

Craig White

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.

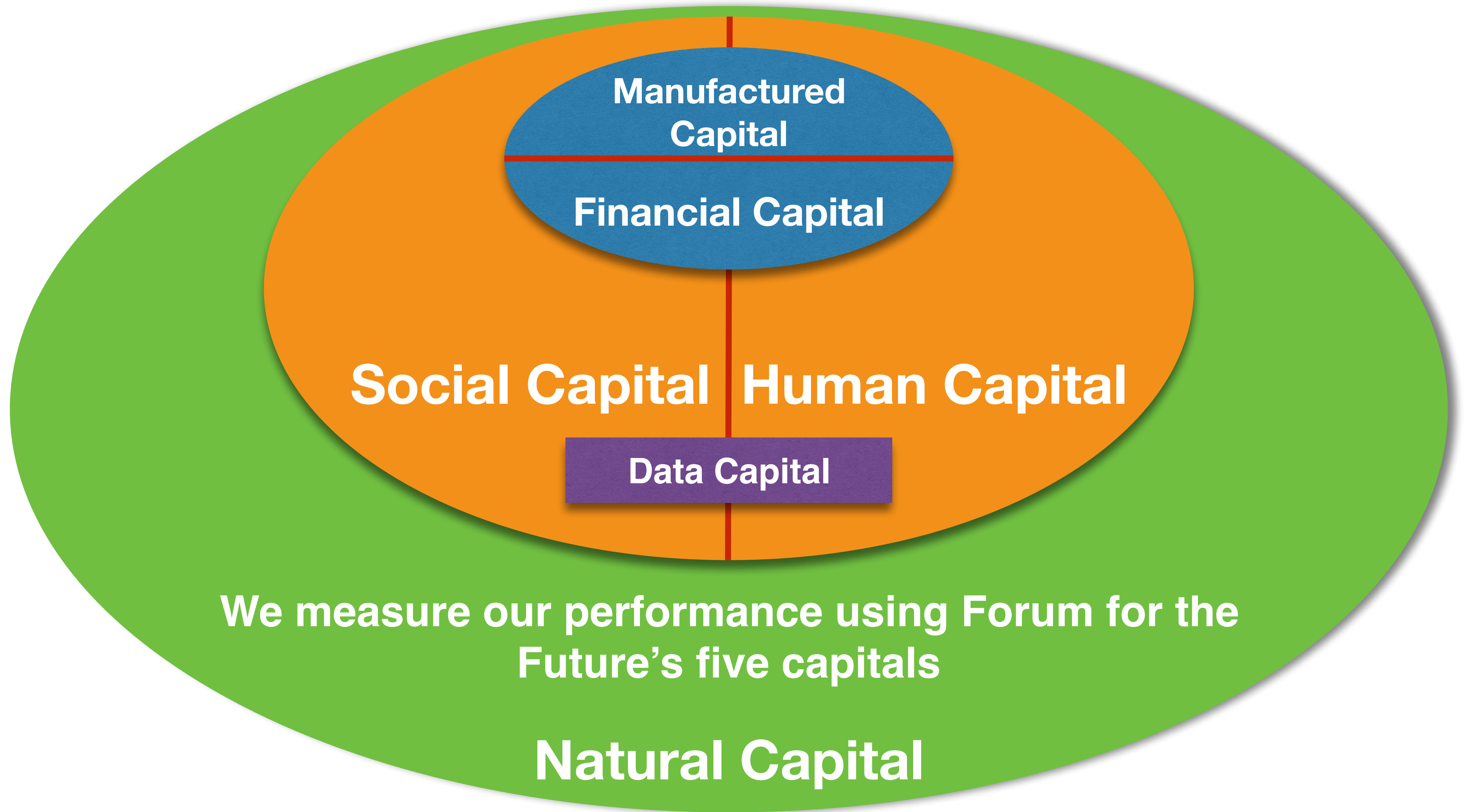
sick building syndrome

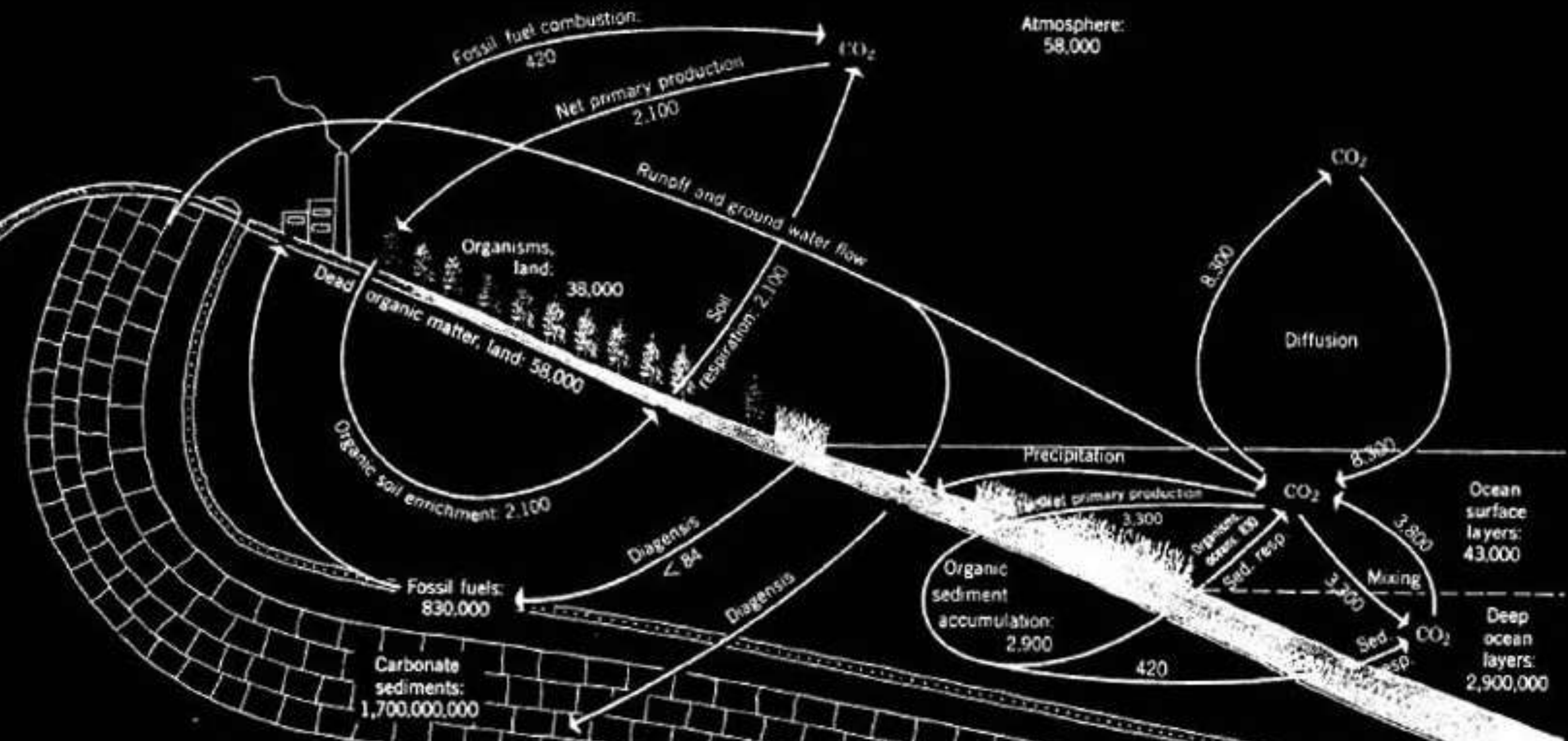
The background of the slide is a complex, abstract pattern of thin, grey, wavy lines that overlap and intersect, creating a sense of movement and interconnectedness. The lines vary in opacity, with some appearing more prominent than others.

sustainability
quality of life
health
wellbeing
happiness
productivity

All interconnected. All Interdependent.

