

# ICOS Cities Talks

*Anais Fabre*

**Olympics as a catalyst to decarbonise city transport systems – Focus on Paris 2024**



**PhD supervisors:**

Associate Professor Michael Howes

Dr Aysin Dedekorkut-Howes

Dr Millicent Kennelly

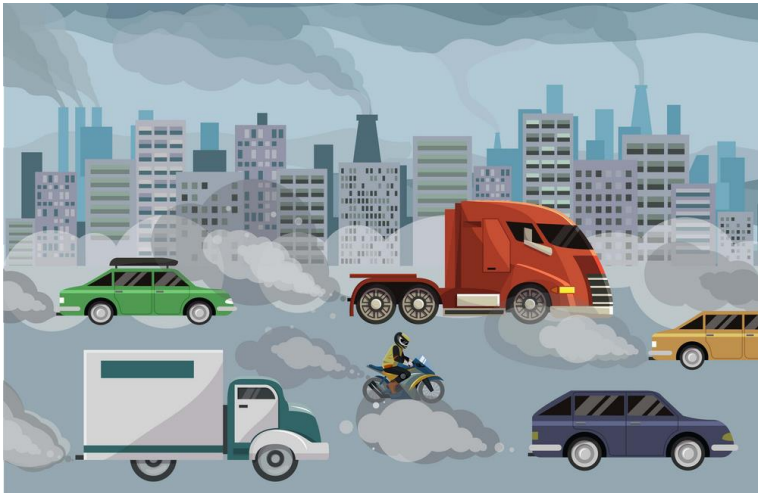
Queensland Australia

October 2024

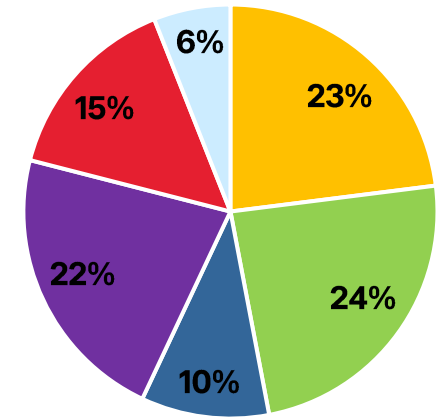
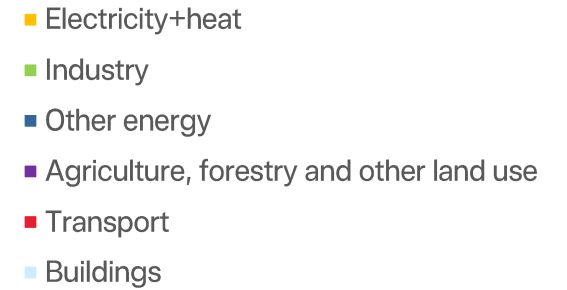
**Make it matter**

# RESEARCH PROBLEM

- Urban transport is not sustainable and needs to be decarbonised
- The Olympic and Paralympic Games tend to exacerbate the problem of transport emissions



Sectoral greenhouse gas emissions trends per sector



IPCC, 2022



# RESEARCH PROBLEM

- The International Olympic Committee (IOC) was committed to be ~~climate positive~~ by 2030



**Updated target:** Reduce the emissions of the Games by 50%

- This gives an opportunity to accelerate the transition towards more sustainable transport systems



