



City of Denton

Climate Action and Adaptation Planning

December 14, 2022



Agenda

- Welcome and Introductions
- Climate Action and Adaptation Planning (CAAP) 101
- The CAAP Process for City of Denton
- Closing and next steps

Proposed operating values

By taking part in this webinar, we agree to:

- Show respect for each other by using respectful language, sharing information, and listening to each other's perspectives.
- Stay on mute when not responding to help with background noises.
- Ask questions in the chat during presentations.
- Balance airtime to hear from as many voices as possible.
- Be curious and challenge our own assumptions and biases.

Please note that this meeting is being recorded and will be made available online.

SSG - Redefining Climate Action Planning

**100+ climate
action projects**



35+ members
Employee-owned
Worker co-operative

20+ years

Project managers
Process designers
Facilitators
Modeling experts
Analysts
Engineers
Graphic designers
Data visualizers

Holistic approach

SSG



Instructions

Go to
www.menti.com

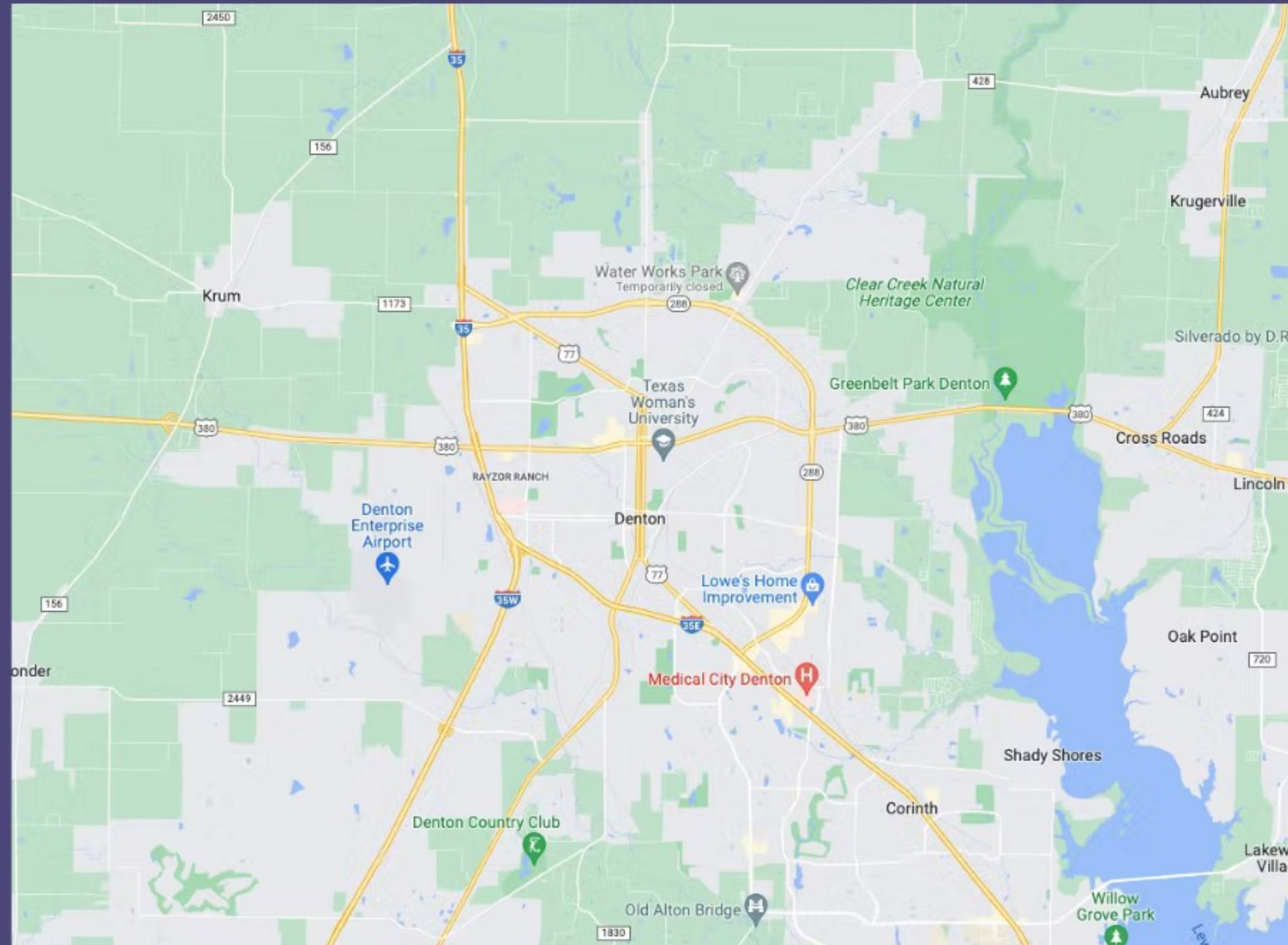
Enter the code



Or use QR code



Where are you right now?



Please describe how you feel about climate change in one word:



Game time!

What do you know about climate change?



There is nothing *we* can do about climate change.

True



False



FALSE

There are many actions we can take
to address climate change.

Just like what we're doing today!



How much will climate inaction cost globally?

0
178 million dollars 💰
✗

0
178 billion dollars 💰💰
✗

0
178 trillion dollars 💰💰💰
✓





GUARDIAN, STERN REPORT: THE KEY POINTS, OCTOBER 30, 2006

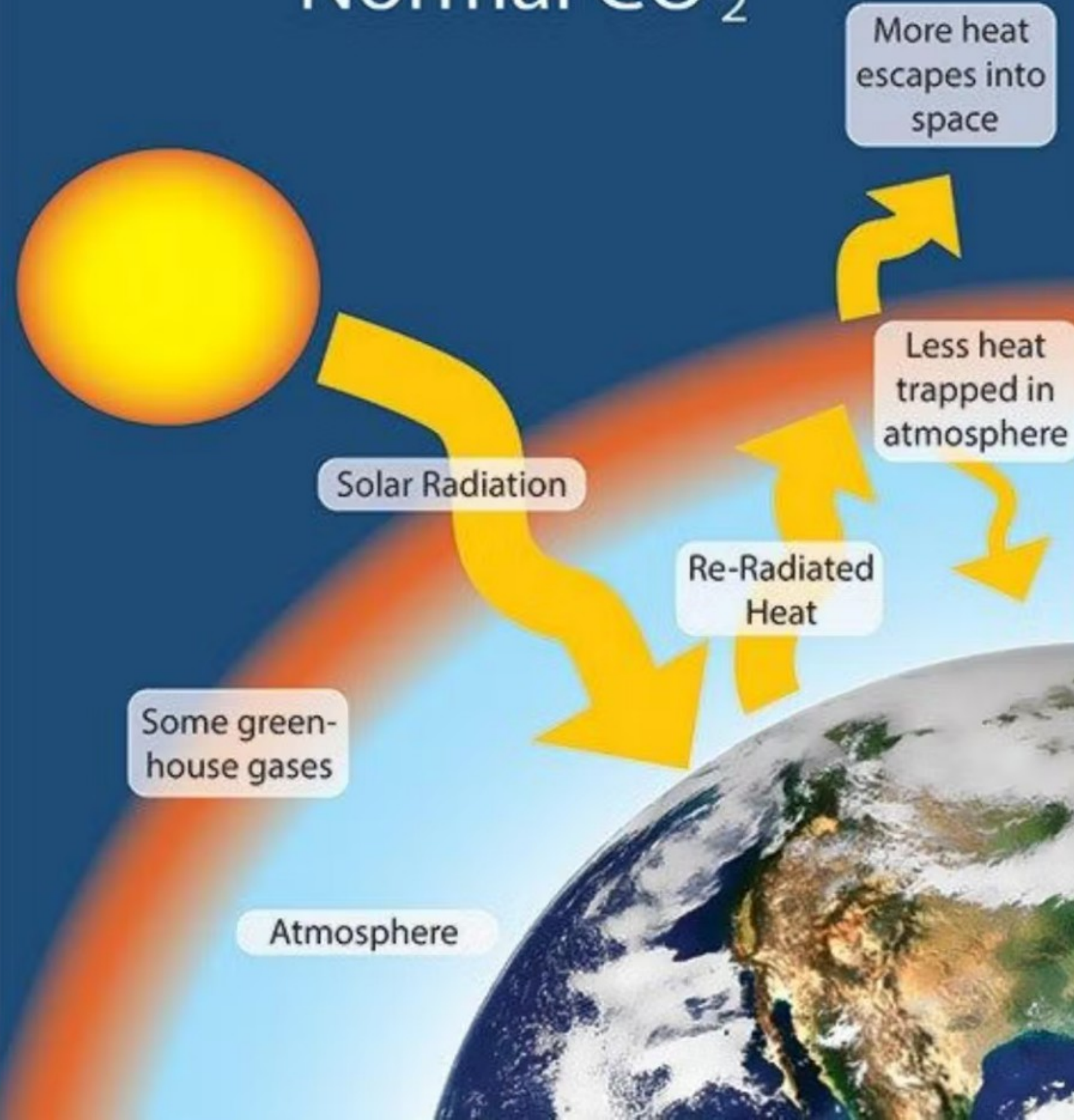
What's more, the return on investing in climate actions considerably outweighs the cost.

Each tonne of CO₂ we emit causes at least \$85 in damage, but emissions can be cut for a cost of less than \$25 a tonne.

