

Appendix – Retrofit Demonstrator Programme: Project-level and Overarching Theories of Change

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Project level Theories of Change (ToCs)

For the five projects still operating, the project-level ToC – in terms of intended steps and assumptions - has remained mostly constant across the programme; the one aspect of the original ToC that has ceased to be a core part of the scheme is the development of a project finance offer.

The ToC recognises the key assumptions around customers being motivated and able to engage, the website providing a route for customer journey progression, the benefits that can arise from local advocacy, and the proposition being attractive to some supply chain. In addition, many of the intended early steps of the ToC – service design, customer recruitment and progress, and coordinator recruitment – have been realised.

The ToC also accounts for the issues described in this chapter, reflecting that the later intended stages of the customer journey, particularly progession to retrofit and outcomes from that, have not been sufficiently evidenced to date. The ToC also reflects that a number of intended steps for supply chain recruitment remain unproven.

The assessment reflects that these assumptions and steps have not been proven / realised as yet; it allows for the fact that these could still be realised, albeit outside the intended timescales, as the ToC reflects the scheme within the programme funding period.

For the Homeworks project, whilst the ToC recognises that some early intended scheme design and development stages were realised, those around the customer journey and supply chain engagement were not, and many of the assumptions underpinning the scheme are unproven or disproven.

Overarching Theory of Change (ToC)

As well as per project theories, evidence across the evaluation has been used to create and update an overarching Theory of Change for the Demonstrator Programme. The structure of this overarching ToC – in particular the rationale underpinning it - has remained largely unchanged since the outset; the only significant adjustment, acknowledged in the diagram, is that the development of a finance offer has not been a priority for projects, despite it initially forming part of some original project offers / customer journeys.

Customers

For the intended stages of the ToC focused upon customers, across at least five of the individual projects there has been clear evidence of successful customer engagement and generally good customer satisfaction with the services provided. There has also been some customer progression to the later stages of the process, with some retrofit activity (though not all of it 'whole-house') taking place. However, partly due to the limited numbers, and partly the timing¹, of retrofit, as of March 2021 there was little to no robust evidence of:

- Post-works benefits being realised by customers (energy savings, bill savings, comfort gains etc.); even for the completed retrofit projects, it has generally been too soon for such outcomes to be properly measured.
- Post-works project stages and their anticipated effects (e.g. QA building customer trust and satisfaction).

In terms of the customer-related assumptions underpinning the ToC, many have been at least partially proven. The services offered by the pilots seem to have appealed to significant numbers of customers – albeit relatively few have progressed to action - and effective feedback mechanisms have been operating. There has also been some evidence that despite the pandemic, the ability of many able-to-pay customers to invest in works has been relatively unaffected. The assumptions around correct installation and its resultant benefits remain unproven.

Supply chain

For the intended stages of the ToC focused upon the supply chain (in particular installers), there has been some successful engagement (albeit not uniform across sub-sectors) and supplier willingness to engage in training has been particularly strong.

However, as for customers, it is the later stages and assumptions around retrofit works happening, and the knock-on effects of that on supplier training and engagement, that have yet

¹ Most retrofit has been delivered in Year 3, towards the end of the evaluation and funding period.

to be realised. In particular, the benefits to suppliers arising from collaboration and coordination (e.g. economies of scale) have not yet been realised.

Inputs and outcomes

The intended inputs to the programme and projects – the BEIS funding but also projects sharing insights and ideas – have been largely realised, albeit the level of funding was reduced in Year 2.

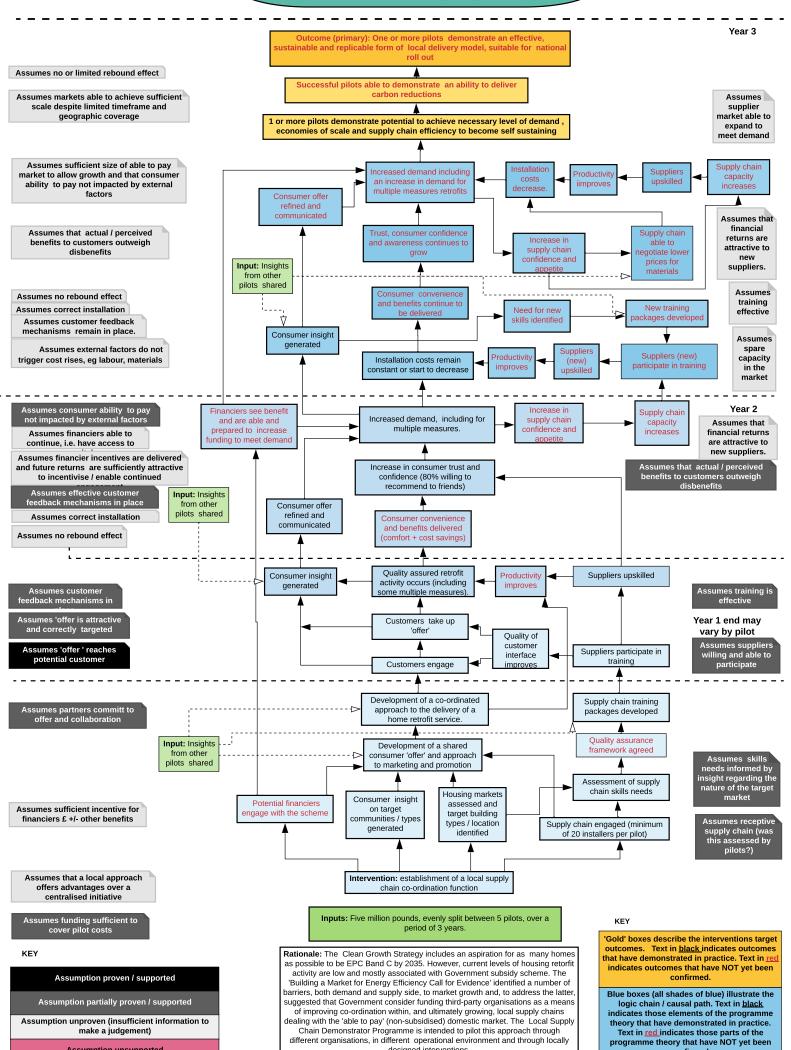
And despite the limited evidence of the later stages and assumptions in the ToC being realised, it is still fair to conclude that five projects demonstrate the potential to achieve the necessary level of demand, economies of scale and supply chain efficiency to become self-sustaining.

