



# Climate budget

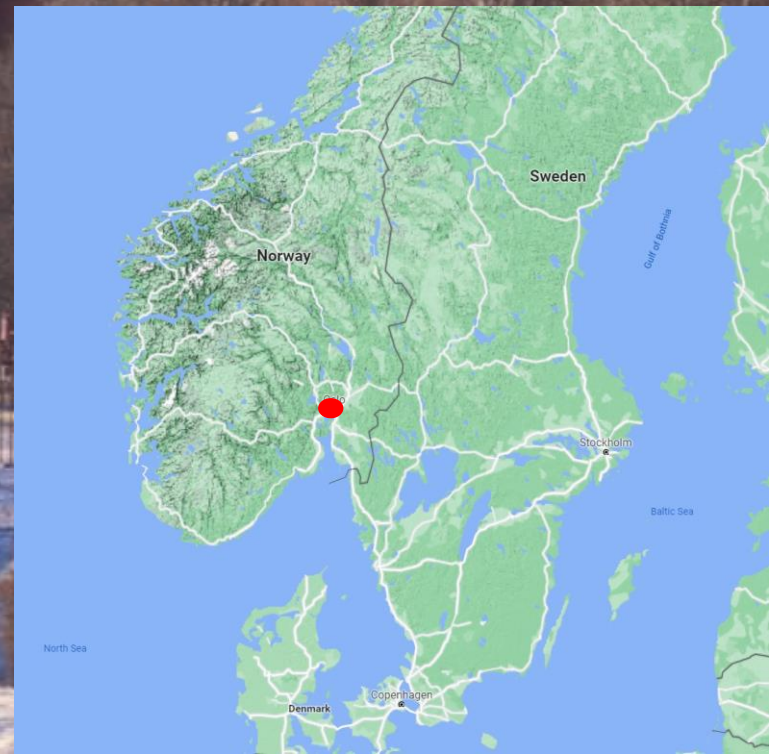
Astrid Landstad  
City of Oslo



# Outline

- ▶ Introduction to Oslo and our climate goals
- ▶ Introduction to the Climate budget
- ▶ Greenhouse gas emissions in Oslo and the Climate budget analysis for 2022
- ▶ Organization, monitoring and reporting
- ▶ Lessons learned







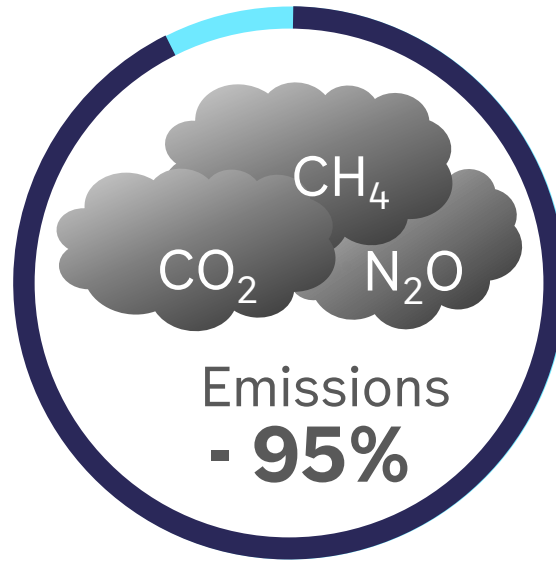
# Oslo has set ambitious climate policy targets

Adaptation



2030

Mitigation



2030



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# CLIMATE STRATEGY 2030

- ▶ Reduce climate emissions with 95 percent by 2030
- ▶ Increase natural capture of CO<sub>2</sub>
- ▶ Reduce total energy consumption
- ▶ Strengthen the city's climate resilience
- ▶ Reduce the city's climate footprint
- ▶ Develop and implement climate governance



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# How do we implement?



# Oslo's Climate budget







City of Oslo  
Municipality of Oslo



# CLIMATE BUDGET

- an efficient governance system

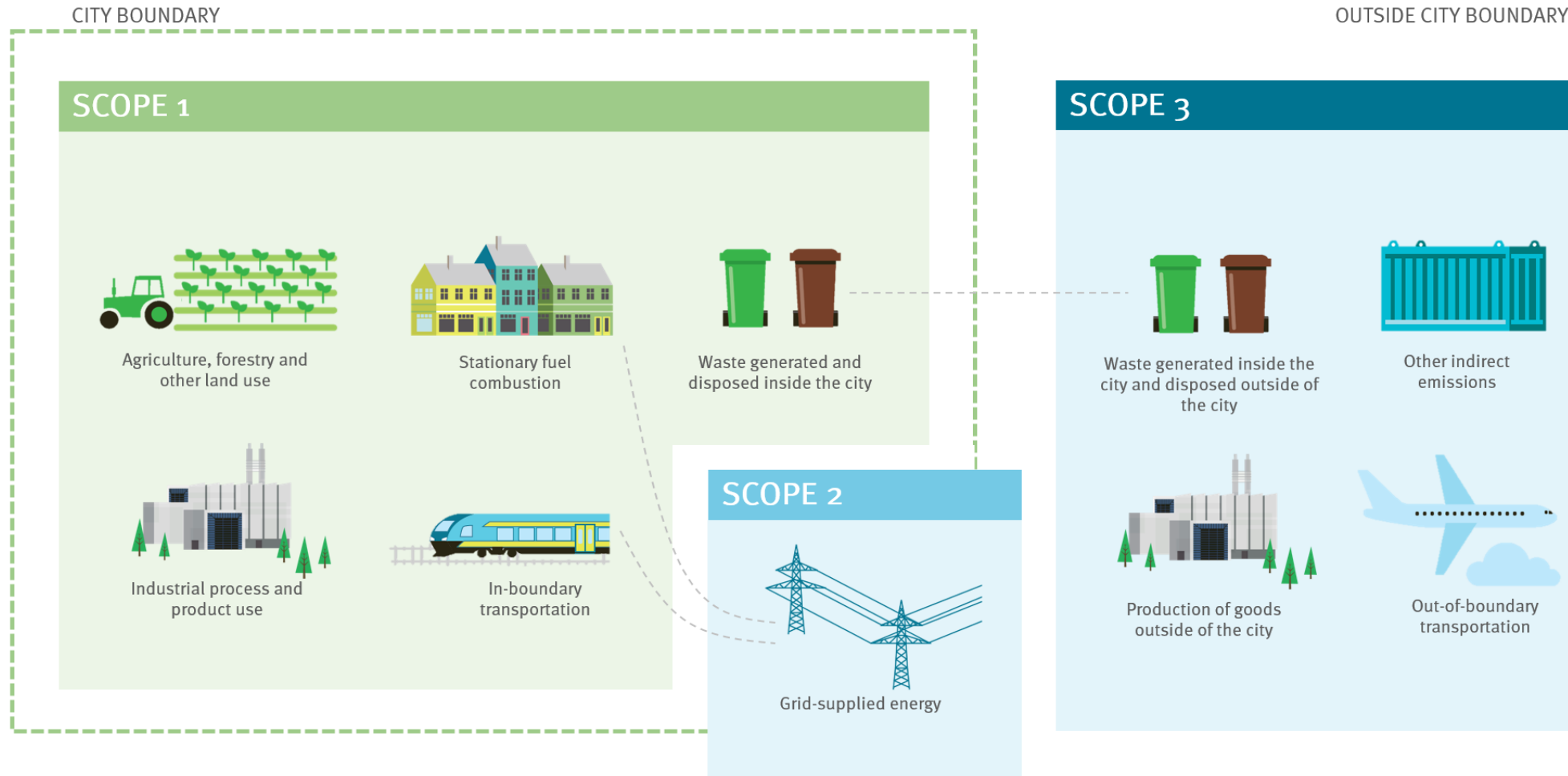
- ♦ Integrated in the ordinary municipal budget
- ♦ Identifies emission reduction measures
- ♦ Identifies costs and responsible unit for implementation
- ♦ Reporting as part of the ordinary budget cycle



