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Fairhome
GROUP PLC

26 11 2019



EKTG and Fairhome

@tweeteco

@AgileHomes

www.white-design.com

we live in a time of crises

climate change

housing



extinction

rebellion



global value £2.9 trillion pa

45% of man-made CO2

existential threat?

stress

anxiety

depression

the need for well-being is now scaled across:

planetary

societal

physical

mental

think global - act local - act now

multiple scales of well-being

Buildings impact on the environment in three ways:

through the resources used in their creation;

through the energy used in their operation;

through waste produced in their construction, operation & disposal.

They are also places where we live & work and they impact on our social, physical, economic and cultural well being.

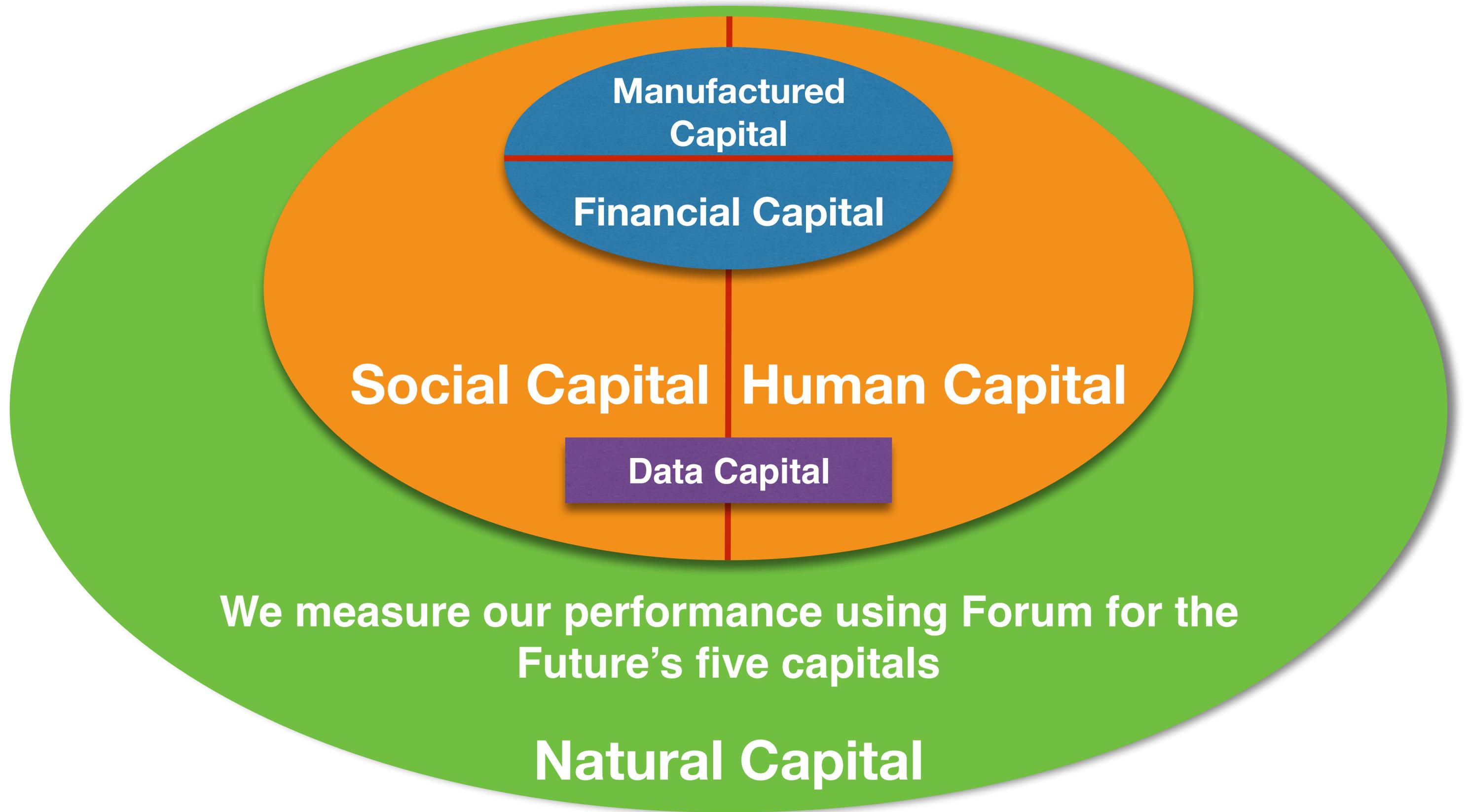
sick building syndrome

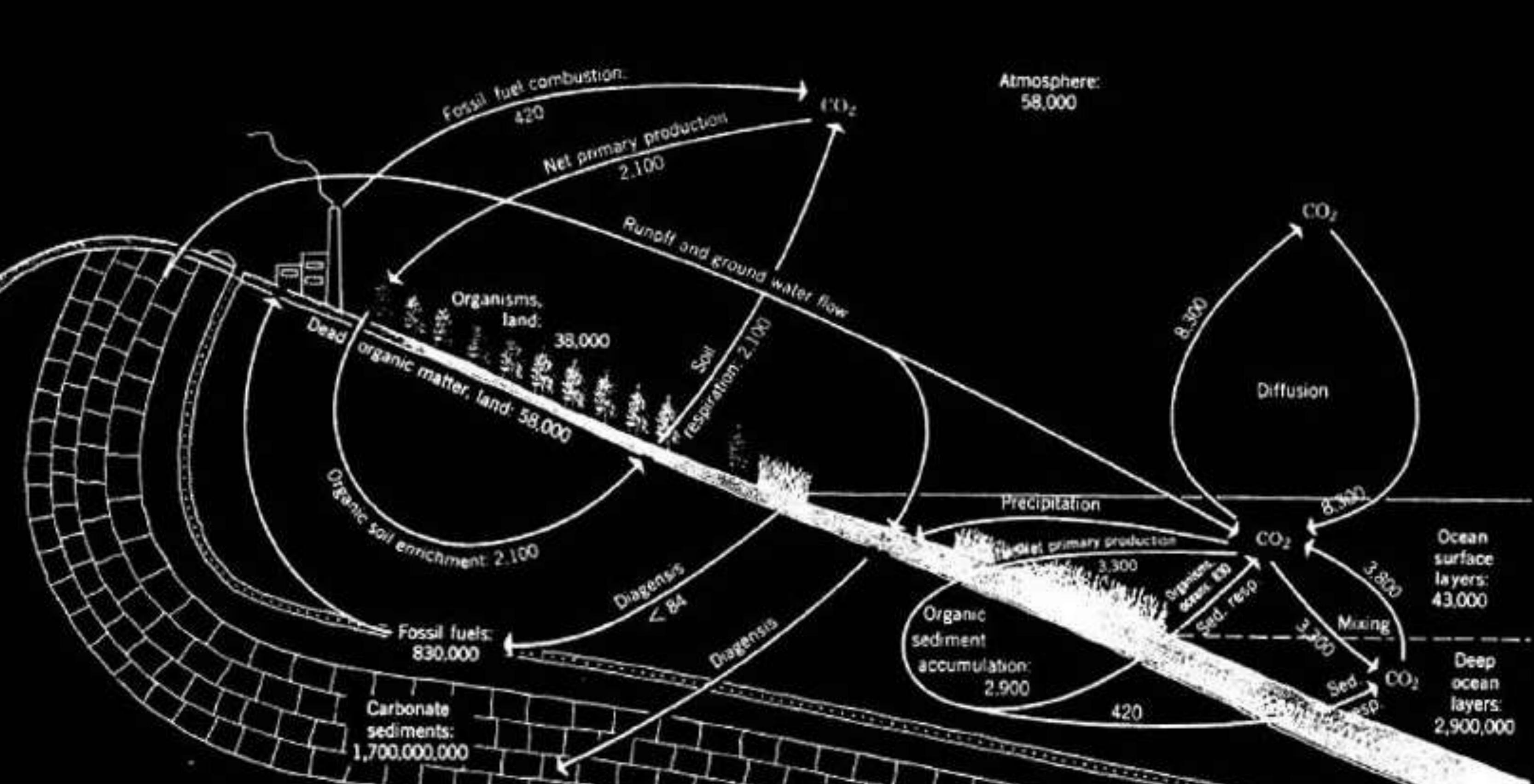


sustainability
quality of life
health
wellbeing
happiness
productivity

All interconnected. All Interdependent.