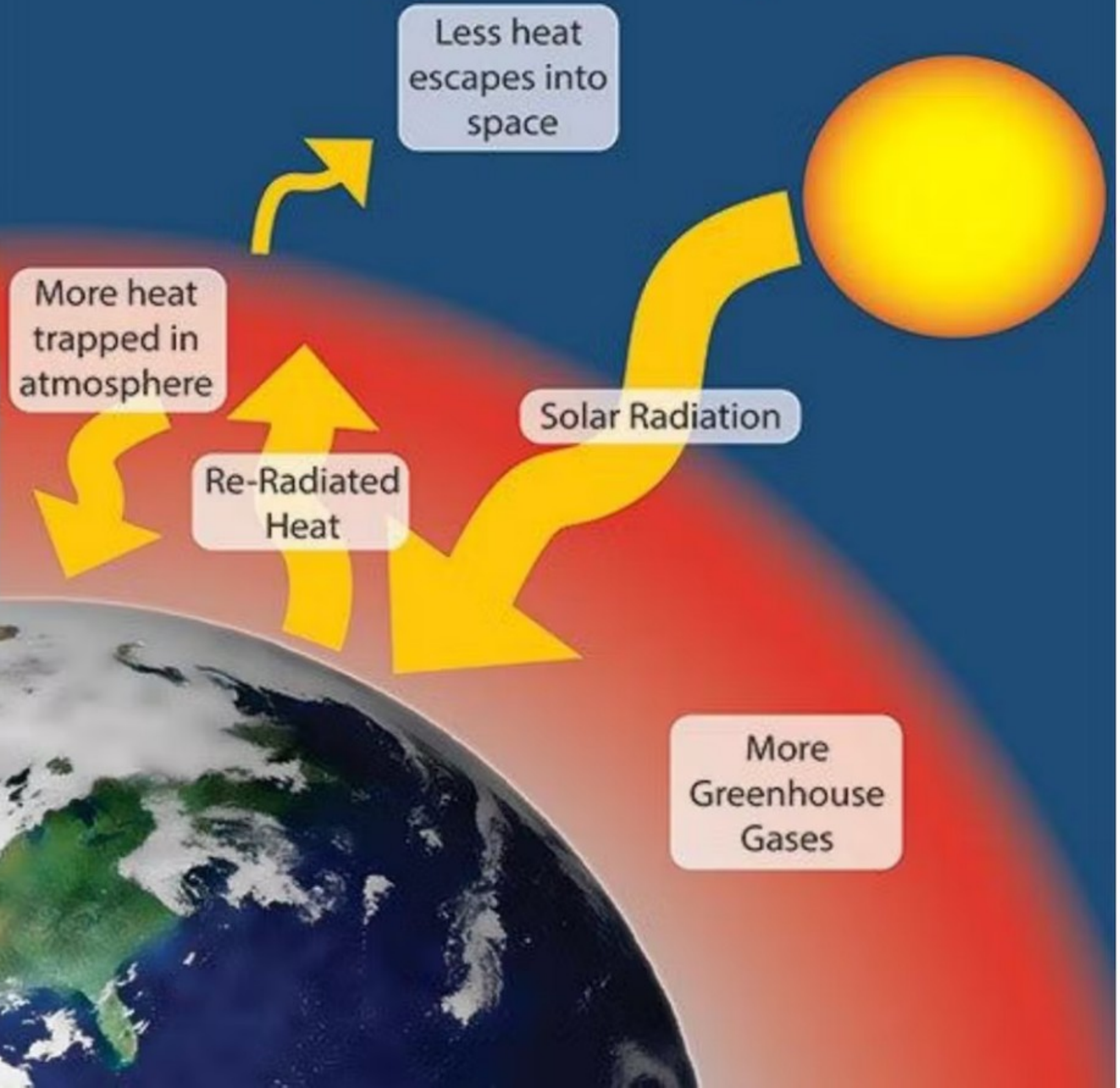
Shifting to a low-carbon path is expected to eventually benefit the global economy by \$2.5 trillion annually.



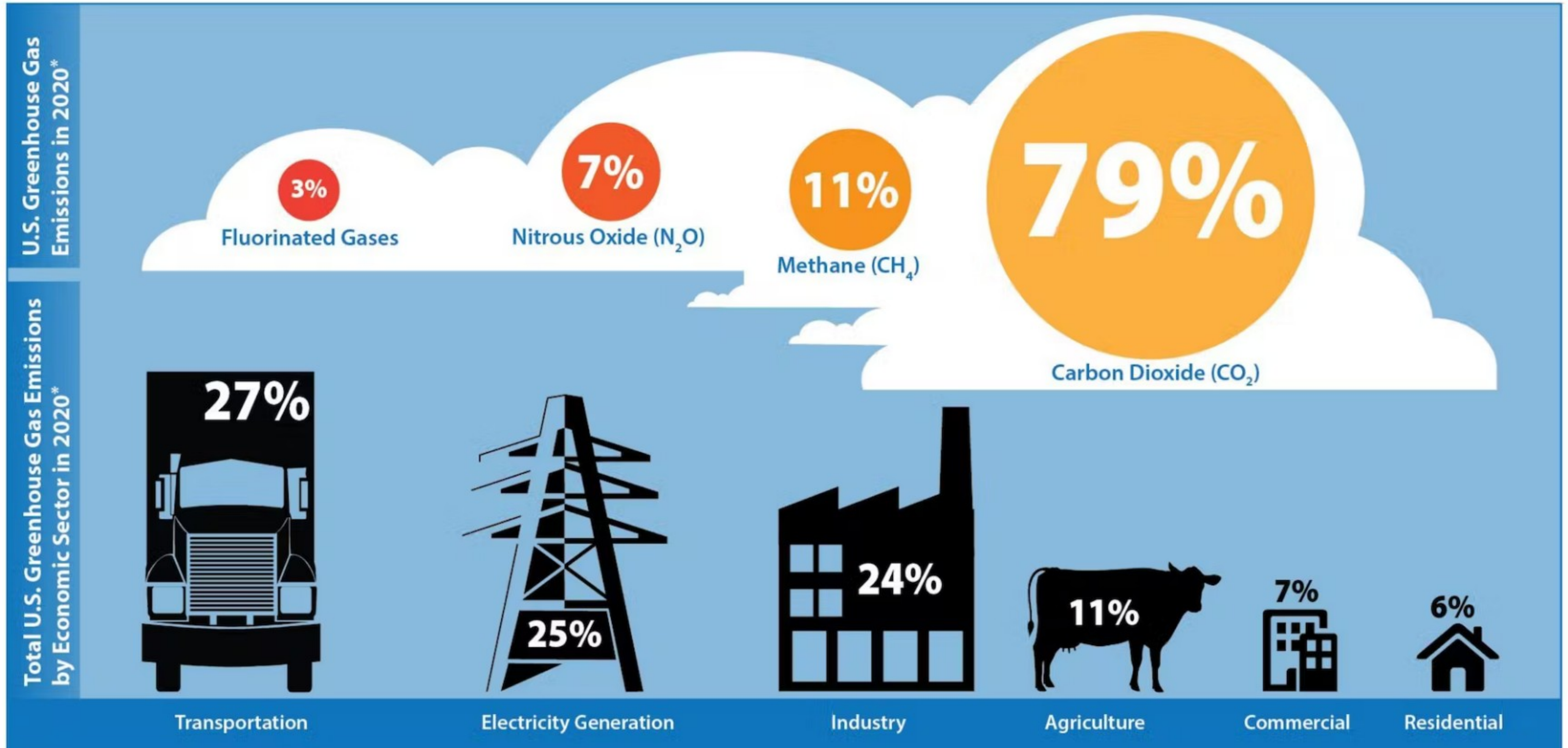
Greenhouse Effect Normal CO₂



Greenhouse Effect: **Rampant CO₂**

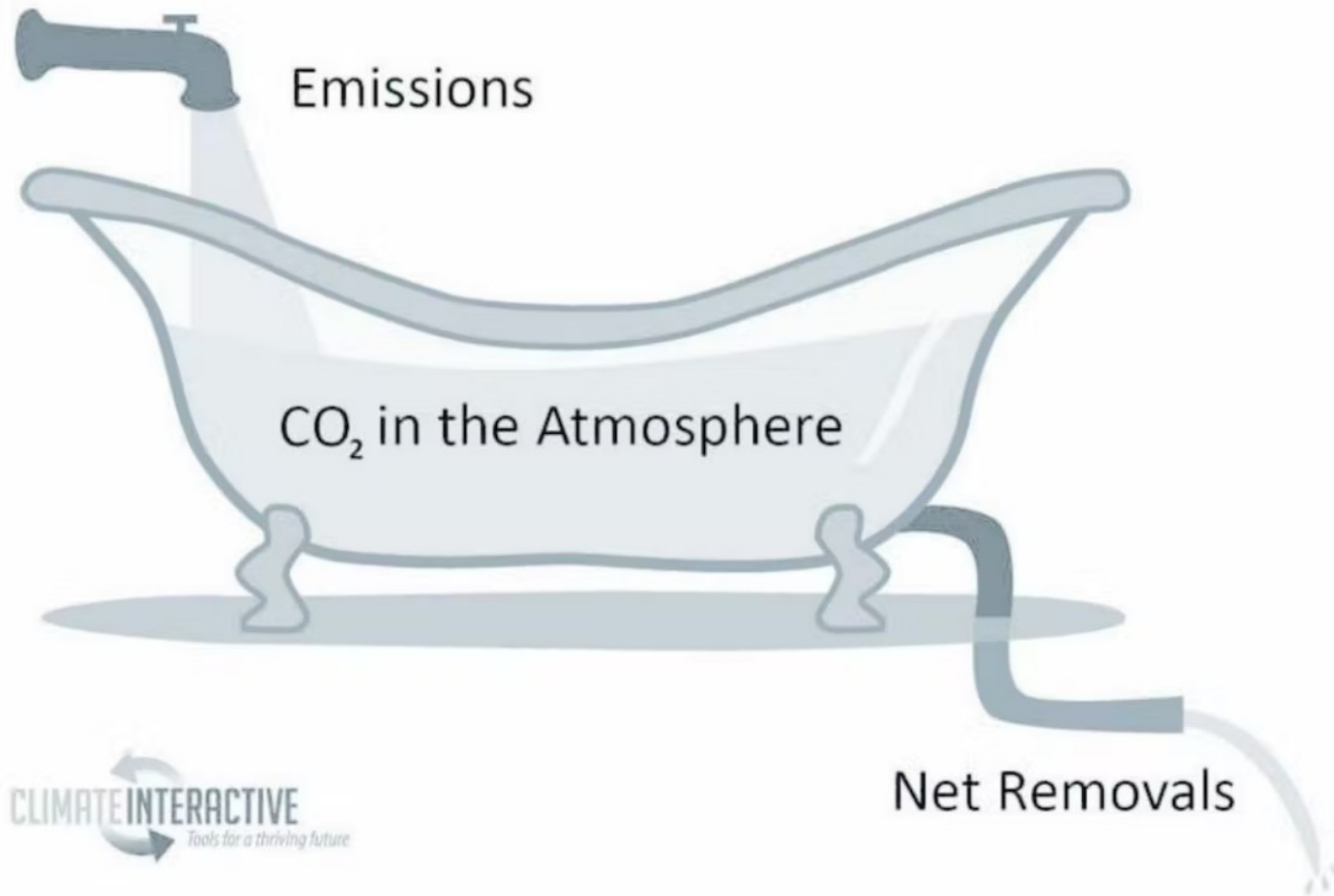


Sources of Emissions in the US



Source: <https://cfpub.epa.gov/ghgdata/inventoryexplorer/>

What does it mean to be net zero?



