

Leading Practices of Climate Action Plans

MNCAA

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Organizations helping develop climate action plans

Using existing literature to frame next generation CAPs

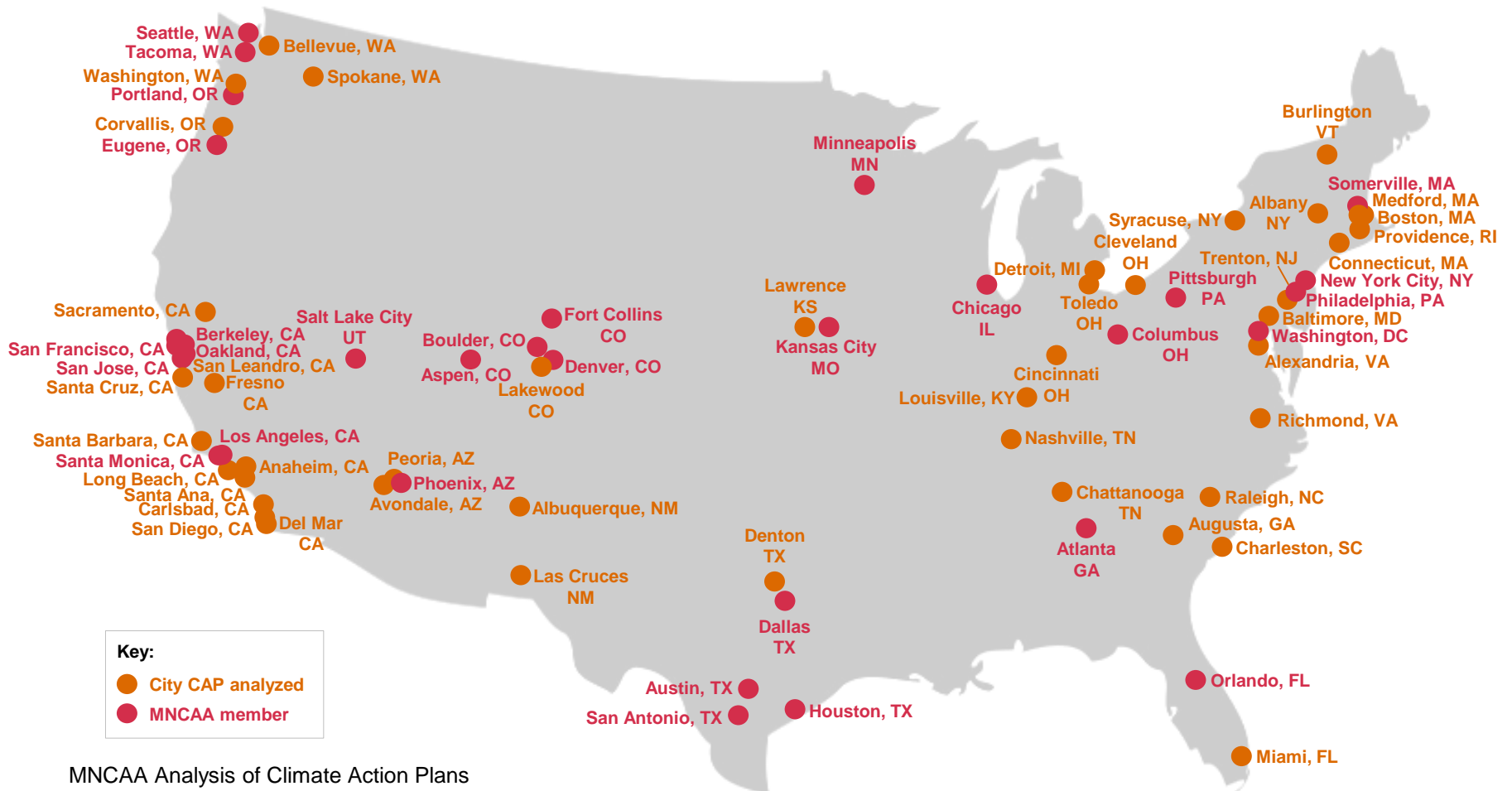
This work is aimed to summarize current climate action plans (CAPs) and anticipate leading practices of 'next generation' CAPs, that will be applicable to all US cities. Other good resources exist for further technical detail or a global scan of activities by other cities.

Entity	Membership	Scope	Resource
Innovation Network for Communities	N/A	<ul style="list-style-type: none"> • Sectoral policy classification and synthesis 	<ul style="list-style-type: none"> • Carbon Neutral City, Road to 80x50
USDN	135 N. American cities	<ul style="list-style-type: none"> • Innovation in sustainability • Capacity building through regional network 	<ul style="list-style-type: none"> • USDN
Carbon Neutral Cities Alliance	20 global (incl. 8 US)	<ul style="list-style-type: none"> • Global approaches for long-term carbon reduction planning 	<ul style="list-style-type: none"> • Framework for Long-Term Deep Carbon Reduction Planning
ICLEI / WWF	1,200 global cities and jurisdictions (incl. 586 US)	<ul style="list-style-type: none"> • Snapshots on 4 US cities 	<ul style="list-style-type: none"> • How US Cities Are Accelerating Progress Towards National Climate Goals
C40 Cities	83 global cities (incl. 12 US)	<ul style="list-style-type: none"> • Reporting and measurement • Best practice solutions 	<ul style="list-style-type: none"> • Unlocking Climate Action in Megacities (2014) • Cities 100 (2015)
ISDR	34 US cities	<ul style="list-style-type: none"> • Climate action 	<ul style="list-style-type: none"> • Pathways to Deep Decarbonization (2014)
Compact of Mayors	428 global cities	<ul style="list-style-type: none"> • Low carbon cities 	<ul style="list-style-type: none"> • How to Maximize the Role of Cities in a Low Carbon Future (2015)

