

COVID-19: KEY LESSONS FOR THE ROAD AND TRANSPORT COMMUNITY



Consequences of the Covid-19 on the HELLASTRON Network in Greece (Attica Tollway, Metamorphosis East Plaza on 5 March and 2 April, 2020 (from Bill Halkias presentation at PIARC Seminar held on 8 April 2020)

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Introduction

The COVID-19 pandemic is a global health and societal emergency that required immediate and effective action in multiple dimensions. In this context, road transport, which is an essential service critical to maintaining the movement of key workers, goods, supplies and services, has to remain operational. Effective crisis management requires cooperation and coordination among several stakeholders, including government decision-makers, road owners and operators, public transport, logistics and mobility providers, and emergency services, while keeping the concerns and safety of employees and road users and customers at the forefront.

PIARC (World Road Association) moved quickly to establish a formal COVID-19 Response Team (CRT) tasked with organising the rapid sharing of knowledge and practices between its members on the impacts of, and responses to, the pandemic and the associated economic and social crisis. As early as March 2020, the PIARC COVID-19 Response Team organized a series of webinars for practitioners and experts to share their experience, knowledge, and some of the most effective responses that are emerging. It is recognized that, while current practices are not yet fully validated, and what works in some parts of the world may not be relevant globally, these shared experiences can be valuable tools during crisis management, where a good idea now could save lives, improve business resilience and minimize service disruption both now and in the future.

This article presents some of the key observations and learnings from these webinars. They are detailed in a Technical Report which PIARC published in December 2020, available as a free digital download to all.

PIARC COVID-19 Webinars

A total of 23 international webinars were held between 25 March and 29 July 2020, in English, in French and in Spanish. They provided an overview of the current situation with COVID-19 in different countries; the issues faced by road operators and administrations; best practices from relevant PIARC reports; emerging planning, operational and customer service responses.

These webinars included presentations from about 100 speakers from all parts of the world and touched on all areas of relevance for road operators and administrations.

Figure 1: Summary of PIARC COVID-19 Webinar Activities



SOURCE: Valentina Galasso for PIARC COVID-19 Response Team

PIARC is also very proud that the following international partner organizations agreed to take part in its webinars and could share their specific experience and projects.

Figure 2: Other Bodies Involved in PIARC COVID-19 webinars



SOURCE Figure from Christos Xenophontos (USA) & Valentina Galasso (Italy) presentation, PIARC webinar 29 July 2020

A dedicated area of PIARC’s website has been created with copies of all the videos and presentation slides from all the webinars. This valuable information is accessible to everyone, for free, in French, English and Spanish. In addition, two Bulletins summarizing the findings from the webinars have been published and are available in PIARC virtual library, and a detailed Technical Report was published in December.

Impact of COVID-19 on Roads and Road Transport

The current global COVID-19 pandemic has struck the entire world in 2020 and is having multiple and acute impacts over and above a conventional disaster. As of early October 2020, the number of global cases surpassed 36.2 million with over 1.05 million deaths. This crisis is as much an economic collapse and a social catastrophe as it is a public health emergency, which has brought with it a dramatic slowdown in business activity, the standstill of international travel and large increases in job furloughs and lay-offs. Global GDP by the end of 2021 is expected to be 6.5% below pre-COVID-19 levels and the time horizon for full recovery of some sectors is 2022-2024.

Policy goals around COVID-19 have evolved over the year 2020 in many countries. First half of the year was marked by what the IMF has called “The Great Lockdown”, a widespread and intense slowing in

economic and social activity, and restrictions on personal mobility and travel to such an extent that in April half the World's population were asked or ordered to stay at home. Containing the infection remains a challenge and is vitally important. Decision makers are also trying or have tried to re-open economies, lifting or replacing national lockdowns with localized measures. The challenge is to guarantee the health and safety of workers and customers, while restoring business and consumer confidence and providing the right economic and fiscal stimulus.