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# Oslo's measures address both direct and indirect GHG emissions



Important to work on reducing both our direct emissions and our entire footprint.

Keep them separate in measurement and accounting.

Climate budget includes only scope 1.

# SCOPE AND SYSTEM BOUNDARIES

- ▶ Direct emissions (scope 1)
- ▶ Geographical area
  - not only the city administration
- ▶ Includes all emission sectors in available statistics
- ▶ Combination of national, regional and local measures
- ▶ Combination of quantified and non-quantified measures





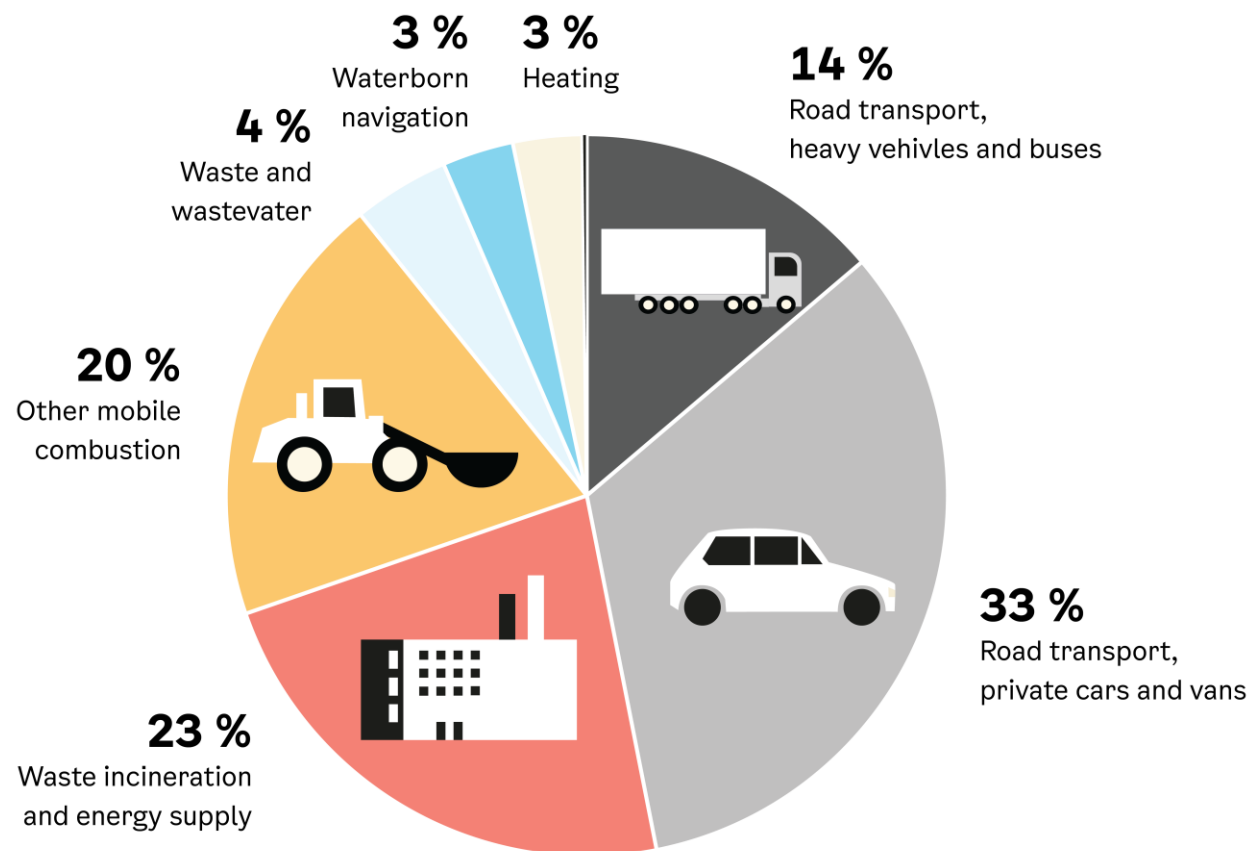
# Greenhouse gas emissions in Oslo and the climate budget analysis



