

# Net Zero Skills

## Sector insight

With thanks to:



# Introduction

Wales is a nation aiming to be fully carbon neutral by 2050.

And at CIH Cymru we share the ambition of Welsh Government to meet the challenges of the climate and nature emergency head on and recognise the central role that housing, and housing professionals in particular, will have play in Wales's journey towards a carbon-neutral future.

We also know that the skills challenge linked to realising that vision in practice is substantial.

*"Matching the speed of the workforce transition with the urgency of investments in technology and infrastructure is a huge challenge"* – **Esin Serin**, policy analyst, Grantham Research Institute on Climate Change, London School of Economics

We've partnered up with Aico – leaders in the home life safety market - to gain insight from housing professionals and leverage the combined knowledge of those at the heart of both understanding the challenges and progressing the solutions in practice.

This focus on skills has characterised our work as CIH Cymru for some time, and in our manifesto ahead of the Senedd election in 2021, one of our headline asks called for 'A workforce strategy for the affordable housing sector' recognising that better data, planning, consideration of workforce issues should be front and centre of every aspect of the wider effort to address the climate crisis.

This report draws outlines some of our initial steps at pulling together that insight and sets out ways we could progress our understanding further.

Reaching that carbon neutral future requires key actions from a housing perspective – building net-zero new homes and retrofitting existing homes to carbon-neutral or low-carbon standards. That is a monumental task which will require huge injections of investment from both the public and private purse.

That investment has to start with ensuring we have the right skills in place as organisations, as well as individual housing professionals, to meet these challenges head on and ensure that global warming doesn't reach the catastrophic levels that are predicted if we don't act now.

I would like to thank Aico for supporting CIH Cymru in addressing this challenge and we will discuss the findings of the report at TAI 2022, with a view to exploring further, more granular research, to assist housing organisations in taking the decisions they need to take in order to have the right skills, in the right places.

## Matt Dicks

National Director, CIH Cymru

We would like to thank CIH Cymru for their support in identifying the skillset required within the housing sector to meet the short-, medium- and long-term skills for the 2050 deadline. This can only be achieved through true collaborative working as we need to ensure that every department within housing is not just educated but also empowered to be able to drive this agenda forward. This will also require support from the education sector to develop the future generations, contractors to be upskilled, and most importantly of all, to ensure that residents from all tenures are part of the journey.

## Tina Mistry

Relationship Manager, Aico

# Decarbonisations and skills - sector insight

A snapshot survey of social and affordable housing providers received 13 responses - 9 housing associations, 3 local authorities and 1 private developer.

## We asked:

1. Your organisation is:
2. Has your organisations developed a specific decarbonisation strategy?
3. What part has (or how should) workforce planning played in that process?
4. Has your team/department/organisation undertaken a skills-gap analysis to support the approach to decarbonisation?
5. Thinking about skills-gaps, in what types of subjects do you feel there is an urgent and pressing need to staff expertise?
6. Has your organisation recruited specifically to deliver on its decarbonisation ambitions in the last 12 months?
7. What type of roles could your organisation look to recruit further in?
8. Are you encountering issues in recruiting to roles linked to decarbonisation?
9. Is there anything else relating to the questions above you would like to share with us?

## Main findings

The following summary provides an overview of the main findings from the survey.

### A strategic approach to decarbonisation

Almost two thirds (62%) of respondents reported that their organisation has developed a strategy linked to their decarbonisation activity.

*"We have an Environmental Strategy which includes decarbonisation. We plan to develop a specific De-Carbonisation Strategy in line with Welsh Government PAS2035 - Pathway to Zero."*

Only one respondent indicated that they had not, with others suggesting that despite not having a strategy in place a present, this is a priority and currently under development.

### Understanding the skills gap

Half of all respondents had undertaken a skills gap analysis to better inform workforce planning and recruitment.

*"We recognise there will be a skills gap but further detailed work will be required in this areas to understand the specific requirements."*

20% hadn't undertaken this kind of work. A number of respondents voiced challenges of trying to match up training in the present time, with how technology/methods will advance - noting that time spent gaining skills etc. can deteriorate in relevance with the often swift advances in technology.

### Recruiting for decarbonisation

Over three quarters (77%) of organisations had recruited specifically to service their decarbonisation ambitions during the last 12 months. Challenges in recruitment were found to be variable with 61% reporting no difficulty in recruiting whilst 39% were experiencing significant challenges in this area.

# Discussing the challenges

The following section provide a summary of the Net Zero roundtable held with professionals across Wales, supported by AICO.

