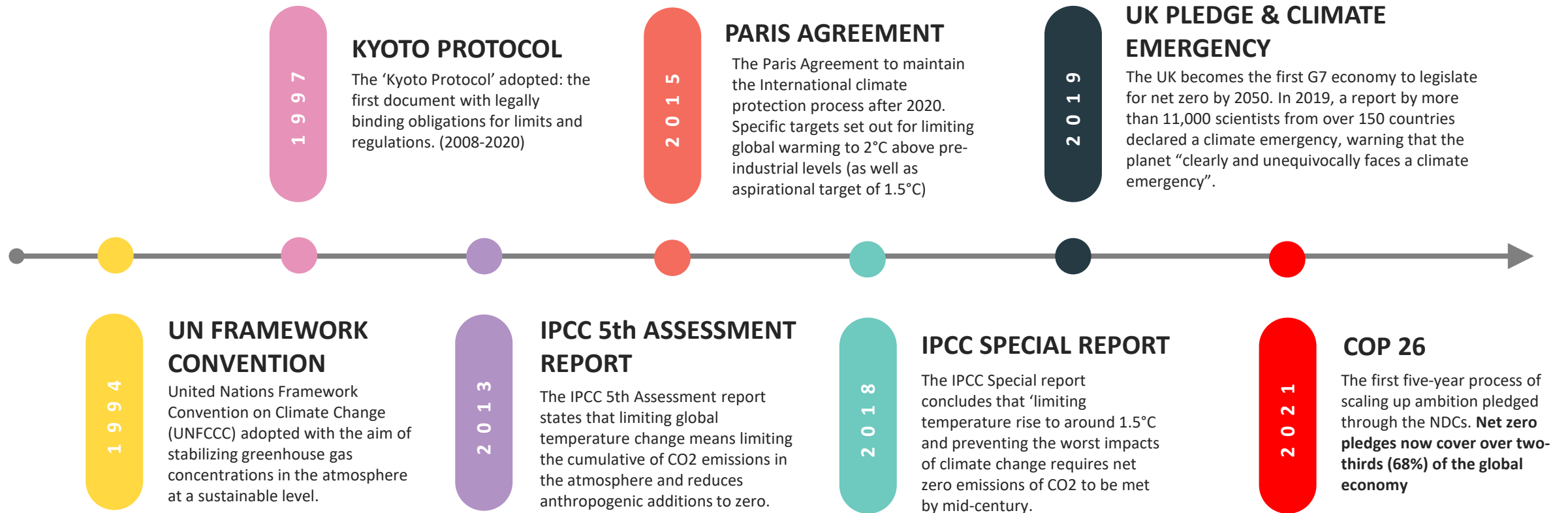


# Public Sector: How to Model Buildings to Net Zero



# Timeline to Net Zero



# UK wide survey findings:



## 1. Where are you on your net zero journey?

58% of respondents are at the '**Early Stage**' of their net zero journey.

26% of respondents are at the '**Delivery**' stage of their net zero journey. 11% of respondents have **not yet started** their net zero journey.

## 2. What are the two most important drivers in setting a net zero strategy?

50% of respondents stated that '**Financial Savings**' / '**Cost Reduction**' was the most important driver in achieving net zero.

35% of respondents stated that the main driver was due to the **environmental benefits** that a net zero strategy would bring.

**Government regulation** was the 3rd most popular response, behind cost and environmental benefits.

# UK wide survey findings:



3. What are the two most important challenges you face in achieving your net zero target?

71% said '**Financing the journey**' was the greatest challenge.

2nd most popular response not having the '**Skills to Implement**'.

3rd was '**Time**'.

4. Do you understand your council's current carbon footprint?

Only 24% have a '**Clear**' or '**Comprehensive**' understanding.

37% of respondents **do not understand** their council's current carbon footprint.

5. Does the strategy give a clear roadmap for implementation?

27% have a **clear** or **very clear** understanding on their net zero roadmap

69% have an **average** or **not clear** understanding of their net zero roadmap.

