



CAMBRIDGE COMPACT FOR A SUSTAINABLE FUTURE

2016-2019 WORK PLAN

Prepared by

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EXECUTIVE SUMMARY

The Cambridge Compact for a Sustainable Future formed in 2013 because its members saw an opportunity to work together to better address the crisis of global climate change and the many challenges it presents. Up until this point, the Compact has focused on standing up the organization, creating the necessary organizational, governance, and funding structure, hiring a part-time coordinator, and undertaking some early initiatives. In 2015 the Compact began its first strategic planning process, facilitated by the Consensus Building Institute, to develop its first work plan.

The work plan reflects the sustainability topics that members are most interested in working on at this time and it is a flexible framework that recognizes there are different levels of ambition and impact depending on member engagement, funding, and capacity. Success of the Compact is predicated on the active participation of all Compact member organizations and their staff in addition to playing a contributing role to carry out the work identified in this plan. Participation is expected to be a mix of leadership and individual contributions of expertise to implement the Compact's initiatives.

Initiatives fall within four engagement strategies (education, research, pilots, and responsiveness & advocacy) and span five focus areas (greenhouse gas inventories, climate resiliency and adaptation, building energy, renewable energy, and sustainable transportation). The following two pages preview these eight initiatives and their actions over the next three years.

The image below illustrates what activities the Compact plans to take in the first year (July 2016-June 2017).



In tandem with the execution of this work plan, the Compact will need to continue to:

- Refine and establish the Compact's management and staffing structure.
- Refine the Compact's strategic role in Cambridge and set itself up as a flexible, inclusive organization.
- Explore additional funding opportunities for larger projects.
- Develop a framework for our annual report and produce its first annual report.
- Compile information about members attributes related to the focus areas and create a baseline tool for members to refer to and to monitor the Compact's progress.

Education

The Compact will hold a total of two to four annual events. Events will be based on the education initiatives below.

Initiative 1: Provide a training opportunity on corporate greenhouse gas inventories and management.

Year 2 Coordinate and host GHG best practice sharing session.

Stretch action: Host a professional GHG inventory training (requires additional funding).

Stretch action: Conduct a GHG inventory workshop (requires additional leadership & staff time).

Year 3 Members can share progress and updates (contingent on stretch actions being executed).

Initiative 2: Create opportunities to learn more about climate change resiliency and adaptation planning.

Initiative 3: Provide opportunities to learn more about building energy reduction strategies.

(Initiatives 2 & 3 have identical timelines)

Year 1 Part of the four annual educational sessions.

Stretch action: Hold a professional training (requires additional funding or staff time).

Stretch action: Host a workshop or event (with additional leadership).

Year 2 Part of the four annual educational sessions.

Stretch action: Host a workshop or event (with additional leadership).

Year 3 Part of the four annual educational sessions.

Initiative 4: Discuss sustainable transportation trends and our challenges in Cambridge.

Year 1 Have the City of Cambridge update members on transportation trends and listen to members' challenges related to sustainable transportation.

Year 2-3 Stretch action: Discuss how the Compact can address Cambridge's sustainable transportation trends and challenges (requires additional leadership and staff time).

Research

Initiative 5: Investigate renewable energy purchase and storage to identify possible pilot opportunities.

- Year 1** Compile Compact members' current renewable energy purchasing policies and interests to shift to low- or zero-carbon energy sources.
- Explore ways local universities could help the Compact better understand these topics and possible pilot opportunities.
- Stretch Action: Participate in the City's low carbon energy supply strategy (requires additional staff time).
- Year 2** Continuation of academic research.
- Stretch action: Hire a consultant to conduct a feasibility study (with additional \$\$ or push to Y3).
- Year 3** Continue research or discuss what a pilot project would possibly look like.

Pilots

Initiative 6: Assess feasibility of a net zero labs by 2030 goal.

- Year 1** Compile best practices for energy efficient lab design and operations; assess feasibility.
- Year 2** Continue Year 1 progress and allow interested labs to trial energy improvement strategies.
- Stretch action: Explore funding opportunities to develop or implement a pilot program (requires additional staff time).
- Stretch action: Explore opportunities to gather and analyze additional lab data (requires additional staff time and leadership).
- Year 3** Continue Year 2 progress and trials.

Initiative 7. Jointly strategize about business continuity in the face of climate change and extreme weather events.

- Year 2** Stretch action: Provide business continuity training opportunities.
- Stretch action: Hire an outside facilitator (requires additional funding).
- Share business continuity plans and analyze opportunities for collaboration.
- Year 3** Continue or start discussions on potential partnerships.

Responsiveness & Advocacy

Initiative 8: Take advantage of opportunities to jointly discuss and advocate for shared interests and new initiatives.

Recurs annually as needed.