International  
Olympic  
Committee



REDUCE



COMPENSATE



INFLUENCE

**Poll:** Do you think that the Olympic and Paralympic Games can become climate-positive?

Overview

Methods

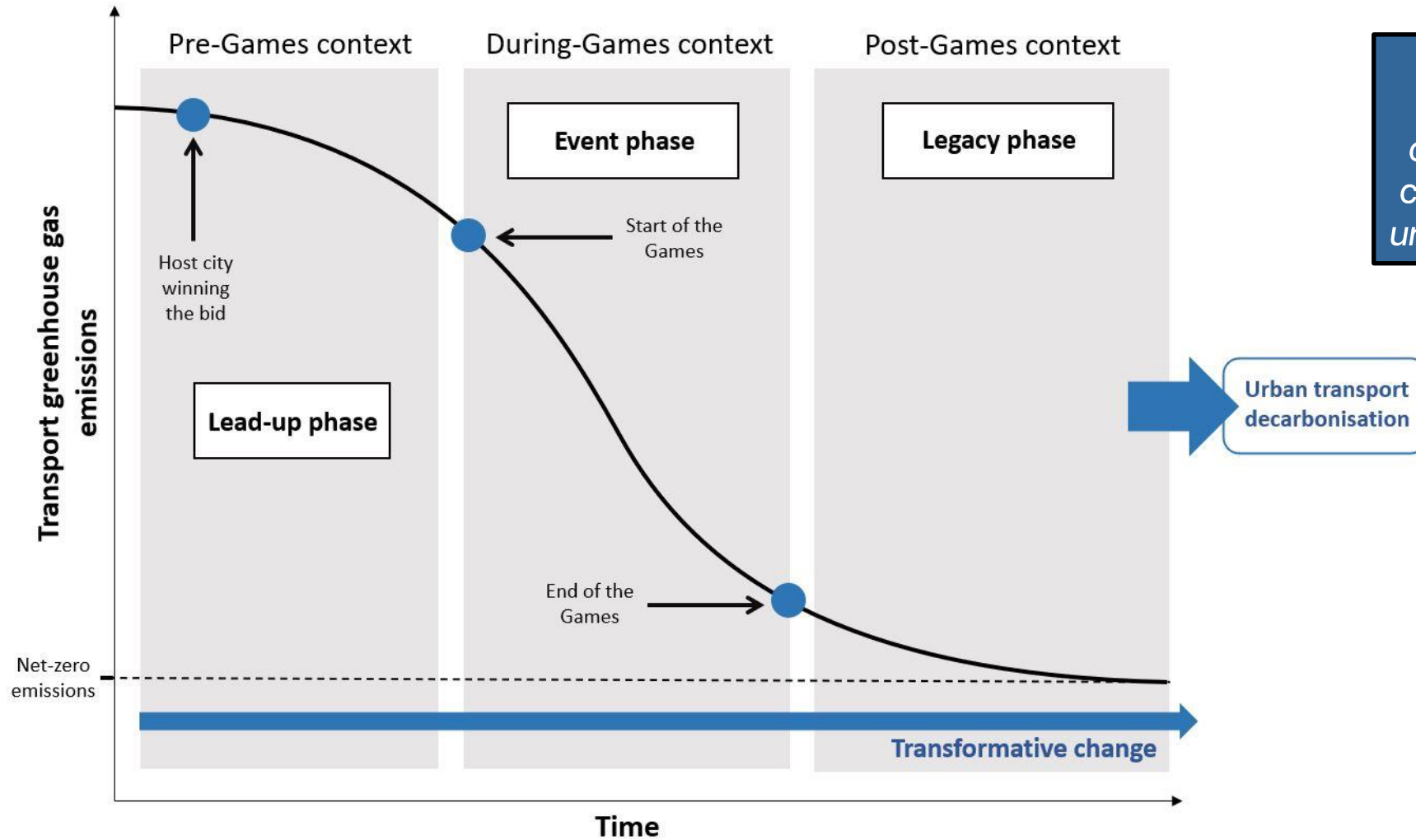
Literature  
Review

Paris 2024

Expert  
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# CONCEPTUAL FRAMEWORK: THE IDEAL SCENARIO



*Can the Olympic and Paralympic Games catalyse transformative change in decarbonising urban transport systems?*





# OBJECTIVES

- Identify how transport-related climate change mitigation strategies may be applied in the context of a mega-event
- Learn lessons from past Games & guide future mega-events towards urban transport decarbonisation
- Identify consensus and debates, offer expert insights, bridge theory-practice gaps



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# PRELIMINARY STUDY

## CASE STUDY: BEST PRACTICE FOR URBAN TRANSPORT DECARBONISATION IN PARIS

Best practice outcomes		Policy effectiveness assessment	
Invest in public transport systems to make them more efficient and attractive	Investment in technology and innovative solutions with automated lines	<b>Effectiveness – goal achievement</b>	
		Increased public transport modal share	✓
		Improved public transport services' attractiveness	✓
	Mitigated effects on traffic and public transport congestion	✗	
Building new infrastructure Additional lines, transfer and number of destinations (68 new stations)		<b>Equity</b>	
		Improved accessibility to transport for highly densely populated and poorest suburbs	✓
		<b>Timeframe</b>	
Shape cities towards transport-oriented developments and higher density zones	Creating new station districts with mixed-use activities	Delays on certain construction sites (e.g., line 16)	✗
		<b>Coherence and synergy</b>	
	Building new employment zones	The GPE intersects with policies related to 2024 Olympic games and other urban developments (e.g., scientific cluster of Saclay)	✓
		<b>Co-benefits</b>	
Reduced congestion in the city centre for higher density in the suburbs	New employment and economic development areas	✓	



Same work completed for Brisbane



AUSTRALIAN PLANNER  
2023, VOL. 59, NO. 1, 64–85  
<https://doi.org/10.1080/07293682.2023.2190143>



