

CCG COP29 POLICY BRIEF SERIES

Implementing Data-to-Deal in Transport: Addressing the Complexities of a Multi-Stakeholder, Multi-Policy Sector

Jairo Quirós-Tortós ¹, Mark Howells ¹, Holger Dalkmann ³, James Dixon ⁴, Naomi Tan ⁵, Marcela Jaramillo ⁶, Emma Richardson ⁷

Summary

The [Data-to-Deal](#) framework is an emerging approach to support countries in the Global South unlock finance for the climate transition. It covers the entire investment pipeline from collecting data and conducting modelling all the way through to the mobilisation of finance. The approach builds on the successful recent experience of several Latin American and Caribbean countries, where its implementation

has mobilised over USD 10 billion across four countries. While the Data-to-Deal approach is relatively straightforward to apply to the energy sector, some adaptations are needed to allow its use in the complex environment of the transport sector. This brief reviews each of the seven steps in the Data-to-Deal framework and provides key recommendations on how these can be applied in the transport sector.

Key Policy Recommendations

- Policymakers in the transport sector, as well as supporting international organisations, should consider adopting the Data-to-Deal framework as a means of navigating through the climate transition.
- Bankable projects, programmes and supporting policies must be designed with stakeholder consultation, modelling tools, and in conjunction with the country's long-term vision to enable coherence and maximise impacts. The Data-to-Deal provides a framework that can support this design.
- Institutional coordination is crucial, given the cross-sectoral nature of transport decarbonisation, which involves public and private entities as well as central and local governments.
- Iterative decision-making helps align policies with economic, social, and environmental objectives.



Mombasa County, Kenya

Introduction

Delivering net-zero emissions by 2050 requires a fundamental transformation across the entire economy, particularly in the transport sector, which is responsible for about 21% of global greenhouse gas emissions [1].

Decarbonising road transport offers significant economic advantages beyond that of addressing climate change. Adopting electric vehicles (EVs), promoting the use of public transportation, and facilitating cycling and walking help alleviate traffic congestion, lower accident rates, and cut energy consumption and local air pollution levels, also known as the avoid, shift, and improve (ASI) approach [2,3]. Additionally, cycling provides health benefits through physical activity, which brings important, though frequently undervalued, economic gains [4].

The transport sector, despite being a significant contributor to global emissions, often lacks concrete measures in Long-Term Low Emissions

Development Strategies (LTS) [5] and Nationally Determined Contributions (NDCs) [6].

Decarbonisation efforts in transport tend to be fragmented, with policies that lack coherence across sectors like energy, urban planning, and finance. Transport decarbonisation must also address households, firms, and governments needs (eg household willingness, firms' finances, fiscal sustainability). This lack of integration hinders the development of clear, finance-ready projects that can mobilise climate finance. A structured approach is essential to systematically assess transport decarbonisation, ensuring that policies are aligned with national climate goals, engage all relevant stakeholders, and create pathways to mobilise the necessary investment for sustainable, low-carbon transport solutions.

