

Research project:
**Environmental Impact of
Digital Services on
Health and Wellbeing in
the Home**

UKRI grant: EP/V042130/1

slides->
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How digital infrastructures in UK sheltered housing empower from within

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**Project: Environmental
Impact of Digital
Services on Health and
Wellbeing in the Home**

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Beaufort Court, St. Leonards, UK



How is this useful?

(for RGS colleagues interested in exploring emancipatory potentials of infrastructure)

We want to understand... how to better target, steer, anticipate, assess and evaluate digital transformation in social and sheltered housing

**paper:
Evolving digital
infrastructures**

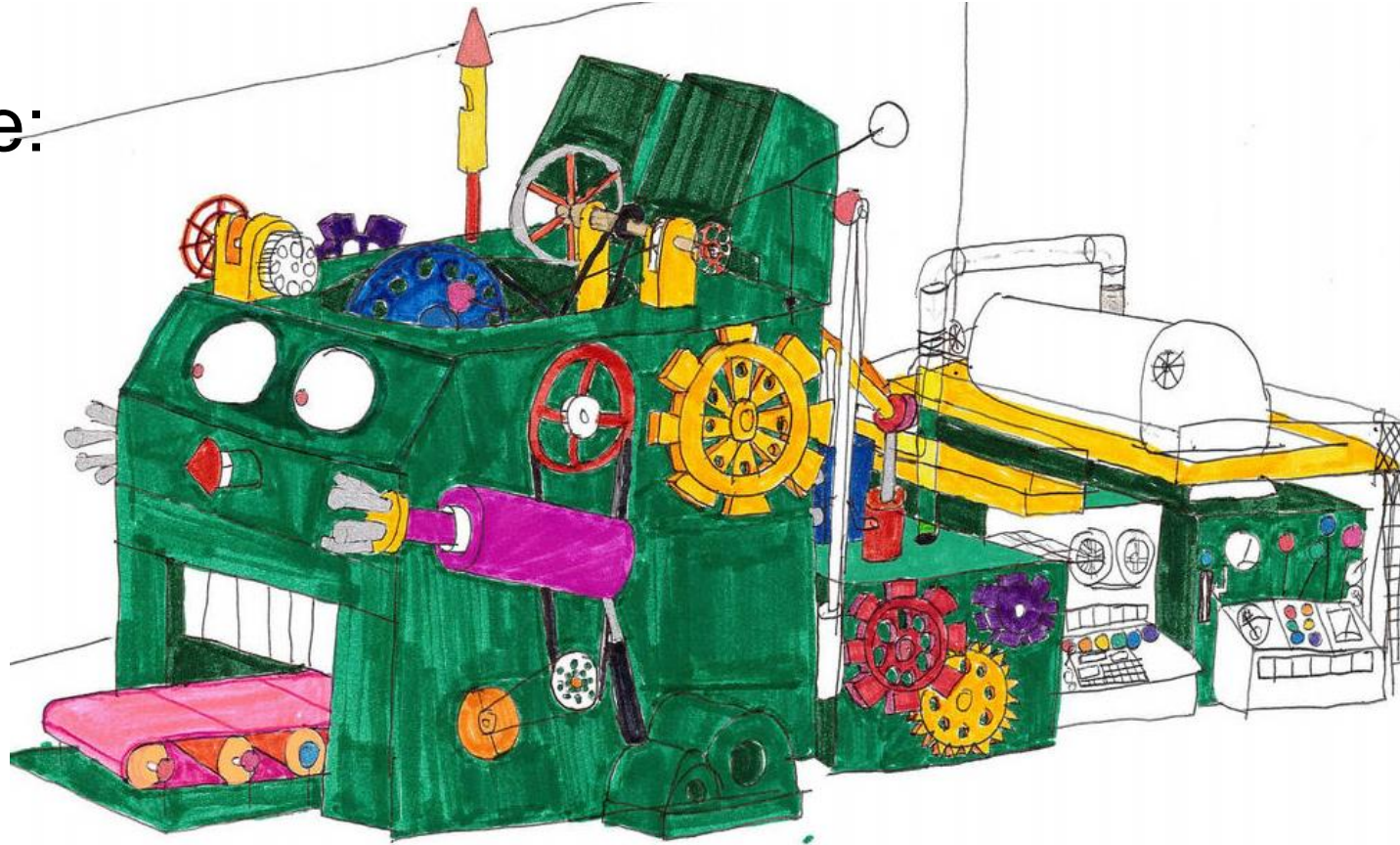
From digital spaces of control to empowering infrastructure spaces

A quick review of some ideas

Digital change: Big mother and logics of control

Control via...