INTRODUCTION

HISTORY OF THE COMPACT

The Cambridge Compact for a Sustainable Future formed in 2013 because its members saw an opportunity to work together to better address the crisis of global climate change and the many challenges it presents. The City of Cambridge, Harvard University, and Massachusetts Institute of Technology, as original founders, viewed the Compact as a community partnership and encouraged non-profits and businesses to join. Now, the Compact is at almost 20 members with the goal to keep growing. To take action, members agreed they would, “work to create broader collaboration among themselves and with other community partners in order to leverage the combined capacities in research, teaching, innovation, entrepreneurship, and program development” to “create a more healthy, livable, and sustainable Cambridge.” Specifically, members agreed to:

- Join with other community leaders who share the same goals and commitment to advance a sustainable Cambridge.
- Continue to advance Cambridge as a leader in community sustainability.
- Leverage the unique collaborative power of university faculty, staff, and student resources with City staff.
- Create a framework to facilitate continued collaboration among the Compact’s signatories on projects and actions.
- Build on existing programs and actions to enhance effectiveness.
- Develop and share new and innovative strategies, technologies, services, products, and best practices that can be used as replicable models for others, considering cost-effective solutions.
- Promote research with Cambridge as a living laboratory offering rich learning and entrepreneurial opportunities for everyone.
- Develop a structure for effective coordination and communications.
- Report annually and collectively to the community on progress toward a more sustainable future.
- Convene annually to discuss the state of sustainability in the city.

Up until this point, the Compact has focused on standing up the organization, creating the necessary organizational, governance, and funding structure, hiring a part-time coordinator, and undertaking some early initiatives. The formation of the Compact coincided with some City of Cambridge-led initiatives, specifically the Building Energy Use Disclosure Ordinance (BEDUO), the Net Zero Action Plan, and a Climate Change Vulnerability Assessment. Compact members were very involved in these initiatives and convened a Building Energy Working Group to provide input as key stakeholders on the BEUDO and Net Zero Action Plan and conducted an energy management study among Compact members. Similarly, a (Compact) Climate Change Resiliency and Adaptation Working Group formed to share current resiliency and adaptation efforts and brainstorm collaborative projects.

WORK PLAN BACKGROUND & OVERVIEW

In 2015 the Compact began its first strategic planning process, facilitated by the Consensus Building Institute (CBI), to identify concrete actions over the next three years. The first step in this process was to review existing initiatives in the City and region to identify unique opportunities for Compact involvement. This was supplemented with a survey sent out to all members in late 2015 and a workshop open to all Compact members in February 2016. Members commented on what they would like the Compact to focus on over the next three years and what benefits they believe the Compact can provide to its members. The following initiatives presented in this work plan are drawn directly from this process and reflect the members’ collective set of priority areas to focus on and actions to undertake.

This is the first long-term work plan for the Compact, and it lays out a series of priority opportunities that the Compact - through the work of its members – should consider implementing to make concrete contributions in Cambridge and beyond. The work plan seeks to provide a flexible framework that recognizes there are different levels of ambition and impact the Compact will need to consider given its current organization, funding model, and staffing structure. The work plan outlines different sets of actions over the next three years that the Compact can undertake, taking into account different levels of member engagement, funding, and capacity. Members agree that the Compact provides an unprecedented opportunity to explore new collaborations and learn from each other, and they want to focus early activities on a few areas of substantial shared interest and opportunity while having flexibility to be responsive, as a group, to new ventures as they arise and to phase out activities when it makes sense to do so.

This document describes both (a) the sustainability topics that Compact members are most interested in working on at this time, and (b) the approaches that the Compact will use to make progress on those topics.

COMPACT BENEFIT TO MEMBERS & ENGAGEMENT STRATEGIES

BENEFIT TO MEMBERS

Compact members describe the following as the largest benefits of participating and working together in the Compact.

- **Joint learning** – The Compact provides an opportunity to learn together and share ideas, best practices, and innovations. It can provide access to planning efforts and research activities that are relevant to shared sustainability goals.
- **Making a difference** – The Compact provides a forum for cooperative project planning on big, complex, global and local problems. Compact members see the opportunity to harness the great expertise and influence of its members to address important sustainability topics themselves while encouraging others to take action (both members and others in the wider community) through Compact leadership.
- **Building relationships** – The Compact provides members with an opportunity to build relationships outside their normal networks. It gives them the chance to work together with others who care about the future of Cambridge as a sustainable leader, and it offers a structure for bringing together diverse and important organizations and institutions for important conversations. In addition, many members appreciate that it provides somewhat more formal and open lines of communication with the City than they might otherwise have.

In some cases, members have not yet realized these benefits, as the Compact is new. Members hope that by participating in the Compact, they can make a bigger difference than their individual contribution can alone, find ways to benchmark best practices and engage in new collaborations, and induce action within the community and greater region. The promise of these benefits – which would have an impact on the participating organizations, the environment, and the community more broadly – shape the types of activities and initiatives that the Compact chooses to undertake, as described in the rest of this document.

MEMBER PARTICIPATION

Success of the Compact is predicated on the active participation of all Compact member organizations and their staff in addition to playing a contributing role to carry out the work identified in this plan. Participation is expected to be a mix of leadership and individual contributions of expertise to implement the Compact's initiatives.

- We can only execute Compact work that has members' leadership and active engagement.
- Activities are not exclusive to select members, but are open to all staff within members' organizations.
- Members are not required to participate in an activity if they do not feel it is the right fit for their organization at the time.
- Any member can always approach the Compact with new opportunities or ideas.