systems thinking - weaving in an interconnected & interdependent

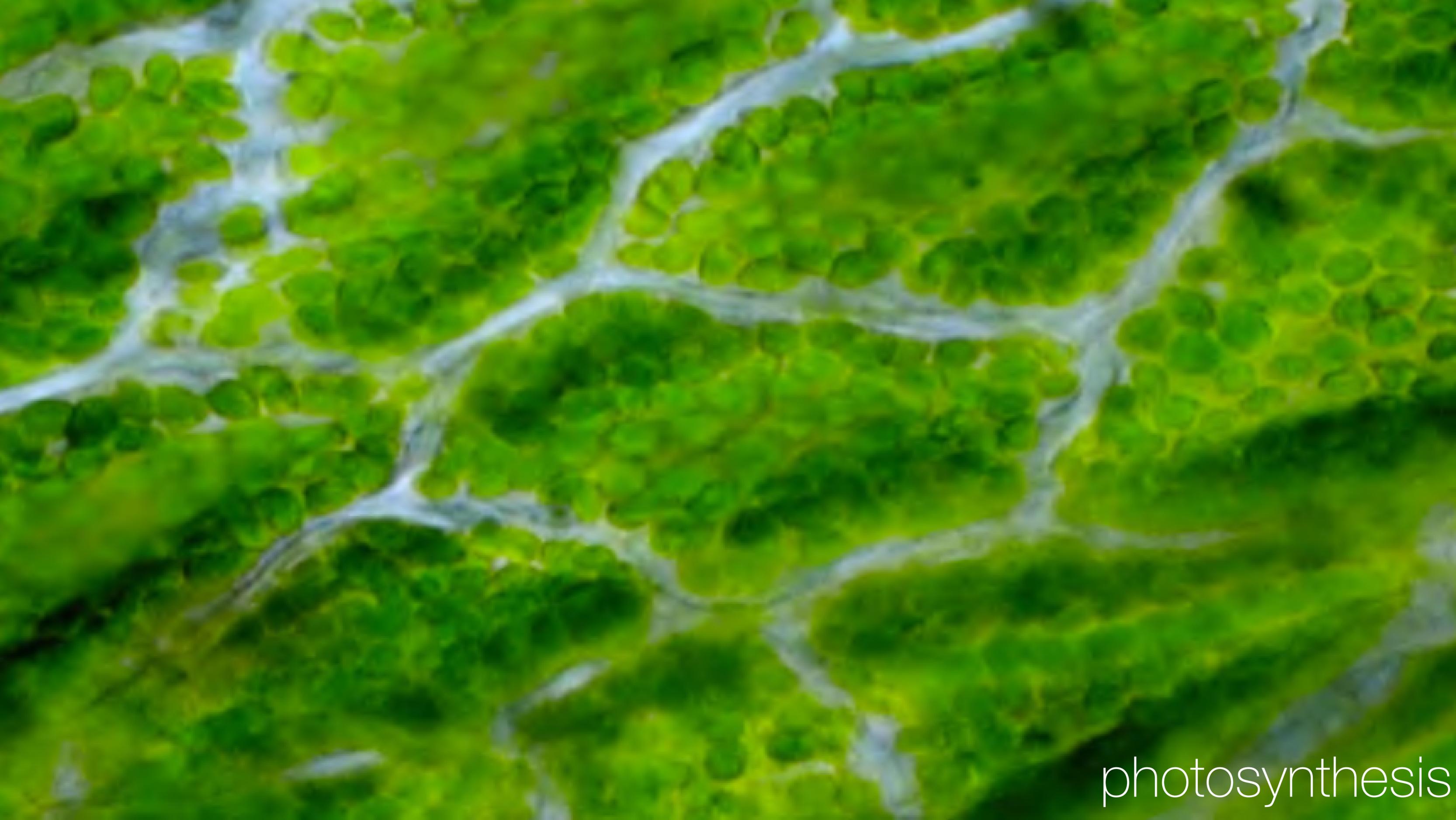




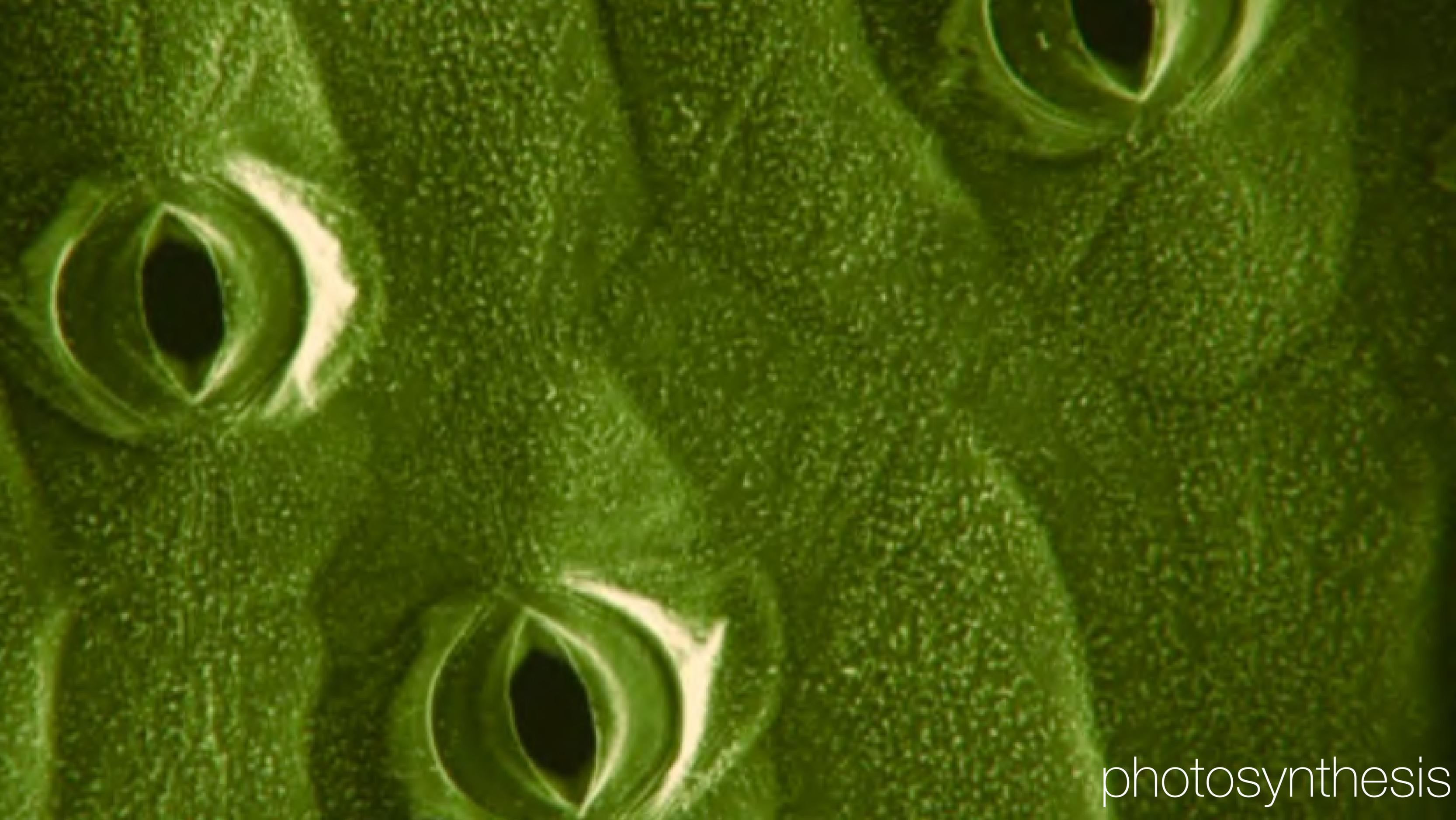
carbon cycle



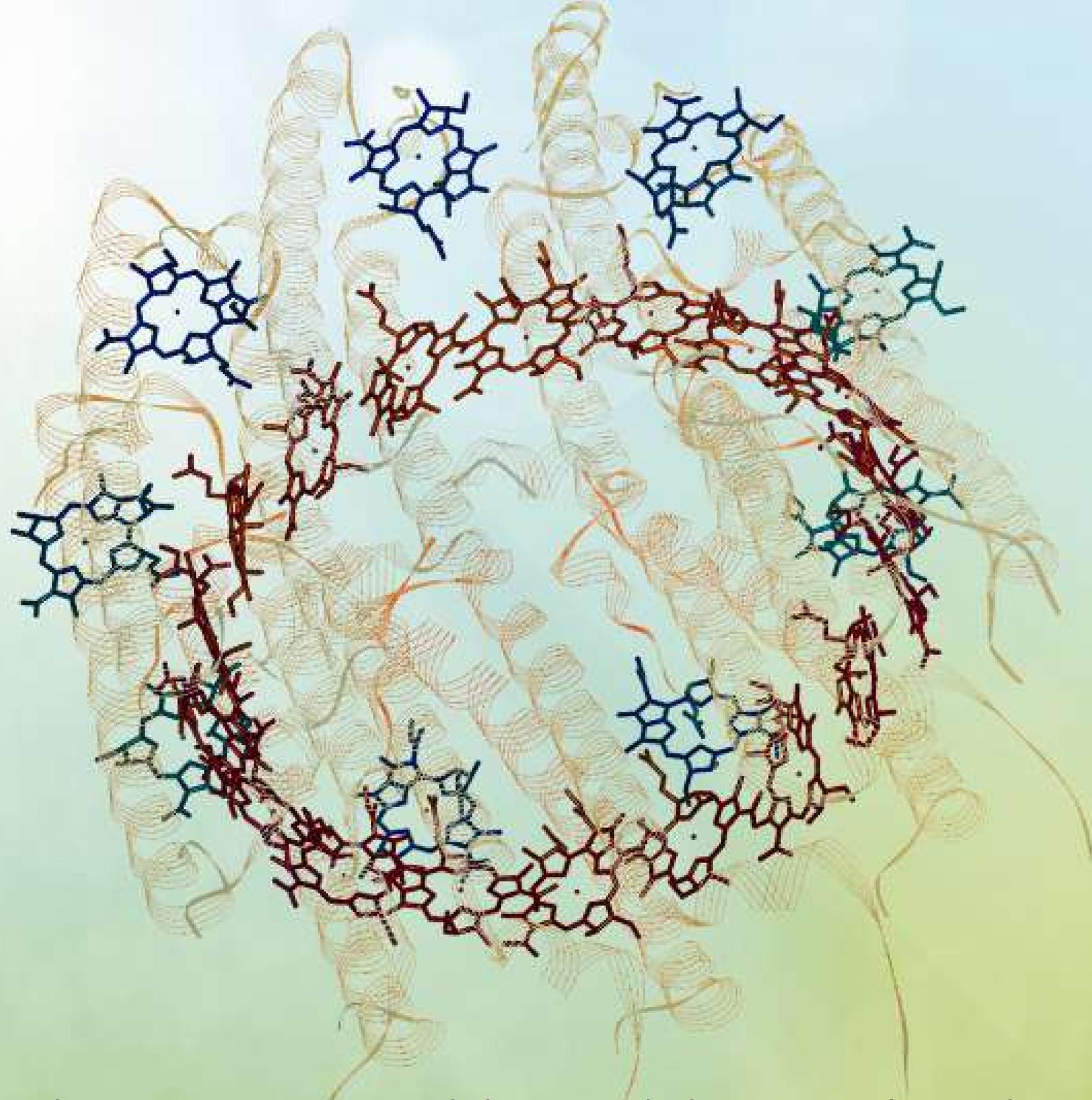
photosynthesis



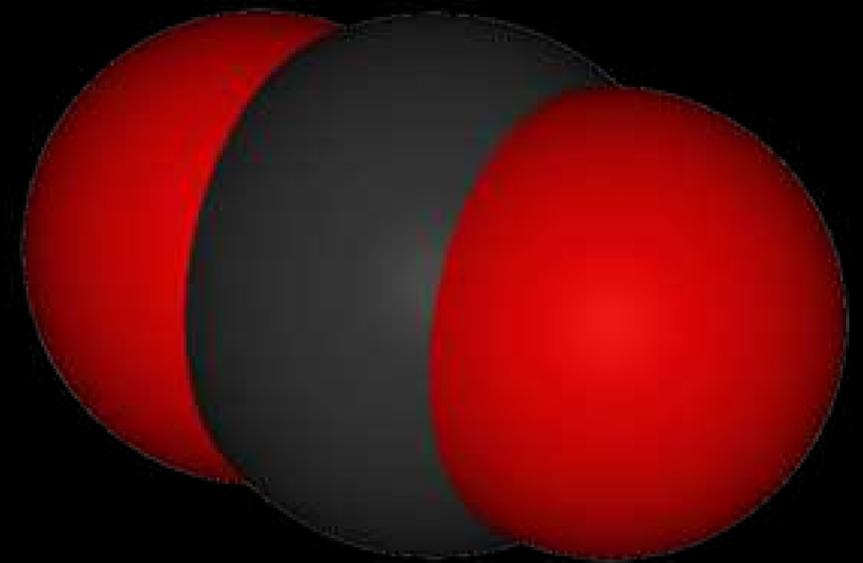
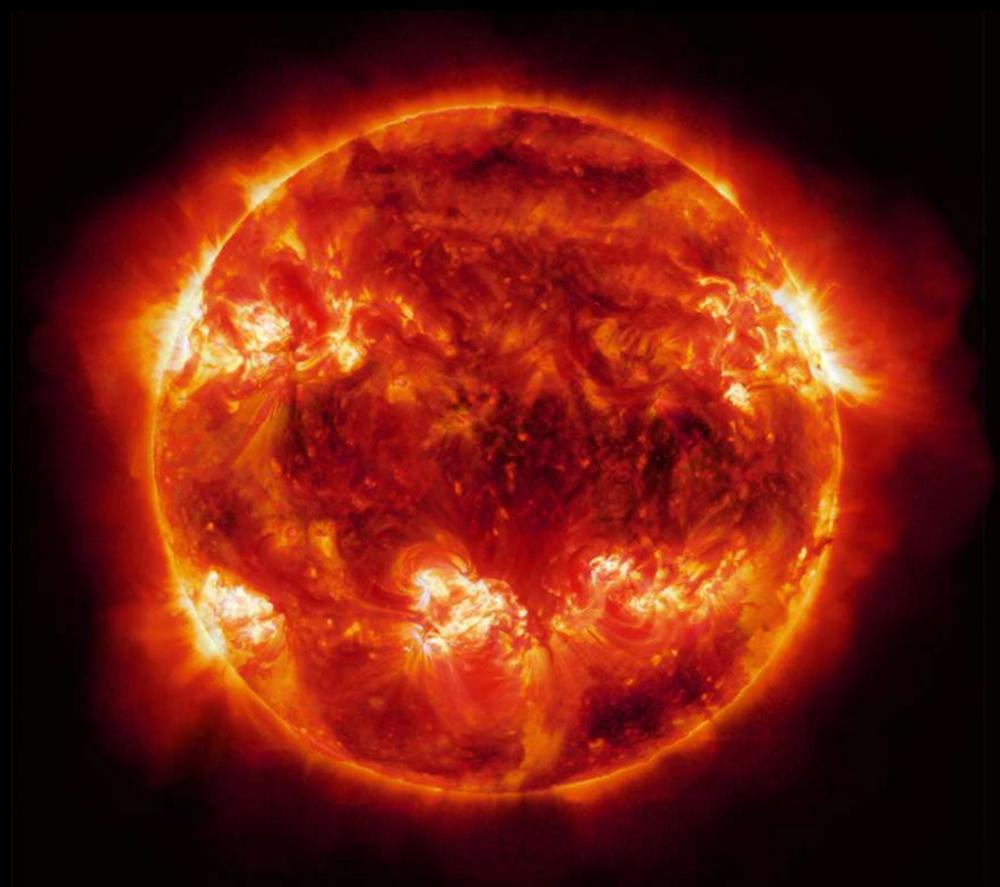
