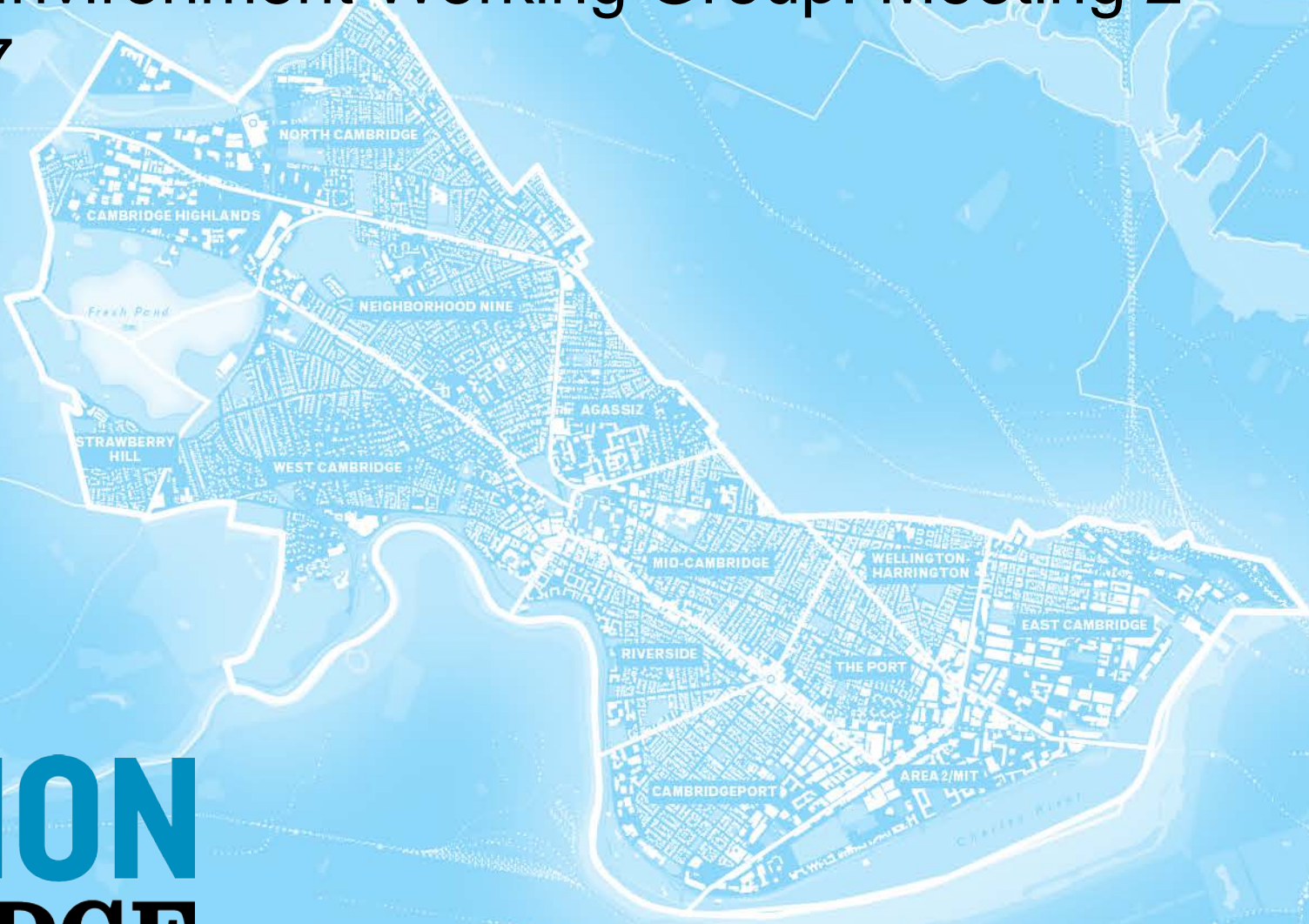


Climate and Environment Working Group: Meeting 2

June 19, 2017



**ENVISION
CAMBRIDGE**

Agenda

Process Overview

Review Revised Goals

Review Existing Strategies and Actions

Discussion

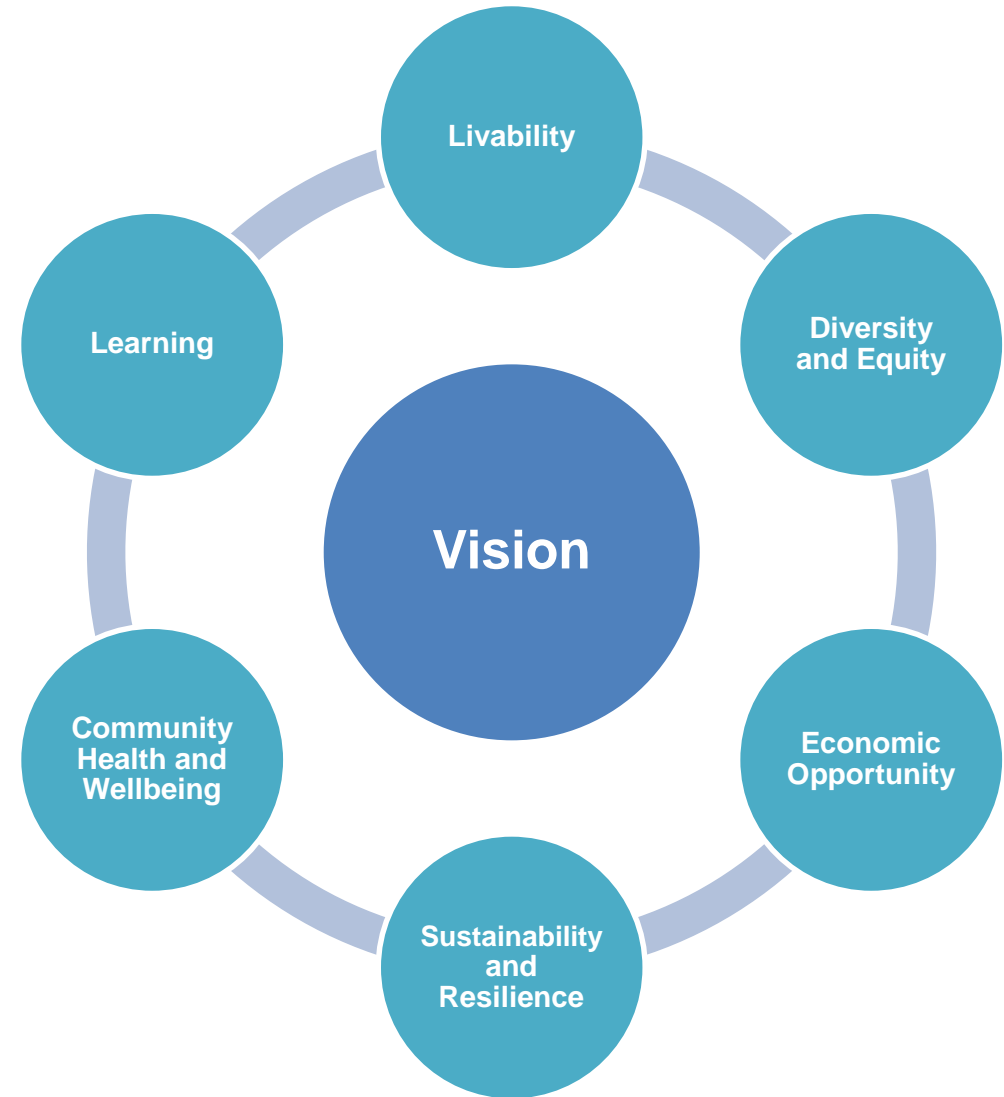