OPEN ACCESS Check for updates

**Best practice in urban transport decarbonisation: a case study of three initiatives in Brisbane**

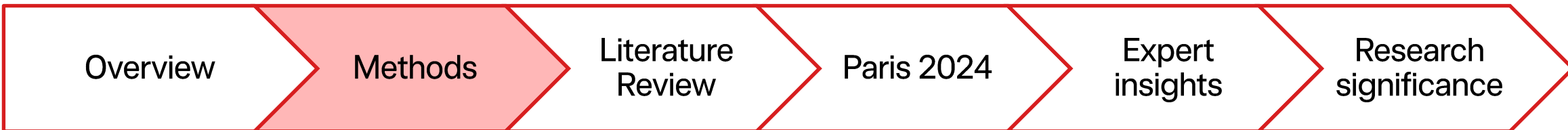
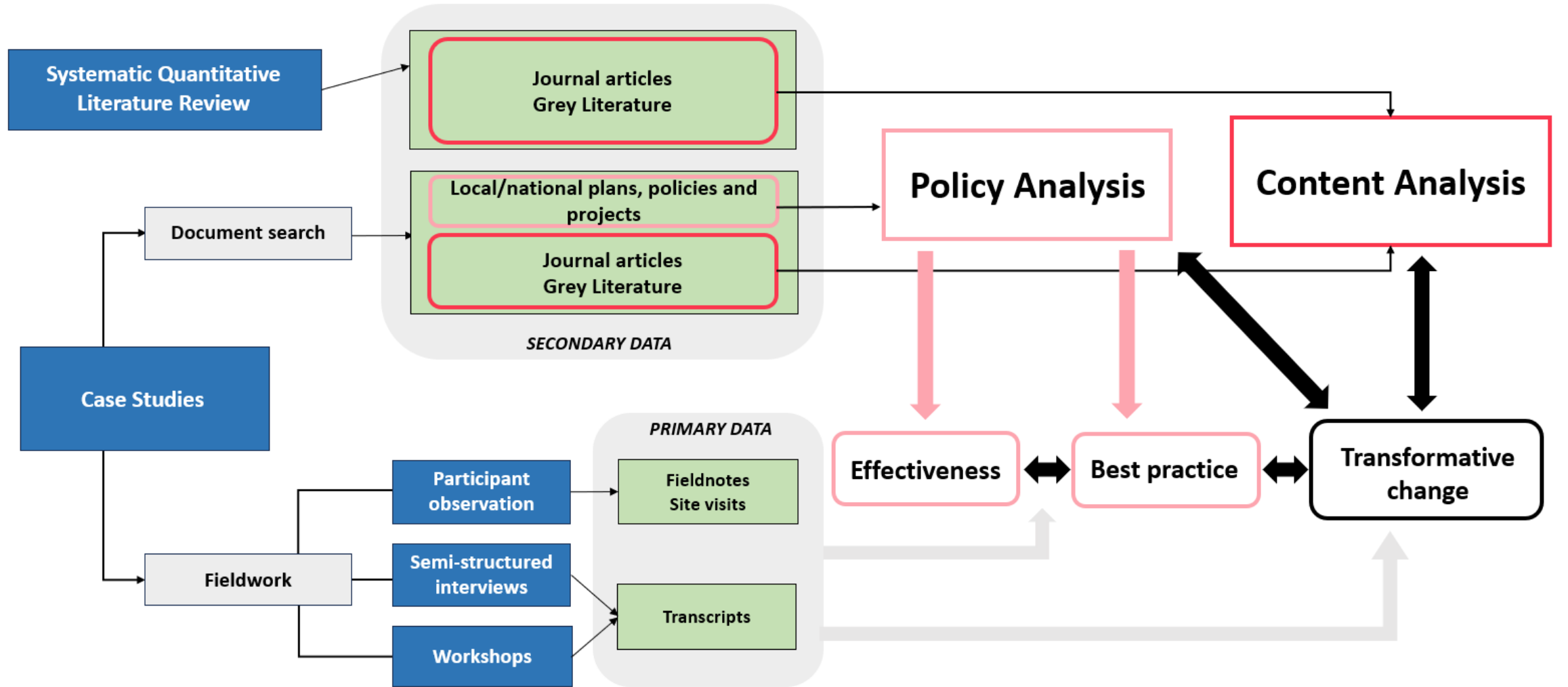
Anais Fabre<sup>a</sup>, Michael Howes<sup>b</sup> and Tom Deweerdt<sup>c</sup>

<sup>a</sup>School of Environment and Science, Cities Research Institute, Griffith University, Nathan, Australia; <sup>b</sup>School of Environment and Science, Cities Research Institute, Griffith University, Southport, Australia; <sup>c</sup>School of Environmental and Earth Sciences, University of Queensland, St Lucia, Australia

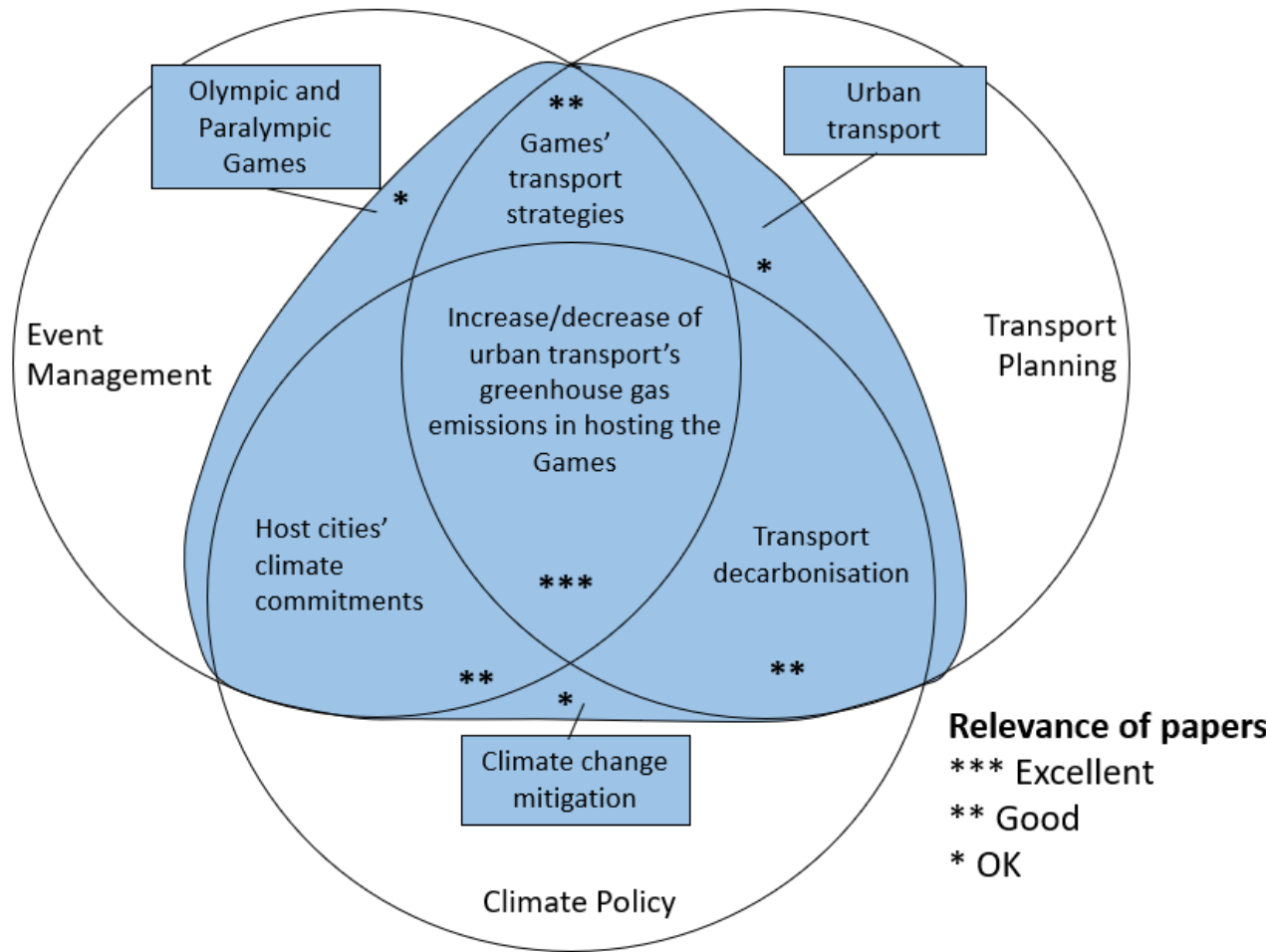
Synthesis of best practice features and policy effectiveness of the Grand Paris (2022)