# Greenhouse gas emissions in Oslo

## Most important sectors

- ▶ Road transport
- ▶ Waste incineration
- ▶ Other mobile combustion





# Climate budget analysis 2022

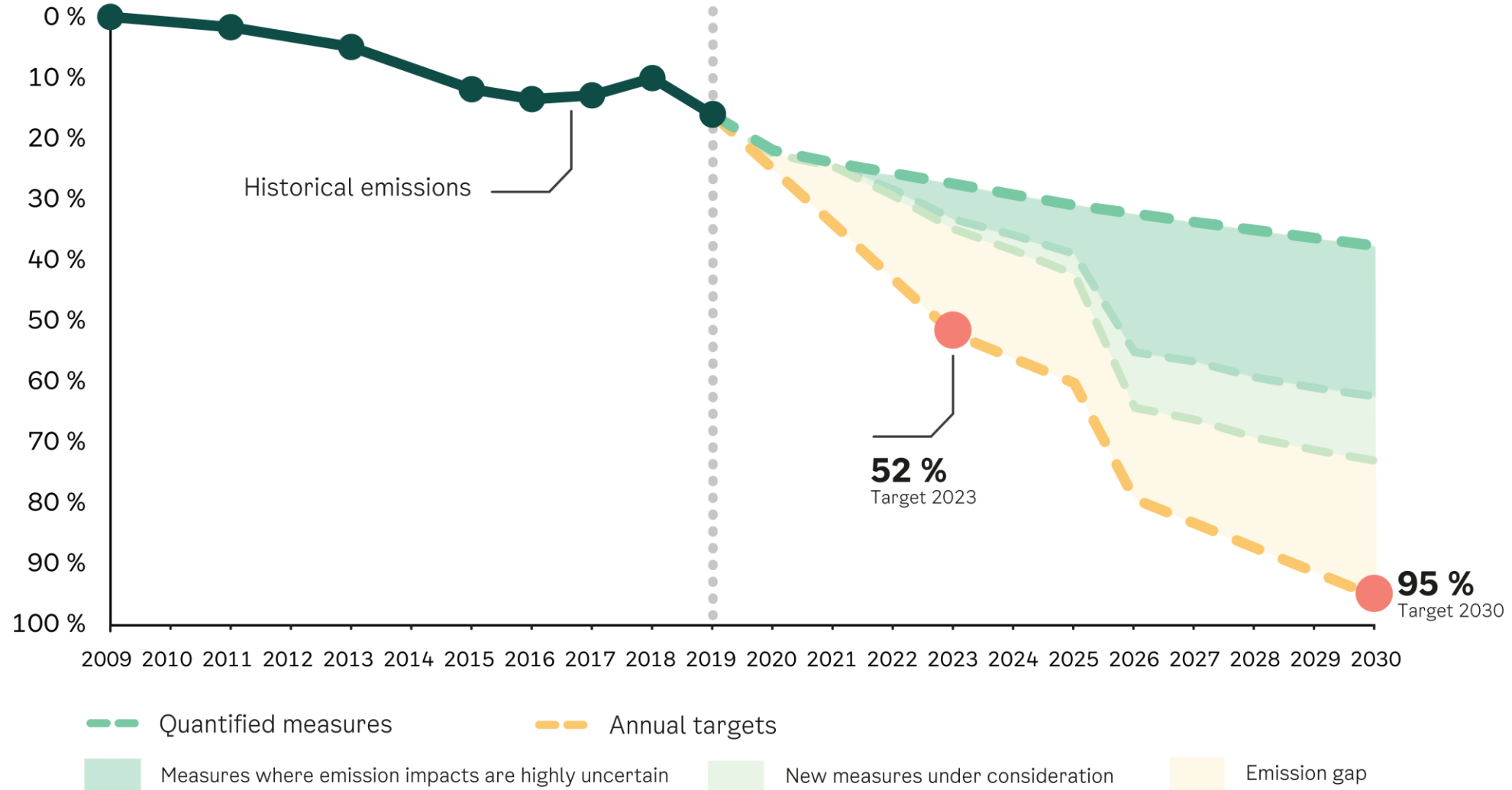




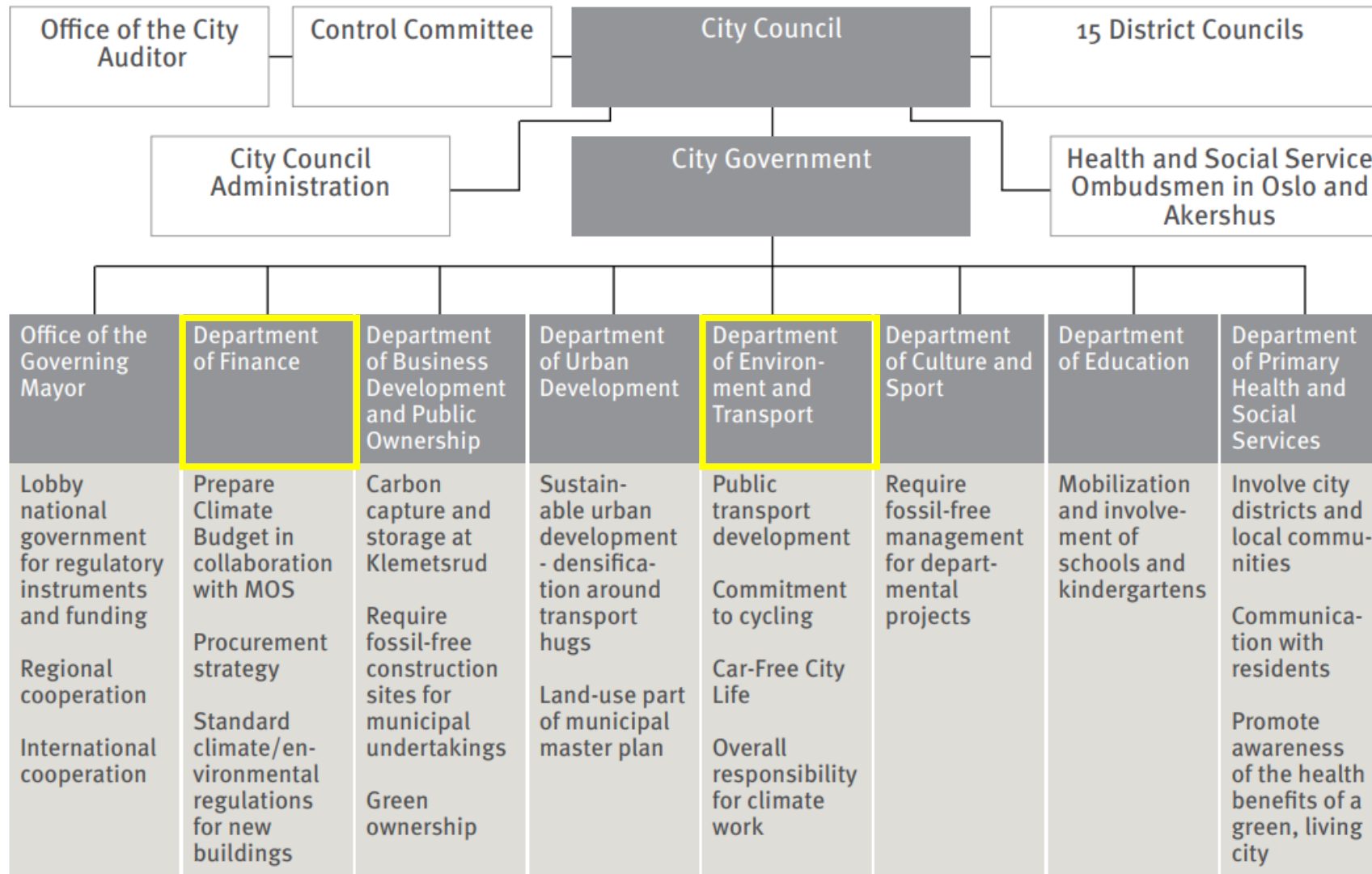
Table 2.2a – Measures with quantified emissions reduction

Emissions sector and source	No.	Measures and instruments	Responsibility <sup>2</sup>	Effect 2021 (t CO <sub>2</sub> e)	Effect 2024 (t CO <sub>2</sub> e)
Heating					
Fossil fuel heating	1	Phasing out of oil-fired heating in buildings - Governmental ban from 1 January 2020 - Phasing out of oil-fired heating in municipal buildings	BYM*	Included in projection	
Waste incineration and energy supply					
District heating excluding waste incineration	2	Phasing out of fossil oil and gas in district heating (peak load) in 2020 - Objective Fortum Oslo Varme AS	NOE*	2,700	2,500
Road transport					
Light and heavy vehicles	3	National requirement for sale of 20% biofuel		Included in projection	
Charging and monitoring	4	Introduction of new road toll payment system - Establish sufficient charging infrastructure for passenger cars - Continuation of local and regional instruments to promote zero-emissions cars - Exemption from road toll payment for electric vans	BYM* MOS MOS	Included in projection	
	5	Zero emissions/sustainable biofuel in municipal vehicles	All*, UKE*	1,700	1,700
	Private cars	6	Better facilities for cycling - Follow up the cycling strategy	MOS, BYM*	1,700
	7	Legislation for taxis: zero emissions by 2025 - Contribute to establishing sufficient charging infrastructure for taxis - Subsidy scheme for charging infrastructure for taxis - Reserve some taxi stands for zero-emissions taxis	BYM* KLI* BYM*	1,000	12,700

