

# COVID-19 AND TRANSPORT

KEEPING OUR WORLD MOVING DURING AND AFTER THE CRISIS

## White Paper

1st May 2020



*This document has been prepared by Atkins Acuity, a member of the SNC-Lavalin Group, in response to the COVID-19 (Coronavirus) Crisis. At the current time, the situation globally and in the GCC Region continues to evolve rapidly, with great uncertainties and no clear end in sight. What is clear is that the human, economic and social impact is already severe and that organizations have a duty to act immediately to protect their employees and clients, address business challenges and risks, and help to mitigate the Pandemic in whatever ways they can.*

*The material in this document will be periodically updated and released in different formats.*

*Acknowledged sources include Permanent International Association of Road Congresses (PIARC), The Chartered Institution of Highways & Transportation (CIHT), Transport Research Board (TRB), The International Association of Public Transport (UITP), National, Khaleej Times, Arab Times, Dubai Media Office, Hellenic Association of Toll Road Network.*

*For up-to-date information on COVID-19, please see reports from the European Centre for Disease Control and Prevention, the US Centre for Disease Control and Prevention, and the World Health Organization, and the live tracker of global COVID-19 cases from John Hopkins University.*

*This document is intended for general informational purposes only and does not take into account the reader's specific circumstances and may not reflect the most current developments. Atkins Acuity disclaims liability for the accuracy and completeness of the information set out and for any acts or omissions made based on such information.*

*For more information, contact our Advisors listed on the final page of this document.*



## 1. THE WORLD JUST CHANGED – COVID-19 PRESENTS AN UNPRECEDENTED CRISIS FOR PEOPLE, ORGANISATIONS AND COMMUNITIES IN THE GCC AND WORLDWIDE

The World Health Organization (WHO) declared COVID-19 an international health emergency on 30<sup>th</sup> January 2020 and a global pandemic on 11<sup>th</sup> March 2020. Compared to previous global pandemics such as SARS or Ebola, the current COVID-19 Crisis is a global event without precedent, possibly in a generation, and exerts a number of specific impacts over and above conventional disaster management and recovery.

The Crisis is as much an economic crash as it is a public health emergency, now exceeding the 2008 Financial Crisis. In the Gulf Consultative (GCC) Council region, major lockdowns on personal and business activity have been compounded by record lows in oil price, on which economic activity and Government budgets are based.

Right now, as we potentially approach a pause in what the International Monetary Fund has called the “Great Lockdown,” the Crisis presents immediate logistical and operational challenges requiring urgent mitigation, with containing the number of COVID-19 cases and deaths being the top priority ahead of economic recovery. According to The National Cooperative Highway Research Program (NCHRP), 80% of these responses are common to all crisis categories, but 20% are unique to pandemic and local circumstances.



Although less severe than being seen in Europe or the USA, the human cost of the Pandemic in the GCC is real and tangible. Over time, the balance and trade-offs between policy objectives is likely to change with the current hard lockdowns giving way to a careful re-starting of economic and social activity. This has already commencing in some parts of the GCC and is expected to continue into June and July, ahead of a re-starting of international and regional movement across borders later in the year.

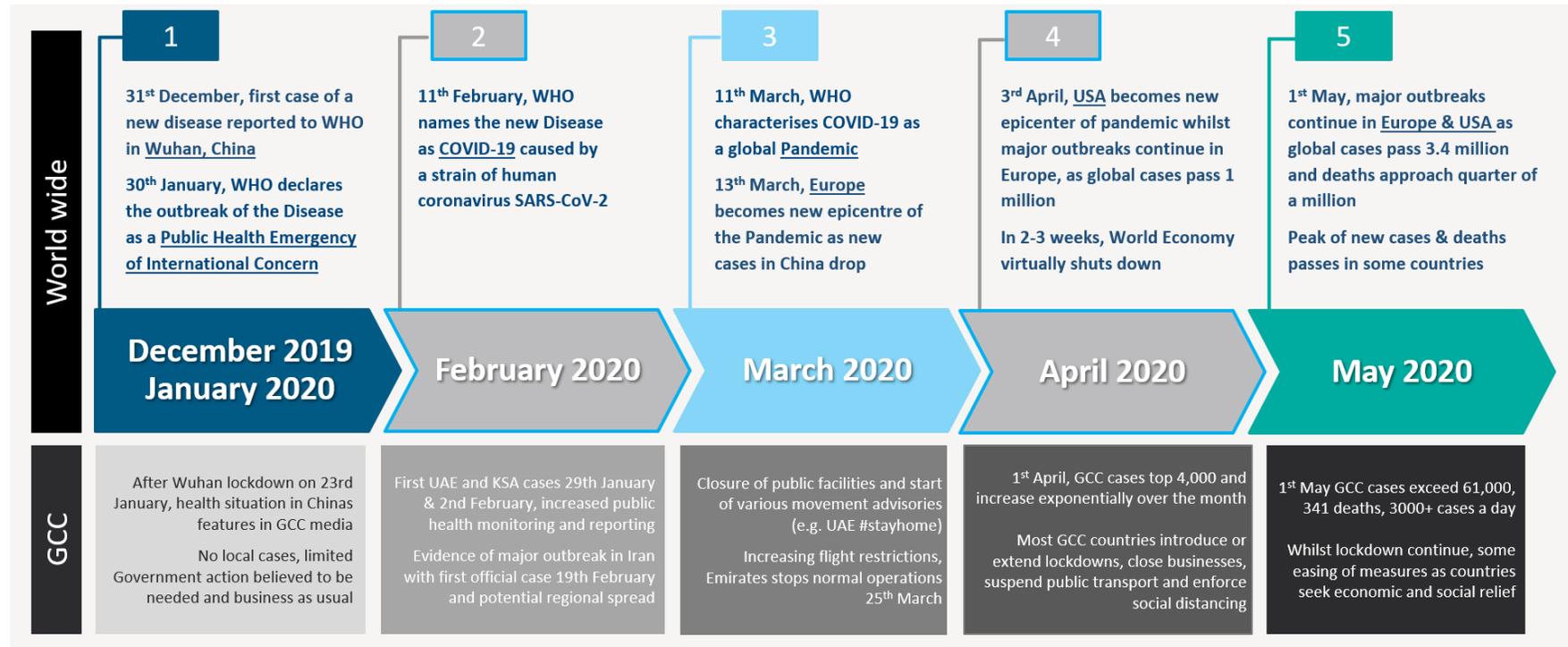
The transport sector, and the public and private organizations within it, is impacted by COVID-19 as much as others. However, it has a vital role in keeping essential goods and workers moving; it will have a vital role in the recovery too, especially if Governments prioritize infrastructure investment as an economic stimulus and a means of re-invigorating the private sector.

