



Cymru

TANI

2026



Breakout: Smarter Data for Healthier Homes



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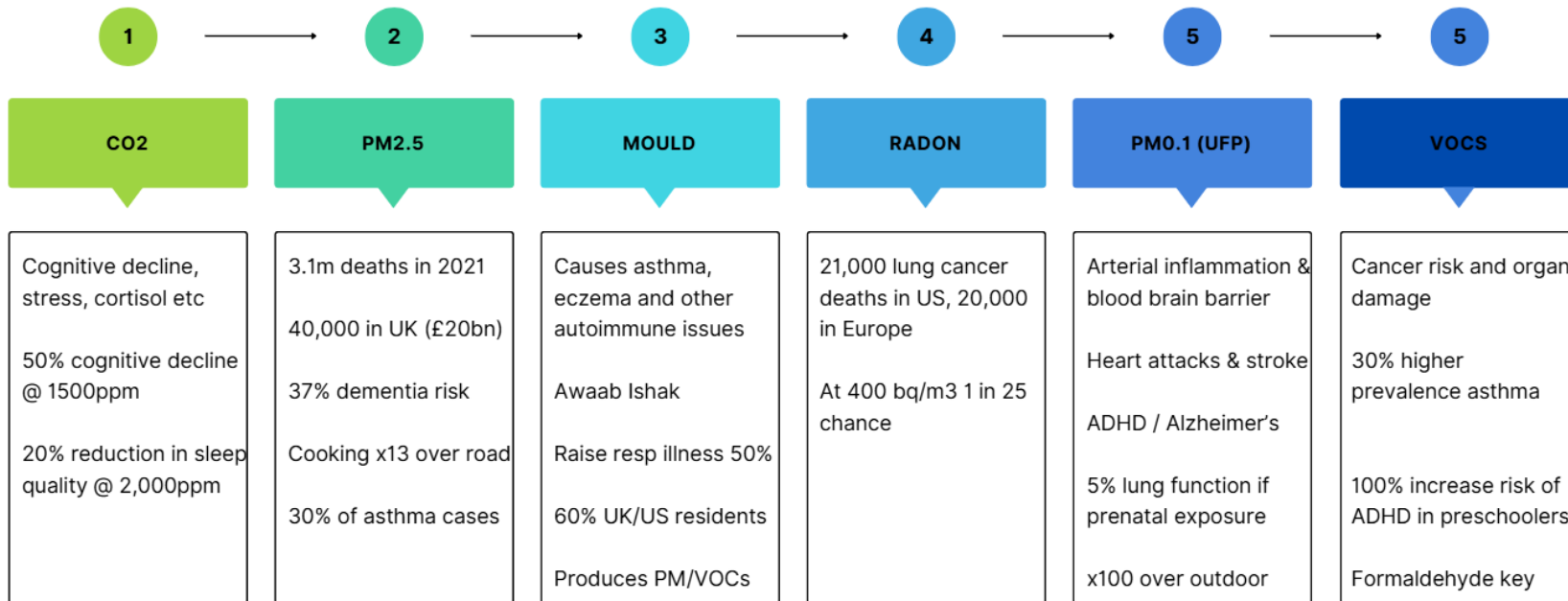


