



COVID Impacts and Implications: A Global Perspective

APTA Rail Transit CEO Committee

Presented by:

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7th November 2021

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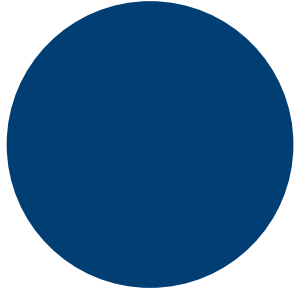
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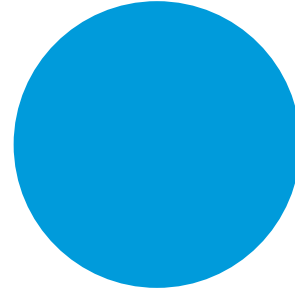
Key Takeaways from the Global Perspective



SHARED CHALLENGES

90% of metros had at least one period below 20% of normal ridership (and 55% of metros were below 10%)

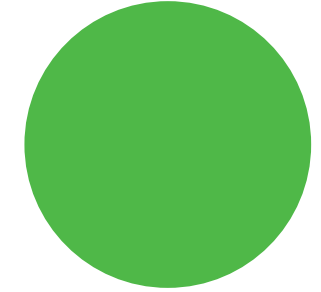
Every metro responded to new requirements and regulations, workforce implications, and financial impacts



RAIL STILL ESSENTIAL

No other modes have the capacity to move large volumes of people in dense urban corridors

Long-term investments for long-term gains: equitable and sustainable economic recovery



GLIMMERS OF HOPE

Strong evidence of recovery globally – several metros in Europe and Asia consistently over 80% of normal ridership

Changing travel patterns as well as different needs and priorities may be new opportunities

Presentation Contents

- ▶ **Introduction: Transit Benchmarking at the Transport Strategy Centre**
- ▶ **Impacts of COVID-19 on Metros**
- ▶ **Implications of COVID-19 for Metros**
- ▶ **Conclusion and Discussion**

Introduction: Public Transit Benchmarking at the Transport Strategy Centre



The Transport Strategy Centre (TSC) at Imperial College London



▶ More than **25 years** of transit benchmarking across **>100 agencies** globally

▶ Unparalleled **experience and insight** into how transit can be most **successful, for the long-term**

Metro

COMET

Railway

FLIRT

IMRBG

ISBERG

RIAMBIG

Light Rail

GOAL

Bus

IBBG

ABBG

Airports

ABG

COMET, The Community of Metros: Founded in 1994, Now 43 Metros in 40 Cities Globally