# London snapshot:

Statistics taken from London Borough Council's Net Zero strategies:



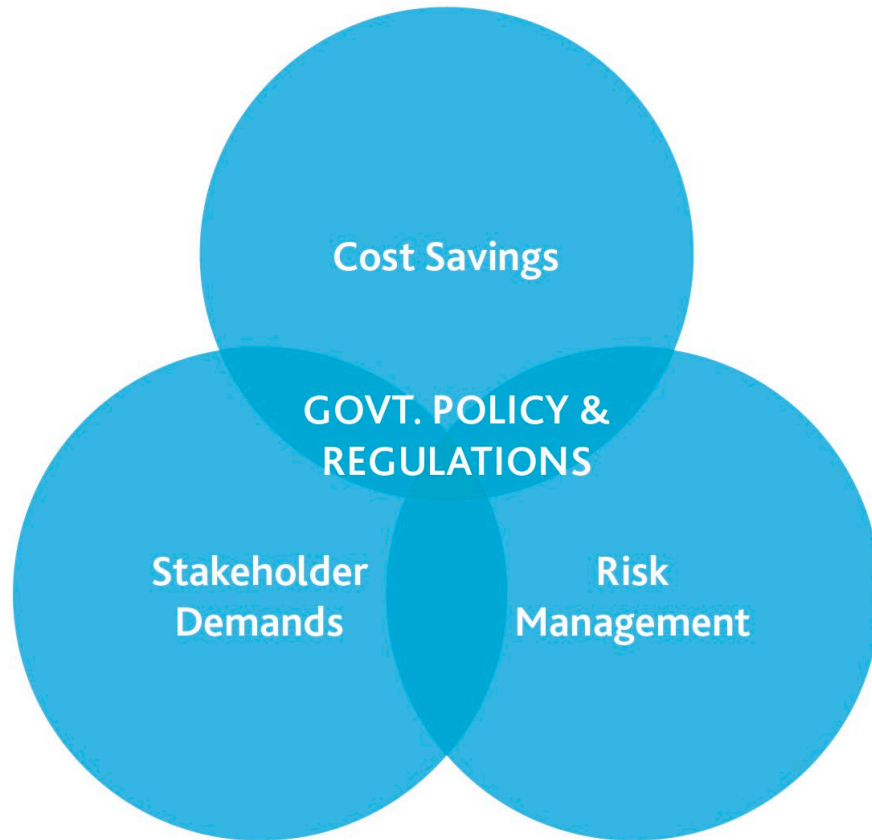
90% of London Borough councils have declared a **climate emergency** – compared to only 50% of UK-wide councils.

Only two London Borough councils had net zero targets later than **2030**.

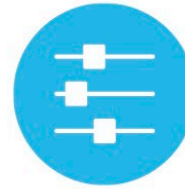
The average net zero council target is only **eight years away** in 2030.



