CITY SOLUTIONS PLATFORM –
LESSONS LEARNED FROM PUBLIC/PRIVATE
CO-CREATION
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SUMMARY - C40’s CITY SOLUTIONS PLATFORM

Supporting cities to advance climate action through public private collaboration

Public-private innovation is rapidly developing in many global economies and the objective of new and improved solutions for climate challenges is vital considering the urgent and ambitious targets that cities face. The goal for the City Solutions Platform is to convene solution providers from a range of different industries, academic institutions, and NGOs to co-create solutions to a city’s key climate challenge.

By enabling collaboration across sectors, C40’s City Solutions Platform empowers C40 member cities to co-create climate solutions safely and effectively with different innovators whilst becoming global thought leaders for innovation in climate solutions. Multiple public policy and private entrepreneurship objectives can be achieved through co-development and collaboration across sectors.

Since the City Solutions Platform inception in March 2016, C40 has formed a delivery partnership with CLEAN, Denmark’s leading cleantech cluster, and delivered climate solutions through the City Solutions Platform programme in the cities of Seattle, Melbourne, Rio de Janeiro and Sydney. By providing cities and solution providers a program for working together on solving specific climate challenges at an earlier stage than usual, the City Solutions Platform ensures that the actors reach a common understanding of the cities’ challenges in order to co-create innovative solutions. The collaborative and neutral nature of the platform also ensures that all parties work towards the same goals.

From a C40 perspective, the City Solutions Platform is a key programme in delivering our Deadline 2020 vision, which emphasizes the need for cities to work with the private sector and others in delivering the goals of the Paris Agreement.

The activities of the two-year pilot phase (2016 – 2017) were delivered on a pro-bono basis to the chosen cities thanks to the support of Realdania and industry partners Hitachi Insight Group, BMW Group, RTI International, Nordic Innovation, Danfoss & Arup.

SUCCESSFUL BUSINESS ENGAGEMENT

Over 100 businesses have taken part in the City Solutions Platform so far. These businesses include large global companies such as Microsoft, Amazon, Siemens, Rambøll, and WWF as well as local companies in each city, innovative start-ups and start-up accelerators and universities.
THE DEMAND FOR PUBLIC-PRIVATE SECTOR COLLABORATION

C40 research and experience shows that many cities are looking for opportunities to work collaboratively with the private and academic sectors to fulfill their ambitious climate targets and the goals set by the Paris Agreement. Indeed, C40’s Deadline 2020 report states that the

“capacity to collaborate with other actors may be as important to cities’ climate action as having direct control over city assets and services.”

The UN General Assembly has identified the lack of systemic approaches to public-private cooperation as one of the main barriers to harnessing the private sector’s potential for swift innovation towards achieving international targets such as the Paris Agreement and the Sustainable Development Goals. Deadline 2020 captures the statistics that emphasize the need for public-private partnerships to drive climate action;

“of the 51% of reductions achieved through City Action, 20% of the necessary actions can be implemented by cities unilaterally, while the remaining 80% can be delivered through a combination of collaboration and partnerships”.

Public-private collaboration increases climate action by directing private sector knowledge, skills, resources, experience and funding, to the key climate challenges that cities are facing. At the same time, public-private collaboration combines city climate goals for long-term planning with private sector ingenuity; something that is direly needed for the transformational changes necessitated by the climate crisis.

"City Action alone is unlikely to be sufficient to deliver on either a 1.5 or 2 degree scenario. Collaboration with external partners and wider stakeholders will be crucial to deliver the further transitions necessary."

– Deadline 2020
Online Collaboration Capacity
Both local and global companies should, and would like to, input into the City Solutions Platform (CSP) city climate solutions. This ‘global and local’ approach will enable best practice solutions from other geographies to be shared locally with the CSP city. This approach would also enable solutions developed as part of the programme to be considered in the global context as well as with local communities and cities.

A sophisticated global e-platform for public and private entities to work together to develop innovative, implementable and replicable city solutions on the global stage would enable a range of innovators to be involved in the conversation between cities and the private sector, taking account of the important local perspective and context and bringing in a ‘fresh eye’ perspective from the global innovators.

