2022 GHG Emissions Inventory Briefing

Presented to the Sustainability, City Light, Arts & Culture (SCLAC) Committee

March 2025

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What we'll cover today:

Context

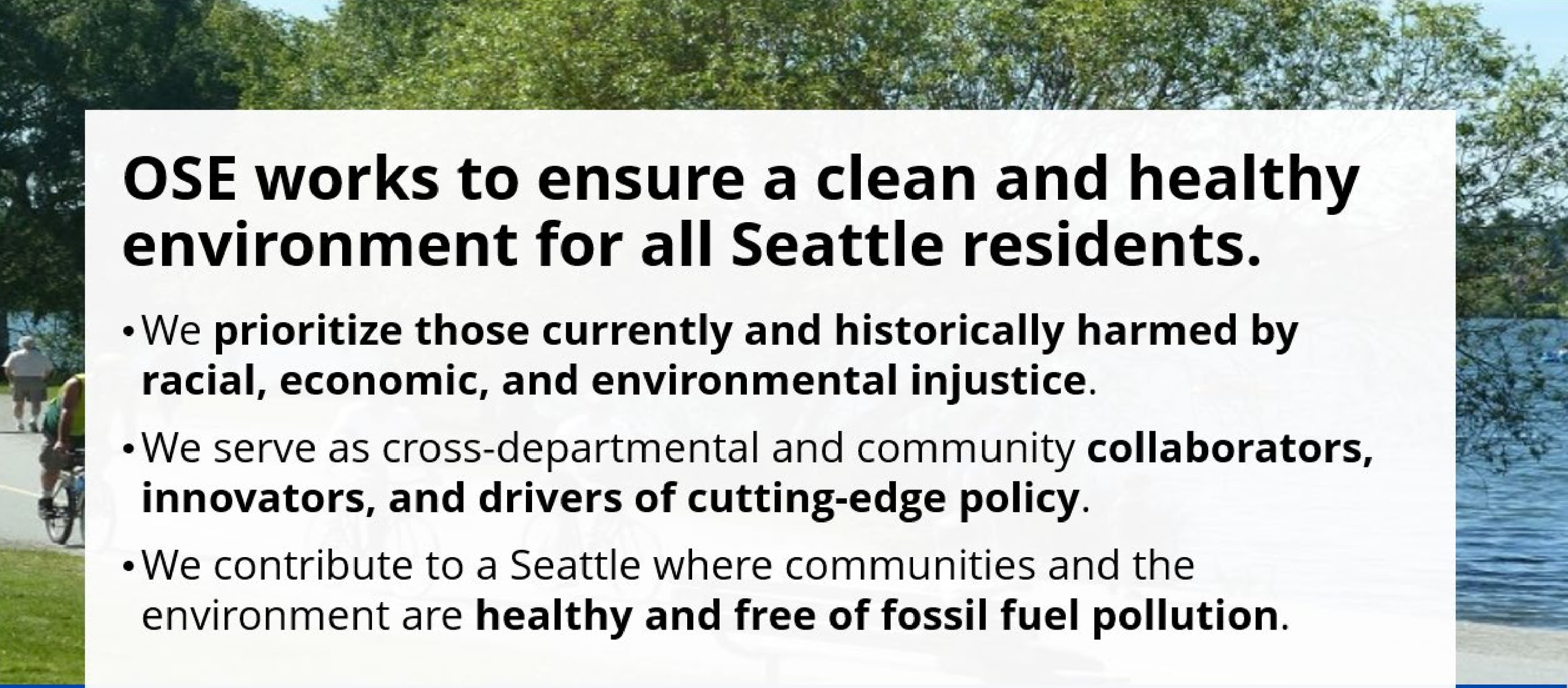
1. Introduction to OSE & our work
2. Refresher on Seattle's climate goals
3. GHG inventory data considerations & landscape

Data

4. Takeaways and trends from 2022 GHG inventory update

Next Steps

6. How we're addressing emissions
7. Climate Action Plan (CAP) update
8. Q&A



OSE works to ensure a clean and healthy environment for all Seattle residents.

- We **prioritize those currently and historically harmed by racial, economic, and environmental injustice**.
- We serve as cross-departmental and community **collaborators, innovators, and drivers of cutting-edge policy**.
- We contribute to a Seattle where communities and the environment are **healthy and free of fossil fuel pollution**.

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OSE's Core Services

Climate & Environmental Justice

- Environmental Justice Grant Programs
- Climate Workforce
- Resilience Hubs
- Duwamish Valley Program
- Green New Deal Oversight Board

GHG Emissions Reductions

- Transportation Electrification
- Building Emissions Performance Standard
- Clean Heat Program
- Municipal Energy Emissions Program

Food Policy & Programs

- Healthy School Food
- Fresh Bucks
- Food Action Plan
- Sweetened Beverage Tax Community Advisory Board

Seattle's Trees & Forests

- Trees for Seattle
- Tree Canopy Cover Urban Forest Management Plan
- Foresting Communities
- Urban Forestry Commission

Emissions reduction: our targets and how we measure progress

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Seattle's climate goals

For our transportation, buildings, and waste sectors:

- **58%** emissions reduction by 2030
  - **82%** reduction in passenger vehicle emissions
  - **39%** reduction in commercial & residential building emissions
- **Net carbon neutral** by 2050
- Set through our climate action planning process
  - Council Resolution (2011)
  - Climate Action Plan (2013)