photosynthesis



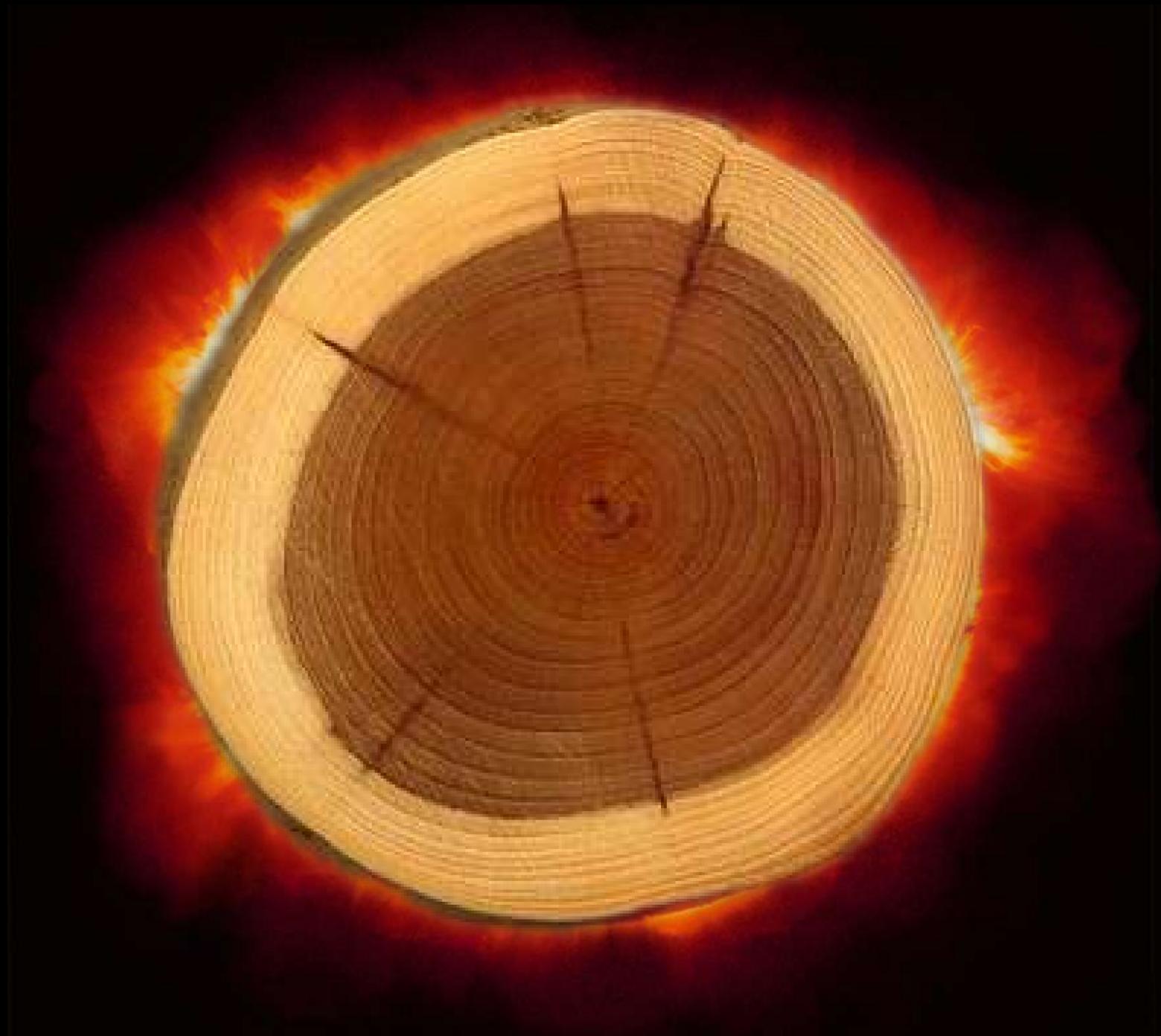
photosynthesis



photosynthesis - powered by a bio-evolved quantum machine



photosynthesis - sunlight + water + CO₂ = cellulose



742 kg of CO₂ per m³



wood

+



straw

+

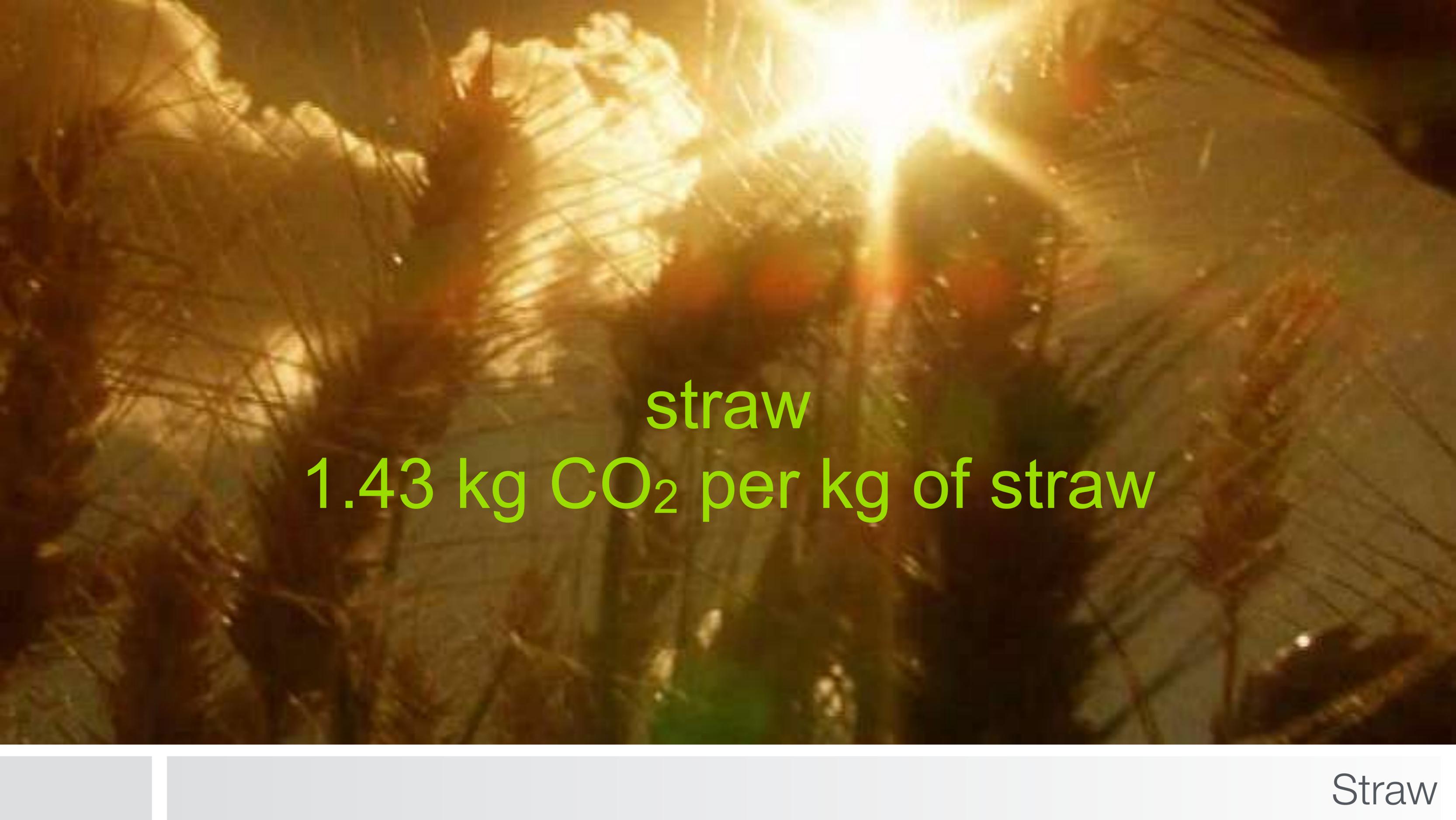


lime
(render)