## Scale of the challenge

All attendees to one extent or another highlighted the sheer scale of the challenge represented by net zero. From the huge financial resources required to test and scale methods effectively, to the practical issues around informing tenants, and improving staff knowledge and expertise more broadly.

The scale of the financial challenge was highlighted by a number of attendees with some raising concerns about the cyclical, short-term nature of funding that would often have quite tight deadlines for submissions – preferring to see an approach that looked to provide organisations with greater long-term certainty over their income. Add to that it was recognised that the amount of funding needed to fill gaps in finances would require a radical shift in thinking around financial modelling, prompt difficult conversations with current sources of investment and ramp up the need to attract new money into the sector.

Some highlighted the positive impact that government-led schemes have had and are continuing to have on the sector such as the Optimised Retrofit Programme (ORP) and the Innovative Housing Programme (IHP) as well as industry-led approaches such as the Homegrown Homes initiative.

Some noted that in this area, the next iteration of the Welsh Housing Quality Standard would be a strong driving force in informing what skills/capacity is required at an organisational level. Others also noted the role of programmes such as ORP in developing understanding around the performance of intelligent energy systems, and other innovations – but that due to the infancy of approaches understanding and data were both limited and in short-supply meaning there is often a reliance on information from manufacturers.

A number of attendees were minded that they cannot wait for the data to become broadly available – that the onus is on individual organisations to obtain and implement their own monitoring and evaluation measures to aid shared learning and collaboration across Wales. Attendees also highlighted the need to improve existing data, to understand what measures could realistically be used with different housing-types and this in turn would help inform the approach to skills development.

One attendee reflected on the tension between the push to upgrade properties against what could tangibly be achieved on very old, poorly performing homes. Whilst it was recognised that the disposal of these homes may be part of the discussion, attendees also highlighted that more often than not, these homes were situated within communities where there is a clear need to retain the presence of affordable housing.

## Existing and new skills

It was recognised that the volume of activity that organisations need to undertake could result in teams needing to expand and/or gain new skills at pace. For example, with the PAS2035<sup>1</sup> (See footnote for definition) framework one attendee highlighted the likelihood of providing training for this in-house and expanding teams to involve roles such as 'Clerk of Works' to maintain quality control and assurance of its latest retrofit activity. Although it was also noted that the standard asks for a significant amount of roles linked to retrofit activity (coordinator, designer, adviser etc.) all of which wouldn't be realistic in the current climate.

<sup>1</sup> PAS 2035 is a specification for what is called 'whole-house' or 'whole building' retrofit. PAS 2035 is concerned with assessing domestic dwellings for energy retrofit. This involves identifying areas where improvements can be made and specifying and designing the relevant improvement measures. It is also concerned with the monitoring of domestic retrofit projects.

Competition for skills in the market is considerable – one attendee highlighted that for smaller organisations there is likely to be an increasing challenge where the offer around benefit/pay is likely to make attracting professionals harder – a pattern that some have already seen with other types of technical skills, such as surveyors. Linked to this one attendee highlighted the challenge of retaining staff who may have undergone a significant amount of training and who may move on to other opportunities limiting the impact of that development on the organisations' activities. When this had occurred a number of attendees highlighted that the recruitment exercise that followed was not simply about seeking to replace like for like – with the pace and demand in the market for skills, it would mean potentially re-looking at job descriptions, undertaking a fresh benchmarking exercise in the interest of elevating the salary to a level that would now be attractive enough to prospective candidates.

The need for skills was also viewed as a massive opportunity to build-in learning, skills and employment opportunities for tenants and communities who have been subject to the conditions of an ongoing cost of living crisis against the backdrop of the continuing prospect of economic hardship. It was felt that this approach could incorporate an academy approach for Wales.

One attendee highlighted the need to work directly with contractors who may well be enthusiastic about upskilling or retraining their own staff to service new heating systems – but that the enthusiasm could be tempered by the level of existing work that any one contractor is already committed to, that for those involved in large-scale frameworks could represent workload over a number of years.

Linked to this, providing contractors with any form of certainty over what skills would be needed by when was seen as a stubborn issue. Attendees highlighted that although as an organisation they could evidence the need for a programme of work, there needs to be clear and reliable funding in place to deliver so that the demand is there for contractors to actively train new staff and develop expertise. At present the certainty over the scale needed and when would be timely for the skills to exist is far too vague.

It was also felt that the approach to skills development needs to be considered in its widest sense where those key partners across the sector, within local authorities, social enterprises, the third sector etc. were also sufficiently well-skilled to facilitate the effective undertaking of services.