To assist in the analysis of this process, PIARC's COVID-19 Response Team had identified three phases that would follow the first lockdown:

- **Reopening**, with risks carefully managed until vaccine and more effective therapeutic treatments are available. Partial or full short-term or localized lockdowns in many countries are still happening; life is unlikely to get back to “normal” in the immediate and near-term future.
- **Recovery** of national and local economies. Expected to extend well beyond 2021, this will involve accelerated infrastructure delivery, technology research and other tools of economic stimulus and industrial strategy.
- **Reimagining** on how transport system will meet future needs, reflecting the impacts, challenges and opportunities of COVID-19 and other agendas; transforming and future-proofing transport infrastructure and services towards 2025 and beyond. This phase has already started.

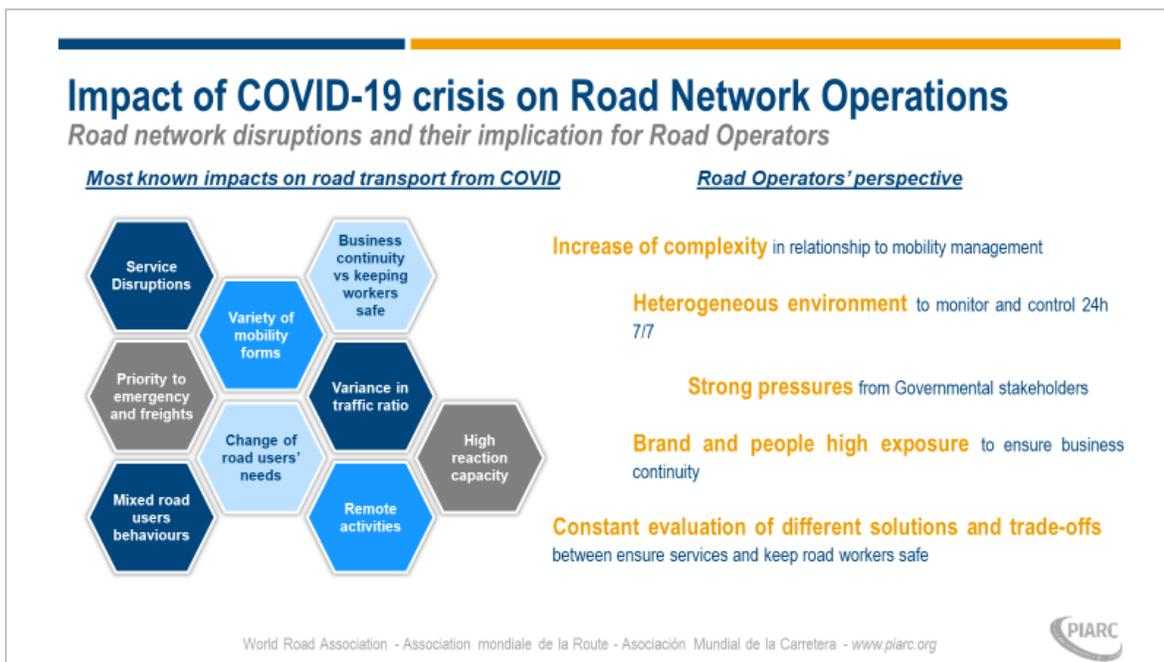
Experience has shown that these phases can actually happen simultaneously, not one after the other, but they remain a good framework for analysing priorities and options. Indeed, the pandemic is still raging in many parts of the world. Public policies continue to evolve about COVID-19 containment and about fostering recovery. Last but not least, the perspective of effective vaccines is a strong hope signal for the year 2021.

Strengths and Resilience of the Road Sector.

Roads have remained open during the pandemic. Road transport has been able to maintain connectivity and to provide a lifeline to even the most remote places. This is true of passenger traffic as well as of freight traffic. This, in itself, is a major success for road administrations and operators.