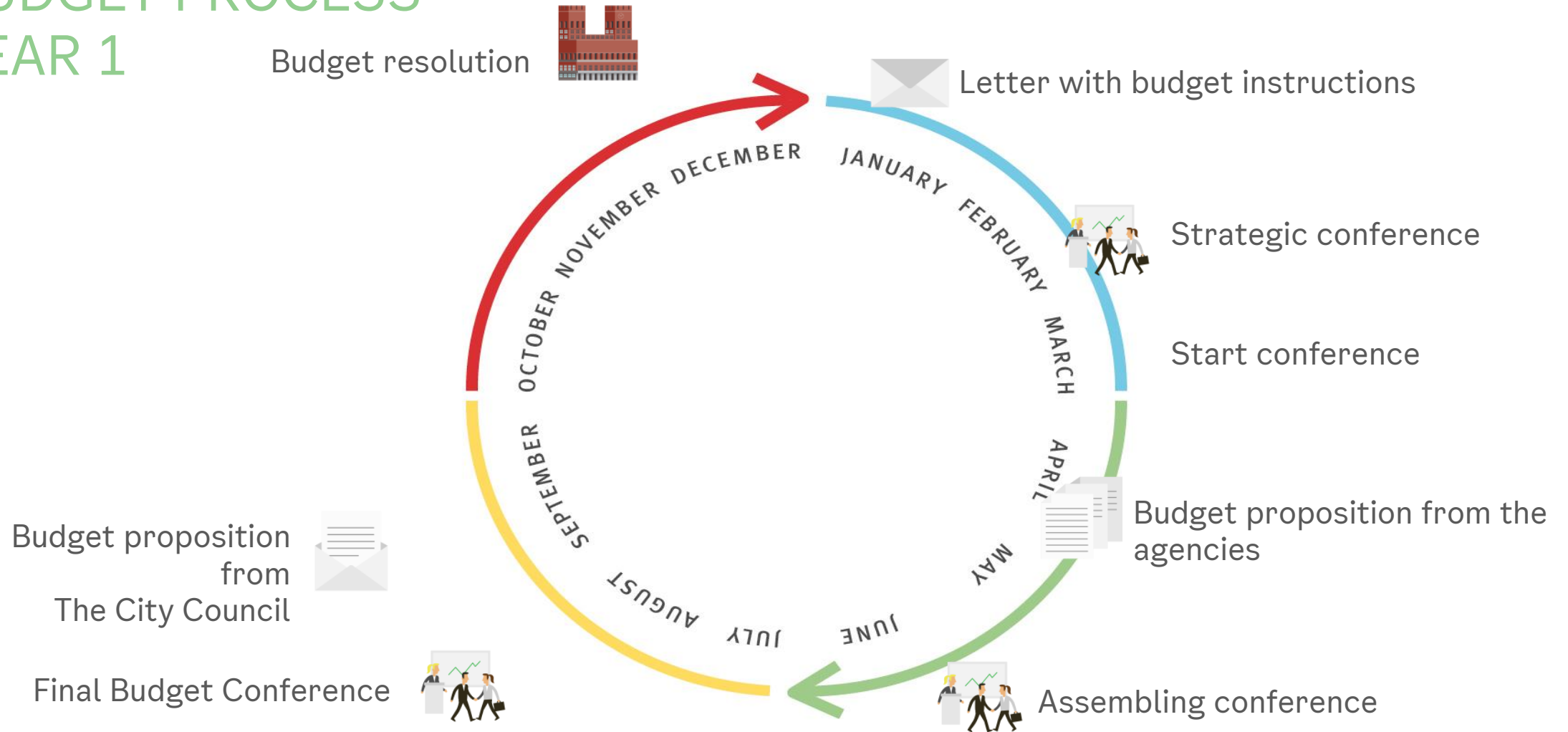


# Organization, monitoring and reporting

# Organisation of the climate work in Oslo

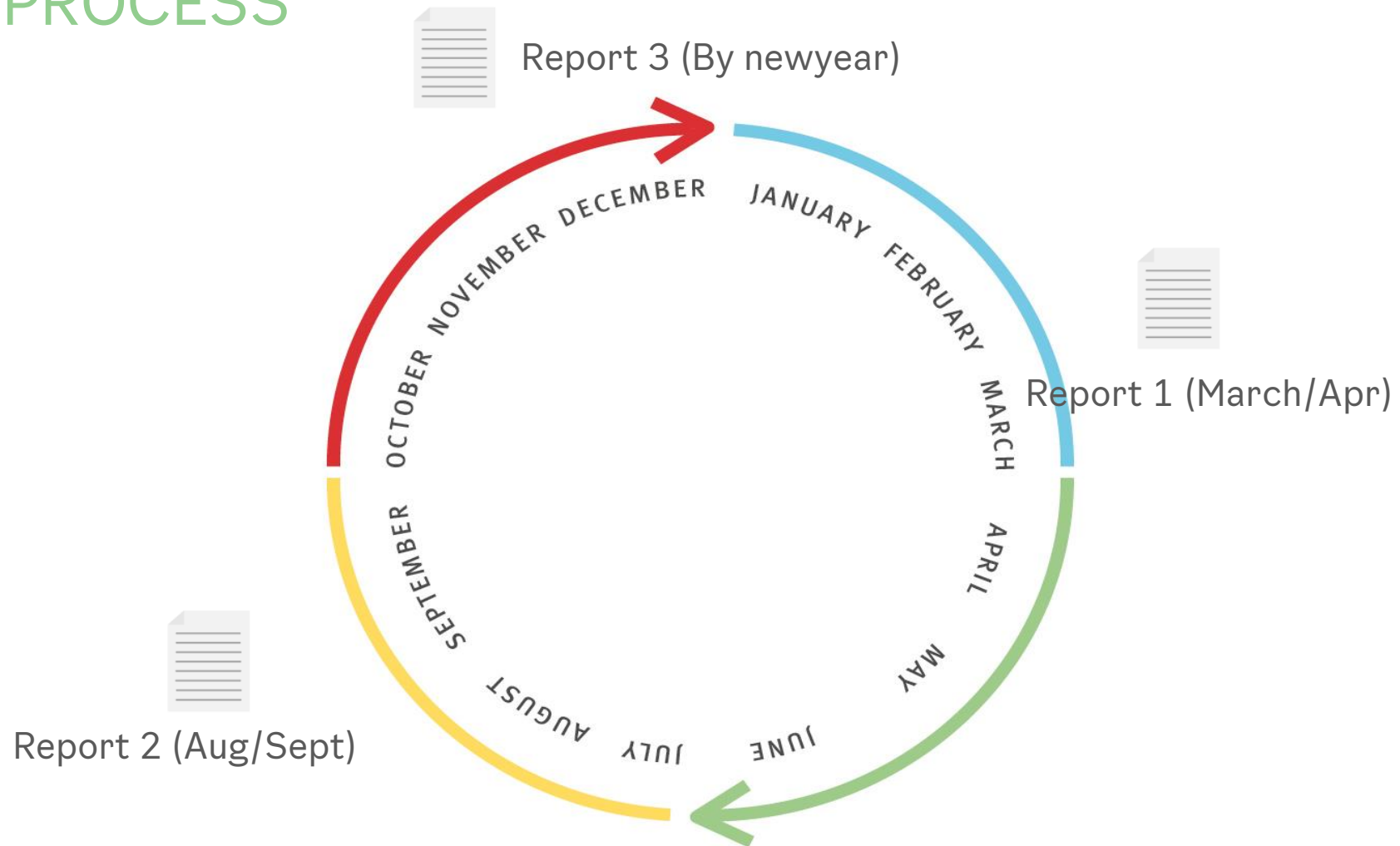


# BUDGET PROCESS YEAR 1





# BUDGET PROCESS YEAR 2



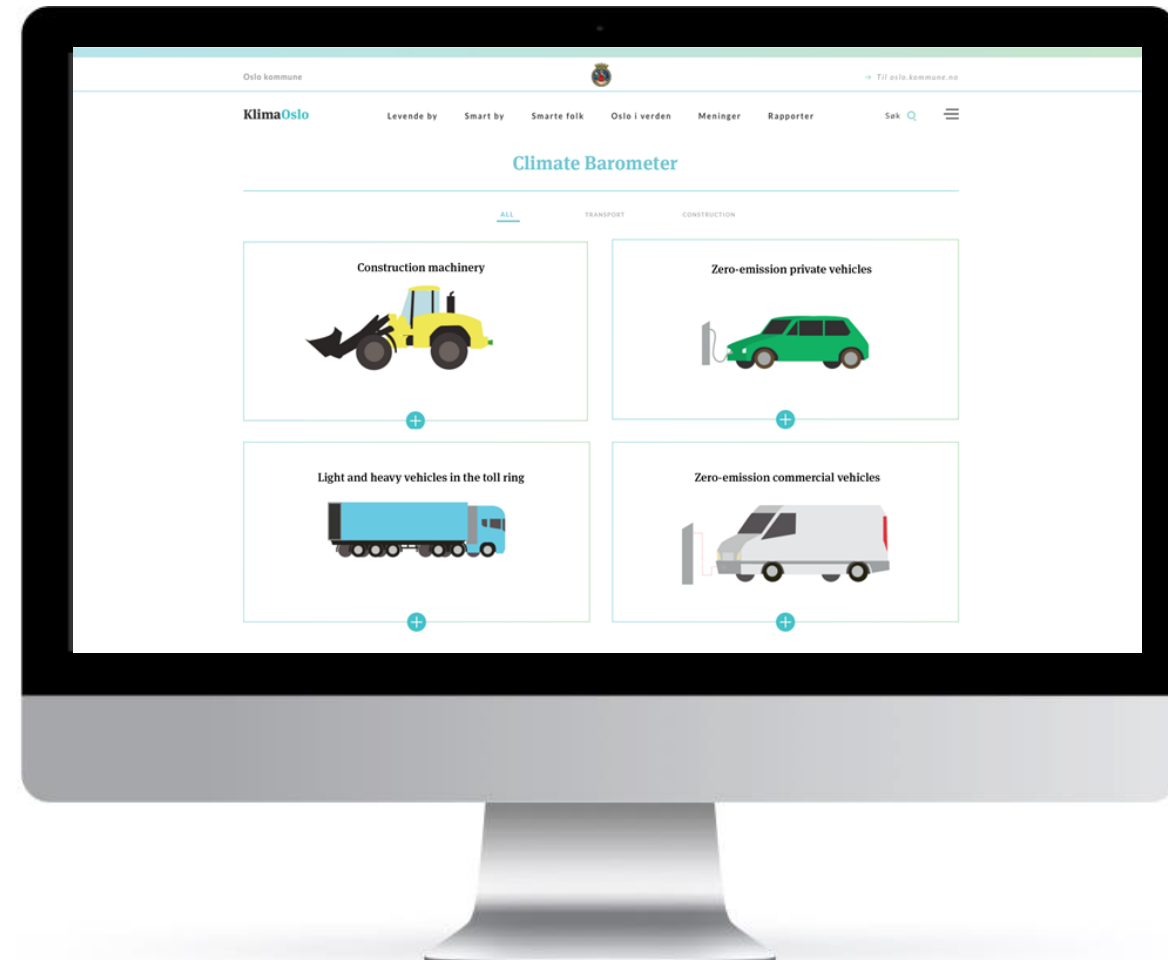
# MONITORING AND REPORTING

Reporting as part of the ordinary budget process (3 times a year)

- ▶ Entity-specific targets and indicators

The Climate barometer

- ▶ 17 indicators
- ▶ Results are published at our website <https://www.klimaoslo.no/>



# Lessons Learned







# Clean construction

**2016**

Oslo requesting  
fossil-free  
construction  
sites

**2017**

Municipal  
construction  
projects fossil-free

**2018**

Establishing C40  
Clean  
Construction  
Forum & Big  
Buyers Initiative

**2019**

Common tender  
criteria & pilot  
project in Olav V  
gt

**2020**

Zoning permit  
requirements

**2025**

Municipal  
projects  
emission-free



# Lessons learned

- ▶ Start with the emission sources you control
- ▶ Ensure implementation of the measures through the budget process
- ▶ Ensure responsibility for reporting
- ▶ Communication, cooperation and transparency is key