Seeing the Whole Picture: Building, Environment and Person



Léa Hampton-O'Neil

Environment effect on health





110,000+
Systems Installed

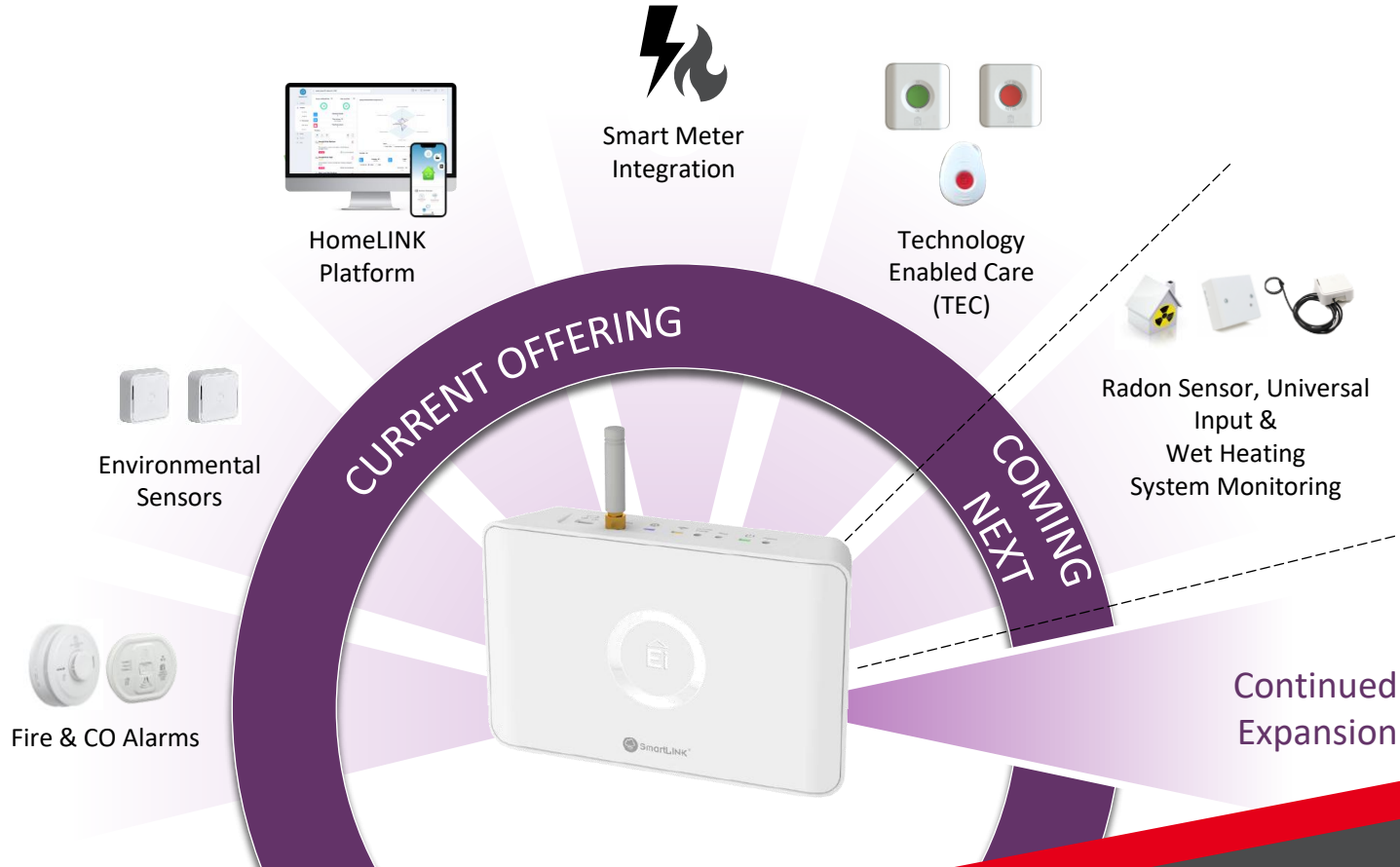
675,000+
Devices Connected

Connected Solution

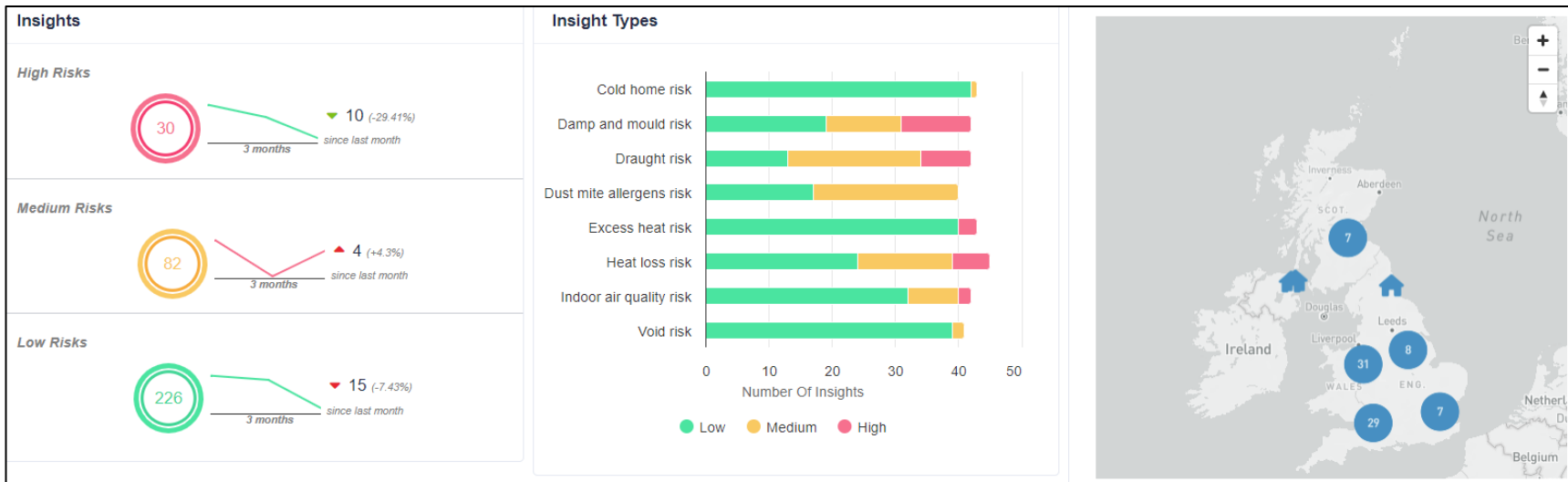
15+ Billion
Readings

400+
Data Messages
Per Second

Aico ecosystem: seeing the whole picture



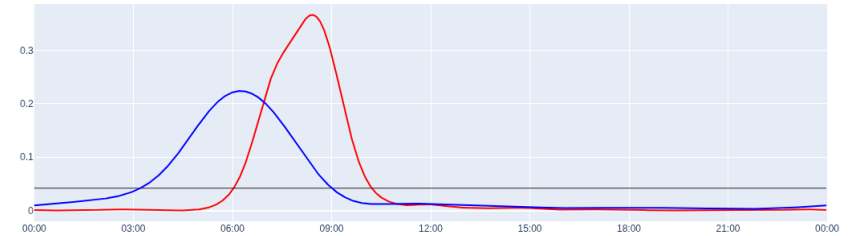
Actionable insights



Pattern Of Life

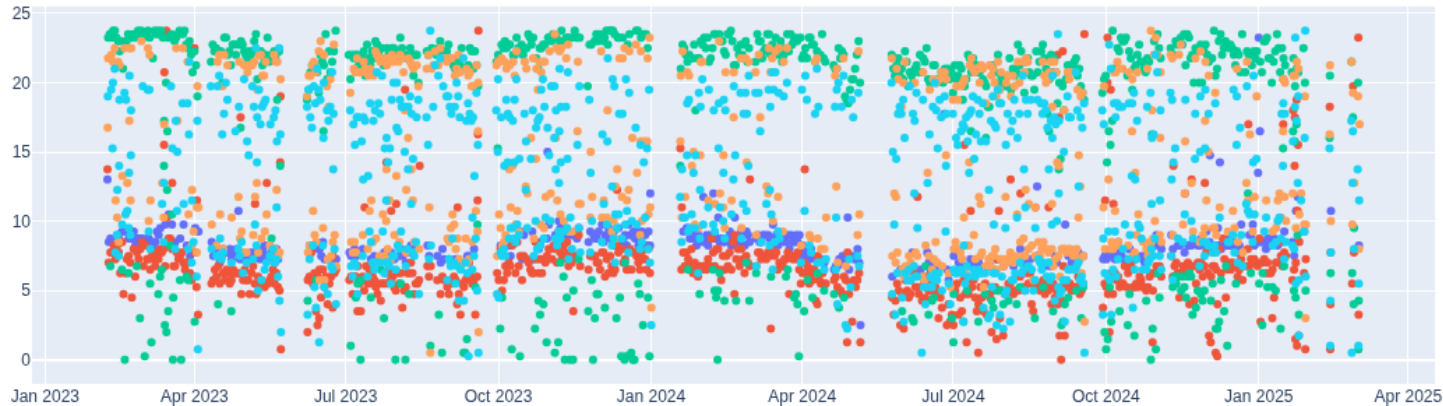
For each event:

- Build a distribution of when the events typically occurs
- Build out a routine



Distributions of times events occur:
Blue – Leaving the Bedroom