Benchmarking methodology

75 cities analyzed, totaling a population of 46 million

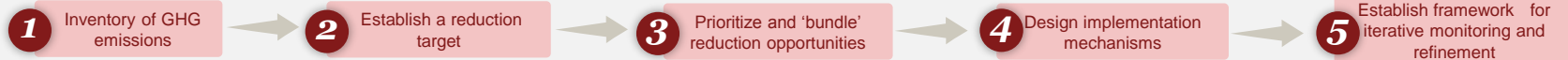
We gathered data from existing climate action plans (CAPs) by generally focusing on the largest cities in each state. We added to this information data from a survey sent to MNCAA members, combined with additional PwC analysis.



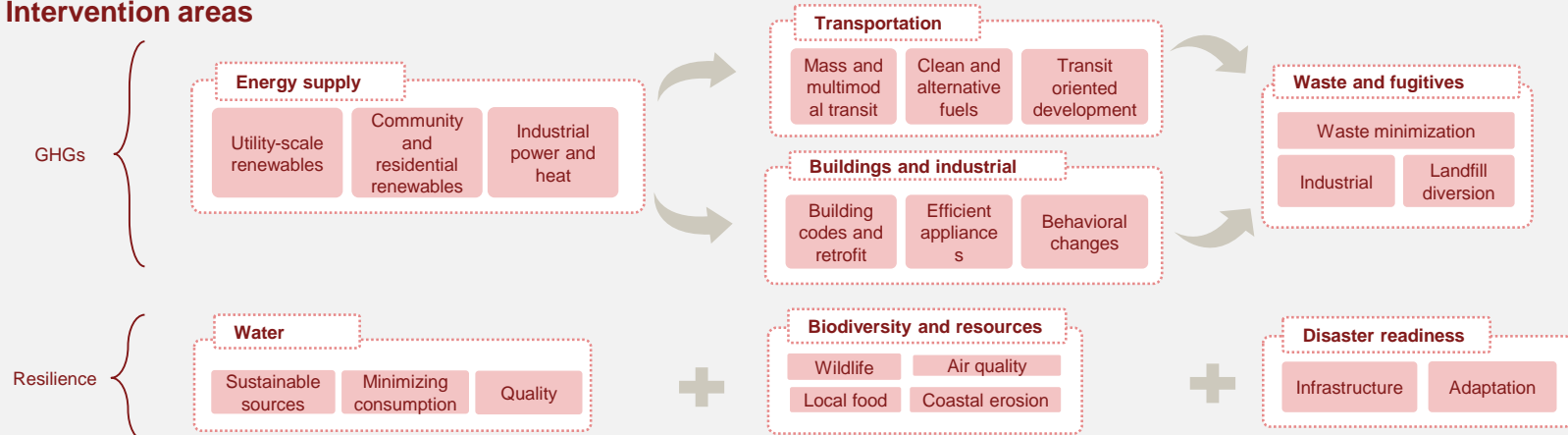
What we looked for in climate action plans

Process, actions and implementation readiness

Process



Intervention areas



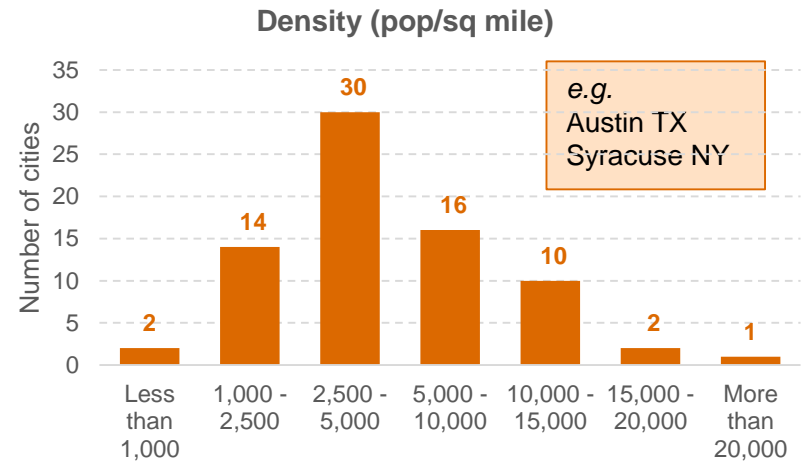
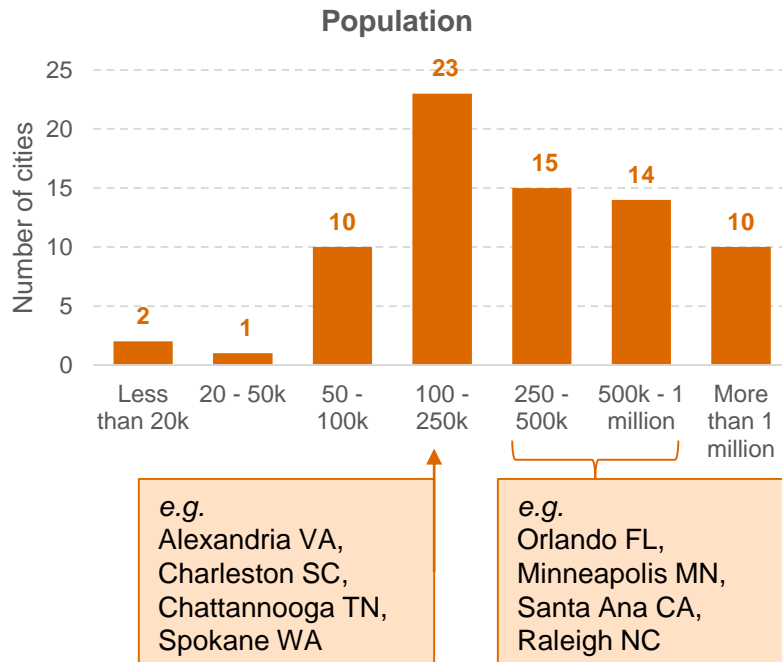
Implementation planning