The CSP will develop a sophisticated global e-platform for public and private entities to work together to progress innovative and implementable city solutions on the global stage. This would take account of the important local perspective and context and bringing in a ‘fresh eye’ perspective from the global innovators.

Engagement models
Specific city context and procurement rules lead to different models of engagement between the public and private sectors. By creating an inventory of appropriate engagement models, with training for city employees in these engagement models, the CSP process can better map a route to implementation for the CSP public-private collaboration methodology as well ensuring the implementation of solutions which come from this collaboration.

International visibility for innovation in climate solutions
The C40 Cities Climate Leadership network provides a thought leadership platform to give a greater international visibility of member cities implementing innovative climate solutions. The City Solutions Platform will continue in this effort to act as a vehicle for thought leadership to innovators beyond member cities and will showcase best practice from a range of solution providers on innovative solutions to city climate challenges.

This international visibility will also provide a shared understanding of the nature of the problems faced by cities, the means available to the city and collaborators to solve them, and the potential for climate action. Innovative best-practice solutions will also be developed for CSP cities that can be replicated across the network of C40 cities.

Stronger partnerships between global cities and innovative climate solution providers
Through public-private collaboration, cities will not only accelerate their implementation of climate solutions and their rate of carbon emissions reduction; cities will also build stronger relationships with
the private sector and will develop an easier, more confident, way for engaging innovative climate solution providers.

Lessons Learned:

(1) Solution providers require concrete city objectives, earlier on in the process, to inform the solutions.

(2) The importance of creating a neutral space for public-private relationships and methodologies to develop.
BARRIERS TO PUBLIC-PRIVATE COLLABORATION

Convening power
One of the main barriers to public-private partnerships is the lack of a neutral entity and informed process to facilitate the partnership creation and productivity. This is a key ingredient to assembling multi-sector stakeholders in one room to collaborate.

Stakeholder relationships
Communication between stakeholders is perceived as one of the main barriers to public-private partnerships. Building up reliable and constant channels of communication between stakeholders is essential to foster trust, align priorities and avoid conflicts of interest. By emphasising the overarching goal of public-private collaboration as implementing a solution that will reduce city emissions, stakeholders can collaborate with this goal constantly in mind.

Solution providers from both global and local organisations are empowered to engage with each CSP city challenge. The CSP method is to create a global platform, with local implementation and therefore a local knowledge of the city challenge and context, this requires a new set of skills in cultural agility and appropriate local knowledge.

Lack of familiarity with public-private engagement/Lack of options for public-private engagement
The cities’ relationships and confidence when interacting with the private sector is fundamental to the success of public-private collaboration. Equally, clear rules and requirements are needed for the private sector to confidently interact in public collaboration activities.

In some cases, it is a city’s limited number of avenues to take public-private sector collaborations from ideation to procurement. The CSP aims to facilitate this through mapping a realistic route to implementation for different climate solution concepts.

Open communication
An improvement in the communication channels between cities and solution providers will enable a more succinct range of solutions to be implemented in cities. Through ensuring all communication is open and honest, businesses will follow public-private engagement roles more surely and ensure they are not at risk of conflict of interest during later product/project implementation and potential tenders.

Mayoral buy-in
C40 works at a mayoral level, thus mayoral-buy in and ongoing engagement in the project is essential to commence the public-private collaboration process in any city.

Managing stakeholder expectations
There are a variety of routes to climate solution implementation, such as a city releasing a tender, or developing ongoing strategic partnerships with businesses. It is important that any public-private collaboration methodology maintains flexibility to allow for multiple outcomes with multiple timeframes,
and that this is communicated to the potential stakeholders at the start of the process to manage their expectations.

Alignment on the basic principles
Specific goal setting with the stakeholders at the beginning of the collaboration process is essential for managing expectations. Goal setting could include: specifying solution criteria and design parameters with the city, or thoroughly setting the context around the challenge to maximise the potential to engage relevant solution providers pre-workshop. The CSP framework will increase flexibility and openness to accommodate potential goal or objective shifts.