# Drivers & incentives



**£689M** savings on energy bills by retrofitting 3.49 million homes to EPC C



**7.92MtCO<sub>2</sub>e** reduction in 2030 from retrofit activities



**£1.9 billion per annum** cost savings for the NHS



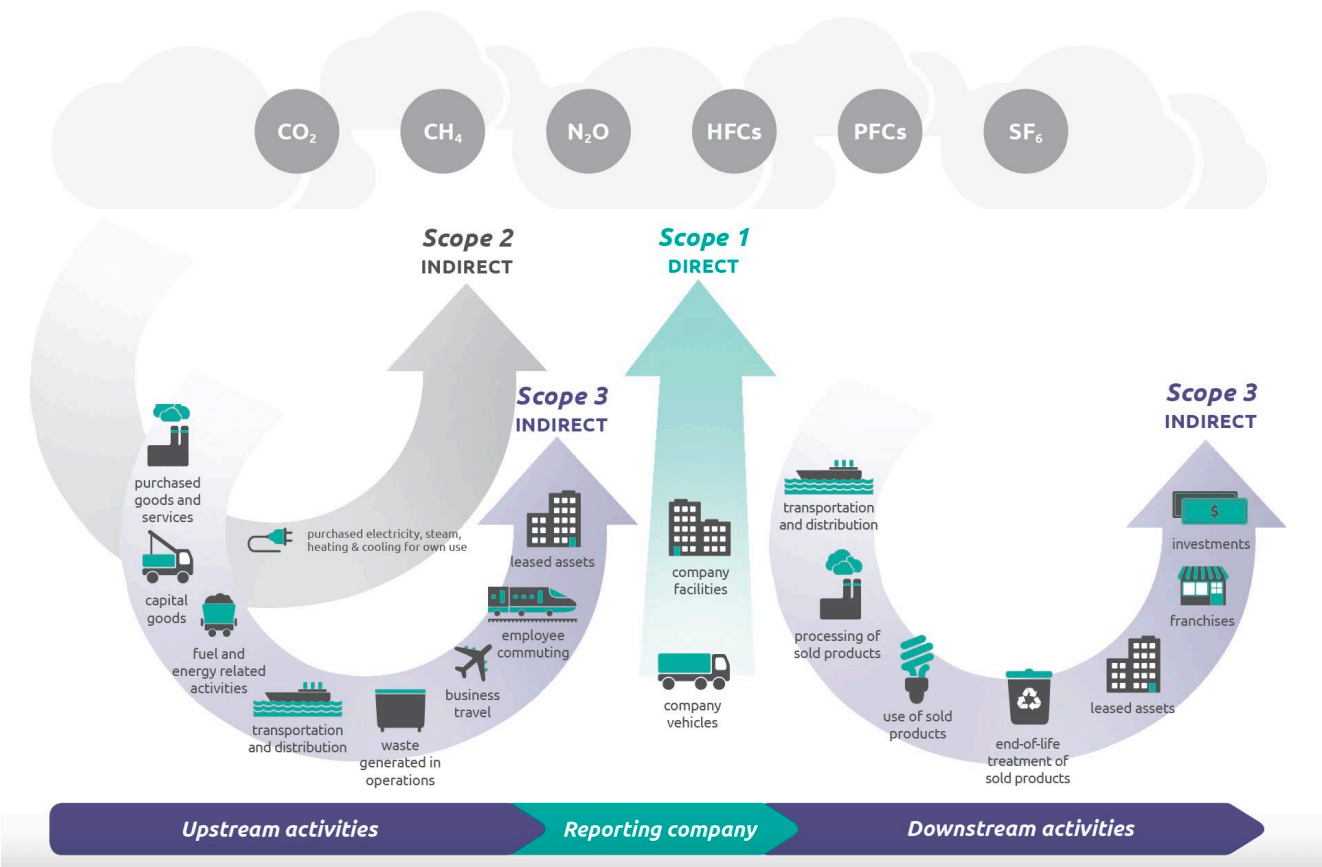
**23,014 FTE skilled jobs** created to meet retrofit demand

# Regulatory timeline

	CURRENT	2022-2024	2025	2026-2029	2030 >
RESIDENTIAL	Energy Performance Certificate (EPC) for <b>all</b> tenancies required to meet the minimum <b>Band E</b> rating	Part L update for new buildings to come into effect on the 15 <sup>th</sup> June 2022 (31% improvement on current regs)	- <b>Future Homes Standard</b> - Proposal to require <b>new</b> tenancies to meet the minimum <b>Band C</b> rating	Proposal to require all residential buildings to always hold a valid EPC	Proposal to require <b>all</b> tenancies to meet the minimum <b>Band C</b> rating
HISTORIC & LISTED	An EPC is not currently required for a listed property or building within a conservation area when it is sold or rented in so far as compliance with minimum energy performance requirements would unacceptably alter its character or appearance. However, if the listed building already has an EPC, then the property will be within scope of the appropriate regulations.				
EDUCATIONAL	There are currently no minimum requirements for educational buildings unless there are aspects of the building that are leased out.  Where any parts of the building are leased out, the EPCs requirements for Commercial buildings are applicable.				
COMMERCIAL (OFFICES /RETAIL)	Energy Performance Certificate (EPC) for <b>new</b> tenancies required to meet the minimum <b>Band E</b> rating	<b>2023</b> - Energy Performance Certificate (EPC) for <b>all</b> tenancies required to meet the minimum <b>Band E</b> rating	- <b>Proposed Future Buildings Standard</b> - Proposal to require all commercial buildings to always hold a valid EPC	<b>2027</b> - EPC required to meet the minimum <b>Band C</b> rating	EPC required to meet the minimum <b>Band B</b> rating
INDUSTRIAL	For industrial buildings with no heating system and no integrated office space, an EPC is not required.  Where heating systems and integrated office spaces are present, the EPCs requirements for Commercial buildings are applicable.				
FUTURE POTENTIAL REGS	Over the next 10 years, voluntary industry drivers such as Display Energy Certificates (DEC) & NABERS could become integrated into regulatory requirements.  Regulations covering embodied carbon are also likely to come into fruition at some point in the near future (Part Z).				