- Outsourcing autonomy
- increased monitoring for efficient management
- revaluation of care through optimisation of housework



Sociomaterial change:

- Shifting practices
- New patterns of life
- Creating new spaces / specialities

“Big Mother - a system that under the guise of maternal care, seeks to manage, monitor and marketise domestic spaces and practices”

– Sadowski, Strengers and Kennedy (2021)

Move 1: From digital spaces to infrastructure



- Digital technologies (telehealth, patient portals, digital wards) are often **developed in silos** and are **not fully interoperable** with social housing systems
 - Digital technologies not designed for specific **staff needs and skills**
 - on site staff are expected to provide remote assistance and maintenance
 - Infrastructure foregrounds **norms and standards** of evaluation, regulation and **governance** / brings specific problems of **scale** and **complexity**
 - **Data, cloud services, and the allure of integration**
(big deal in UK health policy)
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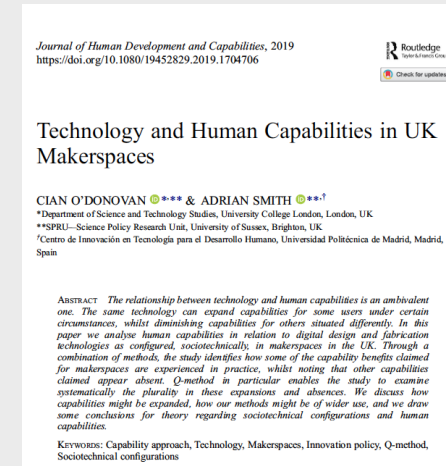
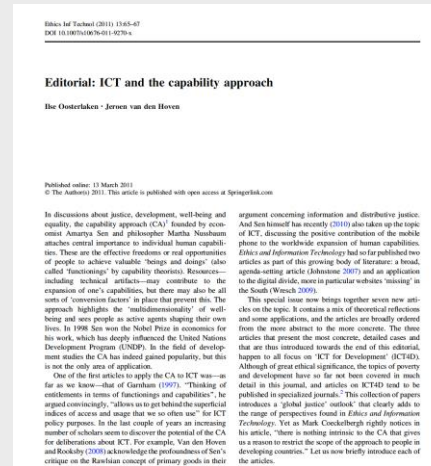
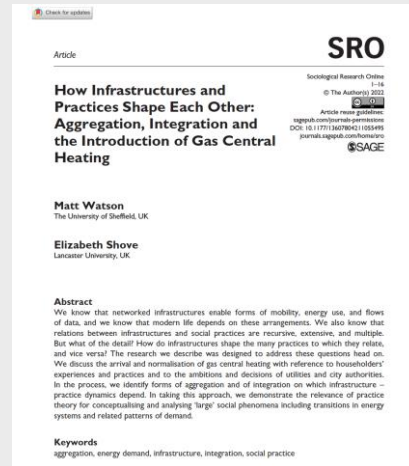
Research questions

1. (How) can we understand evolving digital infrastructures in terms of individual and collective empowerment?
 2. What opportunities do residents and staff have to influence this?
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Move 2: think about empowerment in terms of human capabilities

Infrastructure
spaces:
Practices,
materials,
meanings and
emotion

- Practices and infrastructure evolve together, recursively (Watson & Shove 2022)
- Practices are underpinned by certain human capabilities – real possibilities to be and to do (Oosterlaken et al 2011 *after Sen, Nussbaum, Robeyns et al*)
- Capabilities valued in digital spaces
e.g. skills, identity, livelihood, community making... (O'Donovan & Smith 2019)





Martha Nussbaum's capabilities – central components of well-being

(in which agency and empowerment is central to *being* and *doing*)

- **Life.** Being able to live a satisfying life into old age.
- **Bodily health.** Having good health and access to medical help when needed.
- **Bodily Integrity.** Being able to go where we want to go.
- **Senses, Imagination, and Thought.** Being able to use all of our senses. Being free to imagine, think, and reason.
- **Emotion.** Being able to feel attached to others, to love and suffer the absence of loved ones. Also to feel gratitude, longing, and compassion.
- **Practical Reason.** Being able to reflect critically about good and evil, and to live with our own consciences.
- **Affiliation.** Being able to form a community with others, have social ties, have respect and compassion for others, and not discriminate.
- **Other Species.** Being able to live in harmony with the rest of nature.
- **Play.** Being able to laugh, play, and enjoy recreational activities.
- **Control Over One's Environment.** Being able to exercise control over our own lives, participating in politics, working, and owning property.