screws and glue

photosynthetic ingredients



straw

1.43 kg CO₂ per kg of straw



ModCell Straw Technology
we Build with Carbon



EcoSystems Services as Technology Solution - we Build with Carbon



Flying Factory - uses local skills, labour and materials





Flying Factory - delivered to site



BaleHaus at Bath

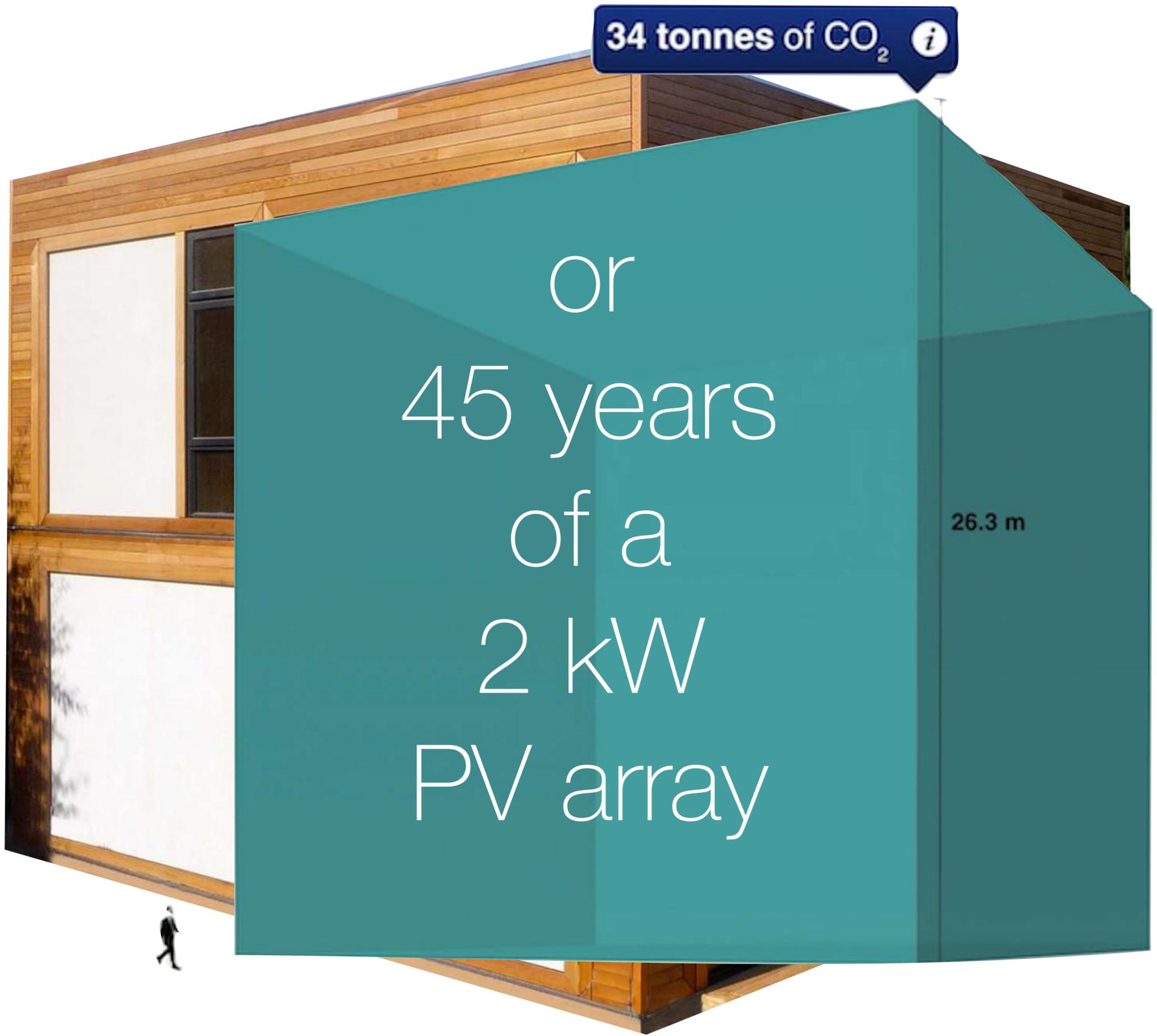


projects - BaleHaus at Bath

34 tonnes of CO₂ 

or
45 years
of a
2 kW
PV array

26.3 m



BaleHaus a Domestic Carbon Bank - 34 tonnes

we can build with carbon

climate change

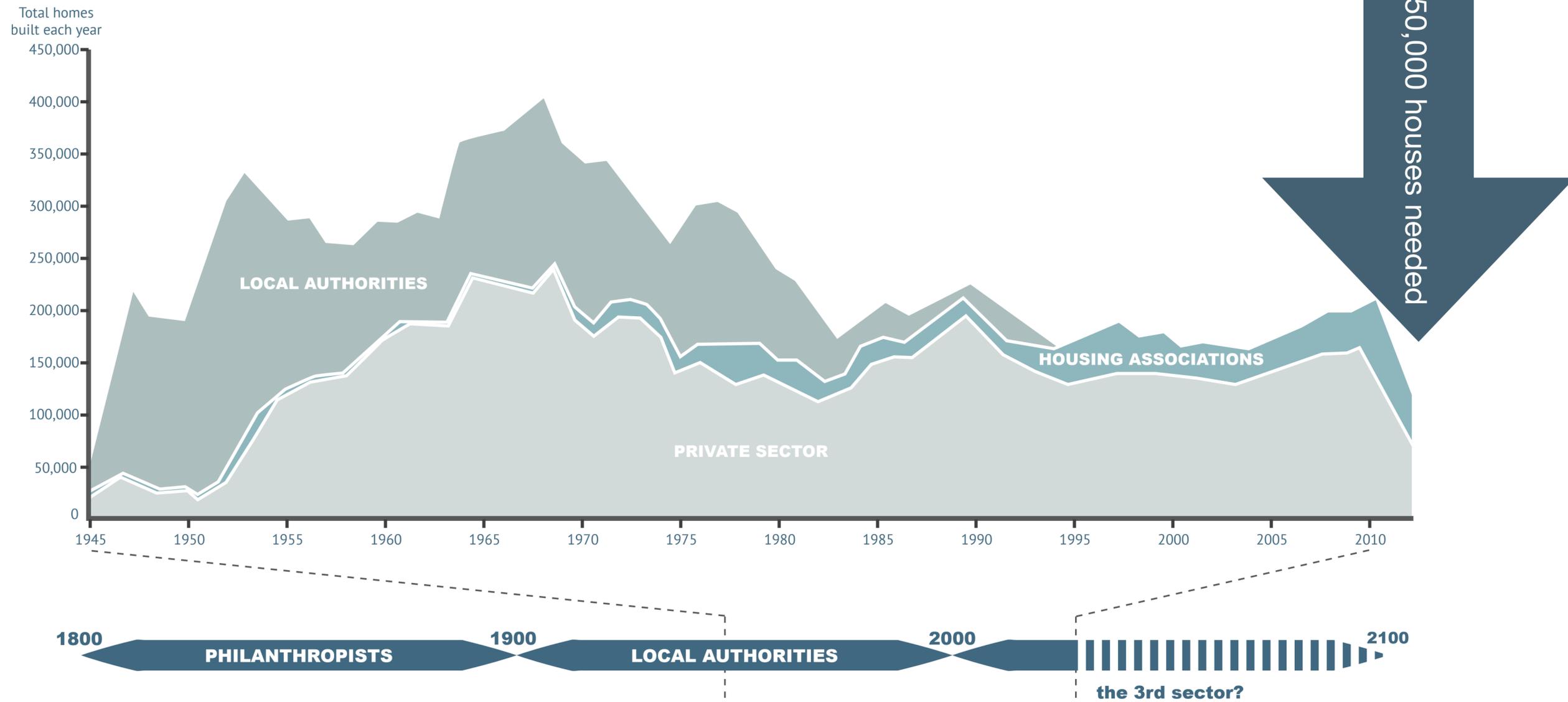
sorted

housing crisis

housing is health

THE UK HOUSING CRISIS

To meet our changing and growing needs, the UK has to build at least 250,000 new homes every year. Our current housing systems alone are dramatically failing to do this.