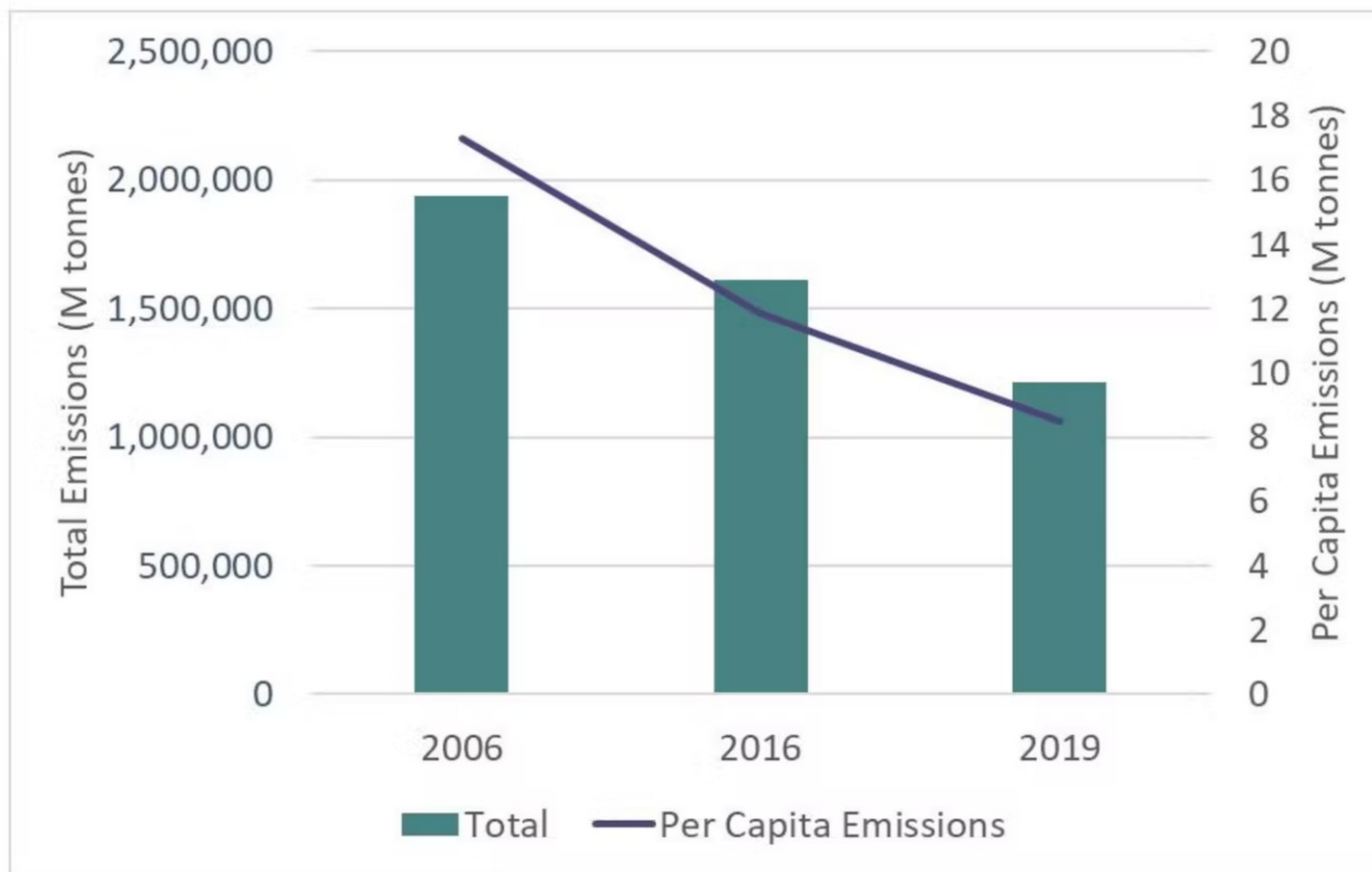
Simply put, being net zero means we can only emit as much greenhouse gas as we are able to absorb or sequester.

Why develop a Climate Action Adaptation Plan?

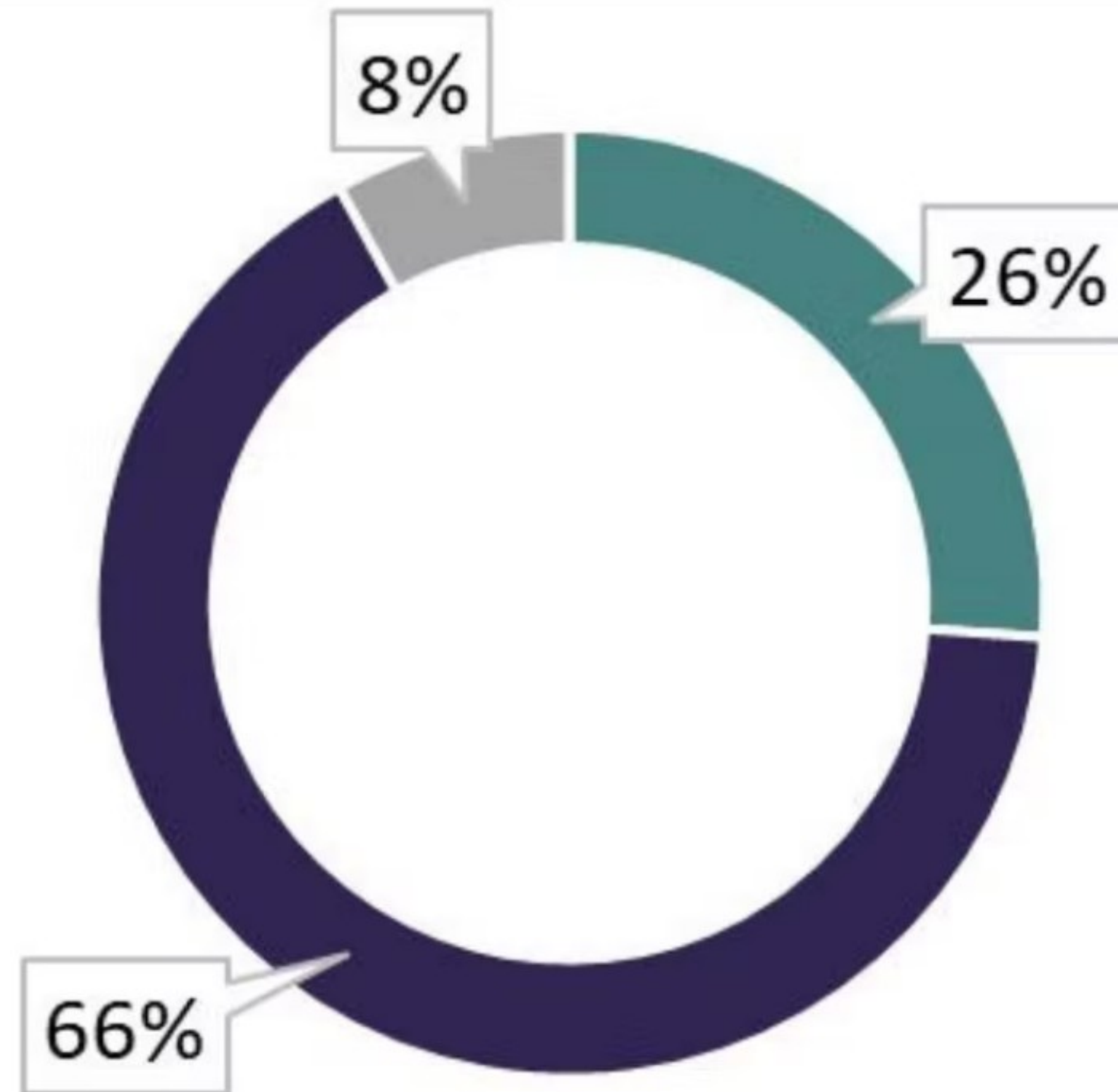
In 2018, the City of Denton established a science-based target to reduce community-wide greenhouse gas emissions by 46.3% from a 2018 baseline by 2030.