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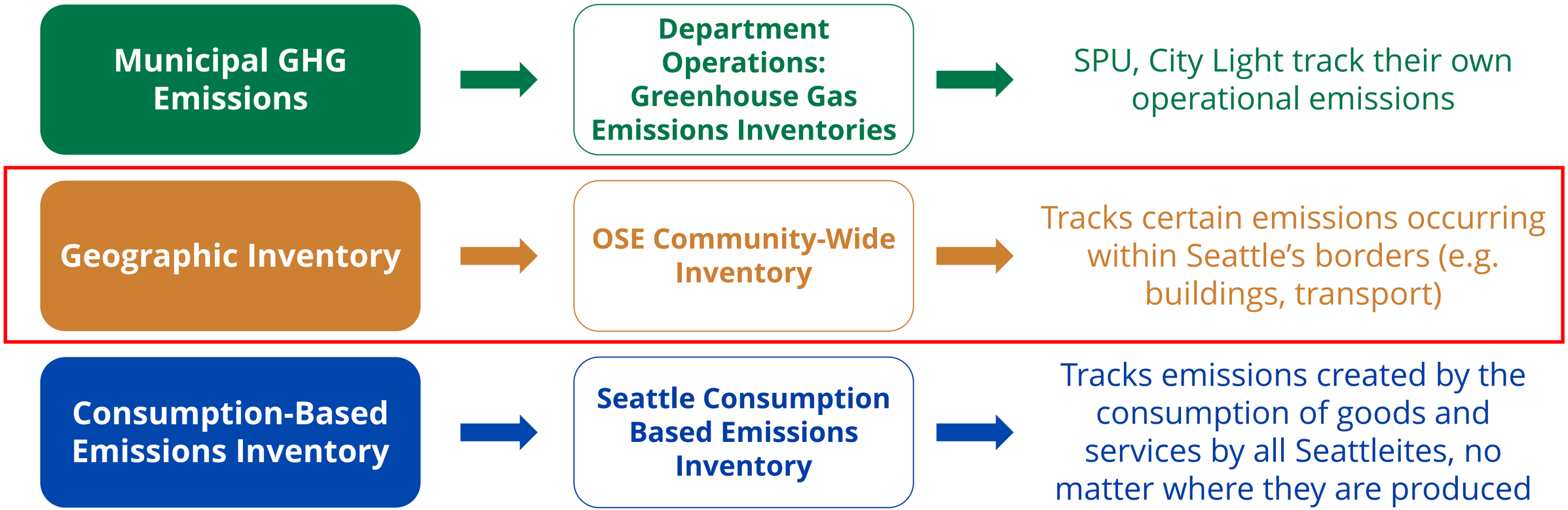
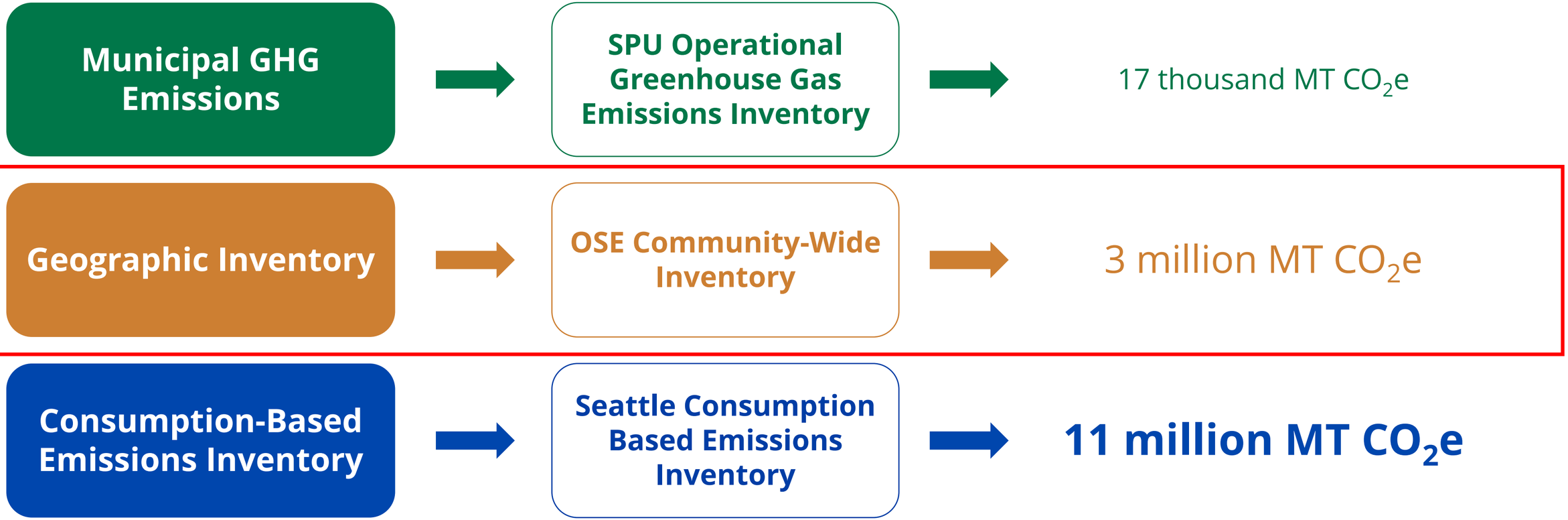
Seattle's approach to GHG inventories



Seattle's approach to GHG inventories



Seattle's geographic GHG inventory:
characteristics, comparisons & trends

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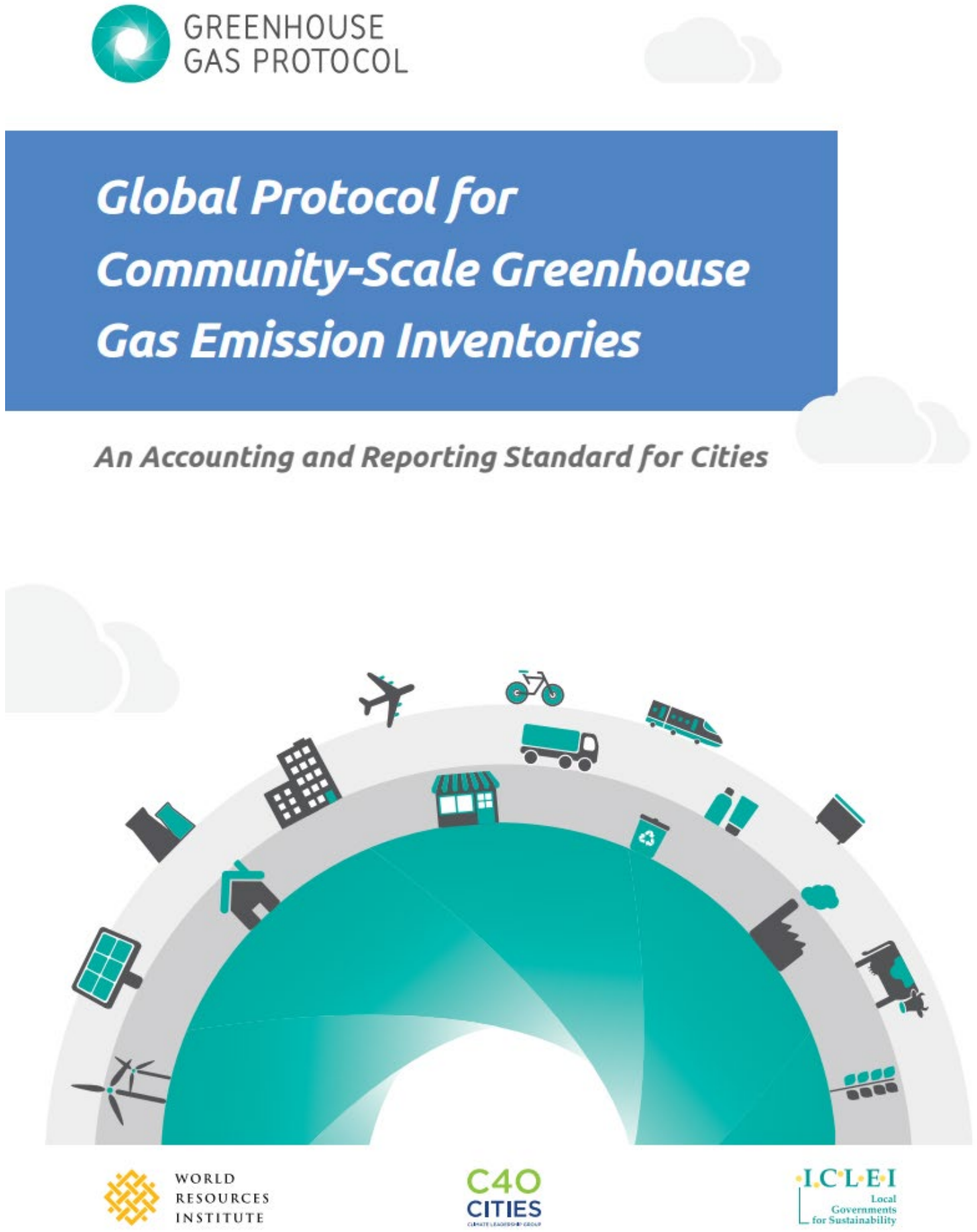
Global Protocol for Cities (GPC)

