

CHICAGO CLIMATE ACTION PLAN

Transportation Strategy

September 2009



Office of
the Mayor



BCG

THE BOSTON CONSULTING GROUP

Contents

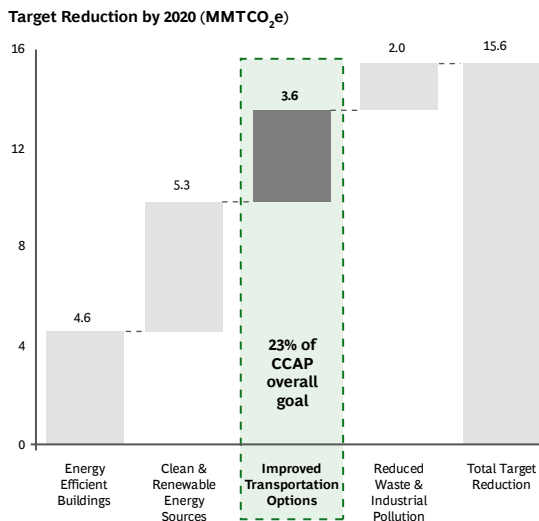
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Introduction

For more than 15 years, Mayor Richard M. Daley has been promoting the transformation of Chicago into the nation’s most environmentally friendly city. From green roofs to recycling, Chicago continues to take significant steps toward this aspiration. Currently, not only the local government but also the business community and Chicagoans at large have engaged in a multitude of key partnerships and efforts to support the city’s ambition.

One of the largest efforts to date is the Chicago Climate Action Plan (CCAP) which was developed by a multi-stakeholder task force commissioned by Mayor Daley. The plan, completed in 2008, set an initial goal to cut greenhouse gas emissions by 15.6 MMTCO₂e (million metric tons of CO₂ equivalent) by 2020 or 25% below 1990 emissions levels. It also identified four mitigation strategies to do so:

1. Energy Efficient Buildings
2. Clean & Renewable Energy Sources
3. Improved Transportation Options
4. Reduced Waste & Industrial Pollution



The Improved Transportation Options strategy represents 23% of the overall goal and is the focus of this report.

In 2009, the four mitigation strategies underwent a planning process to identify specific initiatives to attain the CCAP’s goals. For the Improved Transportation Options strategy, The

Office of the Mayor partnered with the Civic Consulting Alliance (CCA) and The Boston Consulting Group (BCG) in a 12-week pro bono effort to develop a portfolio of initiatives to achieve the transportation emissions reduction goal of 3.6 MMTCO₂e by 2020.

The stated goal is aggressive and, although many actions can be taken across different types of transportation categories, achieving the goal will require stakeholders to be bold and focused in their implementation efforts. Transportation stakeholders should also keep in mind that the topics of climate change and transportation are constantly evolving. Thus, the recommendations included in this report should be revisited periodically and updated to reflect technological, environmental, and financial realities that the City of Chicago may face.

To maintain the momentum of the Chicago Climate Action Plan, a Green Ribbon Committee of business and community leaders was formed to review performance against the overall CCAP goals and to recommend revisions, adjustments, and improvements. With a similar objective in mind, a Coordination Committee will be set up to manage, track, and evaluate the implementation of the CCAP Transportation portfolio of initiatives.

It is important to acknowledge that complementary efforts are being driven in parallel by key transportation stakeholders. Some examples of efforts under way are: ATA’s Bike to Work Week, CDOT’s Complete Streets Program, RTA’s Green Transit Plan (in planning), and initiatives captured in the CCAP Lead by Example pro bono effort supported by A.T. Kearney.

Executive Summary

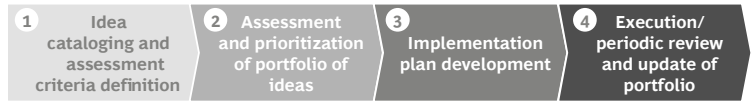
Improved Transportation Options is one of the four greenhouse gas emissions mitigation strategies identified in the Chicago Climate Action Plan. The Chicago Climate Action Plan estimates that 21% of the city's greenhouse gas emissions are transportation related and produced by cars, trucks, buses, and trains. This inventory excludes air and water transportation emissions which are believed to mirror those of most other comparable cities.