See the Compact's convening documents or contact the Compact Coordinator for more information on member benefits and responsibilities.

TYPES OF ENGAGEMENT STRATEGIES

To have meaningful impact, members identified four primary types of engagement strategies they felt the Compact was well-suited to undertake for maximum impact: education, pilots, research, and responsiveness & advocacy.

Education

To propagate collaborative capacity, we want to share best practices and undertake joint learning. This will allow all members to build knowledge and skills and become aware of useful resources.

Research

To learn more about a variety of complicated sustainability topics and strategies, we want to use the wealth of research capacity in Cambridge to study and report on shared topics of interest.

Pilots

To make a real difference on sustainability in Cambridge, we want to take joint action on creative, collaborative projects that no single member organization could accomplish alone and that could be scaled-up for increased impact.

Responsiveness & Advocacy

To support one another and to capitalize on timely opportunities, we want the flexibility to seek each other's advice and to jointly pursue opportunities as they arise.

SUSTAINABILITY FOCUS AREAS

Compact members have identified focusing their shared sustainability efforts on the following highest priority topics: climate change resiliency and adaptation; building energy; energy supply; greenhouse gas emissions; and transportation, transit and mobility.

CLIMATE CHANGE RESILIENCY & ADAPTATION

The scientific community finds that climate change is real and occurring. Despite local action and global greenhouse gas (GHG) reduction initiatives over the years, there is a time lag between what we emit into the atmosphere and the climate change impacts we will experience. Managing the risks associated with climate change in coming decades will better prepare us to avoid or address areas where we are most vulnerable. In Cambridge the City recognizes this and recently completed a Climate Change Vulnerability Assessment to explore how climate change might impact public health and safety, quality of life, and the City's economy. The assessment will be a technical foundation for a Climate Change Resilience and Preparedness plan. In April 2015, the results of the Vulnerability Assessment were shared at a Compact meeting piquing the interest of many members. Those members shared their current efforts and began to identify opportunities for collaboration. Additionally, members agreed the Compact had an opportunity to share best practices, standardize resiliency efforts, compare resiliency plans, advise the City during its preparedness planning, and advocate for regional resiliency goals. In late 2015, 10 of 14 members indicated via survey that resiliency planning and adaptive infrastructure was a topic they wanted the Compact to focus on.

BUILDING ENERGY

Globally, the building sector accounts for 32% of final energy use and its GHG emissions have doubled since 1970.¹ In Cambridge, 80% of greenhouse gases are emitted from building energy use, making buildings the sector with the largest potential to reduce GHG emissions. Cambridge is also one of the leading biotech hubs in the country and labs represent a significant use of building energy in the city. Sensitive setups like proper ventilation and specialized lab equipment make labs energy intensive and make their path to net zero intricate. In Cambridge, commercial labs use 16%² of estimated energy in the city, and university labs use 13%³.

As a result, the City has implemented several building energy reduction efforts over the past few years. Two of these initiatives are the Building Energy Use Disclosure Ordinance (BEUDO) and the Net Zero Action Plan. The nature of both challenges all building owners to reduce their energy use and increase energy efficiency. Several Compact members have served as key advisors during these processes and express a continued interest in addressing building energy. Seven of 14 members who responded to the fall 2015 survey want to see the Compact to continue with these efforts.

ENERGY SUPPLY

Many cities, businesses, and homeowners are looking to renewable energy as a way to reduce dependence on fossil fuels and decrease GHG emissions, but this entails several challenges. One challenge is that renewable

¹ Lucon O., D. Ürge-Vorsatz, A. Zain Ahmed, H. Akbari, P. Bertoldi, L. F. Cabeza, N. Eyre, A. Gadgil, L. D. D. Harvey, Y. Jiang, E. Liphoto, S. Mirasgedis, S. Murakami, J. Parikh, C. Pyke, and M. V. Vilariño, 2014: Buildings. In: Climate Change 2014: Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Edenhofer, O., R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel and J.C. Minx (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter9.pdf

² Data from first year BEUDO analysis.

³ Peregrine Energy Group, "Appendix B Cambridge Building Energy Primer," August 4, 2014, p 12.

energy is variable due to weather, geography, and other factors. Battery storage may offer a solution, but the market, technology, and regulations are constantly changing. Another challenge is that navigating the market structures, purchasing models, regulations, and other factors to even directly purchase renewable energy is cumbersome and complex. Eight of 14 Compact members indicated in the fall 2015 survey that they would like energy supply to receive more attention and these were two challenges that came to the forefront. Over the next couple of years, the City will be evaluating an energy supply strategy to help transition energy supply from fossil fuels to renewables and low-carbon energy. The Compact has the unique opportunity to investigate and pursue collaborative options to help move forward the net zero vision.

