

Sustainability & the future of housing

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BRADLEY HOWARD, ENDAVA HOST (BH): Welcome back to Tech Reimagined. Our guest today is Sarah Thomas, the CEO, Chief Executive Officer, of Catalyst Housing. Hi, Sarah, thanks for joining us. Can you tell us a bit more about your background?

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SARAH THOMAS, CEO, CATALYST HOUSING LIMITED (ST): Hi, Bradley. Thank you. Yes, so I am Sarah Thomas, Chief Executive of Catalyst Housing. What we do at Catalyst is that we build and own homes, homes for affordable rent, homes for affordable purchase, and also we sell homes on the market. We only manage around 37000 homes. That means we have around 70000 customers any one time and we build around a thousand homes a year, to contribute to the supply of new affordable homes. We're not for profit, so the money we make from our market activities gets all reinvested into either building new homes or the quality of existing homes. And of course, obviously right on the agenda right now is the decarbonization of homes in the UK, to attain net carbon zero, which is one of our strategic priorities for the next five years and beyond.

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BH: Well, welcome to Tech Reimagined and thanks very much for joining us. In today's episode, we want to tackle the big issue of climate change in the housing industry. Now I was really surprised to read on a website housing.org.uk that England's homes produce more carbon emissions every year that is produced by all of the country's cars. So how is sustainability important for Catalyst?

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ST: Well, sustainability is incredibly important. We're one of the largest housing providers in the UK and as I said, we own and manage 37000 of the UK's homes. So we are obviously contributing to the issue at the moment, and it's one that we have a responsibility and a role in finding solutions for. One of the interesting things about housing providers in the UK of affordable homes, is that one of our jobs is to make sure that affordable homes stay affordable in perpetuity, and therefore we are in the business of long term planning and making sure that our assets are there for future generations to come. So in a way, we're all about sustainability and we see ourselves very much as stewards of homes for now, and for the future. So in order for the future to be there, obviously we've got an important role to play in net carbon zero. The most important way we can do that is through the decarbonisation of our homes. Obviously, like all other businesses, we can work on our offices and our working environment as well, but how we construct and maintain and look after our homes is going to be really important in in the coming future.

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BH: I was going to ask you about what the customer expectations are today and do you find that different types of customers that you interact with have different expectations?

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ST: Very much so, but I think primarily the majority of our customers are with us because they're after an affordable product – either an affordable rented home or they want to buy an affordable home as part of say a shared ownership product. That means affordability is important to them, and not all solutions for decarbonisation are affordable. So the particular challenge for us as a housing provider in our market is to find solutions which work and which have longevity. But are also affordable for our customers because that's going to be their primary concern. And I think secondary to that is the complexity. So some of the solutions at the moment are complex to manage, and we need to find solutions which are easy, that enable homes to function, but in an easy to use way so that the new solutions can be used effectively. So those are probably the two challenges at the moment. I mean, we're all we're all going to have to get used to how new technology works in relation to our homes. That's as much for our customers as it is for everyone else.

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BH: Can you explain to our listeners what the word decarbonisation means,

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ST: So, UK homes at the moment, as you said, produce carbon through the way they function, sometimes because of the way they were constructed and sometimes because of the things that we have in our homes, such as our central heating and our gas boilers. So, decarbonisation is basically to remove the elements from the homes as far as possible. So people can live in their homes without increasing the carbon footprint. That's not always possible with every single archetype in the UK, which is why we also use the phrase net carbon zero. That's an acknowledgment that we can't reduce the amount of carbon emissions from a home completely. Therefore, we need to find ways to offset that, to make it carbon neutral.

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BH: Right. So in reality, what does that mean for residents? You and I were having a chat just before the show began, about the difference in types of boilers, for example. Do you want to take us through some of those?

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ST: Yes, so gas boilers are obviously contributing to the carbon footprint, and the government has already expressed the expectations around the removal of gas boilers in the UK. So at the moment, there's no obvious solution to replace gas boilers in the way that we know and are used to heating our homes. Press a button to heat it up, press a button to stop it or put it on a timer switch. There are solutions, so many of our new build homes we're putting in air source pump heaters, ground heat source heaters. So there are solutions. They tend to be very big units, so people aren't used to having large units in their homes. Some of them are complex to operate, but with a new build, you can install into the design, and effectively design the building around that type of heating and also make sure that its usability is good as well. Communal heating is also a way in which we are reducing the carbon footprint in new build homes, but for existing homes, you have to look at other solutions.

So one of the solutions we explore in this - brand new technology, we're working with the business that invented this. It's hugely exciting. It's a set boiler or a cradle boiler where the technical bit of the boiler is in a cradle, the mechanical bit of the boiler is inserted into the cradle. This means that it's very easy to replace existing boilers, of course, but in future, if hydrogen boilers proved to be a successful replacement for gas boilers, we'll be able to easily switch our gas boilers out and put the hydrogen boilers in in the cradles in their place. Very cost effective way. Very easy for our

customers just to switch. This is the latest technology and we're really delighted to be partnering up with the organization that has invented this and would be really delighted if it if the pilot turns into a success.

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BH: You mentioned earlier that the UK government has mandated that there's going to be an end to installing gas boilers into new homes. As an organisation that builds a thousand homes a year, do you think that's quite aggressive, their timescale, do you think that it should be more aggressive? Where's your feeling on that?

