

# Tackling the Climate Emergency

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CEO @ BE-ST

Built  
Environment  
—  
Smarter  
Transformation



Launched in 2014, BE-ST is  
Scotland's national Innovation  
Centre for construction & the  
built environment



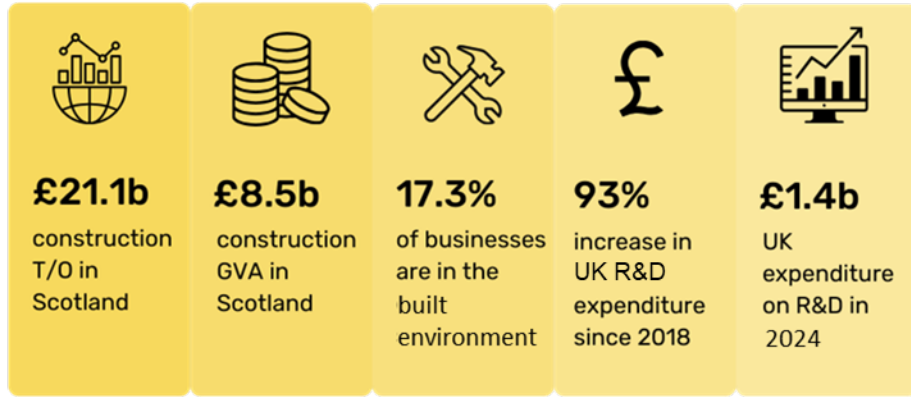
**Our Mission:**

To accelerate the just transition to a  
carbon negative built environment

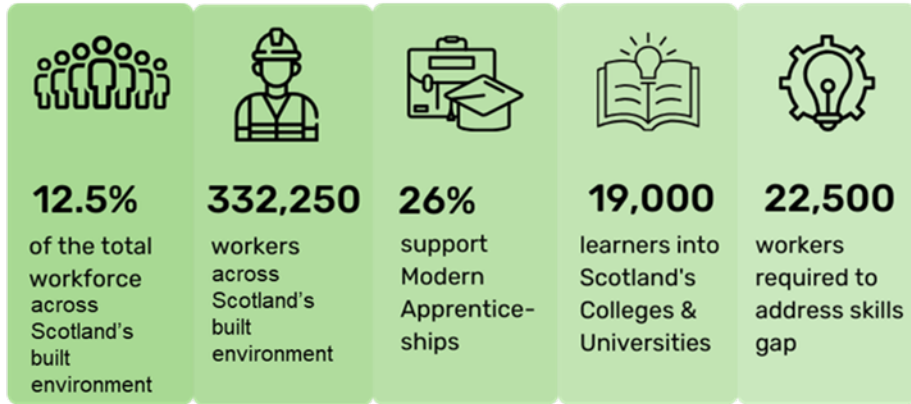


The built environment is the underpinning foundation of our economy, impacting the lives of every one of us, every single day.

