

# Climate and Environment Review: Framework and Recommendations Report

August 8, 2022

# Purpose

- ▶ THAT Council **receive, for information**, the staff report on the Climate and Environment Review;
- ▶ AND THAT Council **endorse the Framework and recommended initiatives** outlined in the *Climate Resilience & Environmental Stewardship Review: Framework and Recommendations Report*;
- ▶ AND FURTHER THAT Council **direct the City Manager to work with staff in bringing Recommendations and priority Quick Starts into the 2023 budget process.**

# Importance



**Greenhouse Gas Emissions**



**A Changing Climate**

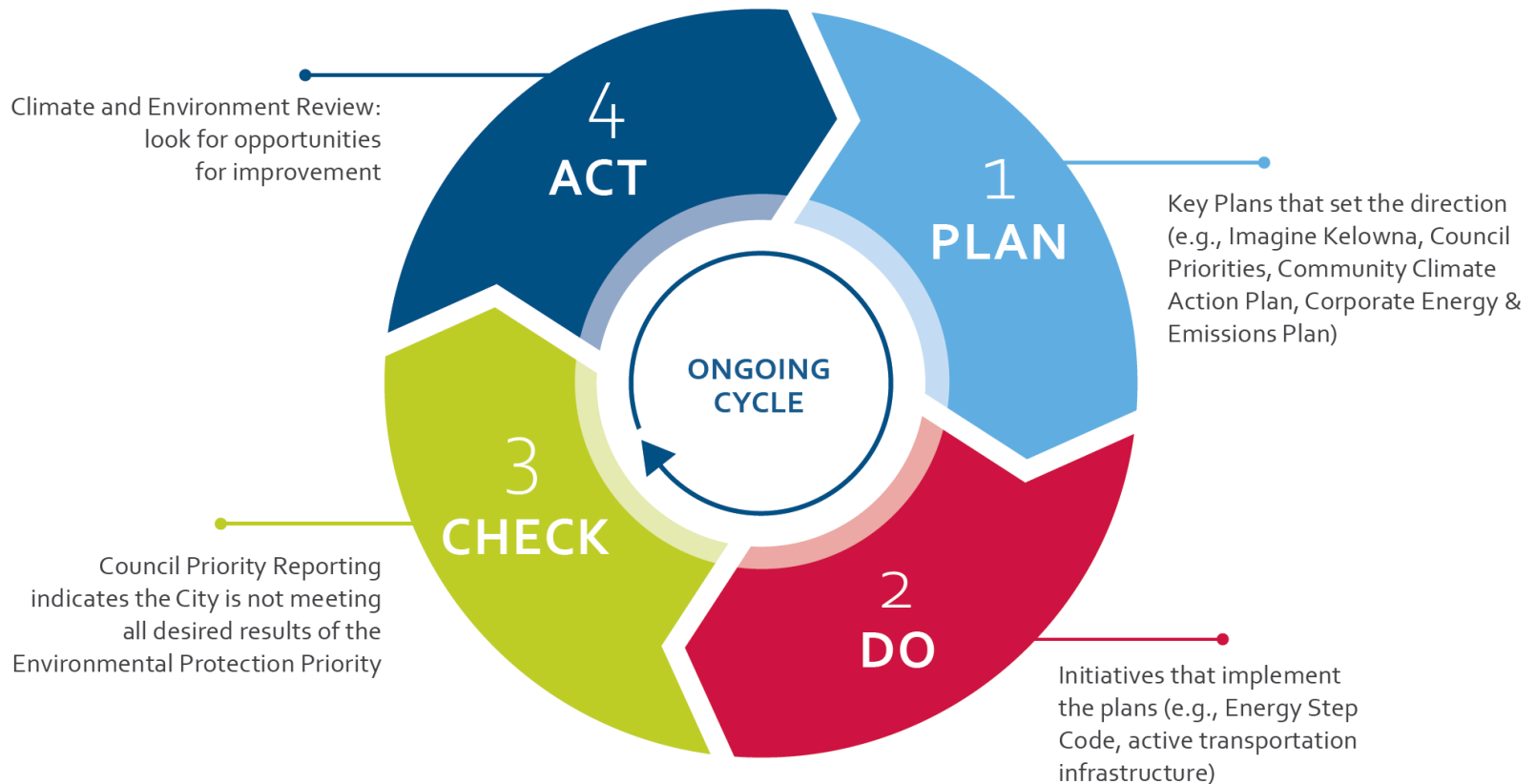


**Impacts on Natural Areas**



**Waste**

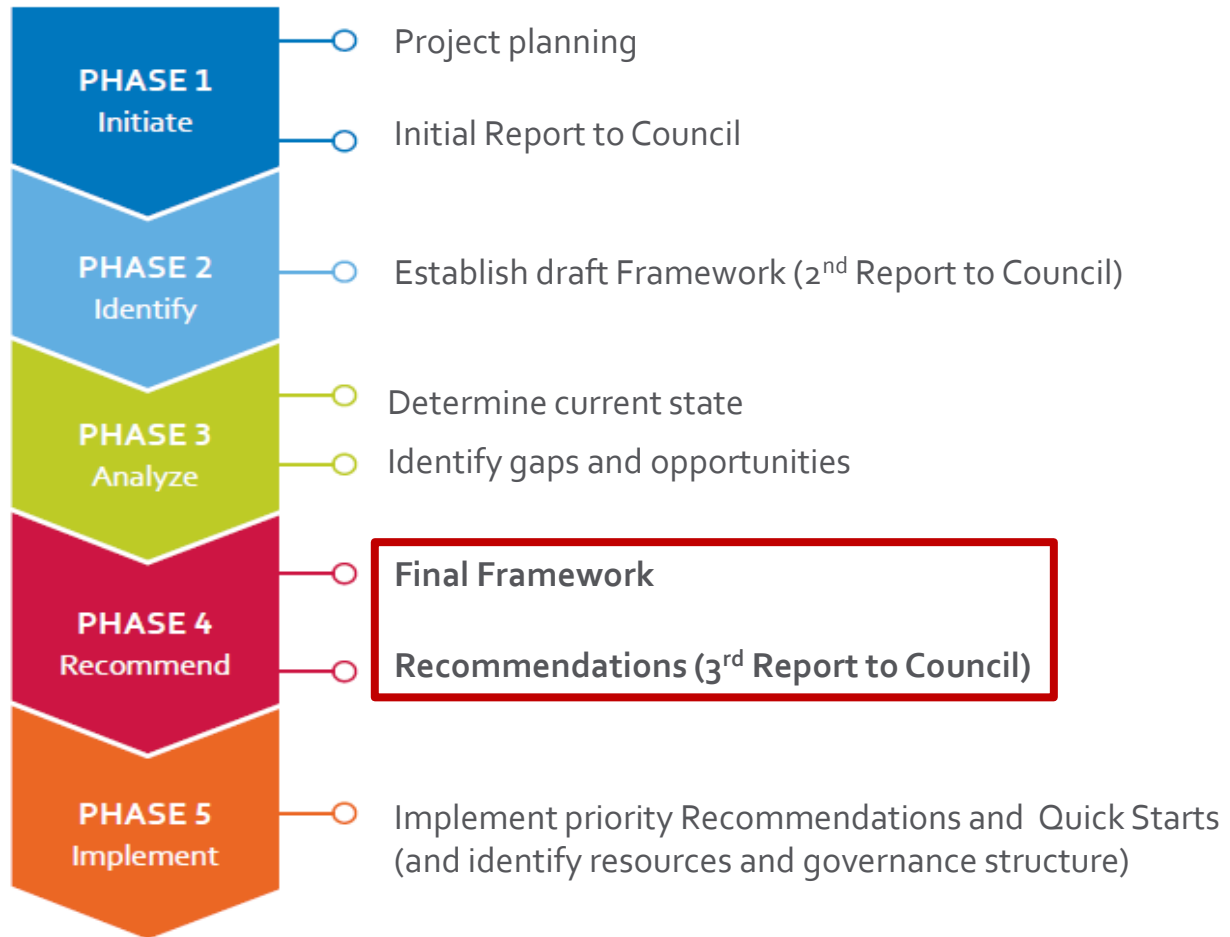
# Motivation



# Objectives

- ▶ **Establish a Framework** that will define and guide Climate Action & Environmental Stewardship (C&E) focal points.
- ▶ **Identify current gaps and future opportunities** to advance corporate C&E performance.
- ▶ **Develop recommendations/solutions** that, if implemented, will result in tangible progress related to the City's C&E objectives.