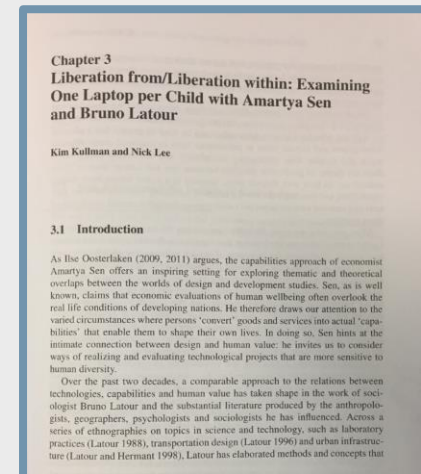
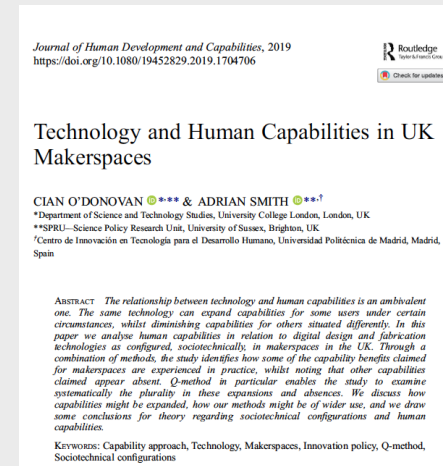
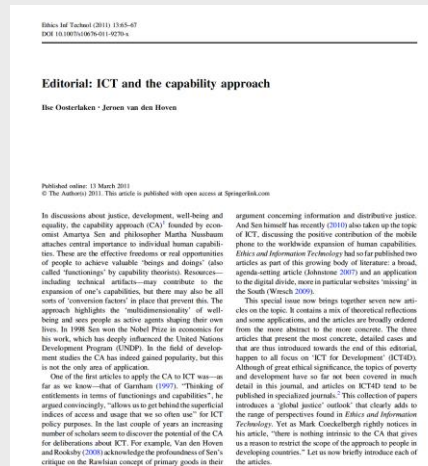
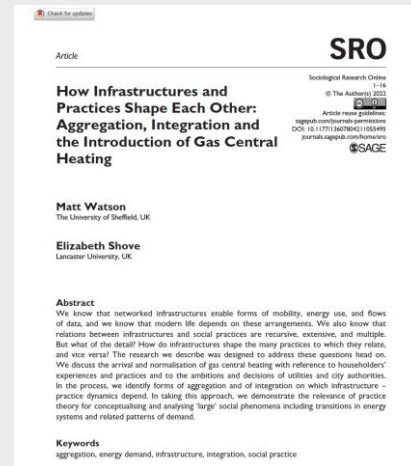
Move 2: think about empowerment in terms of human capabilities

Infrastructure
spaces:
Practices,
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emotion

“...more lasting capabilities and freedoms are not the result of unmaking relations but rather emerge through a careful reordering of those relations”

– Kullman & Lee (2012)

Kullman, K., & Lee, N. (2012). Liberation from/Liberation within: Examining One Laptop per Child with Amartya Sen and Bruno Latour. In I. Oosterlaken & J. van den Hoven (Eds.), *Capability approach, technology and design* (pp. 39–55). Springer.



