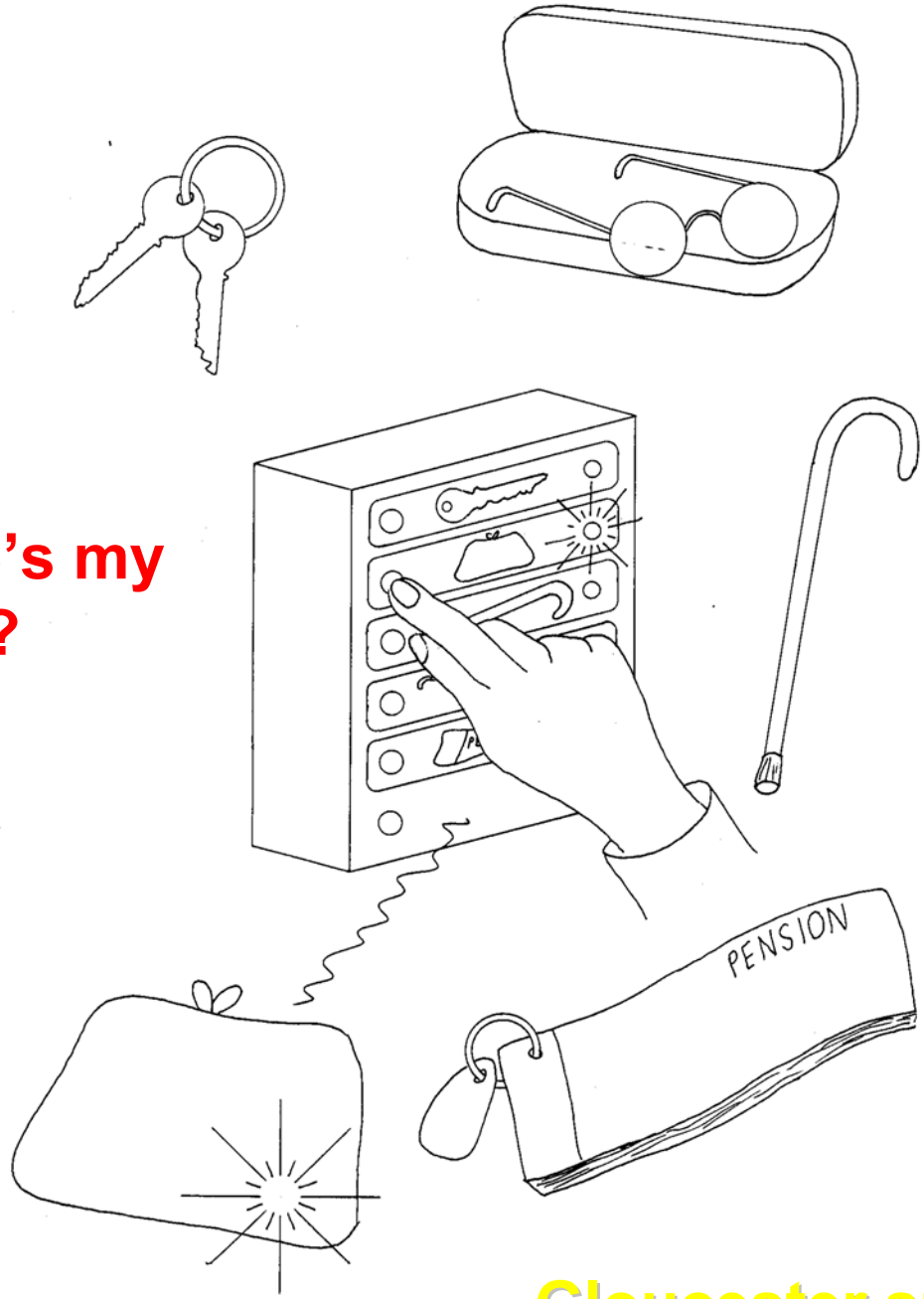
Where's my purse?



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No
Smoking
CANCEL

PENSION BOOK
HANDBAG
PURSE
KEYS
CANCEL

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Acknowledgements

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