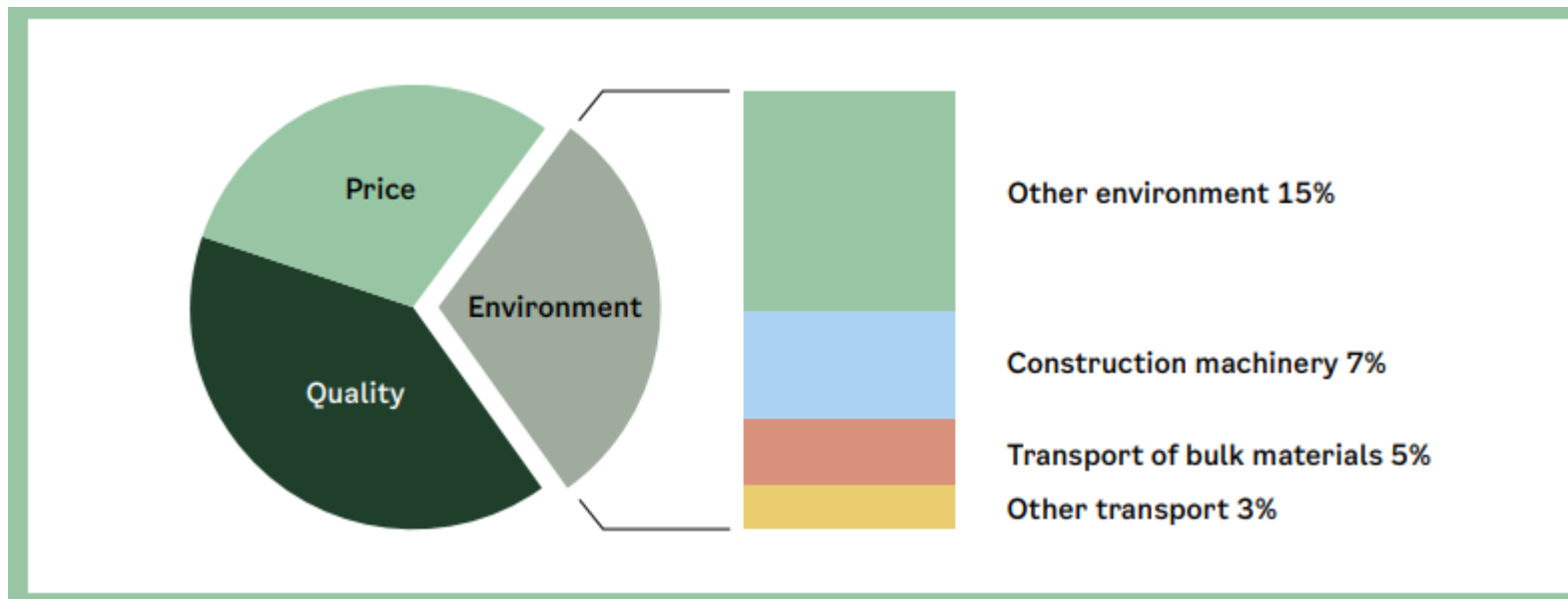


# EXTRA SLIDES



# A procurement strategy that drives innovation

- Oslo procures goods, services and works for NOK 26 billion
- Invests for NOK 11 billion – 400 contract notices – 550 000 invoices
- All planned procurement shall be based on the goal of becoming a zero emission city
- Premium on low/zero emission solutions – use Life Cycle Analysis



# C40-pilot on climate budget

- ▶ Project from september 2021
- ▶ C40 cities will discuss climate methodology

## Guideline in how to make a climate budget

- ▶ published in Norwegian January 2021
- ▶ Based on experiences from six cities and regions developing climate budgets.



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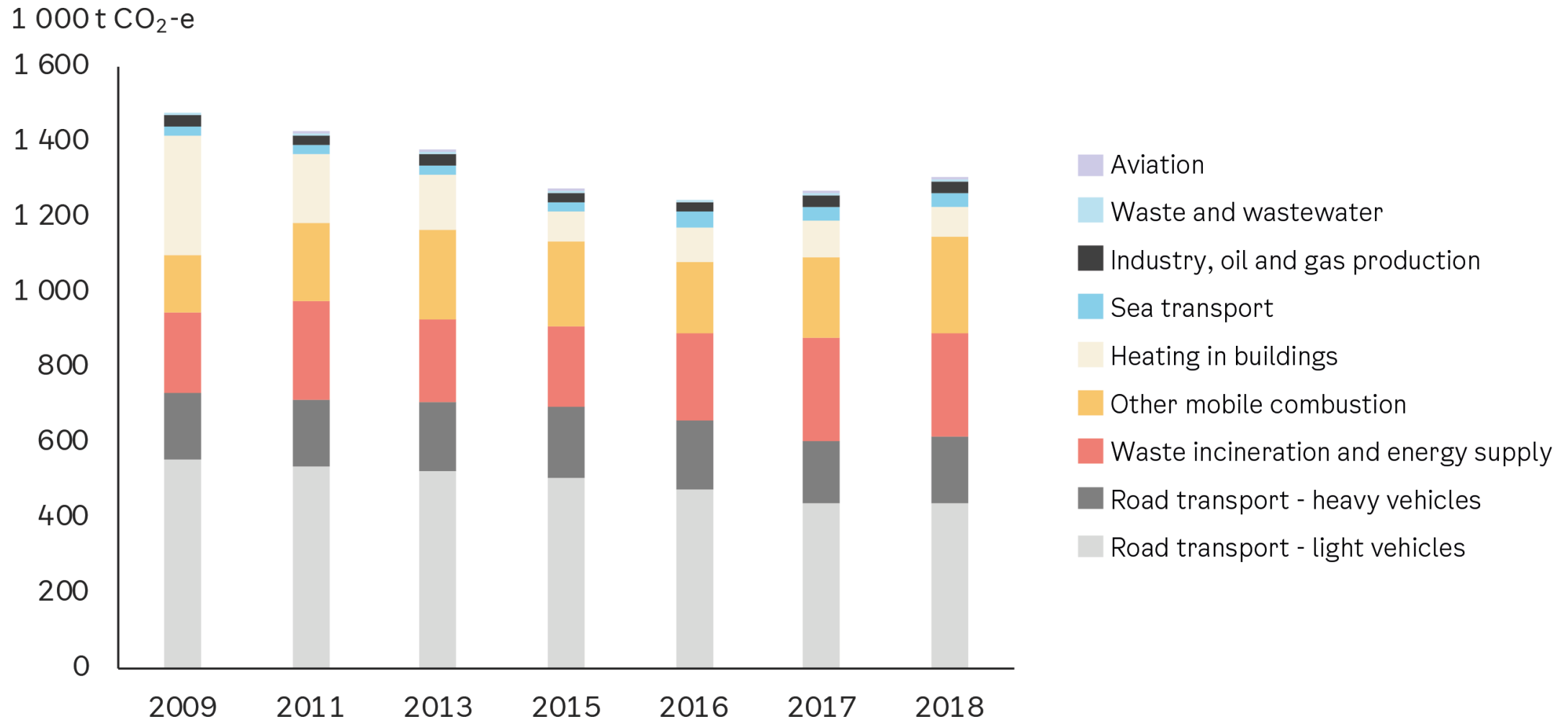




# Climate budget assessment

BUDGET INFORMATION	Part 1. CLIMATE GAS EMISSIONS					Part 2. CLIMATE ADAPATION			
	Step I Assessment of whether the post changes emissions	Step II Assessment of whether emissions are direct, indirect of both	Step III Assessment of direction: it the post net increases or decreases emissions	Step IV Share of the post influencing emissions	Step V Overall assessment: Extent and direction of climate relevance	Step I Identification of posts potentially affecting physical climate risk	Step II Identification of posts and proportion of post that have assessed physical climate risk	Step III Identification of posts that have taken physical climate risk into account	Step IV Overall assessment
Chapter, amount etc.									
Post X	...	...	...	...	...	...	...	...	...

# GHG-emission inventory, 2009-2018



# Measures in the budget

The estimates in the climate budget are generated through a combination of methodologies.