As well as challenges, the Crisis presents some positive opportunities. We should not lose sight of what could be done better or differently and how our post-COVID-19 World might benefit as a result.



When people, business and communities recover from COVID-19, we are unlikely to go back to normal – there will be medium- and long-term implications and, whilst there are pressing immediate needs, we should start thinking about those now. There is also a need to be better prepared for future pandemics.

## The COVID-19 Pandemic Timeline to Date



## 2. MANAGING CHAOS – THE CRISIS IS HAVING IMPACTS AND PRESENTING CHALLENGES ON MULTIPLE FRONTS

### Overall

Globally, COVID-19 has taken a massive toll in terms of confirmed cases and reported deaths. The picture in the GCC has been comparatively modest compared to Europe, the USA & China, but cases have accelerated dramatically since March, rising to a peak of infections across the region.

Lockdowns have been imposed in all countries (e.g. National Sanitation Program in UAE, 24-hour curfews in Saudi Arabia), with strong restrictions on personal or work travel except for essential purposes.

There has been a near cessation of international flights, with the travel and tourism sector now shutdown. Economic impacts have been exacerbated by record low oil prices. Despite OPEC production cuts being agreed, prices have been trading at below half the level in January and continue to be volatile.

Central banks, together with immigration authorities, have introduced various economic stimulus packages, support and relief for people and business, but these will take time to kick in and the IMF's World Economic Outlook has already forecast sharp declines in growth for 2020, both globally and for the GCC.

This is a perfect storm of circumstances. Recovery from the health and economic emergency may commence in the second half of 2020. This is dependent on many factors which remain uncertain, not least the chance of further waves of infection. The effects of COVID-19 will be felt well into 2021, possibly beyond.

## Impacts on Transport and Traffic

There been sharp and substantial falls in demand for movement as a result of stay home campaigns, curfews, cessation of tourism, business contraction and exodus of expat workers in all countries of the GCC.

International and domestic aviation is nearly completely suspended with most national airlines grounded and airports at a standstill, except for air cargo and a small number of repatriation flights.

General traffic is estimated to have fallen by around four-fifths dependent on area, whilst international benchmarking suggests road freight may have halved. Public transport has been suspended in many locations, and, where services are still running, seeing falls in patronage in line with road traffic. For the latter:

- There are limitations on occupancy to provide social distancing;
- Frontline staff are being provided with masks, gloves and sanitizers against infection; and
- There has been a stepping-up in cleaning and sanitation of public areas and facilities.

New regulations (and penalties) have been introduced to minimize trip-making & enforce social distancing. At the same time, some regulations have been eased, such as free public parking, suspension of road tolls and support for home deliveries and enabling movement of health supplies.

There has been slowdown in construction & maintenance projects (e.g. Dubai's Route 2020, Riyadh Metro)

- Delays to materials and components due to factory shutdown in China & elsewhere in the World;
- Lower productivity due to returning foreign workers self-isolating or being unable to travel; and
- Impacts on contract buses transporting workers due to social distancing requirements.

Not all impacts are negative. Air quality has improved, congestion & road traffic accidents are likely to have fallen; the question is how such benefits can be retained as demand rises as the lockdowns ease.



## Organizational Impacts

Public and private entities across the GCC have closed offices and implemented remote working. For example, they are issuing laptops and implementing ICT to allow employees to communicate. Managers are having to coordinate their teams, set tasks, meet deadlines & achieve performance KPIs virtually.

In transportation, management of frontline staff poses special challenges, in terms of absenteeism, reduced capacity, occupational health and safety and protecting key workers from contracting or passing on disease. Non-essential tasks are being wound down or continuing only with new safeguarding procedures in place.

The role and mandate of transport agencies has been strengthened, operationally being regarded as an essential service alongside health agencies, police, civil defense and supply chain management. This raises a need for enhanced organizational leadership and joint working to common goals across agencies.



