

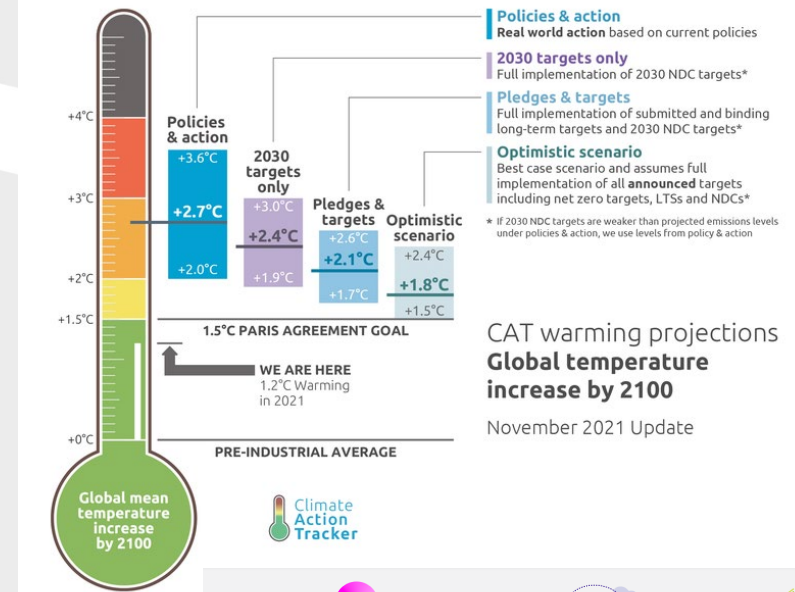
Keynote: “Moving from systems thinking to systems action”

Kit England LLB Hons MA Cenv MIEMA
Group Manager – Green Economy
UNECE-FAO Impulse Lab
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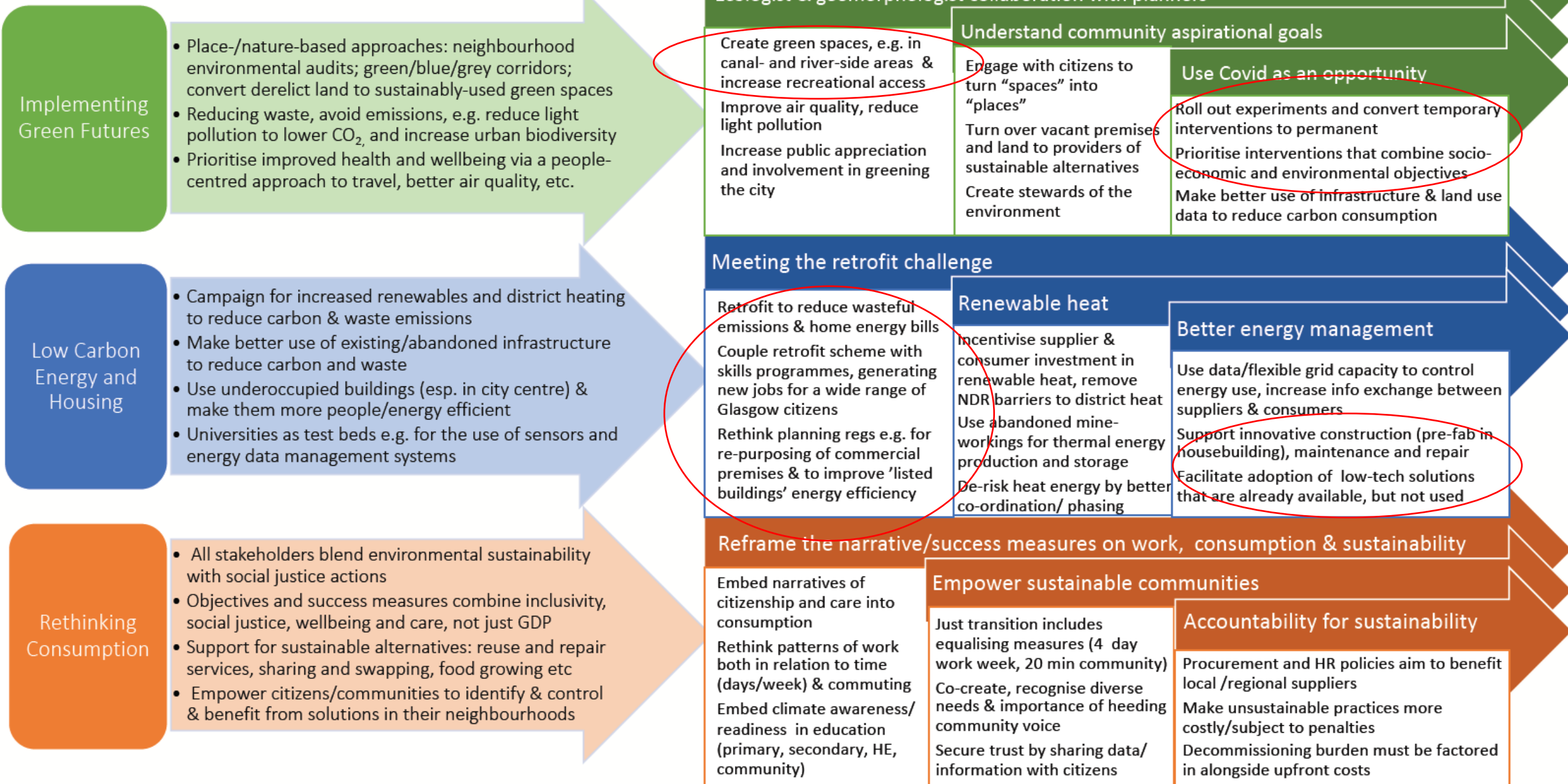


