Introductory Remarks

Michelle Batsas
Executive Director
UITP Australia New Zealand
Agenda

- Introduction and Guidelines
- TfL Presentation
- Panel Discussion with Q&A
Tech & Data at TfL: COVID-19 and Beyond

Simon Reed
Head of Technology and Data, Surface Transport
Transport for London

Michelle Batsas
Executive Director
UITP ANZ
GUIDELINES

• Submit questions via the Q&A function on the control panel
• Questions will be responded to during the Panel discussion
• Webinar is being recorded and will be sent to attendees
• Short survey at the end of the webinar
How Transport For London is serving 8.5m customers and 20,000 staff during a pandemic

Simon Reed
Head of Technology and Data, Surface Transport
Transport for London
TfL – Serving 8.5m customers and 20,000 staff during a pandemic

“....well that wasn’t on the risk register!”
Agenda

1. TFL Introduction, Structure and London Buses
2. TfL Outlook Pre-Covid
4. The new reality
5. Planning and recovery
6. Summary and questions.
Agenda

1. TFL Introduction, Structure and London Buses
2. TfL Outlook Pre-Covid
4. The new reality
5. Planning and recovery
6. Summary and questions.
TfL Intro & Structure

Sadiq Khan, Mayor of London with Heidi Alexander Deputy Mayor for Transport and Val Shawcross ex-Deputy Mayor.

Andy Byford – Commissioner Transport for London (29/6/2020 → )
TfL Intro & Structure

MTS

Healthy Streets and Healthy People

A Good Public Transport Experience

New Homes & Jobs

Active

Safe

Efficient

Green

Connected

Accessible

Quality

Unlocking

Sustainable

London’s streets will be healthy and more Londoners will travel actively

London’s transport system will be safe & secure

London’s streets will be used more efficiently & have less traffic

London’s streets will be clean and green

More people will travel on an expanded public transport network

Public transport will be affordable and accessible to all

Journeys by public transport will be pleasant, fast and reliable

People should be able to live in areas where they don’t need cars because they can walk or cycle

Sustainable travel will be the best option in new developments

MTS Outcomes

Strategic Drivers/ Policies

Contractual targets

ITS assets will allow the safe movement of people through the network, with an emphasis on active travel

ITS assets will be available and in a good state repair. Safety risks will be highlighted by inspections and through automated fault monitoring

Maintain network capacity through the reduction of unplanned maintenance activities. Signal timings will be optimal. Network blockages will be enforced

Adoption of recycling techniques and sustainable procurement processes. Traffic will be kept to a minimum, with an emphasis on active travel

ITS assets will enable all to travel safely. Audible and tactile features will be available wherever possible

Improved performance criteria set for bus routes with help from technologies such as iBus and cameras

Mayor’s Transport Strategy

MAYOR OF LONDON

MARCH 2015

EVERY JOURNEY MATTERS
TfL Outlook Pre-Covid

Total sources and uses of funds

- £9.7bn
  - Total sources of funds
  - Grants £2.0bn
  - Use of borrowing, working capital and cash reserves £0.6bn
  - Other income £1.2bn
  - Passenger income £5.1bn
  - Crossrail funding (including borrowing) £0.8bn

79% spent on running and operating the network every day

21% spent renewing and improving the network through one of the largest capital investment programmes in Europe

Source TfL Budget 2020/21
TfL Outlook Pre-Covid

- Operationally, TfL was in Surplus
- Plan to be completely in break-even by 2022/23
- Economic indicators required caution
(London Buses) Business Model & Technology tools

- Passenger Data Analysis
- Network Planning/Development
- Operator Payments £
- Performance Monitoring iBus Reporting
- Tendering & Schedules Contracts
- Operations iBus Service Control
- iBus On-Board R.T.I
Agenda

1. TFL Introduction, Structure and London Buses
2. TfL Outlook Pre-Covid
4. The new reality
5. Planning and recovery
6. Summary and questions.
Coronavirus grips UK

As of 15\textsuperscript{th} March there had been 21 deaths and 1372 cases. The UK Government acted on 16\textsuperscript{th} March with the advice:

- those who can work from home should do so
- Vulnerable people to stay at home
- Those with symptoms to self-isolate

### TfL sends all non-operational staff home w.e.f 17\textsuperscript{th} March

Meanwhile, a further 232 people have tested positive for Covid-19 in the UK, bring the total number of cases to 1,372 as of 6am on Sunday, the DoH said.