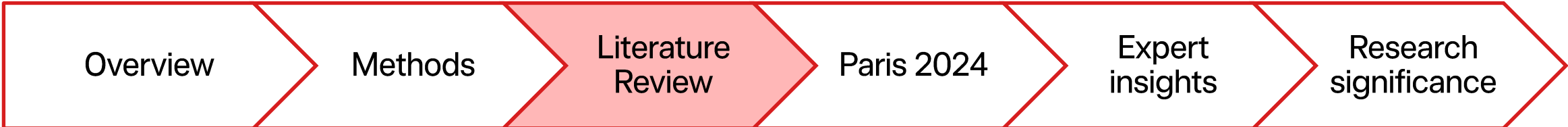
# METHODS



# SYSTEMATIC QUANTITATIVE LITERATURE REVIEW (SQLR)



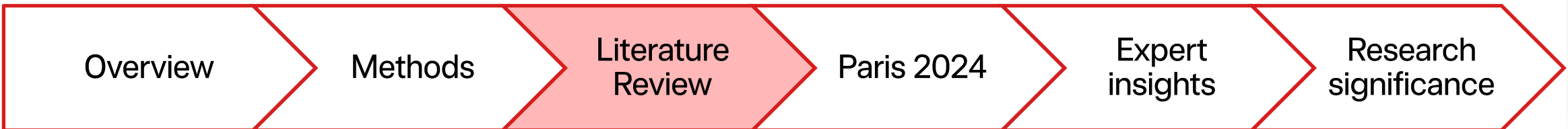
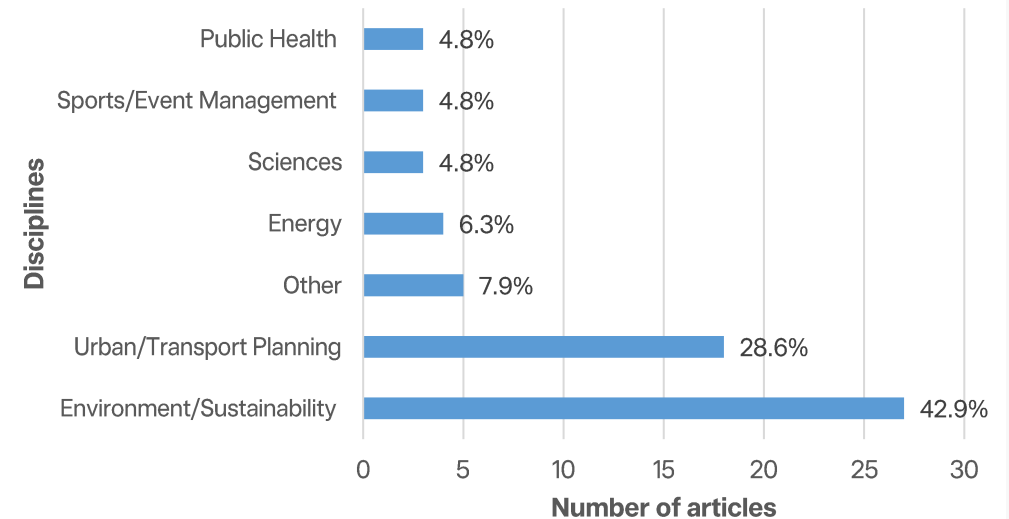
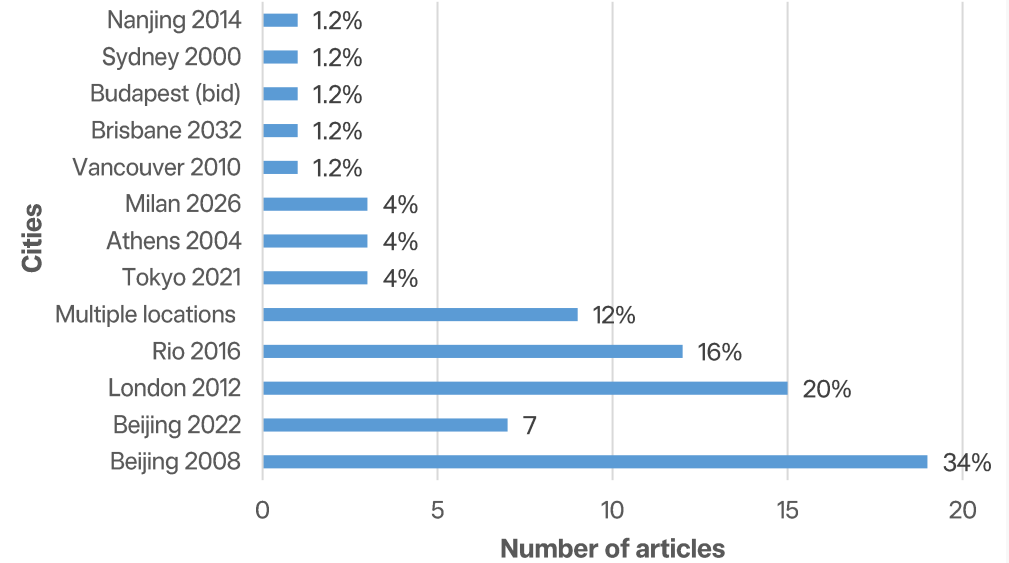
What factors tend to increase or decrease greenhouse gas emissions from urban transport in the context of hosting the Games?