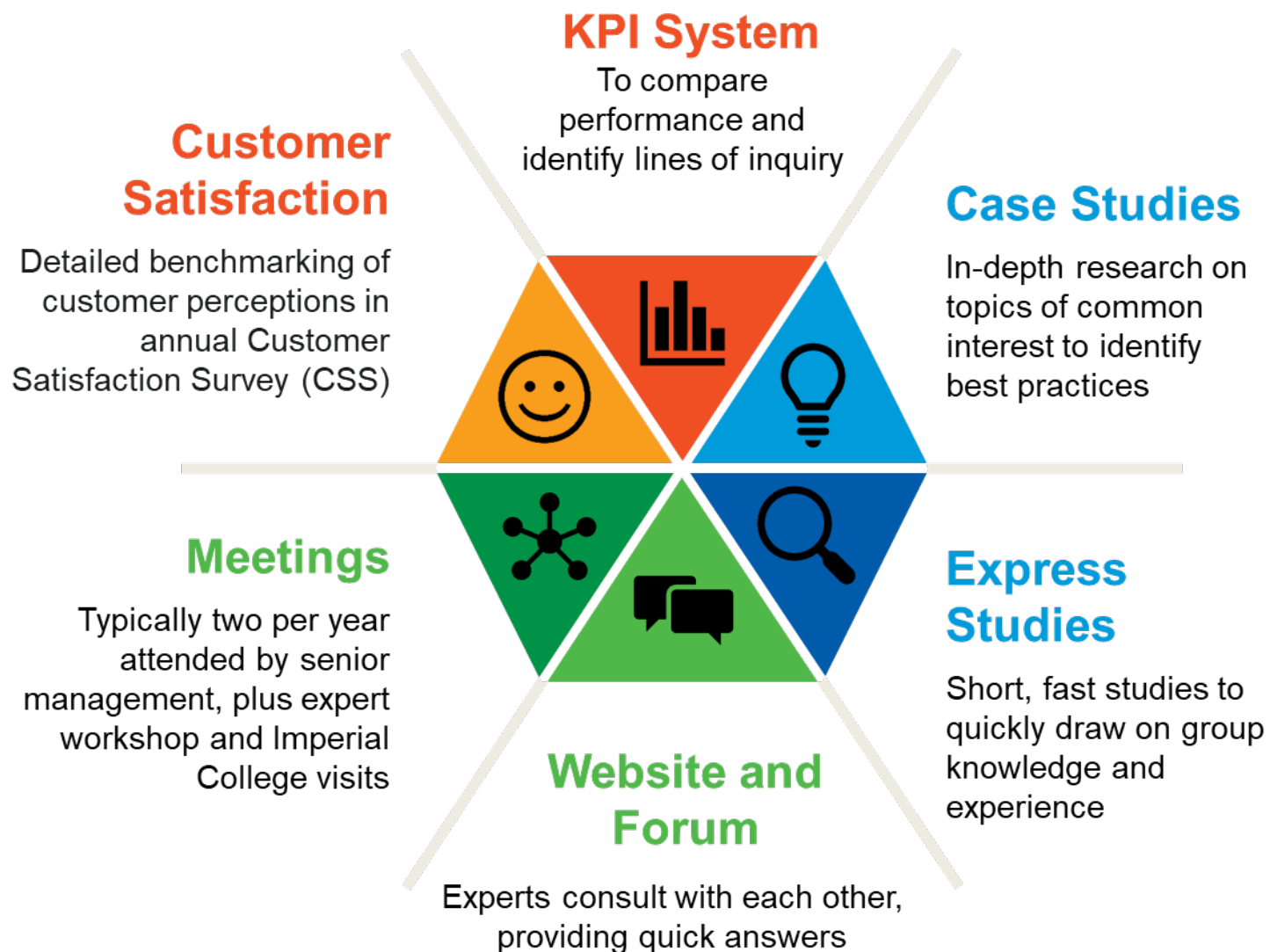
33b passenger journeys

48m train services

US\$60 billion on O&M and renewals



Benchmarking Purpose: To Compare and Analyse Performance and Share Good Ideas, in Order to Improve – Within a Confidential Framework



Benchmarking provides...

- ▶ **Perspective through data:**
 - How do we **compare** to our peers?
 - What are our **strengths and weaknesses**?
 - Supporting and challenging 'rules of thumb' and **setting targets**
- ▶ **Best practices through study and discussion:**
 - What are others doing to **improve**?
 - What **works** / what doesn't?
 - How to **implement best practices**

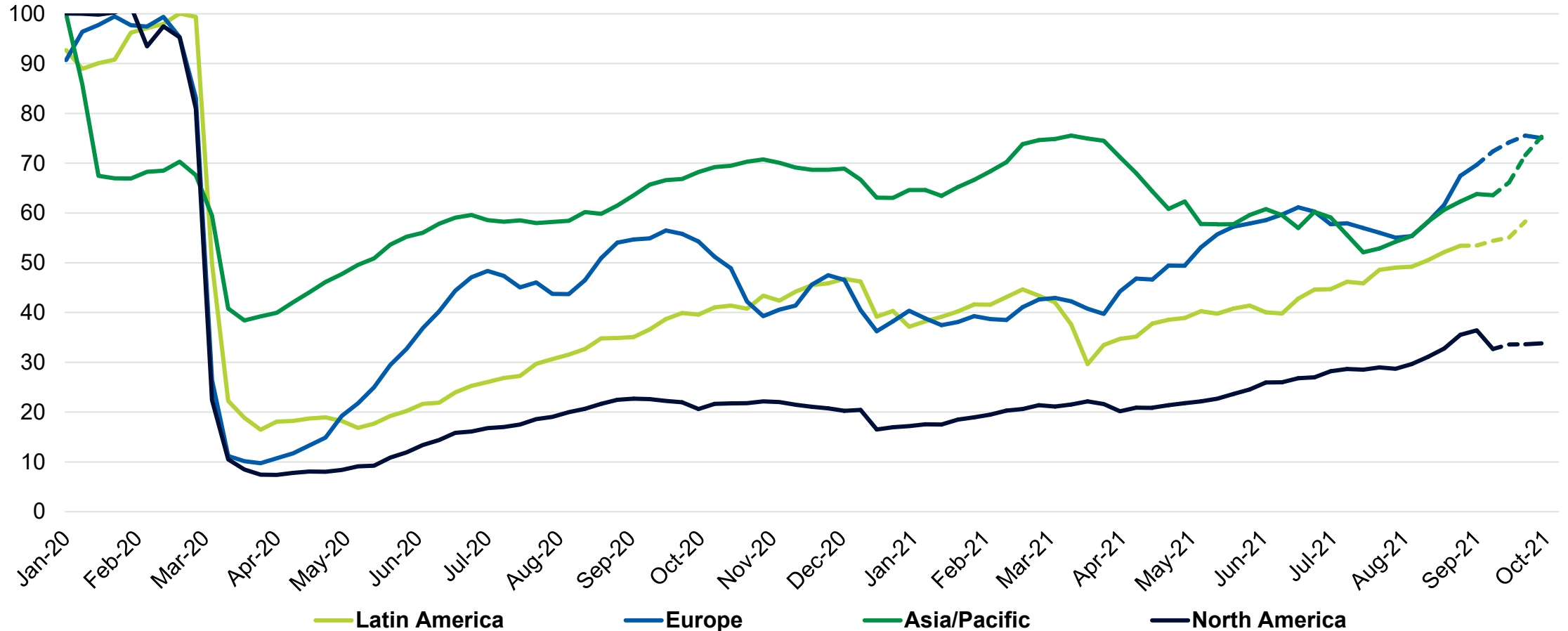
"Rarely is there a challenge that another operator hasn't faced..."