# Process

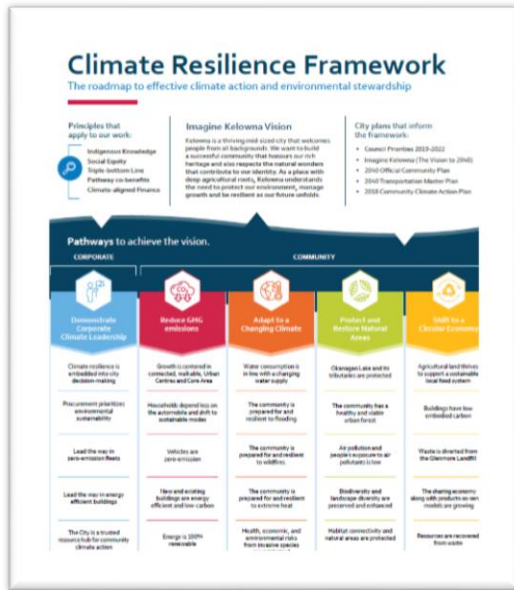




# Framework

The roadmap to effective climate action and environmental stewardship

# Framework



**Demonstrate Corporate Climate Leadership**



**Reduce community GHG emissions**



**Adapt to a Changing Climate**



**Protect Natural Areas**



**Shift to a Circular Economy**

“Kelowna is a thriving mid-sized city that welcomes people from all backgrounds. We want to build a successful community that honours our rich heritage and also respects the natural wonders that contribute to our identity. As a place with deep agricultural roots, Kelowna understands the need to protect our environment, manage growth and be resilient as our future unfolds.”



# Pathways



## Demonstrate Corporate Climate Leadership

- ▶ Climate Lens
- ▶ Sustainable Procurement
- ▶ Zero-Emission Fleet
- ▶ Low-Emission Buildings
- ▶ Supportive Resources



## Reduce community GHG emissions

- ▶ Walkable, Connected City
- ▶ Alternative Transportation
- ▶ Zero-Emission Vehicles
- ▶ Low-Emission Buildings
- ▶ Renewable Energy



## Adapt to a Changing Climate

- ▶ Water Conservation
- ▶ Flooding
- ▶ Wildfires
- ▶ Extreme Heat
- ▶ Invasive Species



## Protect Natural Areas

- ▶ Okanagan Lake
- ▶ Urban Forest
- ▶ Air Quality
- ▶ Biodiversity
- ▶ Healthy Ecosystems



## Shift to a Circular Economy

- ▶ Local Agriculture
- ▶ Embodied Carbon
- ▶ Waste Reduction and Diversion
- ▶ Resource Recovery from Waste
- ▶ Sharing Economy

# Principles

- ▶ Recognize the value of local **syilx Indigenous Knowledge**
- ▶ Consider **Social Equity** in decision-making and implementation
- ▶ Prioritize initiatives with **“triple-bottom-line” benefits**
- ▶ Prioritize initiatives with **co-benefits between Pathways**
- ▶ Balance **short-term savings with costs of inaction**



Source: Shaw et al. (2021). A Low Carbon Resilience Decision Tool for Local Government

