

# BIME and its work for and with people with dementia.

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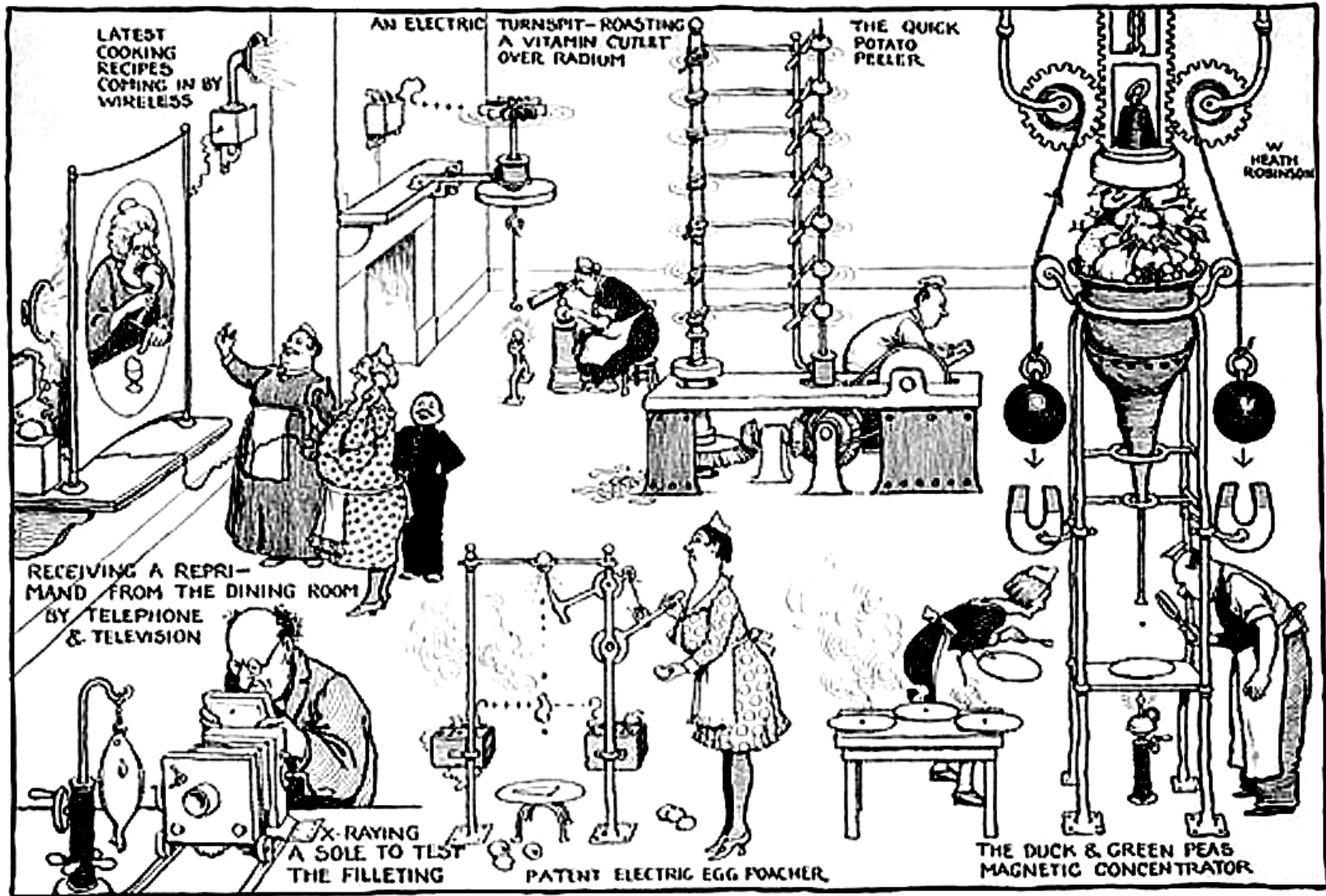