systems thinking - weaving in an interconnected & interdependent

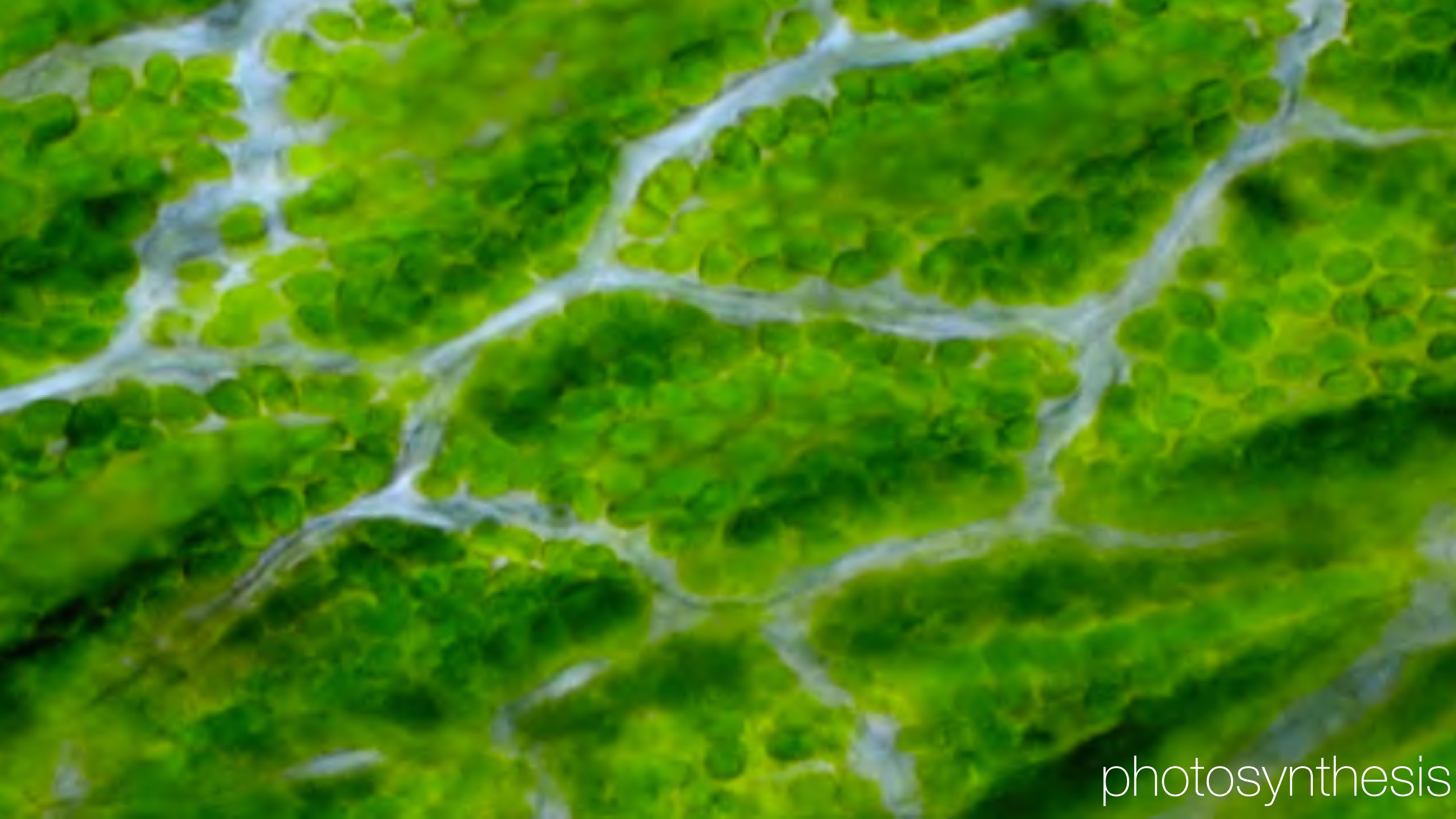




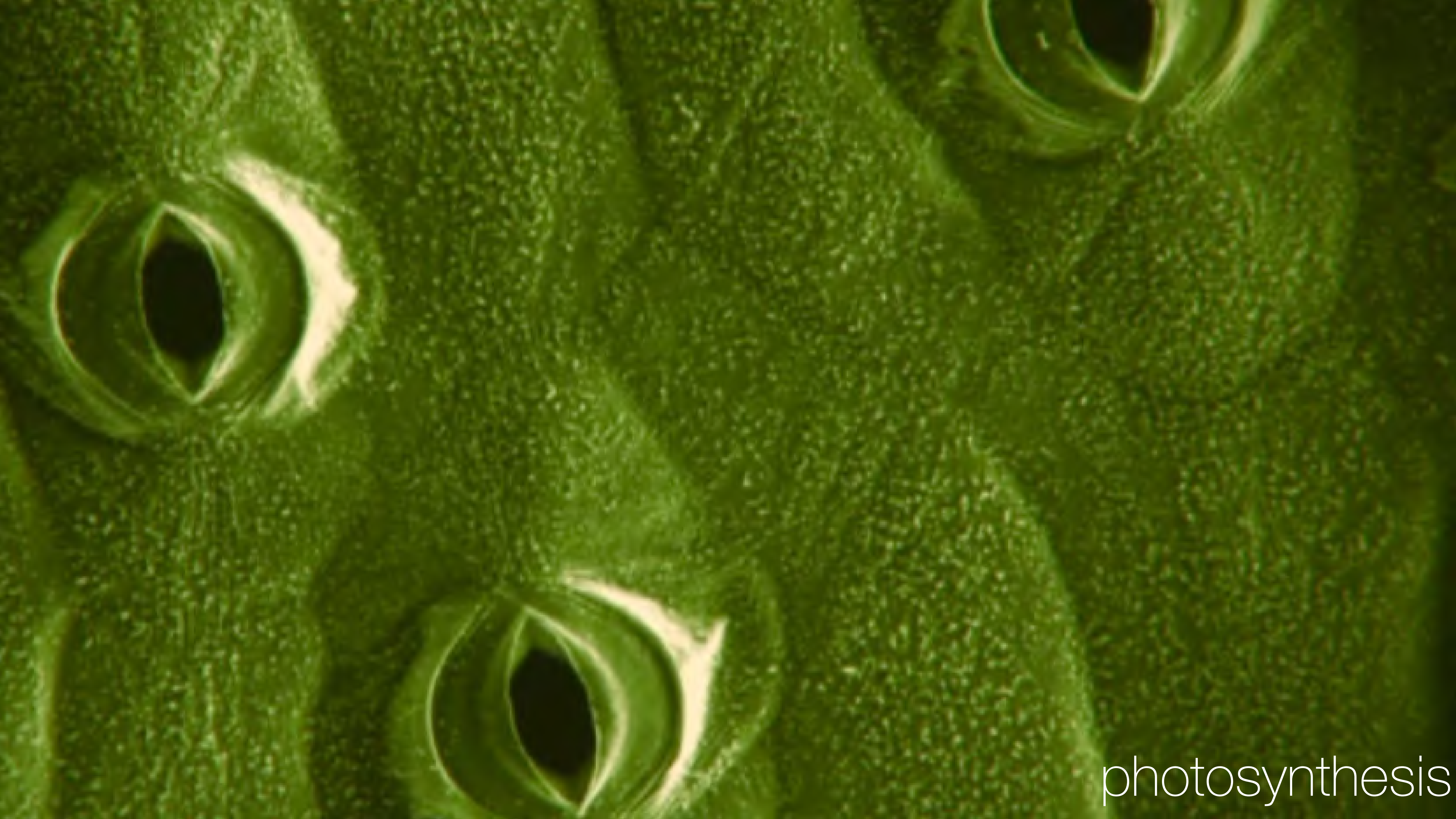
carbon cycle



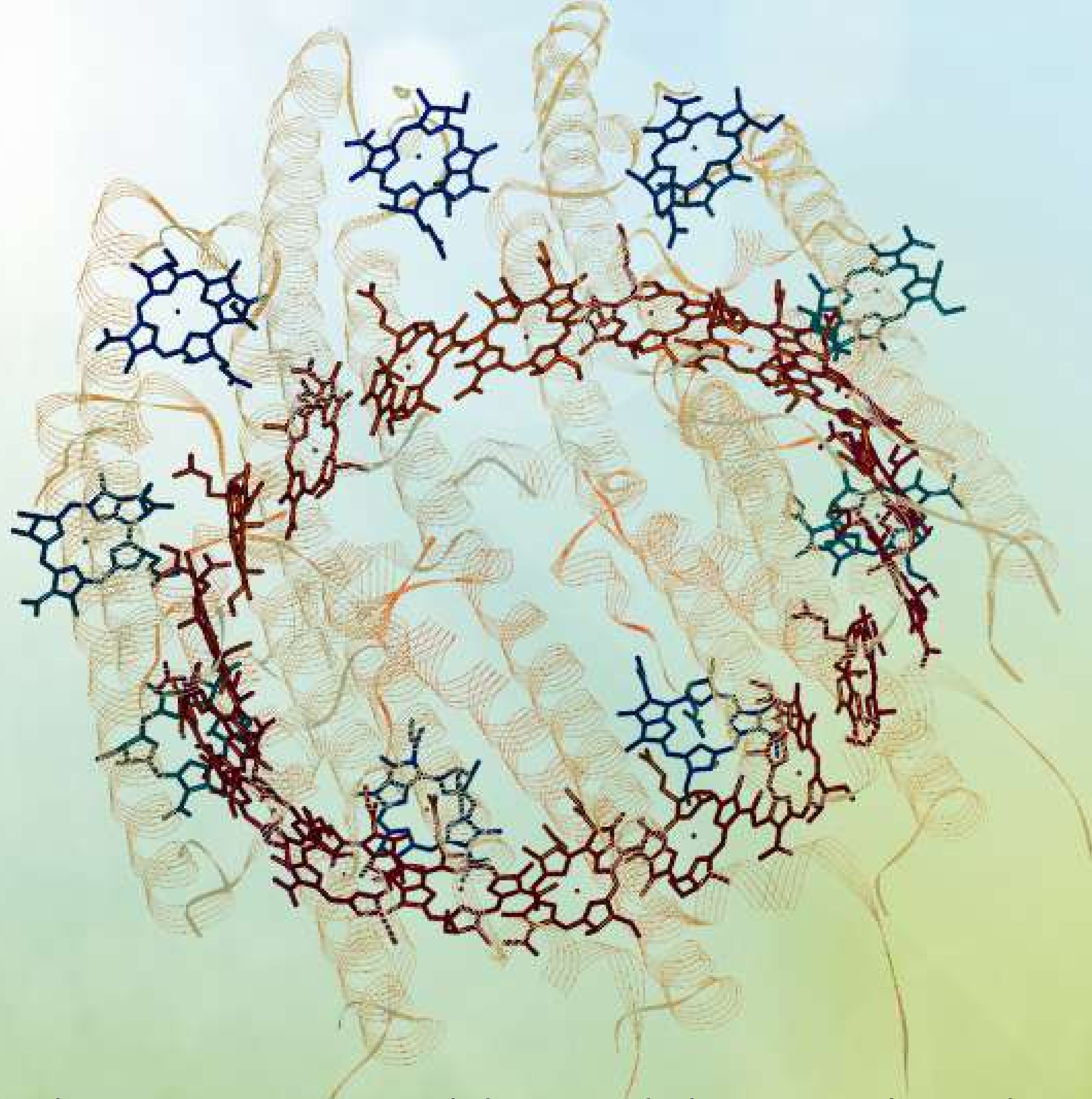
photosynthesis



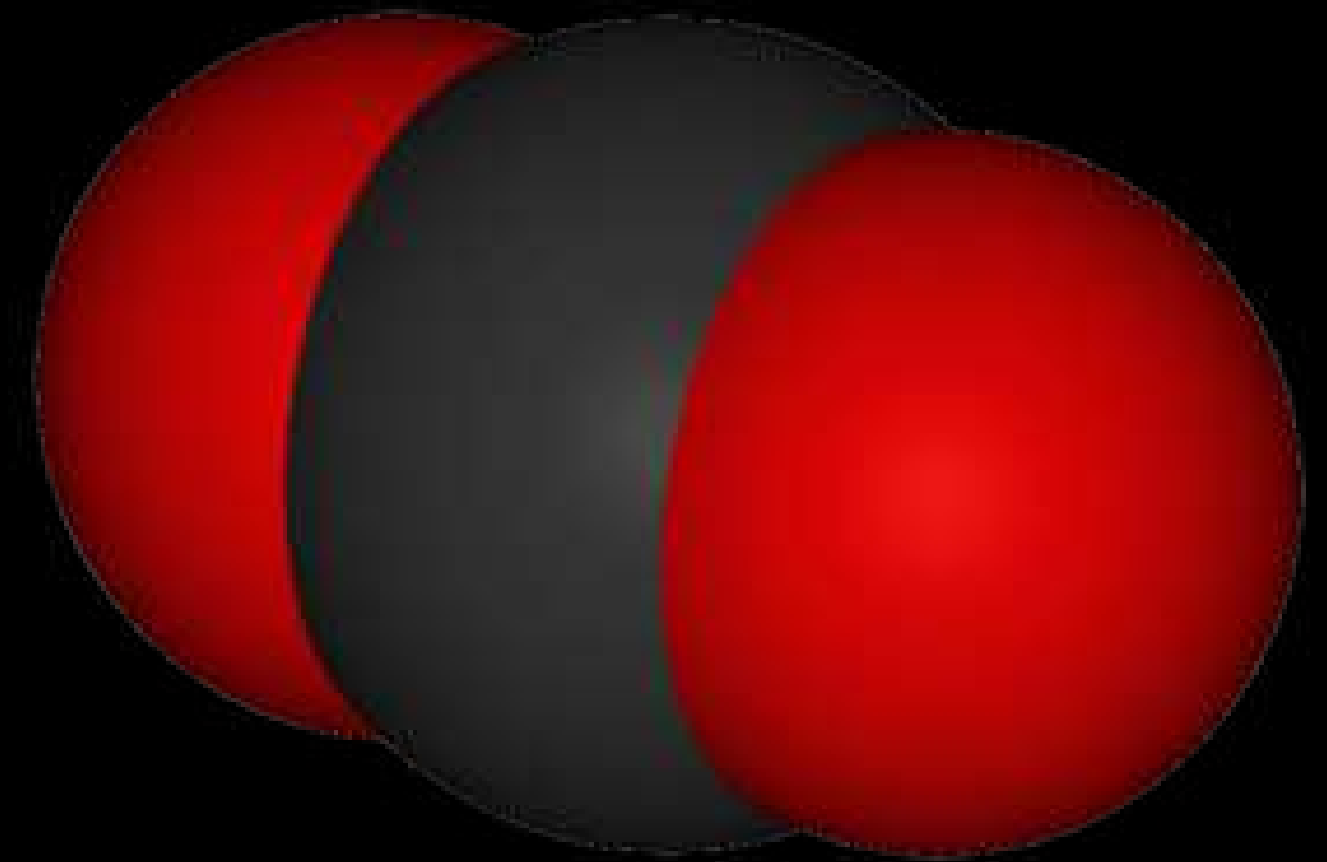
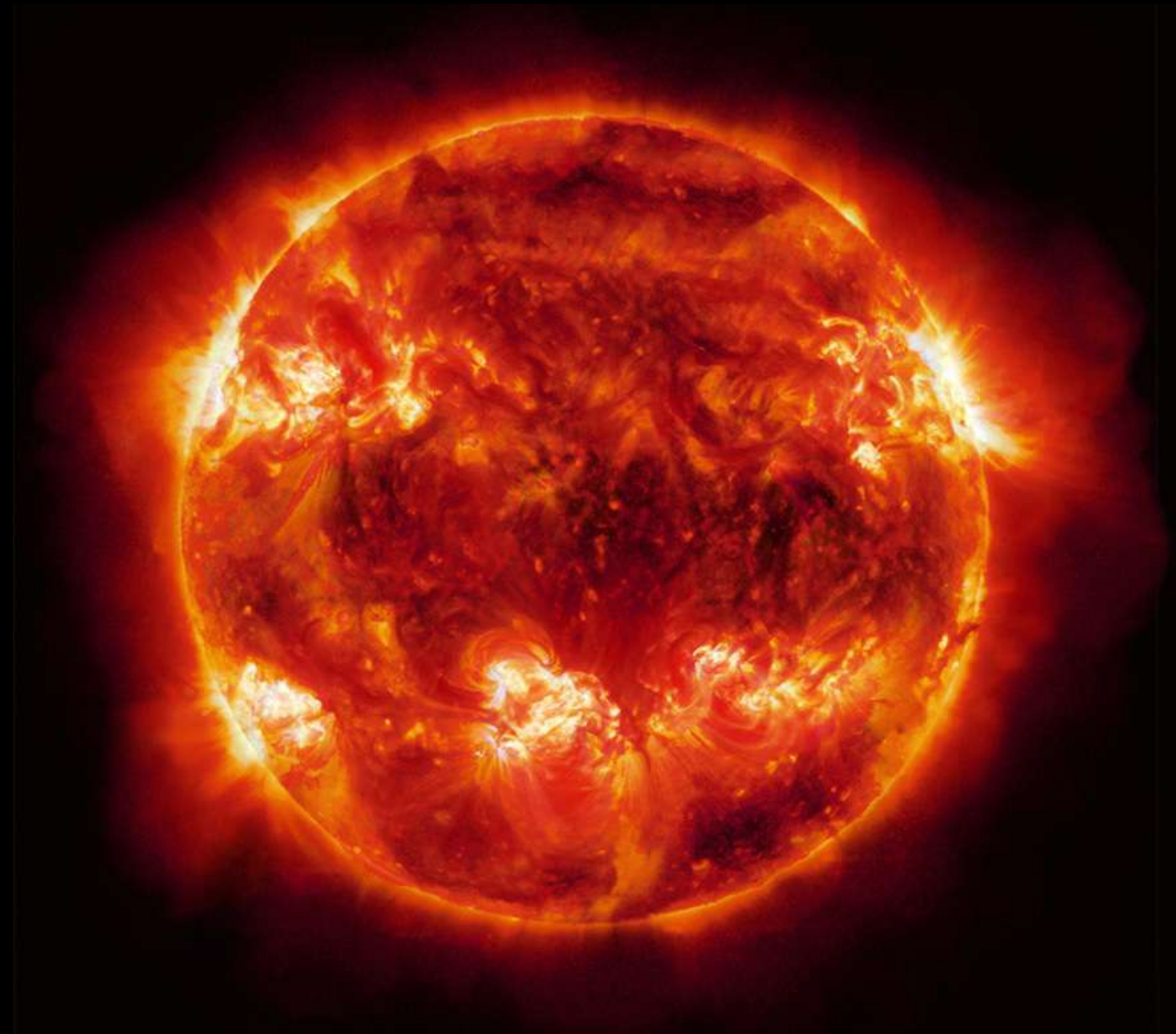
photosynthesis