However, reflecting the limited evidence surrounding retrofit activity and its outcomes, it is not possible to say, to date, that the projects have clearly demonstrated the ability to deliver significant carbon reductions. Nor, moving to the primary goal of the programme, is it possible to state that any of the projects have – as yet - demonstrated an effective, sustainable and replicable form of local delivery model, suitable for national rollout.

This last point should be emphasised. Whilst they have been operating in some unhelpful conditions (described throughout the report), there have also been a number of potentially favourable ones which raise questions regarding project sustainability and replicability:

- Targeting latent demand of an engaged 'early adopter' market what is the size of this
 group to sustain the existing projects (considering thousands of initial enquiries have
 resulted in less than one hundred retrofit projects) and how do projects move beyond
 this to tackle the mass market?
- Services subsidised by the grant, and continuing to be cross-subsidised in many cases by partners' other activities – would this be feasible for less established organisations with new projects?
- Mainly economically strong, urban areas where there is a good level of supply chain, and householder and supply chain appetite to engage – would the same outcomes have been realised in smaller towns with a smaller supply chain and less strong economies?

Theory of Change for Local Supply Chain **Demonstrators Phase 3 (V1.0) 14.4.2021**



designed interventions.

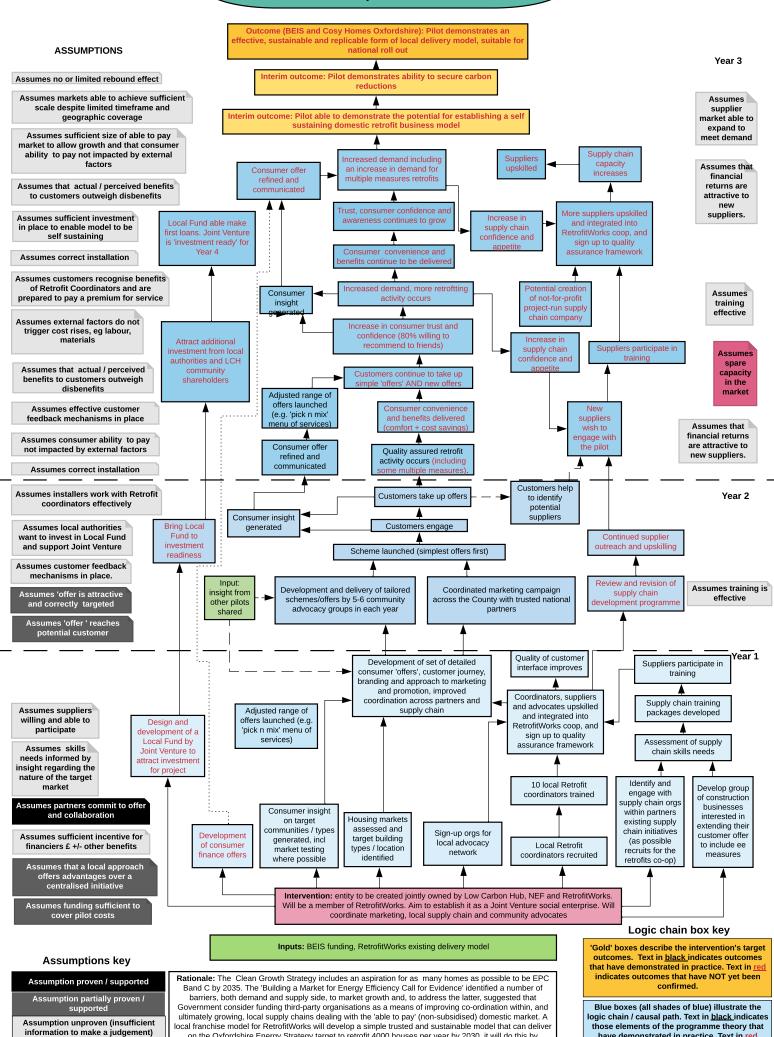
confirmed.