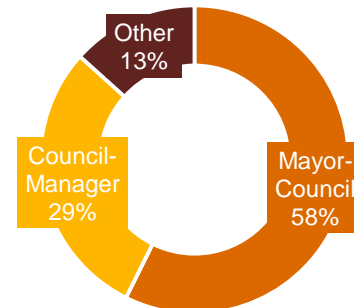
Overview of the cities analyzed

Population, density and form of government

We reviewed cities, focusing initially on the largest cities in each state and then working down, to assess their stated climate action and environmental sustainability plans. Most cities were naturally greater in population size, so as to capture the impact of climate action on populations within administrative areas.



Form of government

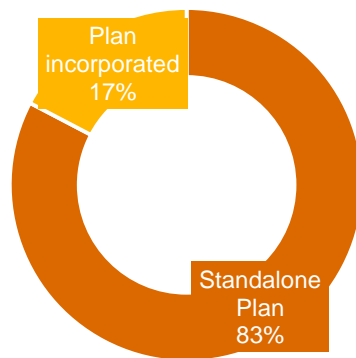


83% of plans are standalone documents

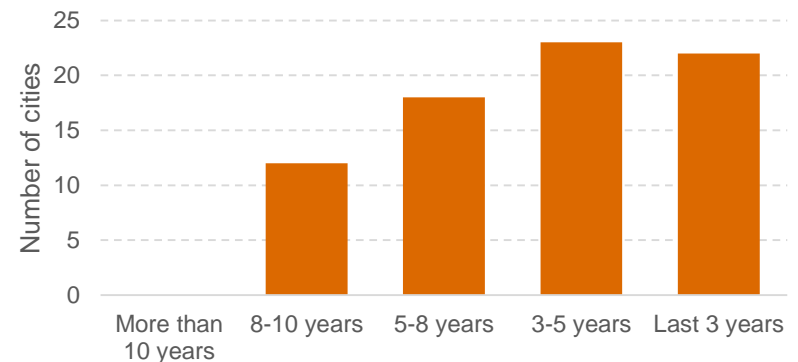
Most created by environmental departments in the last 5 years

Most plans (which include climate action and environmental sustainability) have been commissioned and published in the last 5 years, although all are less than 10 years old. Most are generally standalone documents, while a minority are part of a larger piece, such as a General Plan or Urban Development Plan.

Are plans standalone or part of a broader document?



Age of Plan



Key features:

Technical documents

Led by Office of Sustainability or Environment and equivalent

Primarily GHG mitigation focused

Vary in size: 25-400 pages (most less than 100)

Near-term actions

Long-term targets

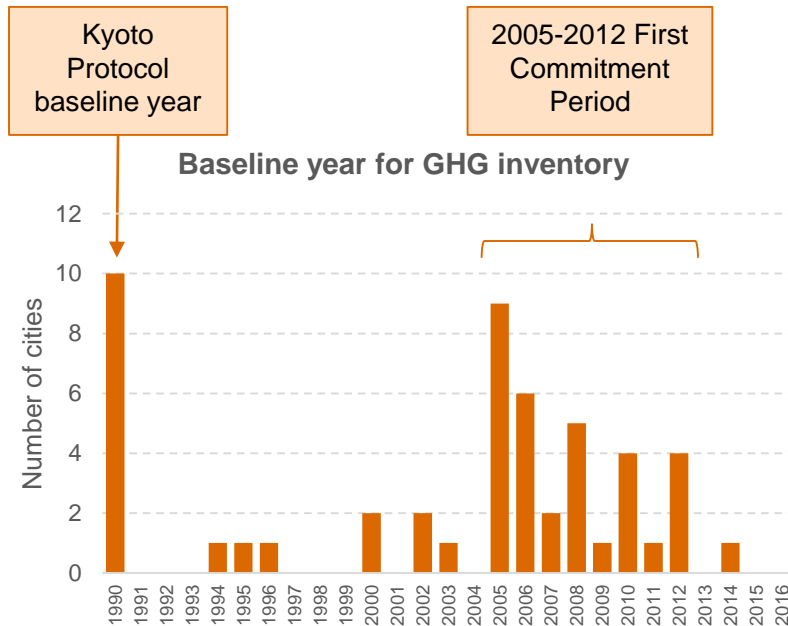
Two thirds of plans inventory GHGs

But varying standards makes comparability difficult

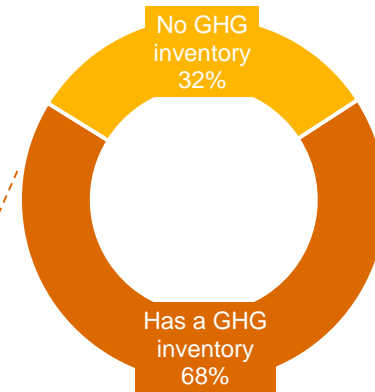
Nearly all of the Plans evaluated have a focus on GHG mitigation.

Although only two thirds do this with a GHG inventory informing the Plan.