# Use Cases

<b>Used For:</b>	<b>Used By:</b>
Policy and Plan Development	<ul style="list-style-type: none"> <li>• Staff</li> <li>• Council</li> </ul>
Decision-Making	<ul style="list-style-type: none"> <li>• Staff (Senior Leadership Team)</li> <li>• Council</li> </ul>
Action Plans	<ul style="list-style-type: none"> <li>• Staff</li> <li>• Neighbouring local governments</li> </ul>
Progress Reporting	<ul style="list-style-type: none"> <li>• Staff</li> <li>• Council</li> <li>• Public</li> </ul>
Communication	<ul style="list-style-type: none"> <li>• Everyone</li> </ul>
Applied Research	<ul style="list-style-type: none"> <li>• Academia</li> <li>• Non-Profits</li> </ul>

# Recommendations

A set of recommendations that outline opportunities and “Quick Starts” to advance the Framework

# Corporate Climate Leadership: Climate Lens

Gap	Recommendation	Quick Starts
Climate impacts and opportunities are not systematically considered in all City decisions	Apply a Climate Lens for decision making across the organization	<ul style="list-style-type: none"><li>• Develop a climate lens decision making tool</li><li>• Develop an internal carbon price to guide climate-friendly purchasing</li></ul>



# Corporate Climate Leadership - Green Standards

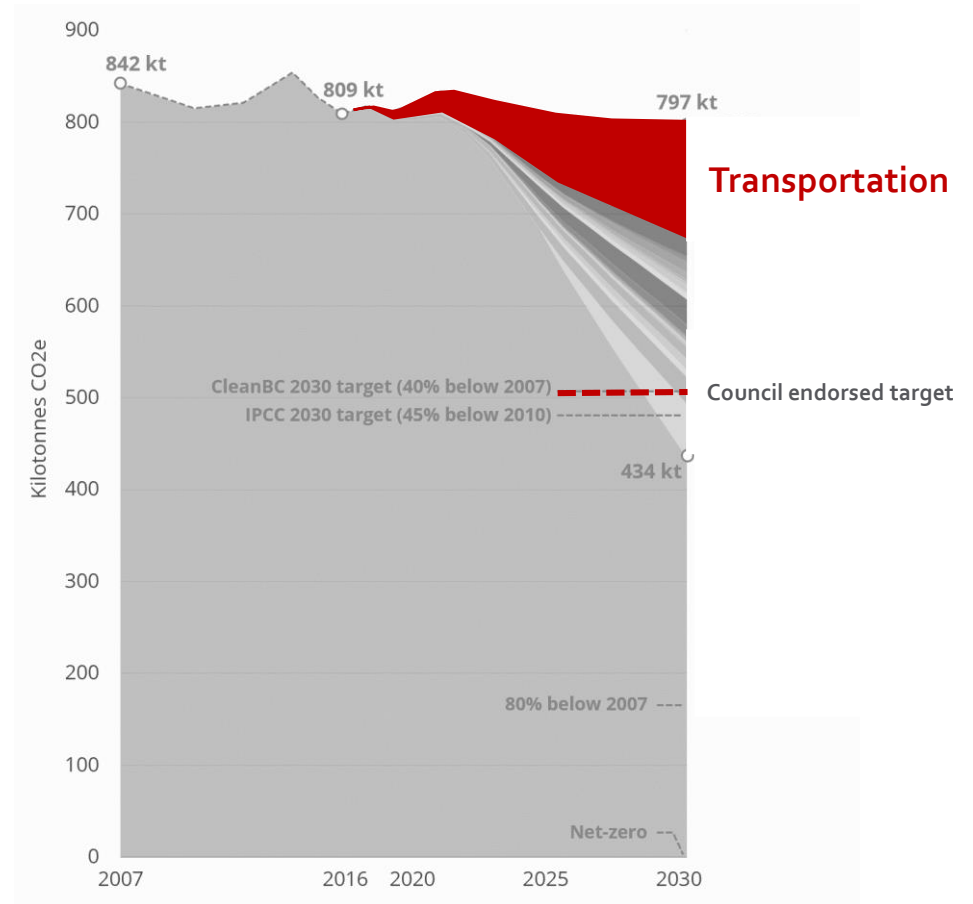
Gap	Recommendation	Quick Start
No standards to ensure new buildings and renovations to existing buildings are built to a defined energy or emissions standard	Develop 'green' standards for City facilities	Develop and apply a sustainable building policy for <u>new</u> City buildings