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ST: The issue is not so much with the new build homes, because many of those requirements were already built into planning requirements, for example, or the partners were working with what they want to deliver, or customer demand, if you're doing market sale. The issue is with the existing homes, particularly older housing stock, Victorian houses, those are the more difficult homes. If you have a small Victorian narrow building, you can squeeze a gas boiler in. But where do you put one of these larger units for some of the alternatives? So I mean, it doesn't just affect Catalyst, it affects UK housing. It's a UK housing issue. So we need to work together to find solutions which are going to work for the different archetypes that we have in the UK. One of the things which I really like about the housing sector in the UK is that the different organisations work together to find solutions in areas where we don't compete and there are various different groupings. So for example, the G15 is all the London organisations or the large organisations, we work together and try and find common solutions that we can then then share to resolve this issue. It is an issue and it's one that has to be tackled. In some parts of this issue, there are no evident solutions as of today. So we all need to add new technology to give us solutions in the next decade.

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BH: So do you tend to work with those of other organisations on decarbonisation or sustainability?

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ST: Yes, they're common issues. I mean, they're common UK issues across the private and the not-for-profit sector, but in the not-for-profit sector, we do work together on these issues to try and find solutions together.

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BH: And how about smart housing? Can you define what it means and how that can help with sustainability?

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ST: Of course, and this is very exciting. So this is where technology can be built into the home, particularly for us if you're constructing new homes. The technology sends data so that we can forecast when things might fail and components might fail, for example. Now why this is good from a customer service point of view is that if there is in-built technology in the home which can relay information about the home to us, then we don't have to involve the customer and the customer can enjoy their home, live in their home and not be bothered by any visits by surveyors, for example.

Then the data will tell us when their component part needs replacing. It also means we can replace something before it fails, which obviously any kind of failure in your home is a great inconvenience. Then the time it takes to get assessed and then the problem identified. So after the diagnosis, then the solution. Whereas if all of that comes through in data in advance, then obviously it's a much better experience for the customer and it's more cost effective for us. So it's a win-win.

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BH: Do you think that smart housing is going to become much more popular in, say, the next couple of years, five years, ten years? What's your view on that?

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ST: I think we already embrace technology in our homes. I mean, people use Alexa, for example. Already people have got smart meters. So yes, I think we've embraced technology in our lives. Why wouldn't you want to be able to activate, you know, if you've forgotten to turn the heating off, if you're outside you can turn it off on your mobile phone? Why wouldn't you want to do that? I think for some people, there's a concern around the 'Big Brother's watching you' and how much of their data and their home data and their home usage is being used by organisations and what for. So, along with technology, it's really important that organisations are very transparent and are very open in their communication. So customers can understand what data about their home is being sent to the organisation, and what the organisation is doing with that data to avoid any misunderstanding about how data is used.

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BH: Because I guess if someone wants a very warm household and they like it like that, well, I guess, who are you to say, please, can you turn the heating down because you're above our average of our other 37000 homes?

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ST: Yes, it's exactly getting that balance right. We don't want to be intrusive, but we do want to manage our homes in a way which is cost efficient for us and the easiest for our customers, the least intrusive for our customers.

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BH: So what does the future of smart housing look like at Catalyst? Are you going to sit there with a massive screen one day and see, oh, we need all these parts being replaced over the next few months and the average home is at this particular temperature. What does the future look like?

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ST: So I think its main use is going to be in our long term financial planning. Because we invest in the supply of new homes, that's a significant financial investment and it's over the longer term. So we have 5, 10 and 30 year plans. Now we need to know when we need to replace components or upgrade components in our existing homes, because some component parts are incredibly expensive. So what we can't have is high levels of investment in our existing assets falling in the same year that we might be investing in a big development program. So what the data allows us to do, is really refine the process of planning for the maintenance and upkeep of our existing homes, and also for when we can invest in the building of new homes. So that's the most important strategic use of that data. Then I think the secondary use is very much an experiential in how we deliver our services to our customers, maintain our homes in a way which is a really good experience for our customers and data can help us to do that.

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BH: Who works on the data? Do you have a data science team or do you have specialists in the housing industry that can understand the data. What do you do?

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ST: So the data in itself is not particularly complex. Our IT team are making sure that we have technology - and we call it BIM, Building Information Management System, it's the same that - office buildings have used BIM for four years, but now we want all that information, all that data on our buildings from the time it's built, all the way through its management, all these parts all listed in the same place. So it's your go to place to understand everything about that building. What were the original elements of that building? How have they been replaced over time? What with? When are they likely to fail? So you have one picture, just like in customer relationship management, we have one - we try and get one picture of our customer so that we can tailor our services for them. This is about one picture of the building, so that we can tailor our maintenance of that building. So we have buildings and customers' data hand in hand to create a good experience for the customer while being cost effective in the management of our homes. That means we can maximize what we invest into the supply of new homes.

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BH: Right. And my last question for today is, what's the place for electric vehicles in construction? Are you starting to build those? How does it work?

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ST: Well, in terms of electric points for electric cars for the future users and the inhabitants of these homes, that's very much part of the design of new homes now. Also we're looking at retrofitting recharging facilities around existing homes. So that's very much part of the solution, as we see it, and councils are very interested in working with us in partnership to find these solutions. Then obviously, you have onsite vehicles, again, you know, electric vehicles are the more cost effective way of operating. So that's another area where we can look at the actual use of our own vehicles. We have been looking for our estate services, for example, which is the management of the estates, how we move to electric vehicles, because they're sort of in-town operations, so short distances. We're waiting for some new technology for some of the fans, but I think it's a very exciting area where we can see some change quite swiftly.

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BH: Right. Well, thank you very much for that. Thanks for sharing all your views on this important topic of sustainability and housing and being with us here today. What an insightful conversation. To all of our listeners, I hope that you enjoyed this episode and thanks for joining us today. Please show us some love. Hit that like and subscribe button if liked the episode today. Until next time.