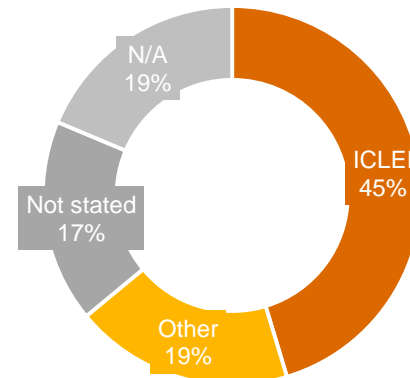
Of those with a GHG inventory, ICLEI's US Community Protocol was the general methodology.



Does the Plan contain a GHG inventory?



ICLEI's US Community Protocol is widely used



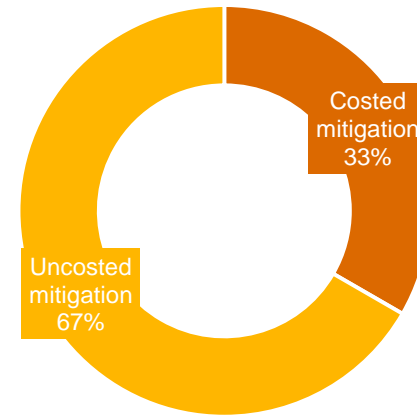
Actions focus on the buildings and transportation sector

However two thirds of climate actions are uncosted

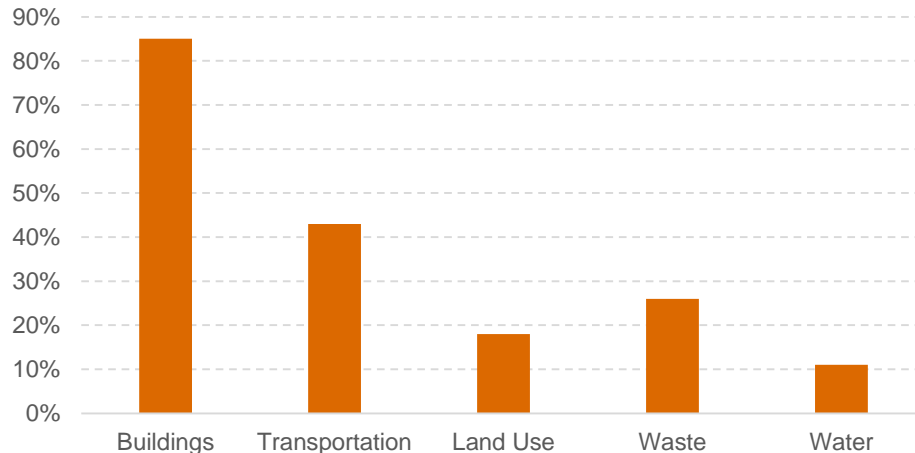
Climate Action Plans tend to focus on areas where cities can create policy/ordinances, but do not themselves bear the direct costs of implementation.

That being said, two thirds of mitigation actions are not quantified (in terms of tCO₂ avoided) or costed. Sequestration and resilience actions are not routinely quantified.

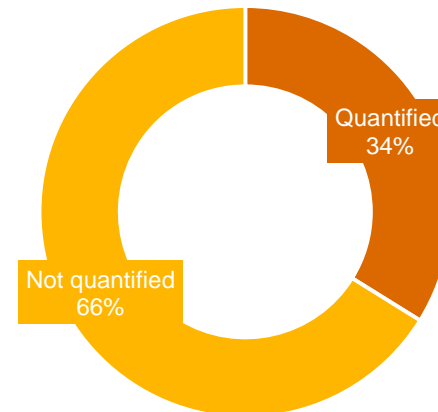
Are mitigation actions costed, in terms of \$?



Percentage of Plans addressing issues in these sectors



Are mitigation actions quantified, in terms of tCO₂ mitigated?



Survey results (1/6)

Overall satisfaction with MNCAA CAPs

MNCAA members were surveyed to gauge their overall satisfaction with their climate action plans. 50% of MNCAA members submitted responses.

Q1. Please state your agreement or disagreement with the following statements as they relate to your city's Plan document	Strongly disagree	Disagree	Neither disagree or agree	Agree	Strongly agree	TOTAL RESPONSES
Our city's Plan identifies a credible, long-term pathway for reducing GHG emissions	0%	12%	18%	35%	35%	17
The targets set in our city's Plan are achievable	0%	0%	6%	65%	29%	17
Our city's Plan identifies climate actions that are sufficiently detailed to implement	0%	6%	18%	47%	29%	17
Our city's Plan is comprehensive as it relates to sustainability and climate action	0%	12%	18%	47%	24%	17
Other departments in our City understand what they should do to implement the Plan	0%	6%	29%	41%	24%	17
Our city's Plan is a technical document	0%	12%	29%	41%	18%	17
Our city's Plan designs the governance and enabling environment for it to be a success	6%	24%	24%	29%	18%	17
Community groups in our City understand what they should do to implement the Plan	6%	24%	18%	47%	6%	17
The private sector in our City understand what they should do to implement the Plan	6%	29%	29%	35%	0%	17
Our city's Plan identifies funding needs and sources	6%	35%	24%	35%	0%	17

Key takeaways

1. Respondents generally felt that their plans were comprehensive.
2. Respondents overwhelmingly felt the targets set in their CAPs were achievable and implementable.
3. Respondents felt their CAPs weren't as clear as they could have been in identifying actions for communities and the private sector.
4. Governance and funding issues were generally not adequately addressed in CAPs.

Survey results (2/6)

Implementation priorities in MNCAA CAPs

MNCAA members were surveyed to gauge their sense of implementation priorities for their climate action plans. 50% of MNCAA members submitted responses.