Next Steps

Process Overview

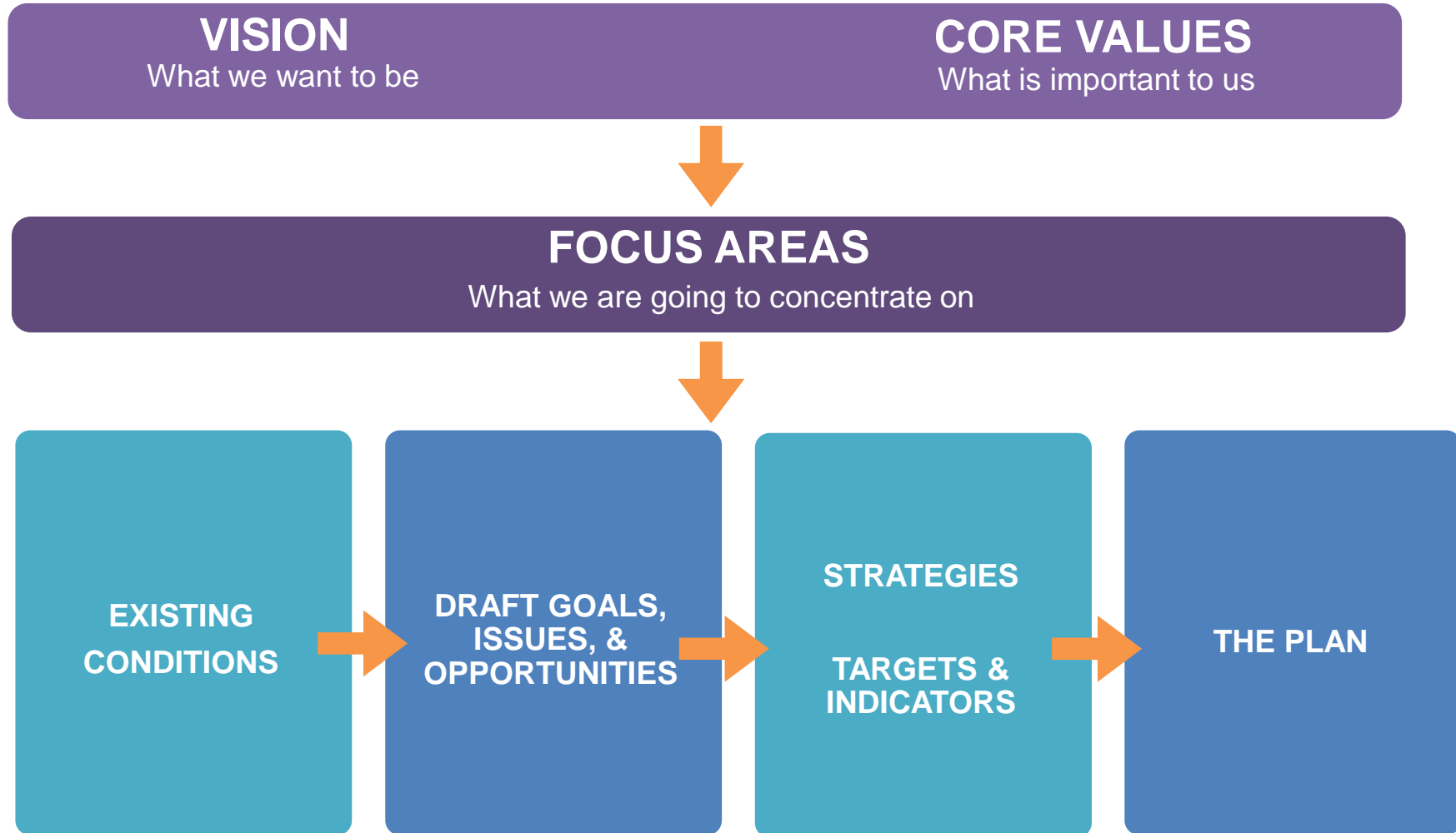


Vision & Core Values

“Cambridge is a forward-thinking, welcoming, and diverse city. We enjoy a high quality of life and thrive in a sustainable, inclusive, and connected community.”