Road operators have been impacted in all aspects of their work. The figure below shows the most well-known impacts on road transport and the perspective of road operators:

Figure 3: Impact of COVID-19 on Road Network Operators



SOURCE: Figure from Valentina Galasso (Italy) presentation at PIARC webinar 29 July 2020

Road networks are a fundamental component to the effective running of the economy and the pandemic has highlighted the strategic and essential value of road transport for social and economic survival and the unavoidable need to protect roads and their management to ensure mobility. PIARC’s series of webinars has made it possible to identify a number of good and noteworthy practices that have been implemented by different jurisdictions across the world.

The measures to prevent disease transmission have had big impact on road and transport management and also on the supply chain. Comparing pandemics and other hazards, the environment in which business continuity management is carried out is quite different because the challenge when pandemics is to continue road and transport management activities effectively with limited and restricted human and material resources while taking measures to cope with infectious diseases. And it should be noted that the occurrence of pandemics and other types of disaster may overlap. So, as CRT report has stated “*in the post-COVID-19 era, it will be more necessary than ever to address the resilience of roads, transport and road-related functions.*” The following sets this out in more detail: Developing a disaster-resistant road network (tunnels, bridges, embankments, etc.), securing road infrastructure in times of crisis, maintaining inspection and diagnosis of roads with appropriate measurement and monitoring procedures and technologies, sharing information dynamically (the significant expansion of data base, data analytics and processing capability, including via social media offers a major source of information which can be exploited), and sharing experiences to create policies, procedures and best practices and to prepare combined disaster scenarios in terms of business continuity operations.

The topic of resilience has been covered throughout the PIARC COVID-19 webinars in the context of:

- Continuity of construction and maintenance work;
- Actions to address pandemic from a resilience perspective focused on transport corridors, transport restrictions & closed municipalities, plus actions in Freight Transport, Public Transport, Toll Highways, National/Federal Road Network, Intercity Passenger Transport and continuity of Telecommunication and broadcasting services;
- General impacts and approaches, road network operations, freight and logistics, construction works and economic impacts and future resilience planning;
- Longer-term implications beyond the immediate crisis under behavioural change, business resilience plan.

Additionally, in July 2020, members of PIARC TC 1.4 “Climate Change and Resilience of Road Networks” and the PIARC CRT published an article with The Resilience Shift titled “A pivotal moment for the transport sector – and lessons for resilience”.

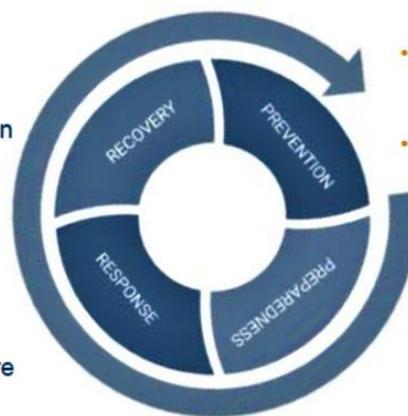
As illustrated in the Figure below, there is a need to integrate lessons learned from a resilience perspective. Future pandemics and any other new and unconceivable threat will (and must) find road and transport administrations better prepared, building up flexibility and ability to recognize and choose the most sustainable measures.

Figure 4: A resilience perspective

A resilience perspective

- Prepare bids to recover construction works ASAP.
- Ensure the budget for road construction and maintenance.
- Ensure the operation of transport corridors (some areas will stay closed due to the high transmission risk).
- Zoning of areas to reactivate construction works.
- Inspections points in transport terminals to identify potential COVID-19 cases.
- Road inspection activities to ensure the transportation operations.
- Reduce lines on toll roads. Use electronic toll collection.
- Highway police surveillance

Integrating lessons learned



- Sectoral policies to address the pandemic.
- Definition of essential activities for transport sector.
- Develop guides and recommendations to face the pandemic.
- Inform stakeholders.
- Implement actions to protect road workers health.
- Implement home office and teleworking.
- Establish working groups to ensure road maintenance and operations in all regional centers.
- Ensure materials and supplies.