The new homes we do build are UNAFFORDABLE

The average house in Bristol now costs 8.2 times average annual earnings, compared to 3.6 times earnings in 1997. This makes houses the least affordable they have ever been. (Office of National Statistics 2017)



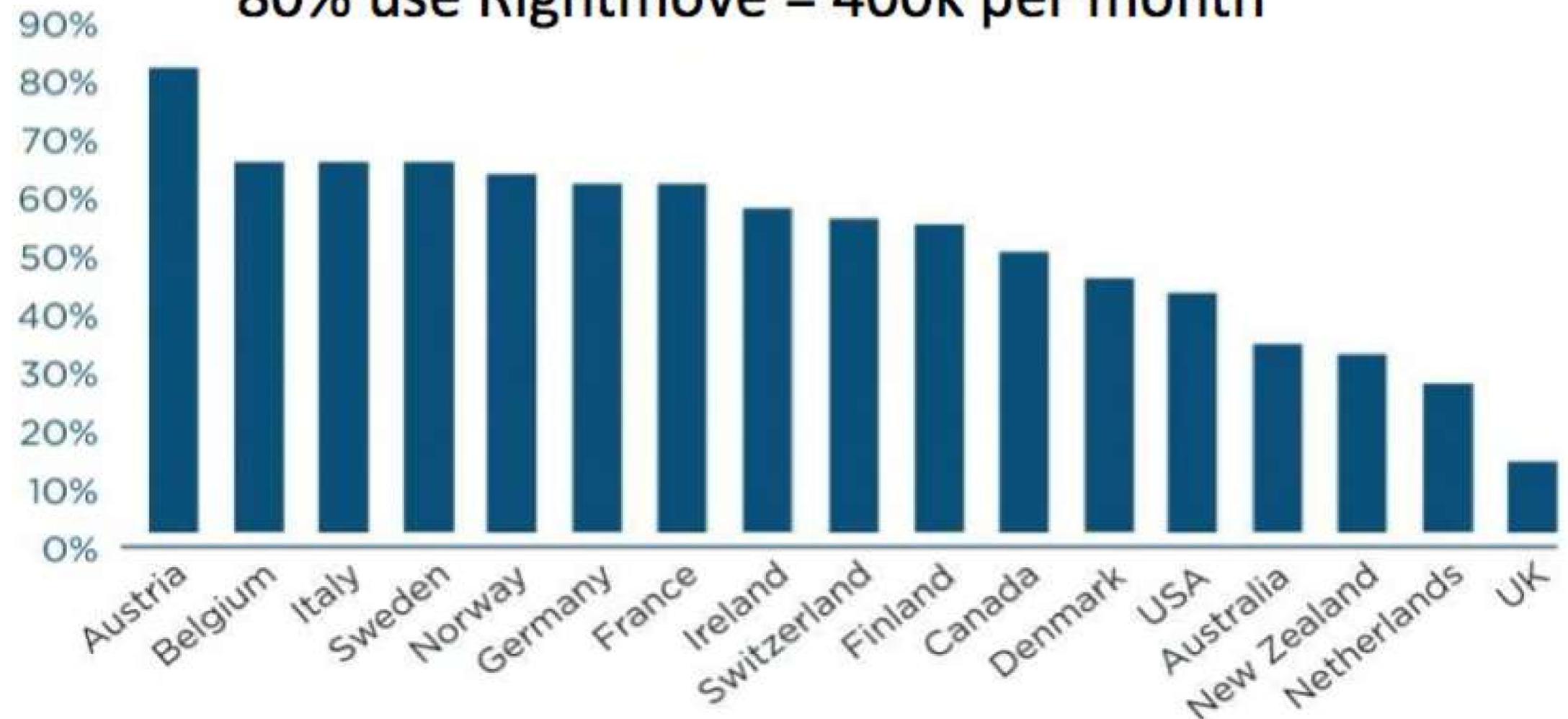
67% would not buy from a volume housebuilder

53% want to Custom Build at some stage

30% want to Custom Build in next 5 years

12% want to NOW = 6 million people

80% use Rightmove = 400k per month



340,000 more new homes needed every year

More than double current production

That's a new £45bn housing market

It doesn't exist today.

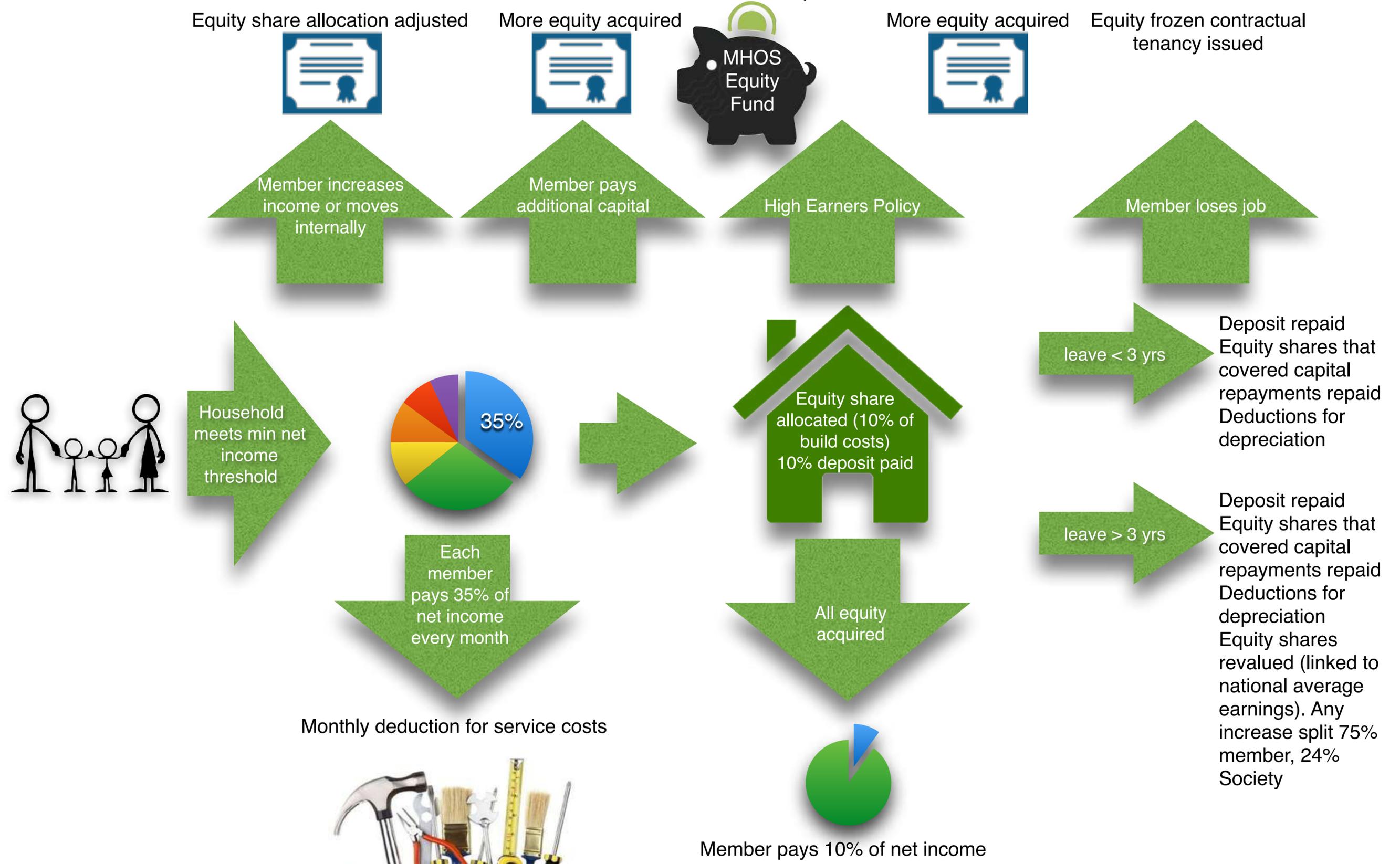
Custom Build started April 2016





Our Experience - LILAC CoHousing Leeds

Mutual Home Ownership



THE ECOS HAVE LANDED

Meet the pioneering eco-warriors living in Bramley, West Leeds. Their environmentally sustainable co-housing project LILAC (Low Impact Living Affordable Community) is the first of its kind in Britain



• AVELINO MANUEL, 48, BIOMEDICAL SUPPORT WORKER, AND HIS SON SAMUEL, 4
I used to live in Portugal, in a community of farmers who supported one another, collecting grapes together, digging potatoes. My wife and I were happy to find this place. We child-share with the families in the other houses [in the development behind the fence]

• LAURA SMITH, 34, BIOLOGY TEACHER
I sold my four-bedroom house to move here. We grow vegetables, car-share, order bread and food from other local co-ops. Our carbon footprint is 2.3 tonnes a year, compared to the average household, which is about 10 tonnes

• ROBIN FISHWICK, 53, CHAPLAIN AND SUPPORT WORKER
I feel I'm leaving the right type of legacy for my daughters. Rosa [below] and Grace, I want them to have some sense of how to live well – not just live in a property they can use

• BETH OXLEY, 30, TRAINEE CPN
It can be intense living here – it's important to get the balance between community and personal time. We hold meetings to discuss issues. Every decision is made by consensus, which isn't always easy

• MIKE HILL, 31, SUPPORT WORKER
People think I live in a place full of naked people running around. I wish that were the case! We pay 35% of our income to live here. I earn £13,500. It's amazing that on my salary I can live in the heart of Leeds in a place like this

• BRENDA GOSLING, 75, VOLUNTEER AND REIKI SPECIALIST
I live here with Clive, 79, who I met through a meeting about LILAC four years ago. We had a lot in common: both widowers, and interested in anything ecological. I love gardening and have an impulsive, adventurous side to me

• RICHARD THOMPSON, 34, IT PROJECT MANAGER, AND HIS DAUGHTER AMBER, 3
The walls of our houses are made of timber, with tightly packed straw bales under layers of rendering. They really hold the heat in. My average monthly gas and electricity bill is £20, compared to my colleague who pays £140!

• ROSA FISHWICK, 9
I enjoy stepping outside the door and always seeing someone I know. I'm the oldest of the little ones, we play all the time, and mummy is teaching me to garden. We've been here six months but it still feels like a holiday camp

INTERVIEWS BY CLIO WILLIAMS
PHOTOGRAPH BY MUIR VIDLER

Quarterly heating bills
£20 - £50
90% less
than the average for Leeds

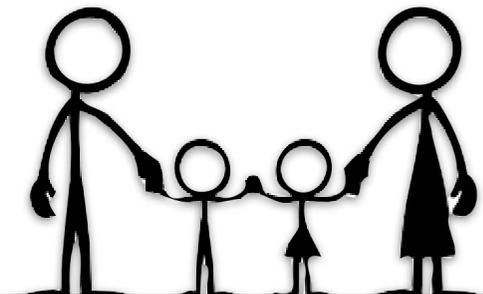
Hardware



OS

**missing
or
confused
or
not defined
&
too slow**

Software



Working with Paul Chatterton

founder of LILAC

writing a new 'red book'



**CITIZEN-LED
HOUSING**

@WeCanMakeHomes

whitedesign

agile
HOMES

KWMC★
KNOWLE WEST MEDIA CENTRE

What if

the community was the

developer

What if
we could deliver
HOUSING
at point of need?
In your street!