The Improved Transportation Options strategy is a multipronged vision aimed at reducing transportation-related emissions. The stated goal of a 3.6 MMTCO₂e reduction in emissions by 2020 is meant to be achieved through ten actions that were grouped into six transportation categories: 1) Public Transit; 2) Private Transportation; 3) Fleet; 4) Fuel Efficiency & Standards; 5) Intercity Rail; 6) Freight.

The Mayor's Office engaged the Civic Consulting Alliance and The Boston Consulting Group in a pro bono effort to develop a portfolio of initiatives that will enable Chicago to achieve its emissions reduction goal. The recommended portfolio is long term in nature and its implementation will be multi-phased.

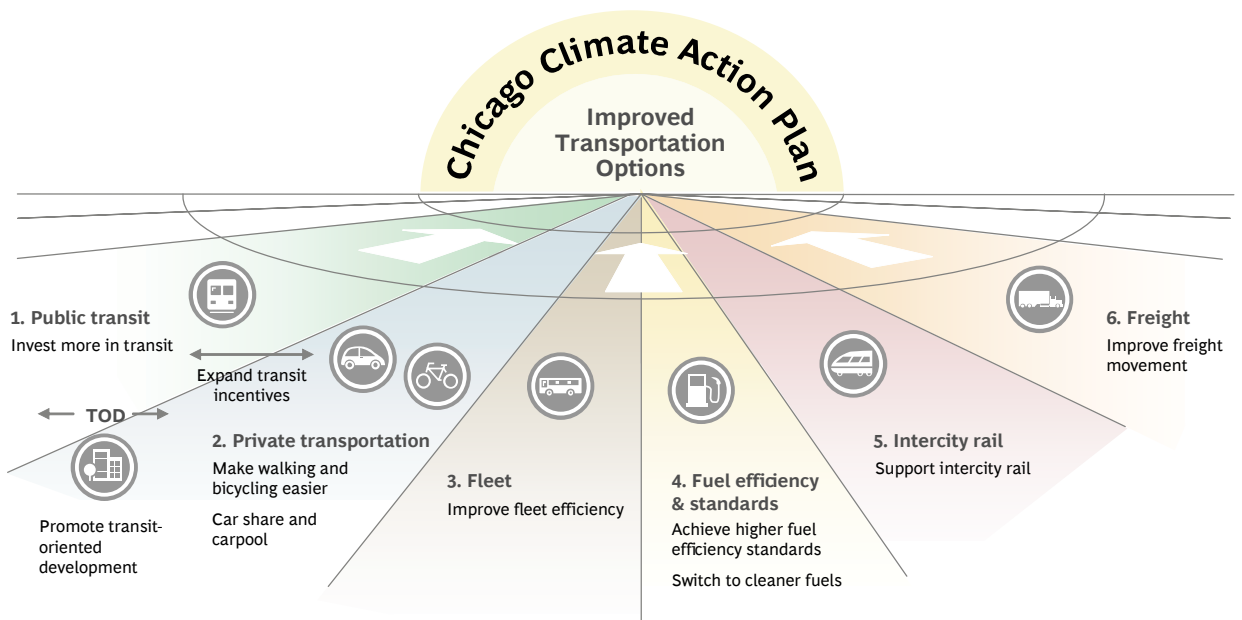
This effort was conducted in three phases. The Civic Consulting Alliance will lead a fourth phase that will complement the initial effort by main-

taining execution momentum and ensuring periodic revisions to the portfolio.



A broad set of organizations provided input throughout the CCAP Transportation planning process, representing government agencies, private businesses, and non-profit stakeholders. Given the breadth of the topic and the aggressiveness of the goals, it is clear that a broad set of initiatives will be required to attain them in the defined timeline. As a result, a portfolio of ~120 ideas was generated. The portfolio's implementation has already been set in motion by multiple stakeholders (e.g., CTA and Metra in fill stations)






The collaboration of the government, the business community, and Chicagoans at large is required for success. Various stakeholders are already taking the lead and/or collaborating in the implementation of these initiatives and will continue to do so in the coming years. A Coordination Committee will be convened by the Office of the Mayor to drive a timely and coordinated execution of the initiatives, and the Civic Consulting Alliance will play a critical role leading the Program Management Office within the Committee. It is important to note that efforts



geared toward maintaining the service levels of the public transit system are considered an integral part of achieving the CCAP Transportation goals.