## Collaboration and partnership

Working across and outside of the sector was a common feature of the contributions from attendees reflecting on the shared challenges many faced, but also the need for greater sharing of resources to achieve economies of scale, inform improvements and develop reliable data. The main areas where it was felt collaboration could yield further positive results included

- The approach taken to developing skills locally and the opportunities to partner with further learning institutions
- Sharing of staff skills and expertise, both across the sector but also within organisations/teams
- Sharing data on performance of different retrofit on different property types
- A common understanding of the interventions that may be most impactful on different property types

## Engaging with tenants

How tenants remain informed and equally benefit from efforts to share insight and increase knowledge was a common feature of the discussion.

Tenant messaging was seen as being central to supporting how the work takes place in practice. For example, one organisation is undertaking thermographic surveying, but this can only be done at night meaning individuals walking around estates throughout the night which risks prompting calls from concerned residents.

Some small changes, such as installing a Smart Meter were highlighted as being important for the overall monitoring and control of new intelligent energy systems, but it was noted that even this relatively small change could be difficult to effect in practice with tenants sometimes being resistant to changing from their current status quo. If agreement is reached, then there can be the added complexity that utility providers may not be supporting a particular product or service at that time.

One attendee highlighted ACIOs work with TPAS in Scotland creating a resident safety and well-being forum - looking at what 'safety' and 'well-being' really means to people in practice. The forum is engaging with a wide-range of stakeholders (largely non-technical organisations) to understand from people using their services what those terms mean to them and developing a more unified understanding that the sector can use in its own work.

Attendees highlighted that although the technical skills should rightly be a priority for the sector, supporting tenants (and the wider population of staff) to understand and use technology in the intended way was equally deserving of attention. For example, air source heat pumps represent a completely different way of living compared with traditional heating systems and alongside that technical know-how there would need to be a substantial programme of high quality information to tenants to aid understanding and off-set any concerns.

More broadly there was also a discussion about how do organisations ensure fairness across their population? There's not the affordability there to ensure every one can have the same level of interventions in each and every property, meaning in practice some tenants will benefit to a greater extent than others. Understanding what interventions would be possible across a large mix of properties was seen as important to being able to offer at least some improvements across all property types.

Ultimately gaining a mandate from tenants to invest money was seen as vital and that there was already clear evidence of the consciousness amongst communities about the climate crisis and an understanding about the need to invest in homes on this basis.

## Prompting further progress

Drawing on the information gathered through our snapshot survey of the sector and subsequent roundtable, we believe that the following themes represent some of the low hanging fruit, where there's real opportunity to make progress on the skills agenda.

1. Scope the idea of a housing skills academy for Wales - exploring how this would look in practice and its potential impact on local communities
2. CIH Cymru to explore the gaps in training provision linked to the PAS2035 standard
3. Create a knowledge library that professionals from all disciplines can access that collects together technical information about the effectiveness of retrofit measures applied to different types/styles of homes.
4. Establish a resident safety and well-being forum in Wales to start and maintain a vibrant dialogue to inform the approach to communication and wider tenant/community engagement.
5. Introduce a forum for frequent sharing of information, practice and insight to aid learning across the sector
6. Social housing providers to engage with Regional Skills Partnerships to intelligently inform the demand for skills at a local level to provide business with an element of certainty around future need and demand from the sector



Chartered  
Institute of  
Housing  
Cymru

# Sgiliau Sero Net

## Mewnwelediad sector

Gyda diolch i:

aico®



# Cyflwyniad

Mae Cymru'n genedl sy'n anelu at fod yn gwbl garbon niwtral erbyn 2050.

Ac yn CIH Cymru rydym yn rhannu uchelgais Llywodraeth Cymru i ymateb i heriau'r argyfwng hinsawdd a natur yn uniongyrchol, gan gydnabod y rôl ganolog y bydd tai, a gweithwyr tai proffesiynol yn arbennig, yn ei chwarae yn nhaith Cymru tuag at ddyfodol carbon niwtral.

Gwyddom hefyd fod yr her sgiliau sy'n gysylltiedig â gwireddu'r weledigaeth honno'n ymarferol yn sylweddol.

*"Mae paru cyflymder y newidiadau gweithlu â'r angen brys am fuddsoddiadau mewn technoleg a seilwaith yn her enfawr"* - **Esin Serin**, dadansoddwr polisi, Sefydliad Ymchwil Grantham ar Gyfleoedd yr Hinsawdd, Ysgol Economeg Llundain

Rydym wedi ffurio partneriaeth ag AICO - arweinwyr y farchnad diogelwch yn y cartref - i gywain mewnwelediad gan weithwyr tai proffesiynol ac i drosoli gwybodaeth gyfunol y rhai sydd wrth wraidd deall yr heriau a datblygu'r datrysiau yn ymarferol.

