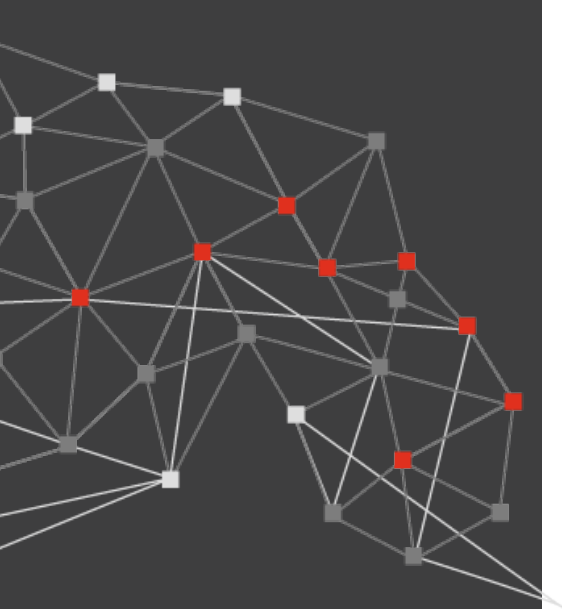


# Thinking Ahead

How to relaunch passenger mobility after COVID-19 emergency







## The COVID-19 impact on the transport system is vast, due to the severe lockdown measures undertaken to reduce the risk of virus spreading.

Italy progressively implemented measures, such as the shutdown of several business sectors and the ban to travel across municipalities, other than for “non-deferrable and proven business or health reasons” decided on March 21st. Thus, it is a good test case for understanding that **magnitude of the impact** in other regions, as follows:

- on regional railways and LPT services, a progressive reduction from -25% in the first week after the significant outbreak was declared, to -40/50% when the emergency becomes national and up to -90% in case of lockdown measures and the movements are restricted to those of necessity (e.g. health and food store workers reaching their place of work, without a private car as an alternative);
- strong drops in the shared mobility sector, for instance car sharing (-60-70%) and car rental (-80-90%), despite both solutions are available and not restricted in most cities;
- sharper decline of non-recurring trips, as shown by CityMapper app data, indicating for the two largest cities (Rome and Milan) only around 5% of normal mobility in the last days, with lockdown extended to some production sectors.
- long distance passenger movements by rail, air or car reduced by 80 to 95% after full lockdown.

Transport operators in this extremely difficult situation are impacted by additional costs for sanitizing vehicles and stations, heavy traffic revenue reduction, operation downsizing implemented in respect with governmental indication and to match the demand reductions. They are also responsible for ensuring appropriate social distancing between workers in sites, such as control rooms, maintenance workshops etc. and in vehicles between drivers and passengers. Some cost reductions are also incurred, for instance of lower energy consumption, reduced energy costs, decreased infrastructure charges, etc. but such cost reductions are likely to be offset by the large losses.



## Short term measures for economic relief

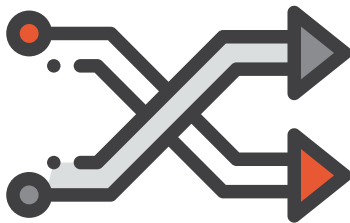
In several countries **specific intervention to cover damages** suffered in this period, both on revenues and cost sides, has been designed or is under definition, such as:

- transfer all revenue and cost risk to the Government for a limited period, as decided in UK for the railway franchises, with operators keeping running the services for a small management fee;
- conversion of the net cost contracts to gross cost contracts, i.e. remuneration of the operators according to the costs + fixed fee, in order to minimize the impact of traffic reduction, as decided in Dublin;
- specific public funding to cover exceptional expenditure for safety equipment and vehicle & station sanitizing activities, as considered by the U.S. Department of Transportation, to support transit operators;
- special funding measures ensuring that operators of subsidized transport services remain financially solvent, taking the form of advance payments or temporarily increased compensation fees, as enacted in Switzerland;
- activation of social safety nets, to protect transport personnel that is laid-off due to the service reduction, as implemented in Italy e.g. for motorway and some public transport operators;
- suspension of specific taxes (or postponement of payment), such as those implemented by Norway, Australia and Brazil for the aviation sector.