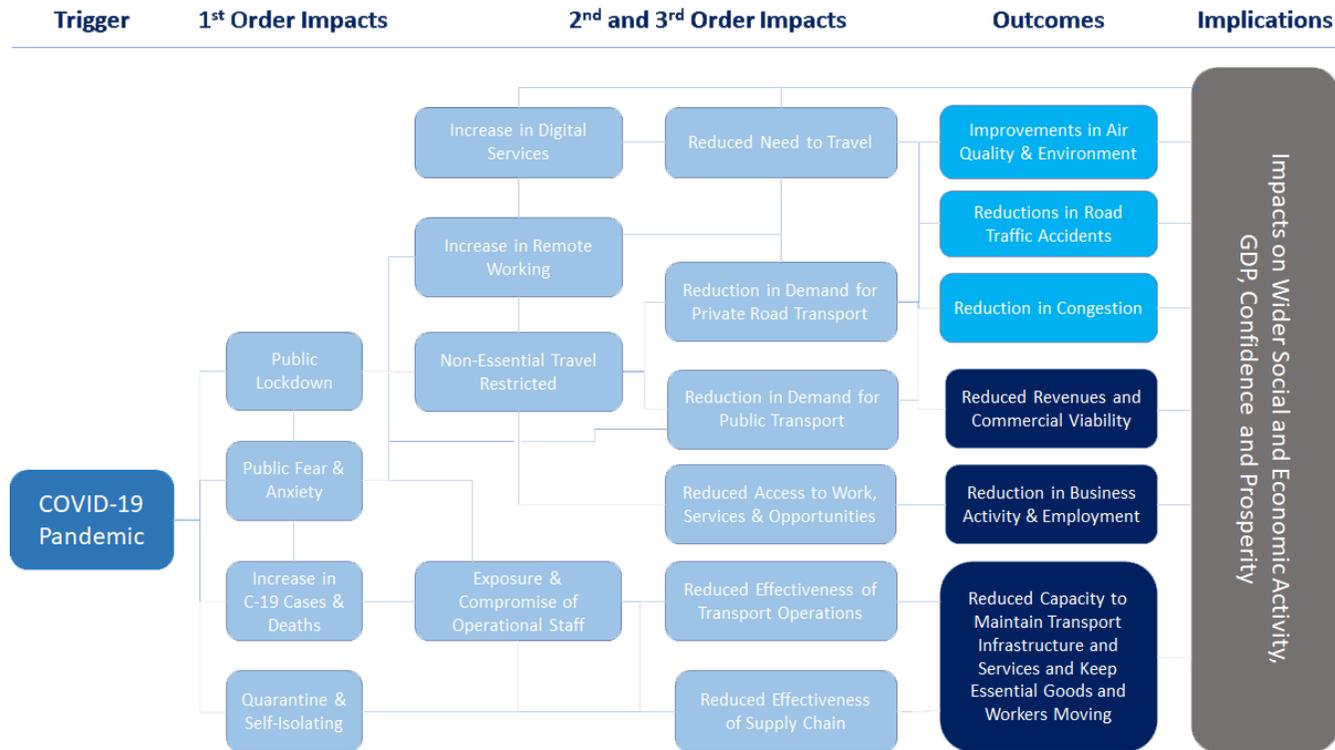
### 3. ORGANISATIONS NEED ASSISTANCE IN FORMULATING PRACTICAL RESPONSES NOW AND OVER THE COMING MONTHS

Since February, we have been monitoring the impacts of COVID-19 across the GCC, as well as globally.

We are gathering evidence through our own worldwide offices and via our participation in global road and transport sector groupings. We are collating, and influencing, the practices and procedures which are emerging, examining what the key issues are, what seems to work at this time and what remains problematic. The situation is fast-moving; it is still messy, but some clear lessons are already emerging.

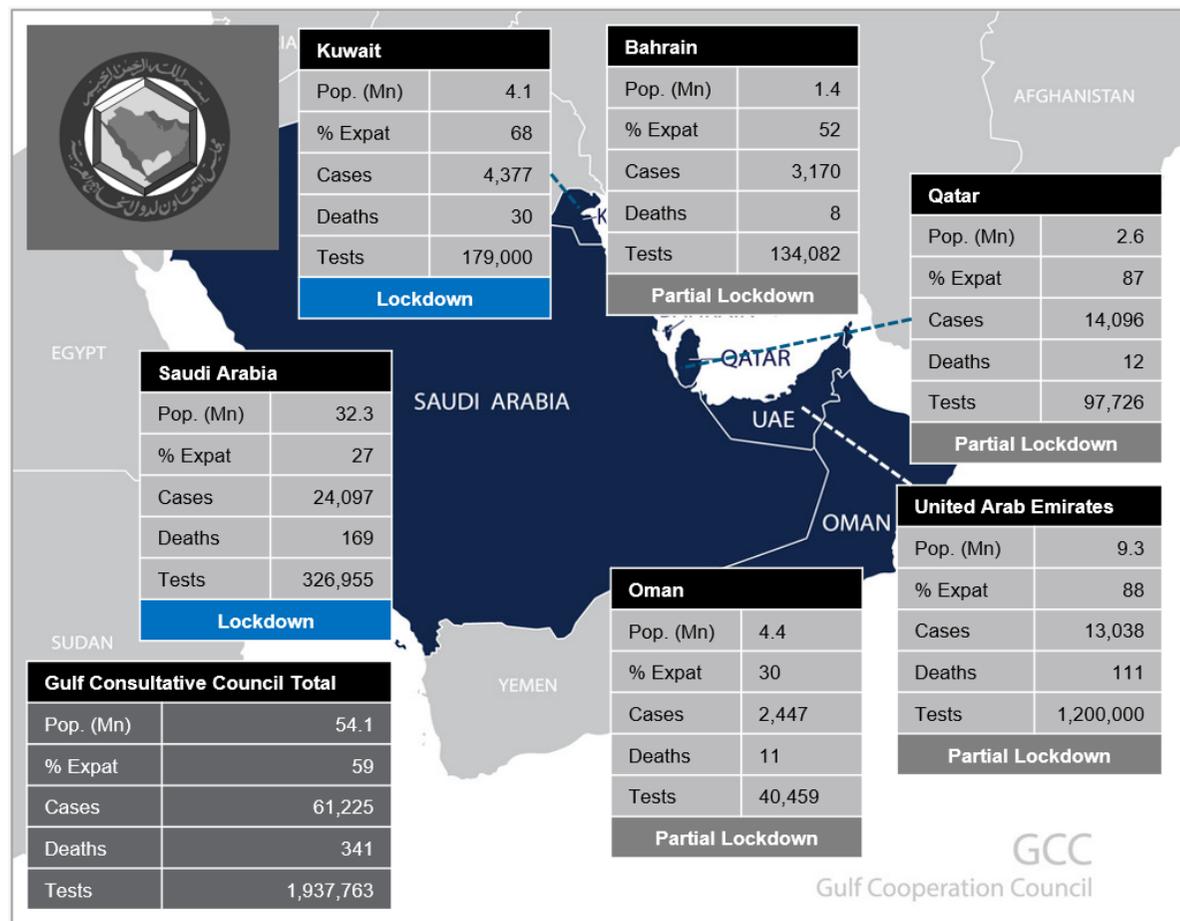
From our sources, ten issues have emerged as the most pressing for transport organizations around the World and are listed below. We continue to expand and update this list continually whilst the Crisis continues, looking at immediate pressures as well as the longer-term challenges and opportunities:

#### Logic Mapping of COVID-19 Impact on Transport Sector



## COVID-19 Situation across GCC (As of 1<sup>st</sup> May)

- Tracking changes in demand for transport now and into the recovery period, together with associated implications (e.g. falls in toll revenues or public transport fares, road traffic accidents);
- Required changes to the role, mandate and powers of transport agencies in delivering essential services, sometimes under “emergency powers” and relationships and working arrangements with other agencies (such as the police, civil defense and health agencies);
- Keeping key road networks and facilities open, accessible and operational, and regulating and maintaining the movement of essential goods (such as food and health supplies) and workers;
- Ensuring the health & safety of road and transport workers, especially those in operational roles;
- Connecting, managing & maintaining effectiveness of office-based staff working from home;
- Continuing, postponing, or bringing forward infrastructure construction and maintenance activities;
- Personal mobility management and contact tracing (including use of smart/Bluetooth applications);
- Relations of public agencies with the private sector supply chain, including contract management and variation, maintaining project schedules and outputs, and continued support for SMEs;
- Cybersecurity, including an increase in hacking and other threats, with new remote working arrangements especially vulnerable until protections are put in place;
- Financial sustainability, at a time when assets need to be maintained and some operational costs have risen, but revenues have all but dried up.



## Atkins Responses to Date to Maintain Business Continuity during COVID-19 Crisis

We have also developed internal responses to keep our own employees safe and maintain our capacity to service our clients effectively. This experience is, itself, instructive and instils lessons for the future.

Impact	Impacts	Responses
 <b>Operations &amp; Facilities</b>	<ul style="list-style-type: none"> <li>Multiple operational impacts at global, regional and local levels</li> <li>Direct productivity impacts from staff self-isolating, sick or unable to work from offices, commute, meet or physically interact</li> <li>Offices progressively shut down in line with Government advice</li> <li>Site operations and working at client premises severely disrupted</li> <li>Some employees stranded due to border closures and flight cancellations</li> </ul>	<ul style="list-style-type: none"> <li>Activation, coordination and cascade between Global and Regional Crisis Management Teams linked to corporate communications to employees and clients</li> <li>Strengthening ICT for Working from Home, including access to technical applications and focus on cyber-security</li> <li>Rapidly finetuning key communications platforms e.g. MS Teams, Zoom</li> <li>Preparing precautions for office working when situation allows (e.g. deep clean, sanitizer, 30% occupancy limit)</li> </ul>
 <b>Travel &amp; Mobility</b>	<ul style="list-style-type: none"> <li>International travel now not possible, advised or permissible</li> <li>Domestic travel (e.g. between Dubai and Abu Dhabi) similarly allowed only by exception and in line with Emirate travel regulations</li> <li>Work travel approved only for "essential" purposes only</li> </ul>	<ul style="list-style-type: none"> <li>International and domestic travel restricted until further notice</li> <li>Investment in remote working and ICT will reduce need to travel in short- to medium-term and feed through into standing policies and practices</li> <li>Corporate travel policies and procedures likely to change in the medium-term</li> </ul>
 <b>Workforce</b>	<ul style="list-style-type: none"> <li>All staff whose job allows it are Working from Home</li> <li>Homeworking presents issues of communication, line management, productivity and wellbeing</li> <li>Mental health is a major concern, especially for junior staff living alone</li> <li>Loss of "social" aspects of working in office environment and/or in team</li> </ul>	<ul style="list-style-type: none"> <li>Almost daily updates cascaded via intranet, staff notices &amp; virtual team meetings</li> <li>Regular staff check-ins to manage workload, provide updates and address issues</li> <li>Emphasis on physical &amp; mental well-being (focused on lockdown as well as WFH)</li> <li>Virtually replicating team socialising (e.g. Coffee Breaks, WhatsApp Groups)</li> </ul>
 <b>Contractual &amp; Regulations</b>	<ul style="list-style-type: none"> <li>Seeking to comply with all contractual obligations as far as is reasonably possible</li> <li>Clients generally flexible &amp; some Government requirements relaxed (e.g. Tender Bonds)</li> </ul>	<ul style="list-style-type: none"> <li>Selective consideration of Force Majeure provisions within existing contracts</li> <li>Close engagement with clients around workable, practical solutions (e.g. working off-site)</li> <li>Proposal of selective contractual amendments to reflect current situation</li> </ul>
 <b>Sales &amp; Financial</b>	<ul style="list-style-type: none"> <li>Increased risk of project cancellation, postponement and delays between milestones</li> <li>Major challenges to commercial and financial management of business</li> </ul>	<ul style="list-style-type: none"> <li>Arrangements to maintain project progress through remote working</li> <li>Stringent management of business costs and revenues over and beyond Q2 2020</li> <li>Pragmatic actions to retain staff skills and capability intact for recovery</li> </ul>

## Case Study: Toll Roads in Greece

The first confirmed case of COVID-19 in Greece was recorded on 26<sup>th</sup> February 2020. As the number of cases increased, domestically and across Europe, schools and other public facilities were closed on 11<sup>th</sup> March and a comprehensive public lockdown was declared on 23<sup>rd</sup> March, with major impacts on private road access and public transport across the country.