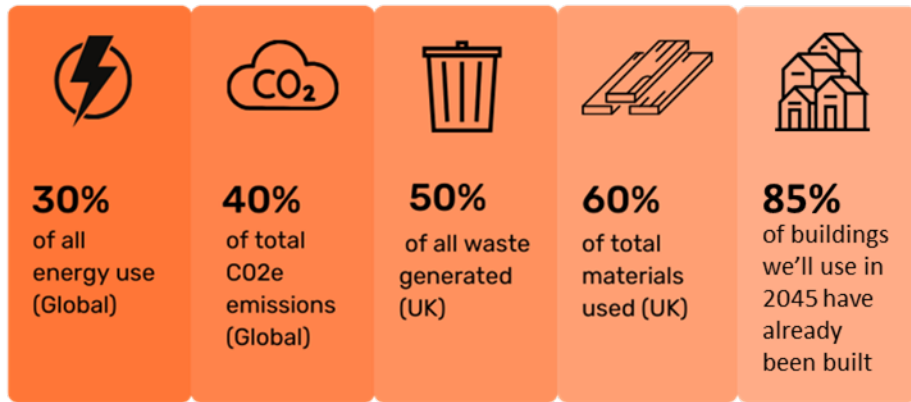
## Economic



## Social

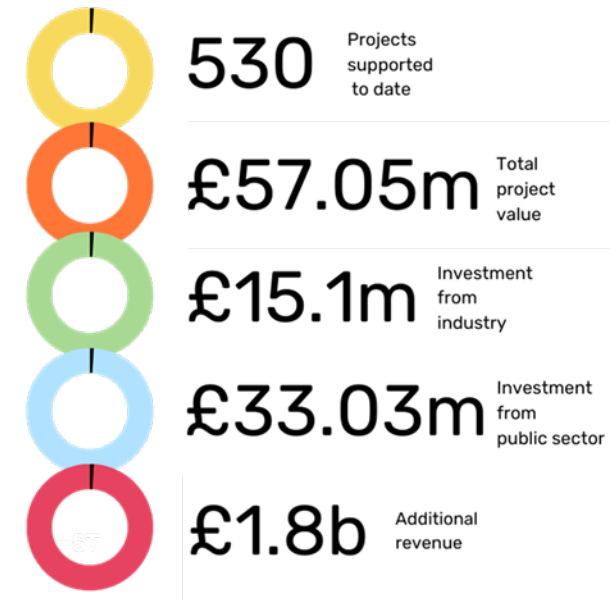


## Environmental



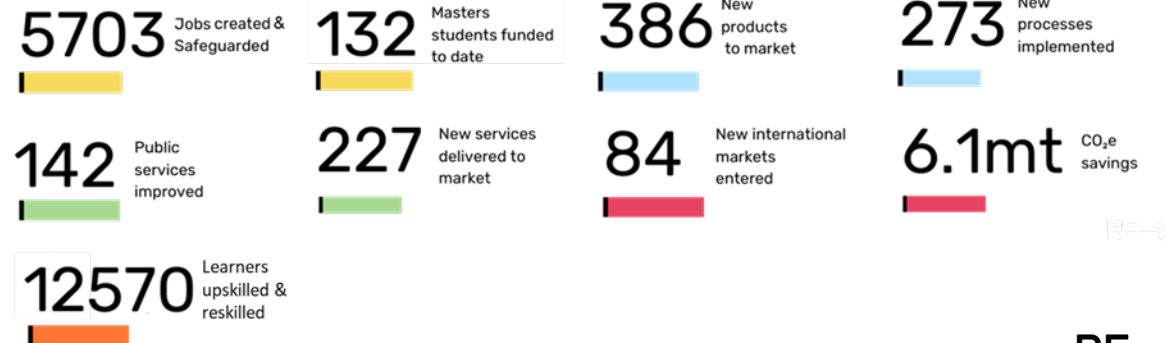