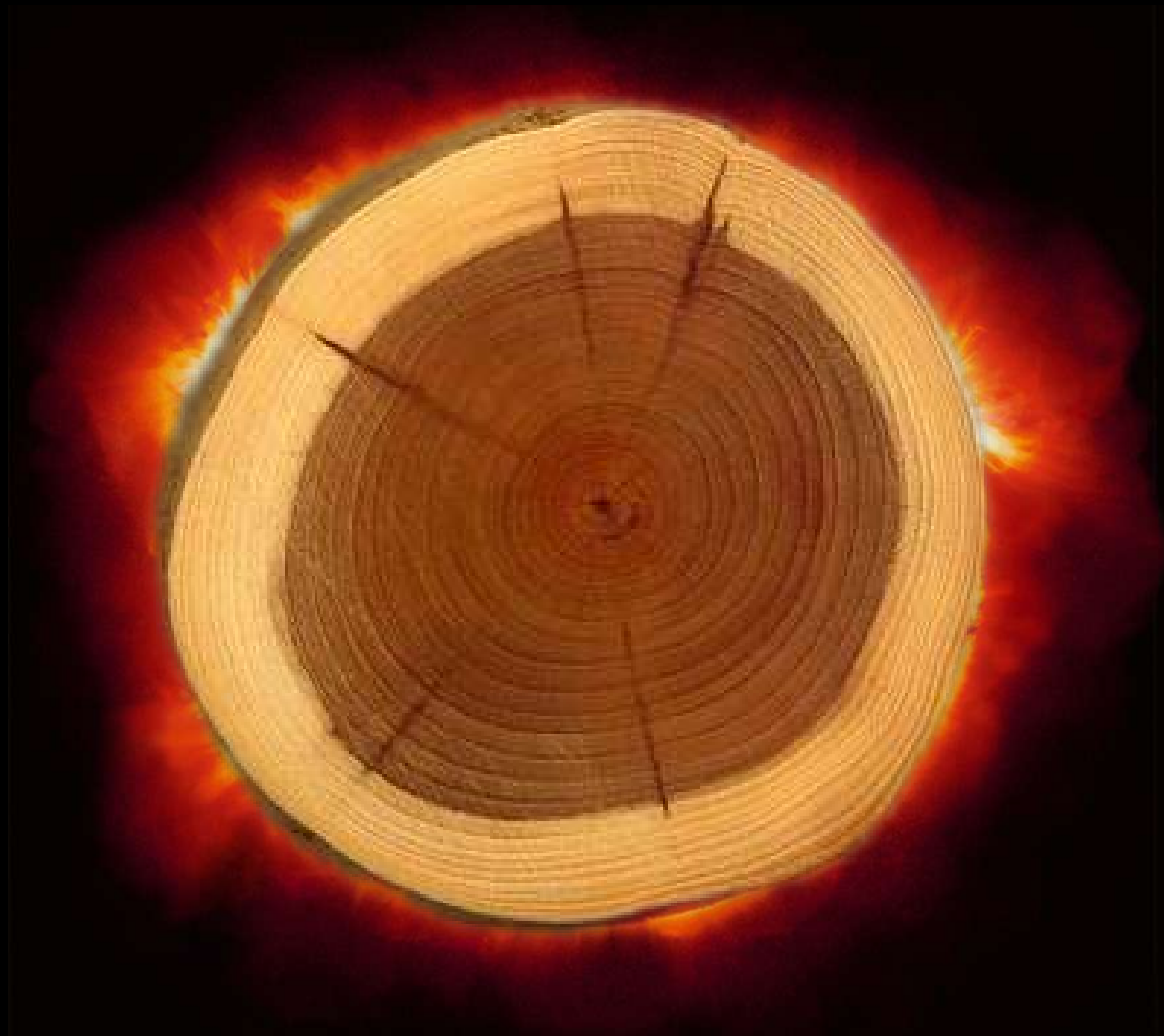
photosynthesis



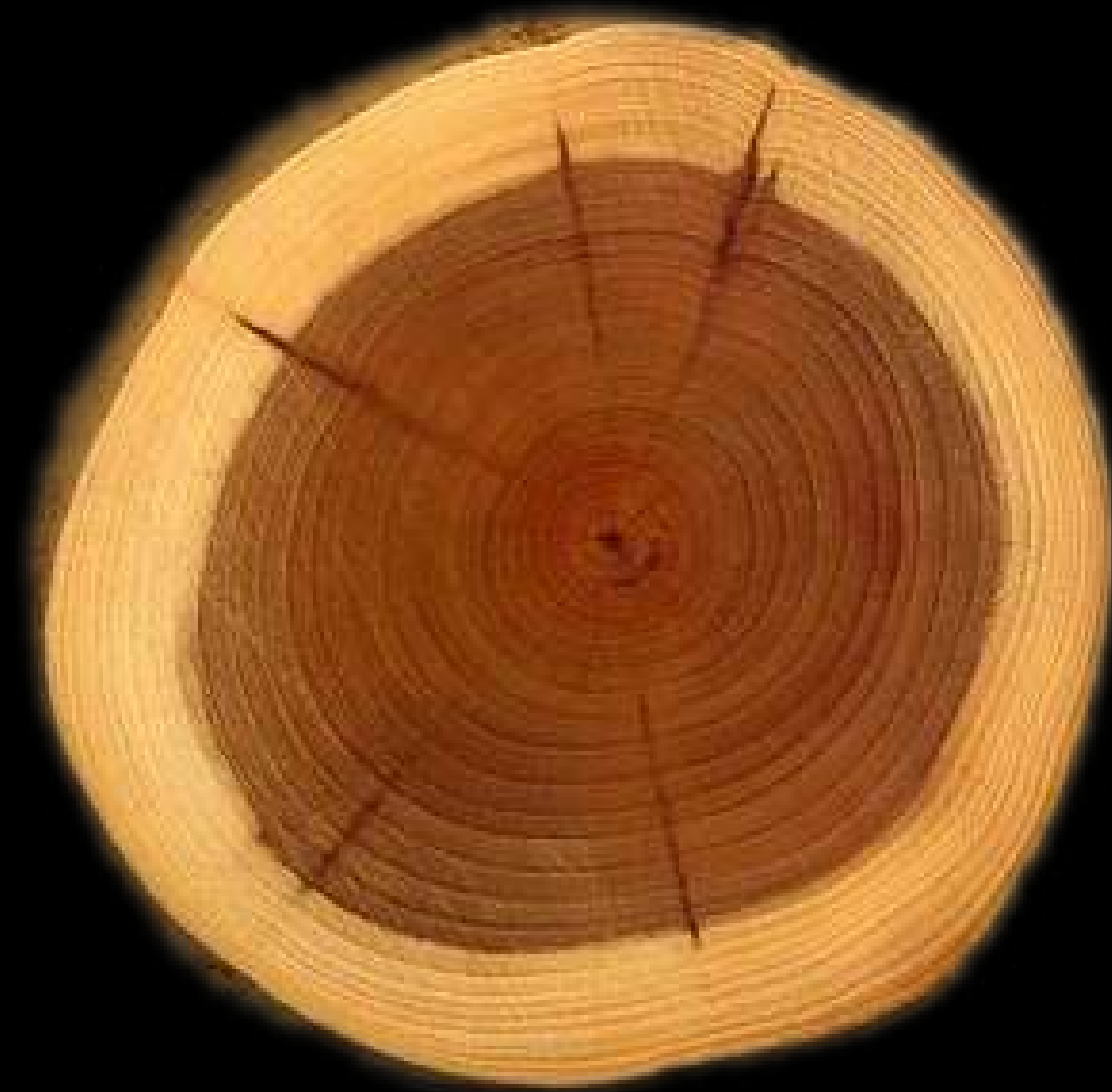
photosynthesis - powered by a bio-evolved quantum machine