Finance
One of the key barriers to climate solution implementation is finance. A route to finance must be clearly identified to implement any solutions generated as a result of the public-private collaboration.

Right people, right place
Innovators and climate solution providers are a key ingredient to city climate solution co-creation. During city climate challenge scoping, the correct framework and amount of time is needed to engage local solution providers prior to any co-creation activity. This time may also be used to search for potential financing. By maximising the range of stakeholders engaged in each city climate challenge, a broader range of solutions can be developed, giving light to ideas which may not have been considered previously.

Citizen experience
Citizens must be empowered by any climate solution activity to fully engage in the outcomes. Early citizen engagement can enhance development results and the success of the implemented climate solution. It can also educate future generations to encourage behavioural changes towards consumption based emissions. Evidence suggests that citizens are more likely to take action on climate change, or more likely to support governments that take action on climate change, if the wider co-benefits of those actions are emphasised.

At the same time, policies that are aimed at supporting innovation, delivering economic benefits, and enhancing the quality of life of citizens, can potentially lead to major climate co-benefits which would be more challenging to achieve if climate action were the primary objective. At the city level, the potential of co-benefits is particularly great as citizens can often witness the results of policy actions more directly on their daily lives.

Language barrier
Multi language materials are necessary when encouraging the local and global solution providers to engage with a city challenge.
NEUTRAL SPACE AND COMMON GROUND
A key barrier to public-private partnerships is finding a neutral space and common ground between stakeholders that allows them to focus their resources on delivering impact. The CSP facilitates this through highly successful co-creation workshops, in a pre-procurement and non-commercial environment. Feedback from all pilot cities pointed to the solid format of the workshops and the wide range of stakeholders in one room for two days.
FUTURE VISION FOR C40’s CITY SOLUTIONS PLATFORM

Work on the City Solutions Platform pilot provided insight into the demand from all actors for better public-private collaboration. It has shed light on the possibility of a broader City Solutions Platform offering engaging a range of stakeholders. Building on the success from the City Solutions Platform pilot, the C40 City Solutions Platform will therefore grow its capacity and offering to support to the 90+ C40 member cities.

The CSP will facilitate, design, scope and support the successful implementation of innovative solutions to C40 Cities’ key climate challenges.

The CSP will build this capacity by putting in place partnership agreements with a network of interconnected regional business hubs to encompass the local context related to city challenges. The CSP will work with the regional business hubs by educating them on the flexible CSP framework methodology. Included in this education will be a full roll-out and understanding of the CSP ethos and experience: co-creation in a non-commercial environment will allow cities to build stronger relationships with climate solution providers, generate more innovative climate solution designs; and enable a more rapid route to implementation for these climate solutions.

The CSP framework will allow the regional hubs to understand the types of climate challenges that cities are facing all over the world. Open communication between the cities and key stakeholders will be maintained at all times and facilitated by the CSP team.

City climate challenges will then be taken through the CSP methodology, led by the CSP team and facilitated by the regional business hub. This process will be open to the regional business hubs as well as any other solution provider or citizen group who may want to enrol. This transparency will mitigate any conflict of interests once solutions are co-created.
C40 are currently seeking partners to contribute funding towards setting up the global model, as well as working to identify potential knowledge dissemination and network partners.
The main objective of the CSP pilot was to accelerate the development of climate solutions and support cities in adapting to climate change by facilitating early engagement between cities and solution providers.

**Melbourne, Rio de Janeiro, Seattle** and **Sydney** were selected to participate in the first round of the City Solutions Platform.

The City of Melbourne wanted to apply the CSP process to co-create innovative approaches to the drainage and flood management in an urban renewal area adjacent to central Melbourne (Arden Macaulay precinct).

The CSP aimed to help the City of Rio de Janeiro in implementing innovative financial, social and environmental solutions to treat the organic fraction of its waste, which represents over 50% in weight of total household waste stream in the city.

The City of Seattle looked to the CSP to assist in creating a new policy framework which allows the city to more easily adopt innovative transportation products and services through high-tech and data driven solutions.