## Impact at a glance

2014 - 2024

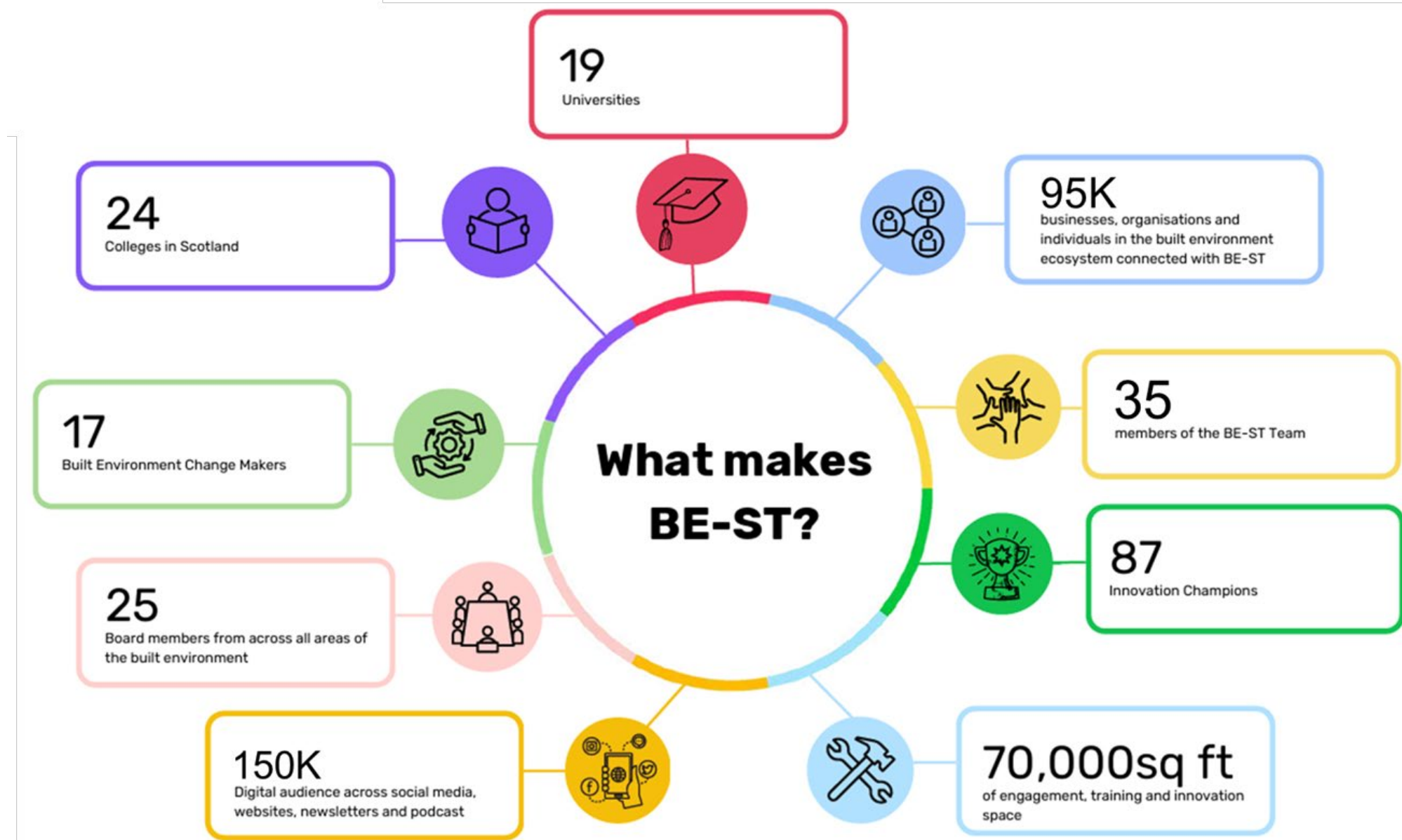


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## Impact to date

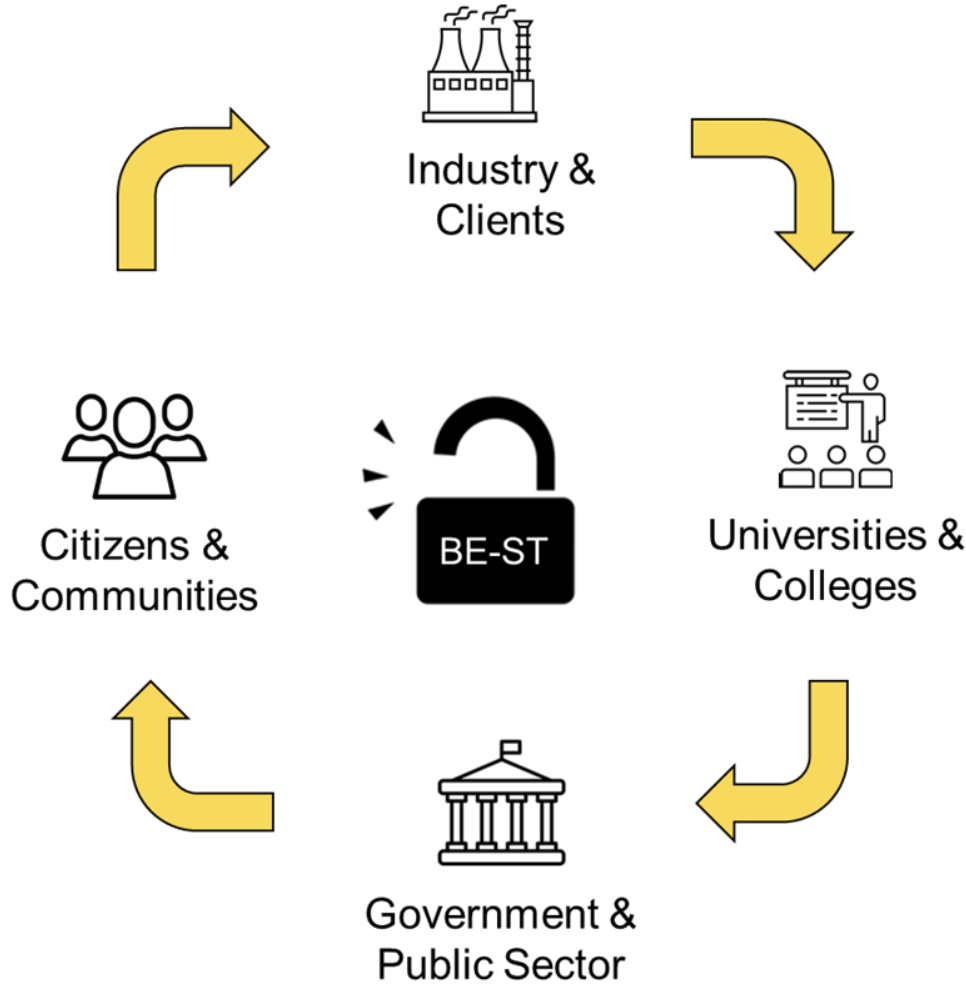