Assumption unsupported

Theory of Change: Ecofurb (London) supply chain pilot v0.1 (phase 3) ASSUMPTIONS Assumes no or limited rebound effect Assumes markets able to achieve sufficient scale despite limited timeframe Interim outcome: Pilot demonstrates ability to secure carbon reductions and geographic coverage Interim outcome: Pilot able to demonstrate the potential for establishing a self sustaining domestic retrofit business model Assumes sufficient size of able to pay market to allow growth Assumes that actual / perceived benefits to customers outweigh disbenefits Year 3 Financiers see RetrofitWorks able to Assumes scheme can become penefit and are activity occurs, including negotiate lower prices fo self-sustaining without subsidies multi-measure or whole-house able and prepared to increase funding to meet Consumer offer Assumes supplier market able to expand Retrofit Coordinators refined and to meet demand enable improved supply Trust, consumer confidence and communicated chain coordination awareness continues to grow resulting in increased Assumes customer monitoring and If customer Increase in supply productivity feedback mechanisms remain in place. research shows chain confidence and need for finance appetite Consumer convenience and Consumer insight Assumes UI and UX able to develop offer, finance sufficiently to enable whole house retrofit to be offered offer developed generated benefits continue to be delivered Supplier capacity and and incorporated capability increases; nev into offer etrofit coordinators come Whole house retrofit Increased demand, more retrofitting Assumes non-scale factors do not trigger cost rises, eg labour, materials offered to customers on board who self-fund their training Assumes that financial returns are Increase in consumer trust and confidence (80% willing to attractive to new suppliers and that new Further research on retrofit coordinators coming in at this recommend to friends) otential bulk purchases Increase in stage will be prepared to cover their own training costs with input from supply chain confidence and contractors Consumer convenience and benefits Consumer offer appetite delivered (comfort, cost savings, refined and Assumes some installations would not communicated. Retrofit Coordinators have happened in the absence of the pilot UI and user Provide enable improved supply experience Quality assured retrofit activity ignpostino Volume of chain coordination and Assumes consumer ability to pay not (UX) are occurs (including some enhanced customer customer to existing impacted by external factors refined multi-measure) finance orders attracts experience helping to new suppliers generate demand offers Assumes correct installation Customers accept Ecofurb quotes Monitoring of for measures managed by r/c Supplier capacity and Supply chain Assumes that customers decide to consumers that capability increases progress retrofit measures (within or efficiency improves continue to Quotes prepared, if requested and customer outside Ecofurb project) interact with Checks undertaken to experience is Ecofurb Assumes that actual / perceived benefits enhanced Further Whole House Assessment to customers outweigh disbenefits RetrofitWorks members undertaken, if needed/requested meet Quality Assurance Ecology requirements Assumes supplier training, if it takes consumers BS and place, is effective Customer reques financiers choose to Retrofit Coordinator **Ecofurb** progress liaises with Retrofit Direct marketing to Assumes customers motivated and able determine retrofit Works installers to attract more contractors to engage measures how best Customer interacts with UI and ecure quotes and outside oversee delivery develops initial basket of measures Ecofurb or offer Assumes increased demand and direct New Retrofit marketing attract more RetrofitWorks Coordinators trained Launch of website and UL with members and existing coordinators upskilled UI developed and tested with target Year 2 Assumes increased demand customer groups; Ecofurb customer journey refined; marketing plans Additional RetrofitWorks Retrofit RetrofitWorks members veloped; supply chain developed Coordinator members recruited Insights from other undertakes including suppliers Assumes new RetrofitWorks member installers don't need technical training Trial customers, identified via enquiries taken through customer journey from (general contractors as well as retrofit experts) survey and pilots liaises with shared enquiry, through whole house installers to and new Retrofit Assumes customers are engaged by website to proceed to next step assessment, through provision of RW secure quotes Coordinators quotes and (in Yr 3) to delivery of Target market agreed Existing RetrofitWorks Assumes incentive for financiers £ +/promotional messages and Options for bulk members (Retrofit other benefits offers tested Research purchase of Coordinators and installers) informed conducted with measures/services Assumes Retrofit Coordinator role is paid financial investigated about pilot and out of the Ecofurb Plan and Spec cost encouraged to take organisations to customer and installation fee to about potential part. contractor. Assessment of Consumer research finance offers for Analysis of building supply chain skills generates customer the pilot stock identifies priority insight for use in needs, availabililty Year 3 Assumes sufficient receptive suppliers homes for targeting and interest devloping 'offer available for early stages of pilot Assumes that a local approach offers Intervention: development of existing local supply chain co-ordination function, moving from subsidised to non-subsidised retrofit market. advantages over a centralised initiative KEY Blue boxes (all shades of blue) illustrate the Assumes funding sufficient to cover costs logic chain / causal path. in all Phases, in combination with funding contributions from Parity Projects Inputs: BEIS Funding Yr 1 £190k, Yr2 £240k, Yr3 £370k. Plus knowledge sharing with other Text in black indicates those elements of the lots. Use of existing RetrofitWorks delivery model and software and Retrofit Coordinator training package. programme theory that have been demonstrated in practice. Text in red indicates those parts of the programme theory that have NOT yet been KEY Assumption proven/supported Assumption partially proven/supported Assumption unproven (insufficient evidence to make a Rationale: The Clean Growth Strategy includes an aspiration for as many homes as possible to be EPC Band C by 2035. There is a recognition that, for a variety of reasons, domestic energy efficiency retroift activity is low outside of Government funded schemes. In 'Building a Market for Energy Efficiency Call for Evidence' it was suggested that Government consider funding third-party organisations as a means of providing support judgement) Assumption unsupported The grant of the control of the cont

owners, with targeted marketing and possible bulk discounts, delivered by a quality assured local supply chain.