- Important measures included in baseline
- 14 quantified measures
- High number of measures not-quantified
  - Not all measures can be quantified
- Toolbox of instruments



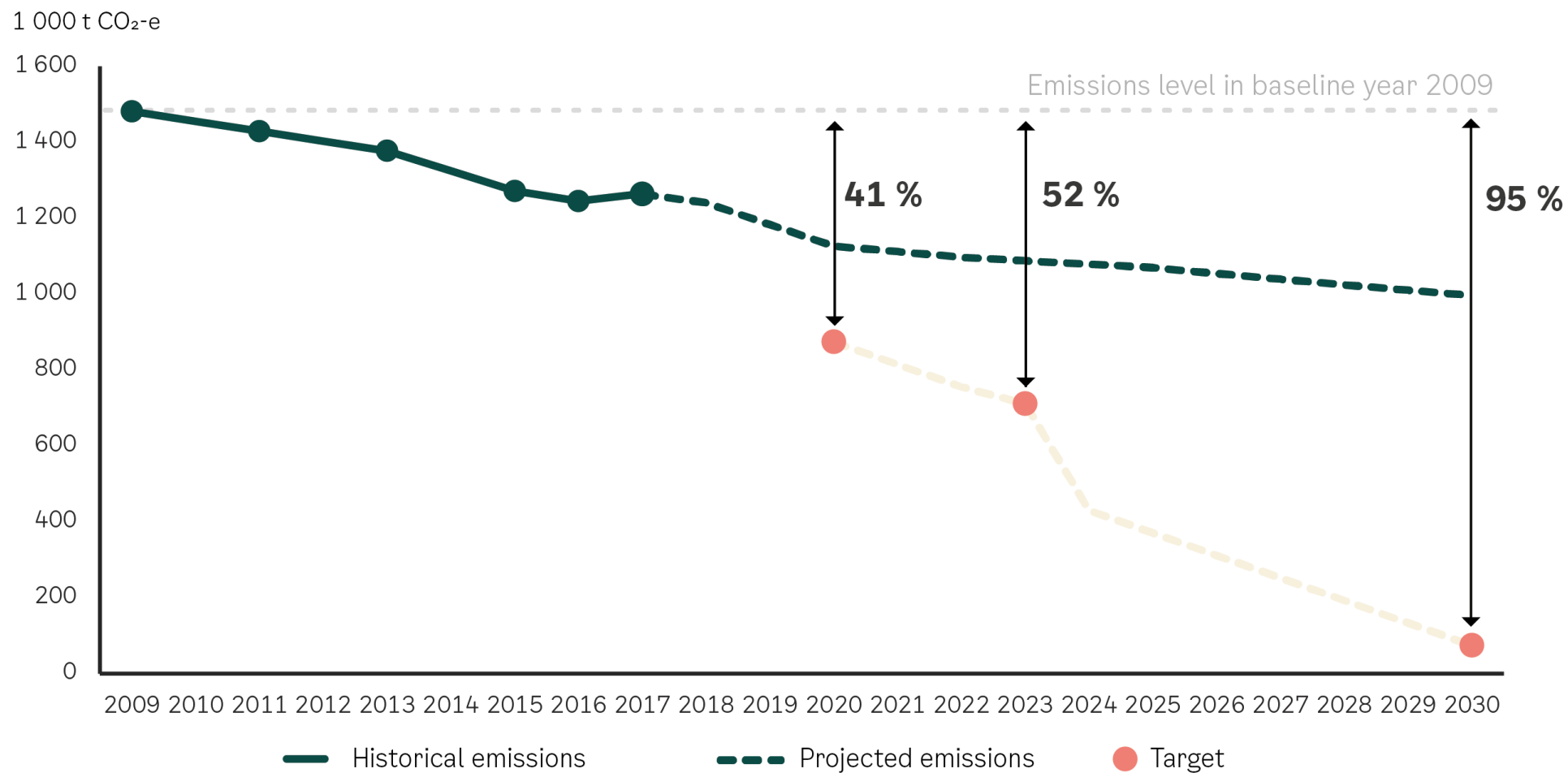
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Table 2.2a Measures with estimated emissions-reducing effect

MEASURES	Responsibility for implementation (Responsibility for reporting in parentheses)	Estimated effect of measure, 2015-2020 (tonnes CO <sub>2</sub> e)
Phase out the use of heating oil in municipal buildings and undertakings	Undertakings that use heating oil (KLI)	121 450
Phase out the use of fossil fuel in privately owned buildings by 2020 through a combination of bans and subsidies (Climate and Energy Fund and Enova)	KLI	
Reduced emissions of landfill gas from Grønmo and Rommen	EGE and EBY	6 900
Phase out the use of fossil fuel and gas in district heating (peak load)	NOE	5 600
Increase material recycling of household waste and boost re-use	REN	4 300
Conclude documentation of nitrous oxide volumes in wastewater, with the aim of correcting figures supplied by Statistics Norway'	VAV	20 500
Introduce a new toll-ring payment system, including new toll stations, in 2019. Note that the effect assumes the implementation of the measures listed below in italics:	MOS	93 300
<i>Installation of new charging stations for passenger and commercial vehicles, including a pilot project for car-sharing schemes</i>	BYM	
<i>Increase public transport capacity to cope with population growth and reduction in private vehicle traffic</i>	Ruter	
Better provision for cyclists	BYM	3 400
National requirement for 20% blended biofuel to be implemented by 2020	National government	53 900
Fossil-free public transport by 2020	Ruter	29 500
Introduce new licensing rules for taxis with requirement for zero-emission taxis by 2022. Note that the effect assumes the implementation of the measure listed below in italics:	BYM	13 400
<i>Install new charging stations for taxis</i>	BYM	
Switch to zero-emission vehicles in the City of Oslo's own vehicle fleet, possibly using sustainable biofuels	All (UKE)	4 100
Establish a low-emission zone for heavy goods vehicles in Oslo	BYM	2 800
<b>TOTAL REDUCTION IN 2020</b>		<b>360 000</b>

The individual measures are discussed in more detail towards the end of this Climate Budget.