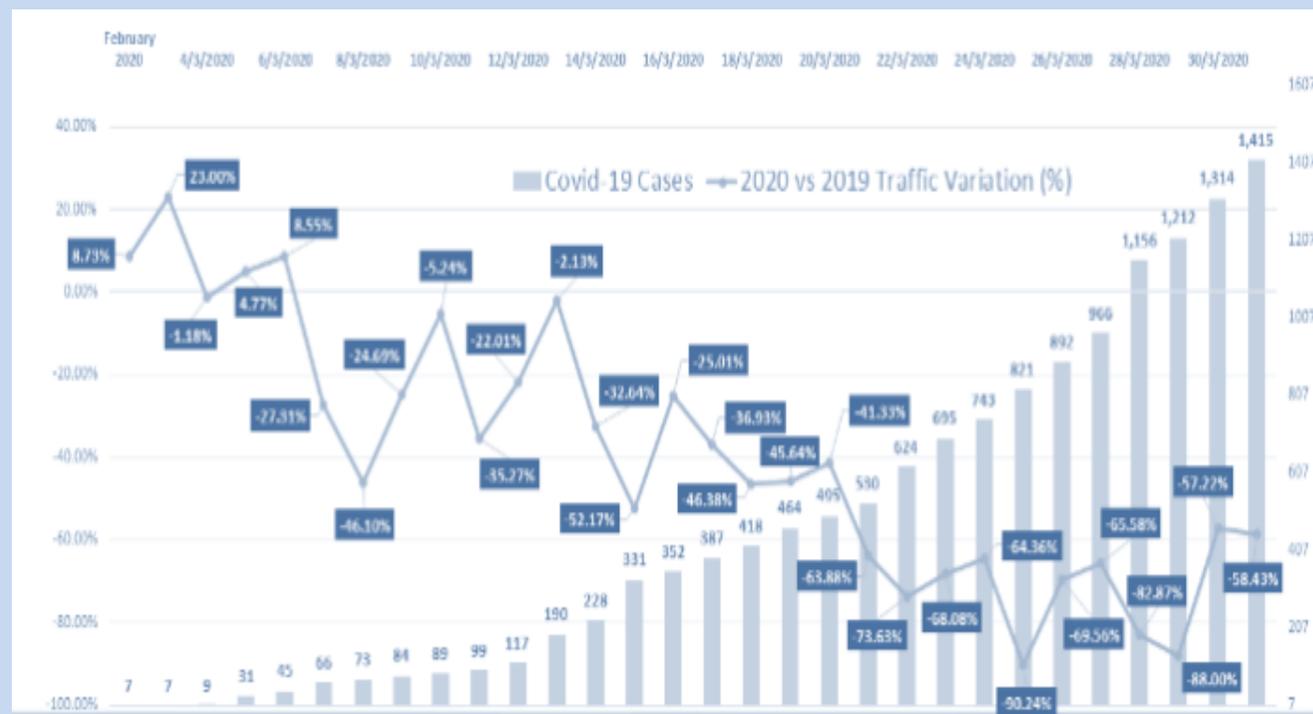
Greece has a national toll road network of over 2,100 Km, contracted by concession to the private sector, with an annual capital investment of € 89 million and € 186 million operating and maintenance expenditure. By the end of March, the network has seen traffic reductions of between 68% and 82% depending on route. This has had an immediate and significant impact on toll revenue, liquidity and business resilience of the concession companies.

The concession companies themselves have also been severely disrupted in operational terms, with some staff sick or self-isolating, closing administrative offices and customer call centers and limiting construction and maintenance works to essential needs only.



New operational guidelines and procedures have also been required on the ground, such as:

- Providing medical guidelines to personnel around personal hygiene and protection;
- Removing vulnerable personnel from operational roles;
- Ensuring antiseptics, personal protection equipment compliant with WHO & Hellenic Public Health Organization guidelines;
- Minimizing social interaction and practicing social distancing in the operational environment;
- Intensifying cleaning services on all operational and non-operational premises (e.g. service stations, toll booths); and
- Discouraging use of cash payment in favor of electronic or cashless methods (e.g. ETC).



With these measures in place for the immediate lockdown, attention is turning to the “day after” the peak of COVID-19 infections. The Association of Hellenic Toll Road Networks currently expects the general lockdown to gradually lift in Greece from June onwards. However, traffic volumes are expected to be still 30% down, compared to 2019, in August and lag by 15% - 20% even by the end of the year, with a full recovery only in 2021. All these forecasts are subject to great uncertainty and the evolving situation.

With the fall in traffic and toll revenues continuing to impact financial performance, toll road operators are pushing the Government (and the EU) to declare COVID-19 a “force majeure” which will release state financial support in immediate term and allow a restructuring of concession contracts to reflect lower and uncertain demand.

## Focus Area: The Future of Public

Across the World, since the COVID-19 crisis took hold at the end of January 2020, public transport systems have seen sharp falls in patronage. In some cases, services have been suspended entirely or had the level of service sharply reduced. Elsewhere, services have continued to run, but with the general public locked down or subject to strong travel advisories, ridership have become focused on essential workers and those carrying out unavoidable personal business.