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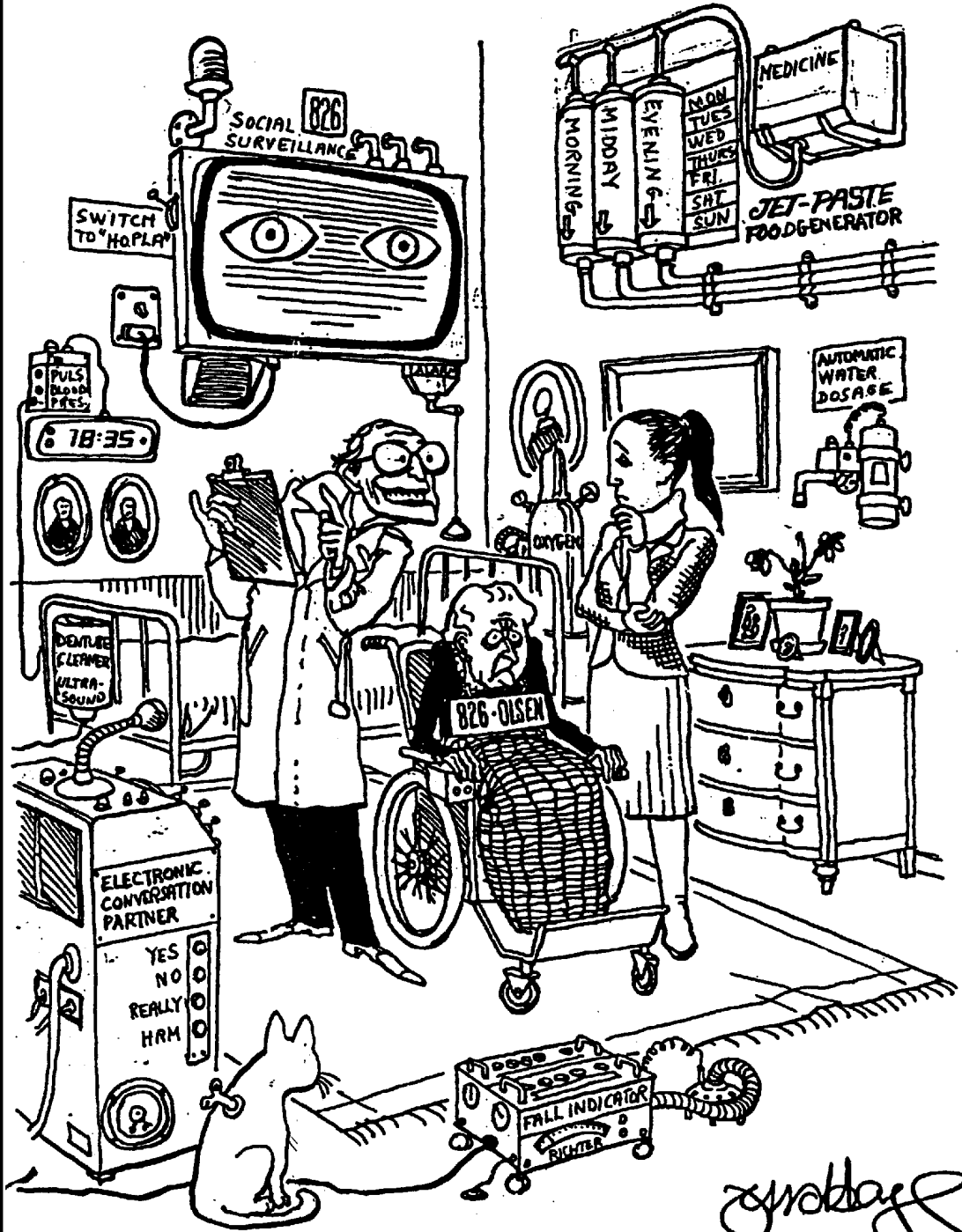
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The Kitchen of the Future  
*William Heath Robinson*