# Net Zero

## Emissions boundary & SBTi's Net Zero target





# Net zero

Plan



1. Establish governance structure, assigning roles and responsibilities
2. Determine emissions scope boundary and baseline
3. Set and agree targets, formalise through policy documents

Develop



4. Develop estate specific decarbonisation strategies, including feasibility assessment and life cycle costing
5. Apply for / identify sources of funding
6. Integrate within strategic asset management strategy
7. Identify and onboard key partners needed to implement strategy

Manage



8. Implement Net Zero strategy
9. Monitor progress, measuring against defined KPIs in accordance with recognised methodologies such as the GHG Protocol

Optimise



10. Report on progress against Net Zero targets
11. Review strategy against latest government regulations, technical innovations and Net Zero solutions
12. Update strategy and implementation plan

# Net zero

Plan



Develop



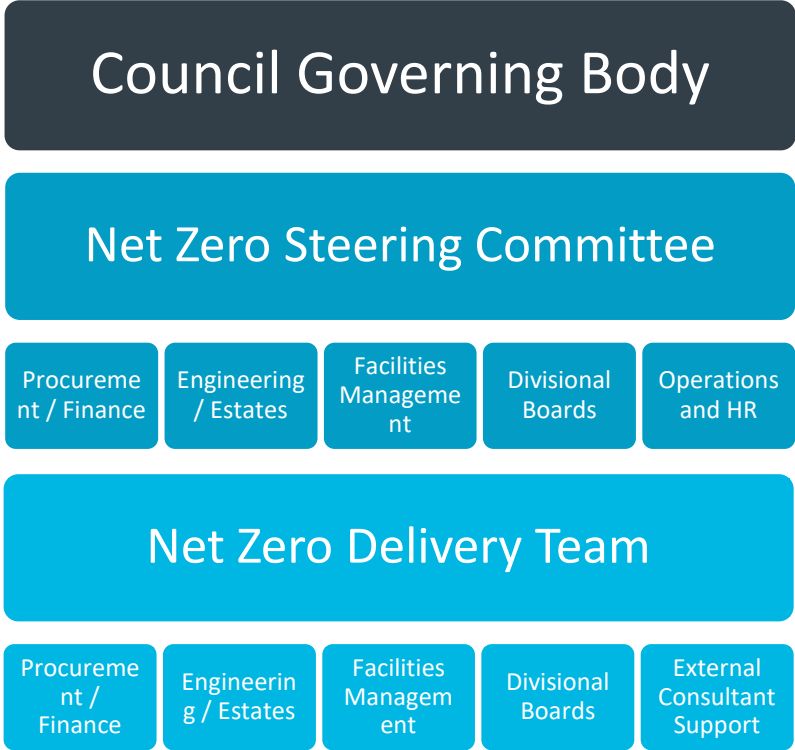
Manage



Optimise



## Governance Structure



## Establish Baseline

**Display Energy Certificate**  
How efficiently is this building being used?

Certificate Reference Number: [Redacted]

**Energy Performance Certificate**

Dwelling type: Semi-detached house  
Date of assessment: 30 September 2016  
Date of certificate: 01 October 2016  
Reference number: R05AP, existing dwelling  
Type of assessment: Total floor area: 135 m<sup>2</sup>

Use this document to:

- Compare current ratings of properties to see which properties are more energy efficient
- Find out how you can save energy and money by installing improvement measures

**Estimated energy costs of dwelling for 3 years:** £ 11,010  
**Over 3 years you could save:** £ 6,012

**Estimated energy costs of this home**

	Current costs	Potential costs	Potential future savings
Lighting	£ 420 over 3 years	£ 252 over 3 years	
Heating	£ 9,843 over 3 years	£ 4,404 over 3 years	
Hot Water	£ 747 over 3 years	£ 342 over 3 years	
<b>Totals</b>	<b>£ 11,010</b>	<b>£ 4,998</b>	<b>You could save £ 6,012 over 3 years</b>

These figures show how much the average household would spend in this property for heating, lighting and hot water and is not based on energy used by individual households. This excludes energy use for running appliances like TVs, computers and cookers, and electricity generated by microgeneration.

**Energy Efficiency Rating**

The graph shows the current energy efficiency of your home. The higher the rating the lower your fuel bills are likely to be. The potential rating shows the effect of undertaking the recommendations on page 3. The average energy efficiency rating for a dwelling in England and Wales is band D (rating 60). The EPC rating shown here is based on standard assumptions about occupancy and energy use and may not reflect how energy is consumed by individual occupants.