Red – Bathroom Shower



- BATHROOM_humidity_peak
- BEDROOM1_co2_fall
- BEDROOM1_co2_rise
- BEDROOM1_humidity_peak
- LIVINGROOM_co2_fall
- LIVINGROOM_co2_rise
- LIVINGROOM_humidity_peak

Pattern Of Life: Spotting issues early

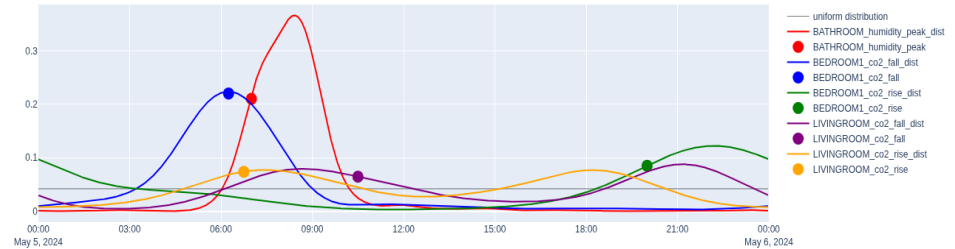
Compare every new day to the Pattern of Life distributions to get the probability of an event happening at that time.

For landlords, on the dashboard, we bring it all together to determine if the overall day is “unstable”, or if the behaviour is normal

A Normal Day:

Events occur near the peak (most probable times)

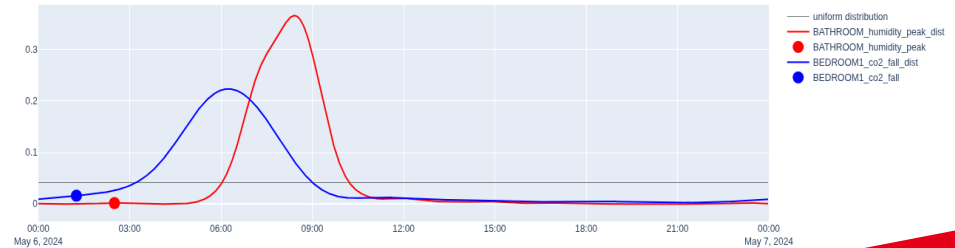
2024-05-05 00:00:00 Events and Distributions