Background context

- Need for a market making approach to tackle the climate emergency emerging from a confluence of different factors
 - The urgency, and size of emissions and climate resilience gaps
 - An ambition to capture and create economic opportunities in partnership with private sector
 - A growing case for use of systemic change for transformation
 - National commitment to build a nature-positive economy and emerging markets identified:
- Significant increase in national and regional nature and forestry projects, – e.g. Glasgow and Clyde Valley Green Network Blueprint, Glasgow City Region Adaptation Strategy and Action Plan, Regional Economy Strategy,
- Glasgow hosted a series of Green Economy dialogues to inform priorities for recovery post COVID.



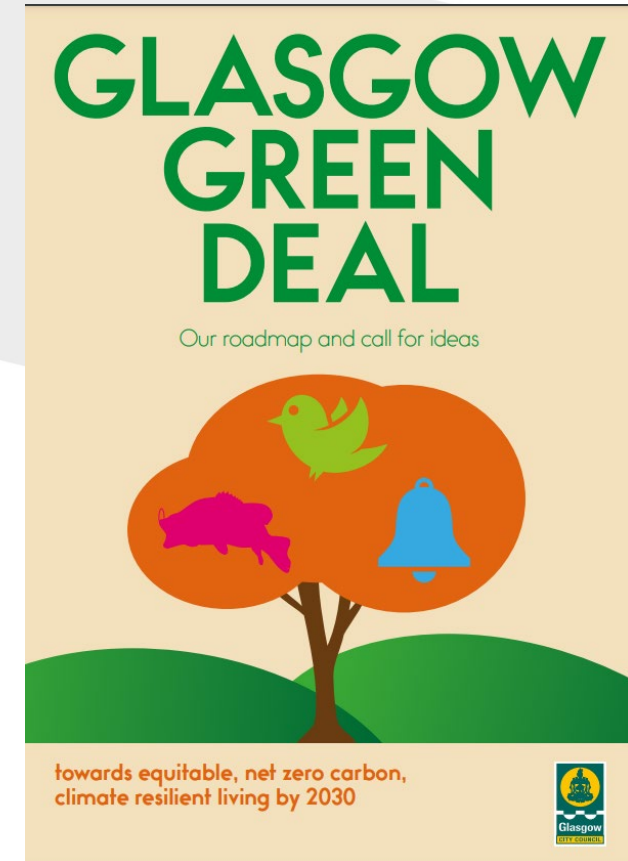
Outcomes from 2020 dialogues:



This diagram captures the discussion topics from the 2020 dialogues and the consensus on where collaborative action is needed.

The Glasgow Green Deal

- Glasgow's Climate Plan committed to creating a Green Deal to bridge the gap between climate targets and current progress.
- An integrated 9 year mission to mobilize economic resources around a transformative vision of rapid decarbonization, environmental sustainability, and socioeconomic justice (in common with the wider Green Deal movement).
- Draft outcomes framework and action plan recently published - committed to realising economic opportunities associated with the transition to a net zero and climate resilient economy
- Complements traditional carbon-centric policies, with a strong focus on policies and actions to address associated socio-economic, governance, and financial barriers.