The increase came just hours after the Government announced that people over-70 will be instructed to stay in strict isolation at home or in care homes for four months, under a "wartime-style" mobilisation effort likely to be enforced within the next 20 days.

It is part of a series of measures being prepared by the prime minister, health secretary, chief medical officer and chief scientific adviser to prevent the health service from "falling over" and to save lives as Covid-19 becomes an epidemic in the UK.
Government Lockdown 23rd March 2020

Lock-down begins.
- Stay at home
- Protect the NHS
- Save Lives

Active campaign to reduce public transport usage to Essential workers only.
The new reality – Public Transport usage collapses

Train companies seek bailout as coronavirus hits passenger numbers

Tom Burridge
Transport correspondent, BBC News

4 hours ago | Business

The government is in talks with rail bosses to put emergency measures in place to deal with falling passenger numbers after the coronavirus outbreak.

Some train operators were already losing money but fewer fares will put even more pressure on their finances.

A senior industry source said fairly drastic measures might be required for train companies to survive.

At an industry meeting last week, passenger numbers were said to have fallen by up to 18% on certain lines.

However, another industry source acknowledged that the fall in passengers could be significantly higher.

They told the BBC that the number of passengers
Agenda

1. TFL Introduction, Structure and London Buses
2. TfL Outlook Pre-Covid
   - The new reality
4. Planning and recovery
The new reality – It’s all about the data

The dawn of the data scientist

Existing data sources combined to provide comprehensive daily reports on boarders, entries and exits, loadings and heatmaps.
The new reality – It’s all about the data

The dawn of the data scientist

Daily ‘flash’ of key statistics to help manage demand.

<table>
<thead>
<tr>
<th>Station Type</th>
<th>2019</th>
<th>2020</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport</td>
<td>62,408</td>
<td>10,225</td>
<td>-84%</td>
</tr>
<tr>
<td>City</td>
<td>821,436</td>
<td>118,623</td>
<td>-86%</td>
</tr>
<tr>
<td>Inner Suburb</td>
<td>2,304,884</td>
<td>640,825</td>
<td>-72%</td>
</tr>
<tr>
<td>Outer Suburb</td>
<td>2,817,079</td>
<td>909,587</td>
<td>-68%</td>
</tr>
<tr>
<td>Shopping</td>
<td>862,663</td>
<td>219,892</td>
<td>-75%</td>
</tr>
<tr>
<td>Terminus</td>
<td>1,954,194</td>
<td>400,413</td>
<td>-80%</td>
</tr>
<tr>
<td>Tourist</td>
<td>833,602</td>
<td>127,550</td>
<td>-85%</td>
</tr>
</tbody>
</table>
The new reality – Operational Staff

New Solutions – urgently required

TfL & Trapeze implemented a web-version of iBus allowing service controllers to be separated and comply with distancing guidelines.

TfL, Cubic & Flowbird
Developed a solution to move the card –reader away from the driver area.
The new reality – Support the NHS

New Solutions – urgently required

TfL & **urbanthings** developed an RTI system for staff and service controllers in < 21 days.
The new reality – Right-size the operation

Modify Services to reflect demand

Coronavirus: 40 London Underground and Night Tube suspended as capital plunges into lockdown

People should not be travelling, by any means, unless they really, really have to, mayor Vincent Wood told Sky News.

Transport for London will run a reduced service that allows critical workers to make essential journeys.

Close 40 Tube stations across the capital and reduced the frequency of services

Reduced frequencies

From Monday 23 March, TFL said it would start to reduce the frequency of other services across its network as well.

It will continue to provide services to help critical workers get to where they need to, while ensuring that remaining services are not overcrowded.

TFL is aiming to run Tube trains every 4 minutes in Zone 1, with the possibility that this will reduce further.

Then from next week and until further notice, London Overground, TFL Rail, the DLR and London Trams will run fewer services.

TFL suspends Congestion Charge and Ulez to help critical workers move around London during the coronavirus crisis

Mayor of London Sadiq Khan asked for suspension to ensure critical workers could travel easily.

It comes as 40 tube stations closed earlier this week amid the coronavirus crisis.

Coronavirus symptoms: what are they and should you see a doctor?