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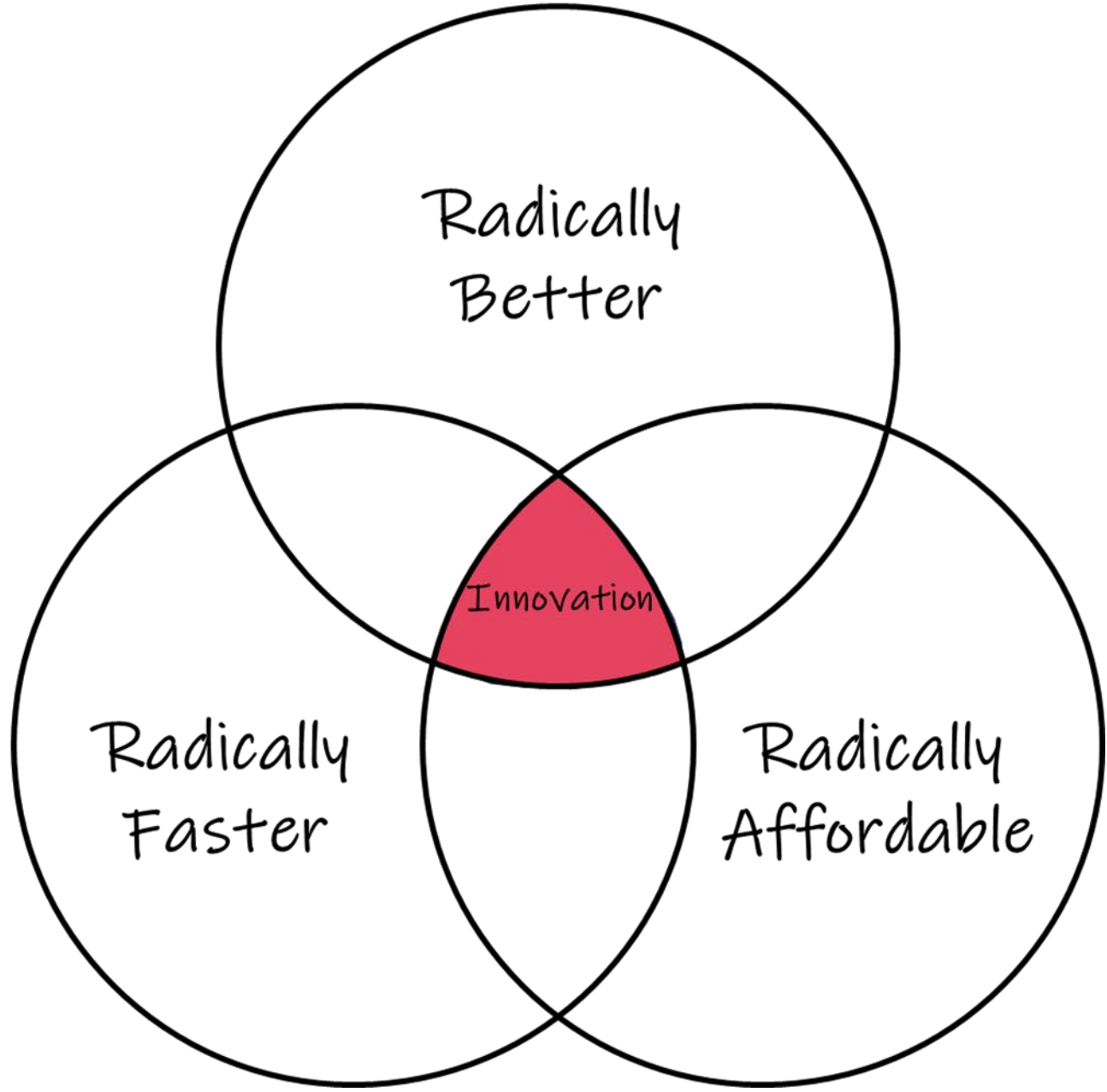
Innovation  
is **change**  
that  
unlocks  
**new value**