**paper:
Evolving digital
infrastructures**

Valued capabilities amongst residents of sheltered housing

Evidence from the case

Research situations



Hastings / St. Leonards

~100 residents

~96 homes

Independent Living

Sheltered housing

Rugby

~43 residents

~37 homes

Independent Living

Sheltered housing

Stratford Upon Avon

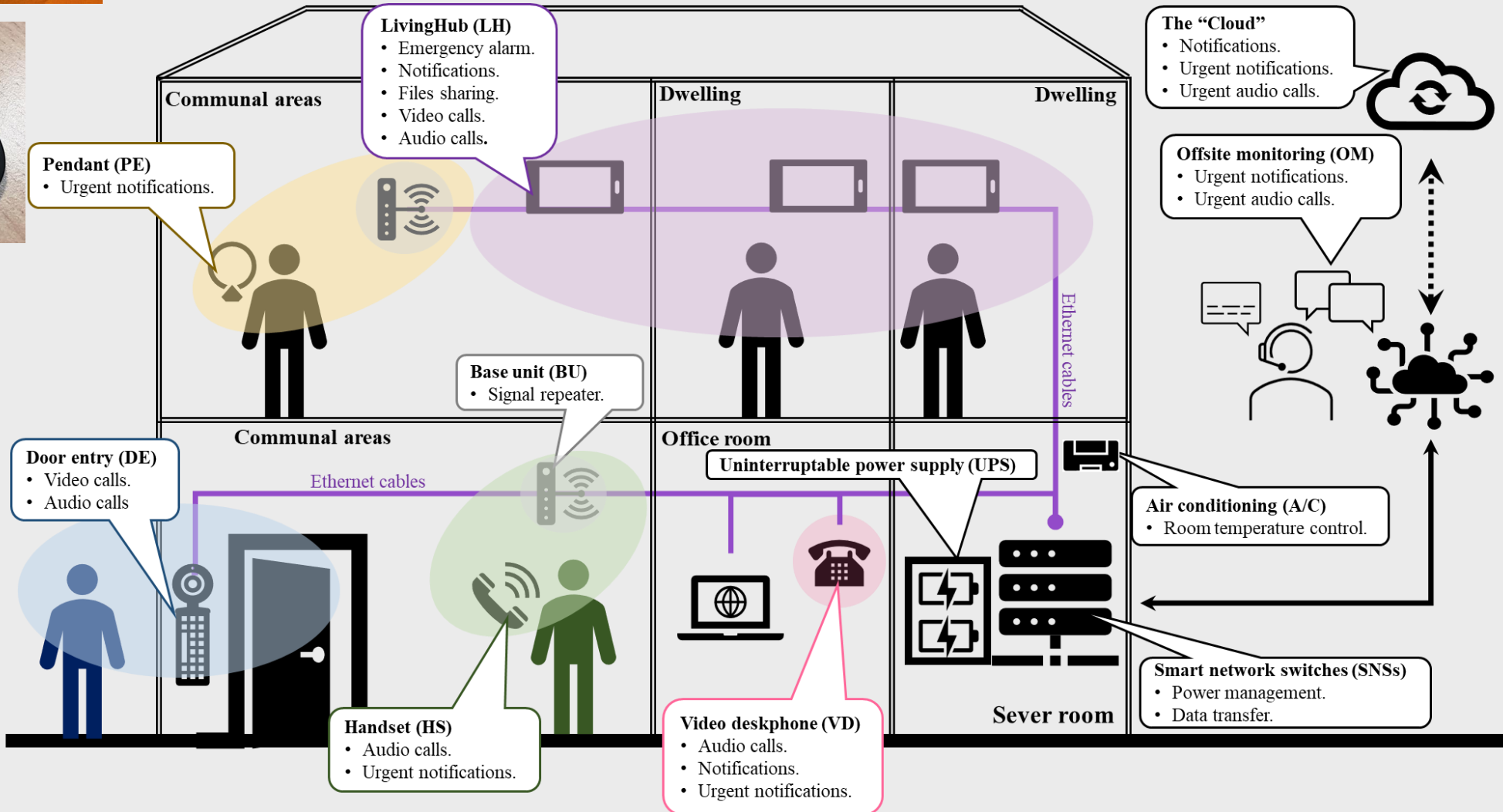
~155 residents

~102 homes

Extra Care/ Independent Living

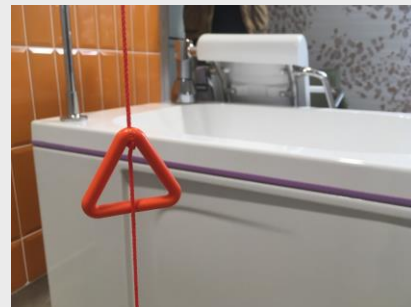
Sheltered housing

New digital warden call system – material and service infrastructure

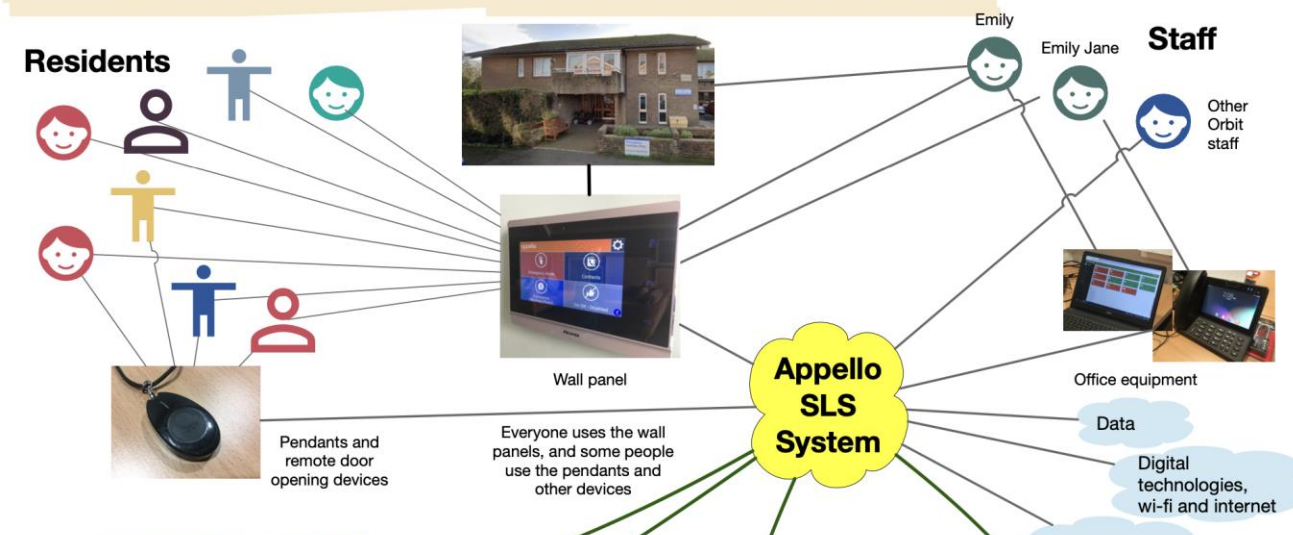


Positions taken by residents

(resident's eye view)



Mapping how people in Beaufort Court use the Appello system



How residents and staff use the system

<p>AED</p> <p>USE 1: Get help</p> <p>Residents use the system in emergency situations and to save lives</p>	<p>EXIT</p> <p>USE 2: Remote door entry</p> <p>Residents use the system to open the front door for deliveries and visitors</p>	<p>USE 3: Social calls</p> <p>Some residents use the system to call neighbours</p>	<p>USE 4: I'm Okay! calls</p> <p>Residents and staff use the systems to check-in with each other</p>	<p>How else do you use the Appello system?</p> <p>Write it on here or tell Kate</p>
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Positions taken by residents



1. **Feeling safer** with some technology features
2. **Praise** for new system
3. **Distrust** of new system
4. **Dissatisfaction** with people linked to the system
5. Previously **feeling coerced** into wellbeing calls
6. Opt to speak to **family** over housing managers, where possible
7. Feeling **left-behind**
8. **Low technology confidence** [co-production of being older]
9. Digital **work is work**

**paper:
Evolving digital
infrastructures**

Three observations about human capabilities

Analysis from the case

Capability implications

[1 of 3]

Connecting people and things

+

co-production of new roles, identities, subjectivities

1. Connection is valued, but does not cultivate capabilities by itself.
 - Everyone agreed connection is central to the home. But connecting what and how?
 - Connecting with neighbours, and nature is valued.
 - But when residents encounter tech already connected to services and firms outside their control they can feel overwhelmed
 2. Co-production of independence (only partial)