Mae'r ffocws hwn ar sgiliau wedi nodweddu ein gwaith yn CIH Cymru ers peth amser, ac yn ein manifesto cyn etholiad y Senedd yn 2021, un o'r prif bethau y gwnaethon ofyn amdano oedd 'Strategaeth gweithlu ar gyfer y sector tai fforddiadwy' gan gydnabod y dylai gwella data, cynllunio ac ystyried materion yn ymwneud â'r gweithlu fod yn flaenllaw ym mhob agwedd ar yr ymdrech ehangach i ymdrin â'r argyfwng hinsawdd.

Mae'r adroddiad hwn yn amlinellu rhai o'n camau cychwynnol o ran tynnu'r mewnwelediad hwnnw ynghyd a nodi ffyrrd o wella ein dealltwriaeth ymhellach.

Mae cyrraedd dyfodol carbon niwtral yn gofyn am gamau gweithredu allweddol o safbwynt tai - adeiladu cartrefi newydd sero-net ac ôl-osod cartrefi presennol at safonau carbon niwtral neu carbon isel. Mae honno'n dasg anferth a fydd yn gofyn am fuddsoddiad enfawr o'r pwrs cyhoeddus a phreifat.

Mae'n rhaid i'r buddsoddiad hwnnw ddechrau drwy sicrhau bod gennym y sgiliau cywir yn eu lle fel sefydliadau, ac fel gweithwyr tai proffesiynol unigol, er mwyn ateb yr heriau hyn yn uniongyrchol a sicrhau nad yw cynhesu byd-eang yn cyrraedd y lefelau trychinebus a ragfynegir os na fyddwn yn cymryd camau nawr.

Hoffwn ddiolch i AICO am gefnogi CIH Cymru wrth fynd i'r afael â'r her hon a byddwn yn trafod canfyddiadau'r adroddiad yn TAI 2022, gyda'r bwriad o gynnal ymchwilio fanwl bellach, er mwyn cynorthwyo sefydliadau tai i wneud y penderfyniadau gofynnol er mwyn cael y sgiliau cywir, yn y lleoedd cywir.

## Matt Dicks

Cyfarwyddwr Cenedlaethol, CIH Cymru

Hoffem ddiolch i CIH Cymru am eu cefnogaeth i nodi'r sgiliau sydd eu hangen yn y sector tai i fodloni'r sgiliau tymor byr, canolig a hir ar gyfer y dyddiad cau ar gyfer 2050. Dim ond drwy gydweithio gwirioneddol y gellir cyflawni hyn gan fod angen i ni sicrhau bod pob adran ym maes tai nid yn unig yn cael ei haddysgu ond hefyd yn cael ei grymuso i allu gyrru'r agenda hon yn ei blaen. Bydd hyn hefyd yn gofyn am gymorth gan y sector addysg i ddatblygu cenedlaethau'r dyfodol, contractwyr i gael eu huwchsgilio, ac yn bwysicaf oll, i sicrhau bod preswylwyr o bob deiliadaeth yn rhan o'r daith.

## Tina Mistry

Rheolwr Perthynas, Aico

# Datgarboneiddio a sgiliau - Mewnwelediad y sector

Yn sgil arolwg a fu'n ceisio cipolwg o ddarparwyr tai cymdeithasol a fforddiadwy derbyniwyd 13 o ymatebion – 9 gan gymdeithasau tai, 3 gan awdurdodau lleol ac 1 gan ddatblygwr preifat.

## Gwnaethom ofyn:

1. Mae eich sefydliad yn:
2. Ydy eich sefydliad wedi datblygu strategaeth ddatgarboneiddio benodol?
3. Pa rhan y mae cynllunio'r gweithlu wedi'i chwarae (neu ba ran y dylai ei chwarae) yn y broses honno?
4. Ydy eich tîm/adran/sefydliad wedi gwneud dadansoddiad bwlch sgiliau i gefnogi'r ymagwedd at ddatgarboneiddio?
5. Gan feddwl am fylchau mewn sgiliau, ym mha fathau o feysydd ydych chi'n teimlo bod angen brys a thaer am wella arbenigeddau staff?
6. Ydy eich sefydliad wedi reciwtio'n benodol i gyflawni ei uchelgeisiau datgarboneiddio yn ystod y 12 mis diwethaf?
7. Pa fathau o rolau a allai eich sefydliad ymchwilio ymhellach i reciwtio ynddynt?
8. Ydych chi'n profi anhawster wrth reciwtio i rolau sy'n gysylltiedig â datgarboneiddio?
9. Oes unrhyw beth yn gysylltiedig â'r cwestiynau uchod yr hoffech ei rannu gyda ni?