photosynthesis - sunlight + water + CO₂ = cellulose



742 kg of CO₂ per m³



wood

+

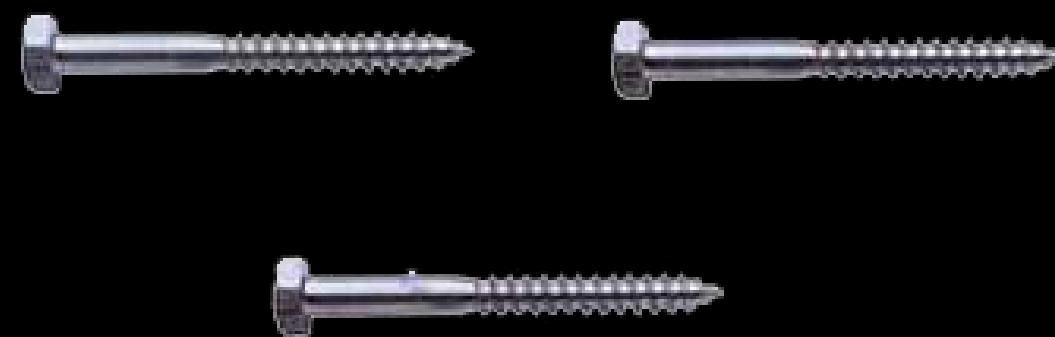


straw

+



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



BaleHaus a Domestic Carbon Bank - 34 tonnes

we can build with carbon

climate change

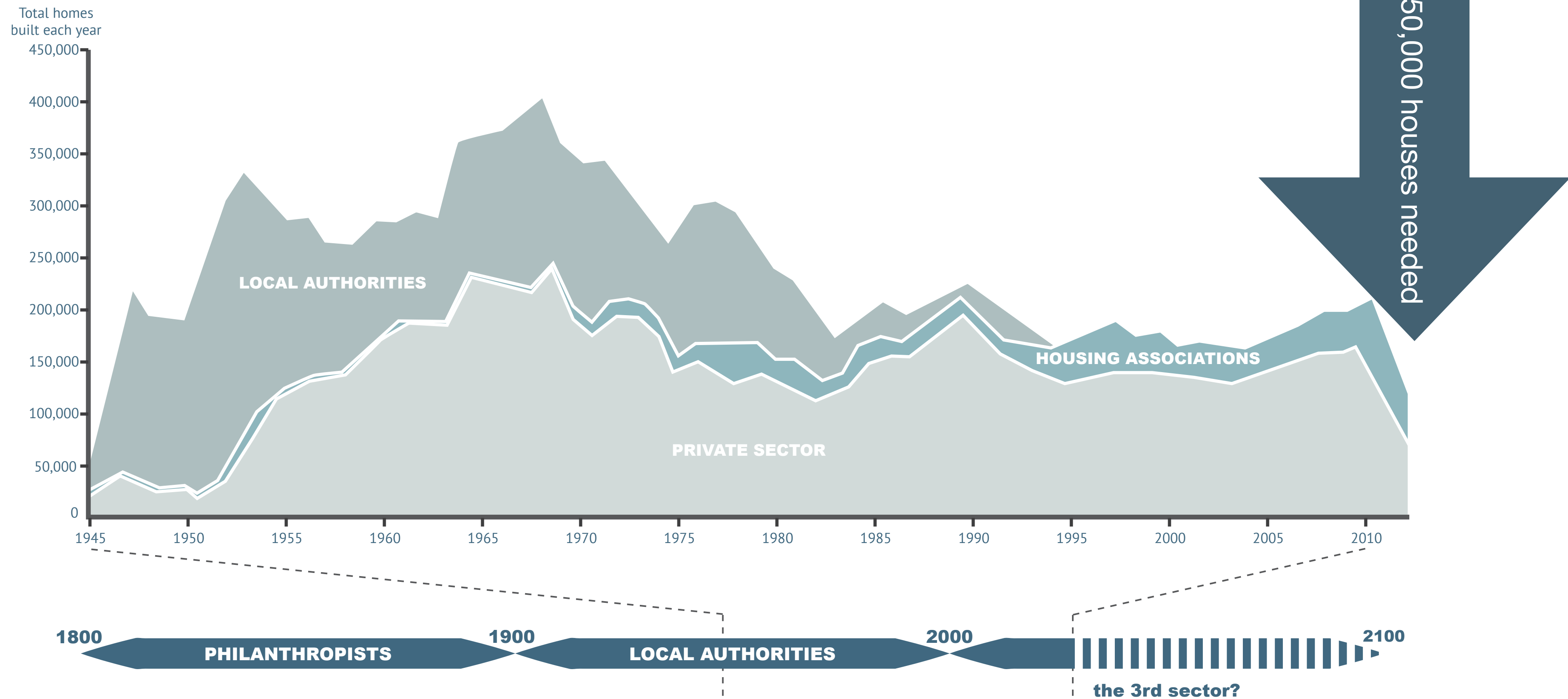
sorted

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)



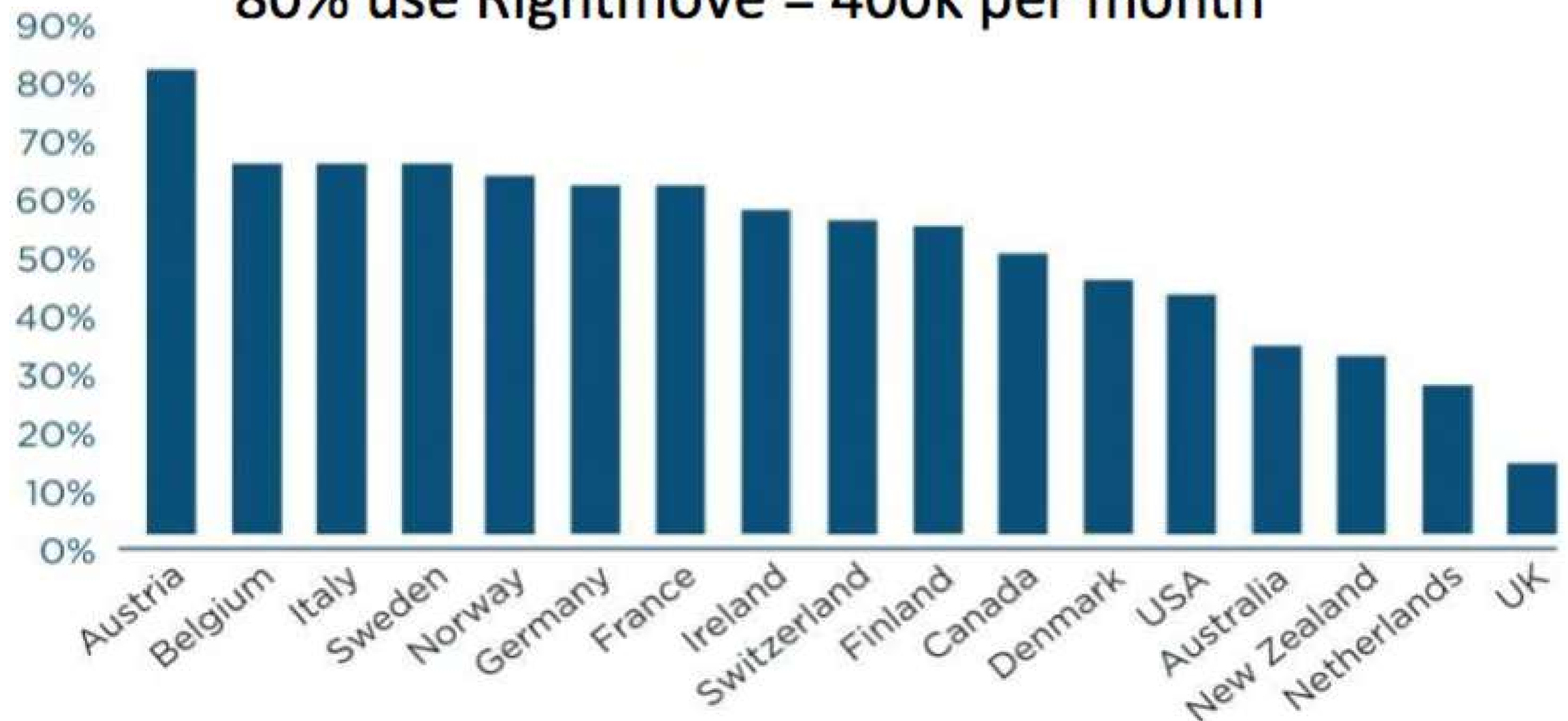
67% would not buy from a volume housebuilder

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.

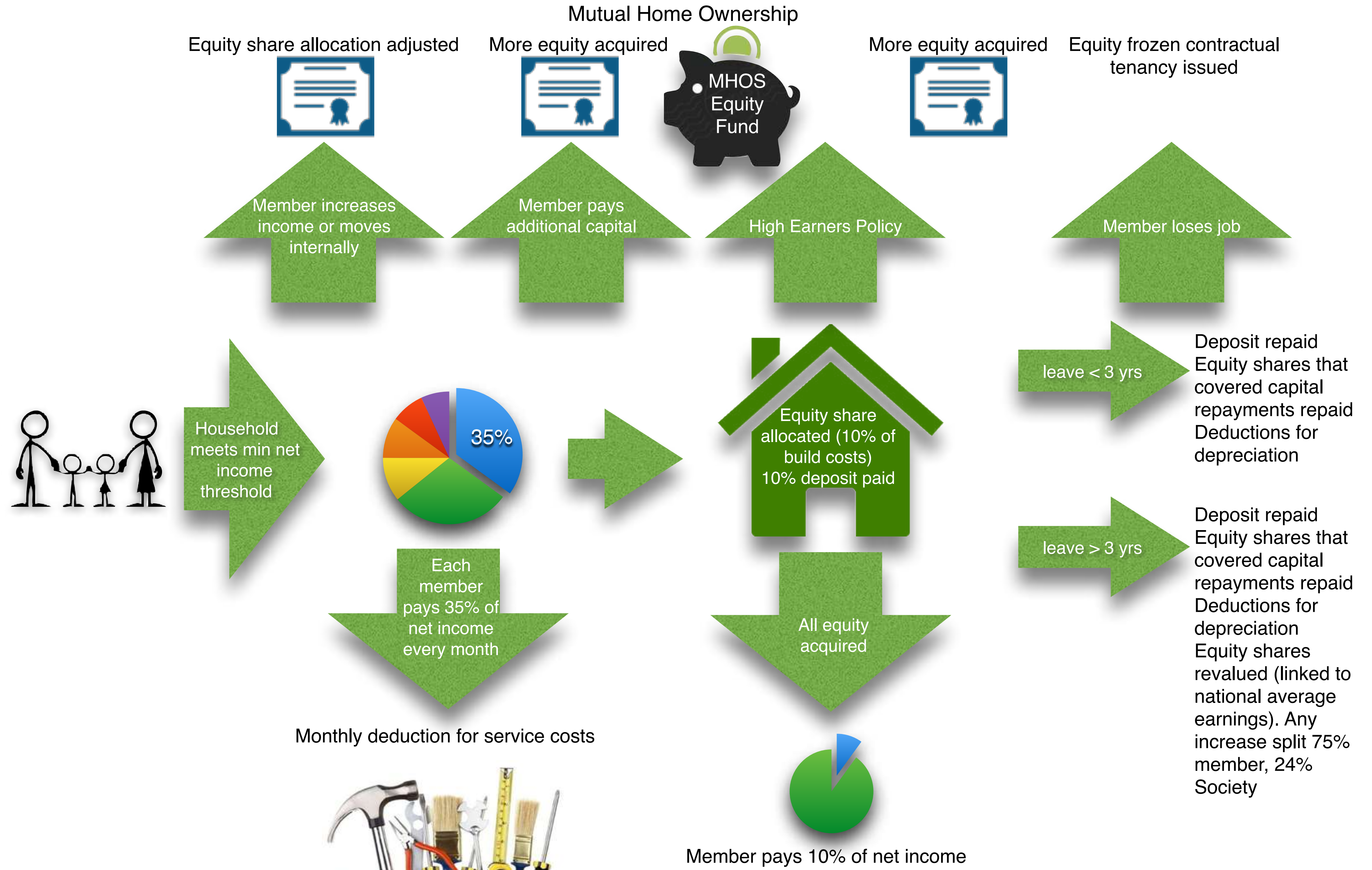
Custom Build started April 2016

The opportunity





Our Experience - LILAC CoHousing Leeds



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, 41, 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 2.5 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 of how to live well – not just leave them 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