An Unstable Day:

Early morning activity is detected (outside expected window)

2024-05-06 00:00:00 Events and Distributions



Making sure residents have the right information



aico®



CTM2030: Building Healthier Communities – Healthy Housing

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Innovation

Cysylltu
Trawsnewid
Cymell

ICTM

Connect
Transform
Motivate



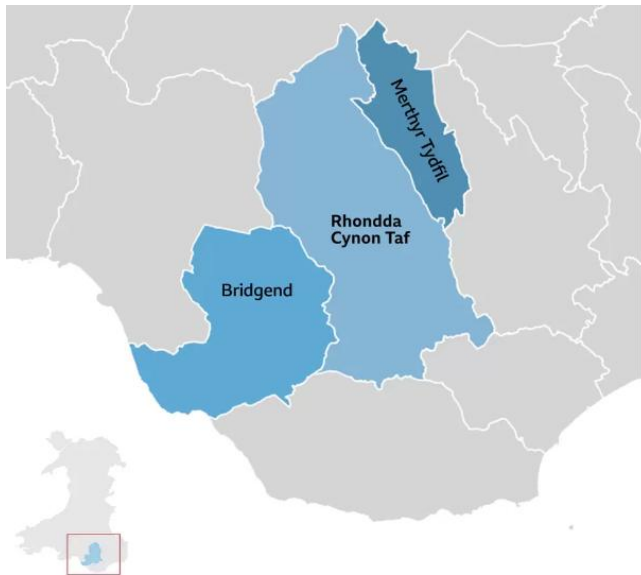
Cwm Taf Morgannwg

Bwrdd
Partneriaeth
Rhanbarthol

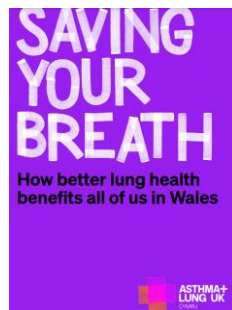
Regional
Partnership
Board



CTM2030: Building Healthier Communities – Healthy Housing



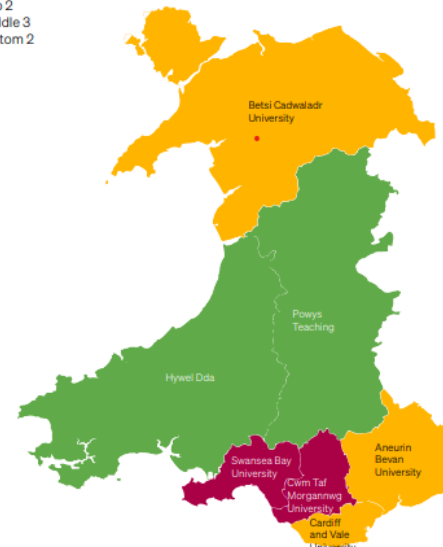
- Life expectancy in Wales is lower than in the United Kingdom ([PHW2023](#))
- In CTM life expectancy for both males and females is lower when compared to the Wales average.
- Prevalence of chronic conditions across CTM is higher than the Wales average for every condition.



Health Board ranking

Based on respiratory admission + death rates

- Top 2
- Middle 3
- Bottom 2



Rank (1 is best)	Local Health Board	Respiratory admissions (per 100,000)	Respiratory deaths (per 100,000)
1	Powys	897.1	95.9
2	Hywel Dda	1125.6	97.6
3	Betsi Cadwaladr	1370.1	108.0
4	Cardiff + Vale	1245.0	111.7
5	Aneurin Bevan	1092.0	118.5
6	Swansea Bay	1162.8	122.9
7	Cwm Taf Morgannwg	1594.9	134.9



CTM2030: Supporting resilient communities – Healthy Housing



- Communities for Change programme

2022



UK Research
and Innovation

- Net Zero heat and power upgrades for demand reduction phase 1

2023



- Income Maximisation Innovation Sprint Net

2025

- Innovations Working at Scale

2026

Sarah Murphy AC MS
Y Gweinidog Iechyd Meddyl a Llesiant
Minister for Mental Health and Wellbeing

Ein eyl/Our ref: MA/GM/1902/25

Leads of Regional Partnership Boards in Wales
Directors of Public Health in University Health Boards
RIC Hub Executive leads

Dear colleagues

Preventative healthcare through innovative data linkage

I am writing to share with you two examples of successful projects which support greater use of health, housing and social care data across Wales and help improve the provision of health and care services. These are successful projects, which I hope to see scaled up and adopted across your region.