In an effort to build momentum and generate visibility for the CCAP Transportation strategy, a set of 14 initiatives were prioritized for implementation. In addition, some specific actions

were identified in The Chicago Climate Action Plan, and progress is being made on many of those efforts (e.g., CREATE, Midwest High Speed Rail network). Going forward, the CCAP Transportation’s Coordination Committee will partner with transportation stakeholders to select the next wave of portfolio initiatives to assess and implement.

Area	Initiative	Description
Public Transit (Ridership) 	Install Transit Signal Priority (TSP) systems	Various technologies that give public transit priority over general traffic (e.g., early green, red truncation)
	Install Bus Rapid Transit corridors and/or bus lanes	Variety of methods to reduce bus travel time (e.g., bus lanes, bus stop re-spacing)
	Increase the availability of real-time transit information	Improve systems that provide riders with real-time transit service information (e.g., online tracker, at-stop displays)
	Explore fare incentives	Explore methods to smooth peak demand and incentivize off-peak usage (e.g., peak and off-peak fares, weekend discounts)
Public Transit (TOD) 	Expedite developers' approval process for TOD projects	Expedite license approval and reduce fees for TOD projects within the city
	Increase aldermanic awareness	Various mechanisms to gain aldermanic support for TOD in their wards (e.g., seminars, brochures)
	Create TOD awards & project recognition	Annual recognition for outstanding TOD projects in Chicago; publicize award among city stakeholders
Private Transportation 	Develop Voluntary No Driving Day program	Participants volunteer not to drive one day each week. Self-selecting program—no tracking, fees, or incentives
	Develop and expand bike sharing network	Push forward third-generation program in Chicago: city built, vendor operated; user fees, advertisement and city funded
	Develop employee Commute Trip Reduction program	Require employers to offer a menu of options to employees to reduce commute trips
Fleet 	Purchase hybrid vehicles	Convert fleet at will or when life cycle supports incremental cost
	Implement eco-driving programs	Utilize variety of driving techniques to increase fuel efficiency (e.g., avoid idling, maintain steady speed)
	Switch to biodiesel blends	Substitute diesel for biodiesel blends without exceeding threshold that would require vehicle changes
Fuel Efficiency & Standards 	Implement traffic signal retiming program	Match signal timing to current traffic patterns to optimize traffic flow and reduce fuel consumption

Portfolio of Initiatives

Through a collaborative effort led by The Office of the Mayor, the Civic Consulting Alliance, and The Boston Consulting Group, over 35 Chicago transportation stakeholders provided input to develop the CCAP Transportation portfolio of initiatives to achieve the greenhouse gas emission reduction target of 3.6 MMTCO₂e by 2020.

The portfolio is organized around six transportation categories that contain the ten transportation actions identified by the Chicago Climate Action Plan. The initiatives were also organized around three groups based on timing to results: 1) Near-term—less than two years; 2) Medium-term—between two and five years; 3) Long-term—more than five years.

Recommended ongoing advocacy efforts were captured separately.

Following is the portfolio of initiatives for each transportation category. Initiatives are meant to be assessed and implemented in waves. In each section below, the ideas prioritized for the first and second implementation waves are called out. Maintaining the service levels of the public transit system is considered an integral part of achieving the CCAP Transportation goals.

Timing to Results

	Near-term initiatives (less than 2 years)	Medium-term initiatives (2 to 5 years)	Long-term initiatives (5+ years)	Ongoing advocacy	Total
Public Transit (Ridership & TOD)	11	12	6	7	36
Private Transportation	9	2	4	4	19
Fleet	9	5	5	3	22
Fuel Efficiency & Standards	4	7	3	5	19
Intercity Rail	2	4	4	1	11
Freight	5	2	5	3	15
Total	40	32	27	23	122

Note: Figures in table indicate number of initiatives



Portfolio of Public Transit – Ridership ideas

21 high-potential ideas in portfolio

Near term (< 2 years)

- Explore fare incentives
- Increase availability of real-time transit information (e.g., rail tracker)
- **Route optimization/reallocation (e.g., optimize bus stop spacing/location)**
- Decrease bus/rail travel time
- Incentivize transit demanders to promote transit
- Extend service hours/frequency
- Enhance fare payment options (e.g., combined convention/transit passes)
- Comprehensive marketing strategy to promote transit usage
- Promote inner city usage of Metra (connecting services, perceptions)
- Publicize carbon implications of trip choices (e.g., Google trip planner)