Project Framework

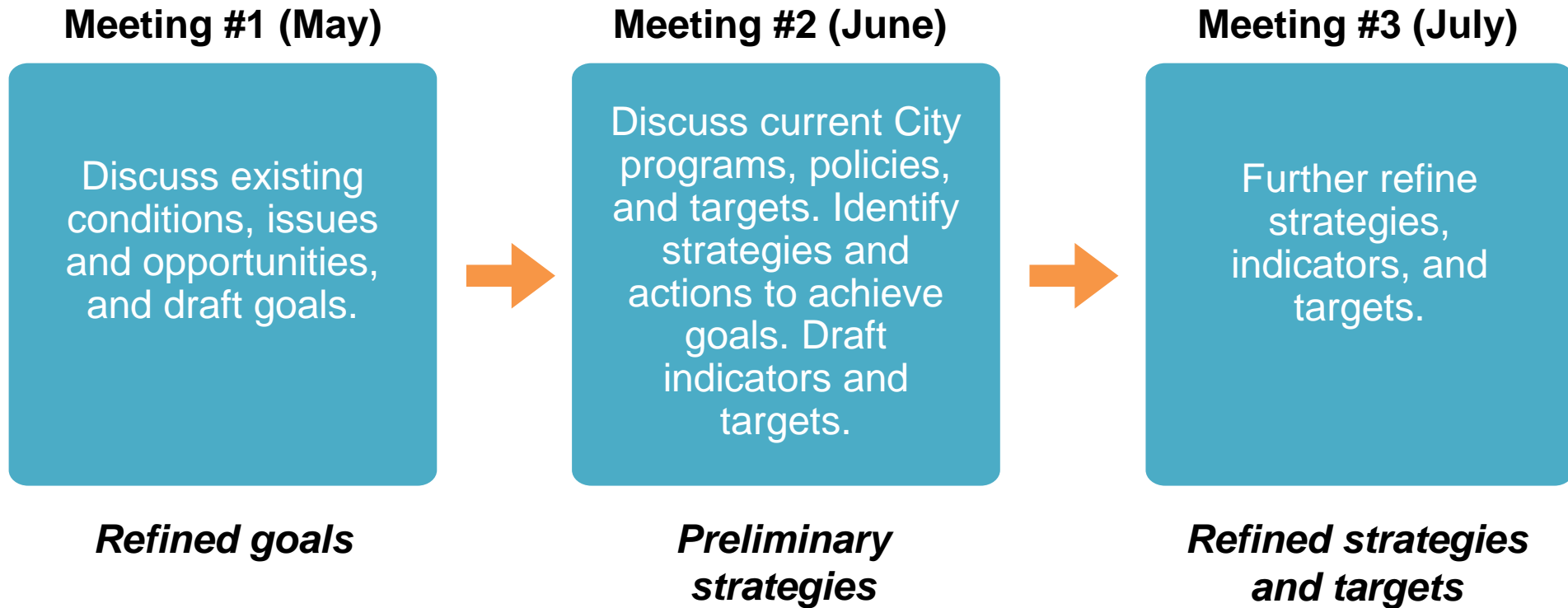


Climate & Environment Working Group's Role

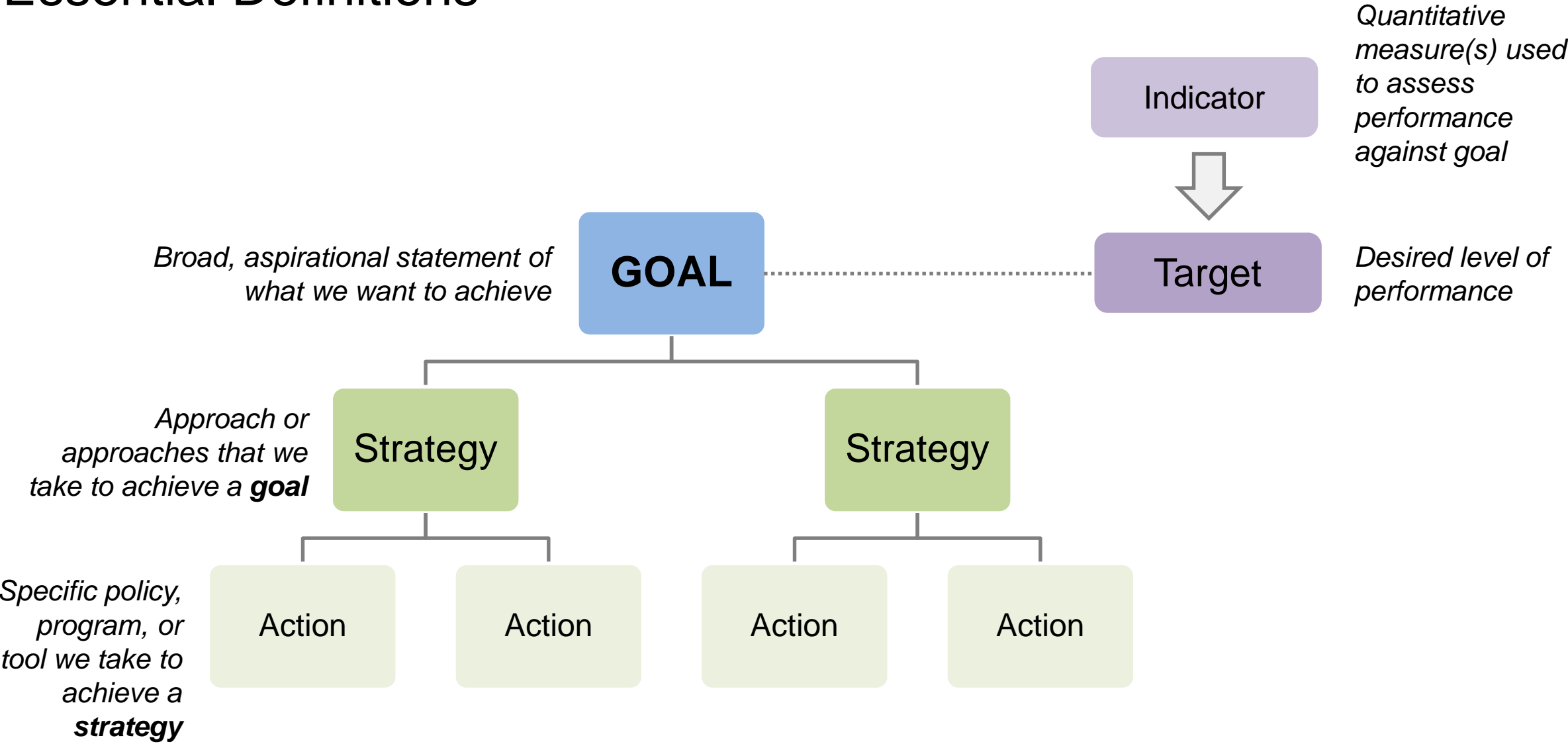
Six working groups will provide input to the Envision Cambridge Advisory Committee for plan development.



2017 Working Group Schedule



Essential Definitions



Examples

Goal:	Eliminate greenhouse gas emissions by reducing consumption, increasing energy efficiency, and transitioning away from the use of fossil fuels in order to reduce the Cambridge community's impact on a changing climate
Strategies:	Reduce building energy consumption Transition away from fossil fuels
Actions:	Require new, larger buildings to meet green buildings standards Connect property owners with information on solar photovoltaic systems
Indicators:	Installed solar capacity on buildings
Baseline:	4.5 MW of installed solar capacity in 2016
Target by 2030:	60 MW solar generating capacity by 2020, 160 MW by 2040

Please refer to the handout document for a full list of goals and corresponding strategies, actions, and targets (where they currently exist).

Examples

Goal:	Meaningfully engage the entire Cambridge community (residents, institutions, and employers) in strengthening the City’s climate and environment initiatives
Strategies:	Develop and maintain formal structures for community members to guide City policy and programs
Actions:	Establish a Climate Protection Action Committee
	Engage major institutions and employers in a commitment to sustainability