GREENHOUSE GAS EMISSIONS

GHGs are directly linked to global warming and climate change. In order to effectively reduce human contributions to climate change, many organizations use GHG inventories as a way to inform reduction strategies and set goals. Cambridge is committed to reducing GHGs which is supported through its Net Zero Action Plan and BEUDO. The City has GHG inventories for municipal operations between 2008 and 2012 and is currently completing years 2013-2015. As part of the City's commitment to the Compact of Mayors, Cambridge is also conducting a community wide GHG inventory with an expected completion date of winter 2016. The community wide GHG inventory will help the City set a community wide GHG emissions target. Many Compact members have GHG inventories or would like to complete one for their Cambridge operations and have indicated a desire to reduce their GHG emissions significantly. Seven of 14 members who responded to the survey feel that the topic of GHGs could benefit from the Compact's engagement.

TRANSPORTATION AND MOBILITY

The modes of transportation cities encourage and individuals use can have significant impact on the environment and quality of life. The density and size of Cambridge makes transit, bicycling, and walking feasible, and the City moves towards sustainable forms of transportation by providing electric vehicle charging, bike share, and has even been ranked in 2015 by Bike Score as the #1 cycling-friendly city in the U.S. There is still work to do and Compact members are eager to determine a clearer path for which aspects they will be able to address since transportation systems operations, employees commute, and suppliers travel across geographic boundaries that typically require more regional collaboration. Members are also interested in learning more about transit services and challenges that we are all facing. Ten of 14 members who responded to the late 2015 survey would like to see the Compact focus on transit issues in the next three years.

WORK PLAN RESOURCES & MANAGEMENT

WORK PLAN RESOURCES

Many of the initiatives in the work plan have adjustable scopes based on available resources. The Compact will keep an updated matrix of members' commitments and abilities to participate to support these initiatives and share it with its members.

WORK PLAN OVERSIGHT

Given that this is the first year of the Compact's first work plan and that the Compact is a small, but growing, group of members, the Executive Committee will act as the Program Committee for the first year. The ultimate goal is to transition ownership of the work plan to a true Program Committee that will provide oversight and decision making on the work plan. In this first year, members that would like to help act as part of the Program Committee are encouraged and welcome, and should contact the Compact Coordinator.

COMPACT ADMINISTRATION AND MANAGEMENT

In tandem with the execution of this work plan, the Compact will also take action on:

- Refining and establishing the Compact's management and staffing structure.
- Refining the Compact's strategic role in Cambridge and setting itself up as a flexible, inclusive organization.
- Exploring additional funding opportunities for larger projects.
- Developing a framework for and producing the Compact's first annual report.
- Compiling information about members attributes related to the focus areas and creating a baseline tool for members to refer to and to monitor the Compact's progress.

2016-2019 WORK PLAN INITIATIVES

Initiatives are not presented in order of highest-priority, but are grouped by type of engagement (education, pilots, research, responsiveness & advocacy).

Each initiative has the following sections:

Basic strategy - what foundational actions the Compact can accomplish with current committed resources. This section is supplemented with a legend (shown on the right) to clarify the timing, staffing and leadership needs, type of benefit it would provide to Compact members (benefits pulled from survey), and expected deliverables.

“Stretch” actions - actions that can increase the scope of the initiative with additional commitment, either in the form of member participation, funding, staffing, or leadership.

Management - a framework for how to support and execute the actions listed within the initiative.

Timeline – when activities would occur over the three years if all actions were implemented.

Basic Strategy Legend

-  Time Commitment
-  Staffing & Leadership
(*indicates the leader on effort)
-  Benefit to Compact members
(i.e., joint learning, joint sharing, make a difference, build relationships, collective action)
-  Deliverables

At a glance, here are the initiatives proposed for the next three years.

Education

- Provide a training opportunity on corporate greenhouse gas inventories and management.
- Create opportunities to learn more about climate change resiliency and adaptation planning.
- Provide opportunities to learn more about building energy reduction strategies.
- Discuss sustainable transportation trends in Cambridge and the challenges members face.

Research

- Investigate renewable energy purchase and storage to identify possible pilot opportunities.

Pilots

- Assess feasibility of a net zero labs by 2030 goal.
- Jointly strategize about business continuity in the face of climate change and extreme weather events.

Responsiveness & Advocacy

- Take advantage of opportunities to jointly discuss and advocate for shared interests and new initiatives.

EDUCATION

The Compact will hold two to four events each year based on interest, demand, and follow up discussions.

1. PROVIDE A TRAINING OPPORTUNITY ON CORPORATE GREENHOUSE GAS INVENTORIES AND MANAGEMENT

BASIC STRATEGY

Share GHG inventory best practices.

Members with existing GHG inventories would be invited to share best practices for collecting and managing data. Depending on members' preferences the Compact can:

- a. Survey members' appropriate staff and compile a best practice report to share with members.
- b. Organize a best practice sharing session where members who have GHG inventories or are currently conducting one can give mini presentations followed by discussions.

STRETCH ACTIONS

Host a professional GHG inventory training for members interested in developing one for their Cambridge operations (requires additional funding).

After the training, participants could informally partner or reach out to expert colleagues to troubleshoot issues in creating their own inventory. This training could occur prior to best practice sharing.

Conduct a GHG inventory workshop (requires additional leadership and staff time).