Theory of Change: Cosy Homes Oxfordshire supply chain pilot 21.4.21



on the Oxfordshire Energy Strategy target to retrofit 4000 houses per year by 2030. it will do this by

combined the RetrofitWorks business model with a network of motivated communities, and existing local

experience of delivery retrofit programmes and raising finance for community-led projects

Assumption unsupported

have demonstrated in practice. Text in red

indicates those parts of the programme theory that have NOT yet been confirmed.

Theory of Change: Warmer Sussex supply chain pilot v1.0 21.4.21 Outcome (BEIS and Warmer Sussex): Pilot demonstrates an effective sustainable and replicable form of local delivery model, suitable for national roll out Interim outcome: Pilot demonstrates ability to secure carbon ASSUMPTIONS Interim outcome: Pilot able to demonstrate the potential for establishing a self sustaining domestic retrofit business model Year 3 Assumes no or limited rebound effect Assumes markets able to achieve Supply chain sufficient scale despite limited Suppliers Consumer offer Increased demand including capacity timeframe and geographic coverage upskilled increases multiple measures retrofits Assumes sufficient size of able to pay market to allow growth and that consumer ability to pay not impacted by external factors Trust, consumer confidence and Increase in awareness continues to grow More suppliers upskilled Assumes that actual / perceived supply chain and integrated into benefits to customers outweigh confidence and RetrofitWorks co-op, and disbenefits sign up to quality Profits reinvested assurance framework Assumes correct installation Consumer convenience into consumer and benefits continue to Assumes offer (e.g. fuel Assumes external factors do not be delivered training poverty support) trigger cost rises, eg labour, materials effective Assumes customers recognise benefits of Retrofit Coordinators and Increased demand, more retroftting Assumes are prepared to pay a premium for Increase in supply Suppliers/advocacy orgs spare service Consumer insight chain confidence capacity in Assumes effective customer participate in training generated and appetite the market feedback mechanisms in place Customers continue to take up Assumes consumer ability to simple 'offers' AND new offer pay not impacted by external Assumes that factors Adjusted range of Nev financial Increase in consumer trust and offers launched (e.g returns are confidence (80% willing to wish to attractive to Assumes advocacy orgs 'pick n mix' menu of Project links with engage with route/approach is successful new suppliers. services) the pilot funding & projects Consumer convenience and benefits Advocacy Assumes that actual / perceived delivered (comfort + cost savings) Assumes network benefits to customers outweigh supplier expanded and Consumer offer Continued disbenefits market able to refined and supported expand to Ouality assured retrofit activity Assumes installers work with communicated occurs (including some multiple and upskilling meet demand Retrofit coordinators effectively Assumes correct installation Customers take up offers Year 2 Consumer Input: insight Engagement Review and revision Assumes customer feedback Insights generated with more of supply chain mechanisms in place. from potential local development other advocacy orgs programme ssumes 'offer ' reaches potential customer pilots Scheme launched (simplest offers first) shared Year 1 Assumes 'offer is attractive Quality of and correctly targeted Assumes training is customer effective interface Development of Development of set of detailed improves consumer consumer 'offers', customer Assumes sufficient incentive for finance offers ourney, branding and approach Coordinators, suppliers financiers £ +/- other benefits Suppliers participate in (potentially with to marketing and promotion, and advocates upskilled training and integrated into **Ecology Building** improved coordination across RetrofitWorks coop, and partners and supply chain Assumes suppliers find RetrofitWorks offer attractive Society sign up to quality assurance framework Supply chain training Training and packages developed Assumes suppliers willing and able support to participate Assessment of supply Assumes skills needs informed by 10 local Retrofit chain skills needs (to insight regarding the nature of the Consumer insight Coordinators trained Housing markets match installer skills) target market on target assessed and communities / types Development ssumes partners commit to offer and collaboration target building generated, incl advocacy network types / location market testing of local orgs 10 local Retrofit Identify and engage with identified where possible Coordinators recruited local suppliers (potential recruits to RetrofitWorks) sumes that a local approach Intervention: establishment of a retrofit delivery offers advantages over a centralised initiative model (based on the RetrofitWorks model) uniting a local supply chain with key advocacy organisations Assumes funding sufficient to cove pilot costs Logic chain box key Inputs: BEIS Yr1 £186k, Yr2 £240k, Yr3 tbc). RetrofitWorks existing delivery model. Citizens Advice energy advice network. In-kind resources from Hastings BC (from related projects). 'Gold' boxes describe the intervention's target outcomes. Text in <u>black</u> indicates outcomes **Assumptions key** that have demonstrated in practice. Text in rec indicates outcomes that have NOT yet been Rationale: The Clean Growth Strategy includes an aspiration for as many homes as possible to be EPC Band C Assumption proven / supported confirmed by 2035. The 'Building a Market for Energy Efficiency Call for Evidence' identified a number of barriers, both demand and supply side, to market growth and, to address the latter, suggested that Government consider Assumption partially proven *l* supported funding third-party organisations as a means of improving co-ordination within, and ultimately growing, local Blue boxes (all shades of blue) illustrate the supply chains dealing with the 'able to pay' (non-subsidised) domestic market. Warmer Sussex's retrofit delivery model will unite suppliers and key advocacy organisations under one umbrella. The aim is to unveil ogic chain / causal path. Text in black indicates those elements of the programme theory that Assumption unproven (insufficient quick-to-launch retrofit offers than can generate a profit, to lay the ground for a longer-term approach that will meet local warmer homes energy targets. It will be based around RetrofitWorks, a 'realistic commercial model information to make a judgement) have demonstrated in practice. Text in red indicates those parts of the programme theory Assumption unsupported that will support a technically expert, quality-assured and nationally scalable delivery model. that have NOT yet been confirmed.