By linking health, housing and local authority data, Cwm Taf Morgannwg and Gwent Regional Innovation Co-ordination (RIC) Hubs have developed these projects, which have identified

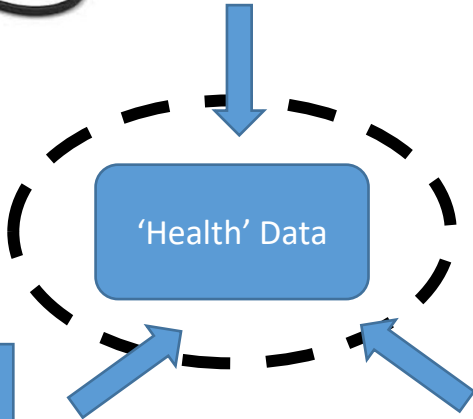




CTM2030: Supporting resilient communities – Healthy Housing



RSL
postcode



 AGE CONNECTS MORGANNWG	 BAVO ASSOCIATION OF VOLUNTARY ORGANISATIONS	 BRIDGEND CARERS CENTRE	 BRIDGEND COUNTY CARE & REPAIR	 CWM TAF CARE & REPAIR
 CITIZENS ADVICE MERTHYR TYDFIL	 CITIZENS ADVICE RCT	 CTM UHB	 DEPARTMENT for Work & PENSIONS	 HAFOD HOUSING
 MERTHYR TYDFIL CBC	 CTM PUBLIC HEALTH TEAM	 REGIONAL PARTNERSHIP	 RIC Hub Hosted by ICTM Endorsed By RPS	
 RHONDDA CYNON TAF CBC	 RHONDDA HOUSING ASSOCIATION	 V2C		

University of
South Wales
Prifysgol
De Cymru

WIDI Wales Institute of Digital Informati
Athrofa Wybodaeth Ddigidol Cymru

Bwrdd Iechyd Prifysgol
Cwm Taf Morgannwg
University Health Board

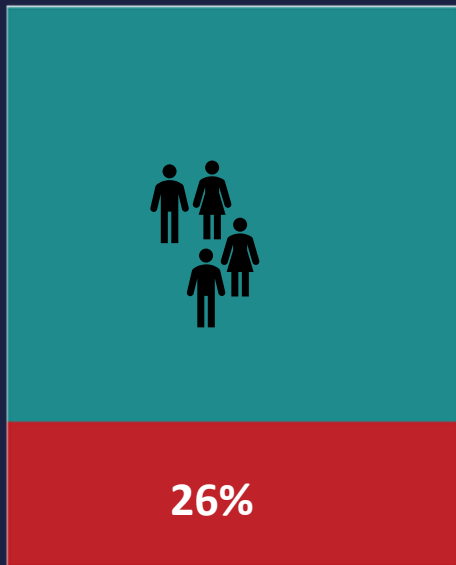


Housing Association

Non-Housing Association



Clinical vulnerability



31,117 (8.6%)



416,562 (91.4%)

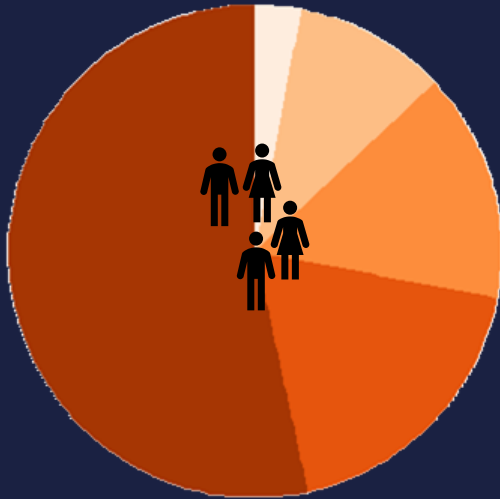


Housing Association

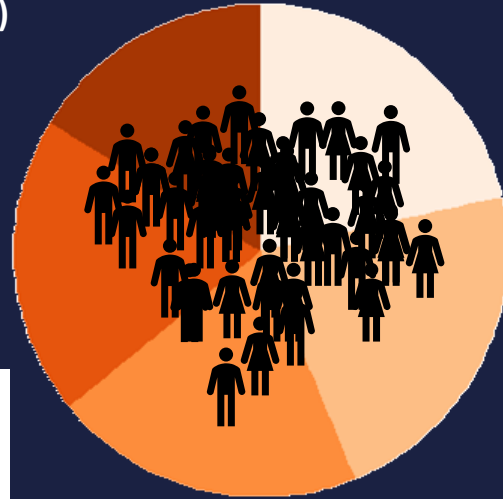
Non-Housing Association



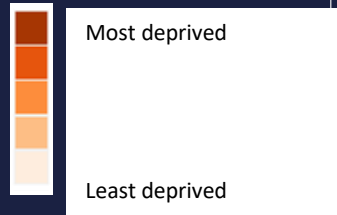
Social deprivation (Welsh Index of Multiple Deprivation)