Q2. What level of importance was placed on the following implementation issues in your city's Plan?	Least important / irrelevant	Not important to consider	Requires consideration	Important to consider	Very important	TOTAL RESPONSES
Support/endorsement from elected officials	0%	6%	0%	24%	71%	17
Alignment with wider environmental and sustainability issues	0%	0%	0%	35%	65%	17
Clear/tangible actions	0%	0%	6%	41%	53%	17
Departmental ownership	0%	6%	29%	18%	47%	17
Public/community support and engagement	0%	6%	6%	53%	35%	17
Departmental coordination	0%	0%	18%	53%	29%	17
Departmental capability	0%	18%	24%	29%	29%	17
Process for accountability/review	0%	0%	35%	41%	24%	17
Pilot and demonstration projects	6%	12%	18%	53%	12%	17
Funding availability	0%	12%	29%	47%	12%	17

Key takeaways

1. Respondents overwhelmingly felt that both support from elected officials were very important to the implementation success of their CAPs.
2. In developing their CAPs, alignment with wider environmental and sustainability issues were seen as a priority.
3. Funding availability and governance issues were seen as important to consider, but not as much as having clear and tangible actions.
4. Respondents had a range of views on the importance of pilot and demonstration projects.

Survey results (3/6)

Evaluating the levels of success of MNCAA CAPs

MNCAA members were surveyed to gauge their evaluation of success of their climate action plans. 50% of MNCAA members submitted responses.

Q3. Looking back on city's Plan, how would you rate your level of success in addressing the following climate action areas?

	No change	Some success	Significant or transformational success	TOTAL RESPONSES
Energy and renewables	6%	41%	53%	17
Waste	12%	65%	24%	17
Buildings	6%	76%	18%	17
Transportation	18%	65%	18%	17
Resilience	29%	59%	12%	17
Consumption (food and consumables)	47%	41%	12%	17
Land Use	18%	76%	6%	17
Water	29%	71%	0%	17
Carbon sequestration	59%	41%	0%	17
Biodiversity	71%	29%	0%	17

Key takeaways

1. Three quarters of respondents had at least some success with buildings sector climate actions
2. More than half of respondents achieved significant or transformational success with energy and renewables sector climate actions
3. Cities which reported no change in transportation sector climate actions were cities that tended to be lower density (less than 4,000 people per square mile)

Survey results (4/6)

Evaluating the levels of success of MNCAA CAPs

MNCAA members were surveyed to gauge their evaluation of success of their climate action plans. 50% of MNCAA members submitted responses.

Q4. Looking back on your city's Plan, how would you rate your level of success in addressing the following implementation issues?

	No change	Some success	Significant or transformational success	TOTAL RESPONSES
Support/endorsement from elected officials	12%	29%	59%	17
Clear/tangible actions	6%	41%	53%	17
Departmental ownership	6%	53%	41%	17
Alignment with wider environmental and sustainability issues	6%	59%	35%	17
Departmental capability	18%	47%	35%	17
Departmental coordination	6%	65%	29%	17
Process for accountability/review	12%	59%	29%	17
Public/community support and engagement	0%	76%	24%	17
Pilot and demonstration projects	18%	71%	12%	17
Funding availability	24%	65%	12%	17

Key takeaways

1. All respondents felt their CAPs had some level of success with 'public/community support and engagement'.
2. More than half of respondents felt their CAPs had significant or transformational success in creating clear and tangible actions and gaining support/endorsement from elected officials.
3. Most respondents had success with building the capacity of their Cities to own and coordinate climate action but some felt that there had been no improvement in departmental capabilities.
4. Nearly all respondents felt that their CAPs had succeeded in aligning to wider environmental and sustainability issues.

Survey results (5/6)

Priorities for the next iterations of MNCAA CAPs

MNCAA members were surveyed to gauge their evaluation of success of their climate action plans. 50% of MNCAA members submitted responses.

Q5. If you were to update your city's Plan, how important would the following climate action areas be?	Least important / irrelevant	Not important to consider	Requires consideration	Important to consider	Very important	TOTAL RESPONSES
Transportation	0%	0%	0%	6%	94%	17
Energy and renewables	0%	0%	12%	6%	82%	17
Buildings	0%	0%	0%	24%	76%	17
Resilience	0%	0%	0%	47%	53%	17
Consumption (food and consumables)	0%	24%	18%	12%	47%	17
Waste	0%	6%	18%	35%	41%	17
Water	0%	0%	47%	12%	41%	17
Land Use	0%	0%	12%	53%	35%	17
Carbon sequestration	0%	12%	41%	18%	29%	17
Biodiversity	0%	18%	53%	29%	0%	17

Q6. If you were to update your city's Plan, how important would the following implementation issues be? (Please rank, 1 = most important, 10 = least important/irrelevant)

	Rank
Clear/tangible actions	1
Support/endorsement from elected officials	2
Public/community support and engagement	3
Departmental ownership	4
Funding availability	5
Departmental capability	6
Process for accountability/review	7
Departmental coordination	8
Alignment with wider environmental and sustainability issues	9
Pilot and demonstration projects	10

MNCAA Analysis of Climate Action Plans

PwC

Key takeaways

1. Sectors which have mitigation opportunity (buildings, energy and transportation) are the most important for MNCAA members.
2. Resilience is an issue that all respondents thought was at least important to consider.
3. Respondents felt that providing clear/tangible actions as well as support from elected officials was the most important requirement for future CAPs.
4. Governance and finance were high-ranking as issue areas that need to be considered.
5. Having succeeded in aligning their existing CAPs to other environmental and sustainability issues, this was seen as less important for the next iteration.

Survey results (6/6)

Quotes from MNCAA members on their climate action plans

Community Steering Committee and follow up Oversight Commission have been key.