**Top actions you can take to save money and make your home more efficient**

Recommended measures	Indicative cost	Typical savings over 3 years
1. Flat roof or sloping ceiling insulation	£850 - £1,500	£ 756
2. Cavity wall insulation	£500 - £1,500	£ 2,178
3. Floor insulation (suspended floor)	£800 - £1,200	£ 249

See page 3 for a full list of recommendations for this property.

To find out more about the recommended measures and other actions you could take today to save money, visit [www.gov.uk/energy-graphic-calculator](http://www.gov.uk/energy-graphic-calculator) or call 0300 123 1234 (standard national rate). The Green Deal may enable you to make your home warmer and cheaper to run.

Page 1 of 4

# Net zero

Plan



Develop



Manage



Optimise



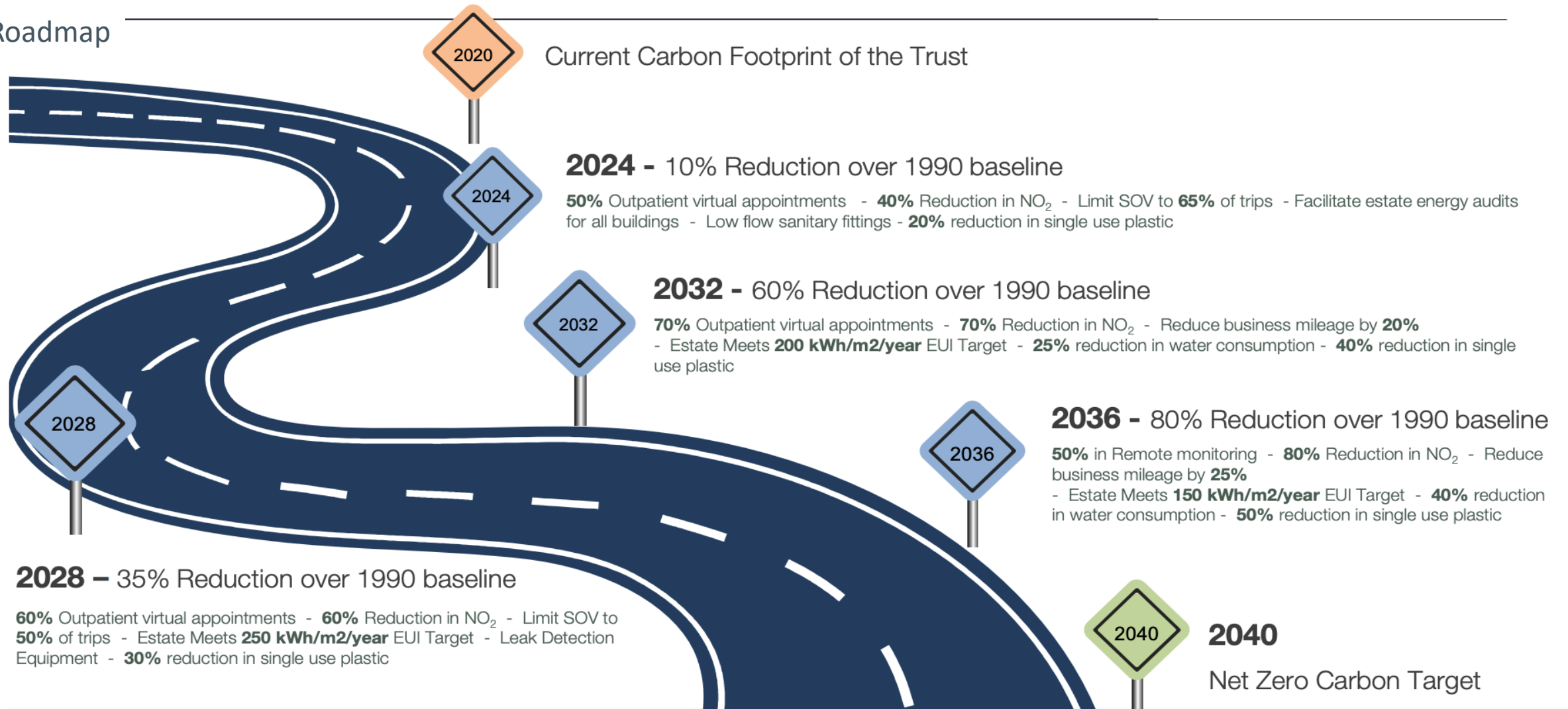
## Approach

Sphere of influen



# Net Zero

## Roadmap



# Net zero

Plan



Develop



Manage



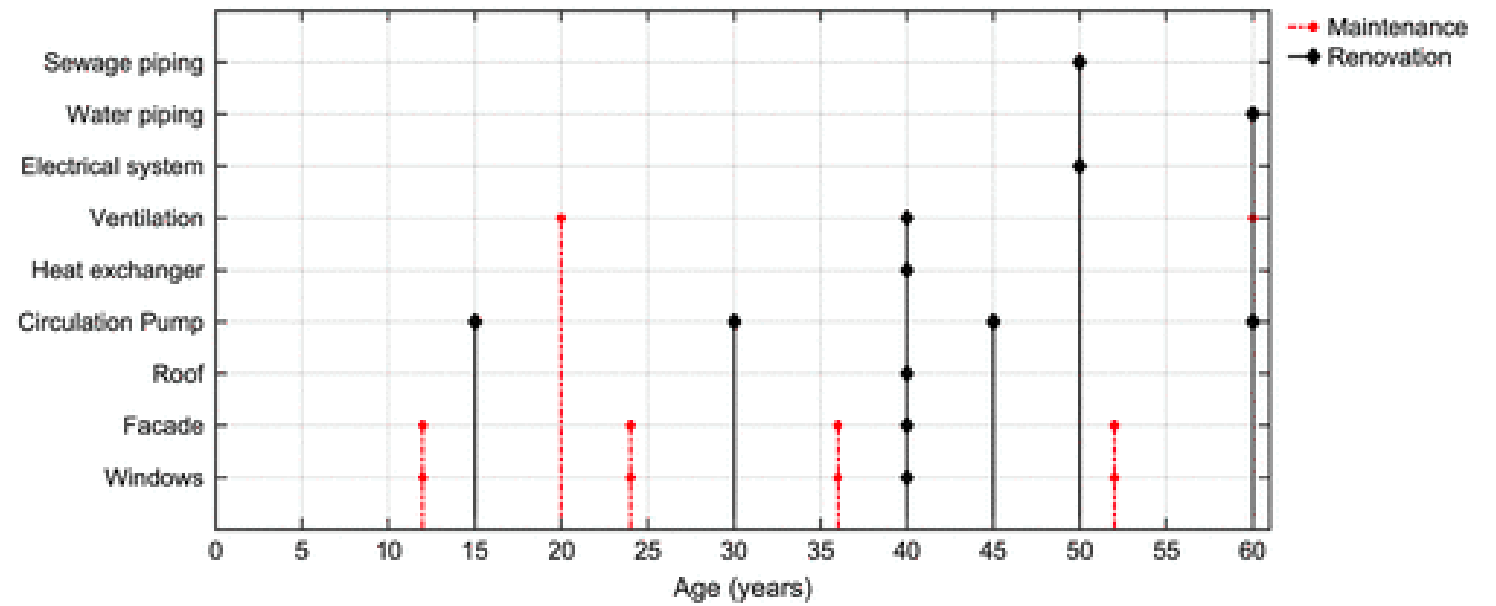
Optimise



## Approach

### Implementation, monitoring and reporting

1. Integrate approach with existing strategic asset management plan
2. Understand the ROI to build a portfolio-specific business case solution





# Net zero

Plan

Develop

Manage

Optimise

## Approach



10. As highlighted already, local government has a critical role in reaching net zero.<sup>10</sup> According to the CCC, local authorities are a "cornerstone of climate change partnerships". They are "the closest form of government to local people" and know "what works best in their areas". This is especially important as many of the areas where reductions will need to be made have "a strong local dimension", such as decarbonising buildings, transport and waste.<sup>11</sup> Likewise, the NAO said local authorities had "an essential part to play in decarbonising local transport, local housing and waste because of their power and responsibilities in these sectors", although it also acknowledged that the precise "challenges and opportunities for local authority work on net zero will vary according to their powers, functions and local circumstances".<sup>12</sup> While local authorities have limited direct control over emissions, they have powers or influence over roughly a third of emissions in their local areas.<sup>13</sup>