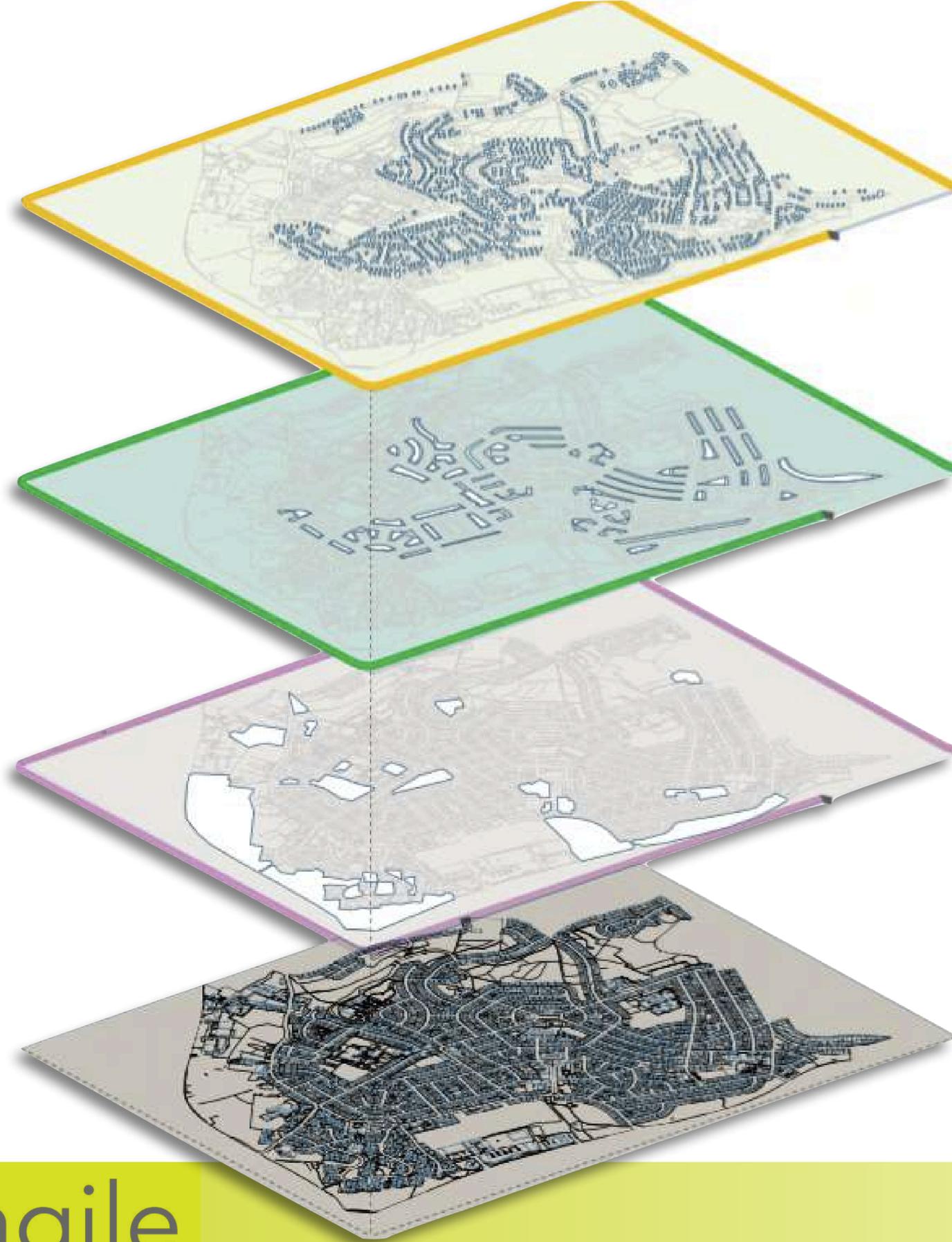
What if

the community was the

bank



The Bristol Pound



We mapped a typical interwar estate

We found:

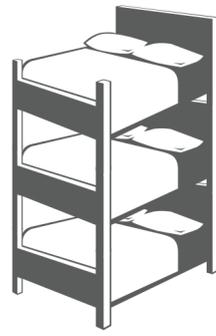
3,500 micro sites

Gaps

Corners

Gardens

No Man's Land



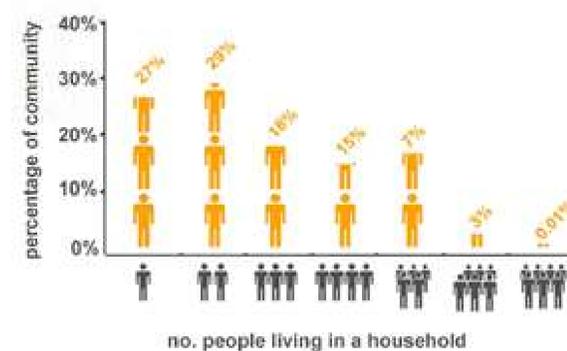
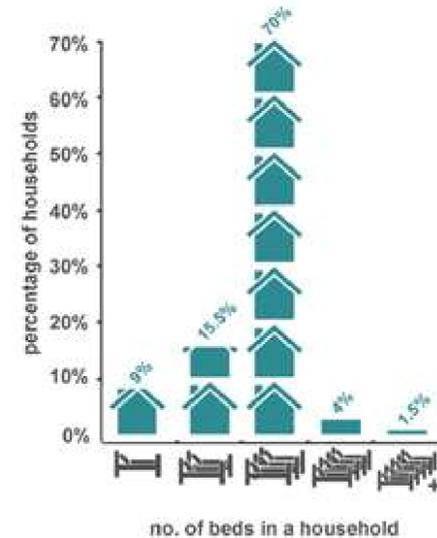
1. Pent up energy for change

People want to adapt their homes and community to better fit their needs. The ‘hack-a-home’ spirit is strong in Knowle West, as evidenced by the DIY improvements people have done to their homes over the years. But, for anything more substantial, the current system is frustrating many people.

Our research found, planning applications from Knowle West are twice as likely to be rejected than those from more affluent Clifton.¹¹

2. Spare capacity

70% of the homes in Knowle West have three bedrooms, but 54% of the community live alone, or with only one other person.



3. Space to grow

Micro-sites big enough to accommodate a one or two bedroom home are in abundance in Knowle West. This includes up to 1500 gap-sites between existing houses, and up to 31.3 hectares of developable garden space. Not all these plots will be viable, but even if 10 percent were developable, micro-sites represent a significant new supply of land held in citizen and civic hands.

4. Knowhow

Experience in construction and trades is high. Our door-to-door survey revealed that 52% of people had experience at professional or amateur level of at least one of the following: plastering, plumbing, electrics, roofing, carpentry, bricklaying, painting and decorating, and design.¹³

we found energy for change, spare capacity, loads of space to grow and huge latent knowhow in building skills

A modern, single-story micro-house with a dark wood exterior and a light wood deck. The house features a large glass door and a wicker chair on the deck. The background shows a clear blue sky and some greenery.

tam

Here's what we built
On a micro site
To the highest standards
Without planning permission
In 10 Weeks...



Why no planning permission?



It complies with both the **Caravan Act** and **Chattel Law**.

The Act has three tests:

Construction There should be two sections separately constructed with the final act of assembly joining them.

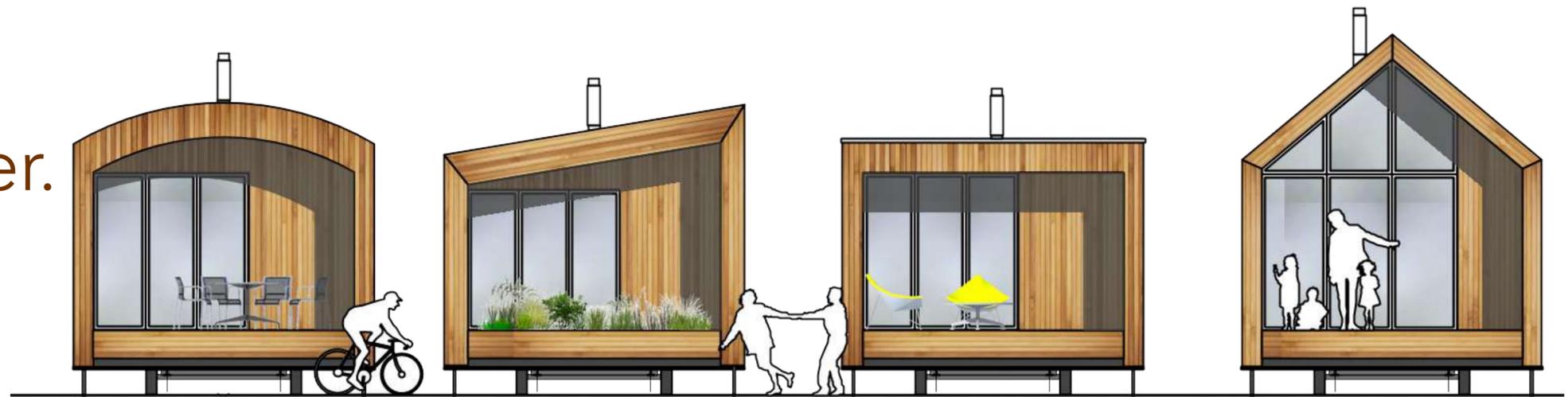
Mobility It is not necessary for a caravan to be towed, only that it can be moved by road without damage.

Size No larger than 20 x 6.8m with a floor to ceiling height less than 3.05m.