Glasgow Green Deal Outcomes and Activities Framework

Equitable, net zero and climate resilient-living by 2030

Mission

Long Term Outcomes (by 2027)

Organisations have a full set of competencies and capabilities and appetite needed for a new economic system.

Glaswegians are safeguarded through the transition to a net zero, climate resilient economy.

Glasgow's finance systems and flows support an equitable and sustainable economy through a programme of sustainable infrastructure projects.

Glasgow is where global solutions to the hardest challenges of decarbonisation and adaptation are found.

The City's power is more equitably distributed and shared, with citizens having a significant stake in how it's governed.

Considerations of sustainability, climate and equity are standard in economic planning.

Activities (by 2025)

1) Ensure the City enables and directs the transition, by building capacity and changing attitudes, behaviours and cultures.

2) Ensure a strong framework of support for all those affected by the transition to a net zero, climate resilient economy.

3) Mobilise capital so the City Council meets the infrastructure investment needs of the Climate Plan and ensure wider flows are compatible with the Paris Agreement.

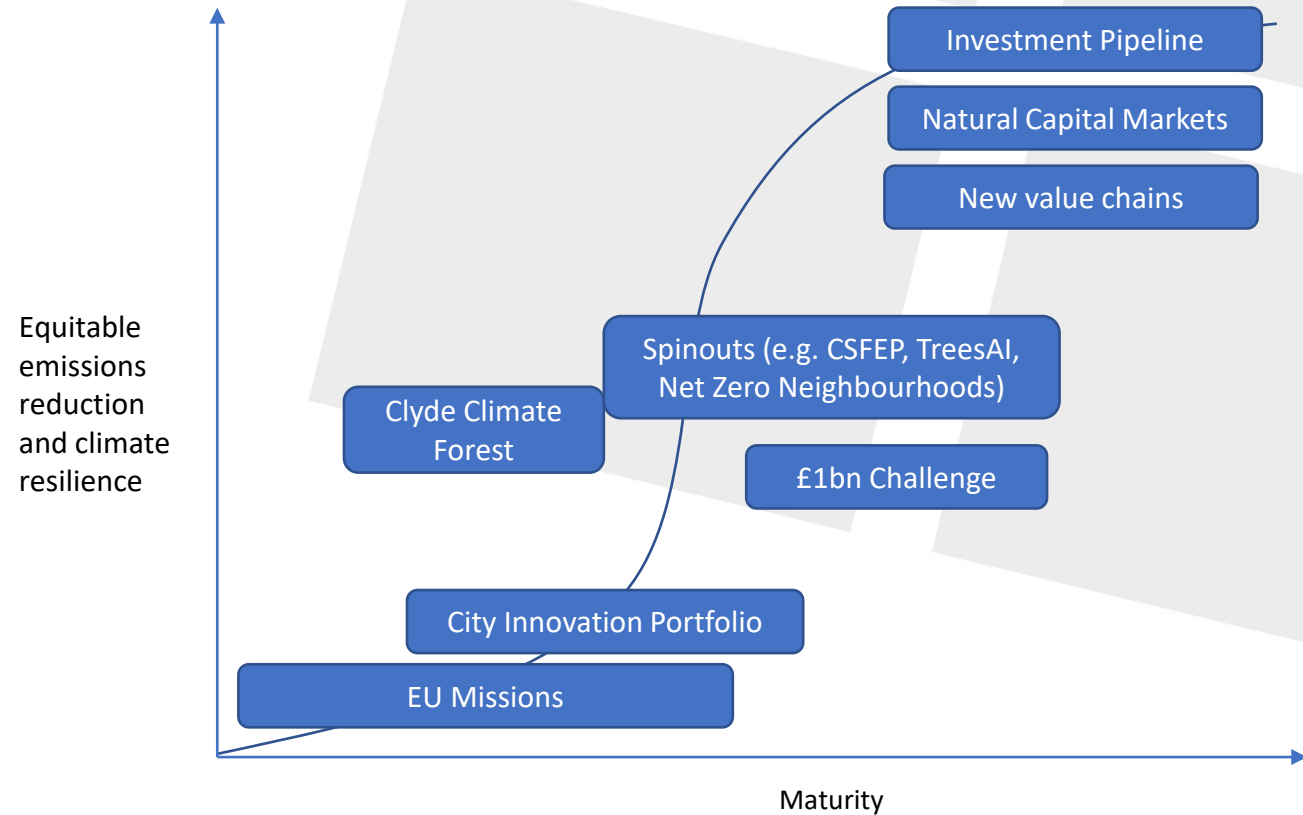
4) Address the complex barriers to widespread action, by developing, showing and scaling systemic solutions.