... for and with people with dementia.

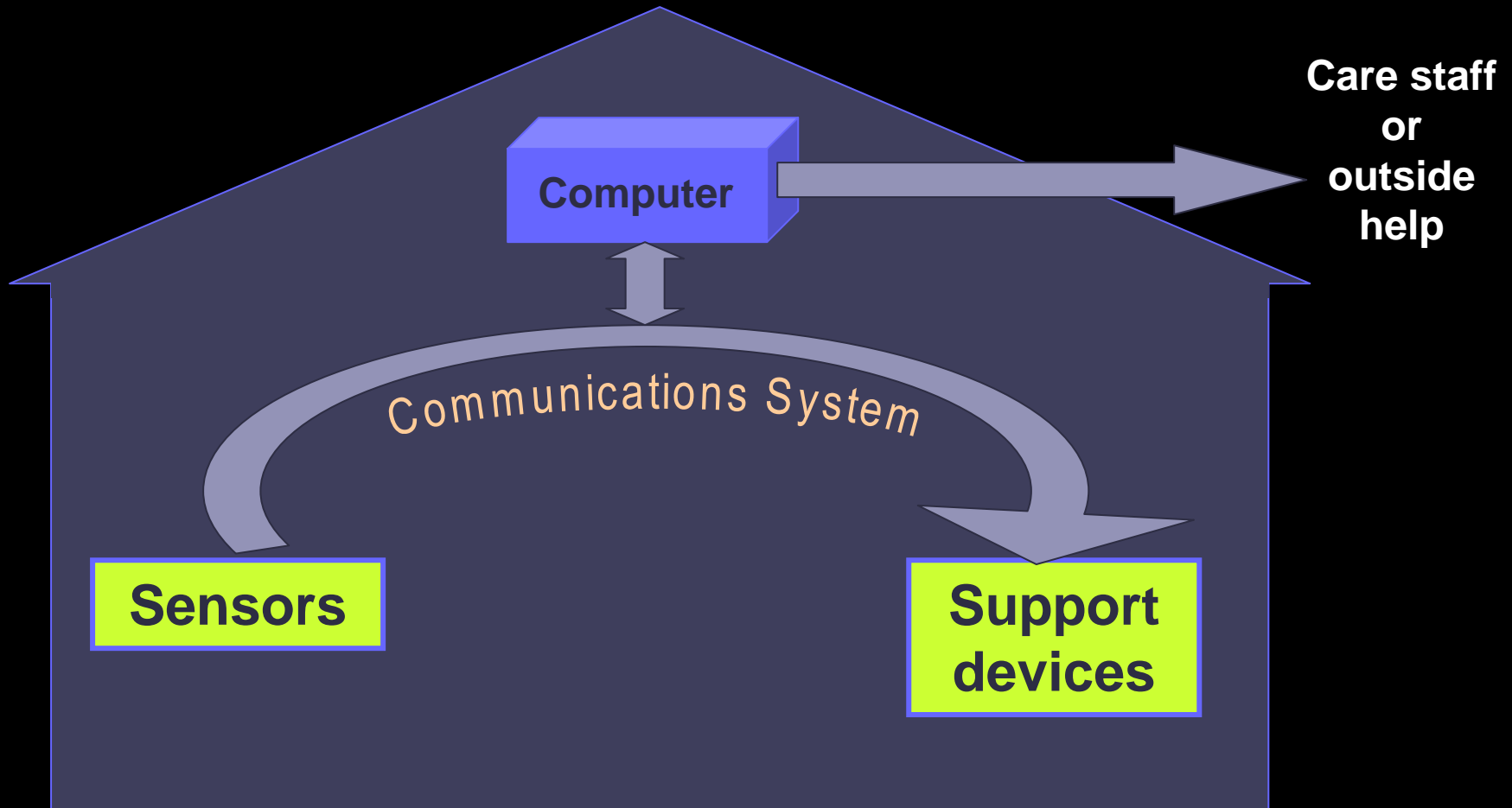


# Technology for People with Dementia

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“Can technology usefully support people with dementia at home, enhancing independence and quality of life?”

# Enabling Smart House Systems



# Design Philosophy

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- Technology that:
  - Acts like a carer.
  - Intervenes early to prevent a disaster.
  - Supports the independence of a person with dementia.
  - Does not unnecessarily intrude into everyday life.

# BIME's work in the field

- Gloucester Smart House Project
  - Technology demonstrator
  - Equipped with integrated smart house systems.
- ENABLE project
  - Evaluating stand-alone technology for people with dementia in 5 European countries.
  - Measured impact on quality of life using DQoL.
  - Learned about working with people with dementia in their homes.
- Deptford & Bristol Flats
  - Extra care developments with permanent or intermediate care tenants.
  - Flats containing integrated smart house systems to support people with dementia.
- Independent Project
  - Technology development with the aim of improving quality of life through enabling participation in enjoyable activities.