Impacts of COVID-19 on Metros



Metro Demand During COVID-19: Average Trajectory by Region

Average Metro Ridership by Region
% of pre COVID-19 demand

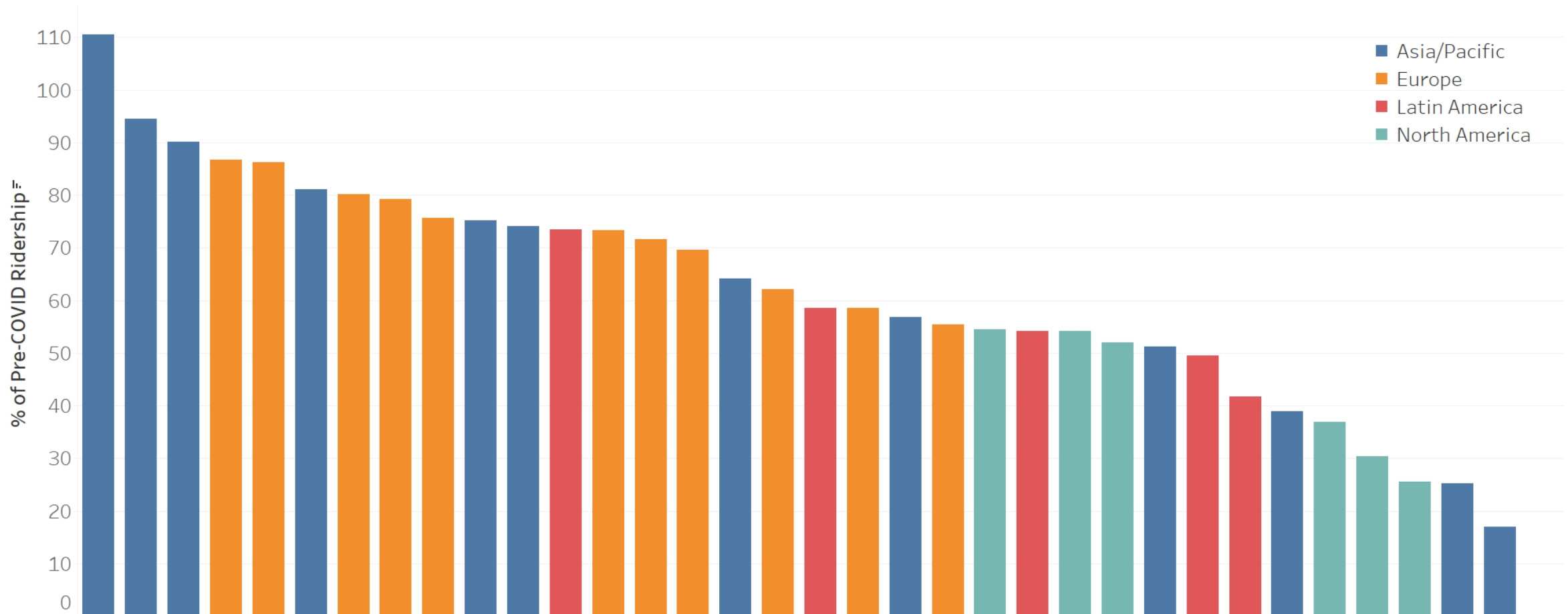


Source: Community of Metros/Transport Strategy Centre at Imperial College London

Latest Passenger Demand: 75% of COMET Metros Now Over 50%, Pulling the Global Average Up to ~60% After Many Months Around 50%

Latest Weekday Demand as % of Pre-COVID Level

Average of Last Four Available Weeks in October / *September / **August



Common Changes in Ridership Patterns: Here to Stay?



Timing

- ▶ More off-peak travel
- ▶ Earlier peak
- ▶ Flattening peak
- ▶ *No consensus on weekday vs. weekend travel*



Ticket Type

- ▶ Less season tickets/ monthly passes
- ▶ More pay-as-you-go and smart card payments



Location

- ▶ Less central business district (CBD) travel
- ▶ More local neighborhood travel
- ▶ *No consensus on shorter vs longer journeys*