5) Mobilise a critical mass of businesses, community groups and citizens and involve them in the politics needed for a new green economy.

6) Build momentum by mainstreaming fair mitigation and adaptation through all economic development activity.

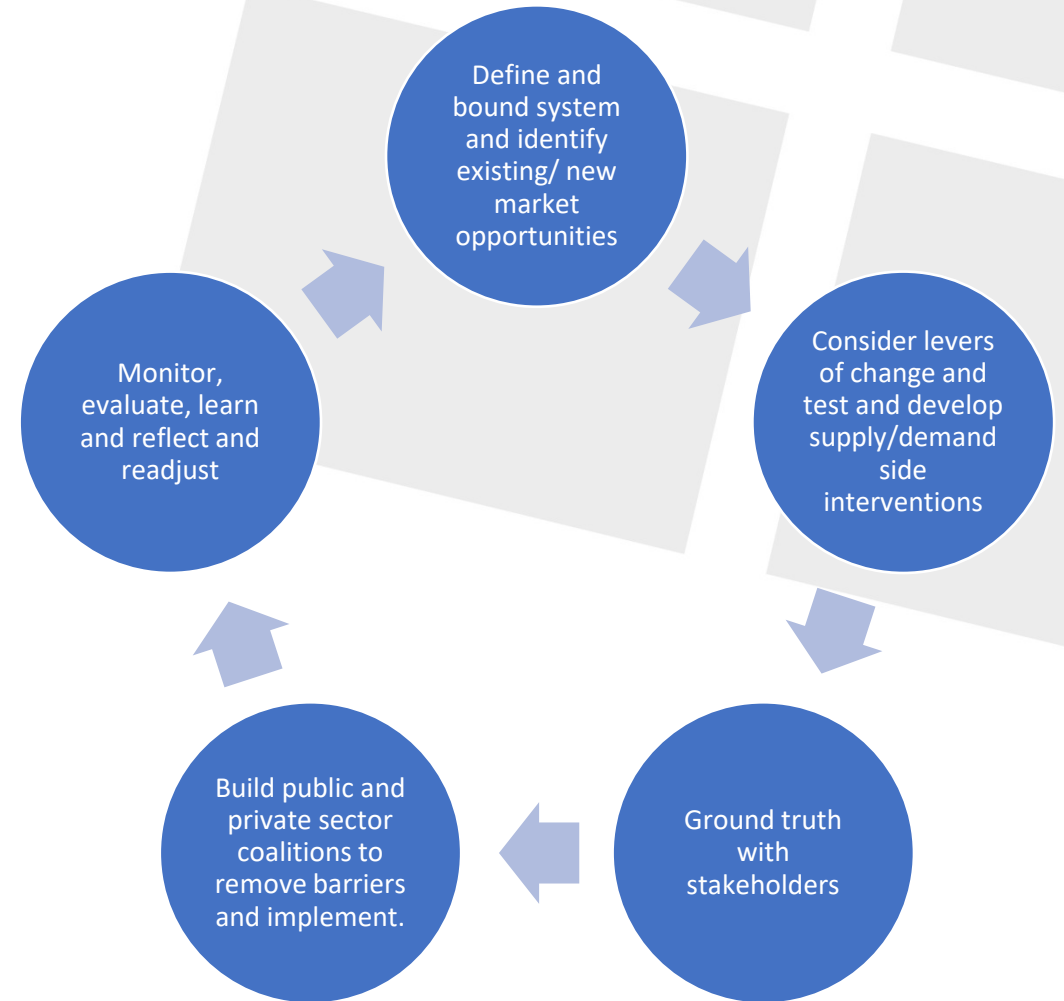
Emerging systems innovation approach

- Early stage approach to transformational change in decarbonising and adapting Glasgow's economy.
- Combining innovation in emissions and resilience domains with mapping and bounding systems and defining challenges.
- Building a portfolio of innovative solutions for a City – with the aim of scaling and replicating and creating exponential change.
- Also joined the EU's systems innovation programme on Climate Neutral and Smart Cities by 2030.
- Complemented by a wider market making role.