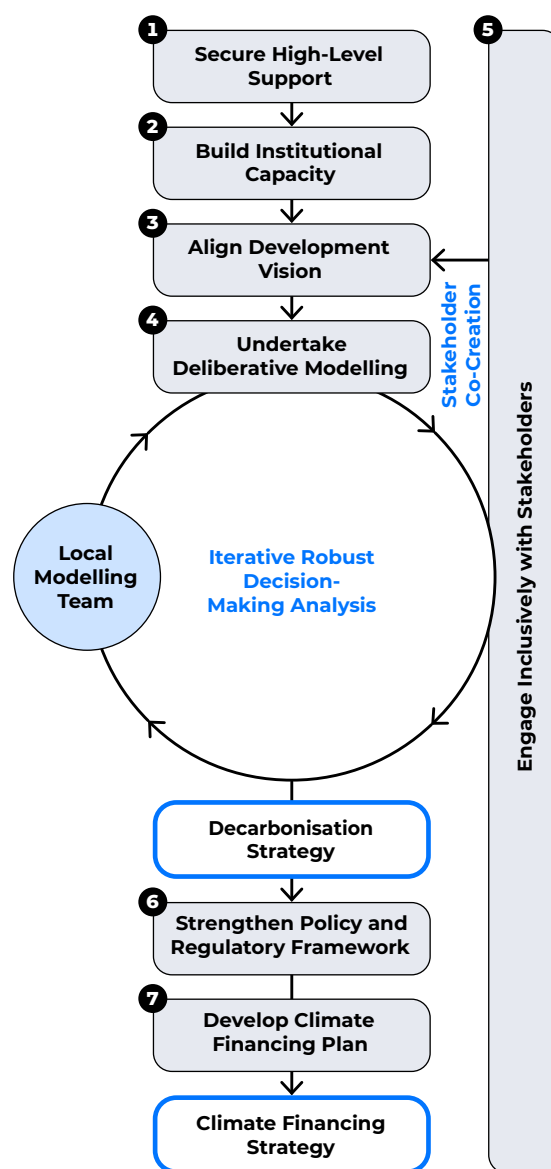
The [Data-to-Deal \(D2D\) framework](#) can support countries in the Global South in navigating this transition, offering a systematic

and flexible approach that engages stakeholders at every level, builds capacity, develops robust decarbonisation pathways, aligns policy, and ultimately paves the way for sustainable financing of decarbonisation efforts. The D2D framework works across seven key stages to deliver comprehensive decarbonisation and finance strategies. It starts with engaging political and institutional support to prioritise transport decarbonisation at the highest level. The process moves through technical capacity building in governmental and academic sectors, enabling countries to gather and analyse data to inform decision-making.

A high-level illustration of the D2D process, based on seven high-level steps, is provided (**Figure 1**). Each step will be further explained below with specific reference to the transport sector. While these seven steps are presented in sequence, the D2D framework is flexible and its implementation could start in a different order (eg building capacity in institutions).

This policy brief examines the application of the D2D framework within the transport sector, building on the original D2D policy brief [8] and case studies from Latin America and the Caribbean [9–12]. It provides key recommendations that can help countries in the Global South navigate the complex, multi-stakeholder, and multi-policy landscape of transport decarbonisation and move towards a net-zero economy by 2050.

Figure 1: A simplified diagram representing the D2D framework elements – adapted from [7]



Data-to-Deal and the Transport Sector

D2D's seven-step framework requires adaptations in the transport sector due to its cross-sectoral dynamics and diverse stakeholders. The steps are outlined below with specific guidance for transport decarbonisation.

1. Politics: Secure high-level support

Garnering political support is critical for the

implementation of transport and economic policies. The cross-sector nature of transport policies means political commitment is required across ministries and stakeholders with varied agendas.

- **Cross-sectoral integration:** Transport decarbonisation must align with energy

policies (eg electrification), urban planning (eg transit systems), and economic policies (eg taxes on vehicles). Having this strong political commitment helps address the cross-sector complexity and avoid siloed policymaking.

- **Managing conflicting interests:** Stakeholders may resist changes due to cost concerns or fear of disruption. Political leadership must manage these trade-offs with clear communication, incentives for EV adoption, and investments in public transport to ensure broad buy-in.
- **Regional variability:** Localised transport solutions are often necessary due to differences in regional priorities. Engaging local governments and tailoring policies to fit their specific urban and rural contexts are critical.
- **Public perception:** Changes in transport policies are visible and may face public resistance. Political leaders must build resilience to public pushback by clearly communicating the long-term economic, social, and health benefits of decarbonisation. This is highly linked to Step 3 (Vision) and 5 (Consultation) as creating holistic and inclusive environments enhance political buy-in and public acceptance.

2. Preparation: Build institutional capacity

The transport sector requires robust institutional capacity for effective decarbonisation. This includes data collection, modelling, and coordination with various sectors.