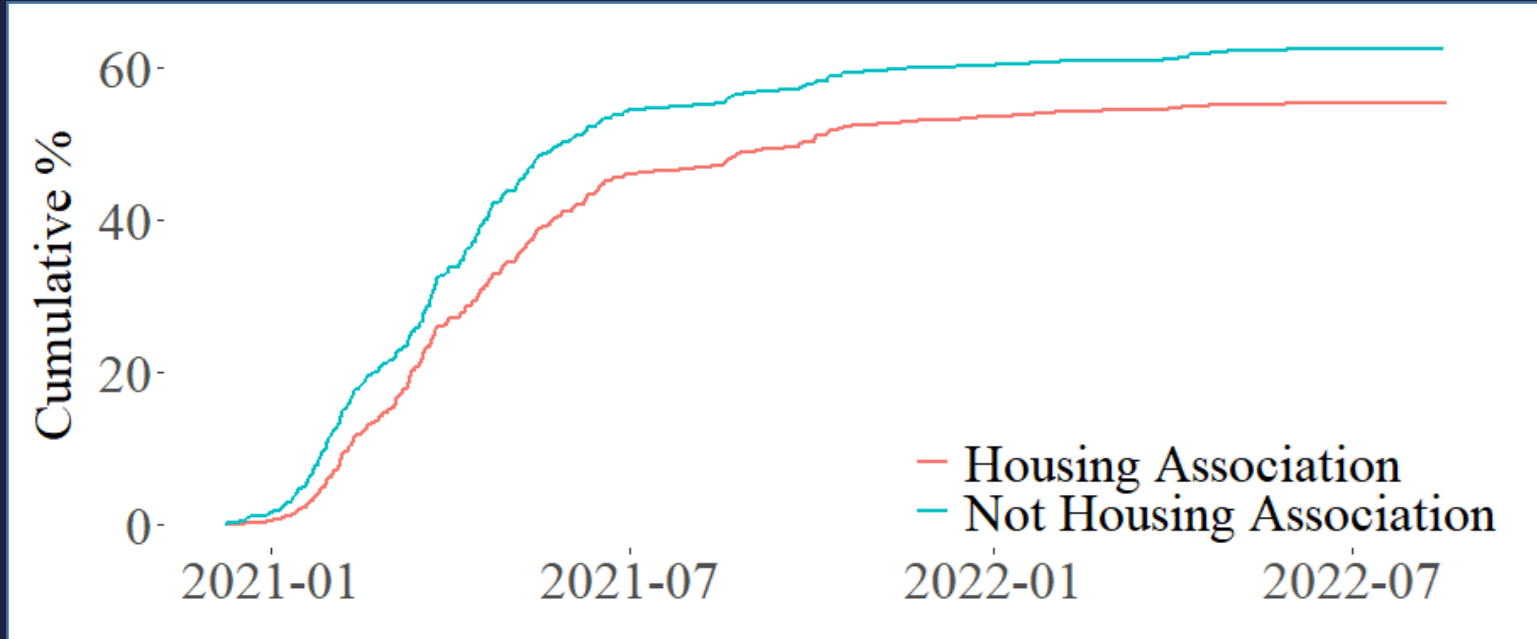
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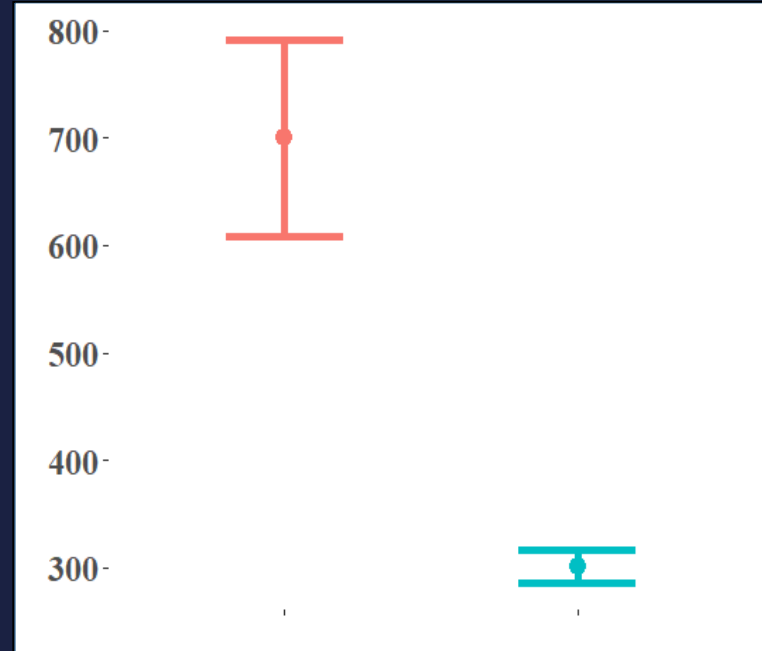
Proportion (%) of people vaccinated is lower for people in social housing.