Indicators:	# of employers/institutions who have signed the Community Compact for a Sustainable Future
Baseline:	20 signatories of the Community Compact for a Sustainable Future, plus the City of Cambridge
Target by 2030:	# signatories of the Community Compact for a Sustainable Future, representing # employees/affiliates

Please refer to the handout document for a full list of goals and corresponding strategies, actions, and targets (where they currently exist).

Structure of Today's Session

Exercise 1. Revised Goals

Present and discuss the revised goals.

20 minutes

Exercise 2. Existing Strategies and Actions

Relate the City's existing programs, policies, and tools ("actions") to the revised goals

20 minutes

Exercise 3. Gap Assessment

Identify new actions and/or strategies to achieve the goals.

60 minutes

Exercise 4. Discussion

Draft indicators and targets designed to measure whether strategies are achieving the desired goals

20 minutes

Revised Goals



What We Heard (Working Group 1)

- Refine the overall hierarchy of goals and strategies, and address overlaps between goals with clear organization
- Expand and prioritize the role of Environmental Justice/Equity
- Add explicit consideration of:
 - *Civic engagement and transparency*
 - *Resiliency as it applies to vulnerable populations, wildlife, and infrastructure*
 - *Access to open space and the linkage between environment and health*
- Address environmental literacy and urban land use in the wider Envision Cambridge plan