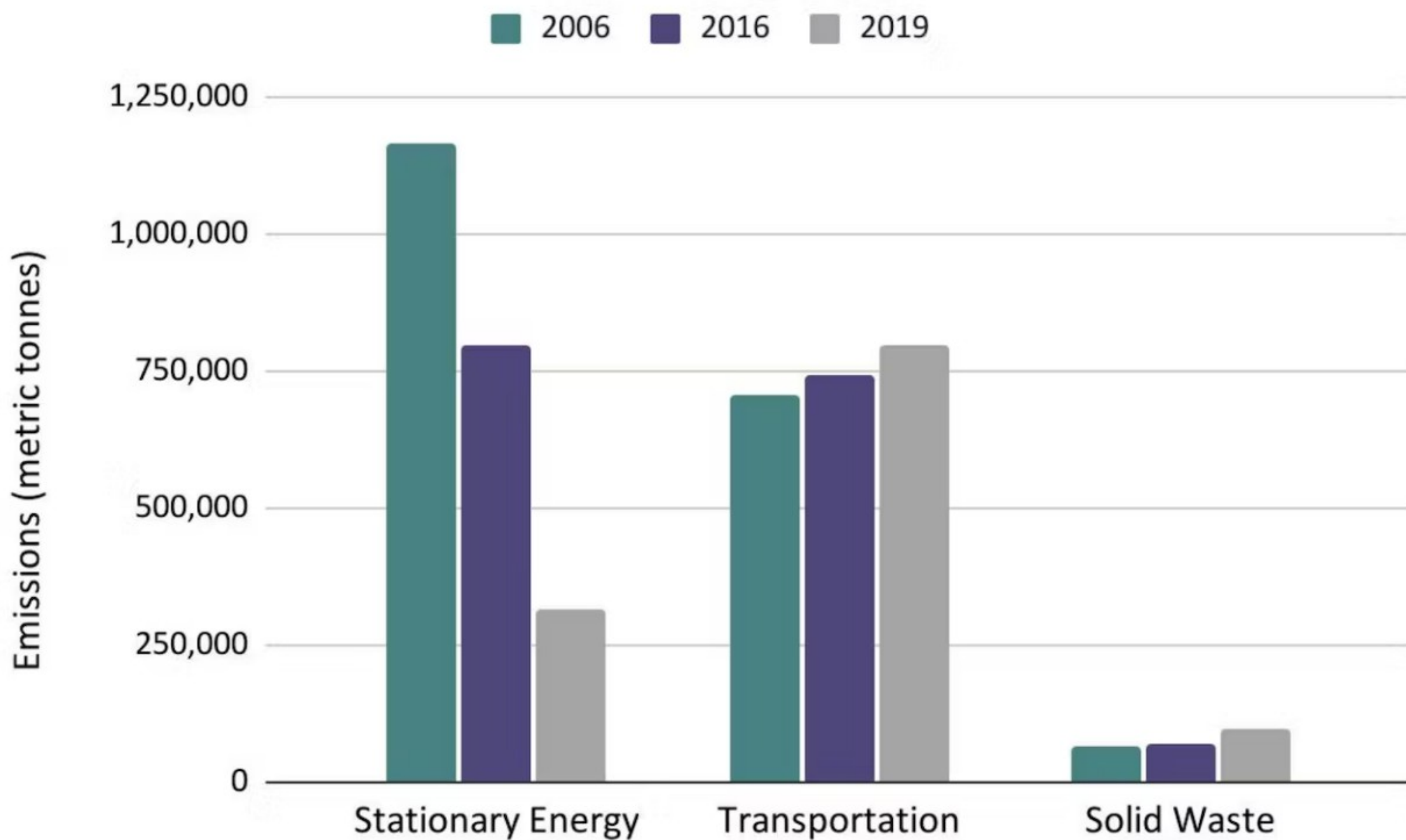
**The City aims to
achieve net zero
emissions by 2050**



**Since 2006,
Denton's
total per
capita
emissions
have fallen
by over 50%.**



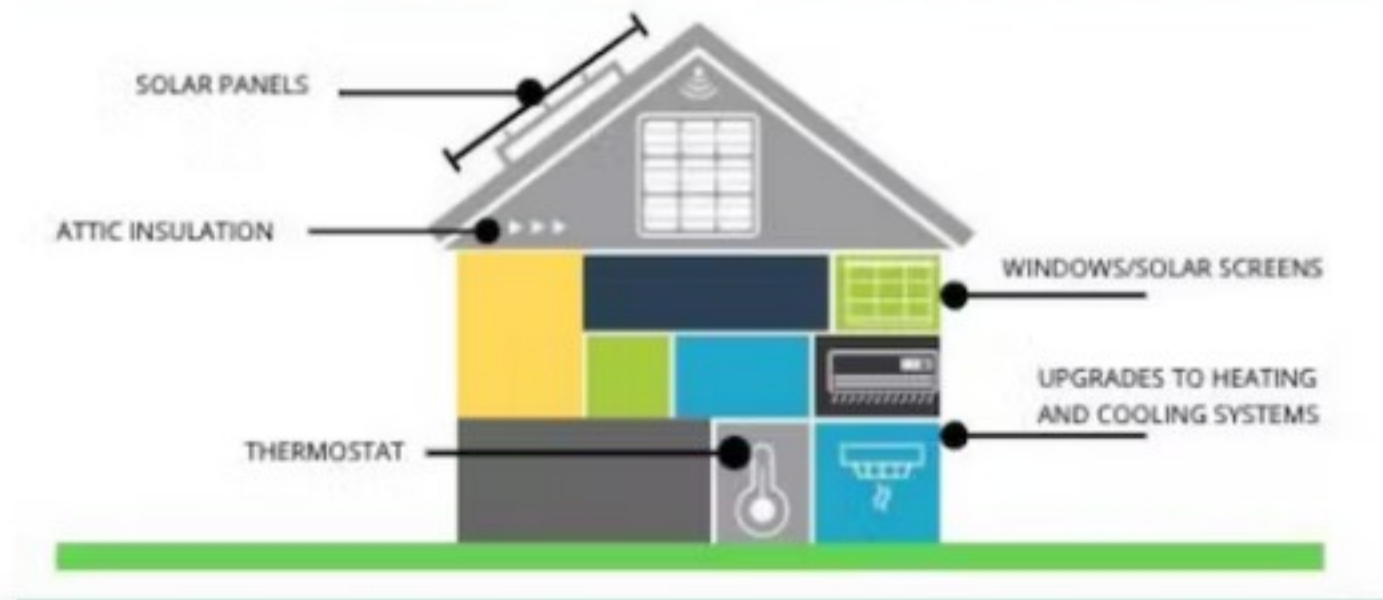
■ Stationary Emissions ■ Transportation ■ Waste



Stationary emissions have fallen by over 70%.

Transportation and Solid Waste emissions continue to rise.

What is Denton doing?



Denton Municipal
Electric Rebates



Green Business program



Denton Sustainable
Schools program



Waste Diversion
Programs



DME's 100% renewable
energy supply goal

What other climate action initiatives are happening in Denton?



What actions have you personally taken that could help reduce emissions?

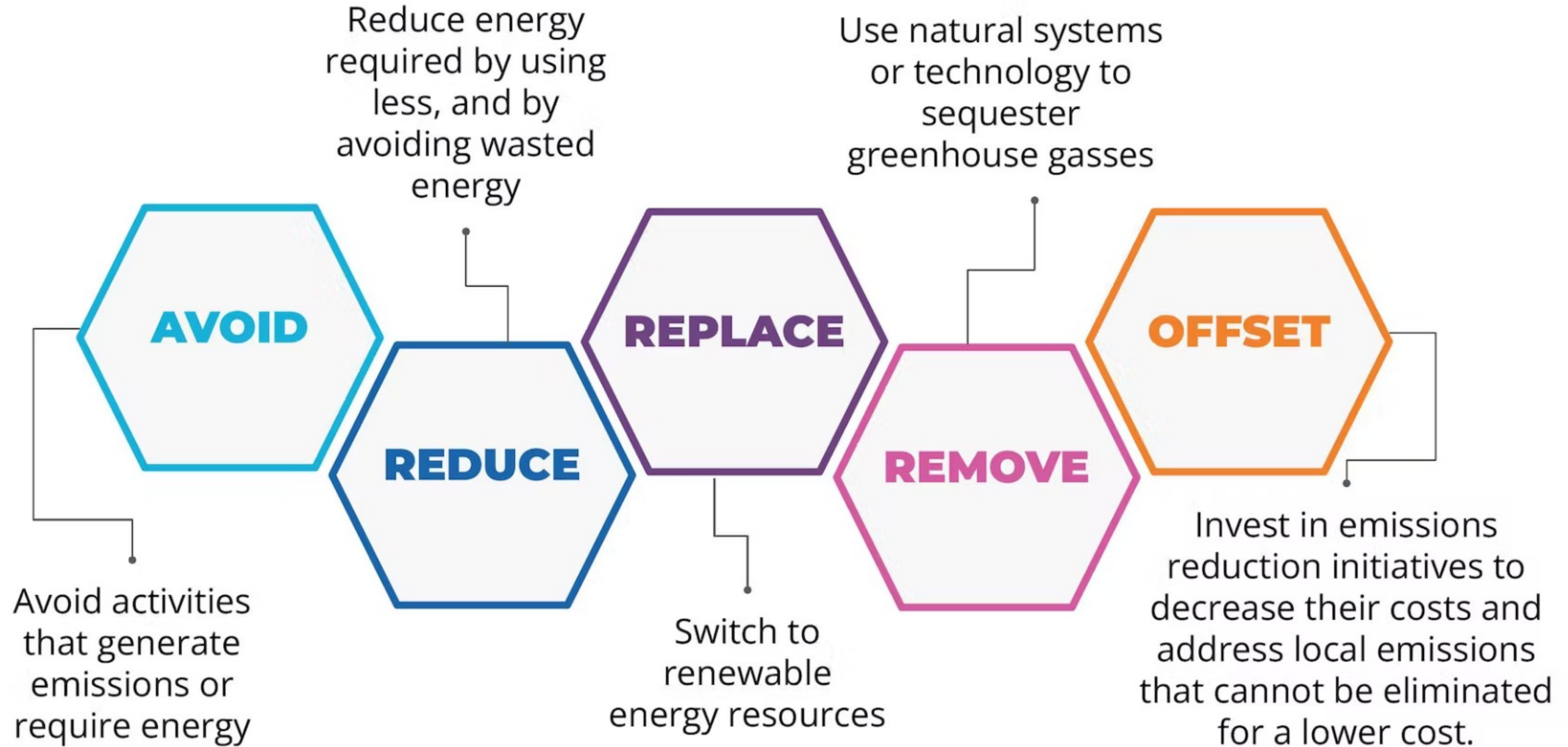


The Climate Action Adaptation Plan

A **data-driven** policy and actions **pathway** to achieve an emission reduction target and minimize vulnerability to climate impacts.