Our Experience - LILAC CoHousing Leeds

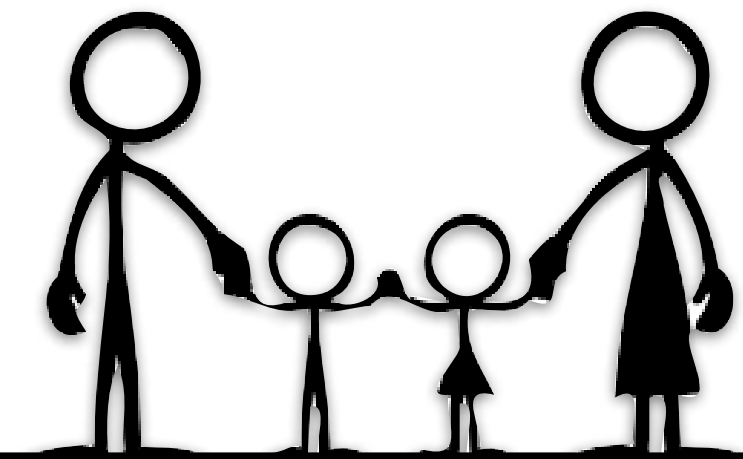
Hardware



OS

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

Software



Working with Paul Chatterton

founder of LILAC

writing a new 'red book'

Hardware Software OS



**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!

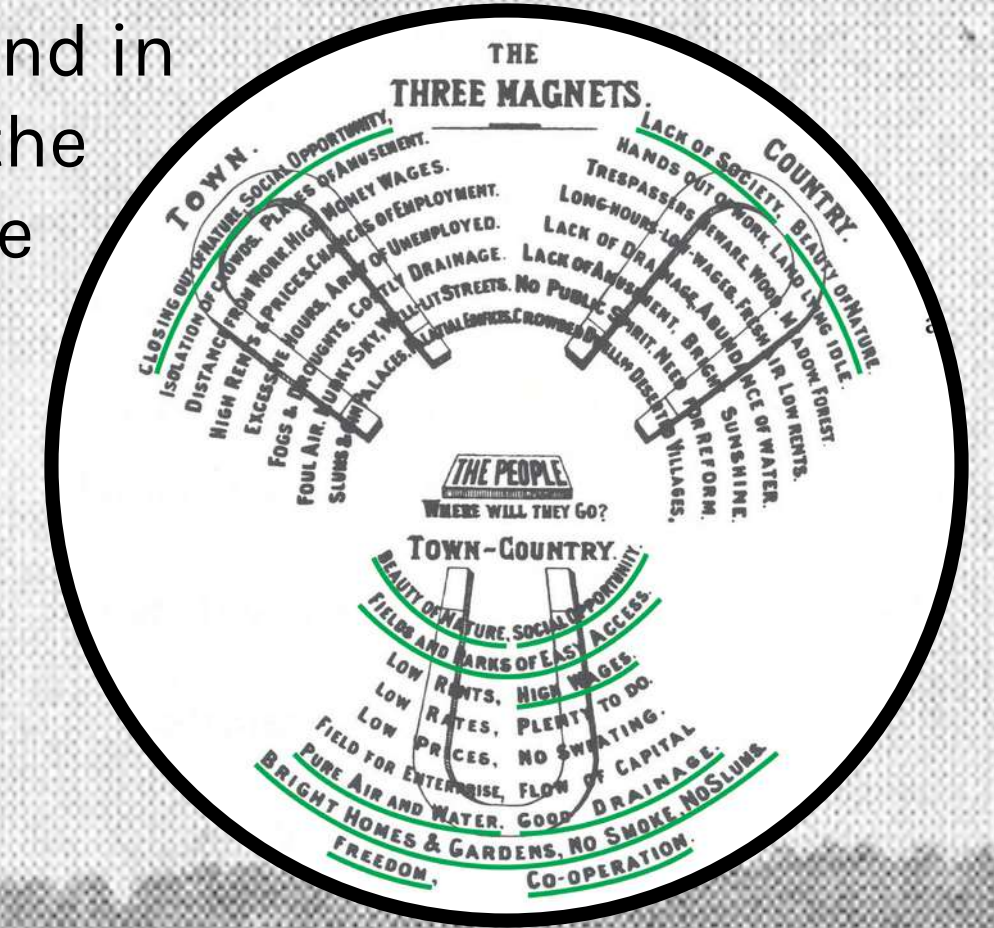
**What if
the community was the
bank**



The Bristol Pound

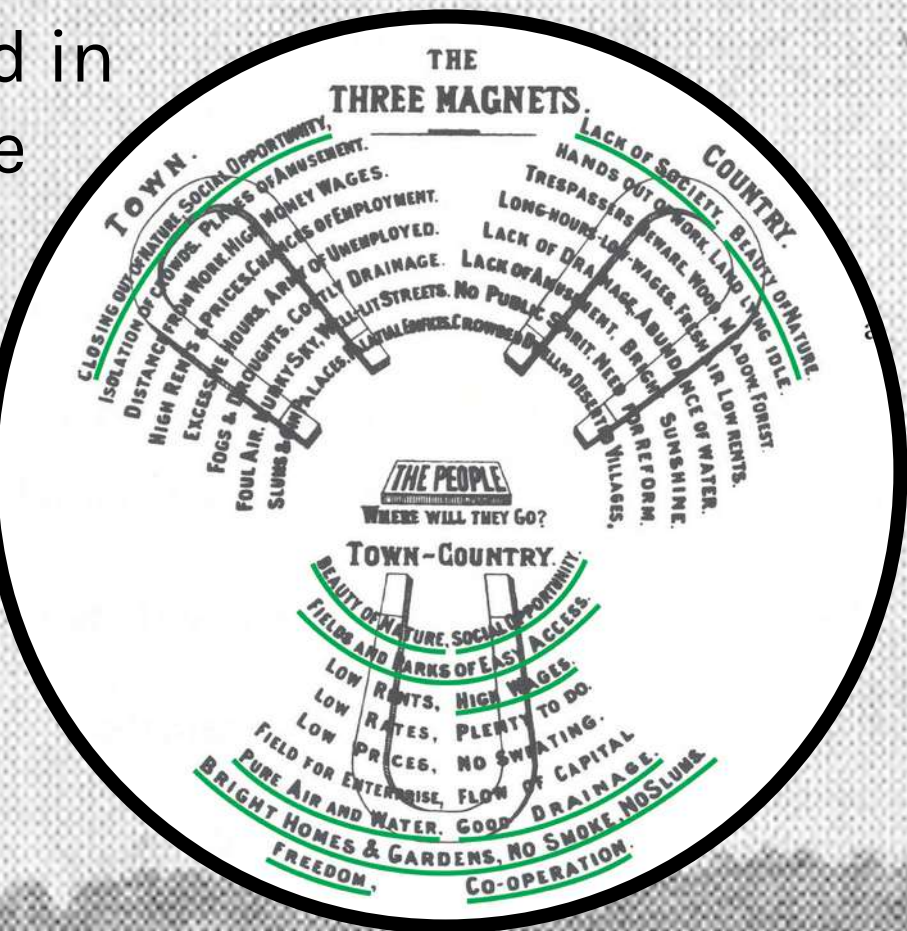
Ebenezer Howard's Garden City Movement was, and still is, a fashionable trend in urban planning. It proposed the idea of building new towns set in the countryside, which could allow people access to nature and the health benefits that green spaces provide. In Knowle West this was interpreted to mean good quality homes set in generous gardens.

Knowle West:
5,000 semi-detached homes
Low Density Garden City
Homes Fit for Heroes - Addison Act 1919 Minister for Health
We built 4 million homes just like this



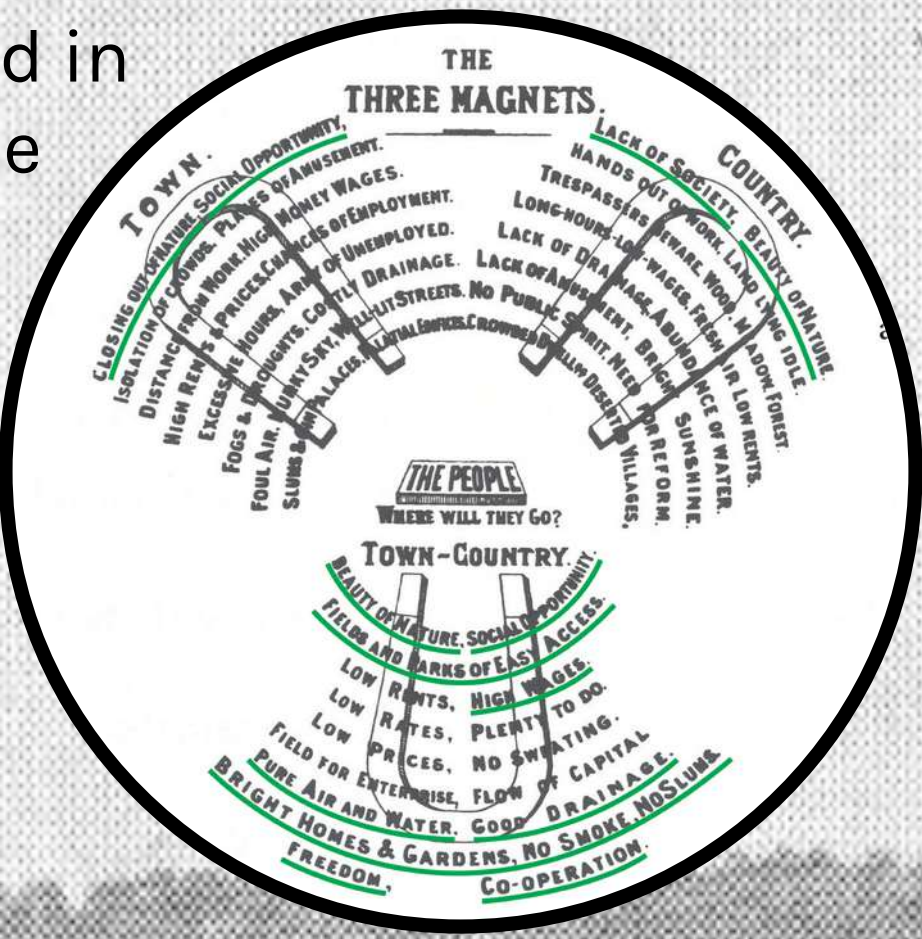
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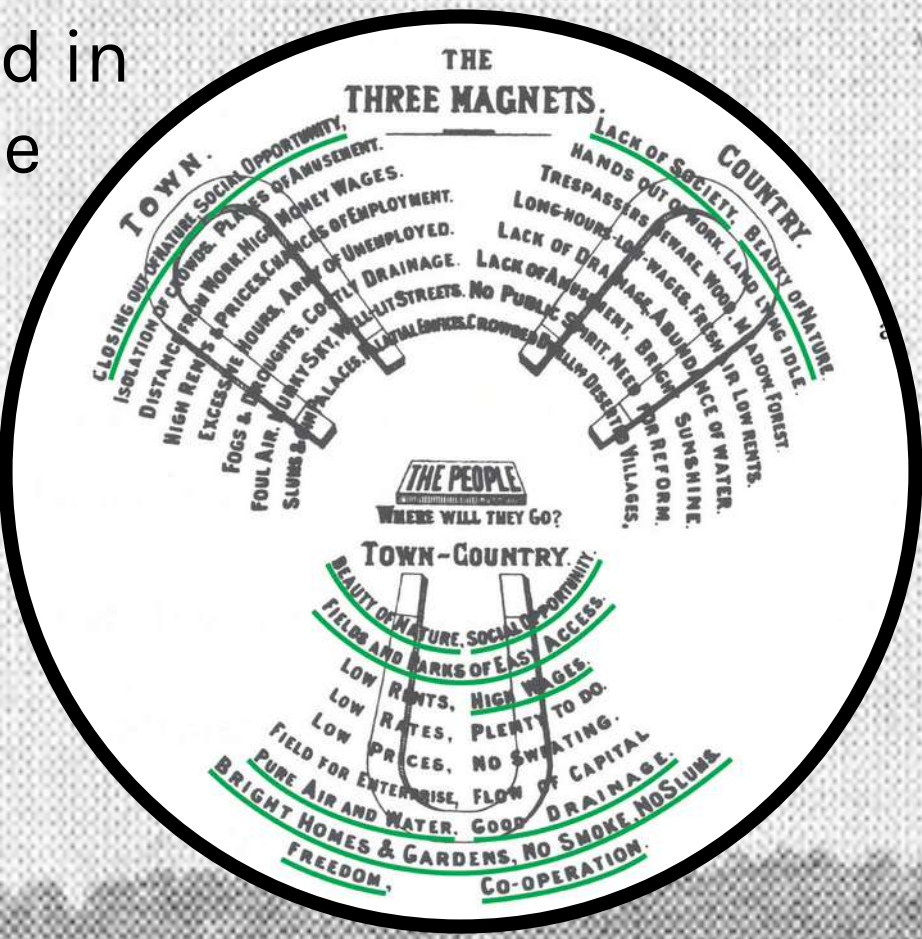