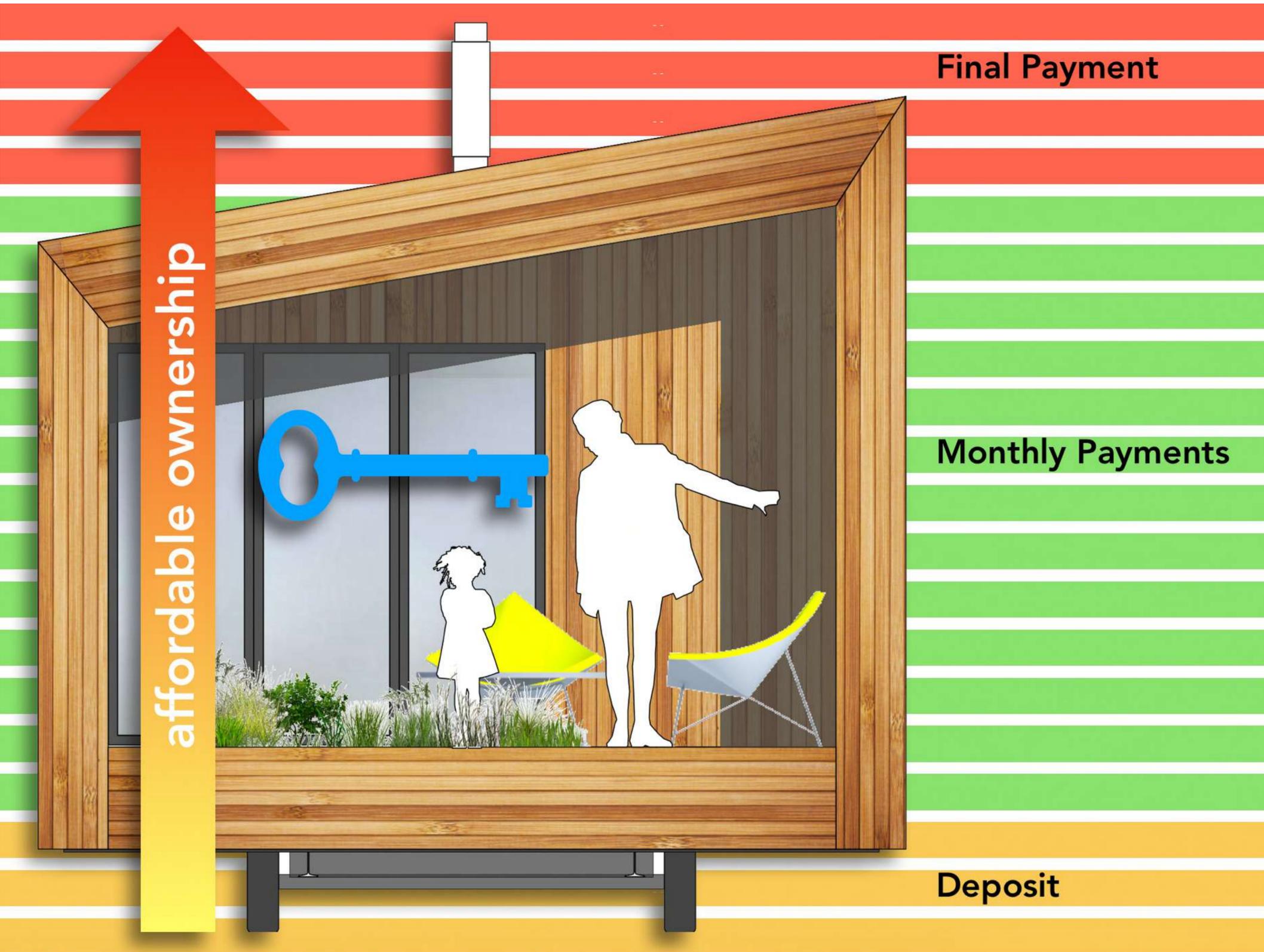
Chattel is a moveable asset that does not require planning approval.

tam

Tam is not a caravan!
It's a house on a caravan chassis.
Nor is it a shipping container.
It's Building Regulations compliant.
Low Carbon and Super Insulated.
Triple Glazed and all LED lighting.
Energy demand minimised.
Fuel Poverty Eradicated.
Lead time 12 weeks from order.
It's recoverable capital.



Available in 1 to 4 bedroom units as a shell or fully finished.



Affordable rent

Affordable ownership

As easy and flexible as leasing a car

Final Payment

Monthly Payments

Deposit

affordable ownership



we
can
make...
CITIZEN-LED
HOUSING



Homes
England



Nationwide
Foundation



power to
change



“More houses like this would be a godsend for Knowle West. It could help so many people – people like us.”
– Bradley, lives in Knowle West



“I feel instantly at home here – so modern & well-designed. I can build one in my garden & rent my house out. I’m in control of my future then.” – Ewlina, lives in Knowle West



“Usually trying to buy a house is a joke. But this is easy and affordable. I’d like to do an apprenticeship to learn how to build them.”
– Thomas, lives in Knowle West



We Can Make - funded and we will build up to 350 homes

we can make...

PEOPLE POWERED HOMIES

MADE IN BRISTOL!