- ✓ Pathways
- ✓ Alignment
- ✓ Metrics
- ✓ Equitable transition
- ✓ Maximizes co-benefits and minimizes harms

The Planning Philosophy



Potential Actions to a Net Zero Denton



Increase renewable energy



Retrofit existing buildings



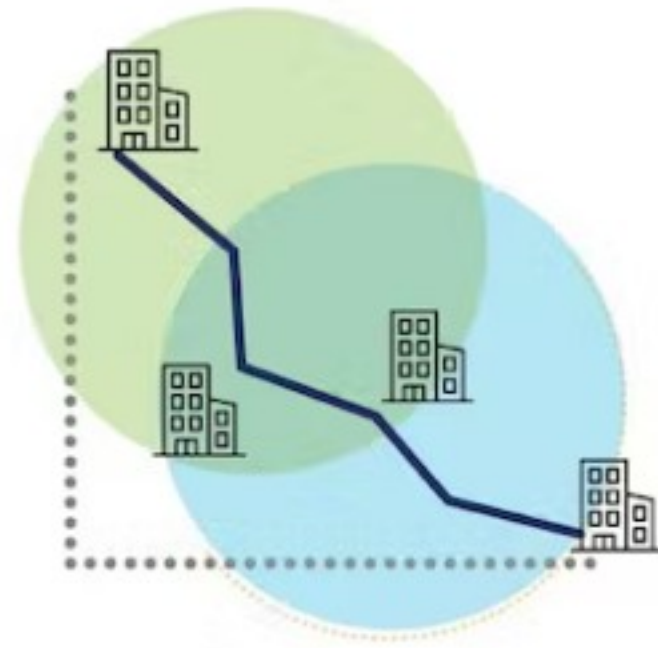
Emissions free vehicles



Fuel switching heating



Increase active transportation and transit use



Net-zero new building construction



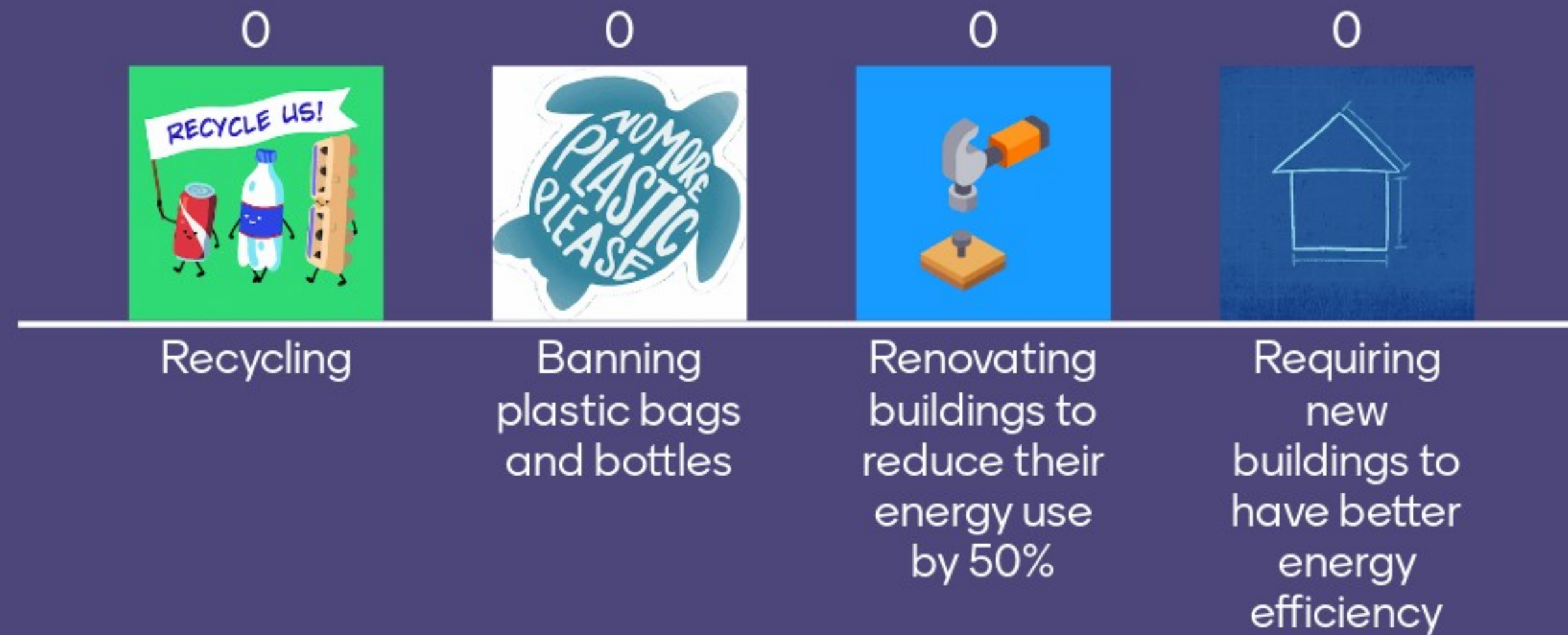
Re-energized, clean industry



Reduce waste emissions

.. but how do we get there?

Which action is better at reducing greenhouse gas emissions (GHGs)?



Renovating for the Win! And, this means long-term savings on energy bills!

Renovating to reduce energy use by at least 50% is called a 'deep retrofit'. This typically includes improving insulation in the walls and attic, replacing windows and doors, and sealing any leaks, and then switching from natural gas or fuel oil to heat pumps and electric systems to heat and cool the building as well as domestic water.

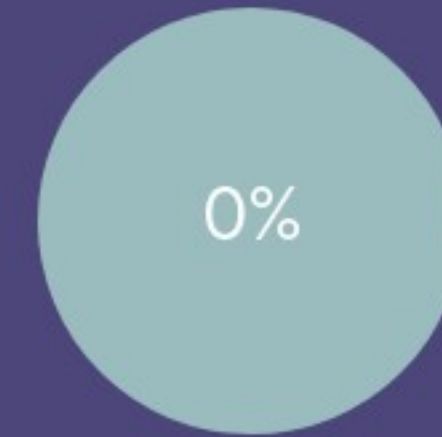


We can't make housing that is both 'net zero emissions' and affordable!

Agree



Disagree



Yes we can, and we already are!

On average, a 'net zero home' costs only 4% more to build than a home powered by fossil fuels. And the 'net zero home' has virtually no long-term energy costs, so it's much more affordable over the building's lifetime! There are already many successful 'affordable housing' communities that contain only net zero buildings.

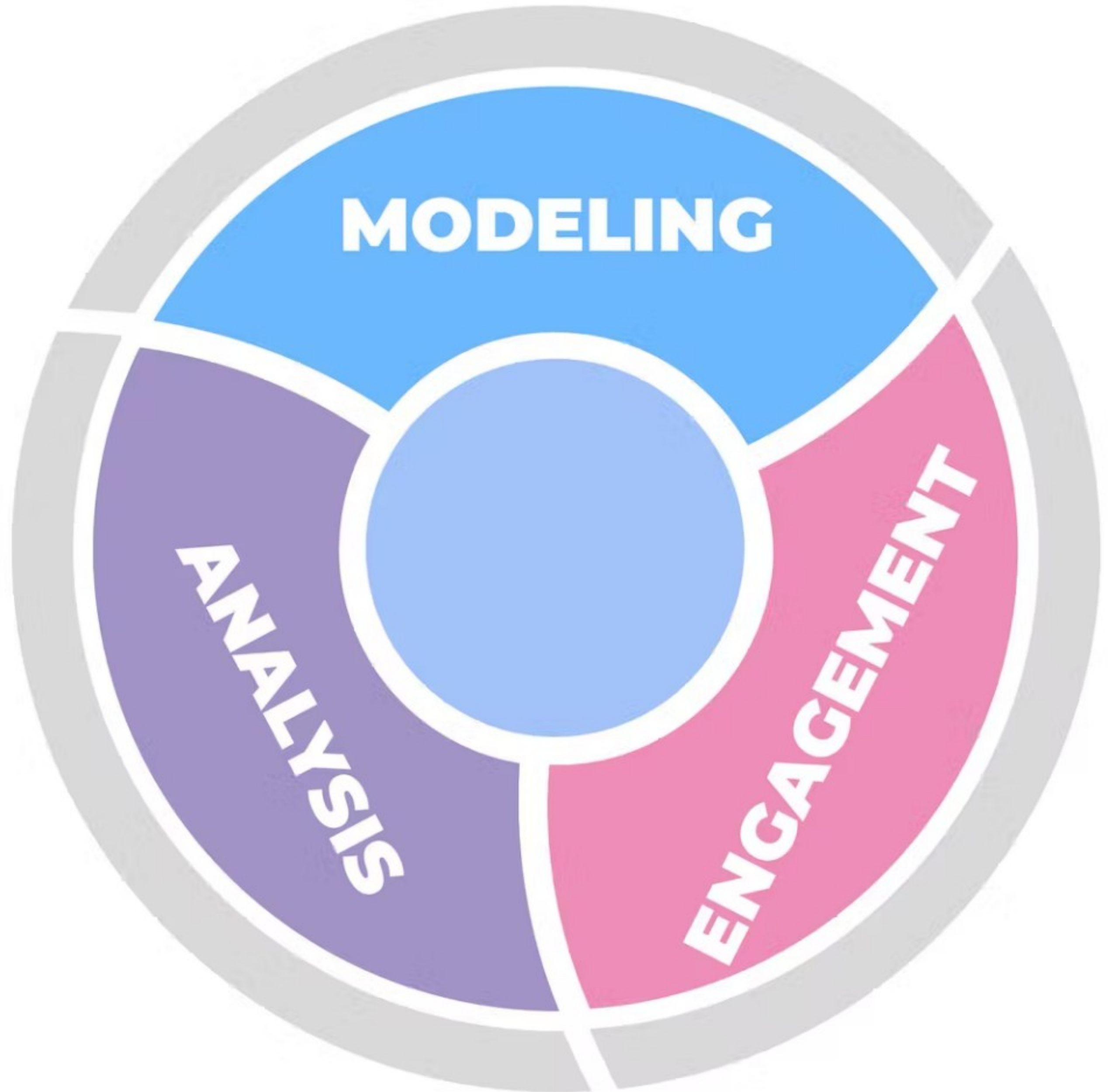


What are your ideas for decreasing emissions in Denton?