# RESEARCH TRENDS & GAPS

- Growing research attention on Beijing 2008, London 2012, Rio 2016, and Beijing 2022 Games
- Research dominance in climate/environmental and transport fields compared to the sports/event management discipline
- Research and policy gaps on decarbonisation in transport strategies for the Games



# KEY FINDINGS

A REVIEW OF THE FACTORS AFFECTING TRANSPORT EMISSIONS FOR CITIES HOSTING THE GAMES

## Economic & technological factors

Increased travel demand

Increased traffic congestion

Emissions

Emissions

Accelerated investments in transport infrastructure

Low-emission transport options

Cleaner transport technologies

Traffic management & information system improvements



Key contributors to the IOC carbon footprint in 2022



Overview

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Literature Review

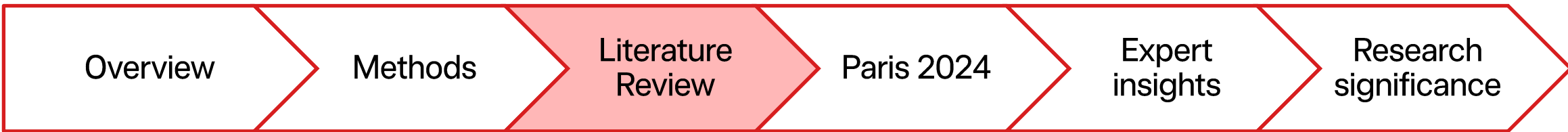
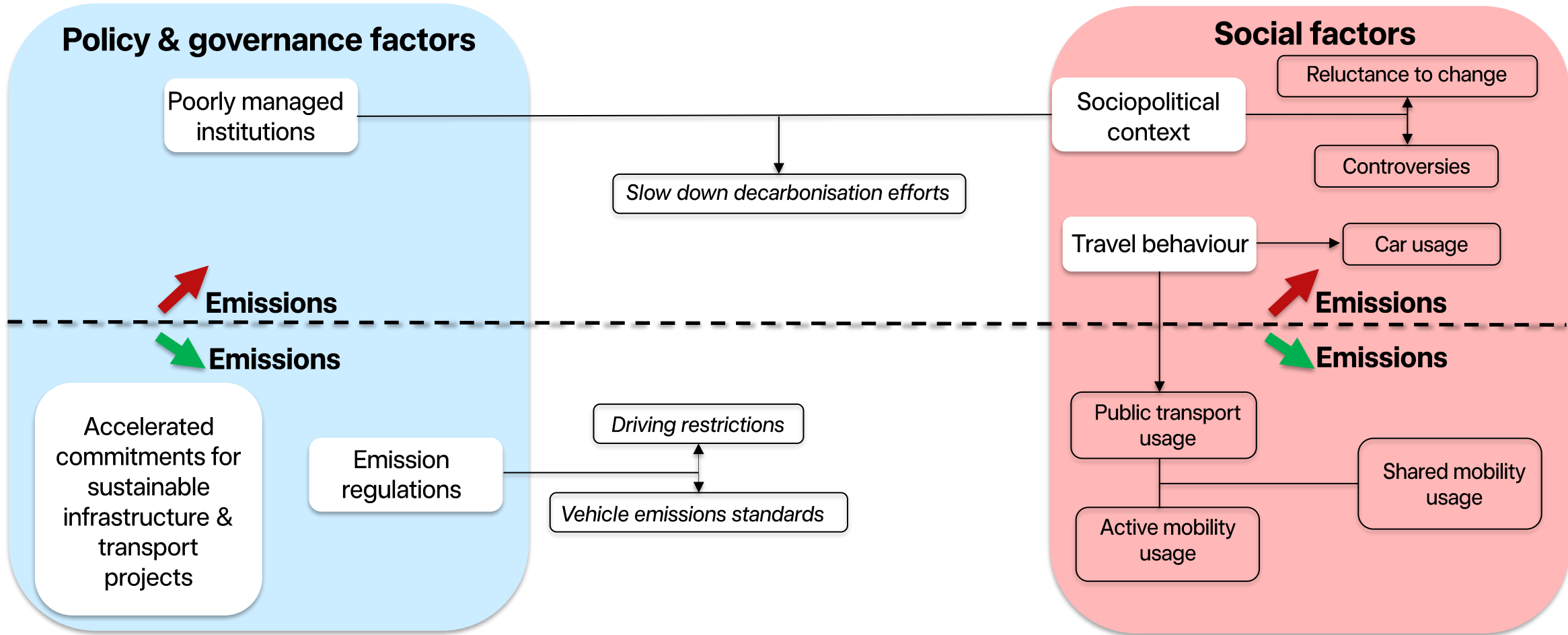
Paris 2024