## Prif ganfyddiadau

Mae'r crynodeb canlynol yn darparu trosolwg o brif ganfyddiadau'r arolwg.

Ymagwedd strategol at ddatgarboneiddio

Dyweddodd bron i ddu draean (62%) o'r ymatebwyr fod eu sefydliad wedi datblygu strategaeth sy'n gysylltiedig â'u gweithgarwch datgarboneiddio.

*"Mae gennym Strategaeth Amgylcheddol sy'n cynnwys datgarboneiddio. Rydym yn bwriadu datblygu Strategaeth Ddatgarboneiddio benodol yn unol â PAS2035 Llywodraeth Cymru - Llwybr at Sero."*

Dim ond un ymatebydd a nododd iddynt beidio â datblygu strategaeth, gydag eraill yn awgrymu, er nad oedd strategaeth ar waith ganddynt ar hyn o bryd, fod hyn yn flaenoriaeth ac yn cael ei ddatblygu ar hyn o bryd.

## Deall y bwlch sgiliau

Roedd hanner yr holl ymatebwyr wedi cynnal dadansoddiad bwlch sgiliau er mwyn cyfeirio cynllunio a reciwtio'r gweithlu'n well.

*"Rydym yn cydnabod y bydd bwlch sgiliau ond bydd angen gwneud rhagor o waith manwl yn y meysydd hyn er mwyn deall y gofynion penodol."*

Nid oedd 20% wedi ymgymryd â'r math hwn o waith. Lleisiodd nifer o ymatebwyr heriau o ran ceisio paru hyfforddiant yn y cyfnod presennol, â sut y bydd technoleg/dulliau'n symud ymlaen - gan nodi y gall yr amser a dreulir yn ennill sgiliau etc. ddirywio o ran perthnasedd o ystyried datblygiadau mewn technoleg sydd yn aml yn digwydd yn gyflym.

## Reciwtio ar gyfer datgarboneiddio

Roedd dros dri chwarter (77%) o sefydliadau wedi reciwtio'n benodol i wasanaethu eu huchelgeisiau datgarboneiddio yn ystod y 12 mis diwethaf. Nodwyd bod heriau o ran reciwtio'n amrywio gyda 61% yn nodi nad oedd unrhyw anhawster wrth reciwtio tra bod 39% yn wynebu heriau sylwedol yn y maes hwn.

# Trafod yr heriau

Mae'r adran ganlynol yn darparu crynodeb o'r ford gron Sero Net a gynhaliwyd ar gyfer gweithwyr proffesiynol ledled Cymru, gyda chefnogaeth gan AICO.

## Graddfa'r her

Amlygodd pawb a oedd yn bresennol raddfa'r her a gynrychiolir gan sero net i ryw raddau neu'i gilydd. O'r adnoddau ariannol enfawr sydd eu hangen i brofi a chynyddu graddfa dulliau'n effeithiol, i'r materion ymarferol o ran hysbysu tenantiaid, a gwella gwybodaeth ac arbenigedd staff yn fwy cyffredinol.

Amlygwyd graddfa'r her ariannol gan nifer o fynycheion, gyda rhai yn codi pryderon am natur gylchol, tymor byr y cyllid a fyddai'n aml yn pennu terfynau amser eithaf tynn ar gyfer ceisiadau - nodwyd y byddai ymagwedd sy'n ceisio rhoi mwy o sicrwydd hirdymor i sefydliadau yng Nghymru yn well. At hynny, cydnabuwyd y byddai'r swm o arian sydd ei angen i lenwi bylchau mewn cyllid yn gofyn am newid radical yn y feddylfryd yng Nghymru modelu ariannol, gan ysgogi sgyrsiau anodd gyda ffynonellau buddsoddi presennol a chyflymu'r angen am ddenu arian newydd i'r sector.

Tynnodd rhai sylw at yr effaith gadarnhaol y mae cylluniau a arweinir gan y llywodraeth wedi'i chael ac yn parhau i'w chael ar y sector megis y Rhaglen Ôl-osod Wedi'i Optimeiddio (ORP) a'r Rhaglen Tai Arloesol (IHP) yn ogystal ag ymagweddau a arweinir gan y diwydiant megis y fenter Homegrown Homes.