Initial & Revised Goals

Base Goal	Revised Goal
Goal 1: Environmental Protection <i>Protect Cambridge's environment and natural resources, ensuring clean air, clean water, and responsible management of land and open space.</i>	Goal A. <i>Safeguard the lives and livelihoods of Cambridge community members, particularly those that are at disproportionate risk of climate change and environmental impacts</i>
Goal 2: Carbon Neutral by 2050 [existing goal] <ul style="list-style-type: none"> • <i>Net Zero Emission Buildings by mid-century [existing target]</i> • <i>Solar target: 60MW by 2020, 160MW by 2040 [existing target]</i> 	Goal B. <i>Meaningfully engage the entire Cambridge community (residents, institutions, and businesses) in strengthening the City's climate and environment initiatives</i>
Goal 3: Resilience <i>Protect the lives and livelihoods of members of the Cambridge community that are at risk from climate change impacts and, in the process, enhance the well-being of the Cambridge community.</i>	Goal C. <i>Preserve and enhance Cambridge's natural environment, including the preservation of open space, habitats and plants, and the reduction of air, light, and noise pollution</i>
Goal 4: Clean Energy Economy <i>Increase proportion of energy supply that comes from no and low carbon sources to catalyze the market for clean energy, reduce greenhouse gas emissions, and enhance community resilience</i>	Goal D. <i>Achieve carbon neutrality by reducing consumption, increasing energy efficiency, and transitioning away from the use of fossil fuels in order to reduce the Cambridge community's impact on a changing climate</i>
Goal 5: Integrated Stormwater Management <i>Implement best practices in stormwater management to reduce stormwater runoff, reduce Combined Sewer Overflows, and help clean waterways</i>	Goal E. <i>Maintain sustainable water resources by taking action to reduce potable water usage, manage stormwater runoff, and improve the quality of surface water and groundwater</i>
Goal 6: Maximized Tree Canopy <i>Maximize the Cambridge's tree canopy across all neighborhoods to help manage stormwater, provide shade and cooling, and provide habitat protection</i>	Goal F. <i>Minimize waste generation and eliminate waste to landfill</i>
Goal 7: Zero Waste <i>Eliminate waste to landfills and help catalyze a circular economy</i>	
Goal 8: Environmental Justice <i>Ensure all communities benefit from the City's climate and environment initiatives</i>	

Revised Draft Goals

Goal A. Safeguard the lives and livelihoods of Cambridge community members, particularly those that are at disproportionate risk of climate change and environmental impacts

Goal B. Meaningfully engage the entire Cambridge community (residents, institutions, and businesses) in strengthening the City's climate and environment initiatives

Goal C. Preserve and enhance Cambridge's natural environment, including the preservation of open space, habitats and plants, and the reduction of air, light, and noise pollution

Goal D. Achieve carbon neutrality by reducing consumption, increasing energy efficiency, and transitioning away from the use of fossil fuels in order to reduce the Cambridge community's impact on a changing climate

Goal E. Maintain sustainable water resources by taking action to reduce potable water usage, manage stormwater runoff, and improve the quality of surface water and groundwater

Goal F. Minimize waste generation and eliminate waste to landfill

Existing Strategies and Actions



Goal A: Safeguard the lives and livelihoods of Cambridge community members, particularly those that are at disproportionate risk of climate change and environmental impacts

Establish a technical foundation for preparedness and resilience

- **Climate Change Vulnerability Assessment (CCVA)**

Develop preparedness and resilience plans at the neighborhood and citywide levels

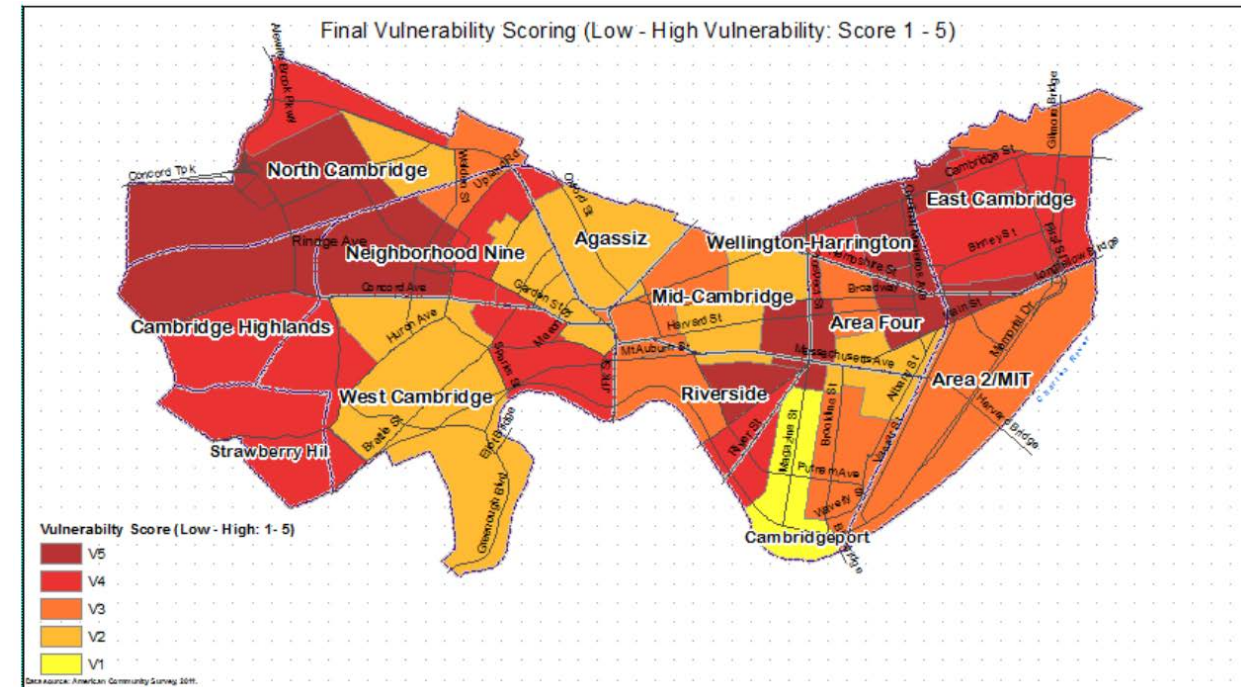
- **Climate Change Preparedness and Resilience Plan (CCPR)**

Manage flooding and hazards in local water bodies in partnership with neighboring municipalities

- **Participation in Arlington Belmont and Cambridge (ABC) Flooding Board**

Incorporate design strategies and best practices which reduce climate change impacts as part of public and private projects

Educate the Community about climate change vulnerabilities which can be mitigated by private property owners



The Climate Change Vulnerability Assessment (CCVA) sought to understand which neighborhoods of Cambridge are more vulnerable to the unavoidable impacts of climate change. The CCVA is currently being used as the foundation for the Climate Change Preparedness & Resilience (CCPR) Plan.