- **Cross-ministry collaboration:** Effective transport decarbonisation requires a central coordination team involved in collaboration across ministries (transport, energy, environment). Building interministerial task forces and shared data systems can ensure coordinated efforts.
- **Strengthening local governments:** Local authorities often manage transport systems

and infrastructure. Capacity building at this level, particularly for urban mobility, infrastructure planning, and finance mobilisation, is key to implementing national decarbonisation strategies.

- **Data management:** Transport requires comprehensive data on vehicle types, travel patterns, and infrastructure needs. Governments must develop strong data systems to inform policy and evaluate the impact of policies through transport-specific modelling.
- **Training policymakers:** Policymakers need continual training on sustainable transport practices, EV deployment, and climate-resilient planning. This capacity building ensures policies are informed, adaptable, and technically sound.

3. Vision: Align development vision

Creating a shared low-carbon transport vision ties sector goals to climate and development objectives. The vision must encompass all transport modes and address passenger and freight requirements, and ensure integration across short, medium, and long-term goals.

- **Integration with national goals:** The transport decarbonisation process must be integrated into NDCs and LTSs [13], ensuring it aligns with overall economic growth, environmental protection, and social equity objectives.
- **Growth and decarbonisation:** Transport plays a critical role in economic development. Decarbonisation efforts should support growth by enhancing connectivity, logistics efficiency, and infrastructure investment while reducing emissions.
- **Urban and rural needs:** Transport solutions must be adapted to regional contexts, with urban areas focusing on public transit, low emission freight, and cycling, and rural areas prioritising access to low-emission freight and long-distance travel options.



- **Clean energy for transport:** Transport decarbonisation must be aligned with energy sector planning and infrastructure development, ensuring that EVs and clean transport solutions are supported by renewable energy sources and well-planned infrastructure.

4. **Modelling: Undertake deliberative modelling**

Modelling tools are essential in D2D, supporting scenario analysis across policy options. The modelling enables exploration of the impact of interventions on emissions, energy demand, costs, and benefits, including in relation to social and economic matters identified in the vision (step 3 above). Effective modelling exercises are best informed by clear research questions, such as evaluating the impact of transformations, and the costs and benefits for the country and each

sector in transitioning to a net-zero compatible transport system [13].

- **Sector complexity:** Transport involves multiple modes—road, rail, aviation, shipping—each with distinct emissions profiles. Multi-modal models (such as OSeMOSYS and TIMES) are essential to capture the interplay between these modes and evaluate their combined impact on decarbonisation.
- **Energy integration:** Modelling must account for the increased energy demand from transport electrification and ensure that clean energy generation is aligned with the grid's capacity to support EVs and other low-carbon transport options.
- **Infrastructure planning:** Decarbonisation requires substantial infrastructure upgrades. Modelling can help assess the cost, feasibility, and timelines for developing EV charging

stations, public transit improvements, and green logistics networks.

- **Behavioural shifts:** Modelling should incorporate policies that encourage shifts from private cars to public transport and active mobility (eg walking, cycling). This helps predict the effectiveness of these measures in reducing emissions and improving transport systems.
- **Diverse policy levers:** Transport models must include a wide range of transformations, such as EV electrification, modal shift, energy efficiency, and active mobility. These levers should be modelled to assess their combined impact on economic growth, emissions, and overall decarbonisation.
- **Capturing socio-economy benefits:** The analytical process should develop indicators and quantify the relevant socio-economic benefits of possible decarbonisation pathways or policy options. To support development goals at the same time, this approach should be tailored to reflect each country's specific development objectives.
- **Public-private sector interactions:** Transport decarbonisation heavily involves the private sector, particularly in vehicle manufacturing, logistics, and public transit operations. A key consideration is to ensure that modelling captures public-private interactions, assessing how private sector investments and behaviours will evolve in response to public policies, new technologies, and consumer demand for low-carbon transport options.