Transport for London (TFL) asks: regular Tube and Overground services will be no Waterloo & City line.

Other lines will be closed.

The coronavirus crisis has led to the suspension of the Go Sutton bus service, as demand for the service has collapsed due to the restrictions on leaving your home and on travelling. We will petition to have it restored once the crisis is over.
Right-size the operation

Modify Services to reflect demand

<table>
<thead>
<tr>
<th>Base Version</th>
<th>Goes Live</th>
<th>Duration</th>
<th>BV spreadsheet (no. of service change)</th>
<th>Covid spreadsheet (no. of schedules)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BV353</td>
<td>Fri 06 Mar 20</td>
<td>2 week release</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td>BV354</td>
<td>Fri 20 Mar 20</td>
<td>1 week release</td>
<td>143</td>
<td>373</td>
</tr>
<tr>
<td>BV355</td>
<td>Sat 28 Mar 20</td>
<td>1 week release</td>
<td>56</td>
<td>267</td>
</tr>
<tr>
<td>BV356</td>
<td>Sat 04 Apr 20</td>
<td>1 week release</td>
<td>2</td>
<td>308</td>
</tr>
<tr>
<td>BV357</td>
<td>Sat 11 Apr 20</td>
<td>1 week release</td>
<td>19</td>
<td>129</td>
</tr>
<tr>
<td>BV358</td>
<td>Sat 18 Apr 20</td>
<td>1 week release</td>
<td>17</td>
<td>101</td>
</tr>
<tr>
<td>BV359</td>
<td>Sat 25 Apr 20</td>
<td>1 week release</td>
<td>17</td>
<td>99</td>
</tr>
<tr>
<td>BV360</td>
<td>Sat 02 May 20</td>
<td>1 week release</td>
<td>7</td>
<td>166</td>
</tr>
<tr>
<td>BV361</td>
<td>Sat 09 May 20</td>
<td>1 week release</td>
<td>23</td>
<td>88</td>
</tr>
<tr>
<td>BV362</td>
<td>Sat 16 May 20</td>
<td>1 week release</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>BV363</td>
<td>Sat 23 May 20</td>
<td>1 week release</td>
<td>83</td>
<td></td>
</tr>
<tr>
<td>BV364</td>
<td>Sat 30 May 20</td>
<td>1 week release</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>BV365</td>
<td>Sat 06 Jun 20</td>
<td>1 week release</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>BV366</td>
<td>Sat 13 Jun 20</td>
<td>1 week release</td>
<td>194</td>
<td></td>
</tr>
<tr>
<td>BV367</td>
<td>Sat 20 Jun 20</td>
<td>1 week release</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>BV368</td>
<td>Sat 27 Jun 20</td>
<td>1 week release</td>
<td>73</td>
<td></td>
</tr>
<tr>
<td>BV369</td>
<td>Sat 04 Jul 20</td>
<td>1 week release</td>
<td>93</td>
<td></td>
</tr>
<tr>
<td>BV370</td>
<td>Sat 11 Jul 20</td>
<td>1 week release</td>
<td>117</td>
<td></td>
</tr>
<tr>
<td>BV371</td>
<td>Sat 18 Jul 20</td>
<td>1 week release</td>
<td>102</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Total BV Releases</th>
<th>Total Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>11</td>
<td>788</td>
</tr>
<tr>
<td>2020</td>
<td>19</td>
<td>3068</td>
</tr>
</tbody>
</table>

Example: TFL Bus Service:
Incredible effort to implement service changes to ensure:
- Right level of service provided
- Timetables/Journey planners and RTI up to date
- Bus operators able to manage change in demand
The new reality – Right-size the operation

Safe-stop all non-essential projects

Hundreds of projects stopped under our safe-stop process. Only essential projects continued.
The new reality – Home Working
The new reality – Home Working

Recent improvements to support high volumes of home working

- Increased concurrent Virtual Private Network (VPN) licences from 2,000 to 12,000
  - F5 VPN used for laptop and mobile access to One London
- Increased concurrent Citrix capacity to 22,500 (then 14,700 steady state)
  - Citrix is used for thick/thin clients and portal.tfl.gov.uk access
- Introduced laptop loan service from Tech Hubs
- Increased laptop stock for prioritised remote workers
- Introduced home deliveries for IT equipment—laptops and DSE bundles
- Completing changes that increase our TFL-Internet capacity from 1 Gbps to 5 Gbps
- Introduced a free phone option for O2 teleconference bridges
- Introduced a new Working From Home SharePoint page (over 30,000 views so far!)
- Increased online guidance and virtual tuition (drop-ins, videos)
- Developed and tested a solution to update laptop software without an office visit
- Completed a Live Event broadcast trial and now preparing to make this a service offering