Expert insights

Research significance

# KEY FINDINGS

A REVIEW OF THE FACTORS AFFECTING TRANSPORT EMISSIONS FOR CITIES HOSTING THE GAMES





# CASE STUDIES

## APPLICATION OF THE REVIEW FINDINGS



London 2012 Games



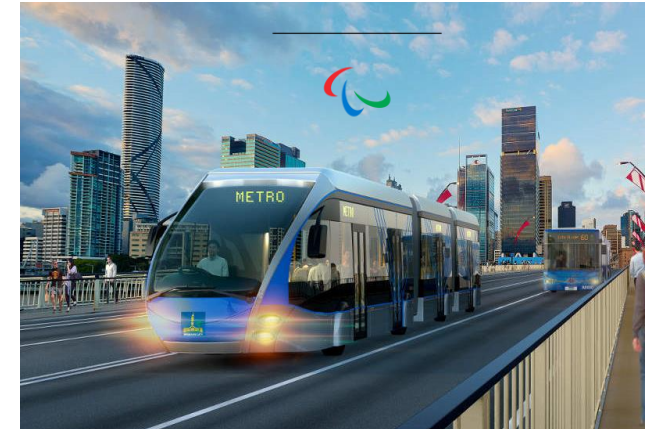
PARIS 2024



Paris 2024 Games



**Brisbane 2032**  
Olympic and Paralympic  
Games Host  
*Queensland*



Brisbane 2032 Games

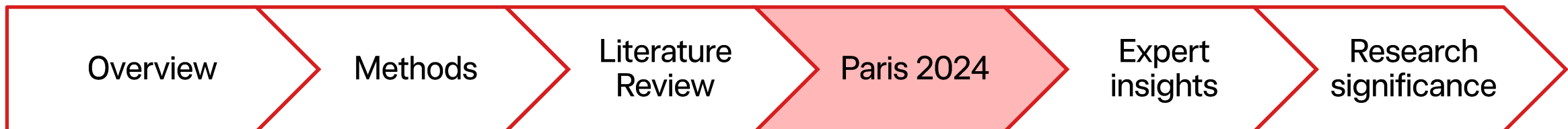




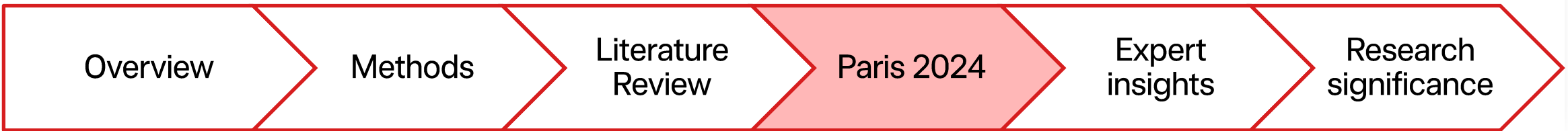
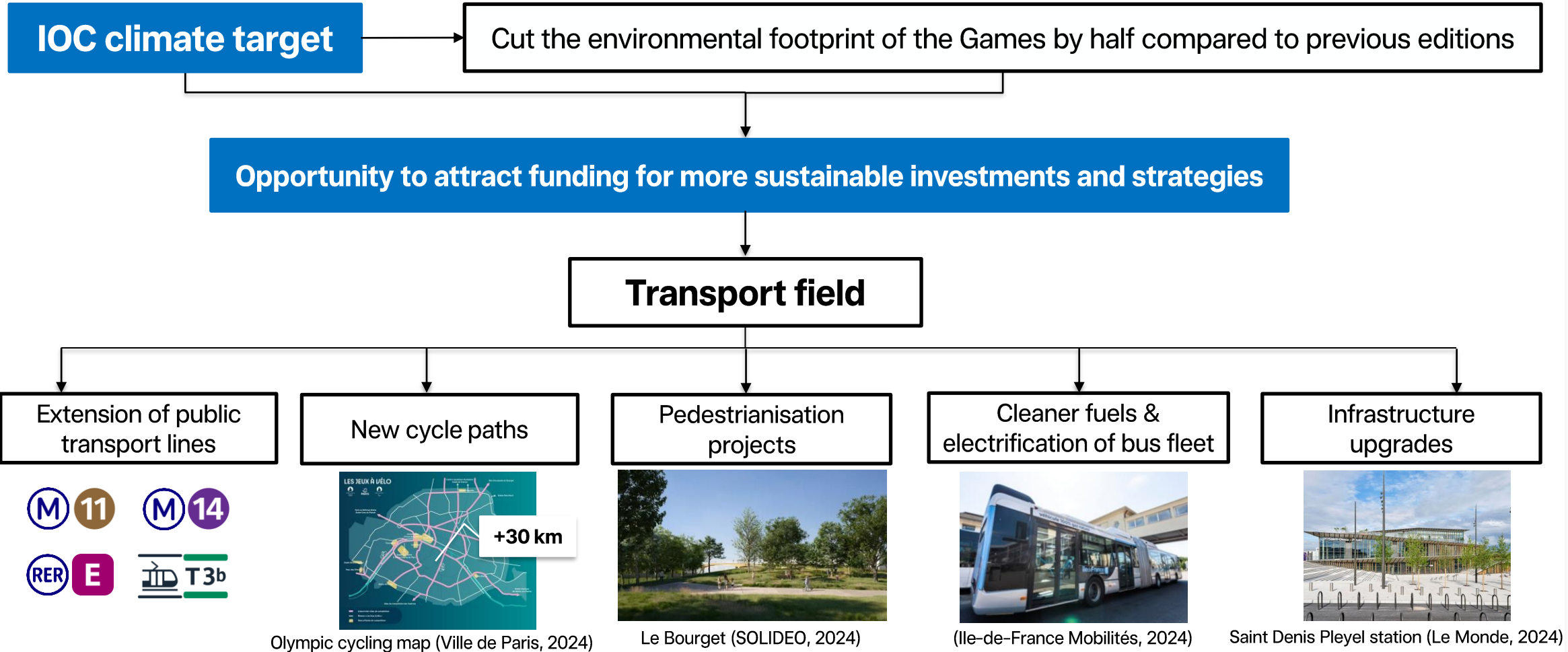
# URBAN TRANSPORT DECARBONISATION FOR THE PARIS 2024 GAMES