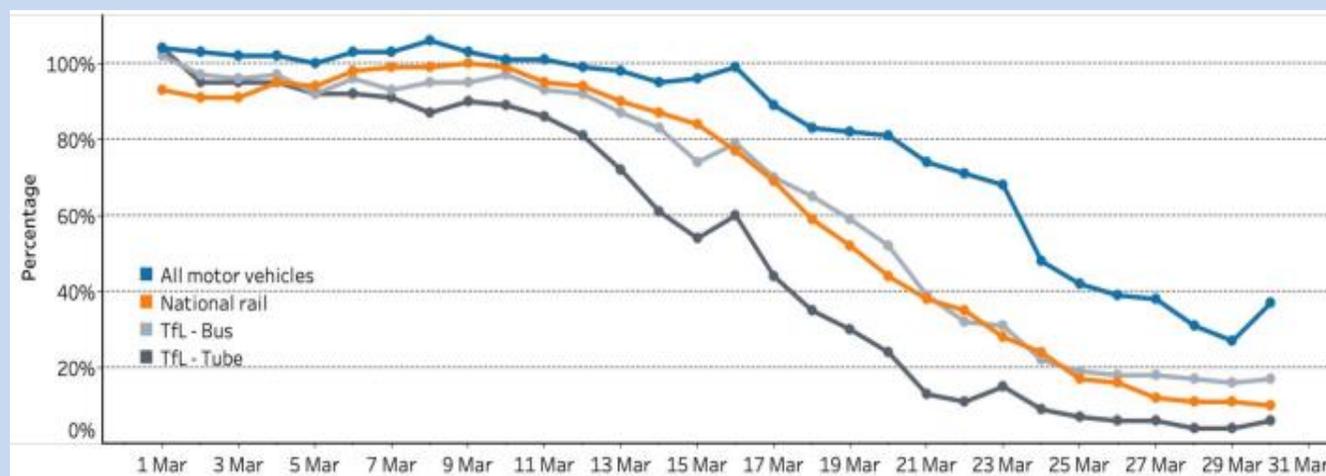
Data is still being compiled, but in London, buses and trains are carrying only around 20 - 30% of normal demand. Equivalent reductions have been seen in New York, Paris, Singapore and other global cities, whilst in Dubai, the first metro in the GCC was suspended for a period as the National Sanitisation Programme was extended to 24 hours a day, with residents only allowed to leave their homes with an online Move Permit issued by the Police. Ridership has become more focused on key workers, such as healthcare professionals and auxiliaries, essential operational staff and those working in supply chain activities.

Where still running, public transport faces a number of operational challenges.

- Frontline staff (themselves reduced by increased sickness and absenteeism) must be equipped with appropriate personal protection, such as masks and gloves, and in some cases protected by screens;
- Surfaces in stations and vehicles must be regularly sanitized, with many systems subject to a comprehensive deep-clean;
- The need to maintain social distancing, requires passenger access to vehicles to be regulated, numbers to be maintained well below normal peak capacities and front doors, seats or standing areas to be closed off; and appropriate signage and passenger guidelines to be installed.
- Cash payment presents a high risk of transmission of infection, driving a shift towards electronic or cashless payment with minimal interaction between employees and passengers.

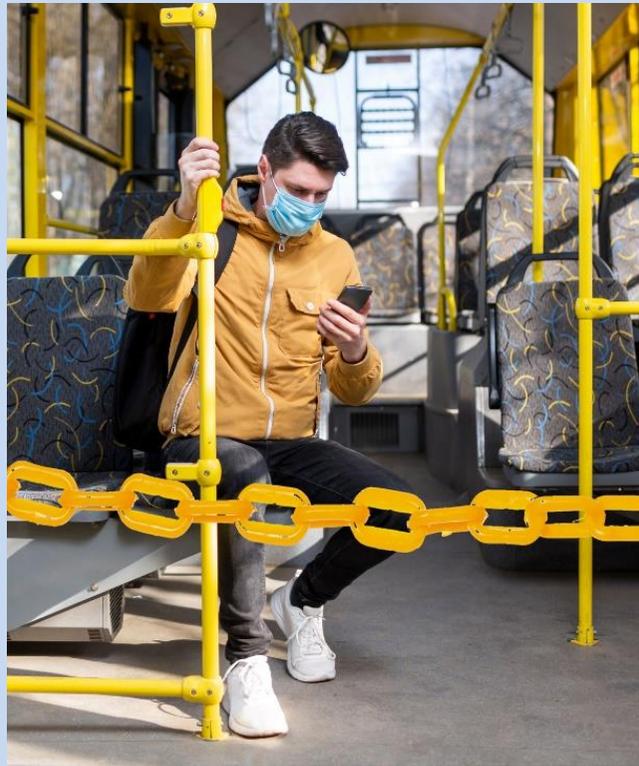
It seems likely that at least some of these measures will be retained as the current period of general lockdowns comes to an end and public movement is slowly re-activated with precautions in place to avoid a resurgence of infections.