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SOURCE: Figure from Roberto Aguerrebere and Juan Fernando Mendoza Sánchez (Mexico) presentation at PIARC webinar 13 May 2020

The practices shared are very relevant since we are still obliged to adapt to the new circumstances as long as the current destabilising reality that is affecting the personal, social, working and economic lives of workers, individuals, communities, companies, administrations and countries continues.

Road and transport organisations have demonstrated their speed of reaction and adaptability to safely maintain daily activity in offices, road inspection, road maintenance (by their own means, contracted or concession), continue to manage road actions and mitigate as far as possible impacts on the supply chain and productivity, all while collaborating with many other agencies and stakeholders.

Road sector employees have continued their duties under conditions of acute professional and personal disruption and accompanied, in the private sector, by considerable stress, employee furlough and lay-offs. The impacts on the personal and professional lives of many working in the sector have been unprecedented: it is requiring to set up new roles, to find workarounds to problems and innovate in how to continue to get the job done. Road workers deserve public recognition and appreciation, and there are lessons to be drawn from this flexibility.

Key conclusions and recommendations areas

For roads and road transport, COVID-19 has presented specific challenges:

How should roads and road transport help to overcome the pandemics?

How can roads and road transport help to fight the economic crisis and move towards a “new normal?”

How should longer term policies and initiative in roads and road transportation be adapted to cope with the new realities and the challenges presented by COVID-19?”

(Oscar de Buen, Past President of PIARC, 29th July 2020 Seminar)

PIARC’s detailed Report is based on the extensive programme of webinars. It presents conclusions and recommendations for all road operators and administrations; most of them are applicable for all countries.

Declaration of Emergency

- Mandate authorities with appropriate emergency powers
- Be prepared to issue interpretative orders and instructions to ensure the provision of critical or essential services for the protection of people, property and places, and maintain activity in key (essential) economic sectors

Economic Measures to Support Businesses

- Establish recommendations for contracts, especially for PPPs
- Plan to maintain road-related activity and business continuity
- Mitigate the economic and financial consequences of reduction in traffic

Road Works

- Be alert and agile
- In certain cases, accelerate some maintenance works to take advantage of low traffic volumes, with operations adjusted according to the traffic decrease
- Secure access to adequate resources to ensure that work can be continued
- Investigate the feasibility of strategic stockpiles of material that could become in short supply in the event of global disruption of supply chains

Data

- Think about data as something of great value for road transport organizations
- Recognise that real time information is needed to meet the needs of users and operators
- Evaluate the power of partnership for data collection and management to drive innovation through road transport

Security

- Recognise that physical security and cyber-security are essential for the application of the concepts related to resilience: prepare, prevent, protect, respond, recover
- Increase the security of I.T. systems

Disaster Management and Resilience

- Address the resilience of roads, transport, road-related functions, connections with other modes and connections with other stakeholders as a whole
- Develop a disaster-resilient road network, securing road infrastructure in times of crisis
- Apply the Preparedness, Response, Recovery, Prevention/Adaptation model
- Be prepared to face additional disasters while facing a pandemic

Passenger and Public Transport

- Restore citizen's confidence in collective (mass) public transport
- Analyze how the urban landscape shifts
- Look into how we can build flexibility in the infrastructure that we build to allow for the changing and uncertain mobility dynamics and expectations that our customer base is facing.
- Analyse how ITS can help public transit provide more reliable service

Freight and Logistics

- Establish guidelines/agreements on national/international level to keep freight moving during pandemics - keep key road networks and facilities open and operational

- Prepare and implement amendments to the law/regulations to have more flexibility regarding exemptions during pandemics or other disruptions.
- Support the digital transition for ITS solutions in logistics and freight transport to reduce physical handling and control processes and to minimize obstructions on traffic flows
- Prioritize investments for key freight corridors for economic recovery and good framework conditions for long distance road freight transport