- Help cities develop a comprehensive and robust GHG inventory
- Help cities establish a base year emissions inventory, set reduction targets, and track their performance
- Ensure consistent and transparent reporting of emissions between cities



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Inventory scopes: tracking towards targets

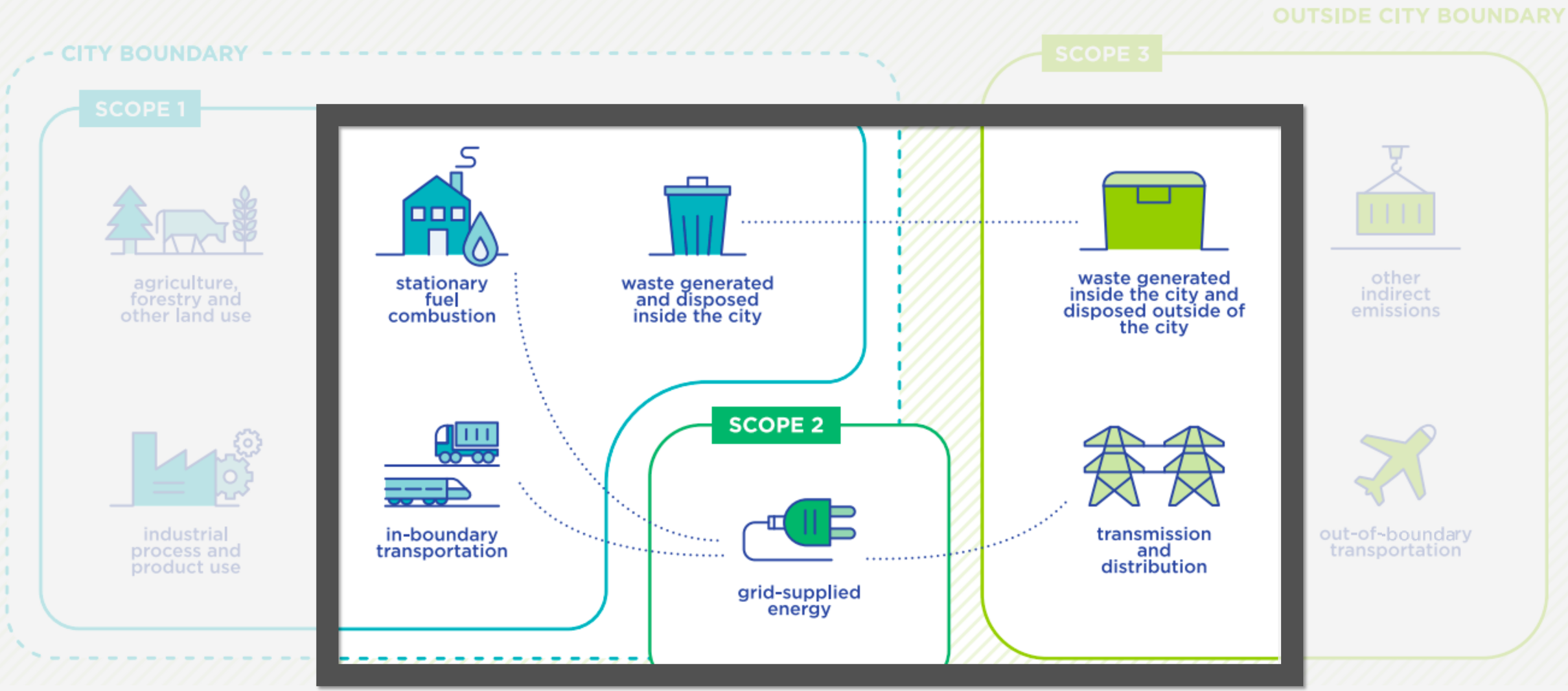
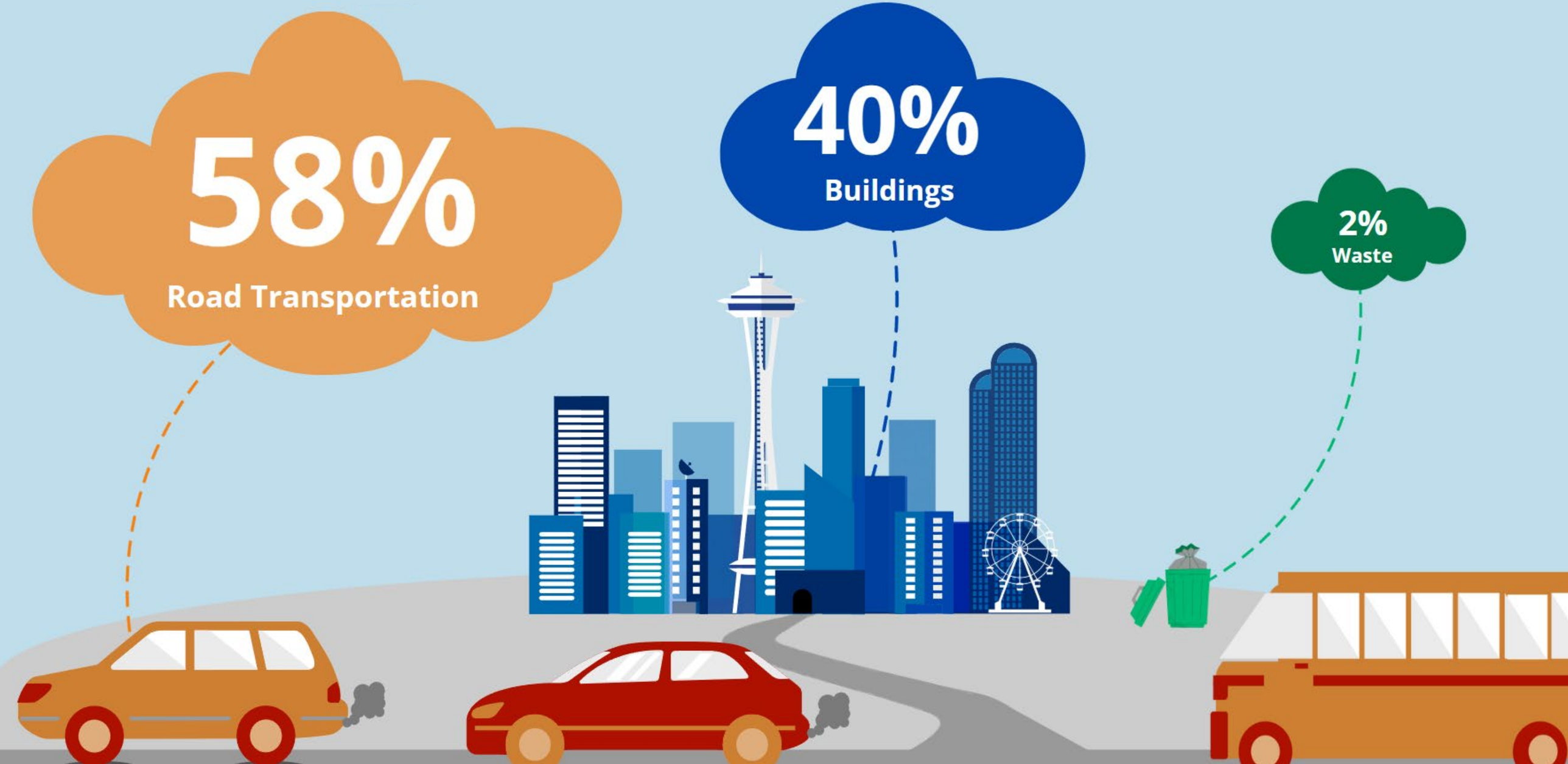
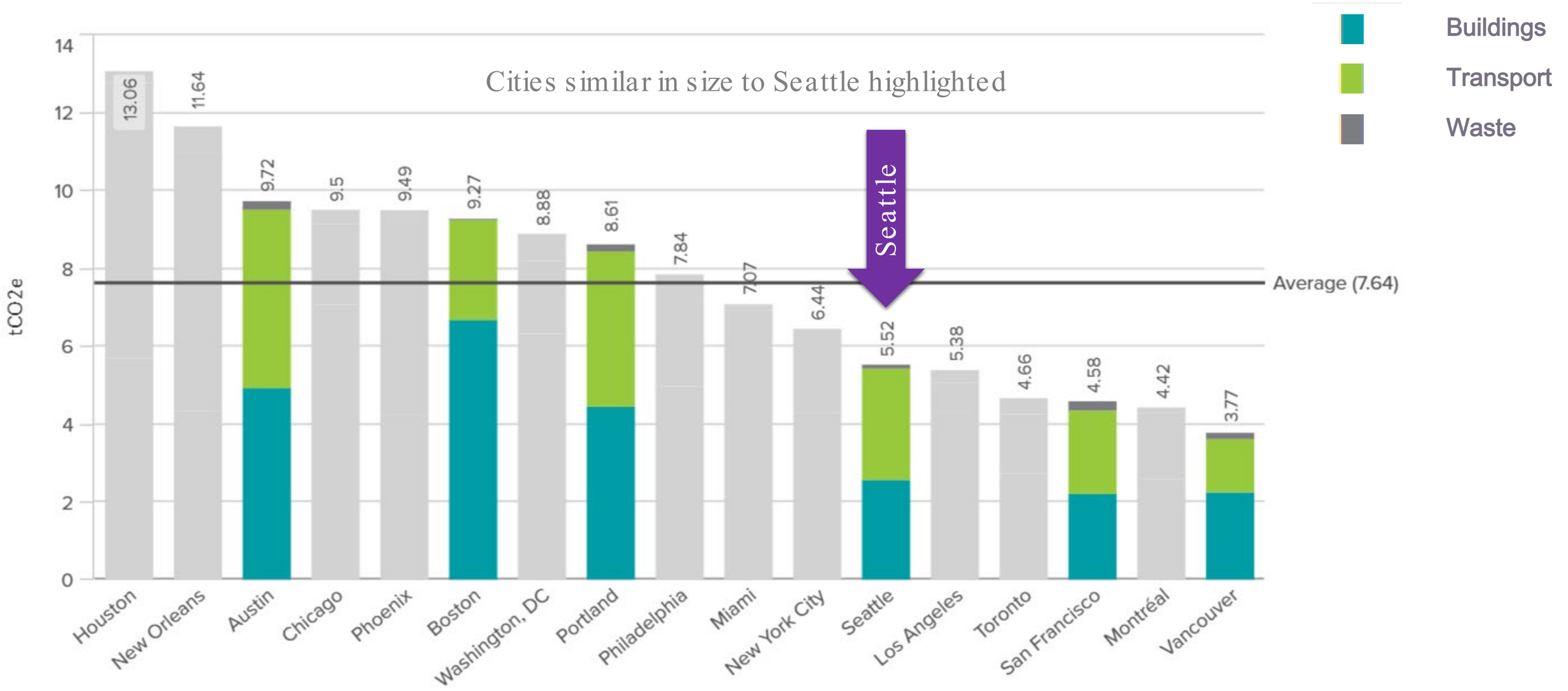


Image source: C40: https://www.c40knowledgehub.org/s/article/Consumption-based-GHG-emissions-of-C40-cities?language=en_US