Percentage Change in Public Transport and Motor Vehicle Use, UK, March 2020

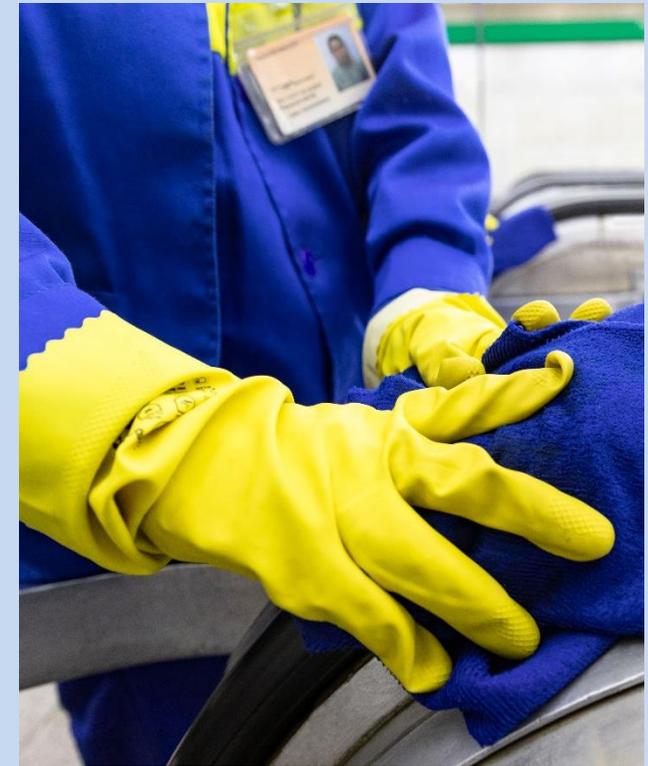




**Seat signage for social distancing**



**Bus front door and rows chained off to protect driver**



**Deep cleaning and sanitization**

Looking into the medium-term, COVID-19 raises multiple issues for public transport. Patronage is unlikely to recover for many months, due to economic recession and as passengers continue to feel anxiety around the health risks of crowded carriages and vehicles. This may sharply affect the financial performance of transit authorities and operating companies and undermine the business case for investment in new or improved services. The design and operational standards of infrastructure, vehicles and equipment is also likely to undergo review, not least to be more prepared for any future pandemic or equivalent threat.

This will require a focus on credible scenario planning, demand forecasting and associated economic and financial analysis. Yet such work will be essential to ensure the future viability of public transport, without which private car ownership will increase and urban traffic and congestion problems escalate as people seek personal protection and isolation rather than mass transit.

## 4. THE LONG-TERM IMPLICATIONS FOR TRANSPORT ARE POTENTIALLY TRANSFORMATIONAL, WITH OPPORTUNITIES AS WELL AS CHALLENGES



Right now, we are in the midst of the Crisis. In the space of six weeks, our world has been turned upside down. It will take all our time and attention for the foreseeable future just to get through it.

We will, however, prevail. This too will pass, and we will emerge stronger and more resilient afterwards.

There are various scenarios for the duration of the pandemic, how it will end, and timing and form of the recovery. Working out how these scenarios will play out in different parts of the World, and via connectivity within and between regions, is challenging. We will need to recognize, accept and manage uncertainty.

COVID-19 is unlikely to vanish as quickly as it arrived; there may be several months ahead where we need to manage residual infectivity as the economy, and the transport system, restarts. After this current wave of global infection, a second or even a third wave cannot yet be ruled out. We will need robust, yet practical, processes, procedures and technologies to be ready and be able to respond effectively.

It also seems inevitable that some of the impacts of COVID-19 will be permanent and transformational. A “new normal” will emerge. This could be positive as well as negative, but how the future shapes up depend on how we approach the task.

Key areas where options need to be generated and policy made include:

- The overall demand for travel, and how and in what form it will recover, together with associated issues such as transport revenues, congestion, pollution and carbon (noting that the “climate emergency” and the sustainability agenda preceded the current public health emergency);
- Behavioral change, especially around retaining the attractiveness and utility of public transport (after the necessity of social distancing) and greater take-up of active modes;
- Safeguarding the continued viability of mass transit as the preferred mobility solution for large cities;
- Office and home working practices, with major implications for commuting and business travel, as well as work-life balance, lifestyle choices, how organizations are run and change management;
- Sustainable transport, including encouraging walking and cycling, and designing cities with a vibrant and functional public realm;
- Supply chain management, with freight and logistics given priority over movement of people; and
- Technology and automation, with COVID-19 accelerating the agenda for digital transformation, smart mobility management, autonomous vehicles, drones and the next generation of Intelligent Transport Systems.

Emergency planning, business continuity, resilience and risk management will receive greater focus, but be done and certified properly, replacing frameworks which have proved ineffective in the current Crisis.



## Some Longer-Term Challenges and Opportunities beyond COVID-19

 <b>Challenges</b>	 <b>Opportunities</b>
<ul style="list-style-type: none"> <li>• Falls in demand for transport mean reductions in operator and transport authority revenue and financial performance</li> <li>• Question over whether mass transit faces and “existential” threat and struggle to retain ridership</li> <li>• Potential for increased car purchase and use due to health concerns over public and shared transport</li> <li>• Some business continuity plans, and processes, have been found wanting and must be re-written</li> <li>• Short-term business performance will be painful – jobs will be lost and not all transport entities will survive</li> <li>• Medium-term funding of capital infrastructure projects may become limited and harder to find</li> <li>• Public agencies have already cut their budgets and may seek to pass this onto suppliers in project cancellations, postponements and contractual savings</li> </ul>	<ul style="list-style-type: none"> <li>• Transport and logistics recognised as an essential service</li> <li>• There have been major environmental benefits (e.g. air quality, noise, carbon) – how can these be maintained?</li> <li>• Likewise, road traffic accidents and casualties have decreased dramatically, should be maintained at low levels</li> <li>• Less congestion and PT overcrowding means operational efficiency, new practices to protect staff &amp; passengers</li> <li>• WFH has gone better than expected for many organisations and will inform future management practices, office design as well as individual lifestyle choices and commuting patterns</li> <li>• Some transport focus areas will grow – Business resilience (done properly), digital services, sustainability, supply chain management, automation, self-driving transport</li> <li>• Travel Demand Management – Why did we travel so much?</li> <li>• Capital projects &amp; public expenditure will continue and may be treated as economic stimulus – the discipline of strong prioritisation and budget control should continue</li> </ul>

## 5. AT ATKINS ACUITY, WE HAVE AN OBLIGATION TO USE OUR EXPERIENCE AND SKILLS TO BRING OUR CLIENTS THROUGH THE CRISIS STRONGER

Atkins, a member of the SNC- Lavalin Group, is a global design, engineering, program management and strategic advisory consultancy with offices and projects across the world. In the Middle East, our teams have shaped transport networks since 1967, with projects including Dubai Metro, UAE National Transport Plan, Bahrain Bus Improvement Plan and the Public Transport Violations Transformation Plan in Saudi Arabia.