# Accelerate to ——— Zero

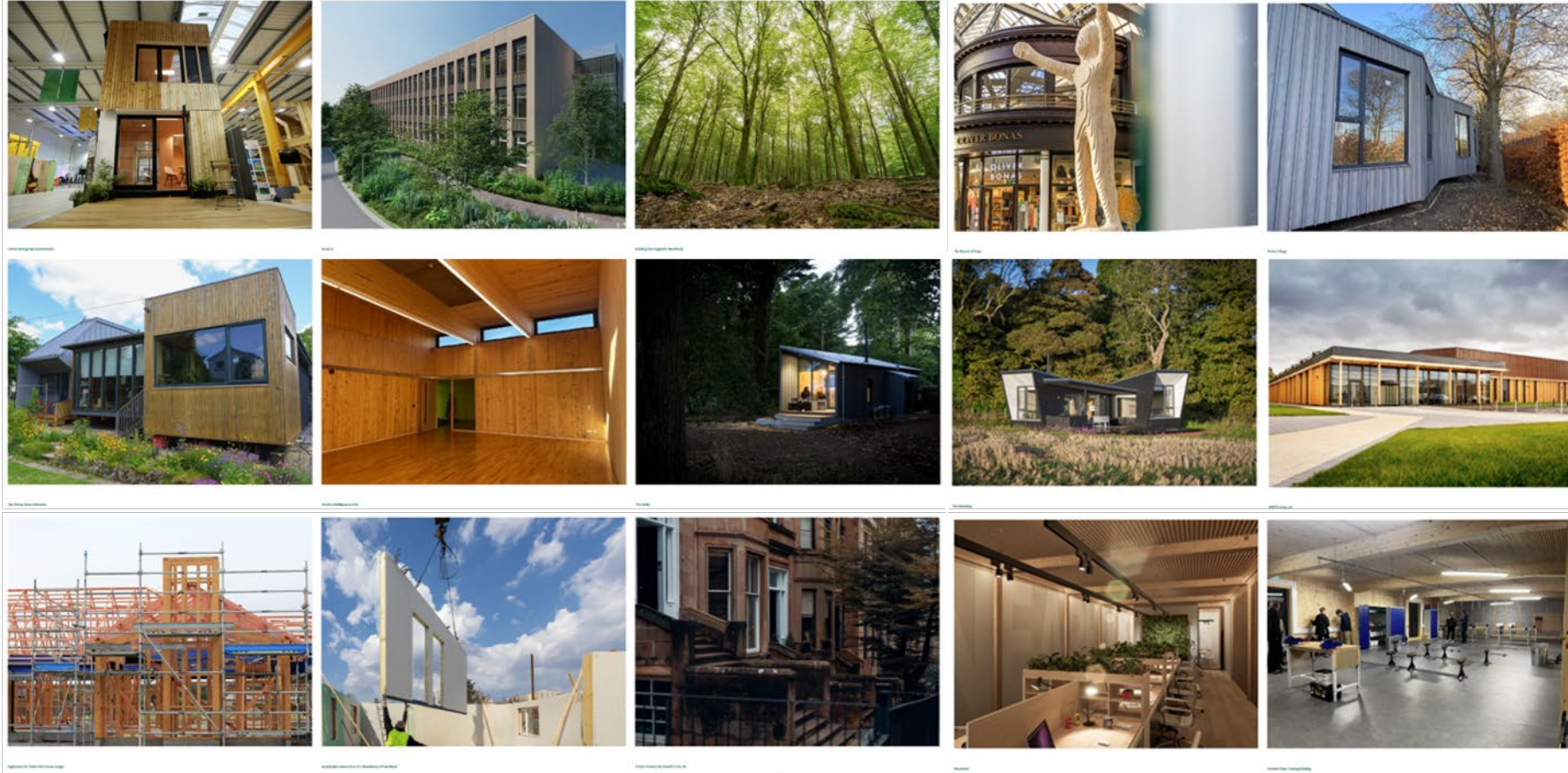
A carbon negative route map for the built environment