Seattle’s primary emissions drivers



Per-capita emissions by city: North America



Source: https://www.c40knowledgehub.org/s/article/C40-cities-greenhouse-gas-emissions-interactive-dashboard?language=en_US

Summary: geographic inventory considerations

Benefits

- City-wide emissions estimates
- Tracks high-level progress towards reduction targets in our three key sectors
- Allows for comparison to other cities who are also required to compile inventories

Limitations

- Two years between report releases
- Not all emissions sources are tracked
- 18- to 24-month lag in data
- Uncertainty in some data sources
- Not enough data granularity to determine impacts of efforts at a local scale

2022 Inventory Data

Key Takeaways & Trends

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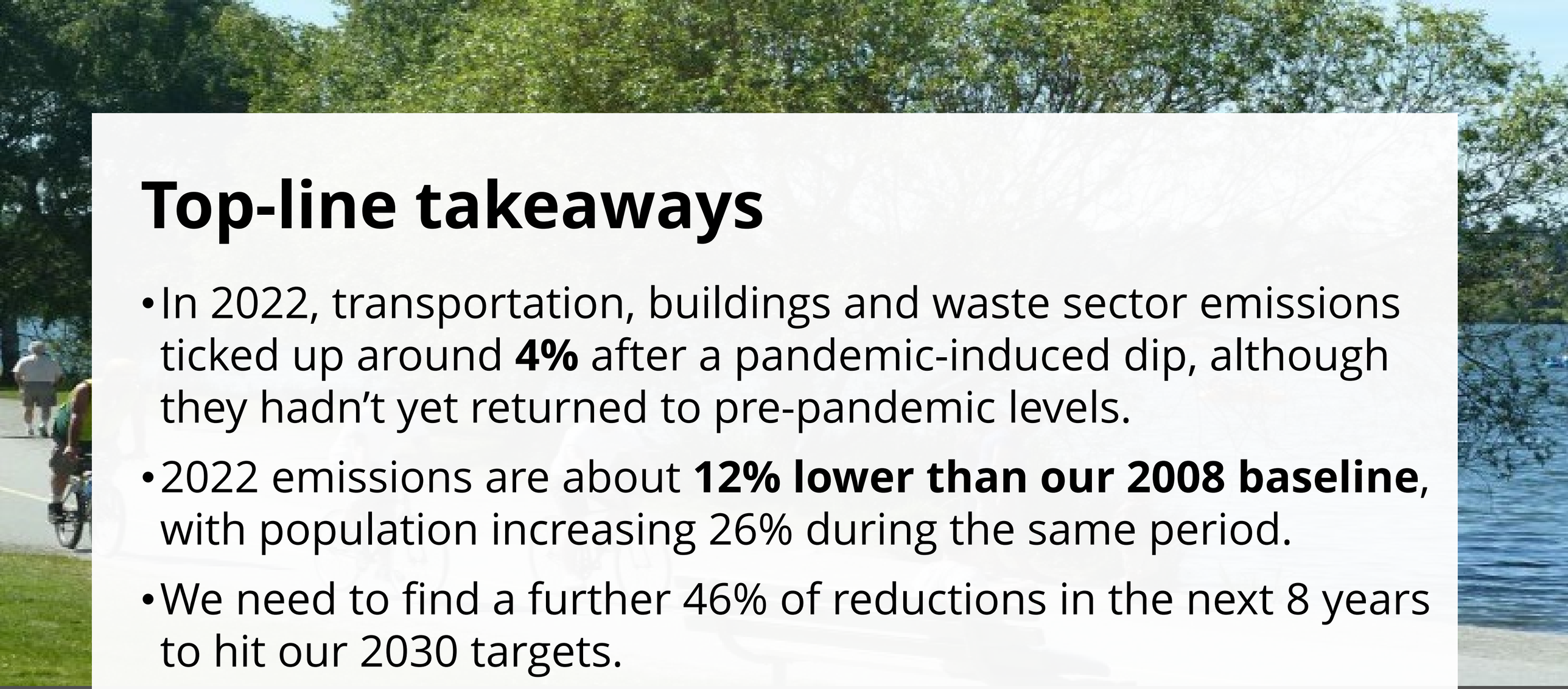
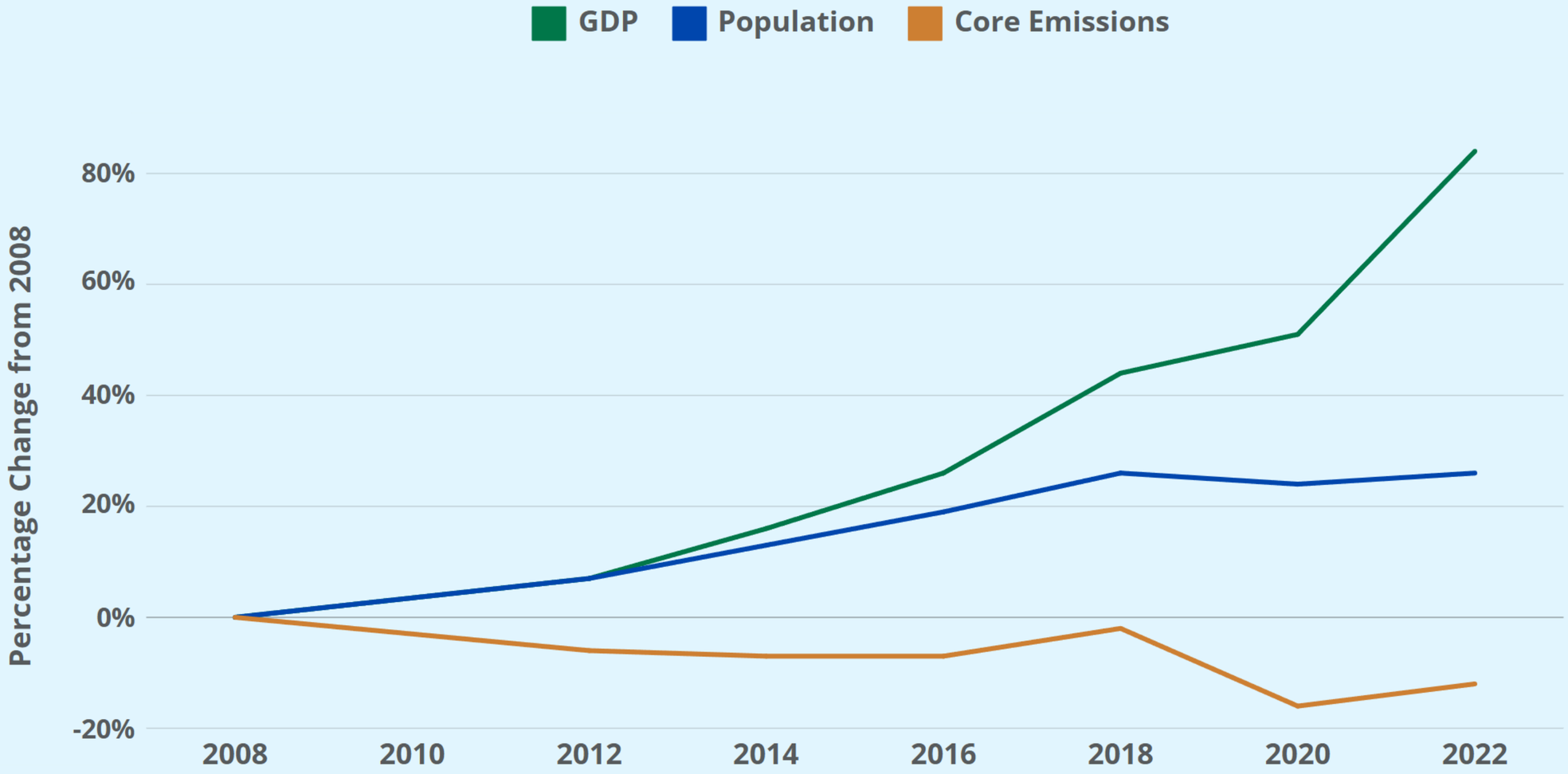