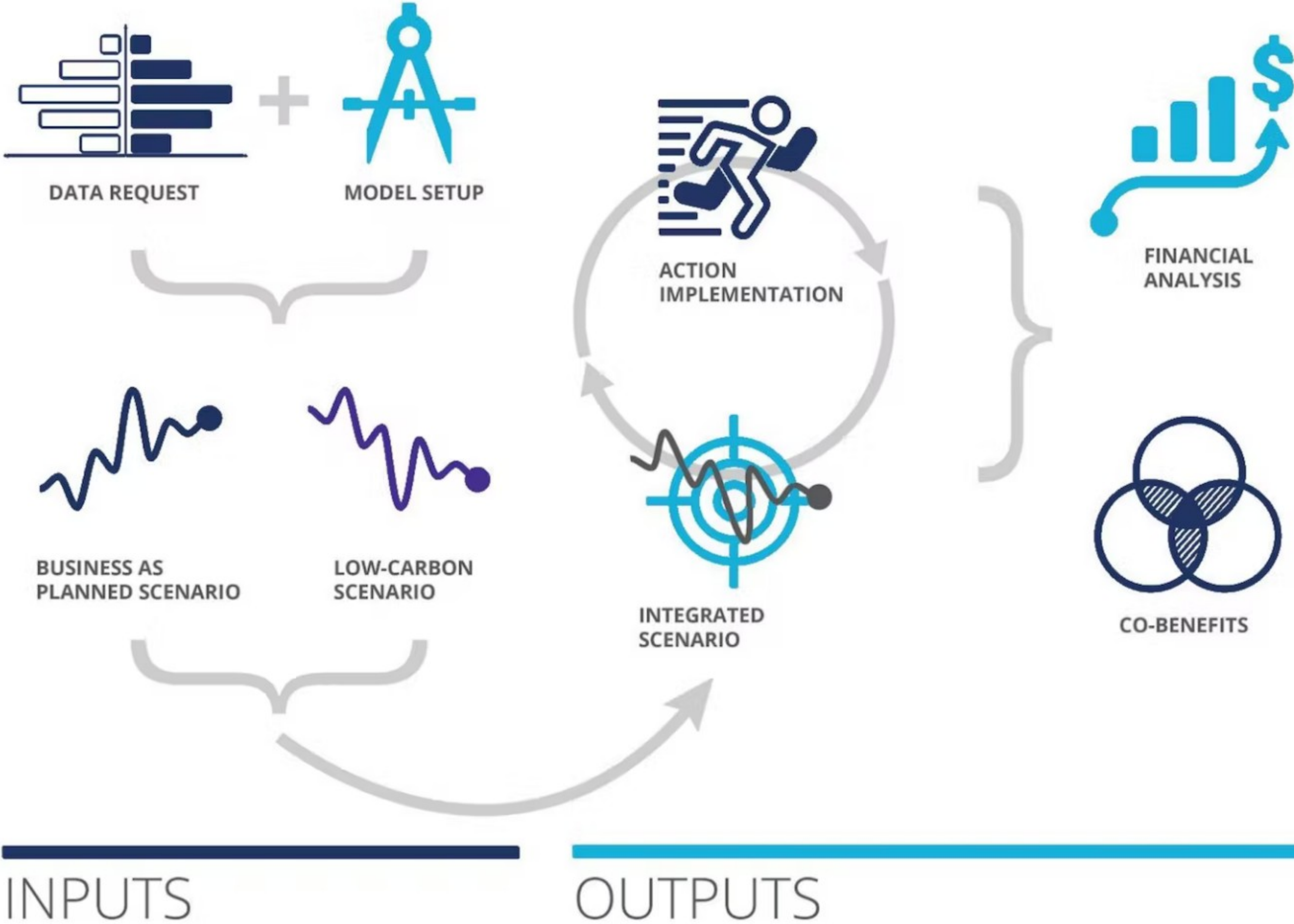


The Planning Process

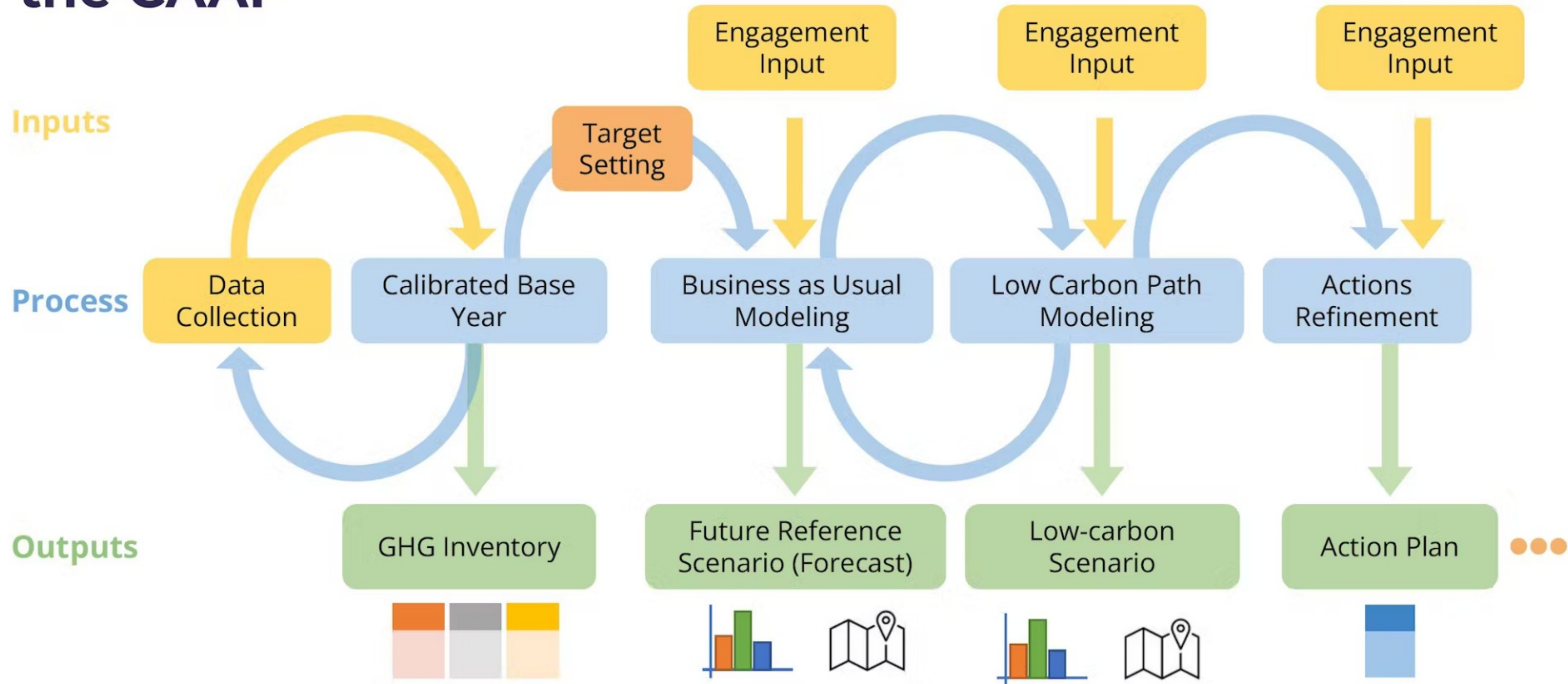
Key ingredients to building a CAAP



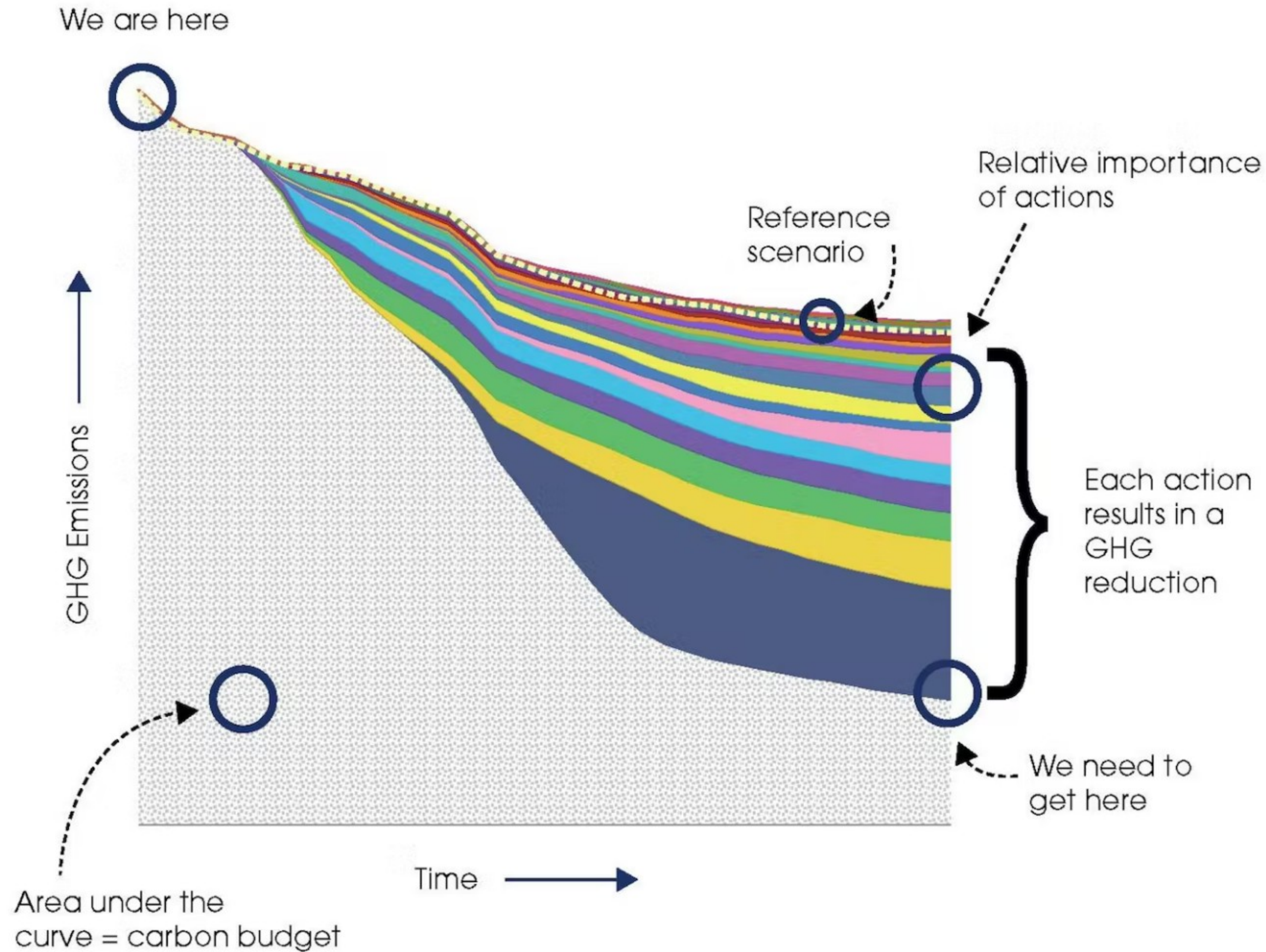
How our model analyses data



Integration of modeling and engagement in shaping the CAAP

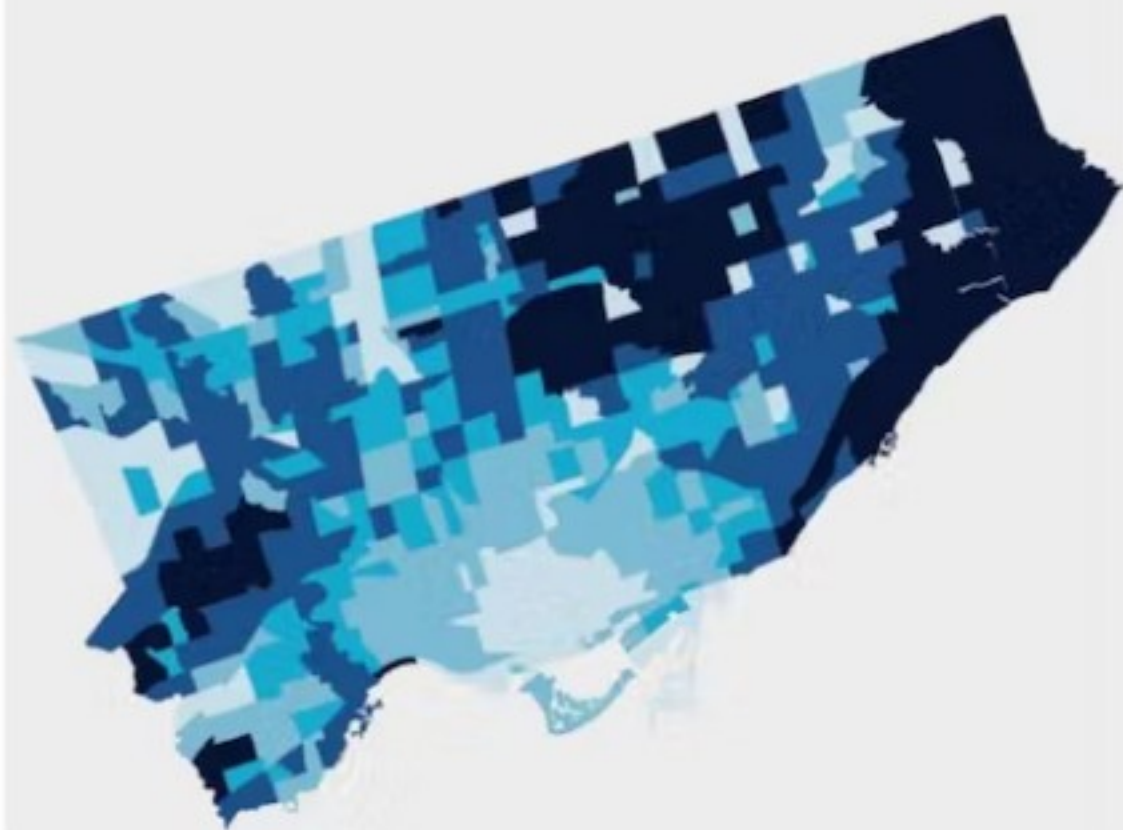


Anatomy of a Roadmap

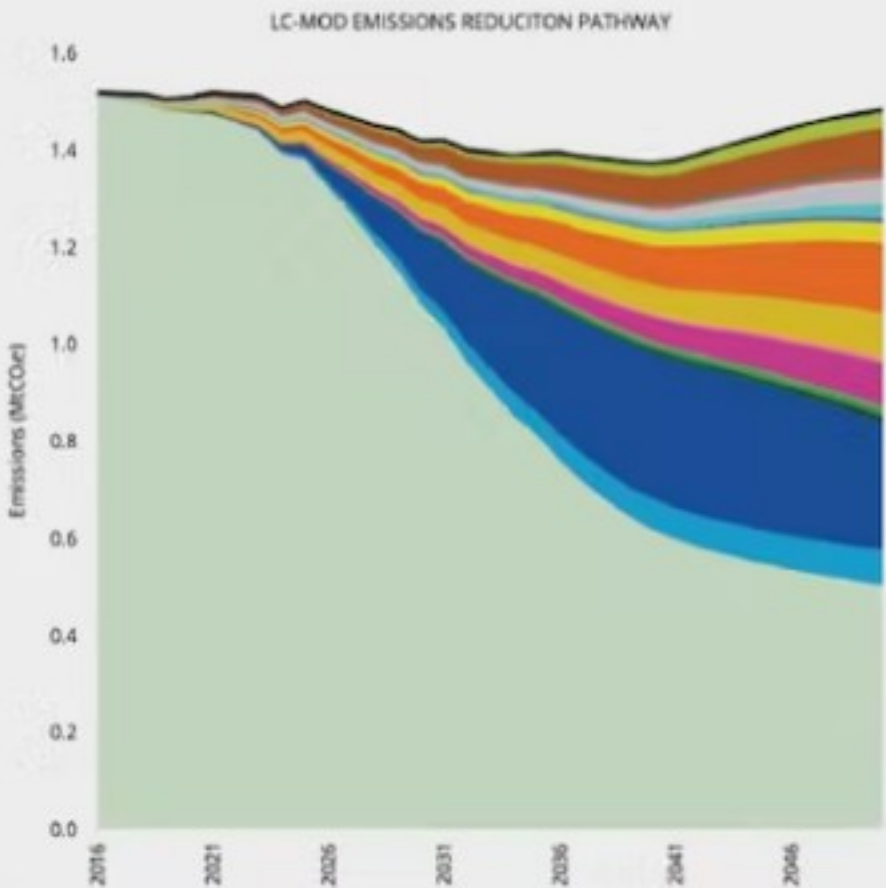


Outputs from the model

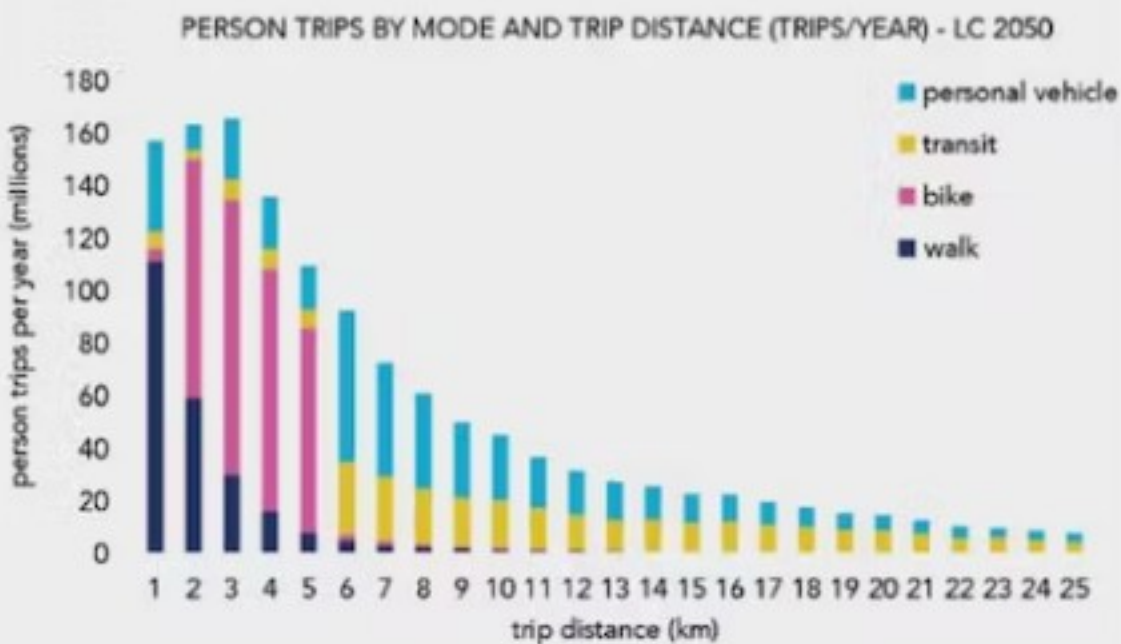
MAPS



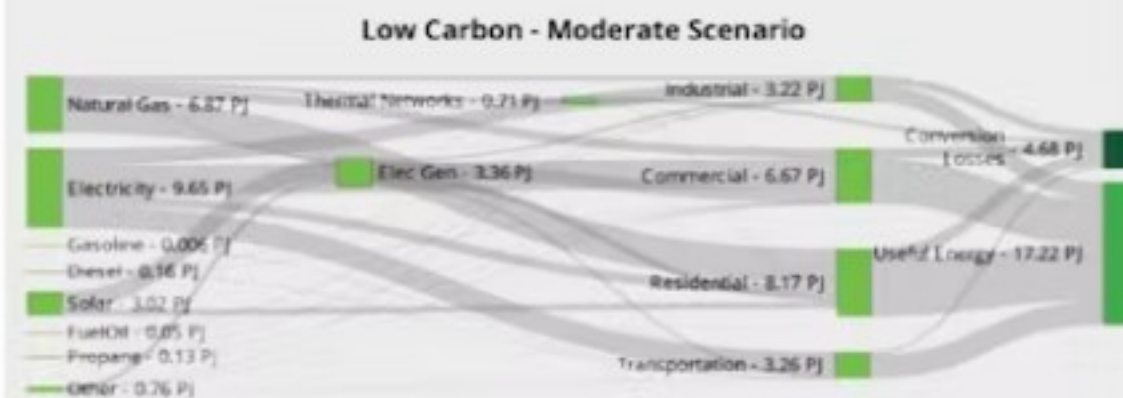
WEDGES



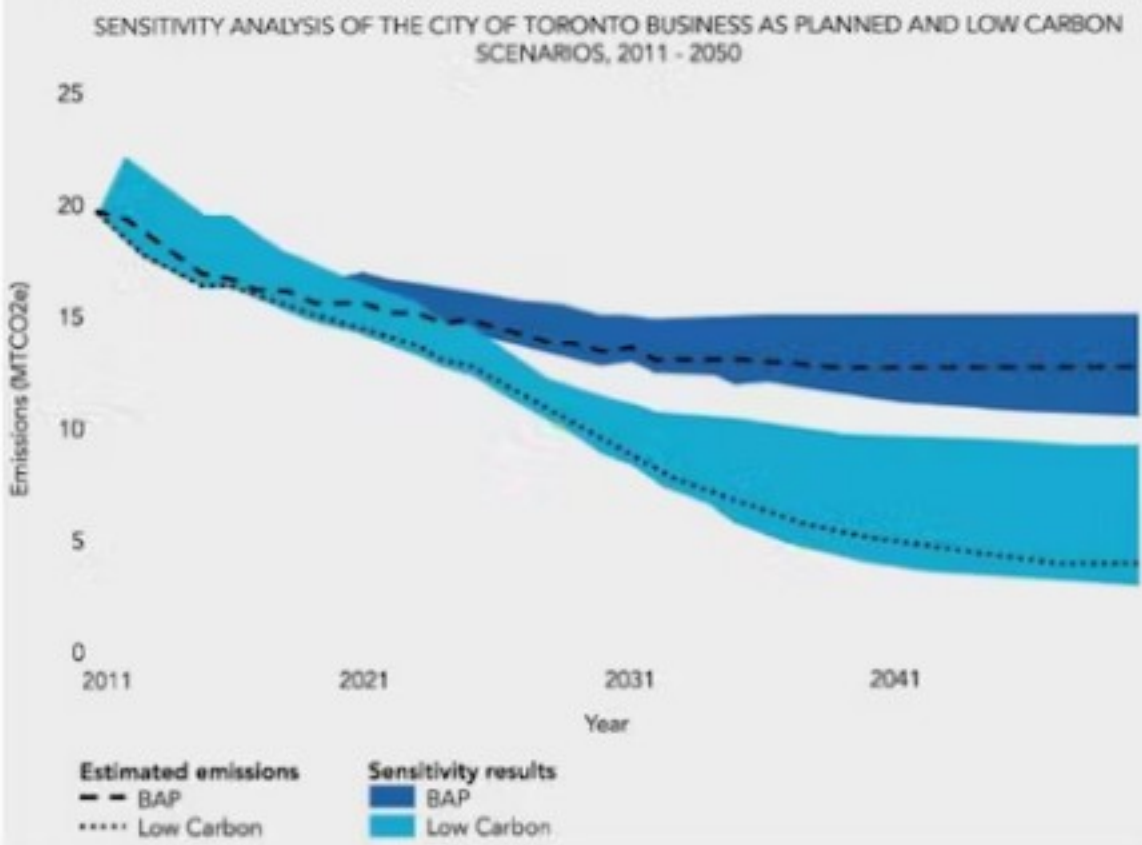
MODE SHARE



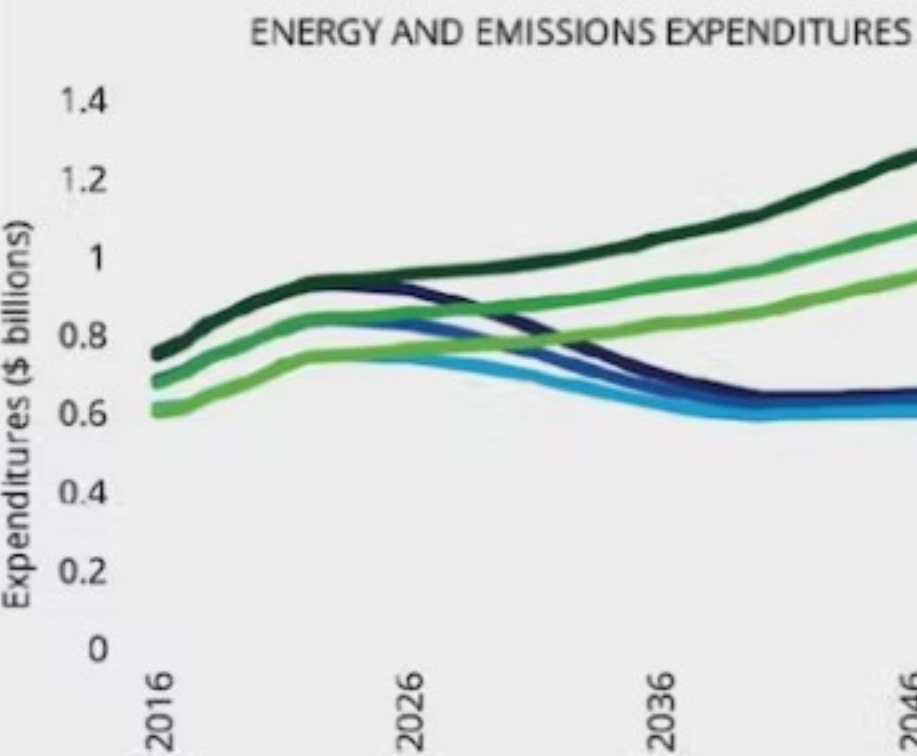
SANKEY



SENSITIVITY



FINANCE



Truth or Lie