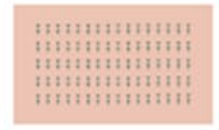
# T ↑ Transforming Timber

Re-engineering the future of the UK construction industry

Explore our projects



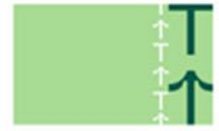
Ensuring Supply Chain Capacity for Mass Timber Commercialisation (SM)  
Download



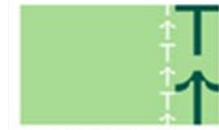
Circular Design for Reuse  
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How Homegrown Timber Stands Up to the Job  
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Quality Assurance and route to certification of Homegrown Mass Timber Systems  
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Life Cycle Analysis of the SMH Demonstrator Module  
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Post-Occupancy Evaluation Report on Fettes College Study Rooms  
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Timber in Construction Roadmap  
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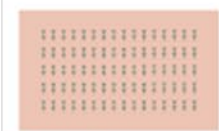
The National Wood Strategy  
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How Procurement Connects to the Uptake of Bio-OSM  
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Fire Safety and Performance of Engineered Timber in Modular Construction Addressing Knowledge and Research Gaps  
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Structural Testing  
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Systems to Enable Design for Manufacture and Assembly (DFMA)  
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# How Shall We Live?

New Settlements, New Imperatives, New Models



Human Nature Places Foundation

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Heatherwick studio

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Ash Sakula

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Architectural Office Michael Dillon

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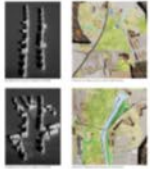
Human Nature

# How Shall We Live?

New Settlements, New Imperatives, New Models

# How Shall We Live?

## Genius Loci: The Unique Spirit Of A Place



## The Pattern Language of Place: Urban Structure



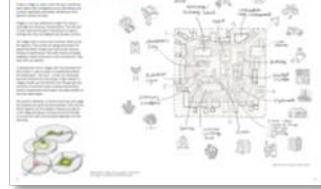
## Wild At Heart: A New Landscape Of Living



## Wild At Heart: Typologies



## It Takes A Village: A Network of Commons



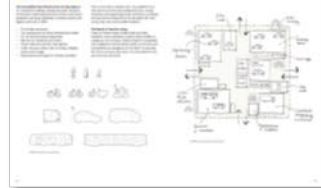
## Genius Loci: The Unique Spirit Of A Place



## Connectivity, Active & Sustainable Travel



## Connectivity, Active & Sustainable Travel



## Darwin's Sandwalk & The Better Everyday



## Growing A Place: A New Way Of Making A Town



## A Place To Start Out In Life And A Place To Stay



## Radically Affordable, Radically Better



## Radically Affordable, Radically Better



## Radically Affordable, Radically Better



## The 21st Century Transformative Economy & Community Wealth



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## Disruptive Delivery: Think Slow, Act Fast and ... Mend Things



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# The Whole Place

## The Whole Place: Remarkable Outcomes

The Whole Place: Remarkable Outcomes

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# Impact

Human Nature has developed a bespoke framework for strategy, planning, design, goal setting, measuring, monitoring and learning to achieve remarkable, regenerative, impacts. This Circle of Impact sets out 12 interrelated ways in which at neighbourhood-scale we and our partners can drive uniquely powerful and urgent transformational change, at a replicable, appropriate and sufficient scale, improving lives while regenerating the biosphere.