 3. Co-production of vulnerabilities
 - *“I can’t work my Smart TV, how am I ever going to manage this”*
 4. Shifting staff roles --> new data responsibilities
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Capability implications

[2 of 3]

Uneven
distribution of
capabilities
+
hidden and
gendered work

1. Digital practices involves often mundane, invisible work (e.g. pressing buttons, charging devices)
 2. Often highly gendered and gendering
 3. Hidden capabilities are a burden to women, + denies attention to specific kinds of knowledge and expertise
 4. Other intersectional subjectivities at play too (age, health, social status)
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Moments of capability building

[3 of 3]

Meaningful digital encounters

Experiences
that change
perceptions
and values
beyond a
single
interaction

- Meaningful digital encounters: during installation, when things go wrong, alarm calls
 - In the absence of meaningful digital encounters, roles and subjectivities formed
 - E.g. action and understanding that is mediated and sustained via proxies, and platforms and digital myths
 - Opportunities to understand; intervene; cultivate capabilities via strategic encounters
-

Conclusions

What's useful here,
what's at stake

1. **Infrastructure evaluation** – capabilities as vectors of empowerment
 - E.g. the co-production of *independent* or *vulnerable residents* versus focus on technology acceptance, engagement or even exclusion and inclusion
 - E.g. a **mandate gap** - Notable when we bring in the institutional level – e.g. not notable when we think of Big Mothering only.
 - E.g. **hidden capabilities** for digital (care) work – what's valued, by who
 2. Measures of **acceptance**, **roll-out** and **scale-up** of digital technologies don't really tell us what we want to know about wellbeing, sustainability etc.
 - + they give us the wrong diagnosis when things don't go right
 3. Opportunities for...
 - **Interventions** towards convivial, collective and pro-community digital infrastructures – re-configuring big mother from the ground up
 - Radically rethinking public utility provision for housing, e.g. free internet
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Thank you, please do get in touch with questions or comments:

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