<b>STRENGTHS</b>	<b>WEAKNESSES</b>
<p>High urban density</p> <p style="text-align: center;">↓</p> <p>Favours public transport and active mobility usage</p>	<p>High urban density</p> <p style="text-align: center;">↓</p> <p style="text-align: center;">Congestion issues</p> <p style="text-align: center;">↙ ↘</p> <p>Public transport                      Roads</p>
<p>Extensive cycling path network</p>	<p>Lack of social acceptance for certain transport decarbonisation strategies</p>
<p>Increased efforts to electrify transport</p>	<p>Operational delays for some transport projects initially meant to be ready before the Games</p>
<p>Increased efforts to extend pedestrian zones</p>	
<p style="text-align: center;">↘ <b>Emissions</b></p>	<p style="text-align: center;">↗ <b>Emissions</b></p>

Strengths & weaknesses of Paris transport systems from an environmental perspective



# URBAN TRANSPORT DECARBONISATION FOR THE PARIS 2024 GAMES



# ANTICIPATED BARRIERS BEFORE THE GAMES

## LEAD-UP PHASE

- **Social reluctance from Paris residents**
- **Congestion in public transport systems**
- **Road traffic jams**
- **Operational delays on most of the Grand Paris metro lines project**

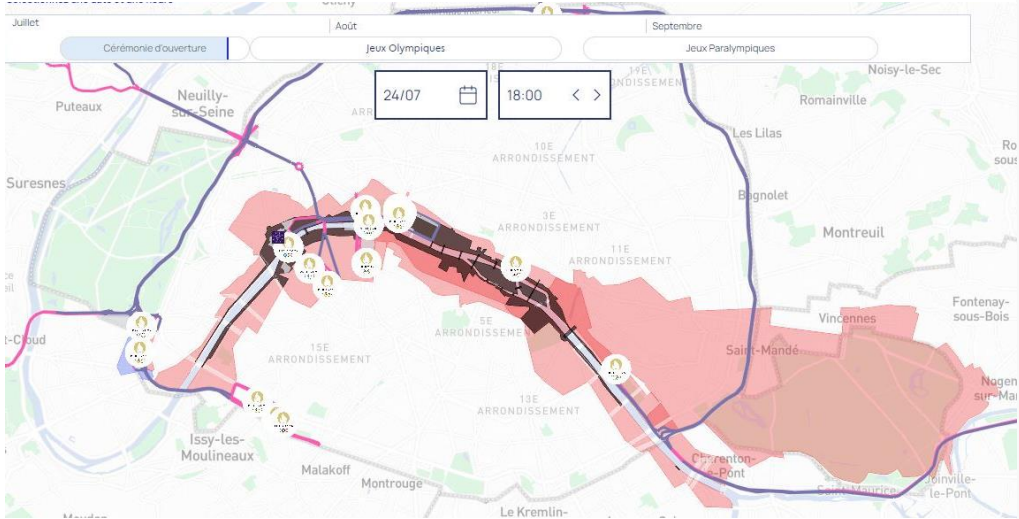


(Challenges, 2023)

### Paris 2024: Will public transport be ready on time for the Olympics?

The initial offer of free, all-out transportation for the Olympic Games has gradually dwindled and become a source of tension, even concern, for the smooth running of the event and the state of public transport in the Paris region.

(Le Monde, 2024)



(Ministry of Transport, 2024)





# ANTICIPATED BARRIERS BEFORE THE GAMES

## A FEW WEEKS/DAYS BEFORE

### Social and political tensions

- Vandalism of rail lines
- Protests against the Games
- Unexpected Parliament dissolution and new legislative elections



(Liberation, 2024)



(French Government Information Service, 2024)



(Le Monde, 2024)

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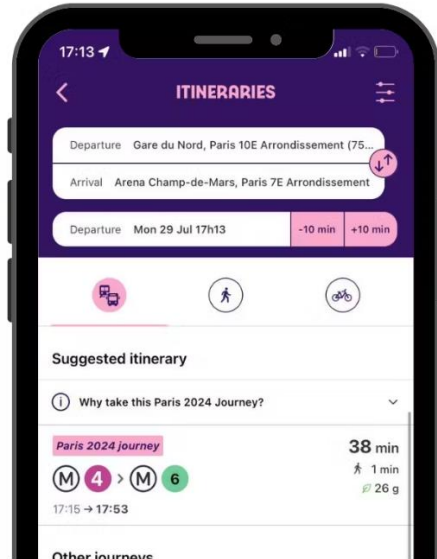


# PRELIMINARY RESULTS DURING THE GAMES

Paris 2024 target

100% access to venues by public transport

Accelerated decarbonisation efforts



CO<sub>2</sub> emitted



Calculation of the CO<sub>2</sub> emission for this route

CO <sub>2</sub> emission calculated for this route	359 g
CO <sub>2</sub> emission calculated for the same route in car	5511 g

Be responsible!