# Reduce GHG Emissions - Transportation

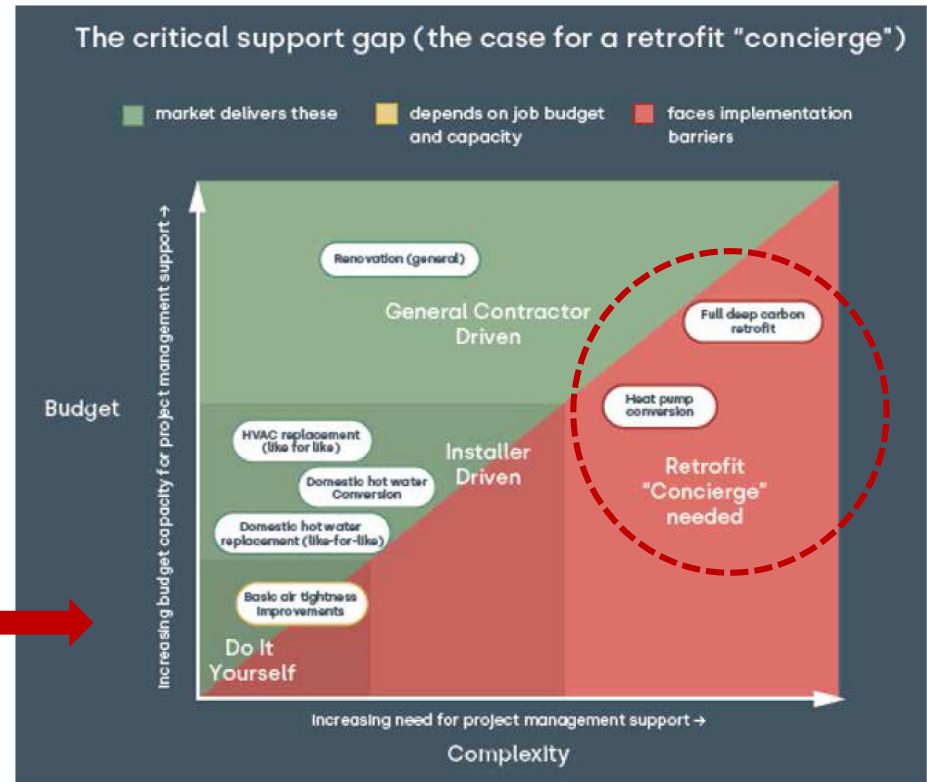
<b>Gap</b>	Emissions reductions not at level needed to meet targets
<b>Recommendation</b>	Prioritize efforts to decarbonize Kelowna's biggest source of emissions: Transportation
<b>Quick Starts</b>	<ul style="list-style-type: none"> <li>• Continue to invest in transit service and active transportation infrastructure per the TMP</li> <li>• Fund and implement Transportation Demand Management Initiatives</li> <li>• Support the shift to EVs through a vast charging network</li> </ul>





# Reduce GHG Emissions - Resilient Retrofits

<b>Gap</b>	<ul style="list-style-type: none"> <li>Retrofits not occurring at the required rate and scale</li> <li>Climate resilience measures not included in retrofit programming</li> </ul>
<b>Recommendation</b>	Bring together energy and resilience into one Home Retrofit Program
<b>Quick Starts</b>	<ul style="list-style-type: none"> <li>Continue to design a home retrofit program through FCM Community Efficiency Financing Program</li> <li>Pilot a <b>Home Energy Concierge</b> support service</li> <li>Direct incentives to proven low-carbon technologies</li> </ul>



