

**Chicago Climate Action Plan (CCAP) Development and Implementation: Performance Measurement (PM) Lessons Learned
A Quick Guide for Municipalities and Entities Tracking Sustainability Performance**

Lessons learned are organized as follows:
(A) Allocate Resources; (B) Build the PM Community; (C) Determine the Process; (D) Set Goals; (E) Process Data;
(F) Report Progress; (G) Evaluate Progress; (H) Obtain a PM Software; and (I) Benchmark

No.	PM Issue	Issue	Lesson Learned/Revelation	Concluded Via Lesson Learned or Advice Provided	Benefit
1	A. Allocate Resources	<i>Measure Dollars Spent Per GHG Mitigated</i>	Measuring dollars saved per metric tons of carbon dioxide equivalent reduced is helpful in prioritizing how to allocate resources.	<i>Internal Lesson</i>	Greater likelihood that practical goals will be set; Greater likelihood that goals will be accomplished
2	A. Allocate Resources	<i>Prioritize Resource Allocation for Actions With Big Payback</i>	In order to leverage resources, Chicago focuses on prioritizing programs with collateral GHG mitigation and climate change preparedness benefits.	<i>Internal Lesson</i>	Less dollars spent
3	A. Allocate Resources	<i>Weigh Collateral Benefits Additional to GHG Mitigation in Prioritizing Climate Action Plans</i>	As mitigation measures are taken, some actions appear to have less impact on decreasing GHG emissions e.g., Stormwater management . However, the collateral benefits such as quality of life, adaptation, etc., make these activities worthwhile to maintain.	<i>Internal Lesson</i>	Greater scope of community issues are addressed through climate planning
4	A. Allocate Resources	<i>Create a PM Dashboard Identifying Challenges and Progress Achieved</i>	CCAP's dashboard is a helpful tool for prioritizing which actions should be focused upon. Task managers are aware of the effort and money spent on specific actions, and measures GHG mitigation progress against other actions is a helpful illustration of where you are getting the best results for the money spent.	<i>External Advice, GRC</i>	Clearer understanding of PM progress; Greater PM accuracy
5	A. Allocate Resources	<i>Understand That Issues Are Larger Than Dollars Spent Per GHG Emission Reduced</i>	CCAP was told to be wary of over prioritizing dollars spent per GHG emission mitigated because doing so could lose track of other important issues and would skew prioritization of action implementation	<i>External Advice, PMAG</i>	Greater community engagement; Greater likelihood that plan addresses larger scope of issues for the community
6	B. Build the PM Community	<i>Be Specific In Data Requests, Allowing for Leeway for Questions</i>	Some data providers reported progress without fully understanding the overlap in some of the GHG reduction goals to overlapping Actions. The calculations are difficult to reach because they require that some Actions overlap with others. You may need to engage in a dialogue when asking for data from a project manager.	<i>Internal Lesson</i>	Greater accuracy in data collection
7	B. Build the PM Community	<i>Provide Incentives for Data Providers</i>	Provide incentives and outreach for data providers to track quality data and ensure that they are prepared to provide valid data. Data asks should be carefully constructed so that providers are asked for the data that they have, are not asked for the same data twice, and are given an incentive to report data. Chicago learned that data providers are especially resistant of providing data when they do not believe it is holistic, and in providing near term initiative targets. Do not assume data providers will respond to your request(s).	<i>External Advice, PMAG</i>	Greater likelihood of data responses; Smoother PM process
8	B. Build the PM Community	<i>Engage Lead City Departments in PM</i>	It is critical to engage leading City departments on board with PM. Chicago's Office of Budget Management (OBM) was unable to incorporate CCAP measures into required PM reporting due to lack of Departmental cooperation.	<i>Internal Lesson</i>	Broader generation of support PM support and engagement
9	B. Build the PM Community	<i>Create a Green Lead By Example Community</i>	Chicago created green work plans for 19 of its City departments and sister agencies. On a monthly basis, Chicago hosts green staff meetings at which a staff person representing one of the departments and agencies reports on progress of its green work plan. This community is helpful in improving the continuous improvement process, is responsive to data requests in line with CCAP, and fosters new city green initiatives. "The knowledge we bring together is really cutting edge." – Green Staff meeting, June 3, 2010	<i>Internal Lesson</i>	Broader generation of support PM support and engagement; creates a community that is responsive to providing data on a regular basis