Medium term (2-5 years)

- Install Transit Signal Priority systems
- Bus Rapid Transit
- **Improve linkages to transit (e.g., improve intermodal linkages and interagency cooperation)**
- Streamline passenger flow outside Union/Ogilvie stations (e.g., optimize traffic flow around stations)
- Increase capacity of bus system

Long term (> 5 years)

- Increase capacity of rail system
- Additional in-fill rail stations (CTA and Metra)

Advocacy

- Form a coalition of advocacy groups to promote the climate and environmental benefits of public transit
- Advocate for increased operating funds for public transit
- Advocate for funding to achieve State of Good Repair (SGR) in existing network
- Advocate for transfer of toll and parking fees toward transit



Portfolio of Public Transit – TOD ideas

15 high-potential ideas in portfolio

Near term (< 2 years)

- Public transit agencies' pilots under way

Medium term (2-5 years)

- Expedite developers' approval process
- Increase aldermanic awareness
- Create TOD awards & project recognition
- Invest in transit-interfacing infrastructure
- Develop locally driven "master" plans
- Create transit station area studies
- **Redefine zoning near transit**
 - Decrease required parking
 - Institute parking limits
 - Increase density
 - Increase height limits
 - Include mixed-use bonuses
 - Utilize existing metrics and guidelines of sustainable development as zoning tool
 - Modify TOD zone to match best practice

Long term (> 5 years)

- **Pursue joint development**
- Broad installation of electric vehicle plug-in stations
- Provide incentives for TOD developers
- **Increase redevelopment financing**

Advocacy

- Advocate for and promote reduced parking near transit
- Advocate for increased density near transit
- Advocate for increased mixed-use developments

 = First wave of initiatives **Bold** = Second wave of initiatives



Portfolio of Private Transportation ideas

19 high-potential ideas in portfolio

Near term (< 2 years)

- Develop employee Commute Trip Reduction program
- Develop Voluntary No Driving Day program
- Develop and expand bike sharing network
- **Expand car sharing network**
- Expand partnership with public transit for car sharing
- Support inclusion of bikers' education in drivers' education
- Incentivize non-employer transit demanders to promote transit
- Expand traffic calming measures (e.g., traffic circles)
- Expand Pace vanpool and carpool programs

Medium term (2-5 years)

- **Implement new regulations to limit parking**
- **Increase investment in walking and biking infrastructure**

Long term (> 5 years)

- Increase parking rates to reflect market
- Expand pay-as-you-drive insurance
- Implement corridor pricing scheme
- Create HOV/HOT lanes

Advocacy

- Advocate for increased walking/biking support
- Advocate for expanded car sharing
- Advocate for road pricing
- Advocate for reduction of per family number of cars



Portfolio of Fleet ideas

22 high-potential ideas in portfolio

Near term (< 2 years)

- Implement eco-driving programs
- Anti-idling included
- Switch to biodiesel blends
- Improve timeliness of maintenance and repairs
- Rationalize and right size fleet
- Replace old vehicles with more fuel efficient vehicles
- Improve efficiency of locomotives
- **Leverage learning of CSX pilot under way**
- Engine retrofits

Medium term (2-5 years)

- Purchase hybrid vehicles
- **Use IT monitoring devices for performance measurement/tracking**
 - e.g., automatic shutdown; mpg tracker
- **Retrofit and replace engines with better technology**
- Upgrade vehicle storage facilities
 - e.g., indoor facilities, in-city locations
- Optimize routing

Long term (> 5 years)

- Encourage purchase of electric vehicles
- Encourage purchase of plug-in hybrids
- Pass more stringent anti-idling policies
- Mandate eco-driving in drivers' education
- Expand vehicle emissions inspections

Advocacy

- Advocate for GHG emissions inspections
- Advocate for higher fuel efficiency standards
- Advocate for alternative vehicle technology and infrastructure

 = First wave of initiatives **Bold** = Second wave of initiatives



Portfolio of Fuel Efficiency & Standards ideas

19 high-potential ideas in portfolio

Near term (< 2 years)

- Promote eco-driving education
- Promote vehicle maintenance
- Enact anti-idling regulations for private vehicles
- Pilot installation of electric vehicle plug-in stations

Medium term (2-5 years)