Top-line takeaways

- In 2022, transportation, buildings and waste sector emissions ticked up around **4%** after a pandemic-induced dip, although they hadn’t yet returned to pre-pandemic levels.
- 2022 emissions are about **12% lower than our 2008 baseline**, with population increasing 26% during the same period.
- We need to find a further 46% of reductions in the next 8 years to hit our 2030 targets.

Seattle's Core Emissions Compared to GDP and Population Growth



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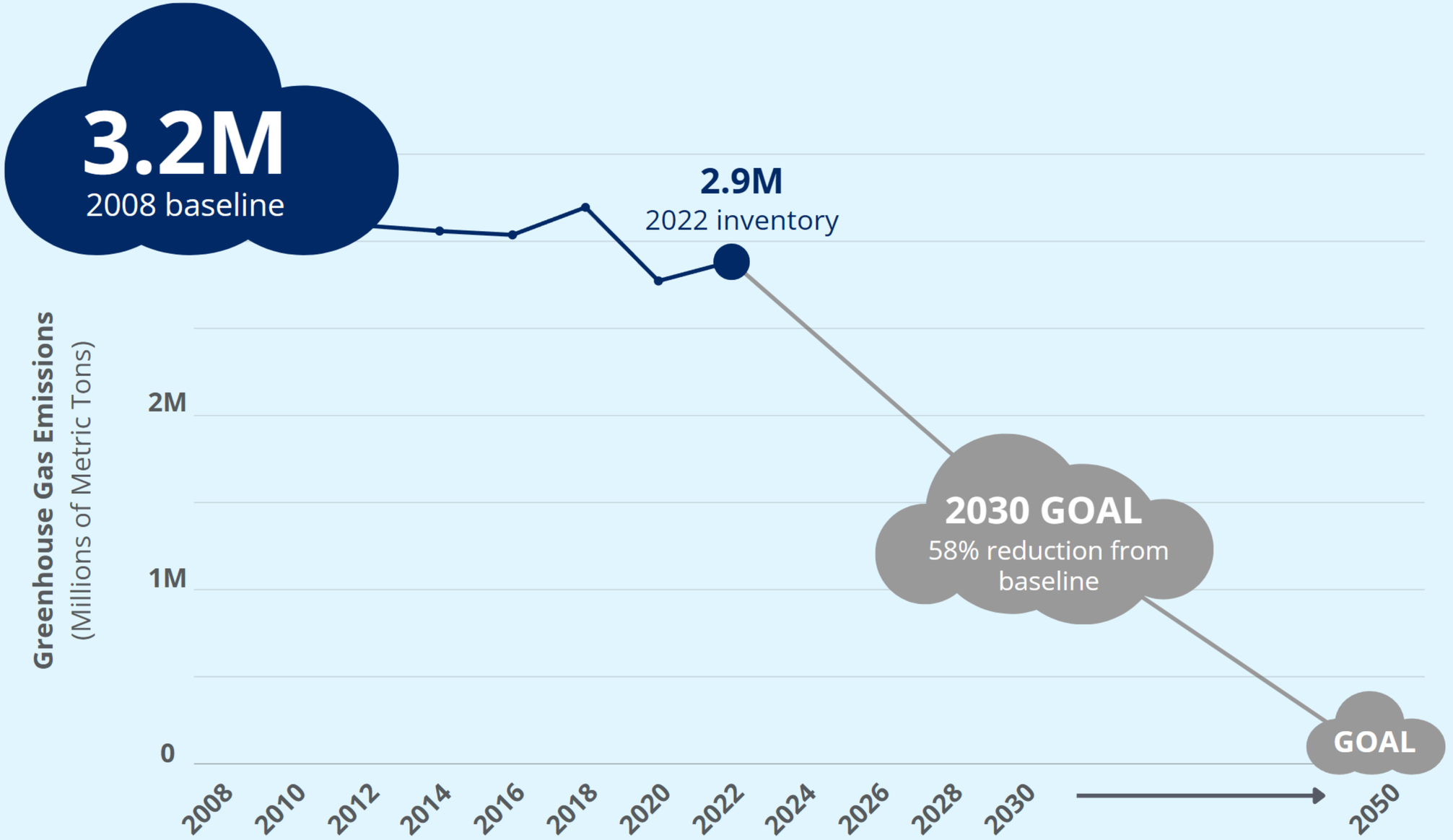
Core Emissions Reductions Needed



Note: *Greenhouse gas emissions are measured in Metric Tons or Megagrams of CO2e (carbon dioxide equivalent).*