10	C. Determine the Process	<i>Measure Actions Beyond Those Outlined in Your Climate Action Agenda</i>	The Green Ribbon Committee (GRC) of external advisors to CCAP recommended, at its March 2010 PM review that they are more interested in the overall picture of Chicago's efforts to mitigate and adapt to future changes in climate than in the measures called out specifically in the Plan's mitigation analysis. Therefore, Chicago is considering big picture measurements and other data that is available rather than the measurements recommended by its mitigation analysis. Those measures may not always be wholly inclusive and/or may be outdated.	<i>External Advice, GRC</i>	Greater PM accuracy
11	C. Determine the Process	<i>Measure Data That Is Available When Determining What to Assess</i>	Focus on where good data exists, emphasizing integrity, transparency, and on-going feedback in data collection. The data we need are the data providers have: It's better to take existing data and analyze it in a way that answers our queries rather than demand new data, because data providers should be focusing on implementation, not data process, and they are often reporting the same data to many different stakeholders.	<i>External Advice Performance Measurement Advisory Group (PMAG)</i>	Greater likelihood that managers will provide data; Creates a positive relationship with data providers; Better initiative prioritization
12	C. Determine the Process	<i>Track Calculations In Your Sustainability Strategy Early Planning</i>	While climate plans are being created, it is important to capture how calculations are being made, their assumptions, and their implicit overlaps, perhaps creating a technical report with this information that is produced in tandem with the plan policy documents. Recalling this information after plan creation is time consuming and confusing and could detract from efforts to analyze data to inform future decision making.	<i>Internal Lesson</i>	Less likelihood for error in data calculations; Less time-intensive process

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13	C. Determine the Process	<i>Understand That Some Actions May Be Unfeasible</i>	In order to reach the long term GHG emission reduction goal, some Actions within the climate action plan may be unfeasible. In this case, other actions must be ramped up to account for the GHG reduction. Overlap in the long term GHG emission reduction goal is inevitable, and as some actions are not feasible, other actions, especially those that are related, must be ramped up to account for the loss in GHG emission reductions. Understanding this early will allow for leeway in identifying other areas that can be improved and ramped up.	<i>Internal Lesson</i>	Less likelihood for program road blocks
14	C. Determine the Process	<i>Understand the PM Software Is Not the Ends, It Is Part of the Means</i>	Choosing the software is not the solution to climate planning PM; it is part of the process.	<i>Internal Lesson</i>	Greater understanding of PM process
15	C. Determine the Process	<i>Set Intensity-Based Targets</i>	Measure projects on an intensity basis considering, e.g., energy saved per capita.	<i>External Advice, PMAG</i>	Increases accuracy in measurement; Improves ability to benchmark data with external initiatives
16	D. Set Goals	<i>Do Not Assume That You Are Meeting Your Goals</i>	Do not assume that your organization is meeting its goals laid out in its plan to address climate change. Goals must be re-evaluated and re-visited throughout the PM process.	<i>Internal Lesson</i>	Better familiarity and ownership of data; Greater likelihood that goals will be practical
17	D. Set Goals	<i>PM Standards Are Evolving</i>	Chicago understands that PM standards are evolving, and therefore, the way performance is measured must adapt, as well. Identify criteria early, but also identify how these criteria will change over time. Baselines are not permanent measures and GHG emission PM is constantly evolving with the development of new technologies; therefore, it should be measured as such.	<i>External Advice, PMAG</i>	Greater PM accuracy