This stretch action has two potential paths, (1) it would be a follow-up education event after the stretch action training session, or (2) replace the basic strategy's best practice sharing with a more robust event. The workshop would involve a range of sessions so members, regardless of where they are in the process, would benefit (e.g., a session to help members still struggling to conduct their inventories, a session on activity data management, a session on sharing inventory results, and how members can report findings collectively). The Compact can consider opening the workshop up to all Cambridge businesses to help support the City's community-wide GHG inventory project. Depending on the type and number of sessions, the workshop could be scheduled as a multi-day event with a Compact member hosting a meeting space.

MANAGEMENT

The Compact Coordinator would manage scheduling and organizing the events. If the Compact pursued a formal training, the Coordinator would work with the Program Committee to consider consultants that offer this type of training, available funding, and local resources and expertise within Cambridge and the Compact itself.

TIMEFRAME

Year 2 Basic strategy: Coordinate and host GHG best practice sharing session.

Stretch action: Host a professional GHG inventory training (requires additional funding).

Stretch action: Conduct a GHG inventory workshop (requires additional leadership & staff time).

-  Best practice survey and report or best practice sharing session
-  Compact Coordinator
Members with GHG inventories*
Program Committee
-  Joint learning, joint sharing
-  Compiled best practice summary

2. PROVIDE OPPORTUNITIES TO LEARN MORE ABOUT BUILDING ENERGY REDUCTION STRATEGIES

BASIC STRATEGY

Investigate, coordinate, and offer events for Compact members and the broader community.

Each year the Compact will identify top areas of interest related to commercial and residential building energy that allow for cross-sector discussions. Members have said one of the biggest benefits to participating in the Compact is the ability to learn from one another and this should be an integral theme throughout the events.

Educational events can take a variety of forms such as:

- Member knowledge-sharing sessions (2 hour meeting with 45 minutes of presentation followed by group discussion)
- Outside speakers (e.g., have representative discuss case study, allow entrepreneurs to pitch innovative technology, invite firms to share new design approaches)
- Site tours
- Member(s) attending an event on behalf of the Compact and reporting back

Potential topics to consider that overlap with net zero efforts are:

Building energy operations (operator training) • Condition and ventilation • Process and plug loads • Occupant behavior patterns and opportunities • Domestic hot water use • Lighting • Tenant-landlord barrier • Green leases
• Sharing financial incentives • Occupant behavior

STRETCH ACTIONS

Coordinate a professional training (requires additional funding or staff time).

If several members would like to receive training on a particular topic, the Compact can hire a professional trainer or recruit subject matter experts. This may require external fundraising or members to cost share the professional training. However, a group training can reduce the cost compared to an individual training and provide participants with the added benefit of a support network.

Host a large workshop or event (requires additional leadership).

The Compact would host a large workshop or event around building energy reduction topics and invite the entire business community. This advances a more sustainable Cambridge by providing resources to both members and non-members. Additional leadership is crucial and building energy champions would need to help develop a program for such an event. The Compact would need to recruit members willing to share best practices or serve on a panel in addition to outside experts.

MANAGEMENT

The Program Committee will create a list of proposed topics for each work plan year and poll members to determine which topics garner the most interest. When developing a list of proposed topics, the committee will reach out to at least two members that operate commercial or residential facilities for additional input. The



See basic strategy for options



Compact Coordinator
Program committee*



Joint learning, joint sharing, build relationships



Internal speaker summaries,
discussion notes

Coordinator would manage scheduling and communication of events. Ideally, these events will identify research areas or new initiatives the Compact might pursue in subsequent years. The Program Committee will communicate when follow up is required if members attend an event on behalf of the Compact.

TIMELINE

Year 1	<p>Basic strategy: Potential for one of four educational sessions to focus on building energy reduction.</p> <p>Stretch action: Hold a professional training (requires additional funding or staff time).</p> <p>Stretch action: Host a workshop or event (with additional leadership).</p>
Year 2	<p>Basic strategy: Potential for one of four educational sessions to focus on building energy reduction.</p> <p>Stretch action: Host a workshop or event (with additional leadership).</p>
Year 3	<p>Potential for one of four educational sessions to focus on building energy reduction, if interest still exists.</p>

3. CREATE OPPORTUNITIES TO LEARN MORE ABOUT CLIMATE CHANGE RESILIENCY AND ADAPTATION PLANNING

BASIC STRATEGY

Investigate, coordinate, and offer events for Compact members and the broader community.

Each year the Compact will identify top areas of interest related to climate change resiliency and adaptation. Members have said one of the biggest benefits to participating in the Compact is the ability to learn from one another and this should be an integral theme throughout the events.

Educational events can take a variety of forms such as:

- Member knowledge-sharing sessions (2 hour meeting with 45 minutes of presentation followed by group discussion)
- Outside speakers (e.g., have representative discuss case study, allow entrepreneurs to pitch innovative technology, invite firms to share new design approaches)
- Site tours
- Member(s) attending an event on behalf of the Compact and reporting back

Potential topics for educational events are:

- Climate change and insurance • Business continuity • Managing heat stress • Preparing for extended power outages • Investment in infrastructure • Teleworking plans

-  See basic strategy for options
-  Compact Coordinator
Program Committee
Climate resiliency working group*
-  Joint learning, joint sharing, build relationships, collective action
-  Discussion notes

STRETCH ACTIONS

Coordinate a professional training (requires additional funding).