Theory of Change: HomeWorks (Cornwall) supply chain pilot (Phase 3 draft V1.0) 12.04.21 Outcome (BEIS and HomeWorks): Pilot demonstrates an effective, sustainable and Pilot demonstrates an ability to deliver carbon reductions Assumes no or limited rebound effect HomeWorks demonstates self-sustaining, low-carbon domestic retrofit model (intergrating quality, appropriately-designed retrofit into the delivery of home repairs, maintenance and Year 3 Assumes sufficient size of able to pay market to allow growth and that developed and sufficient tradespeople willing to pay householder ability to pay not impacted for increased functionality by external factors Benefits of participation in scheme communicated, more Assumes supply side able to expand to Householder trust Tradespeople derive benefit from promoting EE meet demand without a drop in quality confidence and awarene continues to grow Assumes that householder feedback More quality assured EE installation occurs mechanisms remain in place Assumes that actual / perceived benefits convenience and ied and customers agree to tradespeople's to householders valued above disbenefits benefits continue to be include retrofit activity confidence and appetite Assumes no or limited rebound effect Assumes Trust Mark and EHC New tradespeople adopt use of tools. Previous user Assumes correct installation quality mark continue to use them Assumes at least some installations have growing More reputation as would not have occurred without pilot participate in app trusted brands activity and web based Following review of approach Homeworks scheme is training Assumes online training remains effective means extended beyond Cornwall of upskilling participants in the provision of EE advice (kept up to date etc) Assumes householder ability to pay not Increased integration of quality assured energy ear 2 (original impacted by external factors Increase in tradespeople's efficiency measures into routine household schedule) confidence and appetite Assumes online training /app-based Unsatisfactory work information are effective means of identified and supplier A upskilling participants in the provision of Assumes alerted and responds tradespeople EE advice Benefits of participation in More tradespeople notify Assumes quality assurance system is More HomeWorks effective in ensuring quality of delivery tradespeople use when works Increase in genera delivered app and Assumes at least some installations would householder trust participate in weh Tradespeoples' capability Tradespeople derive benefit not have occurred without pilot activity and confidence to deliver retrofit increases based training from promoting EE activity Assumes that actual / perceived benefits +more training undertaken **Assumes Trust** Mark and EHC to householders outweigh disbenefits Householder quality mark Assumes correct installation retrofit activity occurs Tradespeople upskilled are trusted Assumes no or limited rebound effect benefits delivered brands (checked via satisfaction survey) Opportunities identified and Assumes web and Assumes some householders are motivated to take works referred to HomeWorks app customers agree to include app-based and Trust Mark retrofit activity systems provide Assumes tradespeople make referrals to other give tradespeople tradespeople with appropriate Trust Mark tradespeople Scheme successfully convenient promoted to Tradespeople access to make referrals Assumes tradespeople's 'offers' to householders Tradespeople trained in use of app access to householders in are attractive and correctly targeted and web-based tools, and use them information on training via app and Cornwall under when engaging with customers potential energy Assumes tradespeople are motivated to 'sell' retrofit Homeworks banner efficiency opportunities to householders, as part of other works measures Assumption that sufficient suppliers are, or are willing to arket-ready app and web materials pre-popul be, Trustmark registered (suppliers cannot participate supplier data and referral system, information on otherw sment of measures and training courses (linked to Assumes participants unwilling to pay for retrofit PAS 2035). App supported by free internal retrofit co-ordinator service. (ensure PAS 2050 compliance) Householder App and web-based co-ordination service Input: marketing aining packages professional Assumes householders in target group are able to nsigh material developed services pay and that EE measures are incorporated, as part from developed to network agree Trade bodies and others of more routine forms of property maintenance etc. promote othe to offer wider ecruited to help promote (installers) network agree to pilots Homeworks Web and phone app supporting the Homeworks scheme offer services via the scheme commissioned and services via referrals to tradespeople app Assumes referral incentive will not generate developed; assessment process enabled unnecessary activity Referral incentives Year 1 Assessment of installer Assumes partners commit to offer and tested with tradespeople collaboration skills needs occurs Householde Building Homeworks User requirements, data research Assumes supply chain receptive and mapping raining strategy architecture and commissioned. prepared to invest time to assist business business model decision-making matrix Branding and awareness Local tradespeople generates apping and project development established; brief for app campaign commissioned to (installers) network householder analysis management development agreed recruit tradespeople for identifies engaged and involved in journey and Assumes that upskilling tradespeople to and QA Homeworks scheme design processes insights re able priority target deliver (or provide sign-posting to) energy Local to pay areas efficiency measures within normal building works will result in greater take-up of energy developed professional households services network efficiency measures by householders engaged via Intervention: Establishment of systems, tools & training to enable tradespeople, who are already delivering project partners Assumes funding sufficient to cover pilot costs RMI in a home, to identify energy efficiency opportunities and refer technically competent tradespeople KEY Inputs: BEIS funding £186,000 Yr 1 (Yr 2&3 tbc); BRE + partners expertise KEY Assumption proven / supported 'Gold' boxes describe the interventions target Rationale: The Homeworks Demonstrator pilot aims to outcomes. Text in <u>black</u> indicates outcomes that have demonstrated in practice. Text in <u>red</u> indicates Assumption partially proven $\it l$ supported tackle supply chain fragmentation through the development of web tools and a mobile phone 'app' which outcomes that have NOT yet been confirmed. will enable general construction contractors to identify Assumption unproven (insufficient energy efficiency measures to householder clients during Blue boxes (all shades of blue) illustrate the logic information to make a judgement) other forms of building maintenance or refurbishment work, providing the information they need to refer their chain / causal path. Text in <u>black</u> indicates those elements of the programme theory that have Assumption unsupported customers with confidence to technically competent demonstrated in practice. Text in red indicates those tradespeople. for appropriate EE retrofit measures. parts of the programme theory that have NOT yet been confirmed.