Nododd rhai y byddai fersiwn nesaf Safon Ansawdd Tai Cymru yn y maes hwn yn sbardun cryf wrth gyfeirio pa sgiliau/capasiti sydd eu hangen ar lefel sefydliadol. Nododd eraill hefyd rôl rhagleni fel ORP wrth ddatblygu dealltwriaeth o berfformiad systemau ynni deallus, a datblygiadau arloesol eraill - ond gan mai ymagweddau newydd yw'r rhain roedd dealltwriaeth a data yn gyfyngedig ac yn brin, gan olygu y dibynnir yn aml ar wybodaeth gan weithgynhyrchwyr.

Roedd nifer o'r rhai a oedd yn bresennol o'r farn na allant aros i'r data fod ar gael yn gyffredinol - mai cyfrifoldeb sefydliadau unigol yw cael a gweithredu eu mesurau monitro a gwerthuso eu hunain er mwyn cynorthwyo dysgu a chydweithredu a rennir ledled Cymru. Amlygodd mynycheion hefyd yr angen am wella data sy'n bodoli eisoes, er mwyn deall pa fesurau y gellid eu defnyddio'n realistic gyda gwahanol fathau o dai a byddai hyn yn ei dro yn helpu i gyfeirio'r ymagwedd at ddatblygu sgiliau.

Myfyriodd un mynchmai ar y tensiwn rhwng yr ymgyrch i uwchraddio eiddo yn erbyn yr hyn y gellid ei gyflawni'n faterol mewn cartrefi hen iawn sy'n perfformio'n wael. Er y cydnabuwyd y gallai gwaredu'r cartrefi hyn fod yn rhan o'r drafodaeth, amlygodd mynycheion y ffaith hefyd bod y cartrefi hyn yn aml wedi'u lleoli mewn cymunedau lle mae'n amlwg bod angen cynnal presenoldeb tai fforderiadwy.

## Sgiliau presennol a newydd

Cydnabuwyd y gallai maint y gweithgarwch y mae angen i sefydliadau ymgymryd ag ef olygu bod angen i dimau ehangu a/neu ennill sgiliau newydd ar garlam. Er enghrafft, gyda fframwaith PAS2035<sup>1</sup> (Gweler y troednodyn am ddiffiniad), nododd un mynchwr y tebygolrwydd o ddarparu hyfforddiant ar hyn o beth yn fewnol ac ehangu timau i gynnwys rolau fel 'Clerc Gwaith' i gynnal rheolaeth ansawdd a sicrwydd ei weithgarwch ôl-osod diweddaraf. Er y nodwyd hefyd bod y safon yn gofyn am nifer sylweddol o rolau sy'n gysylltiedig â gweithgarwch ôl-osod (cydlynydd, dylunydd, cyngphonydd ac ati.) na fyddai pob un ohonynt yn realistic yn yr hinsawdd sydd ohoni.

<sup>1</sup> Mae PAS 2035 yn fanylob ar gyfer yr hyn a elwir yn ôl-osod 'tŷ cyfan' neu 'adeilad cyfan'. Mae PAS 2035 yn ymwneud ag asesu anheddau domestig ar gyfer ôl-osod o ran ynni. Mae hyn yn cynnwys nodi meysydd lle gellir gwneud gwelliannau a phennu a dylunio'r mesurau gwella perthnasol. Mae hefyd yn ymwneud â monitro prosiectau ôl-osod domestig.

Mae'r gystadleuaeth am sgiliau yn y farchnad yn sylweddol - nododd un mynchай'r tebygolrwydd y bydd her gynyddol i sefydliadau llai lle mae'r cynnig mewn perthynas â buddion/cyflogau yn debygol o wneud denu gweithwyr proffesiynol yn galetach - patrwm y mae rhai eisoes wedi'i weld gyda mathau eraill o sgiliau technegol, megis syrfewyr. Yn gysylltiedig â hyn, tynnodd un mynchwr sylw at yr her o gadw staff a allai fod wedi derbyn cryn dipyn o hyfforddiant ac a allai symud ymlaen at gyfleoedd eraill, gan gyfyngu effaith y datblygiad hwnnw ar weithgareddau'r sefydliadau. Pan oedd hyn wedi digwydd, amlygodd nifer o fynchwyr nad oedd yr ymarfer recriwtio dilynol yn ymwneud â cheisio disodli trwy ddull tebyg am debyg yn unig - o ystyried pa mor gyflym y mae'r farchnad yn symud a'r galw am sgiliau oddi mewn iddi, byddai'n golygu edrych o bosib ar ddisgrifiadau swydd, cynnal ymarfer meincnodi newydd er mwyn gwella'r cyflog i lefel a fyddai bellach yn ddigon deniadol i ddarpar ymgeiswyr.