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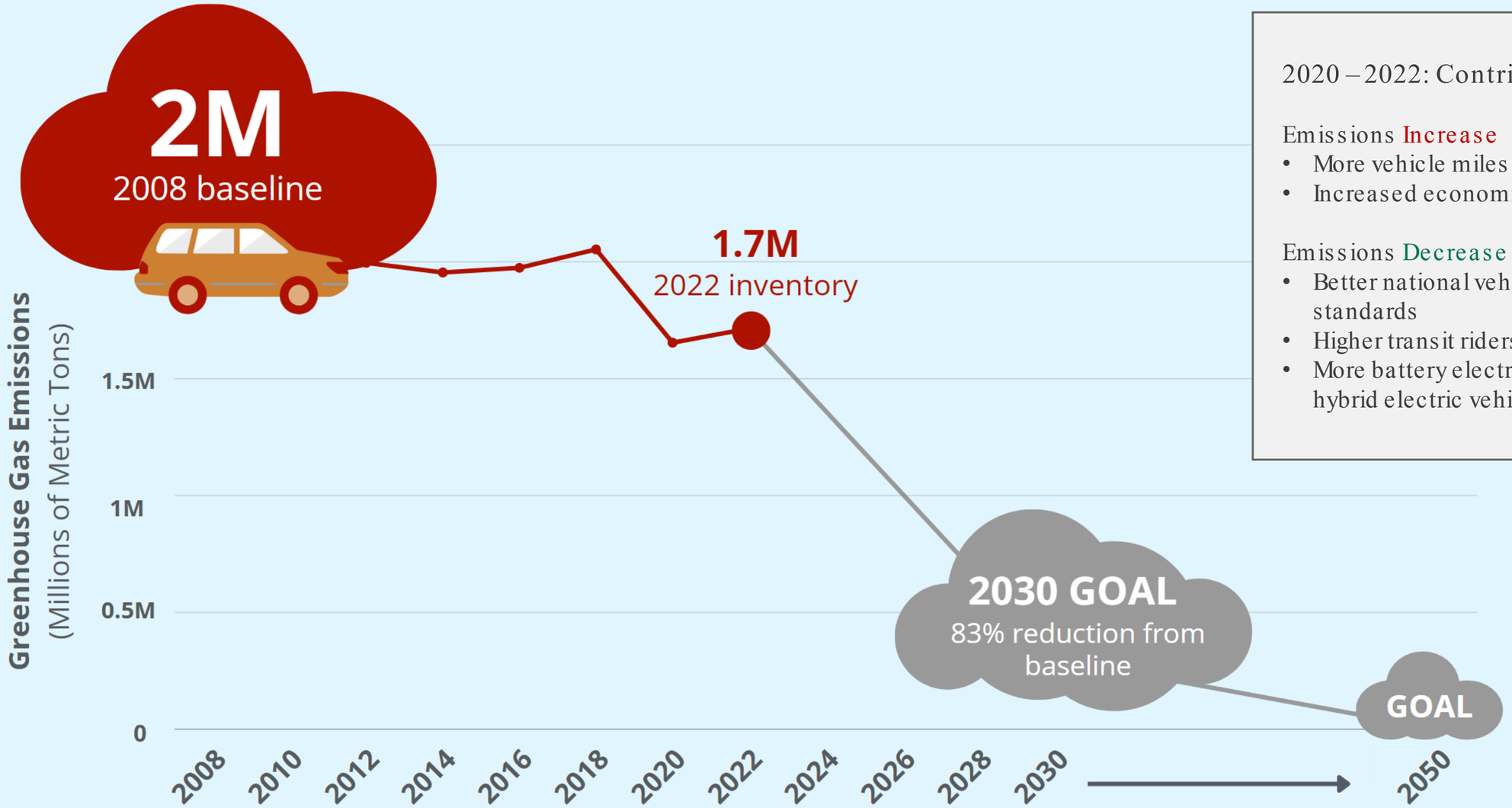
Transportation Emissions Reductions Needed



2020 – 2022: Contributing Factors

Emissions Increase
- More vehicle miles traveled (VMT)
- Increased economic &tourist activity

Emissions Decrease
- Better national vehicle fuel economy standards
- Higher transit ridership
- More battery electric and plug-in hybrid electric vehicle registrations

Note: *Greenhouse gas emissions are measured in Metric Tons or Megagrams of CO2e (carbon dioxide equivalent).*

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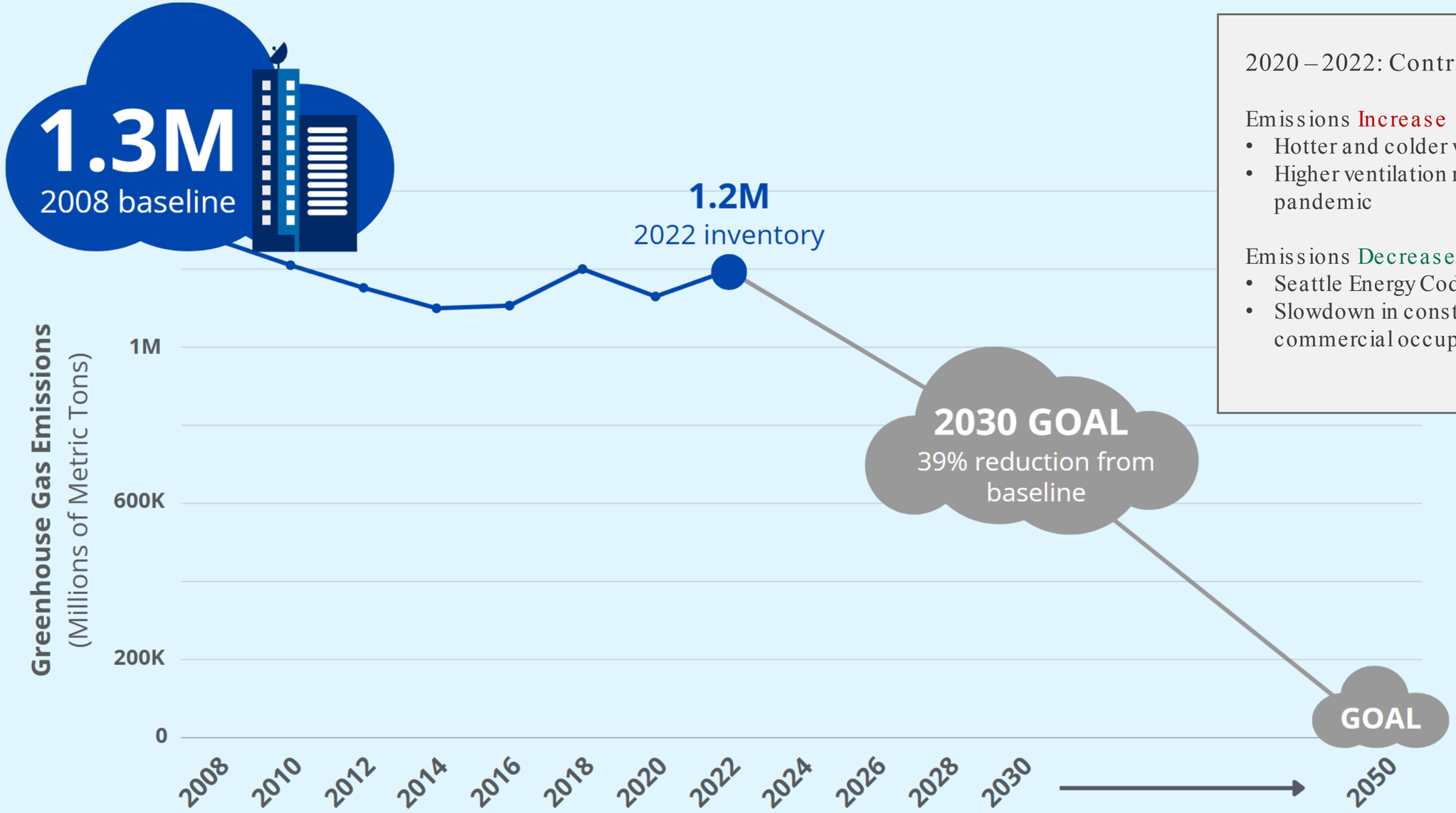
Building Energy Emissions Reductions Needed