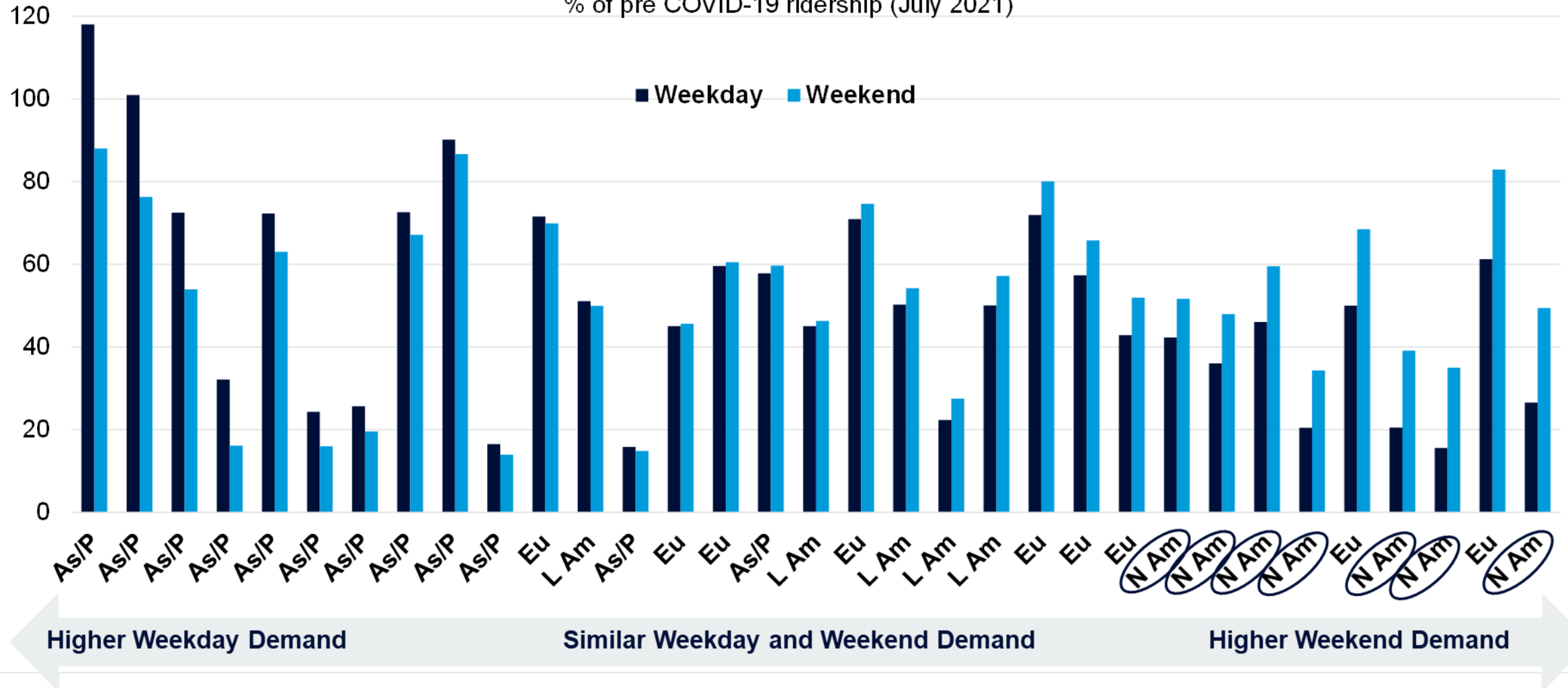


Demographics

- ▶ More younger customers
- ▶ More lower income customers
- ▶ Fewer students
- ▶ Fewer tourists
- ▶ Fewer office/ professional workers
- ▶ *No consensus on leisure vs commuter journeys*

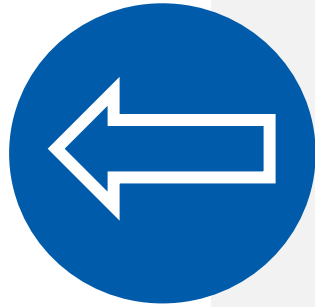
Weekend Ridership Has Recovered More Quickly in Western Europe and North America, Likely Reflecting Home-Working Trends and Alternatives

Weekend vs Weekday Ridership
% of pre COVID-19 ridership (July 2021)



Enhanced Cleaning: Overall 19% Increase Globally with Dramatic Increase in Prominence...What is the Future of Cleaning?

► London Underground



Scaling back enhanced cleaning

Minor scaling back on enhanced cleaning so far:

- **A limited number of metros** have started to reduce some frequencies or staffing levels

Most metros expect enhanced cleaning until at least **late 2021/2022**

► Seoul Metro



Adapting to new customer expectations

Standardisation of enhanced cleaning practices:

- Cleaning is a key part of plans to **regain customer confidence**
- **Customer expectations** may be higher in future



Maintaining standards as demand returns

Return of **routine cleaning requirements** as ridership returns:

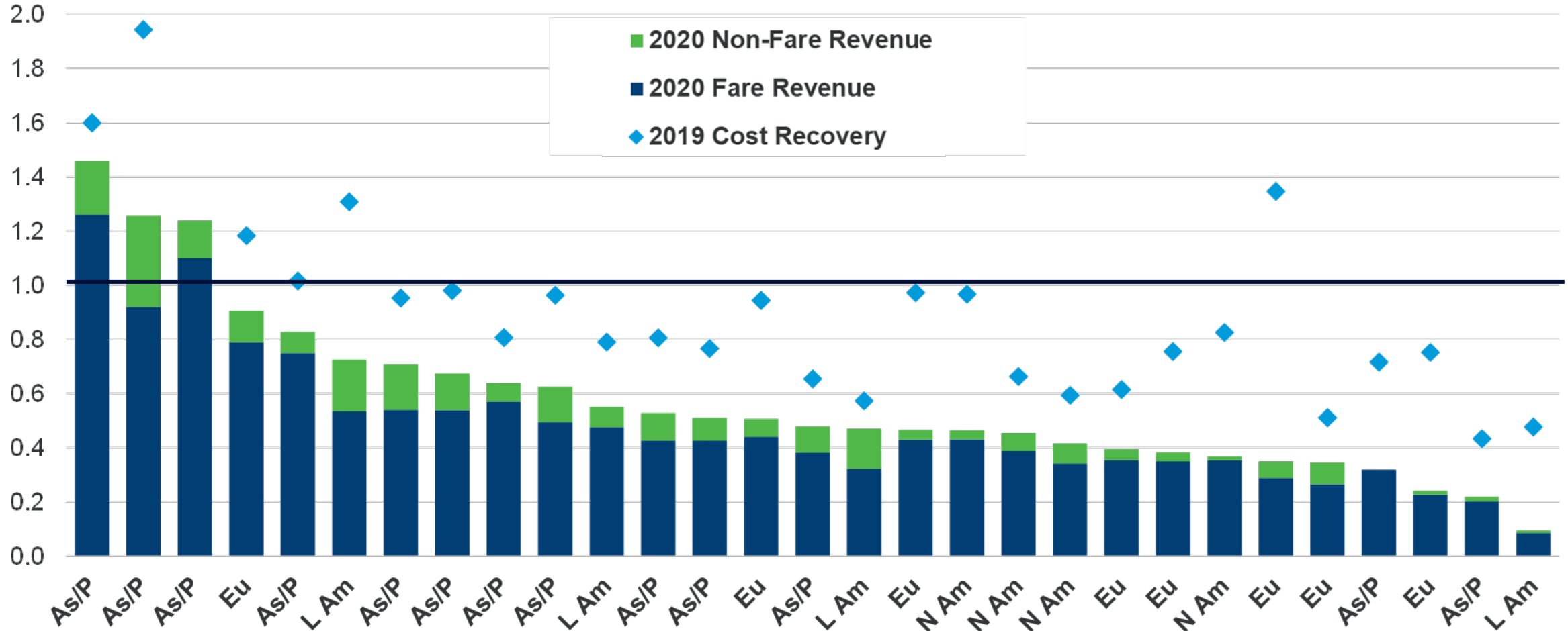
- Difficulty cleaning **during peak hours**
- Mounting **budget pressures**