- Implement traffic signal retiming program
- Expand tiered user fees**
- Encourage purchase of hybrid vehicles**
- Reduce/waive taxes on alternative fuels
- Provide on-the-road incentives for clean vehicles
- Introduce feebates
- Increase fuel taxes

Long term (> 5 years)

- Develop electric vehicle infrastructure
- Provide incentives for clean fuels at fueling stations
- Expand vehicle inspection efforts

Advocacy

- Advocate for low-carbon fuel standards
- Advocate for electric vehicle infrastructure
- Advocate for increased fuel taxes
- Advocate for higher fuel efficiency standards
- Advocate for clean vehicle incentives



Portfolio of Intercity Rail ideas

11 high-potential ideas in portfolio

Near term (< 2 years)

- Update the main waiting room in Union Station
- Begin planning for high speed rail tracks and updating Union Station**

Medium term (2-5 years)

- CREATE projects that improve intercity rail**
- Stimulus-funded intercity rail
- Optimize traffic flow around station
- Promote existing connections between stations and downtown/Michigan Avenue**

Long term (> 5 years)

- Midwest High Speed Rail network proposal
- Add transport that would connect the railroad stations to downtown/Michigan Avenue
- High speed rail from Chicago to St. Louis (existing 110 and 220mph proposals)
- Expand Chicago Union Station

Advocacy

- Support development of off-street intermodal terminal at Union/Ogilvie stations



Portfolio of Freight ideas

15 high-potential ideas in portfolio

Near term (< 2 years)

- Develop comprehensive freight plan (air, water, truck, rail)
- Continue to raise funds for CREATE plan
- Implement CREATE plan
- Revisit pickup & drop-off times
- Revisit permits for overweight or high emissions vehicles**

Medium term (2-5 years)

- Implement CREATE plan
- Optimize routes for truck freight**

Long term (> 5 years)

- Implement CREATE plan
- Improve intermodal transport terminals
- Expand port authority and analyze water freight
- Build freight villages
- Implement freight plan

Advocacy

- Advocate for roadway pricing
- Advocate for increased use of rail system for truck freight
- Advocate for funding for CREATE plan

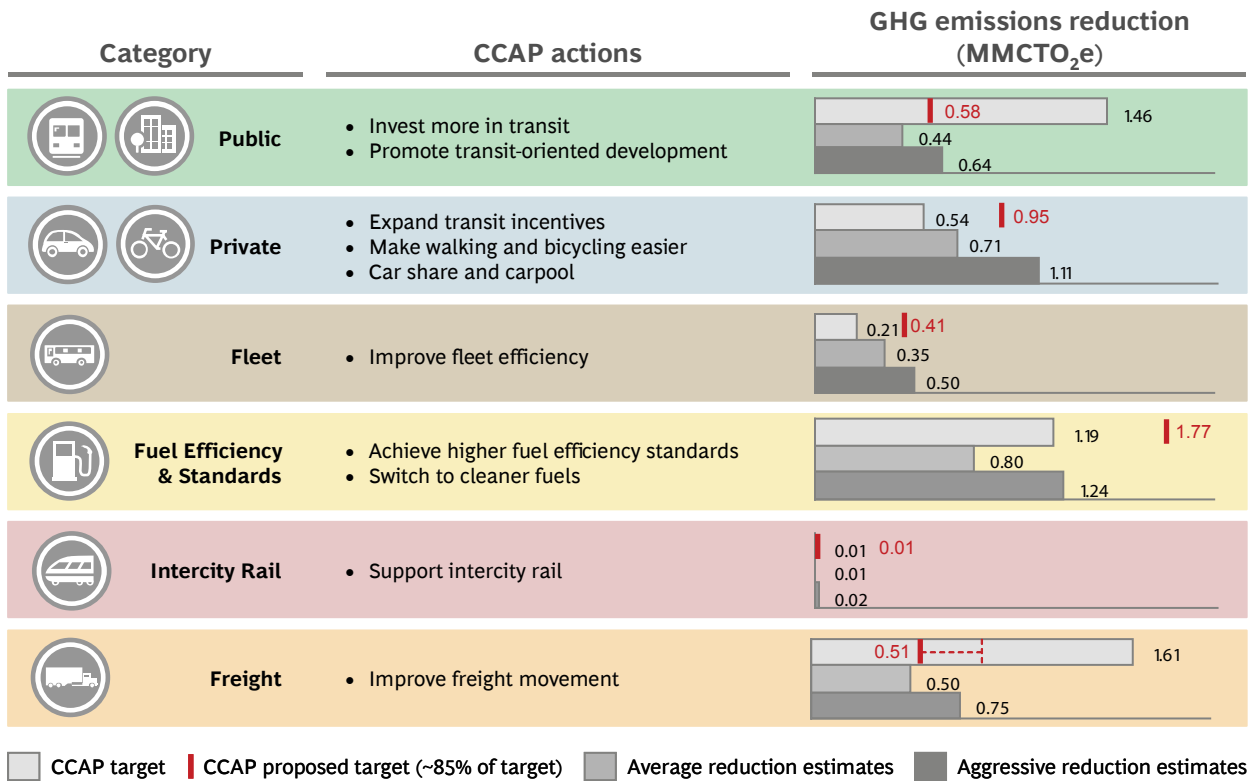
= First wave of initiatives **Bold** = Second wave of initiatives