Intelligent Transport Systems

- Focus on integration and management of the road network with an end-to-end and user-centered approach
- Consider low-cost ITS solutions as a valid option for road network operations, for all countries and for large and small jurisdictions. ITS does not have to be expensive to be effective.
- Even in ITS: Do not reinvent the wheel, and instead aim to benefit from others' experiences and knowledge

Road Safety

- Recognize the risk situations created by the crisis
- Identify local or network-wide measures for potential road safety improvements
- Educate and inform

Winter Service

- Implement heightened precautionary measures to protect workers
- Learn from each other and employ techniques used by Southern Hemisphere agencies during the first wave of the pandemic

Workforce

- Celebrate road workers
- Apply health and safety protocols like all businesses
- Design work-from-home processes with care
- Apply success factors that enable women to continue to thrive at work
- Use technology wisely

A series of implementation actions are also presented for the road community:

Monitor the New Transport Normal

- What is demand for transport going to look like from now on, including the work from home?
- How can we build some uncertainty into our models and processes?

- Pay even more attention to the needs of the users to be more “customer – centric”
- Do not lose focus of society’s pre-COVID expectations regarding GHG emissions, cost-efficiency, resilience, and service levels... They are still relevant

Contribute to Economic Recovery

- Recognise that roads are key for economies and societies (they stayed open during the crisis; road freight worked)
- Include investments in road infrastructure or road transport in national COVID-related economic recovery plans

Fill Gaps in Evidence / Evaluate

- Evaluate all measures that have been implemented in a hurry during the crisis
- Identify actual user needs and policy demands; i.e., what is the “new normal”

Share Knowledge

- Promote the use of all available knowledge
- Engage with LMICs in particular
- Continue providing a networking tool for people to connect
- Analyze the PIARC survey, renew it when appropriate

Final Remarks

Figure 5: Mobility Patterns as a Result of COVID-19



SOURCE: Figure from Dennis Ganendra presentation (Malaysia) at PIARC webinar 13 May2020; and presented by Caroline Evans (Australia) presentation at PIARC webinar29 July 2020

The pandemic is still ongoing, therefore impacts are not yet complete across the full cycle and public policy objectives continue to evolve in containing the virus and fostering recovery whilst in the roads and transport sector a wide range of responses have been adopted with varying degrees of application and success but there has not been already determined what constitutes best practice and under what circumstances.

In many parts of the world, relaunching the economy is now a high priority on the political agenda. Roads and road construction are ideally placed to play a leading role in investment plans, not only because the sector is vital to the social and economic fabric of society, but also because road construction is a purveyor of jobs that can help address the unemployment juggernaut.

Looking forward, there is an opportunity to re-imagine the post-COVID world. This includes accelerating key trends, such as digitisation, online services, and automation, as well as renewed commitment to tackling pressing pre-pandemic challenges, such as congestion, pollution, and climate change, with new resolve. This means reconfiguring road and transport systems and services to drive a better, greener recovery which supports more sustainable, resilient, and happier communities. As we head into 2021, we should look beyond today's trials and tribulations, and focus on preparing well to build the economy and society of tomorrow.

These issues, and how they are handled across the globe, was the topic of the first PIARC webinar of the new season, which took place on 30 September, in Spanish. Following its initial activities, PIARC is now continuing to organize further webinars, bringing in new countries, organizations and focus areas. It is also intended that PIARC's more than twenty Technical Committee and Task Forces will pick up on COVID-19 issues relevant to their topics and lines of enquiry as relevant and appropriate.

Proof of the importance that PIARC attaches to resilience and to reflect the megatrends that are impacting the road sector, is decided to broaden the themes of next winter service congress, to be held in Calgary (Canada), to include resilience so it will be the XVIth World Winter Service and Road Resilience Congress.

All who are interested are welcome to contact PIARC.

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