Future Implications of COVID-19 for Metros



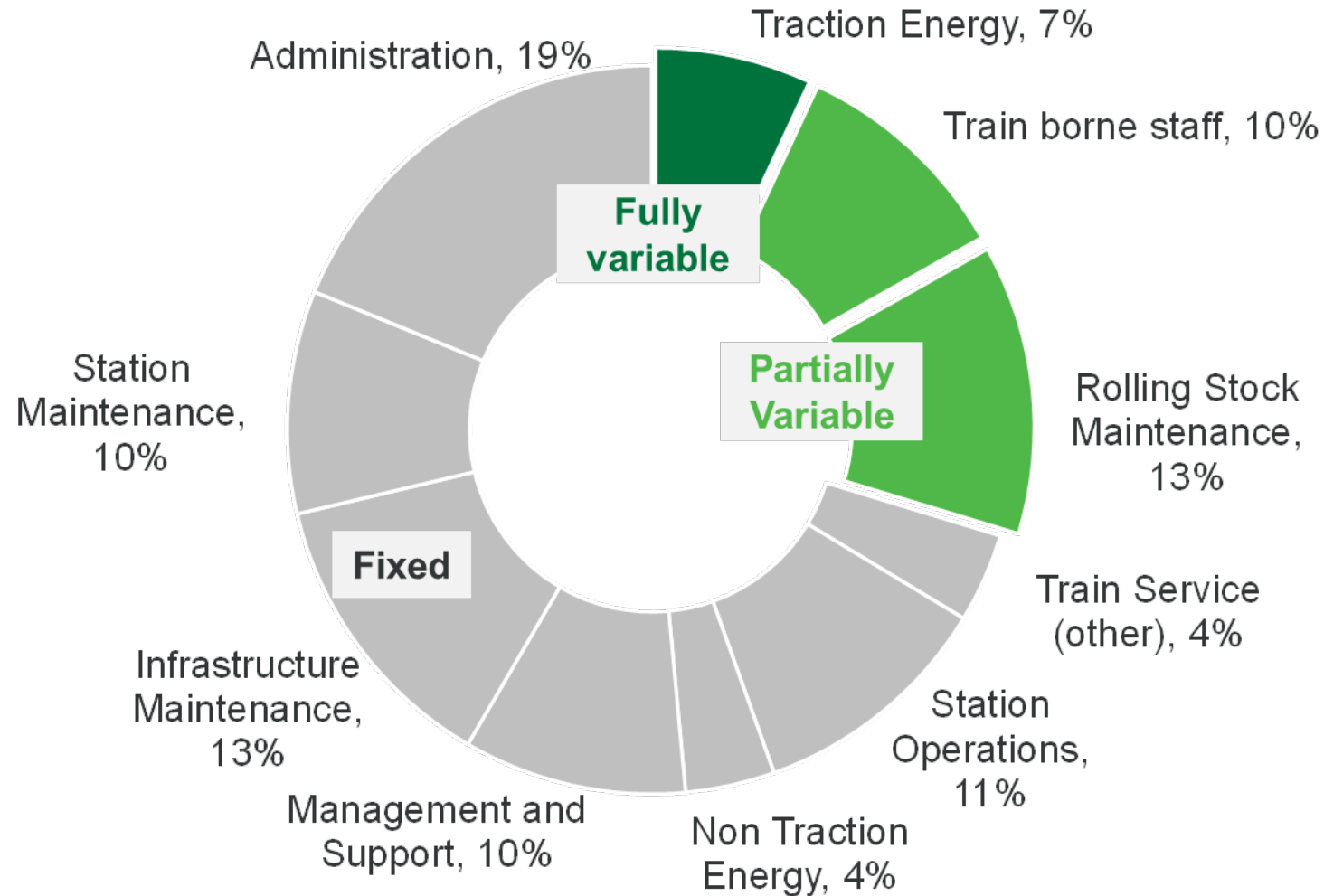
Metro Financial Performance: 30% of Metros Had Operational Surpluses pre-COVID, But Now Every Metro Needs Extra Support

Cost Recovery
Commercial Revenue over Operating Cost



Metros Have Very High Proportions of Fixed Costs...So Cutting Service Cannot Possibly Deliver Enough Savings

- ▶ **82%** of metro operating costs are fixed in the **short run** (~1 year), and still 58% fixed in the medium term
- ▶ **Service cuts have limited impact on costs** and cannot fill the revenue gap – but do have major impacts on demand
- ▶ **Metros have very long lifecycles**, so impacts of decisions can be felt decades into the future



Source: Community of Metros/Transport Strategy Centre at Imperial College London

Metros are Still Essential and are Long-Term – and Therefore Key to Post-Pandemic Recovery for Cities and Their Economies

Metros are still essential

- ▶ No other way to move people in dense urban corridors
- ▶ Alternatives are not sustainable or equitable



Even at
50%
ridership, the **New York Subway** is still carrying
3 million
trips per day!

Metros are long-term

- ▶ Significant risk of decisions with long impacts due to short-term conditions
- ▶ Metros are key catalysts for the equitable and sustainable economic recovery post-pandemic
- ▶ Plan for metros to be successful – so we need to **attract customers back** rather than predict their decline...

