Intervention #11
Implementing a system-wide transition strategy for delivery

Intervention point

Achieving full-scale net zero transformation of the built environment by 2050 requires an organised approach. While there are many important programmes and initiatives, such as roadmaps, demand signal coordination and corporate commitments under development, what is needed is a coordinated framework for delivery that can channel these important parallel developments into an effective system-wide transition strategy.

Current situation

Globally, the built environment value chain emits 37 percent of CO2.[1] There is a pressing need to decarbonise buildings, both in the operational and embodied phases. Operational emissions account for 27 percent of emissions through heating, cooling and electricity while embodied account for 10 percent of emissions through materials, construction, transport and maintenance.

However, according to the RICS the net zero transition for the built environment is not progressing at the pace we need.[2] One central reason for this is that the built environment is not a sector, but a system made up of a number of high-emission sectors (e.g. steel, concrete, energy) that each need to decarbonise to achieve net zero goals.

Buildings are embedded in an extensive value chain, in which even low emission sectors such as engineering, architecture and finance play a crucial role in the whole life carbon emissions of the end product. This is further complicated by the often fragmented ownership of real estate.

National building codes also differ widely in terms of coverage and ambition. This makes the "buildings system" very hard to pin down, and even more difficult to coordinate (see *C Change Intervention #12 Whole value chain coordination).*

While progress is being made to coordinate delivery, the current approach centres on frameworks or roadmaps. These set the stage for what needs to be done by offering guidance, but the crux of the intervention has to focus on actual delivery through stakeholder mobilisation, coordination and actions from industries and governments.

Within the built environment system, the most advanced framework is the Built Environment 2030 Breakthrough Agenda, which wants to ensure that "near-zero emission and resilient buildings are the new normal by 2030".[3] The agenda, led by the governments of France and the Kingdom of Morocco, is so far supported by 15 other countries, as well as 13 world-leading sustainability organisations,[4] and serves as a rallying point for all countries.

There are also several roadmaps which aim to streamline decarbonisation activities in the system and organise the delivery of the net zero transition.

In 2020, the GlobalABC and partners published the GlobalABC Roadmap for Buildings and Construction 2020-2050.[5] This represents a milestone in channelling climate action efforts in the built environment by supporting "a common language and vision for the complete

decarbonisation of buildings across their life cycle and to support the development of national or subnational strategies and policies".[6]

It supports stakeholders by outlining the action they can take in the short, medium and long term for urban planning, new buildings, existing buildings, building operations, appliances and systems, materials, resilience and clean energy. In addition to the global roadmap, the GlobalABC also published regional roadmaps for Latin America, Africa and Asia.[7] Cascading down from these publications, a number of sub-regional, national and sub-national roadmaps are currently under development.[8] The GlobalABC is not planning to publish a roadmap for Europe or North America.

In Europe, other significant roadmap development has been taking place on two levels. At the public level, the European Commission is in the process of developing a roadmap for the reduction of whole life carbon of buildings. Currently, there is a support study[9] being conducted in collaboration with Ramboll, Buildings Performance Institute Europe (BPIE) and KU Leuven, to determine embodied carbon baselines and expectation, operational carbon development trajectories and potential solution impacts.

Aimed at built environment stakeholders, the World Green Building Council (WorldGBC) launched its #BuildingLife[10] campaign and published an EU Policy Whole Life Carbon Roadmap,[11] which includes important milestones and policy instruments the EU should employ to organise the net zero transition of its built environment. Spearheading the development of roadmaps at the national level in Europe, ten Green Building Councils[12] published their own national editions, specific to their country's existing legislative environment and building codes. In 2023, more funding is being secured to tackle more countries.

Importantly, it must be noted that entire value chain engagement (see *C Change Intervention #12 Whole value chain coordination*) will be necessary to deliver the #BuildingLife vision and any other decarbonisation roadmap rather than policy makers alone.[13] Sector or system specific transformation plans that engage practitioners on the ground are crucial for the effective delivery of a green transformation.

Despite these well-developed roadmaps that include significant milestones and prudent policy recommendations, there remain significant barriers. No one roadmap covers all necessary stakeholders, global companies and building owners and investors are often overwhelmed by the existing number and variance of these plans, and significant gaps remain with respect to the actual implementation and delivery on the ground of what is proposed.

To make much needed progress, a comprehensive co-owned and inclusive implementation plan for the built environment is required. The built environment can learn from existing "sector transition strategies" applied in some high-emission sectors, such as steel, concrete, energy or trucking, and an adaptation of such for the built environment could lead to more effective outcomes beyond the roadmaps.

What is being done

Looking into the value chain, a significant number of the sectors within the built environment system, such as steel, concrete, energy and trucking are already moving beyond roadmaps and into the process of actively coordinating a net zero transition.