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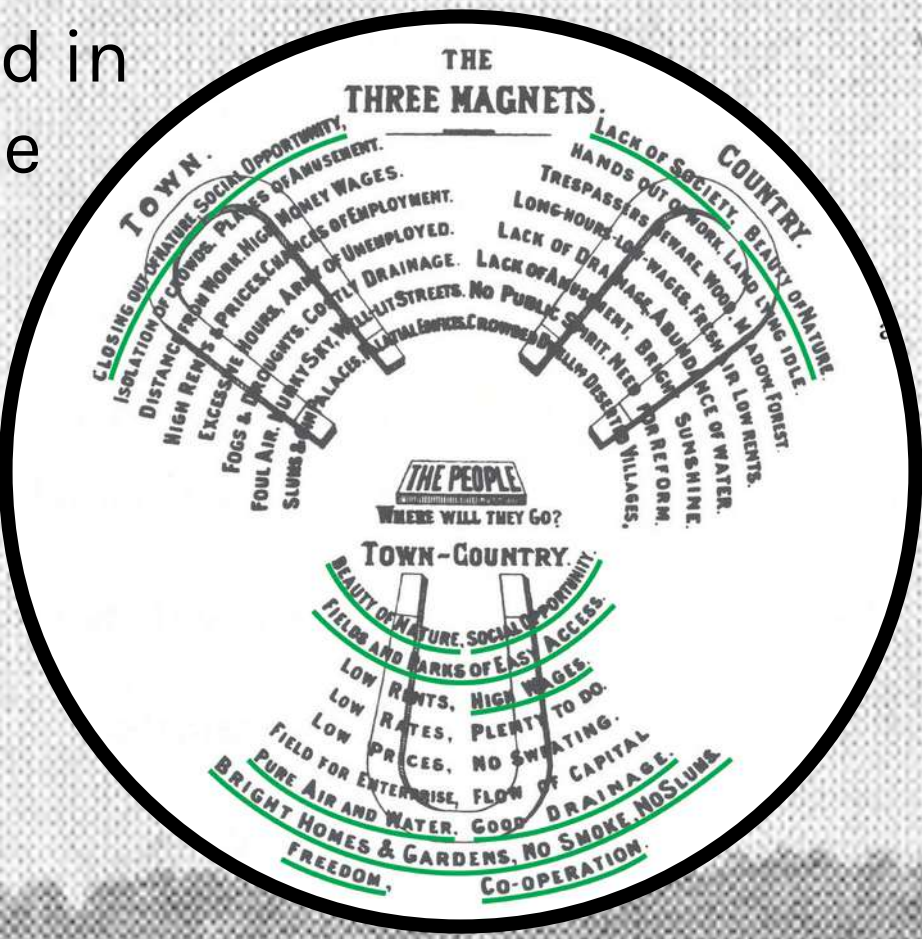
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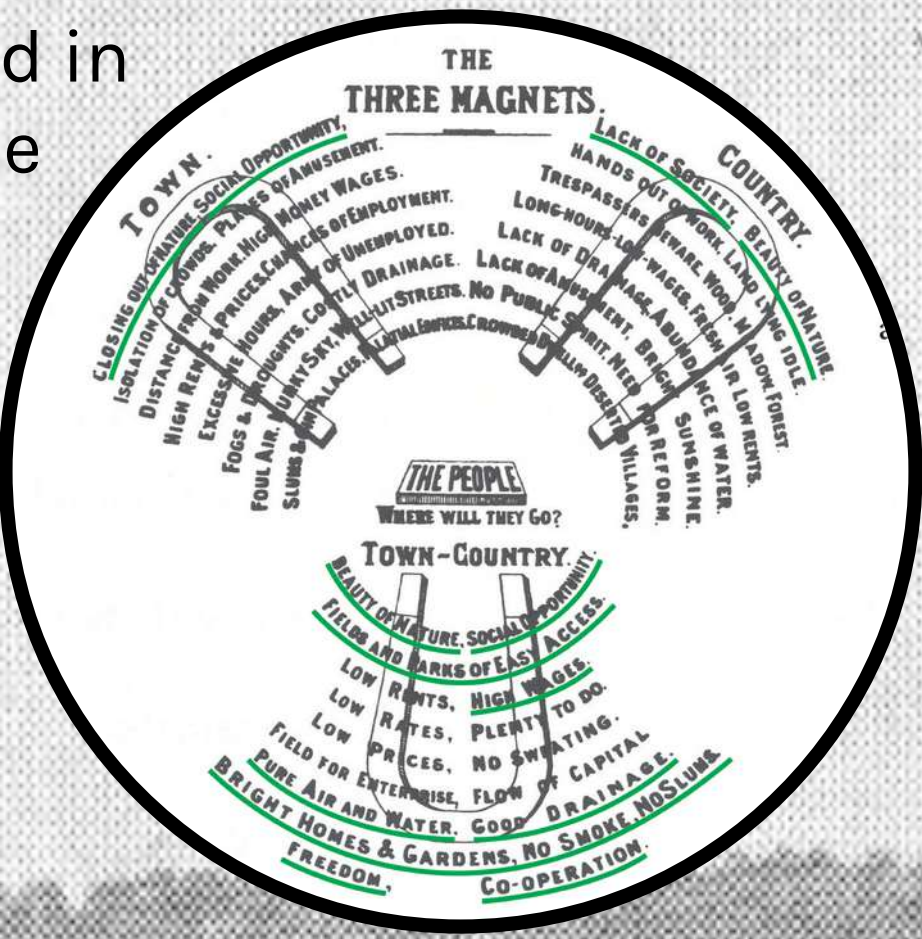
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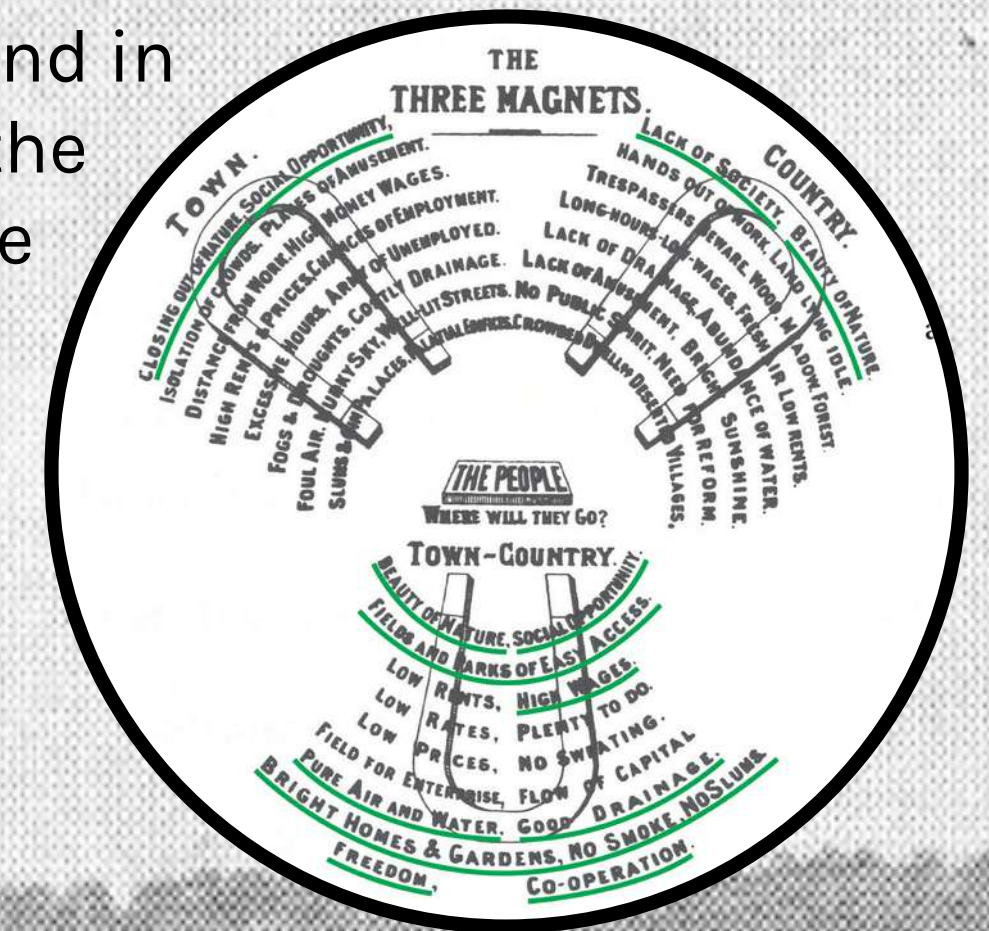
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Land Supply: **new, free** and **hidden** in plain sight