Goal B: Meaningfully engage the entire Cambridge community (residents, institutions, and businesses) in strengthening the City's climate and environment initiatives

Develop and maintain formal structures for community members to guide City policy and programs

- Establishment of a Climate Protection Action Committee (CPAC)
- Major institutions and employers engaged through the “Community Compact for a Sustainable Future”
- **Cambridge Energy Alliance connects home and business owners with information on, and access to financing for, energy upgrades to buildings**
- Establishment of Cambridge Bicycle and Pedestrian Committees



The Cambridge Energy Alliance (CEA) connects homes and businesses with the Commonwealth's Mass Save program for information on, and access to financing for, energy upgrades.

(Source: Cambridge Energy Alliance)

Goal C: Preserve and enhance Cambridge's natural environment, including the preservation of open space, habitats and plants, and the reduction of air, light, and noise pollution

Expand the city's tree canopy

- Multiple city programs for tree planting (replacing existing trees, back of sidewalk program, new tree planting, and commemorative plantings)

Preserve and expand green and open spaces, and enhance access to parks

- Fresh Pond Reservation, Charles River Basin and Alewife Reservation Master Plans and Vegetation Plans
- 2009-2016 Open Space and Recreation Plan implementation

Reduce air, light, and noise pollution

- Reduce vehicle miles traveled (multiple actions including Transit Strategic Plan, PTDM Ordinance)
- Promote a shift to electric/clean emissions vehicles
- Draft Outdoor Lighting Ordinance
- Noise Control Ordinance



Tree planting programs enhance the quality of open space while simultaneously reducing the Urban Heat Island (UHI) effect.

Goal D: *Achieve carbon neutrality by reducing consumption, increasing energy efficiency, and transitioning away from the use of fossil fuels in order to reduce the Cambridge community's impact on a changing climate*

Reduce building energy consumption

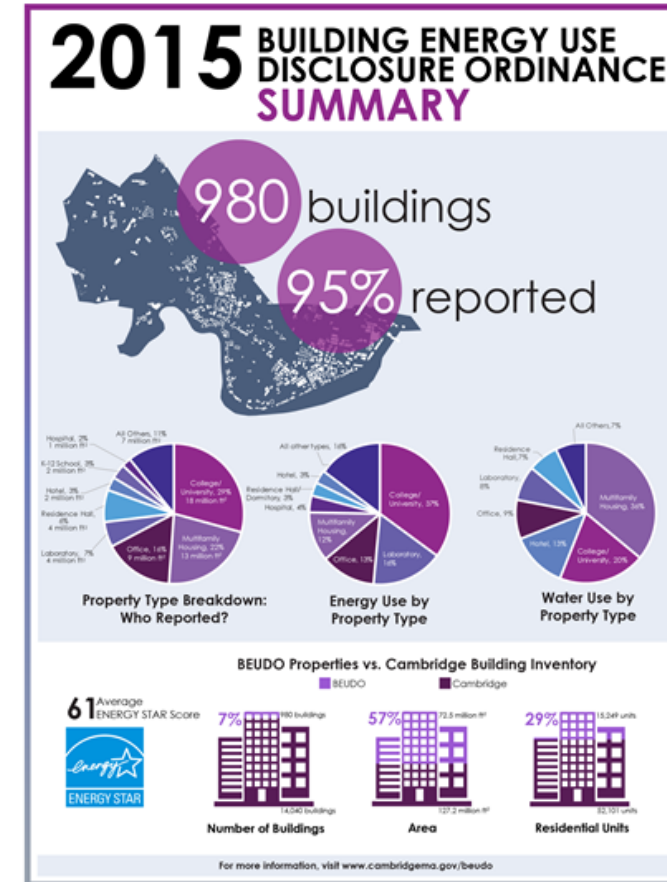
- Net Zero Action Plan
- **Building Energy Use Disclosure Ordinance**
- Cambridge Energy Alliance outreach & engagement

Reduce transportation energy consumption

- Multiple policies and programs to reduce vehicle miles travelled and promoting alternatives to single-occupancy vehicle trips

Transition away from fossil fuels

- Sunny Cambridge
- Low Carbon Energy Supply Study
- Promote a shift to electric/clean emissions vehicles



The Building Energy Use Disclosure Ordinance (BEUDO) is a key step in efforts to reduce Cambridge's greenhouse gas (GHG) emissions.