18	E. Process Data	<i>Assess Both Gross and Per Task Measures</i>	Both gross measures and individual project measures are important to tell the PM story. Sometimes it is appropriate to speak to larger terms even when you only have data for specific tasks within a strategy. You may have to discuss per tasks measures in a gross context in order to tell your PM story. At other times, the individual stories will be important to some audiences to discuss your plan's innovation. Overarching data are helpful for understanding trends in GHG reduction, but, at least at the beginning stages of implementation, case studies with discrete pieces of data can be more compelling and informative. For instance, knowing the change in gallons of water pumped per day per capita helps determine the reduction in GHG emissions, but stakeholders are more interested in the number of miles of pipe replaced, meters installed and rain barrels connected.	<i>Internal Lesson</i>	Clearer understanding of PM progress; Contextualizes PM progress for specific audiences; Greatest intimacy with data; Better equipped to tell your PM story with flexibility for various audiences
19	E. Process Data	<i>Greenhouse Gas (GHG) Emission Mitigation Calculations May Be Incorrect</i>	After careful review, Chicago learned that there were errors in the GHG reduction calculation for several CCAP Actions in its GHG emission mitigation analysis. Chicago found that it is worth the investment to carefully review each GHG reduction calculation to ensure its accuracy and validity.	<i>Internal Lesson</i>	Greater accuracy in data calculations
20	E. Process Data	<i>GHG Emission Reduction Calculations Are Evolving</i>	The field of measuring GHG reductions is constantly evolving. Chicago maintains flexibility in its system because of this understanding. In order to ensure accuracy in its measures, Chicago sought a PM tool that will update its measurements with innovations in national standards for evaluating and calculating GHG reductions. Chicago also maintains a dialogue with leaders in the field of GHG emission PM to stay up-to-date with innovative measurements.	<i>Internal Lesson</i>	Greater PM accuracy in data calculations
21	E. Process Data	<i>Pursue Granular Data With the Understanding that Collecting Such Data Is Challenging</i>	We have collected granular data where we can. It is expensive to collect granular data if it is not already being collected. Sometimes systemization of data is appropriate while sometimes it is appropriate to have a granular measure; knowing the individual measure will help tell the PM story.	<i>Lesson Learned</i>	Greater PM accuracy
22	E. Process Data	<i>Haste Cannot Be An Ultimate Priority</i>	There are many factors to consider in a GHG emission PM process; haste should not be an ultimate priority in order to ensure the integrity in the process. Chicago has taken the time to review its GHG reduction data and, through this process, has identified and corrected errors in calculations and units of measure. If haste is over prioritized during a PM process, critical data may be lost and the quality of the PM task may decline. Therefore, taking time to properly evaluate the performance of a GHG emission project will ensure that your organization is using valid data. Chicago could have overlooked mistakes that were identified and corrected had CCAP chosen to rush its PM process. CCAP learned that careful review of its GHG emission reductions identified the proper metrics for reaching GHG calculations, which would have become more challenging had these misnomers been caught later in the process.	<i>Internal Lesson</i>	Greater PM accuracy; Less likelihood for error

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23	E. Process Data	<i>Understand the Synergy That Exists Between Actions</i>	Many of the actions may overlap both in action participants, increasing and/or decreasing the GHG mitigation effect of other actions, etc.	<i>External Advice, Center for Neighborhood Technology, PMAG</i>	Greater data integrity
24	E. Process Data	<i>Assess Both Validated Data and whatever Data Is Available</i>	CCAP has learned that it must measure the data that is available in order to tell its story; you cannot pressure data providers to give you "perfect" data. However, CCAP ensures integrity in its data by emphasizing data audits and tracking the source and validity of its data, always seeking the best data moving forward.	<i>External Advice, PMAG</i>	Wider variety of data available; enhanced understanding of data accuracy