Each tool has the possibility to create positive impacts. But all tools deployed together and in an integrated way in place are exceptionally effective in achieving compound, transformative impacts towards exponential sustainability. And more than this, they can both inspire and make it far easier for all to live well and sustainably as we approach the second quarter of this century of extraordinary challenges and opportunities.



## The 12 levers of transformational change



**1. Energy & infrastructure**  
Generating, importing, storing, distributing and managing renewable energy; creating a clean and potable water supply, sewage treatment, with circular resource management, all reducing the cost of living.



**2. Buildings & fabric**  
Sourcing materials from our bioregion, 'mining the Anthropocene' (as architect Duncan Baker Brown has it) for salvage and reuse; use of regenerative and low impact materials, finding safe ways to use engineered and other timber; kickstarting local timber industries.



**3. Homes**  
Creating compact but beautifully proportioned and well lit, super-insulated homes. Using raw structure with occupant-led finishes; super-efficient appliances; accessible roofs for gardening, food growing and ecology. Manual for ease of maintenance and repairs; shared storage, housing for bikes of all kinds, laundries, tools and common areas.



**4. Sustainable mobility**  
Encouraging walking and cycling as the primary means of movement, with safe, green streets, short blocks, inviting corners and excellent connectivity. Co-mobility services, including EV car club and hire, centralised parking and EV shuttle service.



**5. Stewardship & services**  
Facilitating professional, commercial and community enterprises that own, build, maintain, repair buildings and building fabric, gardens, streets, energy systems, co-mobility services, shared community spaces, local composting, waste collection, re-use and recycling.



**6. Enterprise & creativity**  
Providing multiple spaces for enterprise from home and co-working, studios, hybrid social spaces, makers spaces, events and meetings spaces. Local expertise in circularity and business support.



**7. Affordable living & community wealth**  
Creating mixed-income communities with more expensive homes to support the provision of affordable homes; different kinds of affordable tenures, institutional private rent, co-housing; shared spaces and facilities; community canteen; local food scheme; collective insurance, affordable energy, estate management; hiring and purchasing locally.



**8. Catalytic conversations**  
Engaging in conversations – from deep purpose to key themes – effective listening and deliberative processes, creating important agents of change. New ways emerge as opportunities, not constraints; finding ways to agree upon strategy and actions for exponential sustainability.



**9. Land use & place**  
Shaping urban structure and form through iterative and transdisciplinary design, marshalling streets, blocks, plots, roofscapes, townscapes and landscapes to create beautiful mixed-use, walkable neighbourhoods that will stand the test of time. Selection of land-use types to ensure mixed-use neighbourhoods and buildings and curating the choice of tenants in pursuit of HN purposes



**10. Bioregion & ecosystems**  
Connecting optimised urban ecology to other ecologies; sourcing food from regenerative farms; low-carbon materials from the bioregion; cycling and going slower to better understand a place and its context, creating new habitats and encouraging biodiversity.



**11. Behaviour & culture**  
Encouraging and enabling people to live sustainably, creating Everyday Heroes who – as per climate scientist Peter Kalmus – inspire others to make positive changes, ultimately creating happier, healthier lifestyles and communities.



**12. Public health & wellbeing**  
Designing compact neighbourhoods that reduce social isolation, loneliness and depression; promoting walking and cycling; neighbourliness; healthy food sourcing; creating active living and fitness centres and trails and primary and complementary health and social care.

## HUMAN NATURE PURPOSE

### CLIMATE AND GLOBAL FAIR SHARES CARBON

To show how all can be supported in taking huge steps in the transition to the target of 2.3 tonnes of carbon, representing a Global Fair Share allowance per person and an appropriate international model of contraction and convergence.