It is too early to assess the effectiveness of such measures, either announced or already launched, but - needless to say – a timely and frictionless implementation of them is critical to overcome the current situation. They shall allow the transport system to remain operational for those who continue to need it, and then a quick restore of normal service level after the end of the emergency period.

Several guidelines on the management of such exceptional circumstances exist, such as the one developed by UITP. They are quite comprehensive and do provide a useful checklist for the operators, in areas such as passenger and employees protection, service reduction, and staff and customer information.





## Understanding lasting changes in customer behavior

Providing that the combination of good crisis management and governmental support will keep the transport industry alive in the short term, it is imperative to start designing longer term strategies for the sector.

For this reason, it is worth to start examining how such situation could **modify customers behavior in the medium / long term**, with particular focus on:

- potential extension of remote-working after the emergency ends in employment sectors where it has proven to be effective, at least for a certain amount of days / month, thus reducing both commuting and business trips;
- penetration of e-commerce after the emergency ends, replacing permanently a certain share of shopping-related movements;
- digitalization of activities such as education and other community services – enabled by platforms developed during the lockdown – lowering the need of the associated trips;
- growing preference for individual mobility solutions (private car) versus the collective and shared ones, due to a perception of higher risk of the latter;
- reluctance on planning leisure / tourism trips due to uncertainty about residual risk levels.
- reassessment of leisure/tourism's trips destination, with a higher preference for domestic or close-by ones.

The first principle to be followed is that we have to learn, since we are navigating uncharted waters. Monitoring the evolution of the mobility patterns in the first days and weeks after the relaxation of lockdown measures is important, but it will not be sufficient to forecast longer term evolution. Immediate after-emergency travel behavior might not be fully explanatory of how transport demand will progress after 6 months or more. It is essential to launch **large scale surveys on consumer attitudes** versus the different elements mentioned above, capturing the lasting effects of the COVID-19 experience.

This knowledge will be essential to effectively plan and design effective actions for public authorities and transport operators. **Traffic recovery** will probably happen in the long run, but – especially for the medium/long distance transport – its speed will largely depend on the capacity of such actors to quickly restore people willingness to travel. Thus, the new perception of travel-related risk shall also be investigated, to assess the reluctance to travel abroad or the potential overall reduction of movement frequencies and their impact.

Besides, on all demand segments, operators will face the lower orientation of users towards collective transport means, with potential permanent shift to individual solutions. Finally, the widespread use of remote working and e-commerce may partially last after the emergency period, replacing permanently a certain share of daily passenger trips. Advanced customer survey techniques, which combine both observation of their actual behavior and “stated preference” surveys about its future evolution, will be required to understand the level and duration (temporary or permanent) of such changes.







## A strategy for resuming operations and relaunch mobility

In parallel with such “understanding” phase, operators urgently need to plan for a number of concrete actions, to ensure a progressive and efficient resuming of the operations, as well as restore people’s trust and willingness to travel.

The following table summarizes the most relevant of such actions clustered according the key objective to be met.





## Object

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### Effective post-COVID-19 restructuring



## Post - emergency actions

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- Properly **evaluate, trace and document damages suffered** (short- & medium-term additional costs and lost revenues) in order to be able to claim for governmental support, where available (in some cases such support measures will be implemented only after the peak of the emergency or after it).
- Take this opportunity to launch appropriate **cost optimization** in underperforming activities, as well as a **review of business development strategies** planned before COVID-19.
- Assess and exploit the possible “**advantageous**” **reduction of demand** lasting in the long run, e.g. lower traffic in peak hours thanks to remote working replacing commuting, by properly re-design the network capacity after the emergency (and investment plans accordingly).

### Enhance preparedness



- Develop well-structured **business continuity plans** to be better prepared in case of future adverse situations, with specific views on the different type of events (such as natural disasters, pandemic diseases, or terrorist attacks).
- Implement substantial **digitalization** enabling better demand monitoring and more flexible operation management under exceptional circumstances.

### Build trust & relaunch willingness to travel



- Build **trust on the transport system**, making it permanently safer for both passengers and workers through both specific investments (e.g. equipment allowing digital health checks in transport hubs, wearable devices monitoring distances between employees and between them and passengers etc.) and improved operating procedure.
- Apply advanced **precision marketing** techniques to manage information to clients, and effectively stimulate restart of traveling.