If several members would like to receive training on a particular topic, the Compact can hire a professional trainer or recruit subject matter experts. This may require external fundraising or members to cost share the professional training. However, a group training can reduce the cost compared to an individual training and provide participants with the added benefit of a support network. Business continuity has been a popular discussion topic at climate resiliency and adaptation working group meetings; many members that have participated in those discussions do not have business continuity plans for their Cambridge operations, but would like to have one. This would be a valuable first training opportunity and a training held on risk assessment and business impact could be a first step in assisting members with this process.

Host a large workshop or event (requires additional leadership).

The Compact would host a large workshop or event around building energy reduction topics and invite the entire business community. This advances a more sustainable Cambridge by providing resources to both members and non-members. Additional leadership is crucial and climate resiliency and adaptation champions would need to help develop a program for such an event. The Compact would need to recruit members willing to share best practices or serve on a panel in addition to outside experts.

MANAGEMENT

The Program Committee will create a list of proposed topics for each work plan year and poll members to determine which topics garner the most interest. During the climate resiliency and adaptation working group meetings, members have already identified several 'hot topics,' and the Compact will use their input. The Coordinator would manage scheduling and communication of events. The Program Committee will communicate when follow up is required if members attend an event on behalf of the Compact.

TIMELINE

Year 1	Potential for one of four educational sessions to focus on climate resiliency & adaptation. Stretch action: Hold a professional training (requires monetary resources).
Year 2	Potential for one of four educational sessions to focus on climate resiliency & adaptation. Stretch action: Host a workshop or event (with additional leadership).
Year 3	Potential for one of four educational sessions to focus on climate resiliency & adaptation, if interest still exists.

4. DISCUSS SUSTAINABLE TRANSPORTATION TRENDS IN CAMBRIDGE AND THE CHALLENGES MEMBERS FACE

BASIC STRATEGY

Have the City of Cambridge update members on sustainable transportation trends and listen to members' challenges related to promoting sustainable transportation.

By learning what's trending, members can hear directly from the City on sustainable transportation trends and planned and future efforts. Members, and the larger community will have opportunity to share what sustainable transportation challenges they face on a daily to seasonal basis (e.g., employee commutes, fleet management) and what impacts result from these challenges. The goal is to establish open, productive dialogue to identify what impediments the business and larger community face in transitioning to sustainable transportation.



2-hr meeting in Year 1

City of Cambridge*
Compact Coordinator



Joint learning, joint sharing, build relationships



Discussion notes

STRETCH ACTION

Engage in discussion that proposes solutions to overcome previously identified barriers (requires additional leadership and staff time).

The dialogue will transition from identifying the barriers, in the basic strategy, to identifying next steps to overcome them. The discussion will identify priority areas and proposed solutions to designs and operations for net zero transportation.

MANAGEMENT

The City of Cambridge will lead the basic strategy and stretch action. The Coordinator will help organize and communicate to Compact members as needed. After the basic strategy is completed in Year 1 and there is interest in pursuing the stretch action, the Program Committee will determine additional scoping and concrete next steps for the stretch action.

TIMELINE

Year 1 (timing flexible)	Basic strategy: Have the City of Cambridge update members on transportation trends and listen to members' challenges related to sustainable transportation.
Year 2-3 (timing flexible)	Stretch action: Discuss how the Compact can address Cambridge's sustainable transportation trends and challenges (requires additional leadership and staff time).

RESEARCH

5. INVESTIGATE RENEWABLE ENERGY PURCHASE AND STORAGE TO IDENTIFY POSSIBLE PILOT OPPORTUNITIES

BASIC STRATEGY

Step 1: Compile Compact members' current renewable energy purchasing policies and interests to shift to low- or zero-carbon energy sources.

Compact members would complete a survey that asks about their renewable energy purchasing policies and energy supply interests. A brief report will summarize the results and provide a baseline for next steps.

Step 2: Explore ways Compact member research institutions could help the Compact better understand these topics and possible pilot opportunities.

A fundamental value of the Compact is to explore processes to match researchers with community needs and initiatives and better connect students with entrepreneurs and social enterprises. Harvard and MIT will investigate in what ways they could utilize faculty and students to conduct research on either of these two topics. Several opportunities to utilize these academic institutions exists, like business strategy or idea-generation competitions, graduate experiential workshops, or research projects. A first step is identifying appropriate faculty or groups at each institution. At the end of a project, student(s) would submit a report and present their findings and recommendations in a meeting with interested Compact members. The Compact could continue to pursue research on energy purchase and storage with the institutions each year as needed if resources are available.

Research topics could:

- Address research questions or gaps from the Kendall Square EcoDistrict energy study. Eight Compact members are already participating in this study.
- Investigate ways others have implemented recommendations that will result from the City's upcoming low carbon energy supply strategy.
- Investigate how other groups have collaborated around energy purchasing or local production of renewable power.
- Explore battery storage options for on-site renewable energy in individual buildings or at a neighborhood scale.