Ystyriwyd hefyd bod yr angen am sgiliau yn gyfle enfawr i ymgorffori cyfleoedd dysgu, sgiliau a chyflogaeth i denantiaid a chymunedau sydd wedi dioddef argyfwng costau byw parhaus yng nghyd-destun y posibilrwydd parhaus o galedi economaidd. Teimlwyd y gallai'r ymagwedd hon gynnwys dull academi ar gyfer Cymru.

Amlygodd un mynchwr yr angen am weithio'n uniongyrchol gyda chontractwyr sydd o bosib yn frwd frydig yng hylch uwchsgilio neu ailhyfforddi eu staff eu hunain i wasanaethu systemau gwresogi newydd - ond y gallai'r brwd frydedd gael ei leddfu gan lefel y gwaith presennol y mae unrhyw un contractwr eisoes wedi ymrwymo iddo, y gallai'r rhai sy'n ymwneud â fframweithiau ar raddfa fawr gynrychioli llwyth gwaith dros nifer o flynyddoedd.

Yn gysylltiedig â hyn, ystyriwyd bod rhoi unrhyw fath o sicrwydd i gontractwyr yng hylch pa sgiliau fyddai eu hangen, ac erbyn pryd, yn fater ystyfrig. Er y gallent, fel sefydliad, ddangos tystiolaeth o'r angen am raglen waith, amlygodd mynchwr y ffait bod angen i gyllid clir a dibynadwy fod yn ei le fel bod y galw yno i gontractwyr hyfforddi staff newydd a datblygu arbenigedd. Ar hyn o bryd mae'r sicrwydd yng hylch y raddfa sydd ei hangen a phryd y byddai'n amserol i'r sgiliau fodoli yn llawer rhy amwys.

Teimlwyd hefyd fod angen ystyried yr ymagwedd at ddatblygu sgiliau yn ei ystyr ehangaf lle'r oedd y partneriaid allweddol hynny ar draws y sector, o fewn awdurdodau lleol, mentrau cymdeithasol, y trydydd sector etc. hefyd yn ddigon medrus i hwyluso'r gwaith o ymgymryd â gwasanaethau'n effeithiol.

## Cydweithio a phartneriaethau

Roedd gweithio ar draws a'r tu allan i'r sector yn nodwedd gyffredin o gyfraniadau'r rhai a oedd yn bresennol gan fyfyrion ar yr heriau a rennir yr oedd llawer yn eu hwynebu, ond hefyd yr angen am rannu adnoddau ar raddfa helaethach er mwyn sicrhau darbodion maint, cyfeirio gwelliannau a datblygu data dibynadwy. Roedd y prif feisydd lle y teimlwyd y gallai cydweithio arwain at ganlyniadau cadarnhaol pellach yn cynnwys

- Yr ymagwedd at ddatblygu sgiliau yn lleol a'r cyfleoedd i greu partneriaethau â sefydliadau dysgu pellach
- Rhannu sgiliau ac arbenigedd staff, ar draws y sector ond hefyd o fewn sefydliadau/timau
- Rhannu data ar berfformiad gwahanol fathau o ôl-osod ar wahanol fathau o eiddo
- Dealltwriaeth gyffredin o'r ymyriadau a allai gael yr effaith fwyaf ar wahanol fathau o eiddo

## Ymgysylltu â thenantiaid

Roedd y ffordd y mae tenantiaid yn parhau i gael eu hysbysu ac i elwa'n gyfartal o ymdrechion i rannu mewnwelediad a chynyddu gwybodaeth yn nodwedd gyffredin y drafodaeth.

Ystyriwyd bod negeseuon i denantiaid yn rhan ganolog o gefnogi sut mae'r gwaith yn digwydd yn ymarferol. Er enghraift, mae un sefydliad yn cynnal arolygon thermograffig, ond dim ond yn ystod y nos y gellir gwneud hyn sy'n golygu bod unigolion yn cerdded o amgylch ystadau drwy gydol y nos, gan godi'r risg y bydd galwadau gan drigolion pryderus.

Nodwyd bod rhai newidiadau bach, megis gosod Mesurydd Clyfar, yn bwysig ar gyfer monitro a rheoli systemau ynni deallus newydd yn gyffredinol, ond nodwyd y gallai hyd yn oed y newid cymharol fach hwn fod yn anodd ei weithredu'n ymarferol gyda thenantiaid weithiau'n amharod i newid o'u sefyllfa bresennol. Os deuir i gytundeb, yna gallai fod cymhlethod ychwanegol na fyddai darparwyr cyfleustodau o bosib yn cefnogi cynnyrch neu wasanaeth penodol bryd hynny.