Emerging market making approaches

- Glasgow also has a role to play in making the new markets needed (e.g. nature based solutions, hydrogen)
- Adopting a challenge/opportunity-led approach - similar to approach used in hard to abate sectors / other mitigation challenges (e.g. Mission Possible Partnership)
- Tailoring this type of approach to the City and Regional scale – using design thinking, co-design approaches, and new evidence generation methods.
- Needs a consideration of both supply side, and demand side, and the relevant levers of change to make it happen. E.g. procurement, policy,
- Still very much in learning / adjustment mode.
- Early work has focused on the Climate Smart Forest Economy programme – in partnership with EIT Climate-KIC, World Economic Forum and the Nature Conservancy.



GCR – AN AMBITIOUS LOCAL AUTHORITY LEVERAGING FORESTS TO TURN BUILDINGS INTO LONG-TERM CARBON STORES



NATIONAL POLICY
MOMENTUM

The Climate Change Plan for Scotland (2018-2032) sets ambitious targets for forest and woodland creation and industry decarbonization, and the National Strategy for Economic Transformation (2022) aims to deliver a just transition to a net zero, nature-positive economy.



FINDING
CATALYTIC
SOLUTIONS

10 intervention points along the forest and wood value chain were identified as actions that could contribute towards building a local climate-smart forest economy.



BUILDING
PUBLIC-PRIVATE
VALUE COALITIONS

Organizations along the value chain will work together to implement 6 actions that support the vision of a local climate-smart forest economy.



...resulting in a substantial climate positive impact



1,362,000 CO₂ SAVINGS COULD BE GENERATED, by 2032 as a result of the planned 18.5% to 21% woodland expansion – or the equivalent of the annual CO₂ emissions of more than 296,000 passenger vehicles*

Notes: *A typical passenger vehicle emits about 4.6 metric tons of carbon dioxide per year, this assumes the average gasoline vehicle on the road today has fuel economy of about 22.00 miles per gallon and drives around 11,500 miles per year, where every gallon of gasoline burned creates 8,887 grams of CO₂
Source(s): United States Environmental Protection Agency, [Greenhouse Gas Emissions from a Typical Passenger Vehicle](#), 2022

LEVERAGING KEY PARTNERSHIPS, GCR HAS SUPPORTED THE DEVELOPMENT OF A CSFE ACROSS THE 3S FRAMEWORK COMPONENTS

3S POTENTIAL*

PARTNERSHIPS**



SINK

Assuming a 50:50 ratio broadleaved to conifer, 988,682 tCO₂ will be additionally sequestered by 2045 as a result of woodland expansion in Glasgow City Region.



The Clyde Climate Forest (managed by Glasgow and Clyde Valley Green Network Partnership) is the highest ambition local forest and woodland creation program.



STORAGE

More than 32,000 m³ of timber will be available to market once the trees reach harvestable age which could lead to the manufacturing of more than 19,000 m³ of Cross Laminated Timber (CLT), thereby potentially storing 1,362,000 tCO₂ in the construction value chain for 60+ years[#].



Built Environment – Smarter Transformation (BE-ST), brings together academia, government bodies, skills bodies and providers, and industry to accelerate the built environment's transition to zero carbon emissions. **Offsite Solutions Scotland** is the co-operative of leading Scottish offsite manufacturing companies.



