

May-July 2024

SOUTH LONDON

# Toward a Roadmap for Retrofit



Studio  
Zao



University of  
Roehampton  
London

RETROFIT  
SKILLS CENTRE

## EXECUTIVE SUMMARY

On May 29th 2024, [South London Partnership](#) convened a ‘[South London Retrofit Roundtable](#)’ event, hosted by the [University of Roehampton](#) and facilitated by [Studio Zao](#).

This roundtable brought together representatives from South London partner organisations and institutions, leading retrofit industry practitioners, experts in sustainable engineering and technology drawn from across academia and business, and from policymakers and stakeholders who are engaged in retrofit strategy and investment decision-making at the pan-London and national level.

Over 50 stakeholders convened to reimagine and design the future of retrofit in South London, aligning on the opportunities, priorities and challenges represented by retrofit. Beyond this, the group explored the wider potential for the creation of a recognised retrofit and built environment cluster within South London to drive the transition to net zero.

The discussion focused on identifying and unwrapping the different ‘themes’ within retrofit:

1. Educating and engaging the market
2. Skills and the workforce
3. Research and innovation
4. Financing and funding
5. Policy, planning and structure
6. Data

This document collates the discussion, acting as a ‘north star’ for the next steps to come. The strategic consensus gathered in the Roundtable formulated a ‘challenge-oriented’ Roadmap - a series of workstreams and focuses based on key needs that may be solved at a Sub-regional level.



**Stephen Pretlove**  
Professor and Director of  
Sustainable Engineering,  
University of Roehampton



## KEY CONSIDERATIONS

The transition to net-zero buildings has the potential to generate **significant socio-economic value for residents and businesses** across the built-environment in South London. As the national decarbonisation movement gains traction, there is a clear competitive advantage to taking action **now** to build a service ecosystem capable of delivering retrofit on a large scale.

However, there is currently a knowledge gap amongst partners around which lever to pull first to kickstart and accelerate the decarbonisation needed by 2030, and further ambiguity around how to deliver this **productively**.

Despite the aggressive sustainability targets in place, **progress in this area may be constrained by several factors** identified in the discussions:

- Retrofit efforts do need to be carried out at scale, prioritising both quality *and* speed, but *without* producing inequitable results through inevitable financial constraints.
- Demand, both public and private, needs to meet supply in equilibrium - and the context starts with little weight on each side.
- There is no one-size-fits-all approach. The built environment is complex, fragmented and highly local with varying and often conflicting building archetypes, residents and decision-makers to navigate.

Therefore, building a **fit-for-purpose retrofit ecosystem within South London can only be achieved through joint partnership and collaboration** between its different players, driving decarbonisation in a way that is mutually beneficial to realise maximum value.

## RECOMMENDATIONS



### A PLACE FOR A DE-POLITICISED, CENTRALISED RETROFIT ENGINE

Retrofit activities would benefit from being standalone - in its skills pipeline, its market and its investment sources. There could be value in the creation of an arms-length independent entity - an *Engine* - insulated from political fluctuations, to oversee and coordinate delivery, and attract and allocate a consistent pipeline of capital investment from both public and private sources. This structure would also provide clear channels, visibility and incentives for new innovative retrofit products and practices to be adopted.



### WITH ENGAGED AND VISIBLE LEADERSHIP...

To succeed, this Engine would benefit from active leadership and advocacy from stakeholders to operate efficiently. Proactive engagement to explain and advocate for the business case for Retrofit would help ensure this topic stays at the top of agendas in the coming years.



### AND AN INCLUSIVE DESIGN.

Equality, diversity and inclusion must be considered at every stage of development to ensure that the benefits of retrofit are equitably distributed and do not disproportionately affect privileged groups.

This extends to designing opportunities for collaboration, as competition between universities, businesses and local government for funding and other resources may otherwise hinder progress.

**The SLP will convene further discussions around the takeaways - and the Roadmap challenges identified in this document. See [page 12](#).**

## THE SOUTH LONDON RETROFIT OPPORTUNITY

**While modern discussions around retrofit focus largely on the environmental and economic value such initiatives will offer, the opportunity of retrofit is much broader and multi-dimensional. Retrofit offers a valuable mechanism to tackle the diverse needs of a range of stakeholders in South London at once.**

The large-scale decarbonisation of buildings is imperative to addressing the climate emergency, supporting the UK's commitment to reach net zero emissions by 2050.