Finally, the City of Sydney worked with the CSP to determine the most effective way to generate 50% renewable electricity by 2030, which is essential to achieve net-zero emissions by 2050.
CSP City Project Managers:
Geraldine Plas, Team Leader - Climate resilience, Urban Sustainability, City Strategy & Place, City of Melbourne
Candace Jordan, Sustainability Support Officer, City of Melbourne

MELBOURNE CSP CHALLENGE INFORMATION
The redevelopment of the under-utilised and central Arden-Macaulay precinct in Melbourne aims to transform the precinct into one of the best examples of urban regeneration internationally. Addressing drainage and flooding is crucial to the long-term viability of the development precinct, thus the City of Melbourne has opened up the investigation into flood mitigation solutions to innovative approaches to drainage and flood management that incorporates liveability and useable spaces.

CITY SOLUTIONS PLATFORM OUTCOMES
Melbourne’s climate solutions were focused on flood management and liveability. The CSP process was valuable and unique to the City due to early, pre-tender engagement with businesses, academic institutions and other key stakeholders. Melbourne were very happy with the outcomes and the ability of solution providers to co-create solutions together, as well as with the city.

Melbourne engaged further with solution providers post-CSP. Three design solutions that came from the CSP activity were taken forward by the city. The levee design solution has helped to inform a strategic opportunity plan for the creek and large scale flood storage. One solution is being led by Rambøll; who are currently modelling a report for the area. All three projects will inform the city and partners’ approach to flood water management in the precinct, which will in turn inform future infrastructure planning.

The CSP has helped to change attitudes towards climate change adaptation; water is now being celebrated as a public aspect rather than being completely drained from the precinct.
CSP City Project Manager:
José Henrique Penido, Chair of the Environmental Sustainability Office of COMLURB, City of Rio de Janeiro

RIO DE JANEIRO CSP CHALLENGE INFORMATION
The City of Rio de Janeiro will work with the City Solutions Platform to implement a financial, social and environmental solution to treat the organic fraction of its waste. There are three parts to their challenge:
• The implementation of a 1,500 t/day Mechanical Recovery Facility
• The economic feasibility for the operation of a pilot Biomethanization Plant with 50t/day capacity, already built and in operation, in order to gather technical and economic information to allow an upscaling.
• The economic feasibility plan for the implementation of a Biomethanization Plant with 500 t/day capacity, upscaling the existing pilot plant;
• The technical and economic feasibility for the integration of Electric Compacting Trucks in COMLURB’s fleet.
• The economic feasibility plan for the implementation of a power generation system with photovoltaic solar panels in closed landfills.

CITY SOLUTIONS PLATFORM OUTCOMES
The city perspective changed as a result of the early engagement of solution providers throughout the CSP workshop, in order to focus on the feasibility of the current plant. The focus became how to upscale the pilot plan and keep it operative for 2 years. This presented a particular challenge due to the reduction of the budget and the current economic crisis in Brazil.

Since the workshop, the National Development Bank has accepted the pilot plan and agreed to fund it. The CSP has enabled the City to make key contacts; the City of Rio is looking to further utilise the resources of C40 and the CSP to attract further private companies to share operation costs and technology. The City of Rio is aiming to run the existing pilot plan for 2 years so that the business plan for the upscaled plant can be prepared; however this can only be achieved with enough data obtained from the 2 years operation of the existing pilot plant. There is also a huge public-private partnership potential for energy generation from solar panels in landfill.

Input from solution providers during the CSP process has now been integrated into Rio’s planned actions until 2021.
SEATTLE – TRANSPORT & DIGITAL EQUITY

CSP City Project Manager:
Evan Corey Costagliola, New Mobility Program Manager, Department of Transportation, City of Seattle

SEATTLE CSP CHALLENGE INFORMATION
Seattle is the fastest growing city in North America with the fastest transit growth. The City needs to integrate new shared mobility services as people are digressing from cars. As more mobility services are coming online, it is necessary to incorporate digital equity into the framework so that all communities have access. Seattle’s challenge is thus how to grow an interconnected transit culture sustainably alongside the integration of digital equity. Digital equity is defined as access to and education for digital means.