SUBSTITUTION

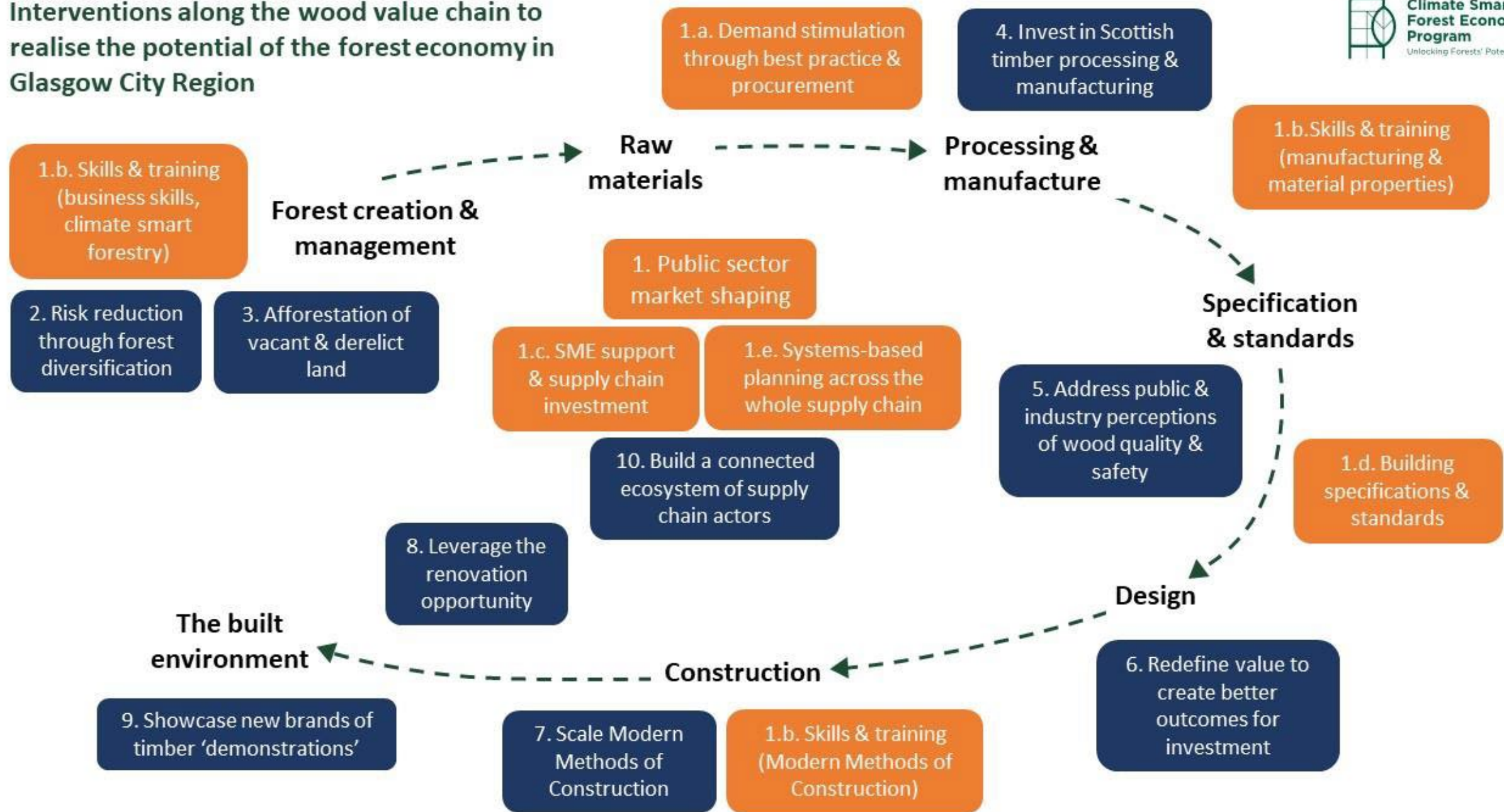
An additional 32,031 m³ of timber will be entering the supply chain, from which a total of 19,219 m³ CLT can be manufactured. This could be used in the construction industry to build up to 413 residential houses, or up to 21 residential blocks.