The extensive number of interventions required to hit this goal offers clear economic value in stimulating the local economy and generating a sustainable pipeline of jobs for the local workforce. There are also broader economic multiplier effects, such as through increased local spending by newly employed workers and the growth of local businesses within the retrofit supply chain.

The South London Partnership (SLP), funded by the Department of Energy, Security and Net Zero through the Greater South East Net Zero Hub, is already taking proactive steps to deliver this value by launching the [Retrofit Skills Centre](#) - a one-stop-shop for upskilling and training across retrofit. The online hub aims to signpost individuals and businesses to the right training, qualifications and events that will unlock more work locally (see [page 16](#) for more information).

However, in navigating the course toward a climate-neutral future, the wider social benefits provided by retrofit beyond core emission and cost-of-living reductions should not be discounted. Efforts to improve the existing housing stock may also increase wellbeing and prosperity for every socioeconomic group, helping thousands of residents avoid the damaging physical and mental health effects of living in substandard accommodation ([Arup, 2024](#)); fuel poverty and poor living conditions disproportionately affect lower-income households.

By upgrading insulation, heating systems and overall building efficiency, retrofit projects could directly address these inequalities and significantly enhance the quality of life for South London residents and communities.

### 66,250

person-years

Required to retrofit all South London properties in 10 years

### £17

billion

Opportunity represented by retrofit cluster in South London

### 635k

properties

To decarbonise in South London by 2030

### 10,997

businesses

Currently in South London's retrofit supply chain

## HOW THE ROUNDTABLE WAS CONDUCTED

A wide variety of stakeholders from within and external to South London were invited to attend a 3 hour session on May 29th, at the University of Roehampton. The session, facilitated by Studio Zao, utilised a '*diamond*' approach to open and distil the conversation. The first part of the session involved smaller, facilitated groups exploring key areas and needs across the topic, before reconvening after the break to develop a series of 'How Do We' questions and challenges. This provided a framework of problem statements and focus areas that were 'worth solving' - these will formulate the basis of the Roadmap outlined in the following slides.

The Strategic topics were generated by focusing on the **Direction, Value and Urgency** of specific areas of exploration - and those that *made sense to pursue at a sub-regional level*. The consensus captured in the session provides a starting point from which to direct activities, focus and resources, based on the value solving them collectively, at a sub-regional level, that might be realised.

### STUDIO ZAO

Studio Zao are a London-based innovation and delivery consultancy. They help people in organisations and ecosystems to innovate *productively*, align strategically, and deliver return on investment and impact.



Productive Innovation

Studio Zao have worked with South London partners for 2 years, delivering BIG business growth programmes, and supporting the strategic direction of the partnership. Their knowledge of South London, innovation, and ecosystem development placed them as a strategic facilitator of next steps in this space.

For more information, see the [appendix](#).

## DIAMOND MODEL

### EXERCISE 1

#### *Expansive Thinking*

Driving out the key topics of focus, aligned against Direction (the topic), Value (is this worth solving, for all) and Urgency (why this, as a priority?)

EXERCISE 1

EXERCISE 2

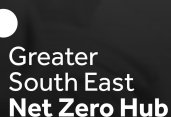
### EXERCISE 2

#### *Selective Thinking*

Diving into these areas and formulating 'How Do We' questions, that act as challenges to solve and form the basis of a roadmap to tackle this at South London level, and beyond.

The strategic consensus gathered in the Roundtable formulated a 'challenge-oriented' Roadmap - a series of workstreams and focuses based on key needs that may be solved at a Sub-regional level.