supply chain pilot. Phase 3b (V2.3) 21.04.21 By end of Year 3 ASSUMPTIONS acceptable and cost-effective Outcome (BEIS and Futureproof): Pilot demonstrates an effective, sustainable and replicable form of local delivery model, capable of being Assumes markets able to achieve sufficient scale for consumers and suppliers despite limited timeframe and geographic coverage (supported for a few large companies but not most, rolled out nationally Assumes Futureproof business model is viable and smaller, Futureproof suppliers not yet tested for consumers) Interim outcome: Pilot demonstrates ability to secure carbon sustainable (using combination of installer service fees and householder service fees, as appropriate) Assumes sufficient size of able to pay market to **Assumes** supplier allow growth and that consumer ability to pay/install not impacted by external factors Interim outcome: Pilot able to demonstrate the potential for establishing a sel sustaining domestic retrofit business model market able to expand to Assumes that actual / perceived benefits of measures outweigh disbenefits to consumers meet demand Increased demand for Supply chain of high Assumes that quality issues identified through energy-efficiency capacity and FHC quality assurance can be addressed through asures, integrated into decrease quality quality and quality suppliers training household repairs Consumer offer marked improves Assumes some rebound effect (mix of carbon refined and savings and comfort taking/increased spend on communicated other goods & services) Assumes Trust, consumer confidence Assumes correct installation (OA system works) Increase in that quality and awareness continues to financial supply chain negotiates lower prices Assumes customer feedback mechanisms remain grow assurance confidence and returns are in place (not yet fully in place) generates attractive to feedback new Assumes external factors do not trigger cost rises, eg labour, materials (GHG impact) and suppliers. and benefits continue to improves New training be delivered Need for nev Assumes Assumes planning permission for measures can be packages developed satisfaction skills identified Consumer insigh obtained where necessary training generated through effective Assumes that perceived benefit of using More consumers take-up Futureproof justifies any consumer fees (untested) some customers offers from trusted, good of high Assumes More suppliers enroll in quality suppliers via and FHC spare quality Assumes that Futureproof continues to be perceived as a trusted brand Futureproof scheme and Futureproof scheme capacity in suppliers quality participate in training the market Assumes consumer ability to pay/install not impacted by external factors (Covid impact) Assumes that financial returns are attractive to new suppliers (mainly Assumes satisfied Futureproof customers willing to Increased demand for energy efficiency 'early adopter' suppliers Increase in Supply participate in Green Open Homes, to market supply chain measures as part household repairs chain so far) benefits to potential customers Consumer offer maintenance and improvement activity confidence and capacity refined and Assumes project can Assumes effective customer feedback mechanisms ncrease communicated negotiate discounts in place (not yet fully in place) with materials suppliers (e.g. via Green Increase in consumer trust and confidence (80%) Assumes correct installation (QA system works) Open Homes; willing to recommend to friends) sustainability Assumes that actual / perceived benefits of Council willing/able to networks) measures outweigh disbenefits to consumers undertake inspections Supplier quality Consumer convenience and benefits Assumes some rebound effect (mix of carbon by Clerk of Works issues monitored delivered (comfort + cost savings) savings and comfort taking /increased spend) and addressed nsights generated Assumes EHC Quality Mark/PAS 2035 is ready Assumes that increased access to trusted, quality (including Clerk o Works inspe opliers increases take-up of EE measures by early adopters' within household repairs, customers Retrofit activity occurs in tandem with Assumes training is household repairs, maintenance and maintenance, improvements (small numbers) • effective in improving improvement activity Quality of delivery quality Assumes that 'early adopters' develop trust in Futureproof brand and some customers choose to Some consume Suppliers upskilled (and delivery monitoring (requires OA