NEW RADICALS 2018



nesta
nesta.org.uk
@nesta_uk

tam

Build With Carbon

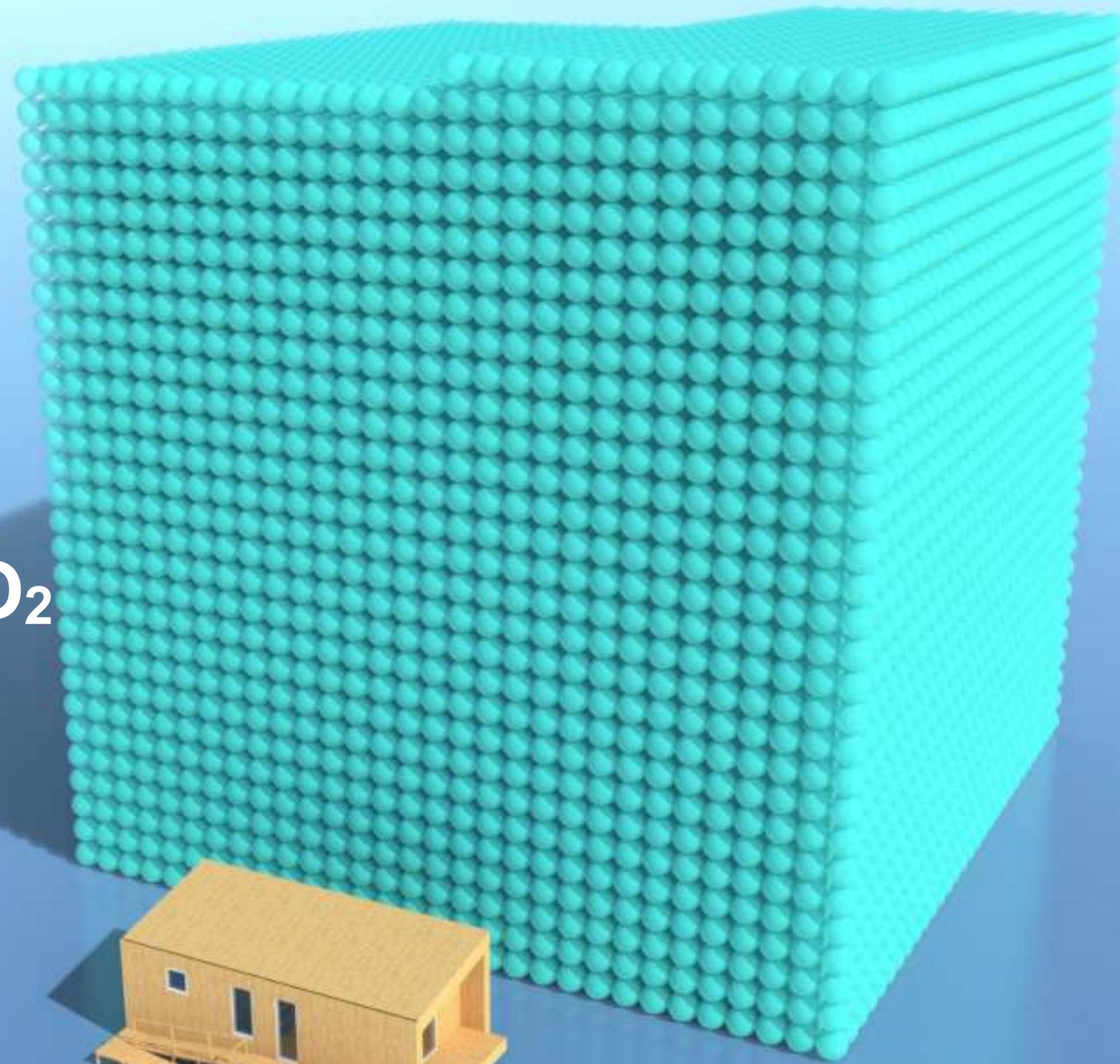


1 kg
CO₂

<https://agile.property>

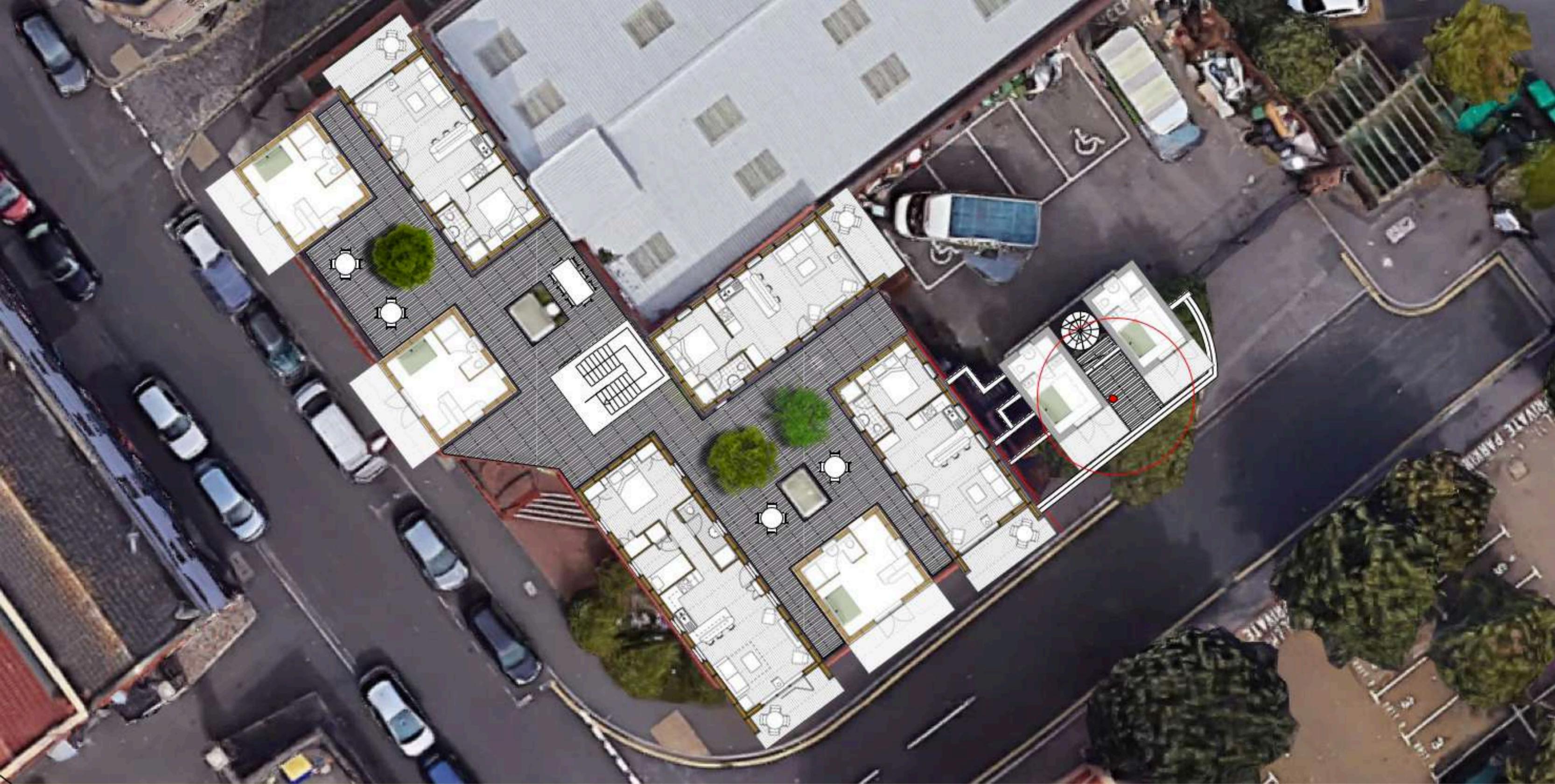
tam

27 tonnes of CO₂



<https://agile.property>

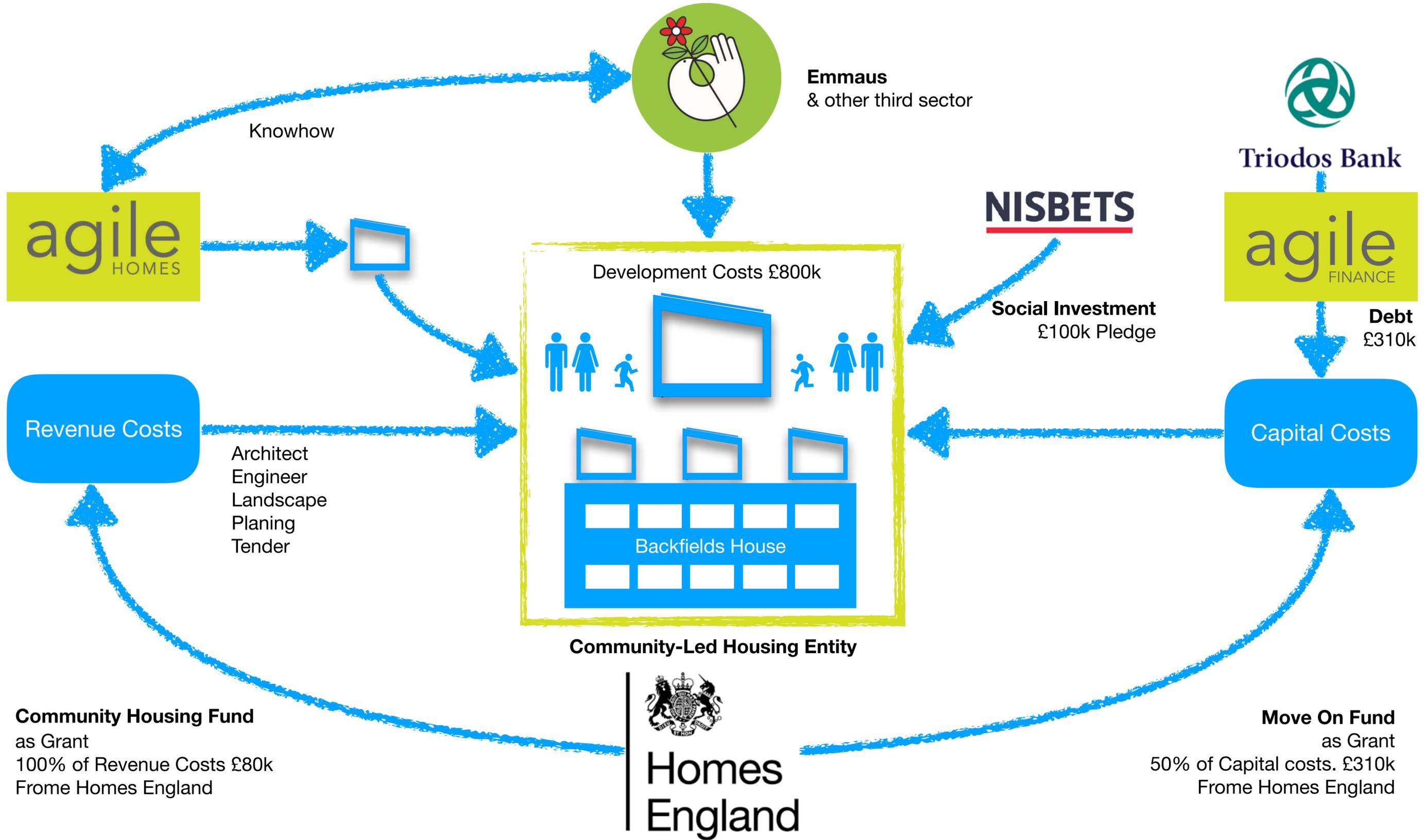
CO₂ Captured and Stored in a TAM

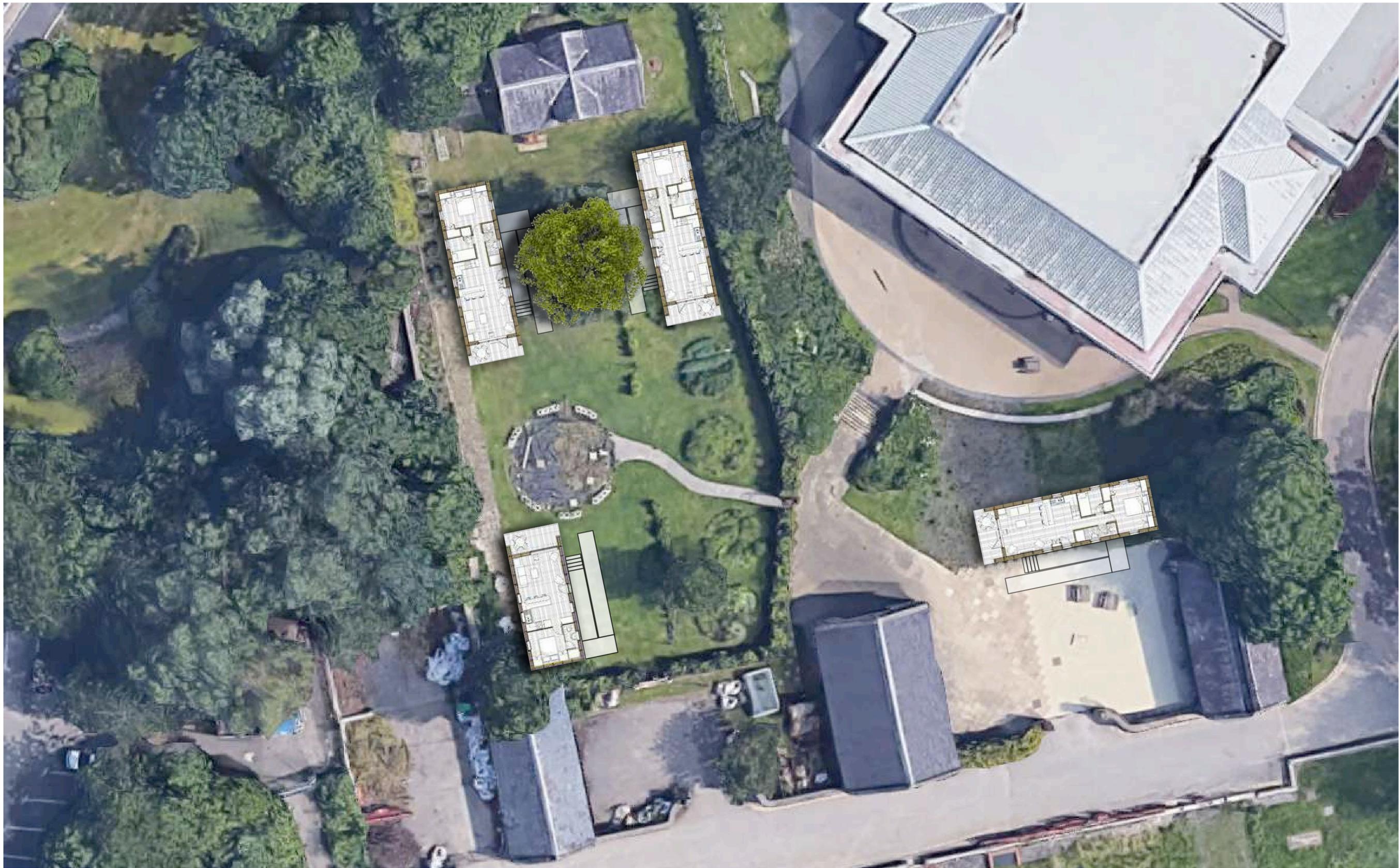


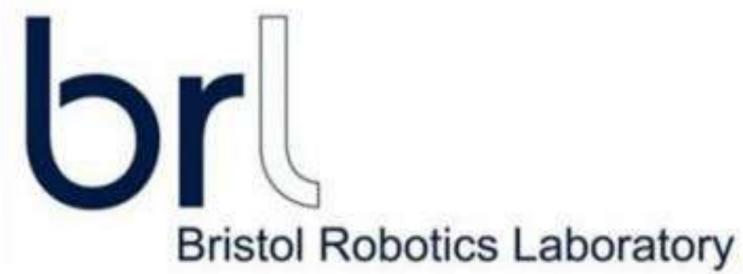


South East Elevation A









UWE Intergenerational Assisted Living Cluster



Dr Praminda Caleb-Solly
Principal Investigator

Systems Thinking delivers better Social Economic and Environmental Outcomes.

By putting people at the centre of our work we meet their need for safe, civil, affordable and low carbon homes.

There is never one technology solution.

Instead, financial, technological and societal systems should be subservient to the need to respect people and planet, working within natural capital boundaries.



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