5. Consultation: Engage inclusively with stakeholders

The transport sector involves a diverse range of stakeholders, making inclusive consultation a core aspect of D2D. This should be iterative and occur throughout the entire process. It is critical to have a clear plan for consultation and channels of feedback with stakeholders to ensure their inputs are properly heard.

- **Diverse stakeholders:** Engaging with multiple ministries, local authorities, private companies, academics, and civil society organisations will help ensure policies reflect the needs of all sectors involved in transport decarbonisation.
- **Public-private collaboration:** Leveraging partnerships with the private sector, especially in vehicle manufacturing, public transport, and logistics, can drive investment in clean technologies and infrastructure.
- **Local governments:** Local authorities must be empowered to implement tailored solutions, such as congestion pricing or electric bus systems, to meet regional transport decarbonisation goals. This requires skills capacity building at the local level to ensure effective execution of policies.
- **Civil society involvement:** Civil society organisations play a key role in ensuring that transport policies are inclusive, equitable, and responsive to the needs of vulnerable communities. Involving the public can be done through non-governmental organisations representing common interests.
- **Building consensus through modelling:** Modelling tools can support an informed dialogue, allowing stakeholders to visualise the long-term impacts of policy decisions and thereby build consensus around the most viable solutions.
- **Addressing conflicting interests:** Conflicting interests should be managed through negotiation and compromise, ensuring that all stakeholders feel heard and that solutions are developed collaboratively to meet decarbonisation goals while balancing economic and social priorities.

6. Operationalisation: Strengthening policy and regulatory framework

Converting a vision and the modelling insights into operational policies and programmes is

a critical aspect of successfully implementing D2D. Transport policies require careful integration with energy strategies and infrastructure planning.

- **Comprehensive, integrated policy frameworks:** Transport decarbonisation policies must address all aspects of the transport system, including vehicle emissions, infrastructure development, public transport, fuel efficiency, and alternative fuels. Additionally, these policies must be integrated across different domains (eg energy, finance, environment), creating a cohesive framework that supports the long-term transition to low-carbon transport.
- **Emissions standards:** Ambitious vehicle emissions standards and targets for the phase-out of internal combustion engine vehicles can drive the adoption of EVs and other low-carbon technologies.
- **Infrastructure regulations:** Effective decarbonisation strategies will require the development of policies that support the rapid deployment of EV charging networks, public transport systems, and cycling infrastructure.
- **Incentives for low-carbon transport:** Fiscal policies and incentives can be designed that support the adoption of clean technologies by both consumers and businesses, while gradually phasing out subsidies for fossil fuel-dependent transport modes.
- **Government revenue and fiscal sustainability:** Governments should assess the fiscal impacts associated with lower fossil fuel consumption, reduced private car usage, and high penetration of subsidised EVs. Their revenue may be affected by these policies, requiring analysis of progressive fiscal policies to mitigate potential fiscal gaps [2].
- **Cross-sectoral policy coordination:** Transport policies need to align with energy and infrastructure strategies to

support an integrated, coherent approach to decarbonisation.

- **Bringing it all together:** Capturing the roadmap for transformations in the sector over the long term to achieve decarbonisation and development objectives is crucial for facilitating dialogue with funders. Previous experience has shown that a well-defined summary of ambitious goals – along with a clear list of measures (institutional, policy, and project-based), timelines, and designated institutional leads – sends a strong signal to potential investors [9]. This helps secure financing, especially from international financial institutions. To keep policies and objectives streamlined and coordinated, this information should be integrated into the country's LTS, with relevant measures reflected in the NDC according to appropriate timelines.

7. Finance: Develop climate finance strategy

Finance is critical in the Global South to unlock the climate transition, especially for the transport sector, which requires large-scale investments. Mobilisation of finance can be encouraged through implementing the above steps and through the development of a finance strategy.