Tynnodd un o'r mynchwyr sylw at waith AICO gyda TPAS yn yr Alban i greu fforwm diogelwch a lles preswylwr - gan edrych ar yr hyn y mae 'diogelwch' a 'lles' yn ei olygu mewn gwirionedd ac yn ymarferol i bobl. Mae'r fforwm yn ymgysylltu ag ystod eang o randdeiliaid (sefydliadau nad ydynt yn dechnegol yn bennaf) er mwyn deall gan bobl sy'n defnyddio eu gwasanaethau beth mae'r termau hynny'n ei olygu iddynt hwy a datblygu dealltwriaeth fwy unedig y gall y sector ei defnyddio yn ei waith ei hun.

Er y dylai'r sgiliau technegol fod yn flaenoriaeth i'r sector, a hynny'n briodol, tynnodd mynchwyr sylw at y ffaith y dylai cefnogi tenantiaid (a'r boblogaeth staff ehangach) i ddeall a defnyddio technoleg yn y ffordd a fwriadwyd fod yr un mor hanfodol. Er enghraift, mae pympiau gwres ffynhonell aer yn ffordd hollol wahanol o fwy o'i gymharu â systemau gwresogi traddodiadol ac ochr yn ochr â'r wybodaeth dechnegol honno, byddai angen rhaglen sylweddol o wybodaeth uchel ei hansawdd ar gyfer tenantiaid er mwyn cynorthwyo dealltwriaeth a lliniaru unrhyw bryderon.

Yn fwy cyffredinol, bu trafodaeth hefyd ynghylch sut mae sefydliadau'n sicrhau tegwch ar draws eu poblogaeth? Nid yw'r fforddadwyedd yn bodoli i sicrhau y gall pob un gael yr un lefel o ymyriadau ym mhob eiddo, sy'n golygu yn ymarferol y bydd rhai tenantiaid yn elwa i raddau helaethach nag eraill. Ystyriwyd bod deall pa ymyriadau a fyddai'n bosib ar draws cymysgedd mawr o eiddo yn bwysig er mwyn medru cynnig o leiaf rai gwelliannau ar draws yr holl fathau o eiddo.

Yn y pen draw, ystyriwyd ei fod yn hanfodol cael mandad gan denantiaid i fuddsoddi arian, a bod dystiolaeth glir eisoes o ymwybyddiaeth o'r argyfwng hinsawdd ymhliith cymunedau a dealltwriaeth o'r angen i fuddsoddi mewn cartrefi ar y sail hon.

## Ysgogi cynnydd pellach

Gan ddefnyddio'r wybodaeth a gasglwyd drwy ein harolwg ciplun o'r sector a'r ford gron ddilynol, credwn fod y themâu canlynol yn cynrychioli rhai datrysiau hwylus, lle mae cyfle gwirioneddol i wneud cynnydd ar yr agenda sgiliau.

1. Cwmpasu'r syniad o academi sgiliau tai i Gymru - ymchwilio i sut y byddai hyn yn edrych yn ymarferol a'i effaith bosib ar gymunedau lleol
2. CIH Cymru i archwilio'r bylchau yn y ddarpariaeth hyfforddiant sy'n gysylltiedig â safon PAS2035
3. Creu llyfrgell wybodaeth y gall gweithwyr proffesiynol o bob disgyblaeth ei defnyddio sy'n dod â gwybodaeth dechnegol ynghyd am effeithiolrwydd mesurau ôl-osod a gymhwysir i wahanol fathau/ arddulliau o gartrefi.
4. Sefydlu fforwm diogelwch a lles preswylwyr yng Nghymru i ddechrau a chynnal deialog fywiog er mwyn cyfeirio'r ymagwedd at gyfathrebu ac ymgysylltu'n ehangach â thenantiaid/cymunedau.
5. Cyflwyno fforwm ar gyfer rhannu gwybodaeth, arfer a mewnwelediad yn aml er mwyn cynorthwyo dysgu ar draws y sector
6. Dylai darparwyr tai cymdeithasol ymgysylltu â Phartneriaethau Sgiliau Rhanbarthol i gyfeirio'r galw am sgiliau ar lefel leol mewn ffordd ddeallus er mwyn darparu elfen o sicrwydd i fusnesau ynghylch angen a galw gan y sector yn y dyfodol