STRETCH ACTIONS

Participate in the City's low carbon energy supply strategy (LCES) (requires additional staff time).

The City is developing a LCES, with an anticipated July 2016 kick off, to better understand options for advancing renewable energy and low carbon district heating and cooling. Members can participate in the process by providing energy data for their buildings for the first phase of the study. Members will have to dedicate the necessary staff time to gather and share the energy data. The study will also look at modernizing the grid infrastructure, and members might have the opportunity to pilot some recommendations in the future.

Hire a consultant to conduct a feasibility study on energy storage or purchasing for a collaborative group (requires additional funding).

This action could be pursued in multiple ways. It could occur after step 1 of the basic strategy is completed, in tandem with student research at either MIT or Harvard, or be a follow-up action after one or two rounds of academic research on the topics are completed, when the Compact has a more focused problem statement. It could also address research questions or gaps from the Kendall Square EcoDistrict energy study or city-wide



- Members fill out survey
- On semester schedule
- 1-3 meetings with students
- Final presentation



Compact Coordinator
MIT/Harvard
Compact member advisors



Joint learning, make a difference, build relationships, collective action



Survey results and report; research proposal, presentation, and report

LCES. To support this action financially, interested members might need to agree to cost share a consultant or the Compact would need to do external fundraising.

MANAGEMENT

The Compact Coordinator will help with creating and distributing the survey. After the results of the survey are communicated, the Compact will need to decide what research topics and strategies it would like to pursue. If MIT or Harvard has opportunities to provide research for the Compact, they would coordinate the student research activities. A small group of Compact members would act as advisors during the research phase to ensure that the research satisfies the Compact's needs and interest. Advisors would likely meet with students a few times and be available for occasional email consultation. The Compact Coordinator would serve as a liaison with both institutions and would plan the final meeting where students would present their results and findings.

TIMELINE

- Year 1 Basic strategy, Step 1: Compile Compact members' current energy purchasing policies and anticipated efforts and interest to shift to low- or zero-carbon energy sources.
- Basic strategy, Step 2: Explore ways Compact member research institutions could help the Compact better understand these topics and possible pilot opportunities.
- Stretch Action: Participate in the City's low carbon energy supply strategy (requires additional staff time).
- Year 2 Basic strategy: Continuation of academic research.
- Stretch action: Hire a consultant to conduct a feasibility study (with additional \$\$ or push to Y3).
- Year 3 Basic strategy: Continue research or discuss what a pilot project would possibly look like.

PILOTS

6. ASSESS FEASIBILITY OF A NET ZERO LABS BY 2030 GOAL

BASIC STRATEGY

Convene an assembly of lab owners, operators, and developers to research best practices for lab design and operations that support the City's goal of net zero labs by 2030 and assess feasibility.

This initiative will bring together appropriate stakeholders in Cambridge to determine a realistic pathway to attaining net zero lab design and operations by 2030. A working group will explore a local laboratory energy benchmark based on data from the Building Energy Use Disclosure Ordinance reporting and other sources and identify strategies to improve lab energy performance through voluntary programs and possibly new City policies.

In the first year, the Compact will hold 3-6 meetings to cover a variety of topics, such as what Cambridge labs are currently doing related to energy monitoring, the biggest opportunities for energy savings, and what incremental steps labs in Cambridge can take to that moves toward the goal of net zero lab design and operations.

After assessing the feasibility of net zero labs, participants can volunteer to trial energy improvement strategies and monitor results.

STRETCH ACTIONS

Explore funding opportunities to develop or implement a pilot program (requires additional staff time).

As the City and the Compact reach a clearer vision on the feasibility of net zero labs, the Compact can explore funding opportunities to help aid in the development of a pilot program. This would require committed staff time to investigate funding opportunities and apply for any grant applications.

Explore opportunities to gather and analyze additional lab data for improved benchmarking opportunities (requires additional staff time and leadership).

The Compact could hire a consultant to analyze laboratories' additional lab data. The Boston Green Ribbon Commission is currently doing a similar study with academic labs; the Compact could reach out to the Commission for more information on consultants or helpful tips. The City of Cambridge Community Development Department also has budget resources to support some of this work.

Labs might be able to collect data on lab energy use through Eversource's Customer Engagement Platform (CEP). This requires a lab energy champion who would help facilitate the data sharing and analytics. The Compact Coordinator could help facilitate the discussion on what a partnership would entail and project planning.

MANAGEMENT

It is intended that the life science sector would lead the exploration of a local benchmark, energy improvement strategies, and the net zero lab standard design. The City of Cambridge would support and facilitate the work. The lab energy working group would ideally have three chairs (1 academic lab, 1 commercial, and 1 lab developer).



- July 2016 Kickoff
- 3-6 meetings



Lab Working Group*
Compact Coordinator



Joint learning, joint sharing, make a difference, build relationships, collective action



Meeting minutes, documented framework for developing program

TIMELINE

Year 1	Basic strategy: Compile best practices for energy efficient lab design and operations and assess feasibility.
Year 2	Basic strategy: Continue Year 1 progress and allow interested labs to trial energy improvement strategies Stretch action: Explore funding opportunities to develop or implement a pilot program (requires additional staff time). Stretch action: Explore opportunities to gather and analyze additional lab data (requires additional staff time and leadership).
Year 3	Basic strategy: Continue Year 2 progress and trials.