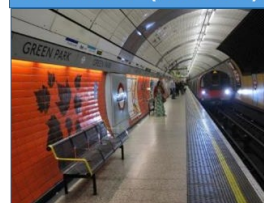
Subsurface Lines
19th Century



Deep Tube Lines
Early 20th Century



Victoria / Jubilee
Post-War (60s/70s)



Modern Extensions
and Elizabeth Line



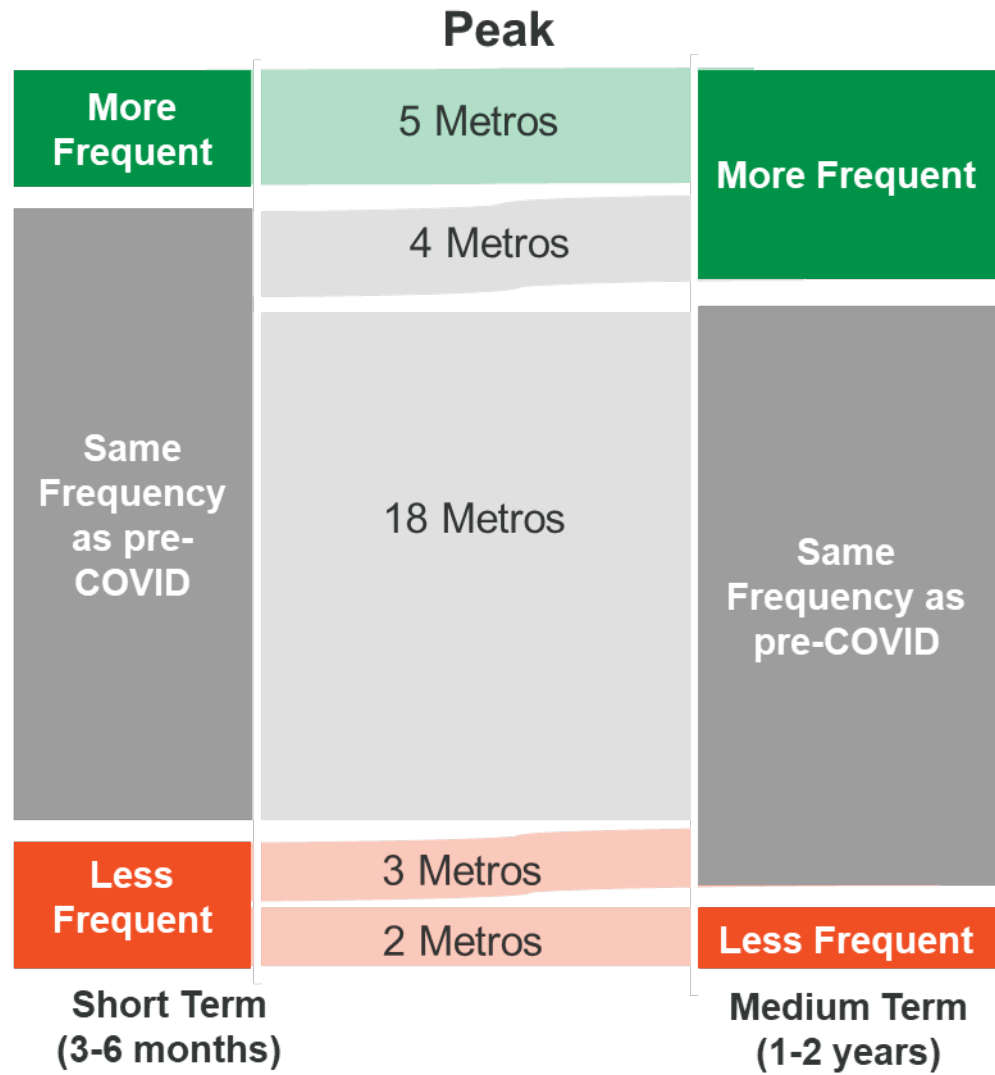
Attracting Customers Back: Research Has Always Shown That Customers Respond More to Service (Frequency→Capacity) Than Price (Fares)

Effect on passenger demand of a 10% increase in:

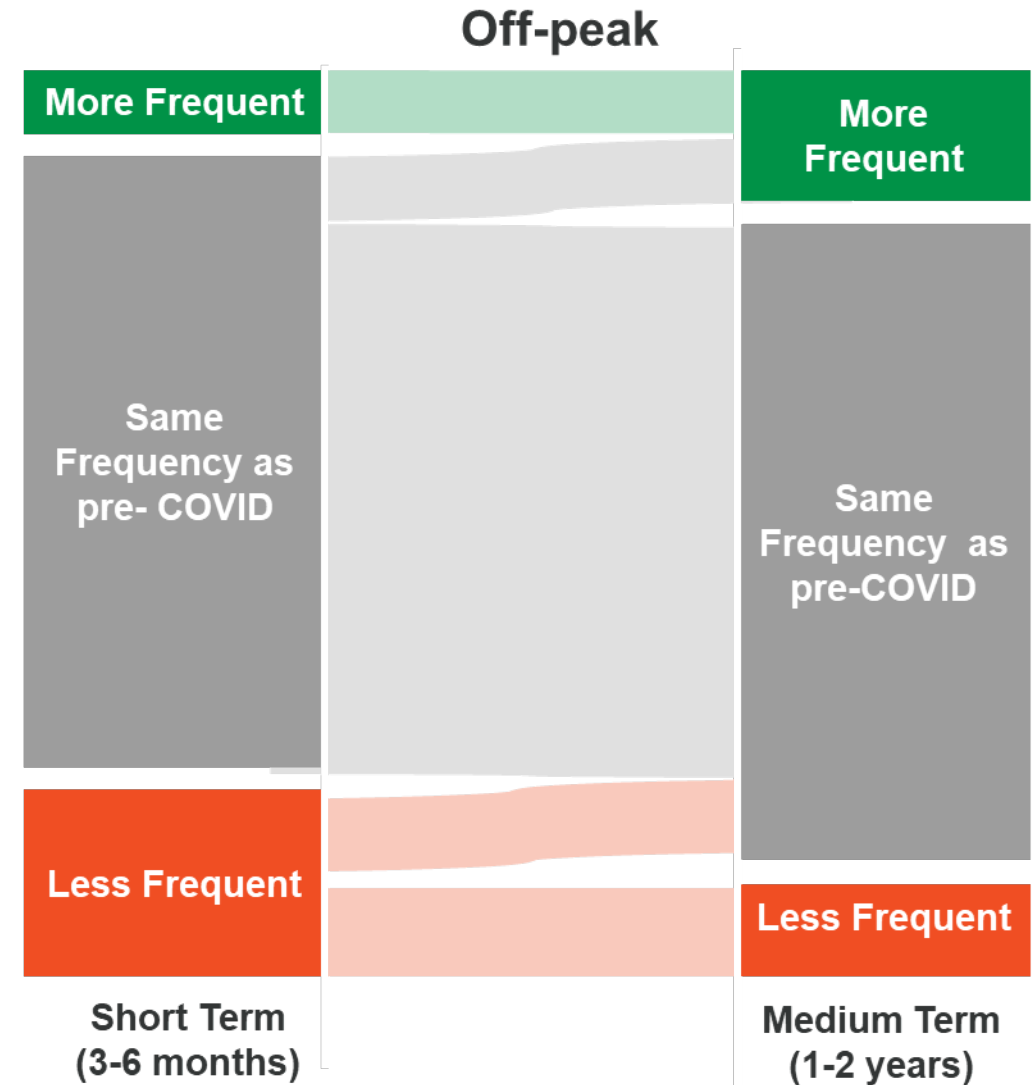


- ▶ **Higher capacity** is better than lower fares to increase passengers
- ▶ Extra capacity and frequency could pay for itself in **additional revenue**
- ▶ **Keep fares up with inflation** to afford higher capacity – a positive feedback

Attracting Customers Back: Most Metros are Retaining pre-COVID Service Levels, but is this the Best Way to Restore Demand and Meet New Needs?



Frequencies compared to pre COVID-19 service levels



Frequencies compared to pre COVID-19 service levels

Attracting Customers Back: Customer Priorities Across Active and Inactive Customers

The top 5 key factors to encourage active and inactive customers back onto London Underground (Sep/Oct 2020):

Active Customers	Inactive Customers
<ol style="list-style-type: none">1. Value for money2. Enforced face coverings3. Real-time information about disruptions4. Train frequency5. Enforced social distancing at stations	<ol style="list-style-type: none">1. Enforced face coverings2. Anti-viral deep cleaning3. Enforced maximum capacity limits4. Enforced social distancing at stations5. Provision of hand gel

The first trip back to the metro is key

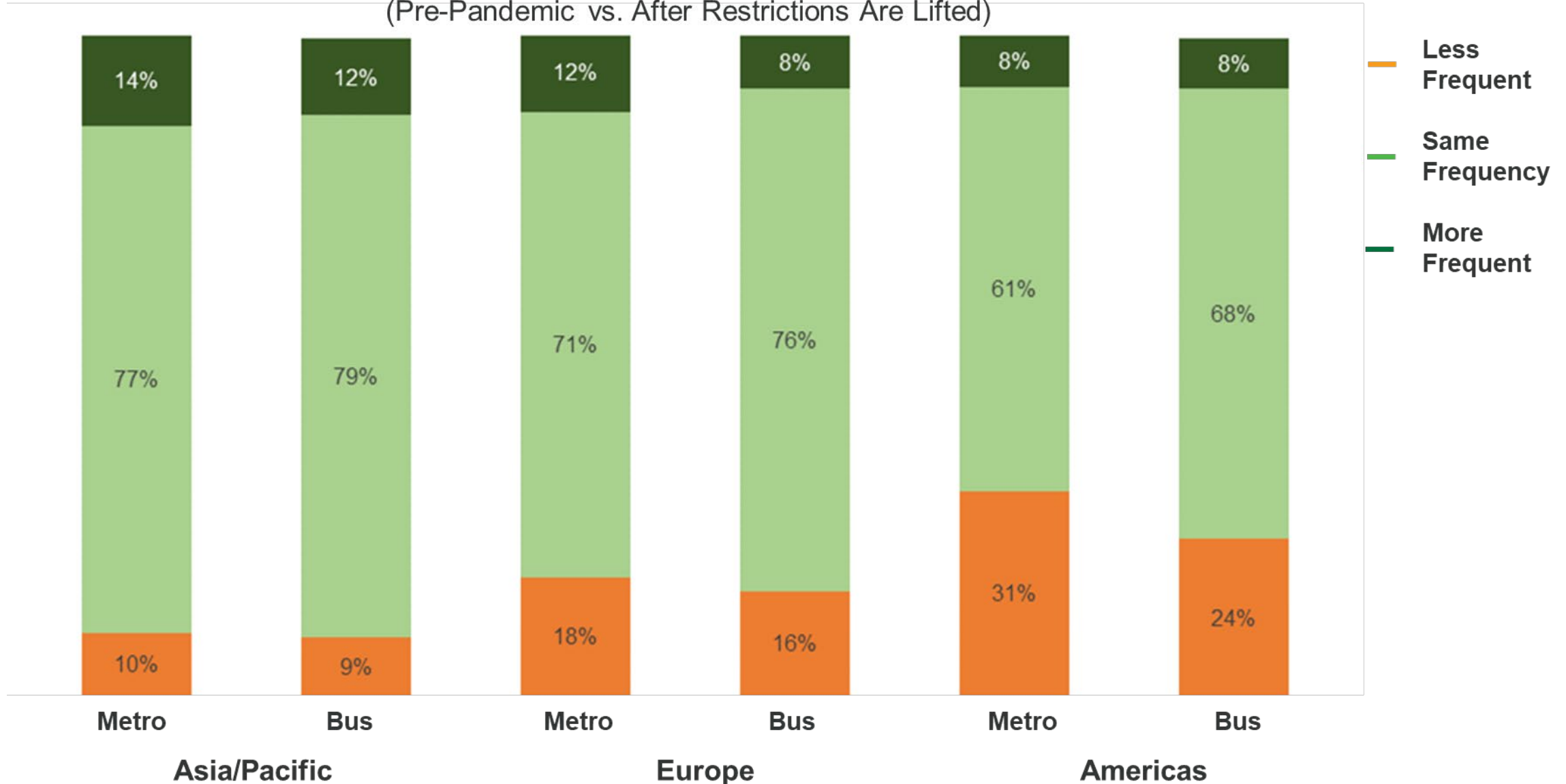
Inactive customers feel that the metro is less safe than active customers