# Oslo's climate budget 2021

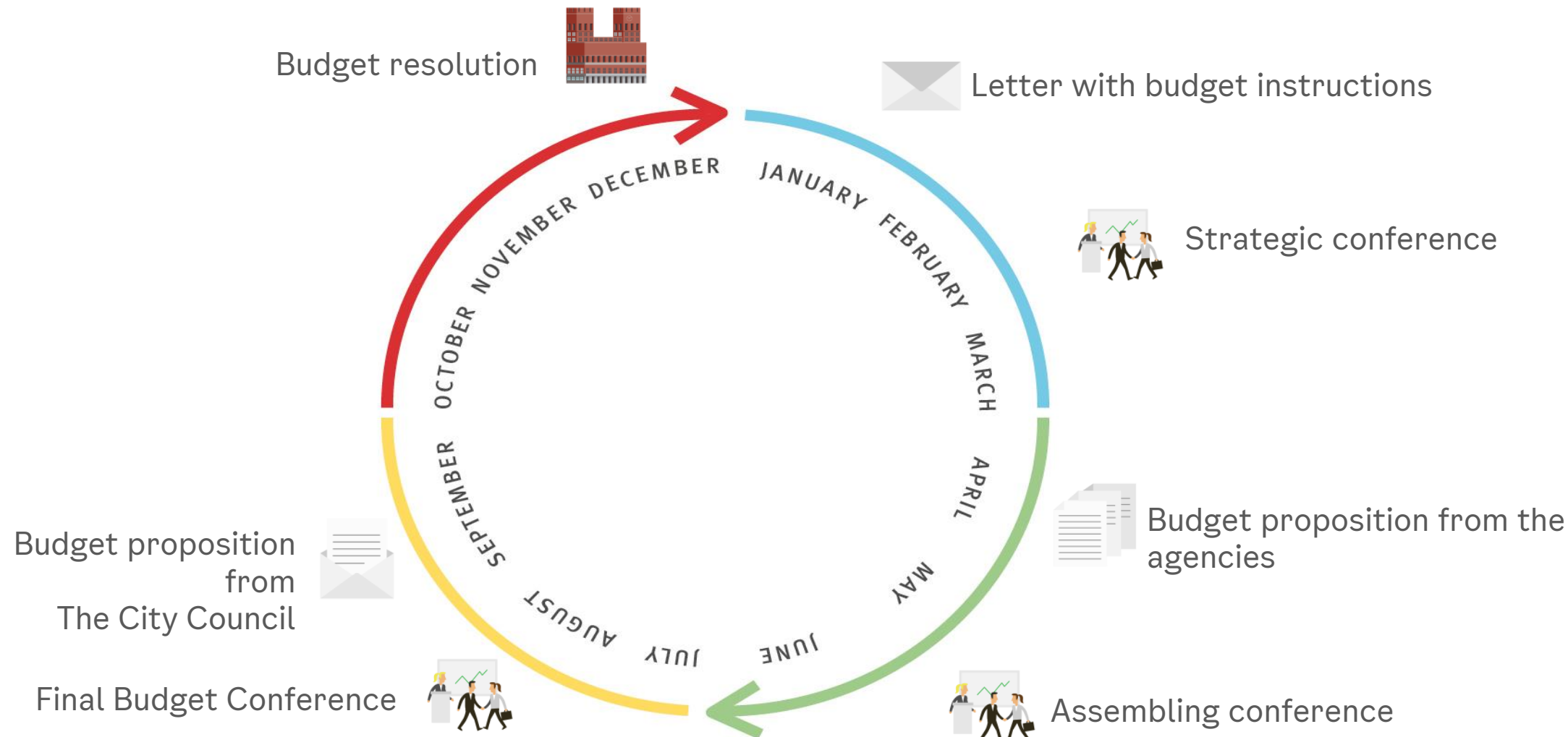


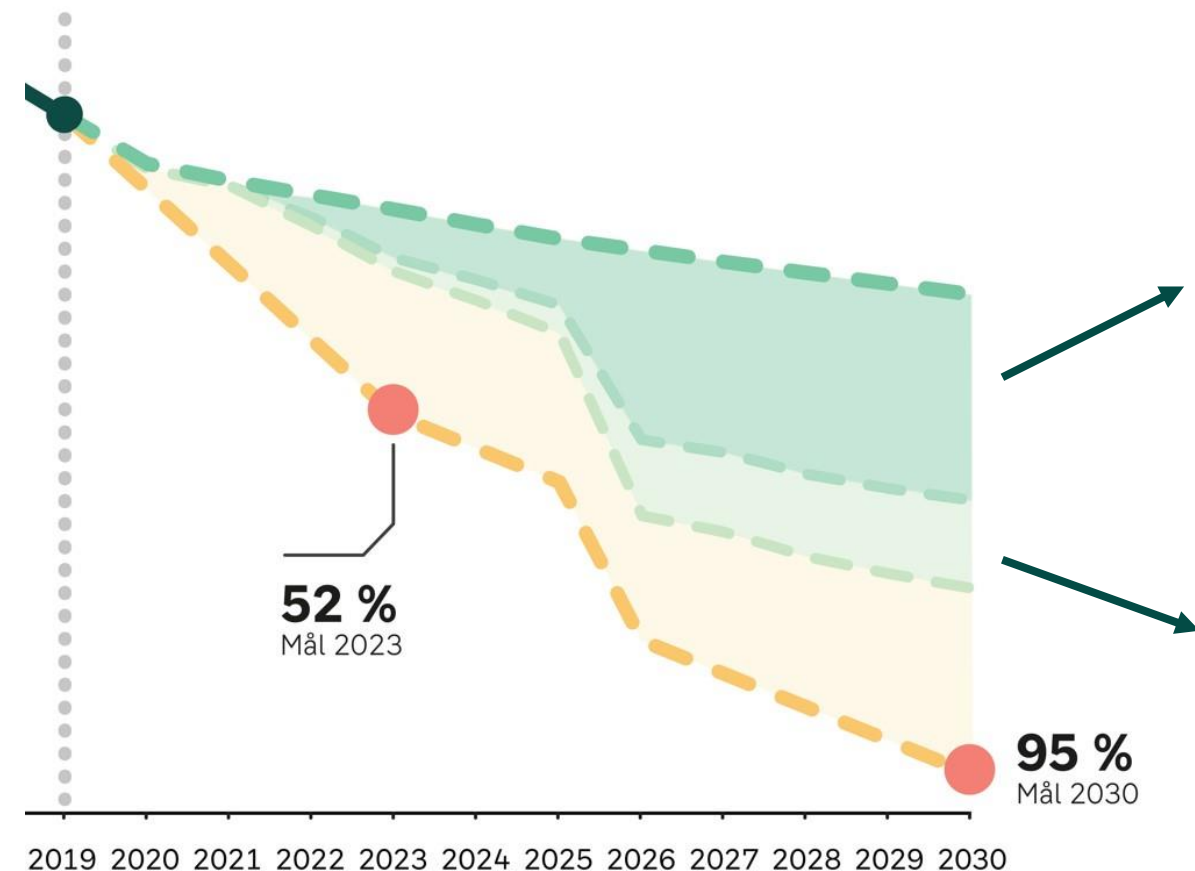
2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
41 %	45 %	49 %	52 %	71 %	75 %	79 %	83 %	87 %	91 %	95 %





# BUDGET PROCESS





## Vedtatte tiltak med usikre beregninger

- Krav til fossilfrie byggeplasser i alle nye reguleringsplaner
- Tiltak for reduksjon i utslipp fra veitrafikk
- Utslippsfrie motorredskaper
- Forbud mot å benytte mineralolje til midlertidig oppvarming
- Karbonfangst og lagring på Klemetsrud fra 2026

## Intensjonsvedtak (av tiltak) med usikre beregninger

- Utvidet nullutslippssone til innenfor Ring 2 fra 2026
- Gradvis opptrapping av priser i bomringen for fossilbiler
- CO<sub>2</sub>-avgift tilsvarende 2 000 kr i 2030
- Opptrapping av omsetningskrav for biodrivstoff
- Reduksjon i utslipp fra forbrenning av husholdningsavfall