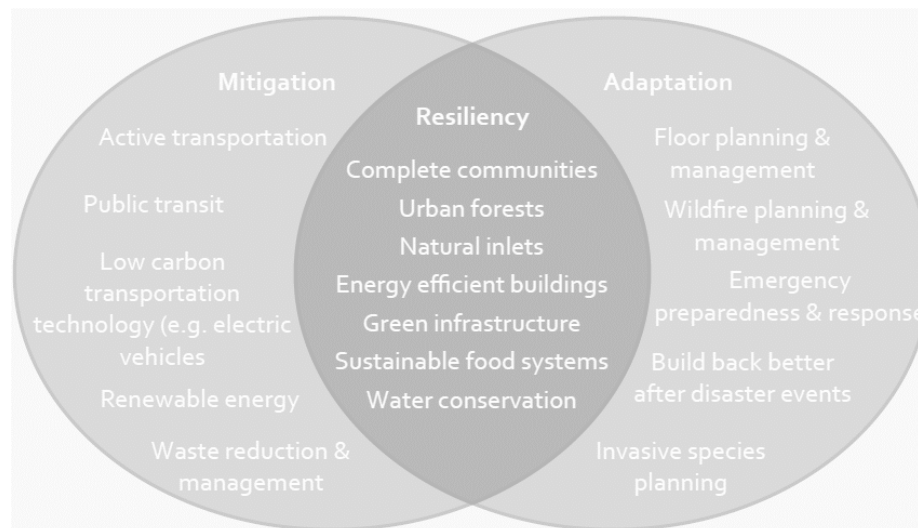
Source: OPEN Technologies & VanCity (2022). Stuck.





# Adapt to a Changing Climate - Resilience Strategy

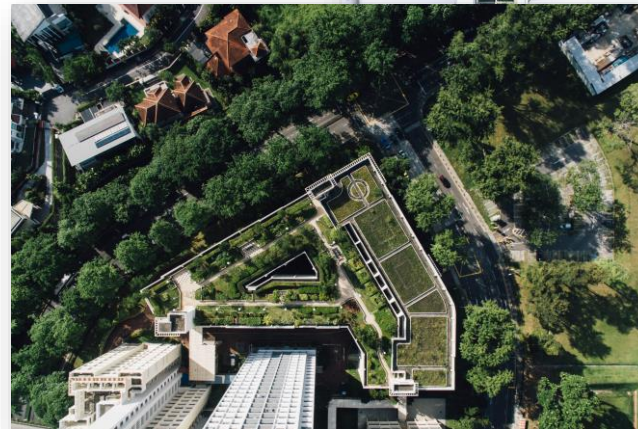
Gap	Recommendation	Quick Start
Climate adaptation planning has not occurred at the community level, considering all potential climate impacts	Combine Climate Mitigation and Adaptation into one Strategy	Complete a Community Climate Vulnerability and Risk Assessment





# Adapt to a Changing Climate - Green Infrastructure

Gap	<ul style="list-style-type: none"><li>• No systematic, coordinated approach to green and blue infrastructure</li><li>• No value from roof space</li></ul>
Recommendation	Develop a strategy to expand blue and green infrastructure
Quick Start	Explore options to incorporate climate resilience in roof space for new construction



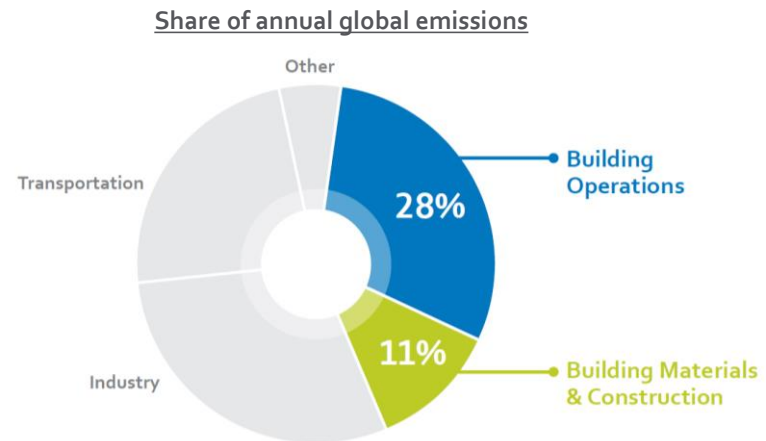
# Protect Natural Areas: Regional Response