Emergency admissions significantly higher for residents in social housing



COVID mortality rates markedly higher amongst social housing residents



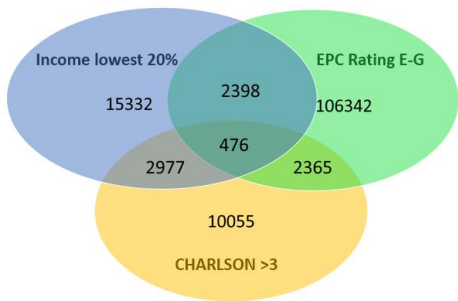
COVID mortality

-  Housing Association
-  Not Housing Association



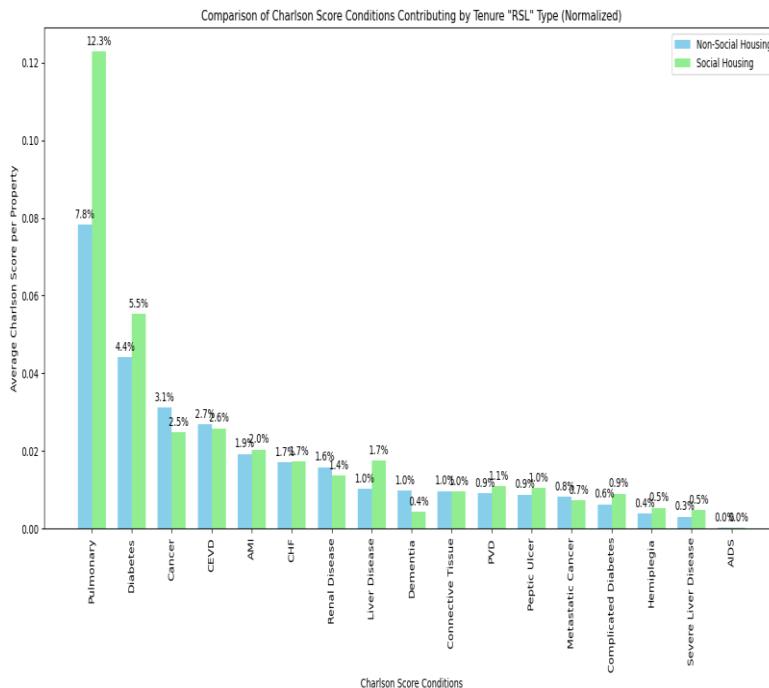
A bit more data linking....

Triangulating actionable data – Target population for ECO4



476 Priority Residences

Health conditions with tenure comparison



Pension Credit Sprints with Public Health

- Respiratory patient data age 65+
- Including A & E attendance in past 12 months
- Target population for referral to 3rd sector & RSL's
- Practical use of data with tangible outcomes



A bit more data linking....

Health Conditions Tenure Comparison

Long term conditions	CTM population prevalence	HA resident's prevalence
Any Long term condition	33.9%	38.9%
Cancer	8.0%	9.0%
Asthma	4.6%	6.4%
Dementia	0.9%	0.5%
Depression	5.0%	8.8%
Diabetes	7.3%	9.0%
Chronic Heart Disease	9.9%	9.9%
Severe Mental Illness	1.0%	2.2%
Severe Obesity	3.7%	5.6%



Healthcare utilisation in CTM 2023-24

Indicator	Housing Association residents	Non-Housing Association residents
Total Bed Days per person	1.28	1.05
Total Spell Admission per person	0.33	0.28
Emergency Bed Days per person	0.95	0.76
Emergency Spell Admits per person	0.17	0.11



Data + Partnership = Impact

- Delivered an Innovation sprint last winter involving health, Local Authority and third sector partners.
- **6,768** instances of outreach efforts through direct engagement, assessed and supported **1,890 clients**, securing a confirmed income increases totaling **£1,655,551.83 (Av.£876)**
- Additionally, we anticipate further annual income gains of **£961,103.19** from pending applications, highlighting the significant financial impact and enhanced support provided to the community of CTM.



CTM 2030

Ein Hiechyd
Ein Dyfodol

DATBLYGU CYMUNEDAU
IACHACH GYDA'N GILYDD



CTM 2030

Our Health
Our Future

BUILDING HEALTHIER
COMMUNITIES TOGETHER

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CTM Healthy Housing Alliance

A partnership between CTMUHB and local Housing Associations

MERTHYR
VALLEYS HOMES



Trivallis.



beacon*

codi



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Housing Associations are place-based anchor partners with a wealth of experience in community based work and a will to make a difference to people's health & well-being

Together, the aim is to use what we already have, in a different way

Making the best of small resource to generate **big impact** and to **learn**



Ripple Effect Impacts of Innovation

Curiosity and proactive approaches

- Analysed data on older residents in general needs housing
- 25% of Trivallis residents were identified as age 60+ (1,970 age 70+)
- Further analysis showed limited engagement from older residents

Project developed to conduct well-being visits to 50 residents age 80+

- 1 required an emergency transfer (24 hrs)
- 12 residents required physical adaptations to live safely at home
- 14 supporting people referrals (cases of hoarding, neglect and poor health)
- £5966 in income immediately recovered