The team estimates that the recommended portfolio could reach between 55% and 82% of the CCAP goal. A process to assess whether the goals should be revisited is being conducted by relevant CCAP stakeholders. The rationale behind the range is that the expected impact of most initiatives is driven by implementation design choices. For example, implementing an eco-driving campaign via web-based training open to the public would have a much lower impact than including eco-driving as part of the existing mobility and drivers' education or adding a course as a prerequisite to getting a drivers license in Chicago. This analysis and example underline the importance of being bold in the implementation of the portfolio.

A high level of coordination among stakeholders will be required to successfully implement the

portfolio. Given the evolving nature of the climate change and transportation topics, the plan also calls for flexibility to periodically revisit and update the recommendations around prioritization to reflect technological, environmental, and financial realities that the City of Chicago may face. The prioritization of initiatives should also take into account synergies that could be generated when implementing related initiatives.

To that effect, a CCAP Transportation Coordination Committee will be set up to manage, track, and evaluate the implementation of the CCAP Transportation portfolio of initiatives. The Committee will be convened by the Mayor's Office and supported by the Civic Consulting Alliance.



Note: CCAP goal (5.01 MMTCO₂e) and portfolio of initiatives (2.81 MMTCO₂e avg. est. and 4.26 MMTCO₂e aggressive est.) subject to a ~30% overlap across initiatives.

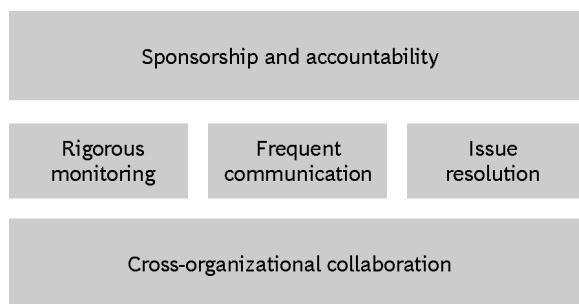
Coordination Committee

The CCAP Transportation portfolio has ~120 initiatives along six transportation categories. Considering the breadth of the effort, the coordination required among stakeholders, and the long-term nature of the plan, it is critical to establish a coordination structure to ensure that momentum is maintained and the aggressive goals are met.