Departmental buy in and continued support is important.

Much of our success has resulted from working collaboratively with our local investor-owned electrical utility.

Integrating goals from various plans is essential. New goals and targets shouldn't be created if there are already some that fit.

Our initial plan was an early success but included a number of blue sky items and special interest pet projects that really didn't have due diligence completed to see if they actually were relevant to our situation.

In implementing our plan, one key lesson is to collaborate with entities with whom we may share common objectives/goals, even if our motivations for achieving those objectives/goals are very different.

It's all about the money, but not new money; integrated spending.

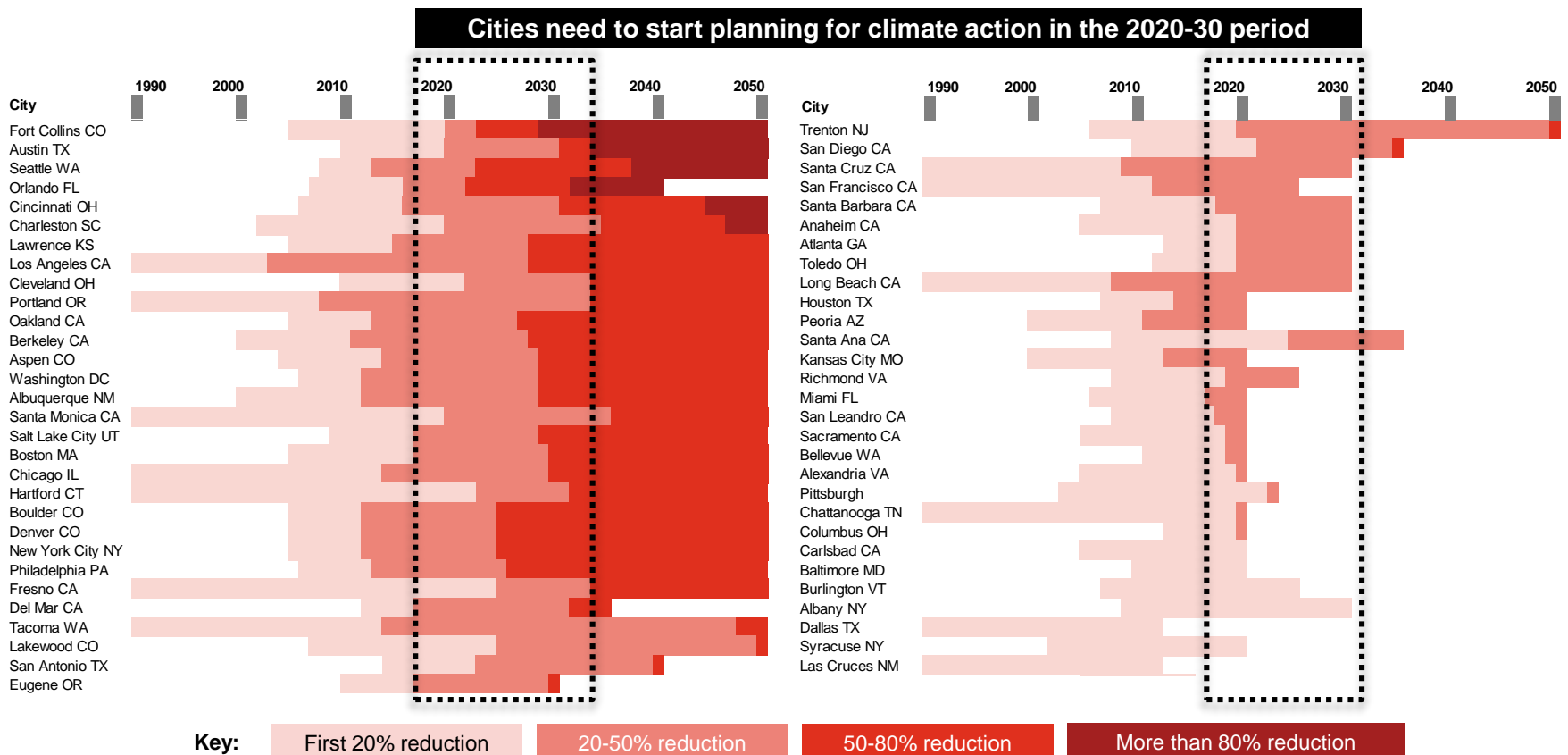
A new mayoral administration will require time to understand the Plan, and incorporate their updates into it.

Community-wide buy-in has allowed for significant investment on the part of Council.