With over 40,000 SNC-Lavalin's employees across Europe, Latin and North America, Middle East and Africa and Asia Pacific, clients come to us for transformational solutions. We are shaping the future of transport, making journeys easier, safer and more reliable, supporting a healthier, happier and more productive society. Whether it's creating something new or getting more from what we already have, we're known for thinking differently.

Specifically, in respect of the challenges posed by COVID-19, from lockdown release through recovery to longer-term transport and mobility sector reprofiling, we can deploy industry-leading advisers and teams to our clients with the following skills and experience:

- Policy, strategy and regulation;
- Scenario analysis and planning for uncertainty;
- Transport demand (and revenue) forecasting and modelling;
- New “disruptive” transport technology, mobility solutions and service models;
- Infrastructure design, engineering and asset management;
- Operational, resilience and business continuity planning;
- Environmental, sustainability and decarbonization services;
- Digital transformation;
- Organizational planning, workplace strategy, manpower planning and capacity building;
- Change management; and
- Financial, commercial and contractual advisory.

We have a tried and tested management and technical approach based on ability to lead which comes from an understanding of the challenge and vision beyond a project coupled with extensive experience and a depth of multi-discipline talent. Our services encompass the whole project lifecycle – from strategic inception, through feasibility studies, planning and design, to safety assurance, project and contract management, life-cycle costing, implementation, site supervision and asset management.

We also have a detailed understanding of specific resilience and security challenges and can assess, mitigate and manage risk in the assurance and provision of resilient infrastructure, services and operations. This includes a Resilience and Security Team which works as a cohesive virtual group between UK, USA and GCC delivering business continuity planning, crisis management and comprehensive threat assessment. Whilst the bulk of crisis management is common to all emergencies, our advice includes an additional focus on those factors which are unique to pandemics and local circumstances.

We contribute to, lead and draw from, international professional groupings, for example through our transportation sector technical leaders being active chairs or members of Technical Committees of the World Road Association (PIARC). We are currently playing an active role on PIARC's COVID-19 Response Team which is organizing knowledge-sharing and other mitigation actions involving transport agencies across the World.

Our advice also reflects, and builds upon, emerging guidelines, fact sheets and advice from other relevant sources specifically on pandemic management, for example, UITP, ITF, New Cities and TRB, the latter including *NCHRP Report 769 on Public Transport Pandemic Planning and Response* which, whilst published in 2014, includes guidance and checklists directly relevant and useful for COVID-19.

Our technical specialists are also currently active across our own organization, existing projects and key clients during the Crisis, helping to activate existing emergency response and business continuity plans, address immediate operational pressures, manage project sites and workforces and remotely and – in the fullness of time – to prepare for the recovery period and address the medium- and long-term implications.



## 6. WE ARE HERE NOW FOR A CONVERSATION

The COVID-19 Crisis tests all of us, demands that we challenge everything we do, and requires and motivates us to think pragmatically, positively and differently as we face the future.

For an initial conversation for how to be different, now and in future, contact one of our Advisors below:



**Jonathan Spear**

Director, Transport Policy & Planning  
Jonathan.spear@atkinsacuity.com  
+971 52 140 3978



**Roger Cruickshank**

Senior Director, Transport Strategy  
Roger.cruickshank@atkinsacuity.com  
+971 55 300 3925



**Johanna Staples**

Associate Director, Transport Advisory  
Johanna.staples@atkinsacuity.com  
+971 55 312 6599



**Lauren Ellis**

Senior Manager, Change Management  
Lauren.ellis@atkinsacuity.com  
+ 971 58 606 9959



**Ibrahim Atta-Apau**

Director, Digital Transformation  
Ibrahim.atta-apau@atkinsacuity.com  
+ 971 58 606 9959



**Tammam Al-Dandachi**

Director, Financial Advisory  
Tammam.al-dandachi@atkinsacuity.com  
+ 971 55 307 2781

## About Atkins

Atkins ([www.atkinsglobal.com](http://www.atkinsglobal.com)) is one of the world's most respected design, engineering and project management consultancies, employing over 18,300 people across the UK, North America, Middle East and Africa, Asia Pacific and Europe. We build long-term trusted partnerships to create a world where lives are enriched through the implementation of our ideas. You can view Atkins' recent projects [here](#).

## About Atkins Acuity

Acuity is the end-to-end advisory business from Atkins. Atkins Acuity combines management consulting, financing and technical capabilities to help clients solve complex front-end problems in the built environment. We help to successfully deliver our clients' big ambitions for infrastructure and energy, worldwide. We use a results-driven and engineering-led approach, to make our partnerships higher value and more rewarding. Together, our core areas of expertise enable us to deliver seamless, results-driven advisory solutions.

## About SNC-Lavalin

Founded in 1911, SNC-Lavalin is a fully integrated professional services and project management company with offices around the world. SNC-Lavalin connects people, technology and data to help shape and deliver world-leading concepts and projects, while offering comprehensive innovative solutions across the asset lifecycle. Our expertise is wide-ranging — consulting & advisory, intelligent networks & cybersecurity, design & engineering, procurement, project & construction management, operations & maintenance, decommissioning and sustaining capital – and delivered to clients in four strategic sectors: EDPM (engineering, design and project management), Infrastructure, Nuclear and Resources, supported by Capital.

# ATKINS

Member of the SNC-Lavalin Group

# ATKINS Acuity

Member of the SNC-Lavalin Group



# SNC • LAVALIN

People. Drive. Results.

[www.snclavalin.com](http://www.snclavalin.com)