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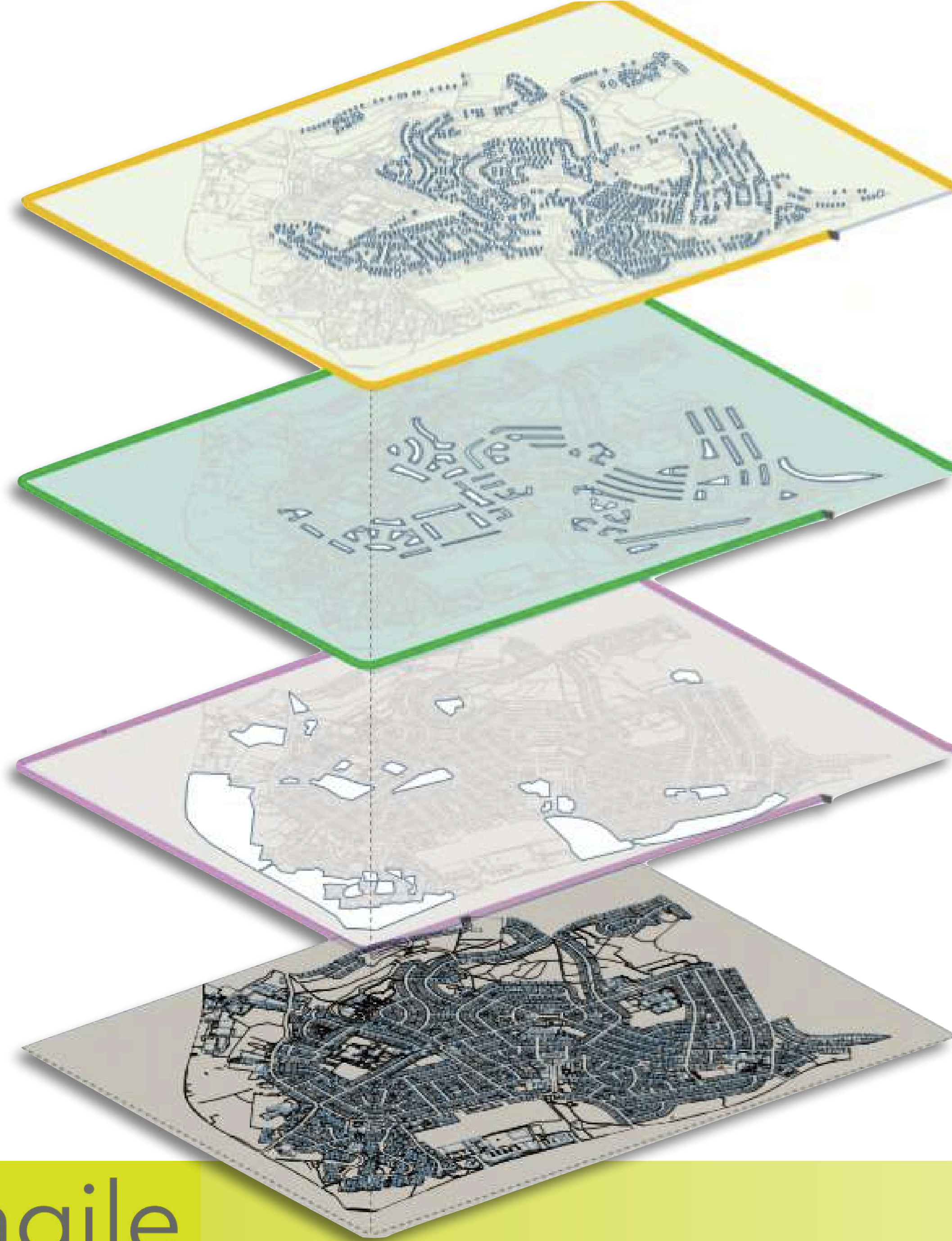


We found:

54% lived in by 1 or 2 people over 55

44% overcrowded

Empty nesters and new shoots



We mapped a typical interwar estate

We found:

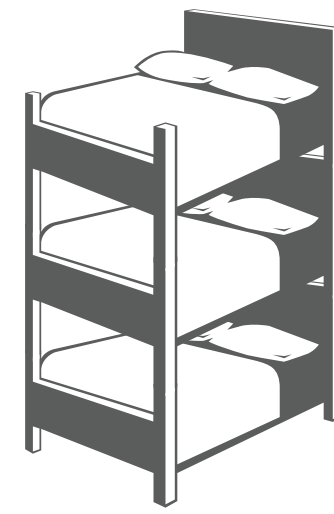
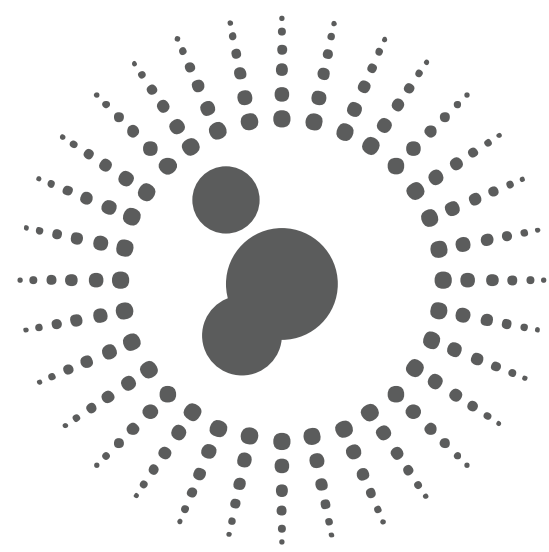
3,500 micro sites

Gaps

Corners

Gardens

No Man's Land



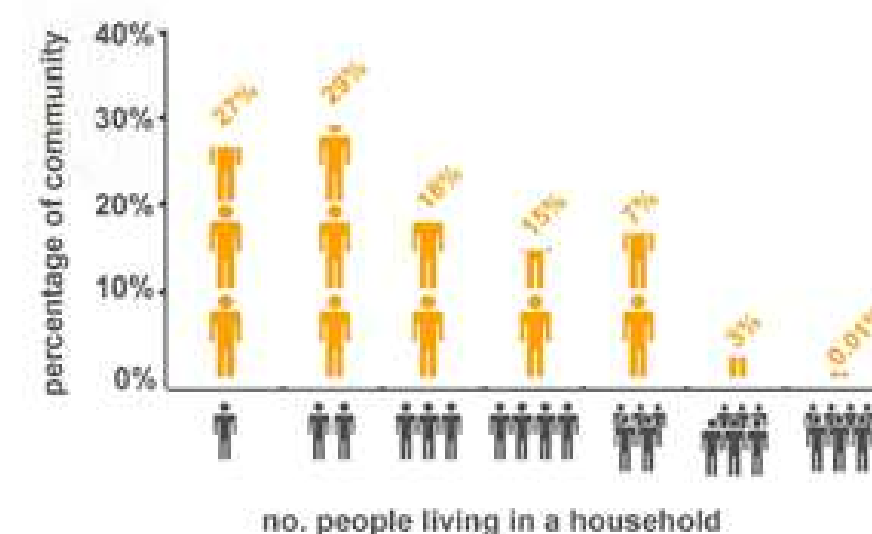
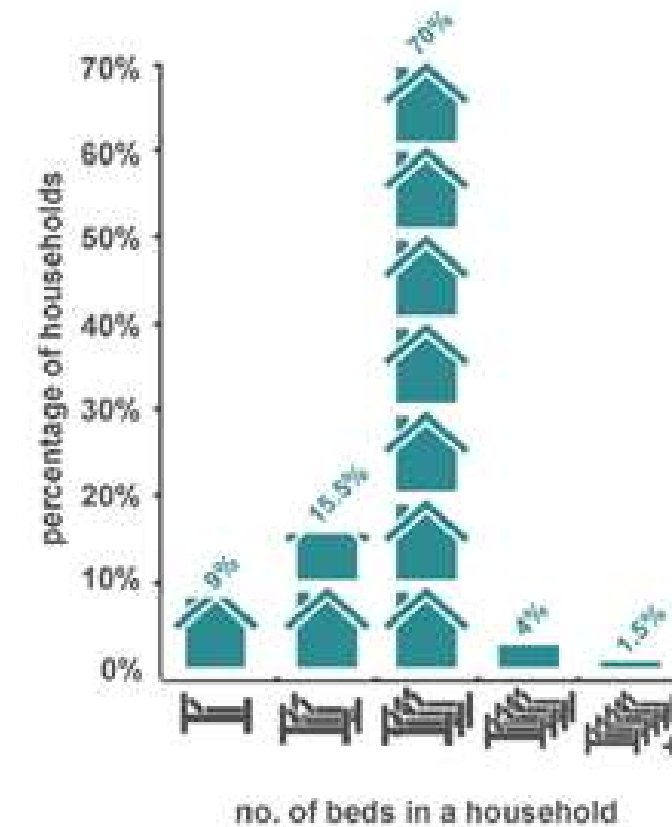
1. Pent up energy for change

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 constructed from dark-stained vertical wooden planks. The house features a large, floor-to-ceiling glass door with a dark frame, which is slightly ajar. To the right of the door, there is a small, square wooden panel. A wicker lounge chair is positioned on a wooden deck in front of the house. The deck is made of light-colored wooden planks and has a low wooden wall on the left side. The background shows a clear blue sky, some green trees on the left, and a brick house with a tiled roof on the right. The overall scene is bright and sunny, with shadows cast across the deck and the house's exterior.

tam

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



tam

Why no planning permission?



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

The Act has three tests:

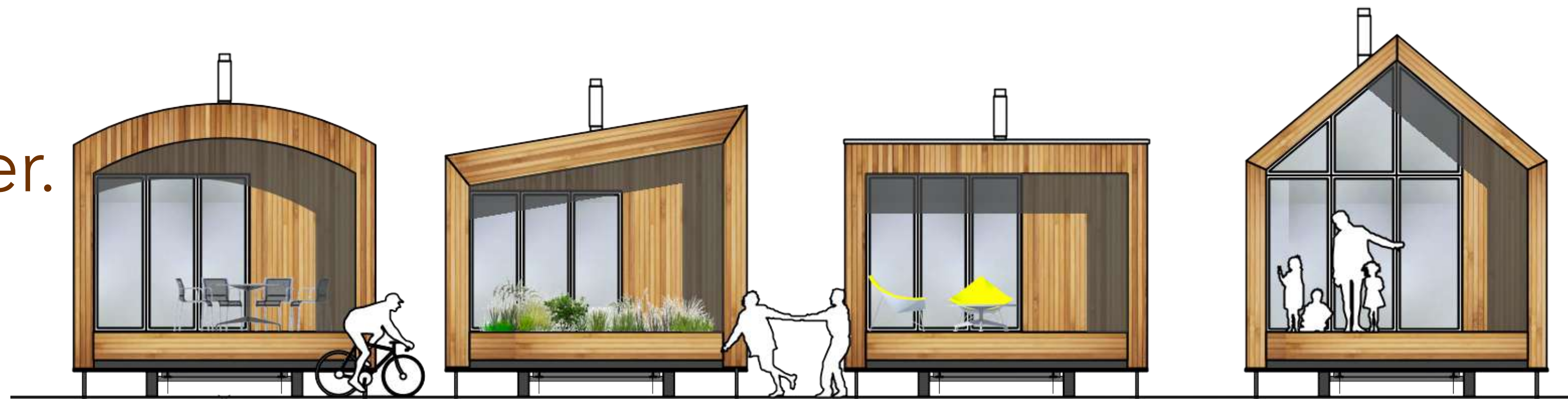
Construction There should be two sections separately constructed with the final act of assembly joining them.