# ROADMAP





## CHALLENGE-ORIENTED ROADMAP

THEME & FOCUS	SHORT TERM	MEDIUM TERM	LONG TERM
<b>Educating and Engaging the Market</b> Stimulating demand for retrofit within the private market through targeting educational gaps.	<b>HOW DO WE</b> improve understanding of retrofit to stimulate demand?	<b>HOW DO WE</b> improve the customer journey for retrofit?	
<b>Skills and the Workforce*</b> Creating incentives and attracting individuals to retrofit training and upskilling.	<b>HOW DO WE</b> motivate young people to engage with retrofit career opportunities?		<b>HOW DO WE</b> change negative perceptions of the construction industry amongst diverse workforce?
<b>Research and Innovation</b> Fostering innovation amongst educational institutions and startups to support retrofit delivery.	<b>HOW DO WE</b> promote collaboration across the retrofit ecosystem?	<b>HOW DO WE</b> support “innovators” to commercialise their products, and improve speed to market / impact?	
<b>Financing and Funding</b> Creating mechanisms for the receipt, allocation and distribution of funding.		<b>HOW DO WE</b> centralise funding and financing for investment into Retrofit pilot programmes?	
<b>Policy, Planning and Structure</b> Supporting retrofit delivery at a policy-level, providing the right structure for long-term success.	<b>HOW DO WE</b> engage strategic leaders to champion and enable policy change?		<b>HOW DO WE</b> make access to retrofit equitable for consumers?
<b>Data</b> Collecting, managing and leveraging data effectively to support the delivery of retrofit.		<b>HOW DO WE</b> define data requirements to provide foundational support for a retrofit campaign?	<b>HOW DO WE</b> build a sub-regional database to drive better decision making?

\*To be considered in addition to current and existing Skills projects and working groups.

## EDUCATING AND ENGAGING THE MARKET

### HOW DO WE improve understanding of retrofit to stimulate demand?

The language around retrofit is nebulous, covering everything from fixing windows to installing expensive heating systems. The narrative must change to help homeowners and residents align this with 'home improvement' terminology, increase collaboration within communities, and support landlord to turn to green, energy saving solutions as a priority investment in their estate. If we can create aggregate opportunities for investment, speed of delivery will accelerate.

**Activities:** Educational campaign at sub-regional level, emphasising place-based elements and tailored to South London needs and nuances.

**Success Metrics:** Engagement at the consumer level for improvements; establishment of resident-lead groups to drive retrofit in communities,

**Timeframe:** Short-term

### HOW DO WE improve the customer journey for retrofit?

A 'customer journey' for residents, landlords and homeowners is required to establish clarity around what steps need to be taken, and in what order, to retrofit their home or housing stock. Providing concise and understandable information, options and associated costs / financing streams can illuminate the pathway to access and improve the 'user experience' when exploring retrofitting opportunities.

**Activities:** Create V1 of 'customer journey' for retrofit; disseminate through channels.

**Success Metrics:** Engagement with journey / website; feedback and input from end-users.

**Timeframe:** Mid-term

## SKILLS AND THE WORKFORCE

### HOW DO WE motivate young people to engage with retrofit career opportunities?

In order to make retrofit more appealing, there needs to be a stronger understanding around the motivations and drivers amongst young people for pursuing a chosen career path. The opportunity is there to engage young people according to their interests, locality and longer term professional goals and growth.

**Activities:** Explore motivations for retrofit career pathways for young people; promote campaign that focuses on relevant language and aspirations.

**Success Metrics:** Delivery of campaign; sign ups from schools / colleges.

**Timeframe:** Short-term

### HOW DO WE change negative perceptions of the construction industry amongst diverse workforce?

The construction industry carries several negative perceptions: hard hat, male-dominated, low pay, little career development, low reward. Education providers and those within the industry can be supported to take an active role in challenging these perceptions, and diversifying the workforce to promote equity and accessibility.

**Activities:** Pilot programmes to engage diverse audiences with construction / retrofit roles and opportunities

**Success Metrics:** Improved diversity metrics in retrofit roles

**Timeframe:** Long-term



## RESEARCH AND INNOVATION

### HOW DO WE promote collaboration across the retrofit ecosystem?

We want to encourage collaboration, joint proposals and co-development of initiatives across South London partners, to maximise impact and to ensure that organisations are able to contribute to retrofit efforts locally. This can stimulate an ecosystem of innovation and deliver solutions to complex local challenges at speed.

**Activities:** Establish a forum for collaboration on innovation / research / funding briefs, driven by value and impact.

**Success Metrics:** Joint applications for funding / innovation opportunities.

**Timeframe:** Short-term

### HOW DO WE support “innovators” to commercialise their products, and improve speed to market / impact?

There is considerable ambiguity and lack of understanding around the channels, guidelines and incentives to take ideas or products to market. Creating a more fluid pipeline for ideation, pilots and scaling can stimulate local start ups, *intrapreneurs* and industry partners to deliver solutions to market can boost engagement locally and provide faster methods to roll out Retrofit.