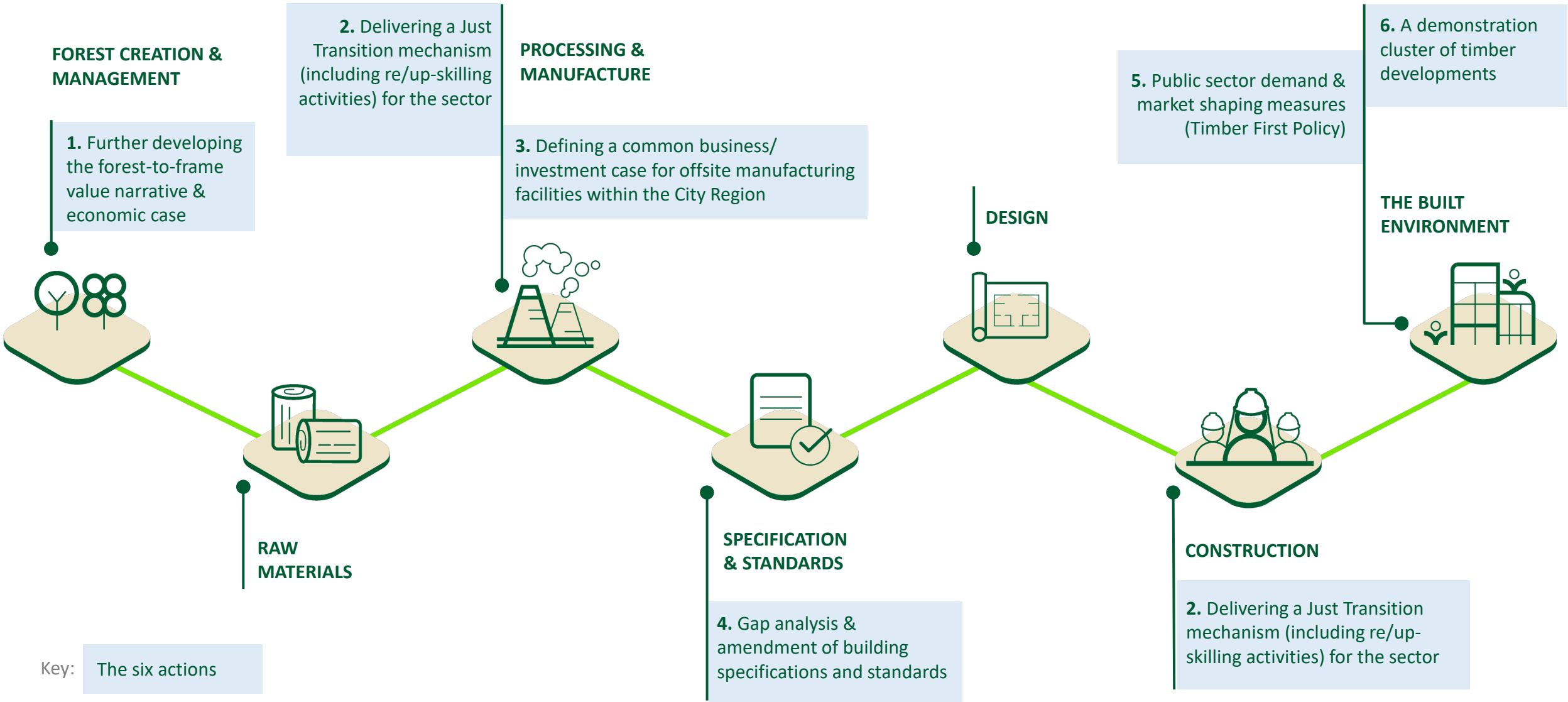
Glasgow and the wider region (formally 8 local authorities) can work towards demonstrating demand and market shaping by exploring various measures (for example, Timber First Policies, offsite manufacturing targets, or deconstruction plans).

Notes: * CSFEP worked with BeZero Carbon to model the (1) carbon sequestration impact of existing and projected forest cover, dividing between broadleaf and conifer; (2) the carbon footprint of construction materials to provide an estimate of the potential for production; and (3) the carbon balance (i.e., savings) that could be generated through product substitution in the construction sector; **These partnerships are being explored as part of the value-chain coalition, confirmed partners include BE-ST, Glasgow City Council and Offsite Solutions Scotland; [#]The Building Research Establishment in the UK has certified CLT products for a lifespan of 60 years, with occupied timber buildings in Europe that are over 700 years old.

Interventions along the wood value chain to realise the potential of the forest economy in Glasgow City Region



VALUE CHAIN ACTIONS TO BE TAKEN FORWARD WITHIN GCR



Takeaway learnings and next steps

- The Climate Smart Forest Economy approach can create systemic shifts which design out the hard to reach carbon, whilst promoting economic development and prosperity.
- Cities and regions can be crucial actors in this effort by bridging silos, sectors and systems, but needs us to rethink the structures competencies and capabilities – for example systems thinking, co-design, linked carbon and economic assessments.
- Needs a consideration of both supply side, and demand side, and the relevant levers of change to make it happen. E.g. procurement, policy
- If this was purely a ‘nature’, ‘climate’ or ‘economic development’ initiative, it wouldn’t work – needs ownership and leadership which is specifically at the intersection of both.
- Also needs to be convened and co-designed with actors in skills system, investment and development, forestry, planning.
- Still very much in learning / adjustment mode, but next steps are an application to the Built by Nature coalition for collaborative action.

Thankyou

Kit England LLB Hons MA Cenv MIEMA

Group Manager – Green Economy

E: kit.England@glasgow.gov.uk

T: (+44)7791 33 22 50