For one year commuting between home and work, the use of public transport on this route avoid **1159 kg** of CO<sub>2</sub>

Dedicated navigation app (Region Ile de France, 2024)



13,000 extra transport agents (Le Parisien, 2024)



Massive campaigns to encourage working from home

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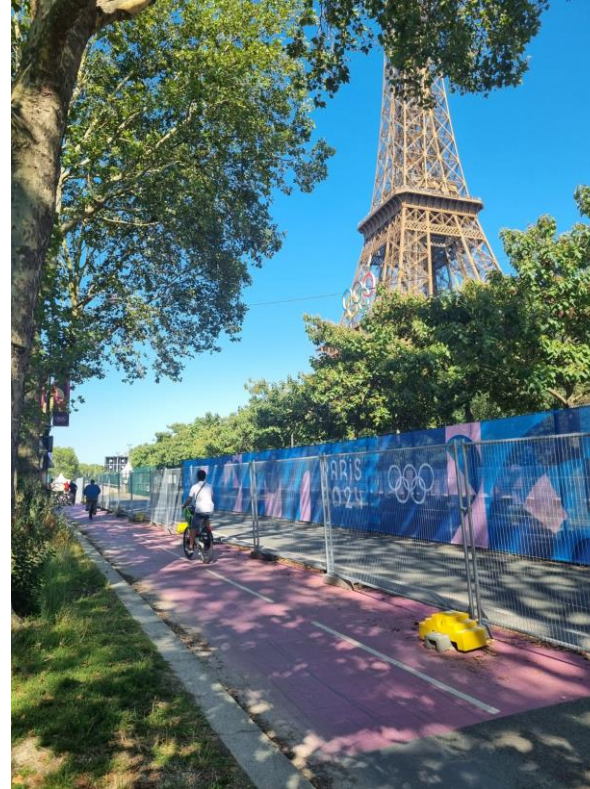
Research significance

# PRELIMINARY RESULTS DURING THE GAMES

## Accelerated decarbonisation efforts



Metro line 14 newly extended to Orly Airport



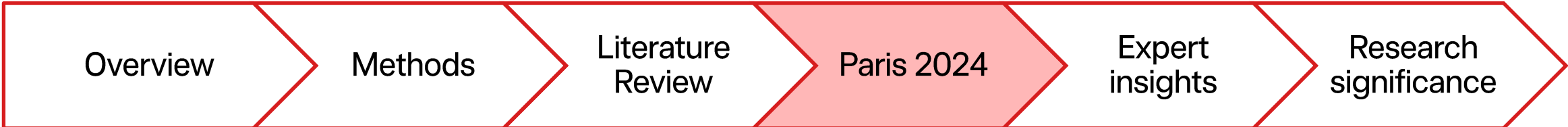
Olympic cycle paths facilitated commuting by bike



Improved access for disability with electric shuttles



Roads closed to cars near Olympic venues





# YOUR THOUGHTS

**Poll:** Do you think hosting the Olympic and Paralympic Games can significantly **transform** urban transport systems towards decarbonisation?

Yes, it's a major catalyst

Somewhat, but other factors matter more

No, it's just a temporary focus

I'm unsure

# PRELIMINARY RESULTS: EXPERT INSIGHTS

## IMPACTS OF THE GAMES ON URBAN TRANSPORT DECARBONISATION



### The Games are a catalyst for accelerating transport decarbonisation projects

- Pressure of giving a good image on the international scene
- Shorter deadlines to deliver projects
- Investments rescheduled over shorter periods



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# PRELIMINARY RESULTS: EXPERT INSIGHTS

## IMPACTS OF THE GAMES ON URBAN TRANSPORT DECARBONISATION



### The Games do not catalyse transformative change

- Projects are usually already existing regardless of the Games
- The existing transport network will make the main difference in achieving climate targets
- The timeframe between the bid and the Games is too short to transform transport systems

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# PRELIMINARY RESULTS: EXPERT INSIGHTS

## Top 5 instruments for future host cities to use to decarbonise transport effectively

1. Plan ahead
2. Develop transport modelling and planning tools
3. Plan strategies according to the mobility needs of the region/city, not just for the Games
4. Increased and fair salaries for public transport staff, especially drivers
5. Make temporary measures for the Games permanent



# RESEARCH SIGNIFICANCE

- Call for climate action in a key polluting sector
- Useful for key stakeholders involved in the organisation of the Games to better prepare for achieving the IOC's climate targets through urban transport decarbonisation
- Novelty in comparing cases in different stages of the process of hosting the Games (London 2012, Paris 2024, Brisbane 2032)
- Will address a research gap



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# CALLING FOR PARTICIPANTS

**Are you an expert in transport, urban planning, and/or sustainability in Paris, London, or Brisbane?**

**We want your insights!**

- Academics
- Policymakers
- Urban Planners
- Professionals
- NGO Representatives

*Contribute to shaping the future of climate action and sustainable mobility . We are looking to interview experts like you to gather valuable insights for our research.*

**Interested in participating?**

**Reach out to us: [anais.fabre@griffithuni.edu.au](mailto:anais.fabre@griffithuni.edu.au)**





**THANK YOU**



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