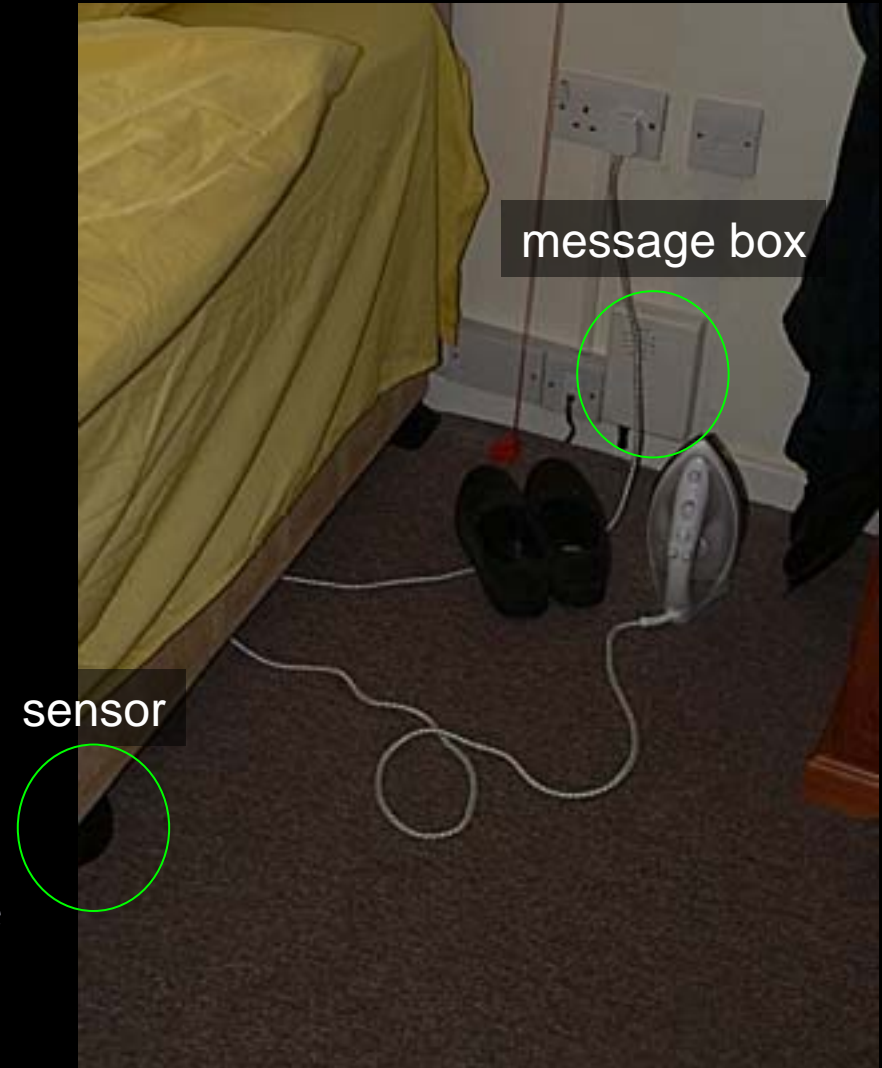
# Installed Systems

- Cooker Monitor
  - Detects smoke, alerts the tenant with a voice message, turns off the cooker, calls for help.
- “Cooker Hot” sign
  - Indicates if the cooker is hot (independent of whether it is switched on).



# Installed Systems

- Night-time lighting
  - Detects the tenant leaving his bed at night using a bed occupancy sensor
  - Turns on his bedroom and bathroom lights using EIB
  - Turns on additional room lights if he moves around the flat
  - Reminds him to return to bed if he stays up for more than a configurable time.



# Installed Systems

- 'Wander' reminder and alert
  - Detects the tenant approaching the front door.
  - Reminds him of the time of day and suggests he returns to bed using voice messaging.
  - Calls for help if he leaves the flat using warden call system.
- Smart taps
  - Turn themselves off after a configurable time delay, but remain useable.



# Technology For People with Dementia

- Dementia is a disability that can be mitigated with technology.
- People with dementia can use technology if it is designed appropriately.
- People with dementia can contribute to the design and evaluation of technology.
- Technology can support independence and improve the quality of life of people with dementia.

# Acknowledgements

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  - Royal Academy of Engineering (RAEng)
  - Institution of Mechanical Engineers (IMechE)
  - Institute of Physics and Engineering in Medicine (IPEM)
- Our tenants, evaluators and carers.