But it will take more than COVID-19 related policies to recover and retain demand in long run

Once riding, customers have different priorities

Attracting Customers Back: Different Future Plans for Bus vs. Metro Travel

Change in Customer Frequency of Use
(Pre-Pandemic vs. After Restrictions Are Lifted)



Attracting Customers Back: Paris RATP's 'C'est la Rentrée' Campaign



Without a train at 06.50, no espresso at 08.01. Thousands of traders are returning to work and resuming their activities thanks to public transport



Without lines A,B,C,D,E, no alphabet. Thousands of teachers and children return to school thanks to public transport

Attracting Customers Back: Transport for London's 'Let's Do London' Campaign



Conclusion



Effects of COVID-19: Positive Outcomes

Increased Service Agility ▶

London DLR has developed a service model, containing pre-planned schedule options, allowing fast adaptation of service to demand in the future

		Train service kilometres	
		Current	Proposed
		Lockdown 3+	Lockdown 4+
Monday to Friday	AM peak	88%	82%
	both peaks	91%	84%
	all day	88%	85%
Saturday	all day	78%	87%
Sunday	all day	82%	88%



◀ Recognition of Public Transport as a Vital Essential Service

At **Berlin BVG**, the national #besserweiter campaign highlighted the importance of public transport workers and the importance of public transport in everyday life

◀ Real-time crowding info

Seoul Metro provides real-time crowding data on apps and in stations



◀ Cashless Payments

SmarTrip on iPhone and Apple Watch in **Washington WMATA** to reduce viral transmission

Opportunities: Changes to Travel Behaviour

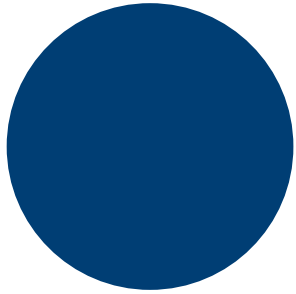


Tokyo Metro 'Cocodesk': private office booth in stations ▼



▲ **Washington WMATA:** Development of new 'Flex Pass' to reflect changing working patterns

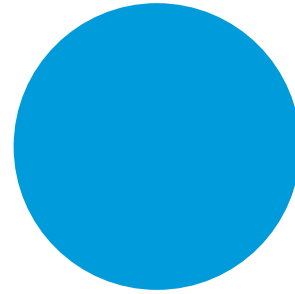
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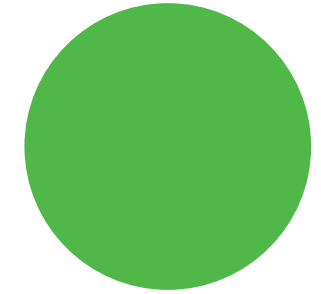
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Thank You for Your Attention! Any Questions?



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TRANSPORT STRATEGY CENTRE

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COVID-19 Discussion Paper

Impacts and Implications for Global Metros

April 2021

Produced by:
Transport Strategy Centre
Centre for Transport Studies
Imperial College London Projects

On behalf of:
Community of Metros (COMET)


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TSC
TRANSPORT STRATEGY CENTRE

27th August 2021

COVID-19 Cross-Group Benchmarking Review of Recent Activities: Public Report



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- 1 Overview
- 2 Editorial
- 3 Recent demand and service level trends
- 4 Summary of policy changes to capacity limits and the wearing of face masks on public transport
- 5 Practical examples used by transport providers to manage COVID-19 challenges
- 6 Endnotes
- 7 References
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Imperial College London Projects

Overview

The purpose of this document is to help operators optimise their response to the ongoing COVID-19 pandemic by sharing knowledge and experience from a wide range of organisations globally, including many of the largest operators in the world's major cities. The focus is on both short-term measures to deal with specific challenges arising from the pandemic in the present, as well as on longer-term impacts, such as the funding crisis or more permanent changes to travel patterns and behaviour, that operators are having to respond to and plan for.

This document summarises recent updates and key findings related to COVID-19, sourced from the benchmarking group members and activities within the groups: over 100 metro, rail, bus and light rail operators participate in the international benchmarking groups (see Appendix A for a list of benchmarking groups and members) managed through the Transport Strategy Centre (TSC) at Imperial College London.

All information provided is anonymised to respect confidentiality rules of the benchmarking groups (unless any information has been sourced publicly).

Full references of relevant literature on COVID-19 in the transport industry are provided at the end of this document, along with a short description for each piece of research.

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