evidence) EHC/PAS 2035 quality improve undertaken (for Customers obtain and take up quotes use retrofit coordinator/QA service (small numbers) Assumes Futureproof those still in (some from Futureproof installers) suppliers see need for and attend free training contact with Quality of custome ssumes that some customers use suppliers willing to engage with Futureproof and accept training Futureproof interface improves 'Early adopter' suppliers Customer needs assessed (including suppliers use enroll in Futureproof scheme and participate Assumes specialist survey if needed) - signposted to installers Futureproof brand Assumes scheme has capacity to assess needs (and surveys can be funded if needed) (small suppliers and general Input: insight in training builders are interested from other Customers contact Futureproof advice line numbers) in deep retrofit work pilots shared and willing to enroll in Futureproof scheme Assumes 'offer' is attractive and correctly targeted Launch of a co-ordinated Futureproof campaign to 'early adopters' (partial - rise in enquiries from aimed at 'early adopter' suppliers (no household Supply chain training packages <u>external factors - GHG</u> fuel poor because of Covid-19 developed (including toolbox talks; product specific support; marketing campaign needed to generate enquiries Assumes partners commit to offer and to collaboration on marketing and co-ordination (no BCC Clerk of Works) Assumes Futureproo customer service quality Development of a shared supplier reaches 'early adopter suppliers via builders support) consumer 'offer' and targeted approa to marketing and promoti merchants and other Assumes Futureproof campaign can be effectively routes targeted at 'decision points' for home repairs Assumes Code of Futureproo improvements and maintenance (no targeting) Practice is acceptable to both suppliers and consumers (supported Code of Assumes 'early adopters' are owner-occupiers that are motivated and able to incorporate energy-efficiency measures into household works, but held back by lack of trusted supplier (in some Practice developed Housing market Marketing testing of for larger companies Local authorities brand concepts with ed and Assessment of target building engage with the scheme target group ('early Assumes skills needs supply chain (Bristol CC, B&NES) types / location adopters' via Greer skills needs Assumes 'early adopter' households are able to pay assessment is informed Open Homes) identified by installer network for energy efficiency measures within home repai insights regarding the maintenance and improvements (small numbers) nature of the target Partnership able to access full range of nece Intervention: establishment of a local partnership for the delivery market Existing Green Register of energy-efficiency measures within household repairs, skills and expertise (not BCC Clerk of Works) provides initial installer maintenance and improvement network Assumes Green Assumes that a bottom up approach more effective Register provides access to initial supply Inputs: BEIS Funding £186k in Year 1, £246 in Year 2, 3 tbc); than top down vice line, tools and resources; CSE analysis of housing stock data; Gre-Register - sustainable builders network; Greenhouse PR - expertise in KEY chain of sustainable Assumes funding sufficient to cover initial pilot Text in red: not yet building contractors costs, until Futureproof fee income becomes communicating sustainability/carbon issues to consumers tested/proven sustainable Rationale: The Clean Growth Strategy includes an aspiration for as many homes as possible to be EPC Band C by 2035. However current levels of housing retrorfit activity are low and mostly associated with Government subsidy scheme. The 'Building a Market for Energy Efficiency Call for Evidence' identified a number of barriers, both demand and supply side, to market growth and, to address the latter, suggested that Government consider funding third-party organisations as a means of improving co-ordination within, and ultimately growing, local supply chains dealing with the 'able to pay' (non-subsidised) domestic market. The Local Supply Chain Demonstrator KFY Assumption proven/supported Programme is intended to pilot this approach through different organisations, in different operational environment and through locally designed interventions. The Futureproof project in South West England aims to unlock latent demand for energy efficient retrofit by mption partially proven/supported