The Mission Possible Partnership (MPP) is an initiative by some of the world's leading and industry convening organisations on climate action including the Energy Transition Commission, the Rocky Mountain Institute, the We Mean Business Coalition and the World Economic Forum. It developed a four-step methodology to stimulate action[14] that is showing great potential for progress. Current sectors include cement and concrete[15], steel[16] and trucking.[17]

Step one is to convene key stakeholders within a sector (finance, producers, consumers, government, etc.) to forge a global vision. In the built environment, the beginnings of this have already come together in the shape of the Building to COP coalition (more information about convening the built environment can be found in *C Change Intervention #12 Whole value chain coordination*). In step two, cross-border sectoral roadmaps are developed together with needs assessments to deliver them from required technologies to the underpinning infrastructure to support it.

In step three, engaged stakeholders are supported to commit to key aligned actions which stimulate implementation, including investment commitments, procurement and lending guidelines, demand signals, government R&D spending and policy making.

The fourth and final step is about supporting implementation with practical resources and support in delivery such as transferable blueprints for zero-carbon pilots including their financing and scale up, green product standards to improve adoption and monitoring of agreed metrics for accountability. The key is coordinated action against the central unified plan, which is something a system, built up on sectors, crucially needs.

Elsewhere, in terms of stimulating action, the World Business Council for Sustainable Development (WBCSD) first published the Market Transformation Levers for a Net Zero Built Environment in 2021 and has been working on aggregating and supporting industry to deliver against them for the last two years.[18]

Within the work, three key levers for change were identified: align behind whole life carbon, integrate carbon cost and price, and transform supply and demand dynamics. All three are considered fundamental to overcome to enable an effective net zero transition.

In 2023, through the Market Transformation Levers work, the WBCSD will conduct a three-step programme of convening the whole value chain of the built environment to identify critical leverage points that, if sufficient work is done, will deliver tangible results in the next one to three years. The first workshops was held at London Climate Action Week with two further workshops, New York Climate Week and COP28 in Dubai.

Possible next steps

In recent years, there has been significant progress in the built environment including regional and national roadmaps, market transformation levers, and new net zero building standards. However, they are not yet coordinated, and a first step towards this coordination could consist in a mapping of the initiative landscape.

What is still missing is a means to coalesce all these parallel initiatives and undertakings into a single, co-owned implementation pathway or "system transition strategy", that all value chain stakeholders can get behind.

A possible next step in Europe would be to consult with the Mission Possible Partnership coalition, and use lessons learned and progress made in this initiative to support the development of a similar system-wide transition strategy for the built environment. Harnessing the already formed Building to COP coalition and others would help facilitate delivery.

Crucially, what the system needs is to rise above fragmented initiatives into a coordinated strategy that harnesses known, tried and tested sectoral transformational techniques, and enables transferable knowledge and efficiency between borders and value chains to accelerate a path forward.

How to get involved

- Companies within the built environment value chain can sign up to join the Building To Cop Coalition through the Race To Zero Campaign: https://buildingtocop.org/race-to-zero/
  This is a necessary enabler for the creation of a coalition that can administer the creation of a transition roadmap.

- Contribute to the study of the European Commission for the reduction of whole life carbon here: https://c.ramboll.com/whole-life-carbon-reduction

- Become a #BuildingLife ambassador to support advances in the national roadmaps of the WGBC. More information here: https://www.worldgbc.org/sites/default/files/BuildingLife_HowToGuide.pdf

- Contribute to the WBCSD Market Transformation Levers for the Built Environment work: parsay@wbcsd.org

About C Change

C Change is a ULI-led programme to mobilise the European real estate industry to decarbonise. We're a movement empowering everyone to work together for a sustainable future. We connect the brightest minds from across the value chain. We challenge barriers, share expertise, and champion innovation to move swiftly to accelerate solutions that will transform our industry and protect our planet. C Change means real change.

C Change was formed in late 2021 by a group of leading real estate players that was united in its aim to focus on collaboration to ensure companies large and small have access to practical solutions and education on decarbonisation.

About these intervention briefings

This is one of a suite of intervention points developed as part of the C Change programme. Intervention points are specific places within a system where we can target action, interrupting business as usual to drive transformation. Of course, systems are dynamic environments that are always in flux. We expect movement over time, and will update this document as prevailing and anticipated trends change shape. This briefing was researched in 2022 and published in 2023.

1 GlobalABC: 2022 Global status report for buildings and construction
2 p. 4 RICS: Sustainability Report 2021
3 Building to COP: List of built environment initiatives announced at COP27, Egypt
4 International Council for Research and Innovation in Building and Construciton : Call for a 'Buildings Breakthrough' at COP27
5 GlobalABC: Roadmap for Buildings and Construction 2020-2050
6 p. 8 Ibid
7 GlobalABC: Forging global and regional pathways
8 GlobalABC: Roadmaps for Buildings and Construction
9 Ramboll: Support study for the development of the roadmap for the reduction of whole life carbon of buildings
10 World Green Building Council: #BuildingLife
11 World Green Building Council: EU policy whole life carbon roadmap
12 Croatia, Finland, France, Germany, Ireland, Italy, the Netherlands, Poland, Spain and the UK
13 p. 21 World Green Building Council: EU policy whole life carbon roadmap
14 Mission Possible Partnership: Our approach
15 Mission Possible Partnership: Concrete/cement
16 Mission Possible Partnership: Steel
17 Mission Possible Partnership: Trucking
18 GlobalABC: Market tranformation levels for a net zero built environment

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