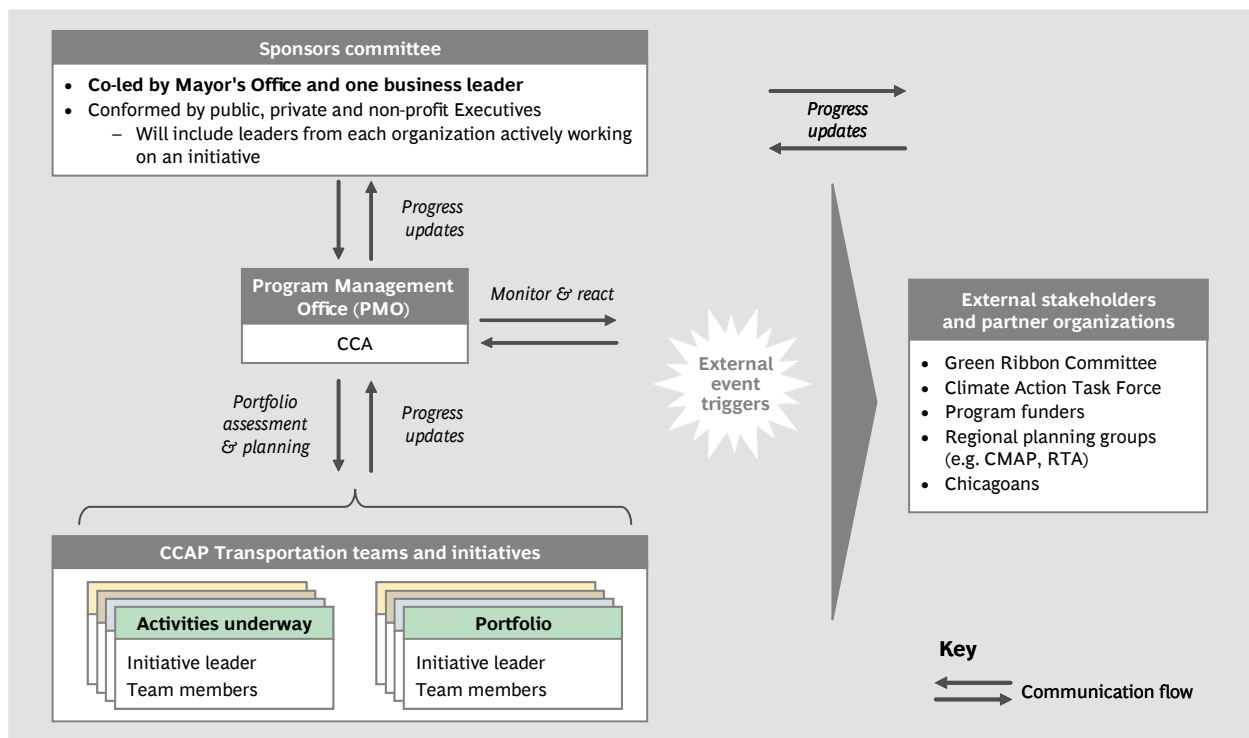
With this purpose in mind, a Coordination Committee will be set up. The Committee will have two overall objectives as its charter: 1) Meet the 3.6 MMTCO₂e emissions target reduction by 2020; 2) Create positive co-benefits that will improve the lives of Chicagoans at large.

The Coordination Committee will increase the likelihood of success by enabling five success factors.

The Committee will have a Sponsor Group formed by the executives of key transportation stakeholders in Chicago, and this group will ultimately be responsible for achieving the GHG



reduction goals. The Civic Consulting Alliance, an objective third-party organization, will play a critical role by leading the Program Management Office (PMO) function ensuring inter-agency collaboration and focus. Initiative teams will be formed with staff from implementing organizations to drive the effort and deliver the agreed impacts within the agreed upon time frame. A set of stakeholders, including Chicagoans at large, will be periodically informed of progress and changes in the implementation efforts.



The CCAP Transportation Coordination Committee will have four core responsibilities:

- » Establish a clear and effective project governance structure for the CCAP Transportation initiatives
- » Enable communication between various CCAP Transportation initiatives and with the Sponsor Committee
- » Assist in the creation of implementation plans and track progress until impact realization
- » Monitor the external environment for triggers that may call for revisions to the recommendations (e.g., portfolio prioritization, potential impact of initiatives)

Concluding Thoughts

The Chicago Climate Action Plan set an aggressive target to reduce transportation-related greenhouse gas emissions (3.6 MMTCO₂e by 2020). The portfolio of initiatives provides a broad set of levers to accomplish the goal but success will not come easily. The stakeholders involved in the implementation must be bold and focused in their implementation efforts. The collaboration and commitment of multiple stakeholders and the Chicago community will be critical to attaining the goal. The Coordination Committee will be a key means of providing guidance, driving action, and promoting collaboration and focus.

The scope of the Chicago Climate Action Plan is broad as it relates to the transportation topic, and it provides great opportunities for relevant stakeholders to contribute toward Chicago's

aspiration to become the most environmentally friendly city. Through the course of this effort, a few additional levers that could drive impact were identified

- » Air transportation related emissions
- » Water transportation related emissions
- » Approaching some of the transportation topics with a regional lens

The team that developed this report included members from The Mayor's Office, The Department of Environment, the Civic Consulting Alliance, and The Boston Consulting Group.

Any questions or ideas to help implement the strategies outlined by this report should be directed to the Office of the Mayor.

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