- **Developing sustainable business models:** Funding sources should be identified and financial responsibilities should be assigned across public and private sectors for key services, such as EV infrastructure and transit upgrades. By creating viable business models, countries can ensure long-term funding support and pave the way for effective financing strategies.
- **Developing a financing plan:** This can act as an overarching plan to help prioritise approaches that engage both public and private sector investment [14, 15]. These strategies need to clearly outline investment

priorities and actions to mobilise resources, clarifying the roles of national and international funding. By integrating climate goals into broader financial strategies and enhancing transparency, countries can ensure resources are effectively used. Additionally, fostering collaboration between ministries of finance and ministries of energy and transport will be crucial in securing funding and closing investment gaps for decarbonisation efforts.

- **Matching policies with financiers:** Data-driven modelling can map transport policies and projects to potential funding sources. This will help ensure that expected outcomes and co-benefits (eg job creation, improved air quality) align with the requirements of financiers.
- **Public and private mobilisation:** Public funds alone are insufficient to decarbonise transport fully. For this reason, it is essential to employ blended finance models that integrate public and private capital, using public funds strategically to mobilise private investment aimed at transforming the transport sector.
- **Leveraging international climate finance:** Transport policies should be aligned with

international climate finance mechanisms (eg Green Climate Fund, Global Environment Facility) to unlock funding for sustainable transport projects. They should also fit within environmental, social, and governance (ESG) regulations to expand the capital pool available to the country.

- **Enhanced investment environment:** A lack of investor confidence can be a barrier to accessing finance. This can be overcome by providing detailed, scenario-based pathways that align transport policies with financial requirements, creating a conducive investment environment that reduces risks and boosts investor confidence.
- **Mapping and prioritising finance-ready projects:** Projects that offer high emissions reduction potential and align with both national goals and international funding criteria should be prioritised. Detailed project proposals that emphasise co-benefits, such as urban accessibility, job creation, and reduced congestion, can increase the attractiveness of projects to funders and ensure that financing is targeted toward the most impactful interventions.

Conclusion

The Data-to-Deal (D2D) framework offers the flexibility needed to navigate the multi-stakeholder, multi-policy landscape of transport decarbonisation. By adapting to these challenges, D2D can play a pivotal role in driving sustainable, low-carbon transitions in the transport sector, helping countries achieve their climate goals while fostering economic growth and social equity. The D2D framework is evolving and adapting to changing conditions. Training material is being produced to build capacity in countries. Countries like Vietnam and Lao PDR are deploying the D2D framework to decarbonise their transport sector, and the key learnings will enhance the application of the D2D

framework to the transport sector. Furthermore, more organisations worldwide, such as the 2050 Pathways Platform and the Asian Development Bank, are embracing the benefits of the D2D framework by rolling it in various countries in the Global South. Institutions and ministries are invited to explore the flexible D2D framework to drive their climate and development objectives and help secure investment.

To find out more about how the D2D framework could help drive climate and development objectives and secure investment, contact j.quiros@lboro.ac.uk

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ACKNOWLEDGEMENTS

This policy brief was developed by CCG, as part of a joint project with the Asian Development Bank. CCG brings together leading research organisations and is led out of the STEER centre, Loughborough University. CCG is funded by UK aid from the UK government. However, the views expressed herein do not necessarily reflect the UK government's official policies.



AUTHOR INFORMATION:

- ¹ **Jairo Quirós-Tortós** (Loughborough University)
- ² **Mark Howells** (Loughborough University and Imperial College London)
- ³ **Holger Dalkmann** (Sustain2030)
- ⁴ **James Dixon** (University of Strathclyde)
- ⁵ **Naomi Tan** (Loughborough University)
- ⁶ **Marcela Jaramillo** (2050 Pathways Platform)
- ⁷ **Emma Richardson** (Loughborough University and Imperial College London)

EXTERNAL REVIEWER:

Adrien Vogt-Schilb  (Agence Française de Développement): Writing – review & editing

INTERNAL REVIEWER:

Hannah Luscombe  (University of Oxford): Writing – review & editing

COMMISSIONING EDITOR:

Vivien Foster (Imperial College London): Conceptualization; Writing – review & editing, v.foster@imperial.ac.uk