7. JOINTLY STRATEGIZE ABOUT BUSINESS CONTINUITY IN THE FACE OF CLIMATE CHANGE AND EXTREME WEATHER EVENTS

BASIC STRATEGY

Members explore ideas and develop several new approaches to reduce business disruption.

Interested members would collaborate and find ways to help one another develop or fill gaps in their business continuity plans. If members are interested in participating in this pilot project but need to develop a business continuity plan first, the Compact could offer training as a precursor to the pilot (see stretch action.)

Participants will:

- Share existing business continuity plans (or whatever portions they are permitted to share).
- Discuss their organizations' status for developing such plans.
- Explore the different types of disruption that members might face in extreme weather events.
- Share their biggest concerns for continuing or restarting operations.
- Identify areas and opportunities where members can help each other. Examples could include:
 - Sharing critical supplier lists.
 - Joint office sharing if one business' building is not operational due to infrastructure failure.
 - Anticipating needs during times of stress for Compact member clients (including the community at large and vulnerable populations) and testing some possible backup plans.



- July 2016 – June 2017
- Monthly meetings

- Climate Resiliency Working Group*
- Compact Coordinator



Joint learning, joint sharing, make a difference, build relationships, collective action



Meeting minutes, documented framework for developing program

STRETCH ACTIONS

Provide assistance in starting a business continuity plan (requires additional leadership or funding).

If enough members want to participate, but do not yet have a business continuity plan, the Compact could host a formal training for creating a business continuity plan. These trainings could fall under the education initiative. Compact members with business continuity plans could voluntarily share tips and strategies for starting one.

Hire an outside facilitator (requires additional funding).

If having an outside facilitator lead discussions would be easier for participation, the Compact could hire an outside facilitator. This will require external fundraising or interested members to cost share the facilitator. The facilitator could also review the business continuity plans submitted and analyze opportunities for partnerships or key areas for discussion.

MANAGEMENT

This initiative requires a chair or co-chairs to lead the process and discussions. The Compact Coordinator can help facilitate the process as needed. For example, the Compact Coordinator could assist with collecting business continuity plans as they are shared to make information more readily available to members and assist with some general analysis to help frame future discussions for identifying areas and opportunities where members can collaborate.

TIMELINE

- Year 2 Stretch action: Provide business continuity training opportunities (would be part of initiative 1).
 Stretch action: Hire an outside facilitator (requires additional funding).
 Basic strategy: Share business continuity plans and analyze opportunities for collaboration.
- Year 3 Basic strategy: Continue or start discussions on potential partnerships.

RESPONSIVENESS & ADVOCACY

8. TAKE ADVANTAGE OF OPPORTUNITIES TO JOINTLY DISCUSS AND ADVOCATE FOR SHARED INTERESTS AND NEW INITIATIVES

OVERVIEW

One of the benefits of participating in the Compact is creating strong relationships with other members and opportunities to work together. At different points, Compact members may identify shared topics they want to speak out about or pursue. Individual members may also choose to use the Compact as a sounding board to get feedback on early ideas about policies or programs. It is appropriate to use the Compact in this way, and Compact members welcome the opportunity to contribute to one another's thinking. The Compact Coordinator will also monitor opportunities for innovative pilots or funding.

STRATEGY

Compact members can seek input from other Compact members, and all will be on the lookout for opportunities for collective action.

This overall action is flexible and depends on opportunities as they arise. Some scenarios include:

- A Compact member can reach out to the Compact if it has or knows of an opportunity that could affect other members.
 - Hypothetical example: The MBTA is considering increasing the frequency of trains on the red line. Yoyo Labs wants to request an endorsement from the Compact of this change in service.
- A Compact member is interested in pursuing an opportunity and is looking for other interested members to collaborate.
 - Hypothetical example: Bright Green wants to hire a consultant to teach them how to do a Greenhouse Gas Reduction Plan and is wondering if any other Compact members would like to share the costs and outcomes of this technical support.
- A Compact member is interested in knowledge sharing about a particular topic or getting advice about a particular area of interest or opportunity.
 - Hypothetical example: Bob's Builders wants to begin using green infrastructure in their stormwater management approaches and is interested to learn other members' best practices or to meet with other members' on-staff experts in green infrastructure.

Some pilot opportunities include:

- Identifying regional/national initiatives that may interest the Compact (e.g., Rockefeller Resilient Cities, RE100).
- Holding regular meeting with utilities to learn about new programs and opportunities.

MANAGEMENT

Compact members will contact the Compact Coordinator, who will check the idea briefly with the Program Committee. The Coordinator will then make members aware of the opportunity and/or schedule a phone or in-person conversation about the proposed topic.

TIMELINE

Recurring throughout each year.

Year 1 opportunities include:

- Giving feedback to the City of Cambridge on its green building standards and solar-ready requirements for new construction (anticipated Fall 2016).
- Participating or advising the feasibility of recommendations from the City of Cambridge's Low Carbon Energy Supply Strategy study.