Milestones to 2050

Typically 30x20, 40x30 and 80x50

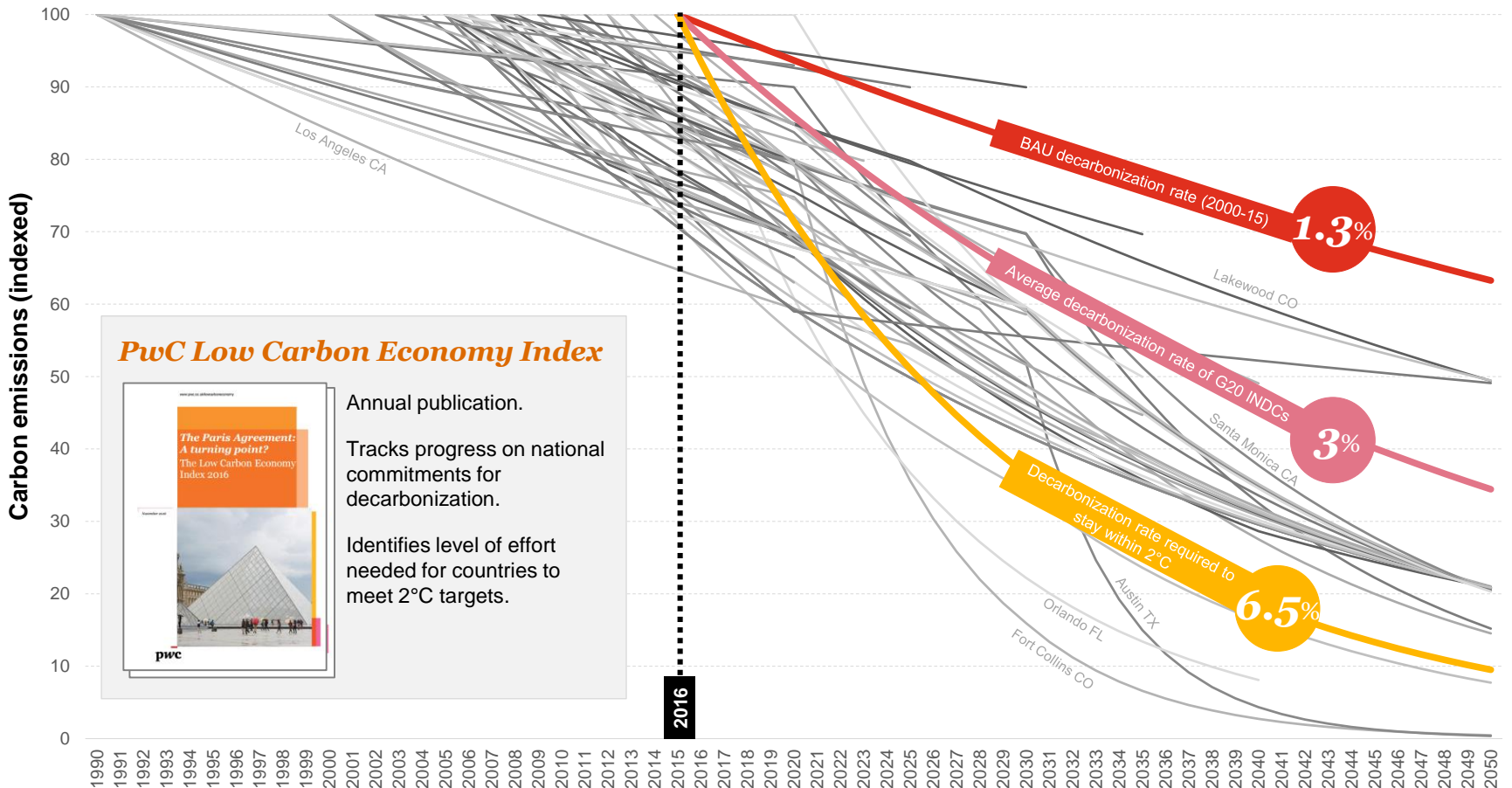
60 of the cities evaluated set carbon reduction goals. Of these, many adopted 80x50 goals, with most identifying interim milestones mostly around the 2020-30 timeframe. A number of large cities are yet to identify nearer-term emissions reduction goals.



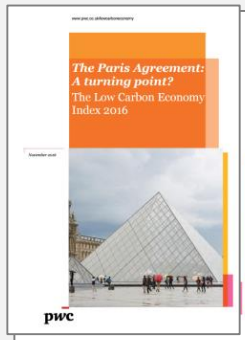
US cities are spearheading action

But more needs to be done to limit climate change to 2°C

Comparing climate action pathways by US cities to global efforts shows that US cities are decarbonizing at rates greater than the G20 average. Cities that front-load emissions reduction with interim milestones will find it easier.



PwC Low Carbon Economy Index



Annual publication.

Tracks progress on national commitments for decarbonization.

Identifies level of effort needed for countries to meet 2°C targets.

Cities will need new thinking in updating their action plans

In order to support the Paris Climate Agreement

Most US cities will need to refresh their Climate Action Plans in the near-term, in order to provide clarity for sustaining aggressive climate action in the 2020-2030 timeframe. Cities can take the opportunity to learn from the current generation of CAPs to develop holistic, integrated and more engaging movements on multi-threaded climate action.

Current generation plans

Aligned to environmental and sustainability goals
Technical documents
Some are unquantified and uncosted
Created to meet standards/expectations
Imported solutions
Stakeholders are brought into the CAP development process
Developed in siloes

Current generation results

Multiple and overlapping targets and metrics
Scientifically correct, but difficult to translate to actions
Lack of true costs of benefits
Not moving the needle on impacts
Imported solutions lack applicability to local context
Stakeholders supportive but unengaged
Not engaging citizens broadly

The next generation

<i>Integrated sustainability reporting</i>
<i>Holistic approach to designing implementation actions</i>
<i>Comprehensive accounting of costs and benefits</i>
<i>Underpin the plan with rigorous technical analysis</i>
<i>Built from local strengths</i>
<i>Forge connections within and outside the City</i>
<i>Build a movement to make change inevitable</i>

Enhancing current CAPs for the next generation

Towards a model of best practice

Next generation CAPs enhance/augment the efforts of cities on sustainability by providing greater confidence in the impacts of proposed actions, clarity on how actions will be implemented and by whom, and catalyzes wider support by engaging a range of stakeholders including City officials, community groups and the local business community.