Major investment to support 15,000 people now working at home
The new reality – Government Support

Operational Support + Critical Renewals

TfL to raise congestion charge by 30% as part of £1.6bn bailout deal

Mayor describes TfL’s £1.6bn bailout deal as ‘sticking plaster’

Deal to keep ‘tubes and buses running’ also affects free travel for children and the over-60s

- Coronavirus - latest updates
- See all our coronavirus coverage

The government has agreed a £1.6 billion funding and financing package for Transport for London to protect key services, helping people to stay safe during the pandemic and supporting the capital’s gradual recovery from COVID19.

Transport for London is to raise the congestion charge by 30%, temporarily stop free travel for children and charge over-60s to travel at peak times after securing a £1.6bn bailout from the government.

A road sign marks the start of the congestion charge area in London. Photograph: Alessia Pierdomenico/Reuters
Agenda

1. TFL Introduction, Structure and London Buses
2. TfL Outlook Pre-Covid
4. The new reality
5. Planning and recovery
6. Summary and questions.
Planning Scenarios

Scenarios are varied stories about the future of London that can help TfL operate and make decisions amidst deep uncertainty.

The point of scenario planning is to help us make plans and agree priorities which are resilient to multiple futures.

The scenarios consider what travel was like before COVID-19 and how it might change as a result. For each of the scenarios we have identified:

- High-level travel outcomes and an indication of transport’s contribution to climate change
- Indicative revenue implications (assuming continuation of current fares policy)
- Strategic fit with HM Government Budget 2020 priorities

Travel in London before COVID-19

- London’s population reached 8.96m in mid-2019.
- London was the fastest growing region in England, but at a slower rate than peaks of previous decade.
- There were 28 million trips on a working day in London.
- This figure was the same as 2016 despite population growth.
- London’s sustainable mode share was 0.3 per cent from 2017 to 63.0 per cent in 2018.
- Improvements in mode share have been much more gradual in recent years, affected by bus patronage falling from a peak in 2014.
Planning Scenarios

A return to business as usual
The story of a London which has bounced back quickly from the crisis

London fends for itself
The story of a lower growth London

Low carbon localism
The story of a smaller but more sustainable London, which has been impacted significantly by the virus and become more local as a result

Remote revolution
The story of a successful but quite different city, where technology has changed how people live, work and travel

Agglomeration
The story of an expanding but still unequal London, where virus related changes to the economy enhance its global competitive advantage
What travel looks like in 2030

Travel demand in 2030 based on MoTION transport model. Demand is split by seven high-level purposes and seven modes of travel.

Carbon in 2030
Indication of transport's contribution to climate change in 2030

Revenue in 2030
A simple illustrative estimate of revenue for rail and bus journeys, taking an average yield per trip from the TfL Business Plan and working forward to 2030. The approach takes account of longer or shorter journeys but assumes no change in fares policy, and therefore there is potential to flex in order to optimise revenue.

Carbon Impacts -

Total trips (millions)
To, from and within London in 2030

Change in travel demand to 2030
Change in trip numbers from 2016

Fit with HM Gov priorities
In each scenario how London's transport system might best fit in with Government priorities as set out in Budget 2020 – list from:
• Levelling up and getting Britain building
• Backing Business
• Growing a Greener Economy
• Supporting people and families
• Funding excellent public services
• Investing in Innovation

TfL – Serving 8.5m customers and 20,000 staff during a pandemic
Summary: Cycling

All scenarios see a likely increase in cycling. Highest levels of cycling are likely in Low carbon localism and Agglomeration.