Goal E: Maintain sustainable water resources by taking action to reduce potable water usage, manage stormwater runoff, and improve the quality of surface water and groundwater

Manage stormwater with public investment in stormwater infrastructure and maintenance

- Stormwater Management Plan
- [Sewer separation program](#)

Manage stormwater with private investment in stormwater infrastructure and maintenance

- Stormwater retention/runoff management requirements for private developments

Actively manage the quantity and quality of the City's drinking water supply

- Surface Water Protection Plan
- Watershed restoration projects through land acquisitions

Reduce potable water usage

- Building Energy Use Disclosure Ordinance (water consumption)
- LEED green building requirements for new construction



The sewer separation program addresses localized flooding issues and improves the quality of waterways in Cambridge by reducing or eliminating combined sewer overflows.

Goal F: Minimize waste generation and eliminate waste to landfill

Reduce packaging waste

- Polystyrene Ordinance
- Bring Your Own Bag Ordinance

Establish a technical foundation for a pathway to zero waste

- Zero Waste Master Plan – in development

Divert recyclable and organic waste

- [Curbside Compost Pilot Program](#)
- Recycling encouraged through single-stream recycling, Recycling Advisory Committee

Remediate hazardous waste

- Hazardous waste reporting and remediation monitoring



DPW initiatives such as the Curbside Compost Pilot Program (right) encourage responsible waste practices and reduce waste sent to landfills.

(Source: Cambridge DPW (left), Harvard Square Business Association (right))

Discussion



Discuss Strategies/Actions

Proposed Strategies

- How would you like to see Cambridge or its partners achieve these specific goals?

Current Actions

- Based on your review of Cambridge's existing programs, policies, and tools (i.e. actions), which are especially critical to helping Cambridge achieve this goal and should be sustained or enhanced?

Proposed Actions

- What additional actions (programs, policies and tools) should be pursued by the community?

Proposed Indicators/Targets

- What additional indicators and targets should be used to measure whether strategies are achieving the desired goals?

Goal A: Safeguard the lives and livelihoods of Cambridge community members, particularly those that are at disproportionate risk of climate change and environmental impacts

Proposed Strategies How would you like to see Cambridge or its partners achieve this specific goal?	
Current Actions Based on your review of Cambridge’s existing programs, policies, and tools (i.e. actions), which are especially critical to helping Cambridge achieve this goal and should be sustained or enhanced?	
Proposed Actions What additional actions (programs, policies, and tools) should be pursued by the community?	
Proposed Indicators/Targets What additional indicators and targets should be used to measure whether strategies are achieving the desired goals?	

Goal B: Meaningfully engage the entire Cambridge community (residents, institutions, and businesses) in strengthening the City’s climate and environment initiatives

Proposed Strategies How would you like to see Cambridge or its partners achieve this specific goal?	
Current Actions Based on your review of Cambridge’s existing programs, policies, and tools (i.e. actions), which are especially critical to helping Cambridge achieve this goal and should be sustained or enhanced?	
Proposed Actions What additional actions (programs, policies, and tools) should be pursued by the community?	
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Goal C: Preserve and enhance Cambridge’s natural environment, including the preservation of open space, habitats and plants, and the reduction of air, light, and noise pollution

Proposed Strategies How would you like to see Cambridge or its partners achieve this specific goal?	
Current Actions Based on your review of Cambridge’s existing programs, policies, and tools (i.e. actions), which are especially critical to helping Cambridge achieve this goal and should be sustained or enhanced?	
Proposed Actions What additional actions (programs, policies, and tools) should be pursued by the community?	
Proposed Indicators/Targets What additional indicators and targets should be used to measure whether strategies are achieving the desired goals?	

Goal D: Achieve carbon neutrality by reducing consumption, increasing energy efficiency, and transitioning away from the use of fossil fuels in order to reduce the Cambridge community’s impact on a changing climate

Proposed Strategies How would you like to see Cambridge or its partners achieve this specific goal?	
Current Actions Based on your review of Cambridge’s existing programs, policies, and tools (i.e. actions), which are especially critical to helping Cambridge achieve this goal and should be sustained or enhanced?	
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Goal E: Maintain sustainable water resources by taking action to reduce potable water usage, manage stormwater runoff, and improve the quality of surface water and groundwater

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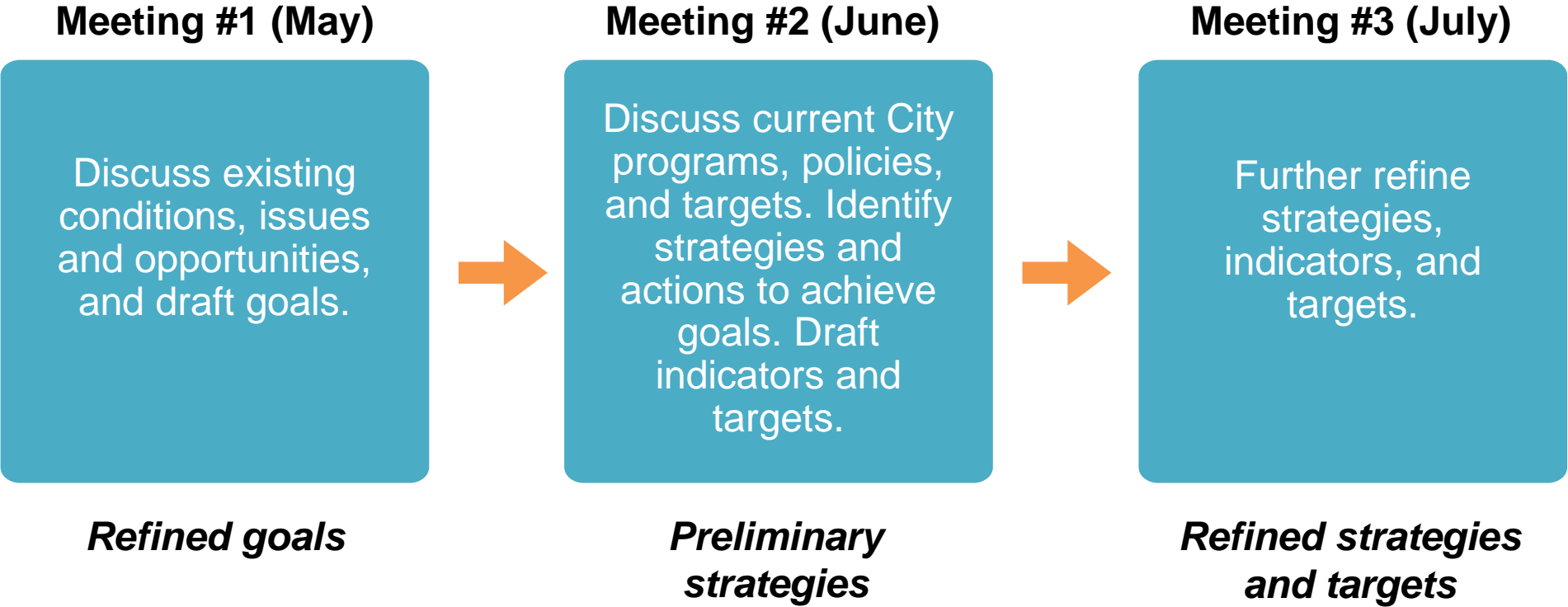
Goal F: Minimize waste generation and eliminate waste to landfill