2020 – 2022: Contributing Factors

Emissions Increase
- Hotter and colder weather
- Higher ventilation rates post-pandemic

Emissions Decrease
- Seattle Energy Code
- Slowdown in construction & commercial occupancy rates

Note: *Greenhouse gas emissions are measured in Metric Tons or Megagrams of CO2e (carbon dioxide equivalent).*

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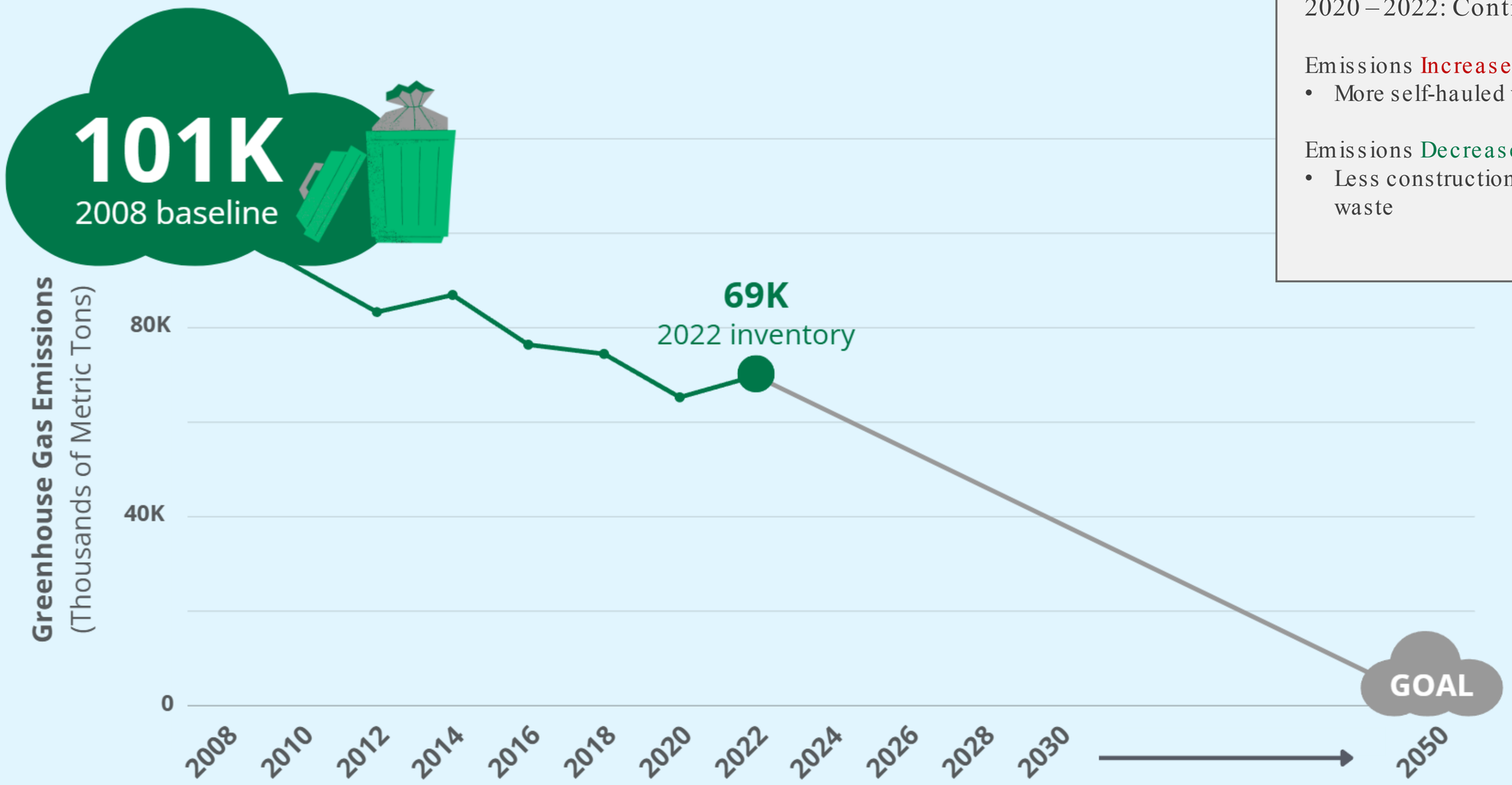
Waste Emissions Reductions Needed



2020 – 2022: Contributing Factors

Emissions Increase
- More self-hauled waste

Emissions Decrease
- Less construction & demolition waste

Note: *Greenhouse gas emissions are measured in Metric Tons or Megagrams of CO2e (carbon dioxide equivalent).*

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Progress & next steps

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Key Programmatic Highlights

Transportation:
- Low pollution neighborhoods
- Sound Transit expansion (ST3)
- 2024 Transportation Levy

Buildings:
- Building Emissions Performance Standard
- Clean Heat Program
- Resilience Hubs

Waste:
- SPU food waste prevention, construction alternatives
- Reusable food service items

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Climate Action Plan (CAP) Update

- 2013, Inaugural Seattle Climate Action Plan published
- Major policies and programs implemented between 2013-Now: Clean Heat Program, Building Emissions Performance Standard, & more
- 2025 Mayor Harrell State of City Address: Executive Order Announcement
- Updating Seattle's Climate Action Plan

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Thank you!

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