**Activities:** Design and define what an innovation pathway in South London could look like.

**Success Metrics:** Sign ups from local innovators to join pathway.

**Timeframe:** Medium-term

## FINANCING AND FUNDING

### HOW DO WE centralise funding and financing for investment into Retrofit pilot programmes?

Challenges exist in part because of timing, but also because there is no single source of truth on the broader size of the prize for retrofit nationally, regionally and sub-regionally. An approach must be established that explores brokering investors with aggregate opportunities, connecting residents with sources of funding, and centralising central and local public funding for distribution against high-priority and high-value criteria.

A vehicle for investment, that enables public and private collaboration, could support this model and drive consistency of approach.

Engaging the supply chain to better understand how the funding available can stimulate their adoption of existing technologies and skills will drive a co-benefit in sustaining the pipeline of work.

**Activities:** Explore financing approaches that promote validated investment decision making and part-centralises asks and bids for funding from national sources.

**Success Metrics:** Applications into centralised fund; acquisition of diversified funding streams.

**Timeframe:** Medium-term

## POLICY, PLANNING & STRUCTURE

### HOW DO WE engage strategic leaders to champion and enable policy change?

Senior executives across organisations play a pivotal role in policy formation. Engagement and training outreach needs to expand beyond the skills needed for operational delivery to include the ways in which retrofit can be enabled, long term. Supporting leaders to understand and articulate the business case for retrofit can help ensure that it remains a priority within future policy and planning frameworks.

**Activities:** Convene leadership forums at sub-regional level, share knowledge and develop collective business cases.

**Success Metrics:** Retrofit on C-Suite/ Executive agendas.

**Timeframe:** Short-term

### HOW DO WE make access to retrofit equitable for consumers?

Regulation must actively ensure equitable access to retrofit. Oversight of the developing market and pipeline of work is required to promote the interests of stakeholders from more deprived socio-economic circumstances, and provide impetus and leadership on ensuring the transition is equitable and fair.

**Activities:** Establish outline of policy and campaign for social value as a key pillar of retrofit activity (e.g. in procurement frameworks).

**Success Metrics:** Map percentage of social housing and other residential stock with improved efficiency against wider roll out.

**Timeframe:** Long-term

## DATA

### HOW DO WE build a sub-regional database to drive better decision making?

Currently, we are missing a 'one source of truth' for data and information on the built environment in South London. South London contains a number of commonalities and potential 'archetypes', both by asset type and demographic, that could be used to drive decision making for priority activity and a provide place-based approach to delivery. Accessing this would allow us to move beyond a 'one-size-fits-all' approach.

**Activities:** Establish current data sets, and create hypotheses for archetypes at Sub-regional level.

**Success Metrics:** Proof of concept for priority archetypes created.

**Timeframe:** Medium-term

### HOW DO WE define data requirements to provide foundational support for a retrofit campaign?

A problem-led data collection approach is imperative. There are no incentives to collect or store data if there are no clear use cases for it. We first need to understand what the key questions to answer are and what data is required for good evidence-based planning and decision making.

**Activities:** Outline data needs, what the use cases are, and what framework is appropriate to establish for data collection.

**Success Metrics:** Agree data collection use cases.

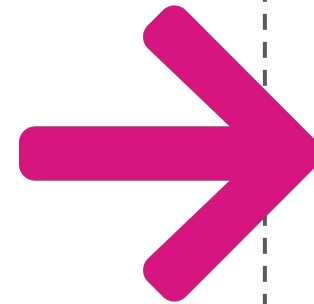
**Timeframe:** Short-term

## MAKING THIS HAPPEN: A SUB-REGIONAL **RETROFIT ENGINE**

*'We believe that there is a desire and need for a vehicle - or an engine - that provides leadership for Retrofit delivery, scale and collaboration in South London, tasked with coordinating joined up thinking in the region and driving innovation to achieve shared goals and targets, both existing and those developed in the future.'*

To test and validate the above hypothesis, Studio Zao recommends the establishment of a coordination vehicle - **an engine** - that will be responsible for conducting experiments, activities and pilot initiatives that explore these challenges, and ensures there is an agile approach taken to understanding what will work best for partners and the wider community. The scope for this vehicle is detailed out in the Roadmap identified above ([page 7](#)).