Table:

<table>
<thead>
<tr>
<th>Mode share</th>
<th>Cycle trips</th>
<th>Change from 2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>5%</td>
<td>1,521,000</td>
<td>+ 768,000 (+102%)</td>
</tr>
<tr>
<td>5%</td>
<td>1,404,000</td>
<td>+ 651,000 (+86%)</td>
</tr>
<tr>
<td>4%</td>
<td>1,498,000</td>
<td>+ 745,000 (+99%)</td>
</tr>
<tr>
<td>3%</td>
<td>812,000</td>
<td>+ 59,000 (+8%)</td>
</tr>
<tr>
<td>3%</td>
<td>795,000</td>
<td>+ 42,000 (+6%)</td>
</tr>
<tr>
<td>3%</td>
<td>753,000</td>
<td>2016 base year</td>
</tr>
</tbody>
</table>

- **Low carbon localism** sees a big change in behaviour to prefer active modes for more local trips with cycling particularly attractive.
- **Business as usual** also sees high population growth and an attraction to active modes leading to an increase in cycling trips.
- **Agglomeration** scenario has the highest active travel mode share.
- High population growth and densities shift travel from car to walk and cycle.
- **Remote Revolution** sees a slight aversion to public transport shifts some trips to active modes.

Increased car traffic combined with more active travel poses challenges.

Large increases in volume of cyclists will have implications for street space allocation.

TfL – Serving 8.5m customers and 20,000 staff during a pandemic.
Return to full service operation
Cleaner, safe public transport system with social distancing

Since 18th May, services increased in line with government relaxation of lock down restrictions.

• Mandatory face masks
• Special Cleaning

25th July: end of special services
Return to full service operation

Safer operations: safer cycling and walking

Streetspace program to create wider pavements and improved cycling facilities. See https://tfl.gov.uk/travel-information/improvements-and-projects/streetspace-for-london
Return to full service operation

Safer operations: restart of projects

Every suspended project subject to rigorous review before restart.

1. Safety review to ensure all necessary steps taken with revised working practices to protect workers and the public.

2. Financial review to ensure affordability and delivery.
Agenda

1. TFL Introduction, Structure and London Buses
2. TfL Outlook Pre-Covid
4. The new reality.
5. Planning and recovery.
6. **Summary and Questions.**
Speed of recovery

Recovery since the release of lockdown

Ridership compared with operator’s reference

Number of weeks after the first measures had been relaxed

TfL, London, UK

Cases per 100,000 residents

Week number

Epidemiological evolution

Lockdown imposed: restaurants, gyms, pubs closed.

Lockdown relaxed, congestion charging reintroduced

Front-door boarding allowed, validation required

Masks mandatory in public transport
Promoting safe recovery

Eat Out to Help Out –
Diners who eat-in will benefit from a 50% discount, up to a maximum of £10 per person, on food and non-alcoholic drinks, any Monday to Wednesday in August.

More than 53,000 outlets across the UK have so far signed up to the UK government’s Eat Out to Help Out scheme - and a new official government online finder is available to help diners locate them.

What is the advice for passengers?

Government advice is now that people "may use public transport, while encouraging them to consider alternative means of transport where possible."

From 1 August, employers in England will have discretion over staff returning to the workplace, replacing the advice to work from home where possible.

Travellers are advised to:

- Travel at off-peak times
- Take a less busy route and reduce the number of changes
- Buy a ticket in advance where possible, or use contactless payment
- Keep at least 1m away from people "where possible" and take "suitable precautions"
- Wash their hands for at least 20 seconds after completing their journey

Face coverings are mandatory on public transport in England, Scotland and Northern Ireland and will be required in Wales from 27 July.

People should only travel in areas under local lockdown if their journey is essential, while the clinically extremely vulnerable should only travel if they are able to shield at the same time.
Current Statistics 30/7/2020

We are seeing a road-led recovery: a consequence of, and in-line with, Govt. policy.
This is expected to change i.e. move from an environment where P.T is discouraged to one where it forms part of a recovery plan for London.
Contact

Simon Reed  Simon.reed@tfl.gov.uk
QUESTIONS?

Submit questions via the Q&A function on the control panel.
Please include your name and organisation.
WEBINARS

Jeremy Yap
Deputy Chief Executive,
Land Transport Authority,
Singapore

Wednesday 19 August
4:00pm - 5:00pm (AEST)

Singapore's Public Transport Approach During and After COVID-19

@uitpanz
UITP Australia New Zealand
https://australia-newzealand.uitp.org/
Zero Emissions Bus Forum

REGISTRATION OPENING SOON

Please register your interest via our website or send us an email.

https://australia-newzealand.uitp.org/digital-events

anz.uitp@uitp.org