25	F. Report Progress	<i>Prioritize Consistent Measures</i>	Prioritizing consistency across climate action plan measurement for clear data illustrations of progress and benchmarking. For example, if you know the energy intensity measure for an action in your climate mitigation plan it may be the best measure for that action but it might make sense to measure emissions through a measure that compares to other actions. Eventually, however, you should move toward the highest quality of data. In addition, know that you should prioritize consistency through measuring data growth since initiation of an action.	<i>Internal Lesson</i>	Clearer understanding of PM progress; Greater ease in benchmarking
26	F. Report Progress	<i>Measure PM Progress By Hand Before Choosing A Software Program</i>	Walking through the process of PM by hand without software is very helpful -- it allowed us to realize where we need to specifically denote when something overlaps or is additive, etc.	<i>Internal Lesson</i>	Creates intimacy with data; Less likelihood for errors in calculations
27	F. Report Progress	<i>Understand That GHG Emission Mitigation is Perceived as a Secondary Benefit</i>	Although your sustainability plan is concerned with the GHGs reduced per action, many audiences consider GHG emission mitigation a secondary benefit to other results, e.g. reduced road congestion, reduced air pollution, reduced energy heating costs. If people view GHG mitigation as a secondary benefit, using other issues to tell a story will help frame your progress in a meaningful way.	<i>External Advice, PMAG</i>	Enhanced PM communications
28	G. Evaluate Progress	<i>When Illustrating Progress, Compare Metrics to the Target Year</i>	Always compare your metrics to the target year, so stakeholders can see if your units are in fact impressive (dwelling unit retrofits).	<i>Internal Lesson</i>	More accurate indicator of progress
29	G. Evaluate Progress	<i>Illustrate Progress to Recognize Work Additional to Climate Action Plan</i>	Chicago is taking on initiatives capturing sister agency and department level data - what to do with their good stories that don't have same metrics as CCAP actions	<i>Internal Lesson</i>	Greater success in program; greater likelihood to expand
30	H. Obtain a PM Software	<i>Seek External Review of Your Request For Proposals (RFP) to Ensure Clarity</i>	Seek external input after the RFP is written but before it is issued in order to ensure that your nuanced needs are addressed; this will decrease the time spent on question and answer and negotiations with the RFP respondents	<i>Internal Lesson</i>	Increased efficiency; greater likelihood of finding a tool that meets your needs
31	H. Obtain a PM Software	<i>The RFP Process Can Take Longer Than Expected</i>	Rather than rush your RFP process, make sure to take appropriate time to ensure that a good variety of respondents have time to bid. To be fair, after the RFP process was closed, it remained closed. If CCAP had allowed for a longer RFP process, the vendors would have increased in diversity.	<i>Internal Lesson</i>	Increased comprehensiveness
32	H. Obtain a PM Software	<i>Reduce the Likelihood of Re-doing Work For A PM Software Engagement</i>	Expect the question and answer period and evaluation for your PM RFP to be a time-intensive task. If one party prepares the scope of work agreement, rather than both parties preparing and merging two documents, some of the process may be streamlined.	<i>Internal Lesson</i>	Increased efficiency
33	H. Obtain a PM Software	<i>Prioritize Software Quality Over Cost</i>	A quality PM GHG data counting software system may be worth a costly investment; do not heavily disfavor a tool due to the initial expense. When choosing methods and tools for calculating GHG emission reductions, quality may be worth an initially large financial investment. Prioritize quality in the cost-benefit analysis, as the software may become the meat of your PM process.	<i>External Advice, PMAG</i>	Greater data integrity
34	I. Benchmark	<i>Understand That Benchmarking Is Difficult</i>	We are learning that, although emissions inventories are quite different, if Cities can use the same emissions factor you can unify conversions to make an apples to apples comparison of climate mitigation progress.	<i>Internal Lesson</i>	Greater ease in benchmarking
35	I. Benchmark	<i>Look to Cities' Best Practices</i>	The City of Chicago's Green Staff have found that we learn best from looking to other cities' models. Following the best practices of other cities continues to inform our work. "We learn better through hearing about the work of other cities." -- Green Staff meeting, June 3, 2010	<i>Internal Lesson</i>	Increased comprehensiveness

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 This lessons learned report was written and compiled by Olivia Cohn, Global Philanthropy Partnership.**