The Roundtable made it clear there is a desire for leadership and direction for Retrofit in South London - this engine will provide a home for the roll out of solutions that meet these challenges, at a Sub-Regional level.



### INNOVATIVE MINDSET



The engine must be designed to embed an innovative, open approach to new ideas and solutions.

The roadmap is challenge-oriented by design. We do not yet know the exact solutions / programmes required to achieve goals, so an open, curious and lean mindset is required to promote impact and distribute funding productively.

### ENGAGED COMMUNITIES



The challenges have identified the need to engage markets, support the supply chain, and enable leaders to embed retrofit in long term, de-politicised plans.

This Engine must view itself as a convener of communities and individuals, driving external engagement and providing the tools for ancillary impact through others.

### SUB-REGIONAL FOCUS



This is about adding value to existing borough level activities. The advantage of convening across the South London area is to move the needle at the Sub-Regional level. Focusing on the "How Do We's" identified provides a foundation for collaboration with the boroughs individual organisations, and funders.

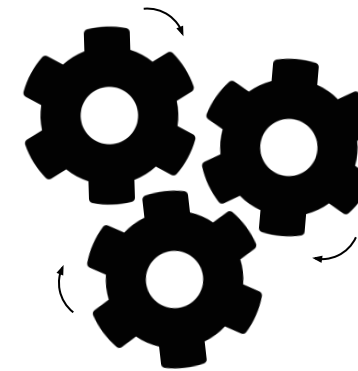
Building a team that represents this will connect stakeholders from across sectors and establish a 'voice' for retrofit to regional and national bodies.

### EXPERIMENTATIVE APPROACH



The engine must adopt and establish a coherent approach for delivering on the challenges, through a robust experimentation process.

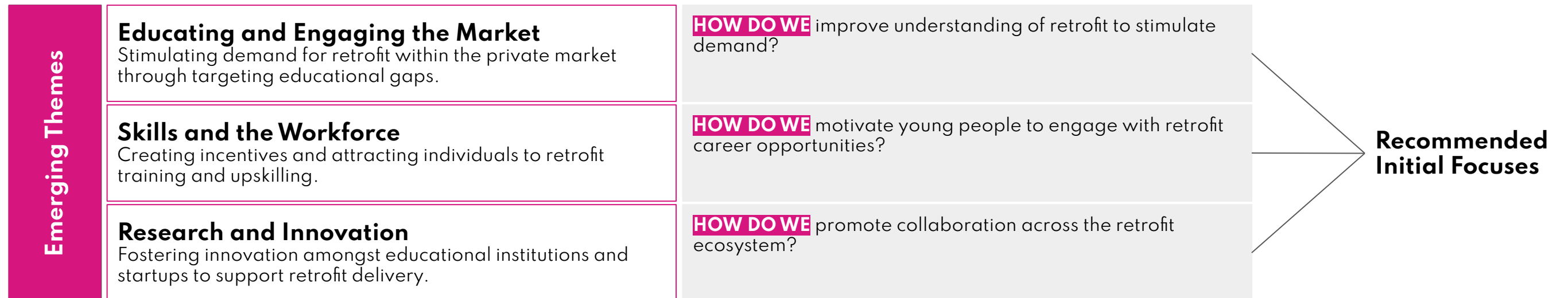
Establish pilots to test solutions and ideas, build momentum and case studies, and provide the market with confidence. It must measure progress through agreed metrics and goals. Regularly review learning - is this working?





## RECOMMENDED NEXT STEPS

As outlined on [page 7](#) of this Roadmap, delegates identified the key questions around the South London retrofit ecosystem that they want answered in the short-term:



### FUTURE DISCUSSIONS

The South London Partnership (SLP) are committed to convening and facilitating future discussions around these three emerging themes, and the short-term 'How Do We' questions identified within them.

### INTERESTED IN PARTICIPATING?

All delegates, including those that were unable to attend, will receive an email invitation to **complete a short survey** to provide feedback on the session. If you are interested in participating, please opt in to joining these future work streams.