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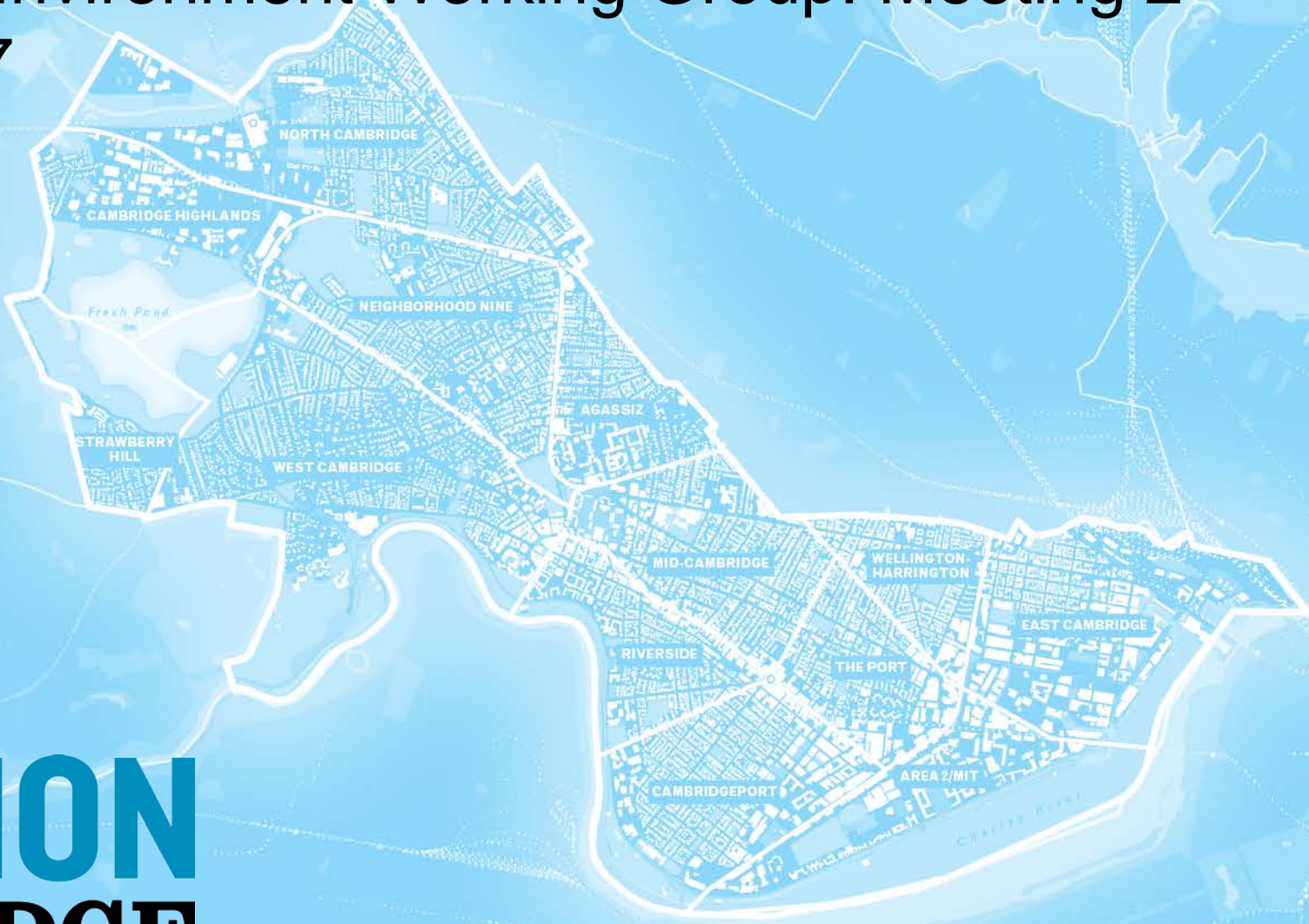


2017 Working Group Schedule



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