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

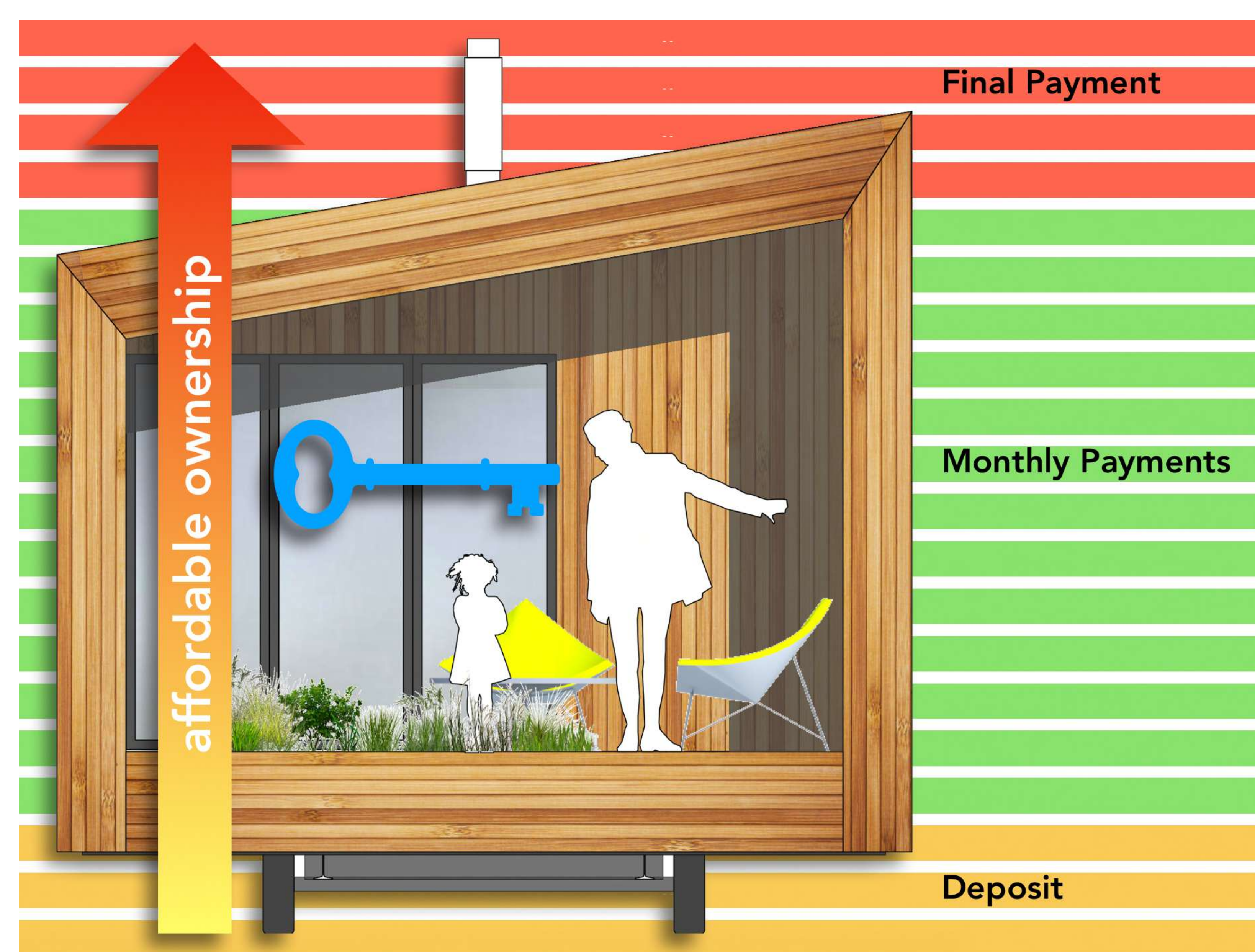
Size No larger than 20 x 6.8m with a floor to ceiling height less than 3.05m.

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

Tam 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



Homes
England



“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...

can make...

PEOPLE POWERED HOMES

MADE IN BRISTOL

MADE IN BRISTOL!



NEW RADICALS 2018



tam

Build With Carbon

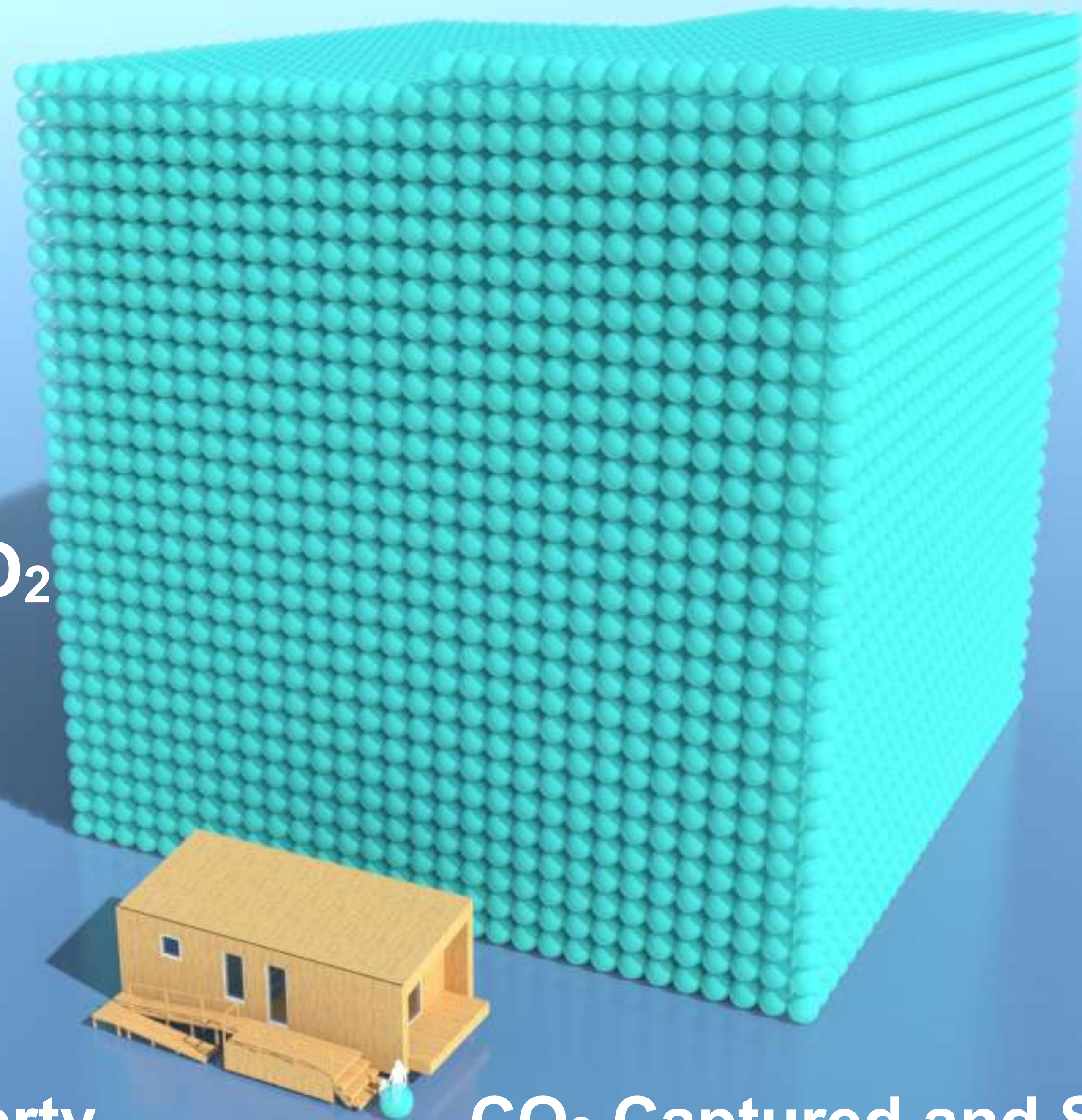


1 kg
CO₂

<https://agile.property>

tam

27 tonnes of CO₂



<https://agile.property>

CO₂ Captured and Stored in a TAM

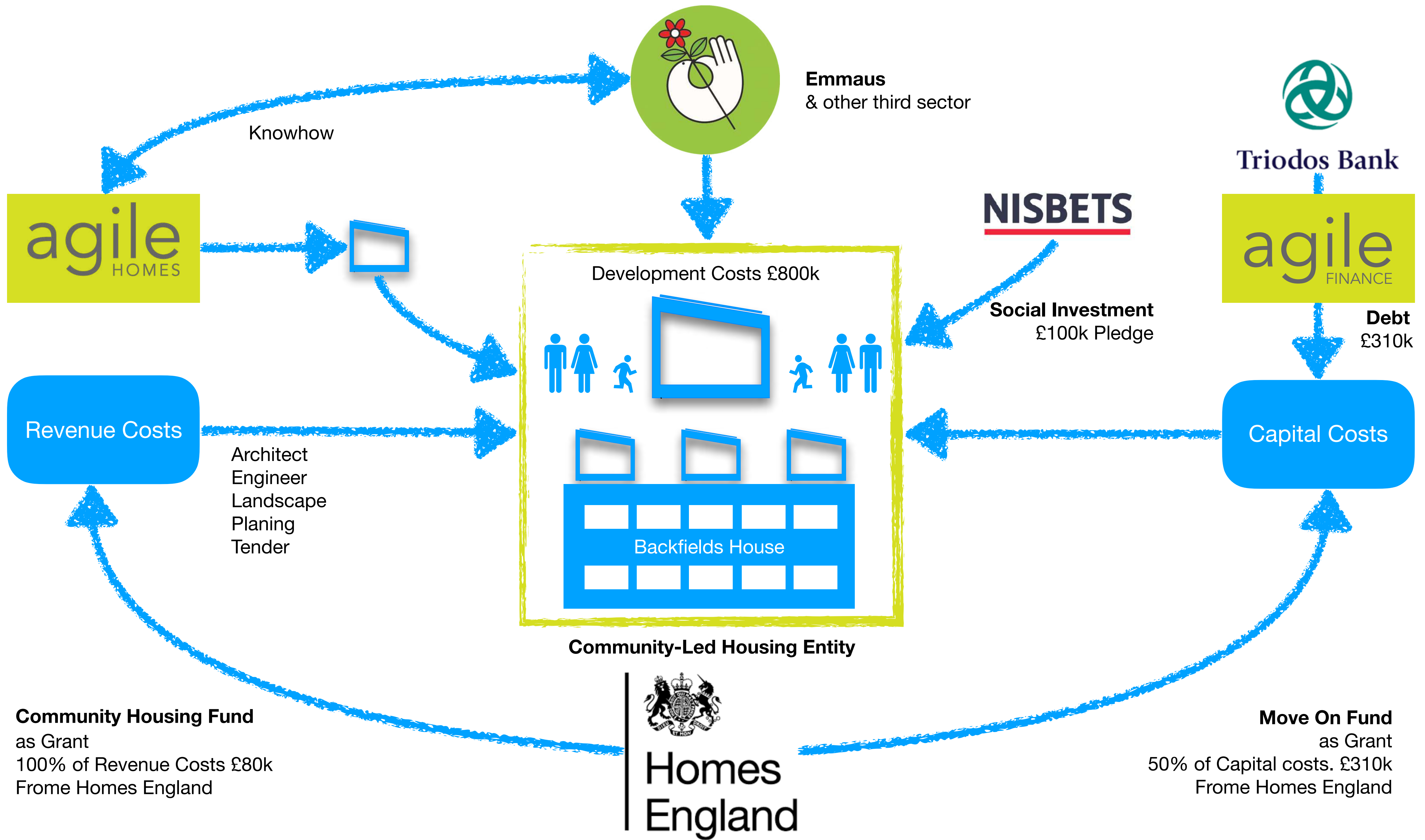




South East Elevation A



0 2 4



Emmaus Roof Top Economic Model





brl
Bristol Robotics Laboratory

UWE Bristol University of the West of England
University of BRISTOL

agile
HOMES

UWE Intergenerational Assisted Living Cluster



Dr Praminda Caleb-Solly
Principal Investigator



EST
HOURS



POCO
BRUNCH
SOURDOUGH
SARNIES
£1.50
YALLAH COFFEE
2019 SUSTAINABLE RESTAURANT OF THE YEAR



THEATRE
GRAPHICS
SIGN
ILLUSTRATION
PUPPETRY
DANCE
STUDIOS
MARTIAL ARTS
YOGA
WIFI
THE CANTEEN
ART PERFORMANCE
DANCING
FREE LIVE
COEXIST
HOTDESKING
SHOP
COMMUNITY HUB

SCHOOL



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.

A close-up photograph of vibrant green grass blades, many of which are covered with small, clear water droplets, suggesting a recent rain or dew. The lighting is soft, highlighting the texture of the grass and the glistening of the water.

Craig White

26 11 2019

EKTG and Fairhome

A cosmic-themed background featuring a deep blue space filled with numerous small white stars. Several large, glowing blue nebulae are scattered across the scene, and a prominent orange and red celestial body is visible near the bottom center.

@tweeteco

@AgileHomes

www.white-design.com