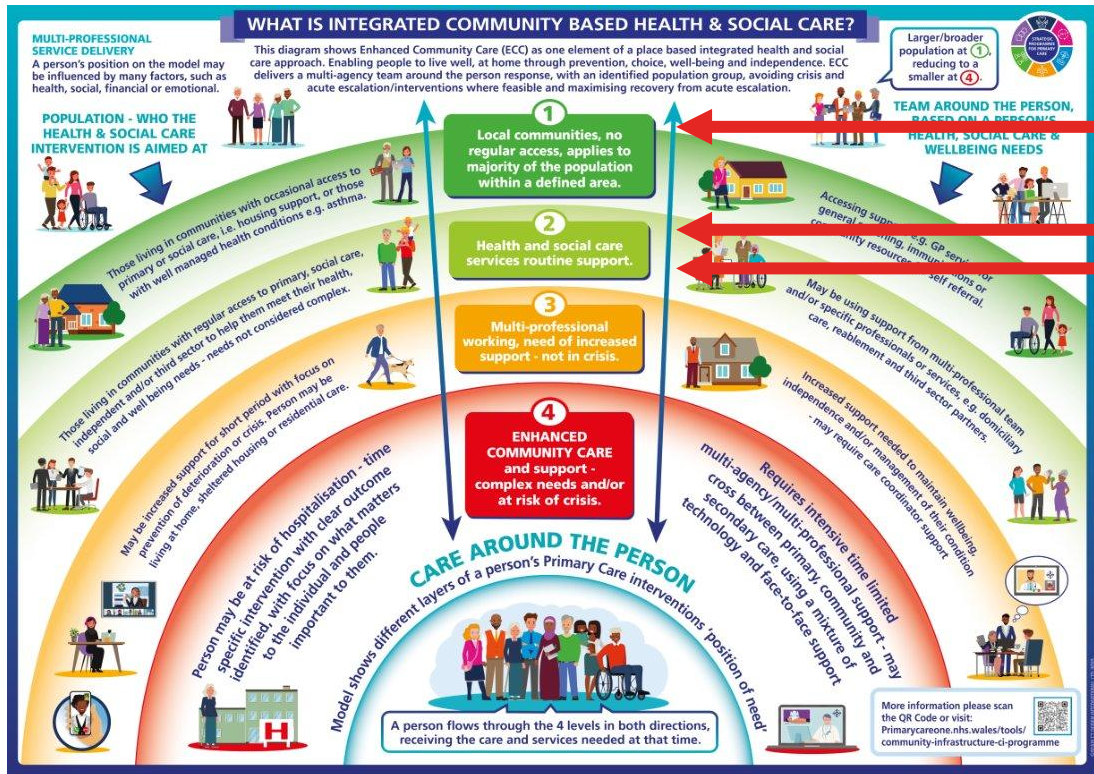
Clear evidence of unidentified need

Trivallis.





Identifying Need



Trivallis General
Needs Tenants age 70
+
Frailty Nursing Team
GP Cluster





Housing is part of the integrated system

Trivallis.



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Cwm Taf Morgannwg
Partneriaeth | Regional
Rhanbarthol | Partnership

Cwm Taf Morgannwg Regional Partnership & Trivallis Pathfinder

- Trivallis Level 1 Partner – identify & refer
- CTM Frailty Nursing Team (Taf Ely) Level 2 Partner - clinical expertise & data
- Feedback loop – risk data passed back to Level 1
- Innovation Funding – 50 new visits in neighbourhoods of less resilience (Taf Ely) April 2026
- Cwm Taf Care & Repair community partner for wider housing tenures
- Aligned place-based initiatives with 3rd & community sector – explore wider community identification



Information sharing

Why? Should do? Can you? Do you need to? How?

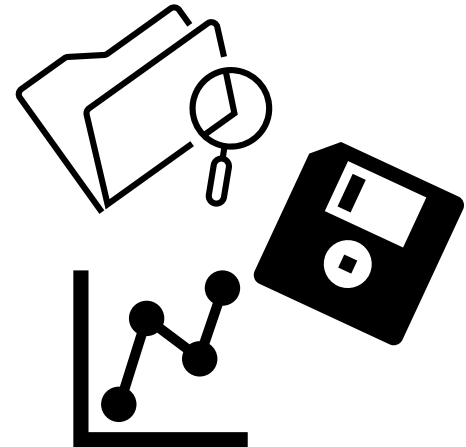
Is there a need for intervention? Will there be targeted direct care public health duties to improve health?

Information Governance Lead - explain the WHY before the ASK

Use the data that you have access to, what does this look like?

The data sharing agreement;

- Do you have a contract for services already?
- Think about secure transfer and storage of information
- How will you get information returned
- Be clear about the purpose
- Do your triage/sift at the data end





So what, now what?

Conversations to date...

- Housing associations' growing focus on data-driven approaches, internal data warehouses, and integrating external sources
- RSL's experiences of demographic profiling and challenges with an ageing tenant base
- Is it about comparative needs (i.e. compare to local population)
- Is it about healthcare usage?
- Is it about RSL's long-term planning, service design and investment?
- Is it about people's health status - prevalence of chronic diseases/ mental health conditions?
- Is it about interventions and initiatives that RSL's can drive or support with?
- Is it about specific population health programmes linked to physical activity, active transport, employability etc?



Questions ?

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