If you were not a part of the Roundtable but are interested in being part of the discussions, **please contact Paul Kirkbright** at [paul.kirkbright@southlondonpartnership.co.uk](mailto:paul.kirkbright@southlondonpartnership.co.uk), or **Chris Baker** at [chris@studiozao.com](mailto:chris@studiozao.com).

# APPENDIX



Studio  
Zao



University of  
Roehampton  
London

RETROFIT  
SKILLS CENTRE



Greater  
South East  
Net Zero Hub



Department for  
Energy Security  
& Net Zero

# PARTICIPATING ORGANISATIONS





## HOW DO WE QUESTIONS (EXHAUSTIVE)

### POLICY, PLANNING & STRUCTURE

- Increase the speed of adoption of innovation through policy / approaches?
- Create an investment vehicle for retrofit that is attractive to capital sources?
- Educate and upskill strategic leaders ('the top') to enable policy and structure change?
- Create a less fragmented, more collaborative environment for retrofit at sub-regional level?
- Improve the landscape for town planning in the built environment space?
- Measure and talk about the risk of 'doing nothing' (at building level)?
- Create a sense of "guide rails" for regulation and stability (for the market to avoid exploitation)?
- Make retrofit 'more affordable for consumers (improving equitable access)?
- Create a specific framework for regulating the heritage building landscape?

### EDUCATING AND ENGAGING THE MARKET

- Leverage demand in commercial sector to support and scale domestic market?
- Change the preference and priorities of planning to favour retrofit over new build? (I.e. whole life carbon as metric)
- Develop a credible, national certification scheme?
- Shift cultural acceptance of energy bills and leaky homes?
- Improve policy to make retrofit the first response when it comes to updating/upgrading for private homeowners?

### DATA

- Agree what the required data set is for...
- Build a regional database to retrofit efficiently at scale?
- What are the data needed to answer the question to support a retrofit campaign based on a solid foundation?

### FINANCING & FUNDING

- Introduce a right to a healthy home and funding?
- Attract private investment to match-fund local government to deliver projects at scale?
- Incentivise the able to pay market to retrofit their properties?
- Raise awareness of alternative financial levers at local/sub-regional level?
- Create an irresistible retrofit proposition that is more attractive than other uses of investment?
- Lobby into new government about central pot of retrofit pilot funding?
- Develop a roadmap which is public sector funded with funding from both public and private sectors?
- Encourage local authorities to issue climate bonds?
- Lobby central government to provide funding to local authorities?
- Influence/advise financial institutions on more innovative financial products?
- Stimulate more FinTechs in this space?
- Piggy back off other financial literacy movements to drive awareness about this to local areas?

### RESEARCH & INNOVATION

- Provide more transparency around the steps to get accreditation?
- Provide more commercial incentive to testing?
- Learn from other sectors about how to increase speed to market (particularly for testing)?
- Support "innovators" to commercialise their products?
- Make it easier to engage with industry?
- Create more transparency in the funding landscape to promote collaboration?
- Learn from other fields to build strong consortiums?
- Build a better understanding of our consumers and bring that into institutions?
- Better understand the partnership channels & incentives?

### SKILLS & THE WORKFORCE

- Change perceptions / increase awareness (knowledge) amongst potential workforce?
- Encourage colleges / training providers to embed sustainability / energy efficiency within standard construction courses?
- Make retrofit sexy? Educate young people on retrofit career pathways?
- Make apprenticeships more appealing?
- Embed retrofit/energy efficiency content within existing construction courses?
- Develop a high quality, consistent retrofit careers programme across South London?
- Unpack the drivers and activities motivating young people and the climate?