Gap	Recommendation	Quick Start
<p>Many recommended initiatives from regional strategies related to the natural environment not addressed by the City</p>	<p>Develop a Natural Environment Strategy with City responses to key regional or provincial plans and strategies</p>	<p>Inventory and develop City responses to regional and provincial natural environment strategies. For example:</p> <ul style="list-style-type: none"><li data-bbox="1263 686 1746 791">• Okanagan Region Biodiversity Strategy</li><li data-bbox="1263 815 1760 976">• kłúsŋnítkw (Okanagan Lake) Responsibility Planning Initiative</li><li data-bbox="1263 1001 1798 1215">• Central Okanagan Non-Structural Flood Mitigation Resource Guide</li></ul>

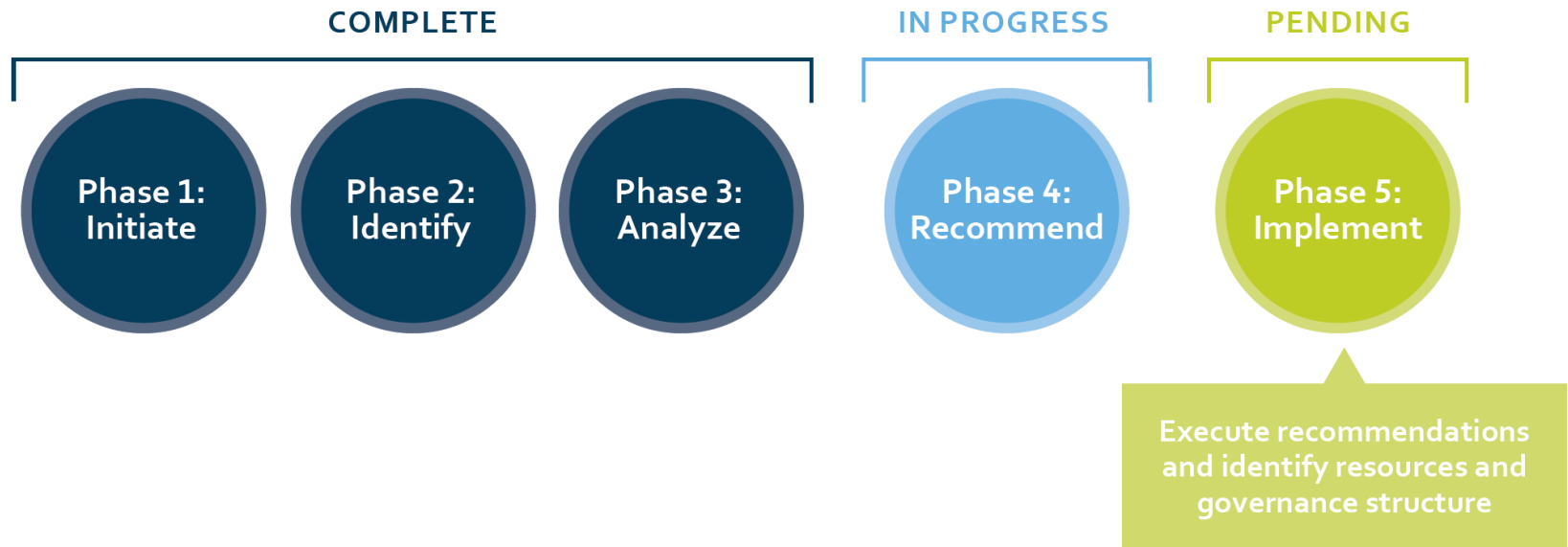


# Shift to a Circular Economy - Construction Waste

Gap	Recommendation	Quick Start
~35-40% of waste disposed at the landfill is construction and demolition debris (CDD)	Focus waste reduction diversion efforts on CDD	<ul style="list-style-type: none"><li>• Complete a CDD Reuse &amp; Recycling Feasibility Study</li><li>• Explore policy for low-carbon concrete</li></ul>



# Next Steps





Questions?