11. The evidence to this inquiry agreed that local government was central to the UK's efforts to reach net zero.<sup>14</sup> EGO, the climate change think tank, said local government would "need to play a central role as the UK moves further into the net zero transition, as decisions and their impacts move closer to people's daily lives" and that there was "a growing consensus" that different approaches to decarbonisation would be needed "to reflect regional variation and assets".<sup>15</sup> Cadent Gas said local authorities' knowledge "of local stakeholders and the local economy, as well as their relationship and trust with the community", meant they were best-placed "to develop and deliver tailored local area energy plans".<sup>16</sup> The Transport Group said local government had "a key role to play in driving the net zero agenda forward and ensuring that new developments in their areas are setting an example for achieving net zero".<sup>17</sup> The Energy Saving Trust told us that by "taking an area-based approach, pooling existing budgets and leveraging additional funding", local authorities had "an almost unique ability to add value".<sup>18</sup>

12. It was also recognised that public support for the net zero agenda would depend on there being a just transition and that local government, through its various roles and responsibilities, could help to ensure that climate action benefited all communities.<sup>19</sup> As we heard, no one can be expected to support measures that make their lives worse.<sup>20</sup> Philippa Bennett, from the Green Alliance, said: "If we start doing stuff that benefits some people and not others, they will not understand why we are investing in it".<sup>21</sup>

13. The joint submission by MHCLG and BEIS also recognised the role of local government in the path to net zero. It said councils were "key delivery partners and place-shapers" and that they played "a role in driving local climate action" through their "direct control and indirect influence" over many national priorities, such as energy, housing and transport.<sup>22</sup>

**The need for a framework**

14. Most councils have already set climate change targets at least as ambitious as central government's.<sup>23</sup> Nevertheless, in its report, *Achieving Net Zero*, the NAO reported that local government representatives had warned of "a lack of clarity from central government on the role local authorities should play in achieving net zero".<sup>24</sup> In its more recent report, *Local government and net zero in England*, it further found that central government had "yet to determine, in consultation with the sector, local authorities' overall responsibilities and priorities in achieving the national net zero target" and that consequently there was a risk local authority climate action would not be "as coordinated, targeted, or widespread as it might need to be".<sup>25</sup> Given these concerns, the CCC said the Government "should engage with local authorities to ensure that a net zero local delivery framework is included in its net zero strategy" and that this framework should "design and clarify national, sub-national, regional and local delivery roles and areas for collaboration".<sup>26</sup> Without some central government co-ordination, it said the UK risked pursuing a "fragmented strategy towards net zero", with councils duplicating both effort and expense.<sup>27</sup>

15. The evidence agreed that local government needed a stronger steer from central government and a more joined-up approach between government departments.<sup>28</sup> Lord Deben, Chair of the CCC, told us local authorities were "doing it on their own" because there was "no centralised help".<sup>29</sup> The Association of Directors of Environment, Economy, Planning and Transport (ADEEPT) said the Government "must strengthen its coordination and improve its engagement with local government" and "provide a framework for action".<sup>30</sup> The Green Alliance, an environmental think tank, said government policy must "make clear exactly how central government will partner with regional and local governments to collaboratively work to reduce emissions".<sup>31</sup> Councillor Sarah Reuss, Enhancing Quality of Life Board Member, District Councils' Network (ECN), told us: "The critical key from a district level is give us that framework, tell us what you want us to do and under what banner and we will develop the policies and deliver it. That is very much the frustration, I think, of the districts, just give us the framework".<sup>32</sup> Electrical Safety First said it was vital that government agencies aligned "to avoid overlap or conflict".<sup>33</sup>

16. Lord Deben told us a framework could also clarify the role of MHCLG in the net zero agenda.<sup>34</sup> Except for planning and new homes, the Department (now DLUHC) does not have direct policy responsibility for any of the areas where climate action is most pressing, such as retrofitting existing buildings and transport, for which BEIS and DfT have primary responsibility, although, according to the Minister, Eddie Hughes MP, it does have a role as a consult between central and local government.<sup>35</sup> According to the BEIS 2021 progress report to Parliament, progress in reducing emissions, however, the Department "is not fully supporting local government to play its part in the transition to Net Zero".<sup>36</sup> Lord Deben said this would require a "new partnership" between central and local government, as opposed to the Department, "as it very often does", simply "handing down requests and determinations".<sup>37</sup>

# Summary

1. The reputational and financial risks can no longer be ignored
2. The financial business case is growing ever stronger, especially for the public sector
3. The accelerated regulatory timeline for buildings to address their carbon footprint is resulting in stranded assets
4. A pragmatic, practical roadmap to decarbonisation of property portfolios should be developed through a collaborative and integrative approach
5. There is no time to waste!



# Thank you