# SOUTH LONDON ‘RETROFIT SKILLS CENTRE’

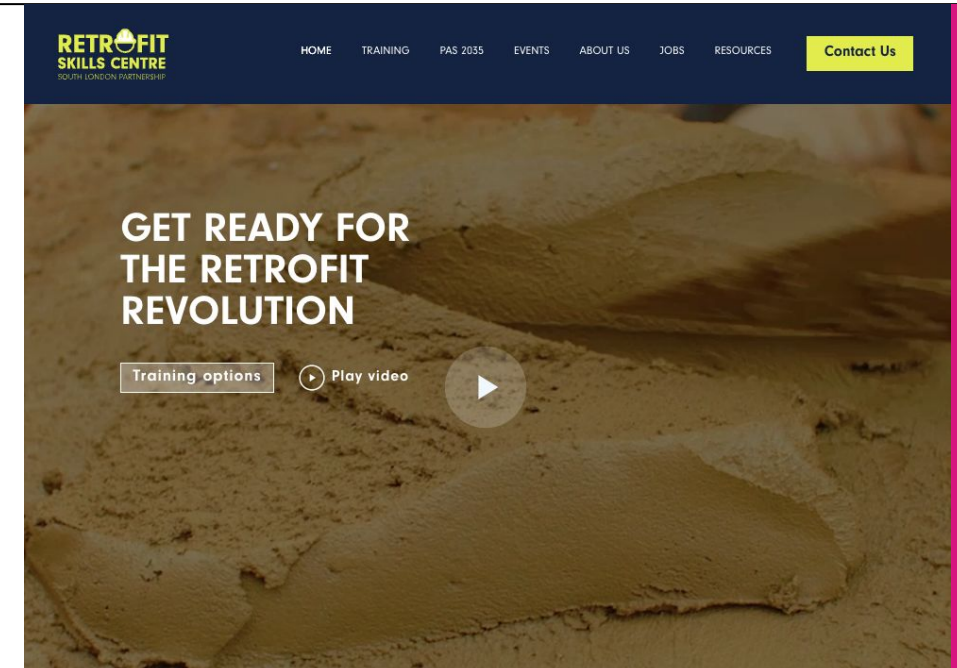
South London Partnership received Department for Energy Security & Net Zero funding for Retrofit Skills via the Greater South East Net Zero Hub, in December 2023.

In January 2024, the South London Retrofit Skills Plan was created in partnership with the University of Roehampton and a South London Retrofit Taskforce of 70 members to deliver against four priority areas:

- Supply of Skills
- Supply Chain Engagement
- Governance
- Consumer Demand

[RetrofitSkills.org](https://retrofitskills.org) was launched as a One Stop Shop website for South London promoting local training pathways, qualifications, events, signposting for jobs and resources including a webinar series and videos.

22 programmes and pilots were delivered as part of the funding.



We are committed to supporting the London goal of reaching Net Zero by 2030

We are committed to creating a high-value skilled green jobs sector contributing to a stronger sustainable economy that benefits us all

We are committed to the decarbonisation of over half a millions homes

With ambitious local and national Net Zero targets to hit, and a £17bn opportunity, we need retrofit professionals and tradespeople ready with the right training to get the job done.



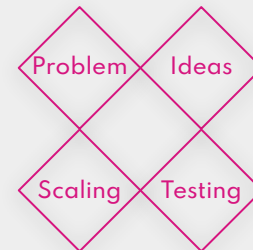
## STUDIO ZAO

### OUR EXPERTISE

We help people in organisations and ecosystems to innovate and deliver major projects and ideas, productively.

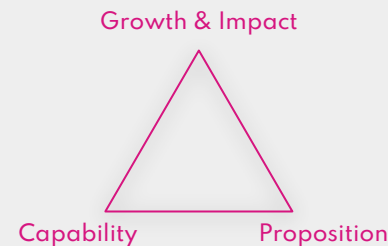
#### IDEATION, DESIGN & TESTING

Understand problems and opportunities with data.  
Develop valuable ideas. Test and make them happen.  
Fast.



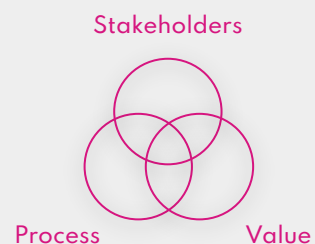
#### GROWTH & IMPACT PROGRAMMES

Incubate propositions, build capabilities, nurture growth and generate economic impact. Productively.



#### INNOVATION & DELIVERY ACCELERATION

Create alignment, build momentum and deliver progress to get transformation and innovation initiatives moving. Quickly.



### HOW WE SUPPORT OUR CLIENTS

We've applied our expertise in a number of areas, including:

- **Corporate Innovation**  
Discover, experiment and launch new propositions and build the engine to do it repeatedly.
- **Public Sector & Academia**  
Increase the impact of services, products and collaborations through innovation and alignment.
- **SME Innovation**  
Accelerate new products, services and businesses to contribute to economic growth.

[www.studiozao.com](http://www.studiozao.com)

### GET IN TOUCH



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