Engagement is critical to the plan



The plan will NOT consider local data



Denton is aiming for net zero emissions



What actions are you willing to take that could help reduce emissions?

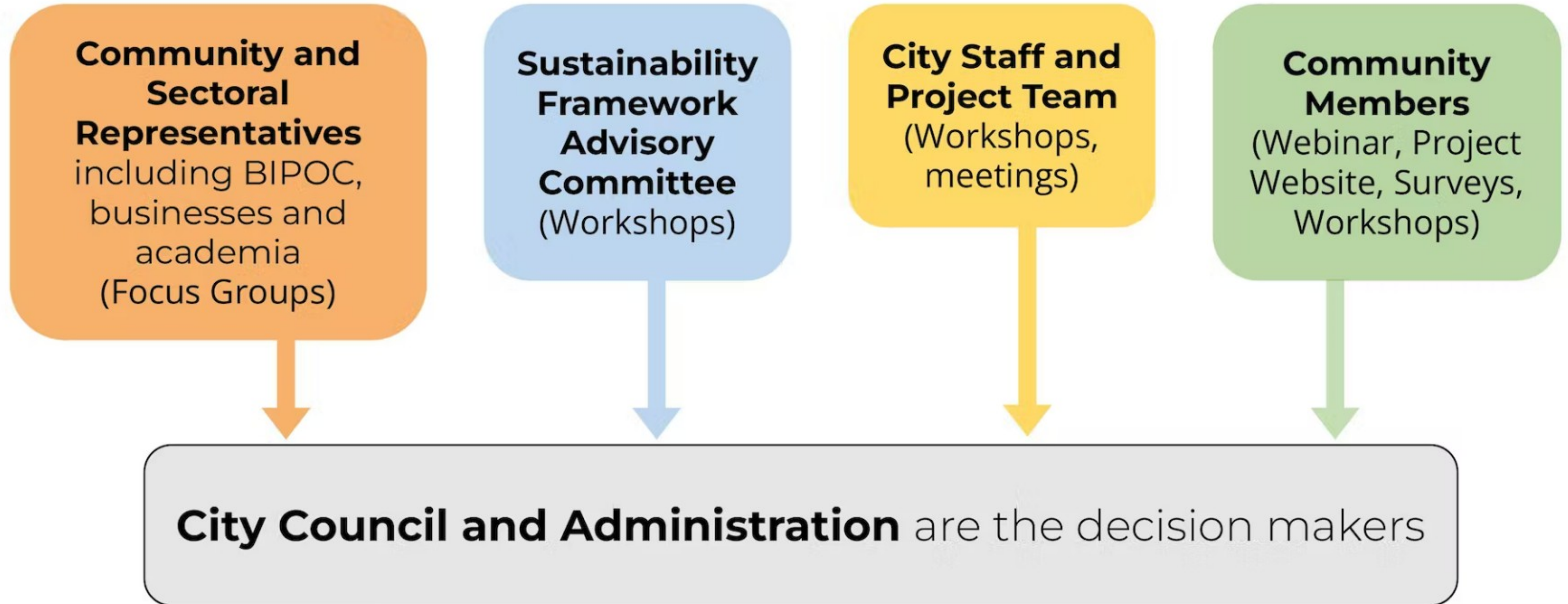


What actions are you NOT willing to take?



Denton's Engagement Plan

Interested and Affected Parties



Public Engagement Opportunities

Public Workshops

Crowdsourcing
Actions Survey



Meeting in a box/
Pop-up kiosks

Focus Groups

sustainabledenton.com

What challenges exist to reducing GHG emissions in Denton?



What barriers do you face personally in taking climate action?



How can the City of Denton support you reduce your GHG emissions?



Closing and Next Steps

Denton's CAAP Project Timeline



Project Outputs

- Baseline greenhouse gas inventory for Denton
- Denton's forecast of energy use and emissions up to 2050 under business-as-usual scenario
- Recommended low-carbon pathway to a net-zero Denton by 2050
 - Catalog of actions and policies
 - Financial and economic analysis
 - Co-benefits, co-harms and equity analysis
 - Implementation and progress monitoring framework



What questions do you have for us before we close the session?



Session Evaluation

[Click here to share your feedback on today's session](#)





Thank you
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SSC