### REGENERATIVE ENVIRONMENTAL HANDPRINTS

Turning GHG and land footprints into environmental handprints where dangerous gases are taken out of the atmosphere so that the climate stabilises, and land, soil, aquatic and other habitats are regenerated and enhanced.

### SOCIAL VALUE

Ensuring people are housed well, new forms of affordable living are made accessible to all, and shared spaces, resources and experience help heal social divisions and build a more open, tolerant, and cohesive society in which all have the opportunity to fulfil their capabilities and flourish.

### BEAUTIFUL AND RESILIENT HOMES & PLACES

Creating beautiful and resilient living environments for people to enjoy and flourish in; designed to establish traditions in how places will stand the test of time, adapt to ever-changing context and needs and cultivate and nurture a compelling sense of place and belonging.

### A NEW SOCIAL IMAGINATION AND THE STORIES TO INSPIRE CHANGE

Helping to forge and amplify a wonderfully optimistic and relatable world view – a new social imagination – about how to live well with abundance and ease in this Century of extraordinary challenges and opportunities; what it will take to make this opportunity available to all, grounded in relatable action and stories not theory or abstract expressions of hope.

### AN ENGINE OF BEHAVIOURAL CHANGE AND BETTER CHOICES

Widespread behavioural change with people being supported in making better choices about what we eat and its provenance, in consumption generally, in our use of energy, to discretionary travel and travel modes and shared resources and services, all having regard to greater affordability and accessibility.

### AN ECONOMY THAT WORKS FOR ALL

Inspiring and enabling a series of cumulative step-changes in the emergence of the creative, productive, inclusive and circular economy.



*“It’s rare to feel excited about UK housing developments but this ambitious project in Sussex is truly remarkable”*

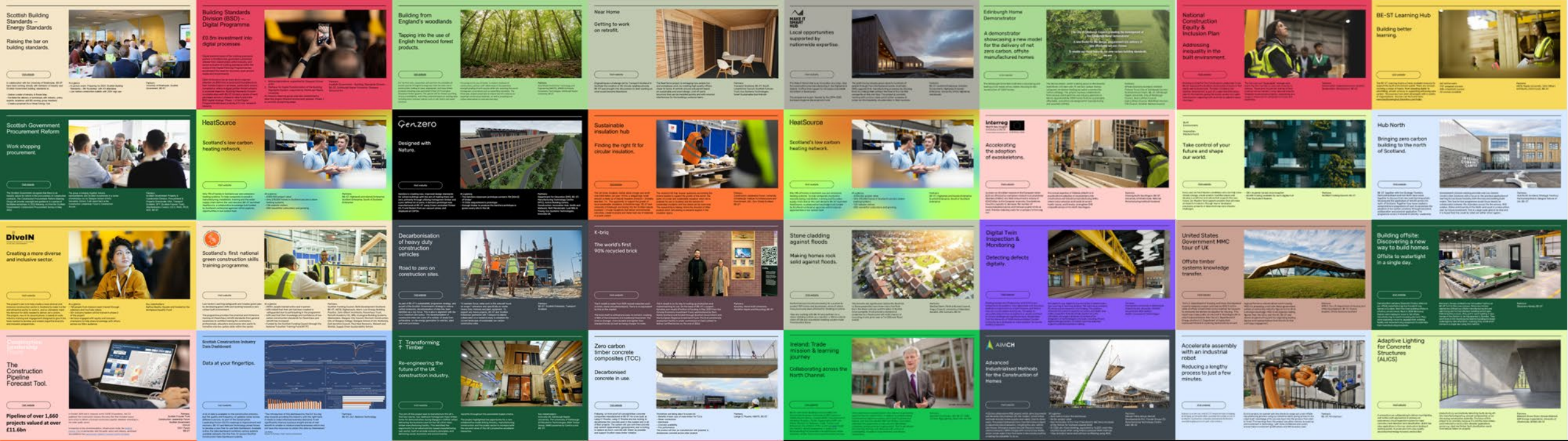
Phin Harper, The Guardian



**Human  
Nature**

Want to be part of the  
Natural Buildings Group..?





# Thank You

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 Smarter Transformation