Feature	Current Generation CAPs	Next Generation CAPs
GHG inventory	<ul style="list-style-type: none"> Contains/refers to a GHG inventory Varying baseline years 	<ul style="list-style-type: none"> Inventory based on defined standard (e.g. ICLEI) Baseline GHG forecast Alignment to 1990 baseline year
Climate actions (mitigation, sequestration, resilience)	<ul style="list-style-type: none"> Actions identified across buildings, transportation, energy and waste sectors Some actions quantified 	<ul style="list-style-type: none"> Actions identified for mitigation, sequestration and resilience Near-term actions quantified and costed Actions packaged into implementation-ready policy, governance, funding, co-benefit 'wrappers'
Targets	<ul style="list-style-type: none"> Target and year identified 	<ul style="list-style-type: none"> 80x50 target with interim milestones (2030-2040) that roll up to state targets Integrated pathway that outlines trajectory for mitigation
Policies	<ul style="list-style-type: none"> Non-specific/generic policy measures 	<ul style="list-style-type: none"> Specific policy measures identified including ownership, funding and implementation
Updates	<ul style="list-style-type: none"> Periodically updated GHG inventory 	<ul style="list-style-type: none"> Scheduled update including GHG inventory Open-data based dashboard
Governance	<ul style="list-style-type: none"> Ownership relies of Sustainability/Environmental Department, sometimes leveraging others 	<ul style="list-style-type: none"> Sponsoring City departments and agencies identified, briefed and trained
Funding	<ul style="list-style-type: none"> Funding not comprehensively considered 	<ul style="list-style-type: none"> Capital and public works needs and sources identified

Specific tools to develop next generation CAPs

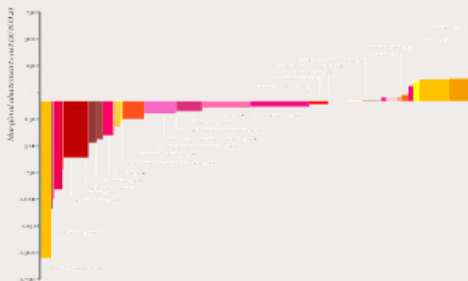
Provide analytical rigor, and ready for implementation

Next generation CAPs need to focus on providing the confidence for climate action to be supported and funded; this means analytical rigor around the costs and benefits (including co-benefits) of climate action, as well as describing the holistic environment necessary to support implementation. Finally, climate action should be shown to be aggressively shifting to a low carbon pathway.

GHG and water abatement curves

- Analyze climate action measures to inform policy; costs, benefits, and rate and scale of implementation for GHGs and water.

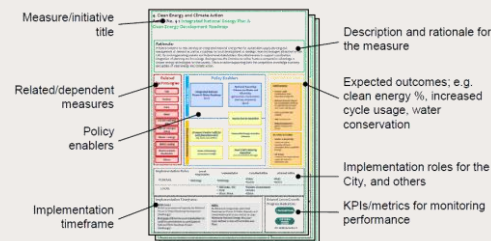
Marginal Abatement Cost Curve (MACC) for carbon



- Assist cities in making effective policy choices to plan and identify interdependencies and synergies between actions.

Implementation scorecards

- Address implementation considerations for each climate action measure (e.g. co-benefits) and develop scorecards.

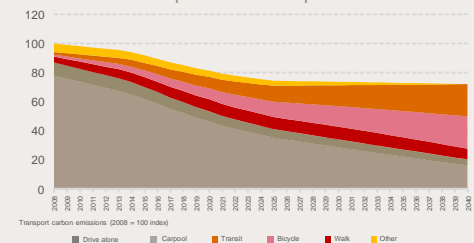


- Package measures into implementation bundles, based on political feasibility/will, availability of funding, and ease of implementation.

Sustainability pathway

- Sequence supported measures into new integrated sustainability pathways for GHGs (including energy and transportation) and water.
- Aligns and integrates new and existing measures.

Transport mode shift profile



- Synchronized with State-level commitments

Leading practices of next generation CAPs

Provides the robustness to guide implementation

Mitigation

Mitigation actions are the current focus of traditional CAPs, and many cities do well in developing actions to reduce carbon emissions. In next generation CAPs, mitigation actions need to be thoroughly costed, their co-benefits appraised and applied comprehensively across sectors that are yet to - or stubborn to - decarbonize.

Sequestration

While sequestration may currently be limited in technology for large-scale adoption, cities can consider limited sequestration measures that also serve co-benefits such as tree planting contributing to biodiversity. For cities with large industrial mixes, carbon capture and storage (CCS) and other technologies may become available.

Resilience

Traditional CAPs do consider resilience. In next generation climate action plans, cities should consider incorporating resilience measures into their core CAP and explore uses of market-based mechanisms (such as insurance products) as actions cities can support.

Co-benefits

Traditional CAPs tend to not explicitly identify co-benefits. However, many climate actions do yield better social and health outcomes. If quantified and monetized, the economics of climate action becomes compelling for city authorities to endorse, and for financial backers to invest into.

Mitigation

Innovation and growth

The timeframe for which climate action is considered is multi-decadal. Next generation CAPs need to anticipate changes in technologies and seek to support such changes to accelerate climate action.

Innovation and growth

Financing and funding

A clear understanding of the costs and benefits of climate action is necessary to provide the confidence to stakeholders that climate action is being undertaken with the most efficient use of resources. Capital budgets need to be identified, departmental budgetary planning needs to take place and cities need to partner with the private sector to reduce the risk threshold of key projects.

Governance

Traditional CAPs consider the role of the City in ownership and coordination of climate action. In next generation CAPs, this needs to be combined with capacity building to equip cities to effectively own and manage climate action,

Stakeholder mobilization

Many cities recognize that CAPs are not merely technical documents; and community support is built in to develop CAPs. In next generation CAPs, a wide range of stakeholders (infrastructure and technology providers, developers, community groups, business actors, government agencies and related entities) need to all be mobilized to drive their respective components of the CAP.



Thank you!



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