CITY SOLUTIONS PLATFORM OUTCOMES
The vast range of solution providers in the workshop meant that the solutions developed were unexpected and varied. This outcome was valuable to the City, as Seattle had no framework to bring in innovative ideas or procure them. Following the CSP activity, Seattle ran an internal half-day workshop that resulted in one all-inclusive ‘think tank’ – the ‘think’, ‘learn’ and ‘do’ tank. This solution is structured to incorporate a range of stakeholders in a pre-procurement, non-commercial environment.

The City worked with the large foundation Challenge Seattle to map existing procurement processes to understand the location of the barriers and challenges. The work also included a review of innovation frameworks in other cities. The idea is now in the process of being operationalised. The City is also developing templates to improve procurement processes.

The CSP has empowered the mobility department to receive further funding through highlighting leadership visibility. The CSP has also enabled the City of Seattle to make connections in the private sector, specifically through identification of future funding partners and solution providers. The City of Seattle highlighted that one of the main benefits of the CSP was enabling the City to understand private sector levers and business models. This bodes well for the City’s future collaboration with the private sector to tackle the climate challenges within Seattle.
CSP City Project Manager:
Nik Midlam, Carbon Strategy Manager, City of Sydney

SYDNEY CSP CHALLENGE INFORMATION
The City of Sydney’s challenge is to achieve 50% renewable electricity for the City by 2030. If this target is to be achieved, a better voluntary model to facilitate renewable demand and investment by residents and business is required. The City is looking to maximise the amount of solar power generation within the City of Sydney and models to invest in large-scale offsite renewables.

CITY SOLUTIONS PLATFORM OUTCOMES
The City of Sydney has budget approval for a range of market-ready programs and incentives. The main outcome from the CSP process was to develop valid concepts for how the city is able to catalyse more voluntary transfer to renewable energy.

In parallel to the CSP developed renewable energy programs, the City has funded an internal resource working on how to make the process of community support more streamlined, in response to the C40 Deadline 2020 report.

The methodology that the City used throughout the CSP involved Sydney reaching out to experts to develop and evaluate the strength of proposed climate solutions. Concepts were tested with networks and subject matter experts for their feedback and input. In this instance, there wasn’t a singular process; all outcomes came from different avenues.

The CSP has been a key influencer in Sydney’s developing relationship with local electricity grid company Ausgrid. The City has since co-invested with Ausgrid in a local community solar incentive program. This is a successful example of a CSP solution being implemented by a well-suited organisation. The “Zero Carbon Future Club: model solution”, one of three concrete solutions that arose from the CSP workshop,
is about giving communities the energy that they require along with other incentives. This solution was largely developed as a result of the human centred design ideas created in the CSP workshop.
REFLECTIONS

“Having the C40 gravitas meant that the City were comfortable in giving another 4.5 million AUD to the project budget” – Nik Midlam, Carbon Strategy Manager, City of Sydney

“The CSP has helped catalyse investment to bring new ideas further forward” – Nik Midlam, Carbon Strategy Manager, City of Sydney

“The CSP was a key influencing factor in forming strategic relationships and partnerships post-workshop” – Nik Midlam, Carbon Strategy Manager, City of Sydney

“We quickly realized that a tender ready solution was not the outcome of the CSP. What we got is even more valuable. The CSP helped us fundamentally rethink how we engage the private sector and establish a framework for collaborative innovation.” – Evan Corey Costagliola, New Mobility Program Manager, Seattle Department of Transportation

“The CSP has generated private sector interest to collaborate on Seattle’s biggest mobility challenges” – Evan Corey Costagliola, New Mobility Program Manager, Department of Transportation, City of Seattle

“C40 and the CSP are very good at gathering specialist people interested in technology development” – José Penido, Chair of the Environmental Sustainability Office of COMLURB, City of Rio de Janeiro

“The CSP gave a kick-start to a new strategy for flood management in the city” – Candace Jordan, Sustainability Support Officer, City of Melbourne

“CSP workshop outcomes have led to informing council plan actions” – Candace Jordan, Sustainability Support Officer, City of Melbourne

“The CSP has helped change attitudes to climate change adaptation and how we prepare adaptation responses” – Candace Jordan, Sustainability Support Officer, City of Melbourne