Assumption unproven (insufficient information to

make a judgement)

Assumption unsupported

helping 'early adopter' consumers (who are already motivated and able to pay) to find trusted, good quality suppliers. This is expected to

demonstrate demand to suppliers, causing more suppliers to enter the market for energy efficient retrofit, making it even easier for

consumers to find a trusted, good quality supplier, and creating a virtuous circle of increasing demand and supply.

Theory of Change: Futureproof (South West) local

Theory of Change: People Powered Retrofit local supply chain pilot Phase 3 (V1.0) 14.4.2021 ustainable and replicable form of local delivery model, suitable for roll out via a national domestic retrofit programme **ASSUMPTIONS** Interim outcome: Pilot demonstrates ability to secure carbon Assumes no or limited rebound effect Assumes markets able to achieve sufficient scale despite limited Interim outcome: Pilot able to demonstrate the potential for establishing a self sustaining domestic retrofit business model timeframe and geographic coverage Year 3 Assumes suppliers participate in training and and that it is effective Increased demand, more Assumes sufficient size of able to pay capacity and supply chain confidence and market to allow growth and that retrofitting activity occurs capability consumer ability to pay not impacted by external factors decrease arows of the lifespan of the pilot A Assumes marketing methods effective in extending reach beyond early adopters Suppliers Suppliers Skills gaps Trust, consumer confidence articipate in acquire new and awareness continues to Assumes that actual / perceived benefits to training practical skills customers outweigh disbenefits arow. Social norms becoming established. Assumes comsumer behaviour allows Co-ordination benefits to be achieved service able to negotiate lowe Insight generated Consumer convenience Assumes correct installation (QA works) prices for vice and offer and benefits continue to refined Assumes external factors do not trigger cost rises, eg labour, materials Quality assured deep retrofit Supply chain capacity and capability grows supply chain activity occurs confidence and Assumes suppliers willing and able to meet demand Increased Year 2 Suppliers Increased demand for retrofitting interest Suppliers acquire service (and increased retrofitting?) from supply gaps Assumes there is an appetite for to pay for participate Insight chain (esp new identified service outside of the initial customer base generated. practical larger and Increase in consumer confidence Assumes market attractive to conventional building sector Service and skills conventiona offer refined Consumer convenience and firms) desired outcome benefits Assumes comsumer behaviour allows benefits to be achieved Input Supply chain capacity Quality assured deep retrofit Supply chain capacity insight from othe Assumes correct installation (OA works) and capability grow activity occurs and capability grows pilots Skills gaps Customers engage with and commission service Suppliers / householders Opportunities to secure addressed benefits through acquire new practical skills Customers screened to filter out (training + onsite Assumes there is scope to establish and secure increased supply chain collaboration identified casual enquiries (latter directed benefits through increased supply chain support) to training +online support collaboration Suppliers / householders and initiated Assumed that customers prepared to pay for a retrofit service Establishment of a trusted service unlocks latent demand participate in training Facilitation of Yr 2 funding secured. End to end retrofit Training and Assumed that customers are aware of Inputs: Pilot collaboration coordination service established. Service development programme partnership between supply facilitates commercial relationship between for training and that it is complements draws on existing chain members pilot customer cohort and suppliers co-ordination service training packages Year 1: R&D Assumes cost savings are not the only driver, customers recognise other benefits Pilot cohort of households agree to Supplier buy in participate in pilot Assumes marketing methods effective in engaging target market interest secured (at least scheme in principle) Role of retrofit Assumes data allows for effective market Pilot End to End offer Messaging and co-ordinator informed targeting Bespoke quality trialled (multiple house branding developed Assessment of by service design Assumes a targeted marketing approach assurance surveys to assess supply chain skills offer is more cost effective than a general framework current status and needs campaign developed needs) Assumes PAS 2035 unsuitable for small Market research refines contractors Service design Supply chain identified Potential 'early adopters' targeting and identies approach used to and approached via local identified by innovative social networks (known design an End to End appropriate marketing data analysis and GIS assumes finance is not a major barrier fo most in the able to pay market whole house retrofit messages and and trusted contractors) techniques service mechanisms Assumes partnership able to access full range of required skills and expertise Intervention: R+D to inform establishment of a local supply chain co-ordination Assumes bottom up approach more partnership effective than top down Inputs: BEIS Yr 1£186k, Year 2 £240k, Yr 3 £370k. Assumes funding sufficient to cove all costs required for pilot to be Pilot partnership brings existing contacts **KEY** relationships and expertise effective. Rationale: The Clean Growth Strategy includes an aspiration for as many homes as possible to be EPC Band C by 2035. There is a recognition that, for a variety of 'Gold' boxes describe the interventions target **KEY** outcomes. Text in <u>black</u> indicates outcomes that have demonstrated in practice. Text in <u>red</u> reasons, domestic energy efficiency retroift activity is low outside of Government funded schemes. in 'Building a Market for Energy Efficiency Call for Evidence' it was Assumption proven / supported indicates outcomes that have NOT yet been suggested that Government consider funding third-party organisations as a means of confirmed. Assumption partially proven / supported providing support for local supply chain growth and coordination to effect greater uptake amongst the 'able to pay' market. The Local Supply Chain Demonstrator Programme is Blue boxes (all shades of blue) illustrate the Assumption unproven (insufficient intended to pilot this approach through different organisations, in different operational environment and through locally designed interventions. The Carbon Co-op recognises logic chain / causal path. Text in <u>black i</u>ndicates information to make a judgement) those elements of the programme theory that the need for local level supply chain co-ordination but considers that there is also a need to promote domestic retrofit and for any associated marketing to be targeted at have demonstrated in practice. Text in red **Assumption unsupported** indicates those parts of the programme theory that have NOT yet been confirmed. those who are both able to pay and predisposed to undertake retrofit activity.

This publication is available from: www.gov.uk/government/publications/supply-chain-demonstrator-project-final-evaluation-report
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