## Effective post-COVID-19 restructuring

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Operators are experiencing big financial difficulties, and they expect (and most likely will get) some kind of support from governmental authorities. In most cases, the actual level of such support will depend on a **thorough evaluation and tracing of short- & medium-term additional costs and lost revenues**, as well as the capability to properly document them. The economic impact shall be evaluated taking into account all relevant aspects (including potentially some upsides such lower fuel costs), in order to be able to claim such subsidies. On each business areas impacted (ticket sales, vehicle and infrastructure operation & maintenance, energy supply, health & safety etc.) it is necessary to compare the economic performances with a verified pre-COVID-19 situation, with appropriate level of details (e.g. on daily basis), in order to be properly correlated to the evolution of the pandemic, on one side, and on the related governmental measures restricting movement, on the other side. Quality of data coupled with a technically founded explanation of their drivers, will be crucial to back the requests of subsidies.

Passenger transport business is, in most cases, a low margin one, and this applies both to subsidized local public transport (where operators profit are typically capped by the regulation) and long distance services, where the growth of demand in the last years has been largely driven by low cost solutions especially in the air and bus sectors. The fragility of this sector is emerging in all its magnitude from the very first weeks of COVID-19 emergency, with several operators struggling to survive, with the most exposed ones being airlines (one UK one already collapsed). While fighting to overcome the current crisis, transport operator shall take the opportunity to plan for appropriate **cost optimization** strategies in underperforming activities, carefully analyzing the potential areas of efficiency (including decisions not to restore routes / services with lower profitability, staff process automation, more efficient procurement, outsourcing of maintenance activities etc.). Besides, **business development strategies** that were planned beforehand should be reassessed to lower the risks, for instance by postponing the investments that will not instrumental in relaunching the core business after the crisis, as well as reconsidering planned expansion in new, unfamiliar business areas with uncertain return in the short term.

On the other hand, the public orientation for more **sustainable solutions** is likely to grow significantly, increasing the pressure for a transition towards a low carbon economy. Prioritizing investments in this area will be then crucial.

A less straightforward element is to understand and take advantage of the possible “**advantageous**” **reduction of demand**, e.g. permanent reduction of passenger flows in peak hours, thanks to consolidation of remote working practices (at least for some days a week), triggered by positive experience during the emergency, also in terms of staff productivity, and following improved remote connectivity solutions. This will allow the re-design the network capacity after the emergency, creating a more homogeneous level of service across the day, so that all operating resources (infrastructure, vehicles, drivers etc.) may be dimensioned and planned more efficiently. Potentially, even investment needs – both on vehicles and infrastructure – aimed at matching peak demand could be remodulated accordingly.

## Enhance preparedness

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It is also essential to acknowledge that pandemic and other critical situation could occur again in the future. Thus, it is necessary to develop well-structured **business continuity plans and emergency procedures**, to be better prepared in future adverse situation. Such programs shall integrate the identification of critical functions and supplies (and the appropriate backups), planning of specific staff training to deal with such events, appropriate communication plans, targeting both employees and passengers, as well as specific actions to be undertaken according to the type of emergency (such as natural disasters, pandemic diseases, or terrorist attacks) e.g. for enhanced protection of transport workers and passengers’ enhanced checks before accessing transport hubs or vehicles. A core element of emergency plans will be strategies to accurately downsize or shutdown transport services. Errors a in this area have been numerous (e.g. as observed recently in several cities, reducing too much the service frequency during a pandemic might make impossible to apply social distancing, or could obstruct the movement of workers that operate critical function in health, food distribution etc.).

Accompanying measures may include the ability to partially transform line services to on-demand ones, to increase cost efficiency and simplify management of maximum load factor, while preserving of the service to the customers.

Critical suppliers should be identified/appointed, with potential alternative sources to be activated in case of emergency. In the case of pandemics, appropriate plans on how to progressively restore the services shall also be defined, taking into account that – most likely - the virus will not have been fully eradicated (e.g. social distancing between passengers shall be maintained).

Continuous monitoring of passengers flows and network operation, as well as and more flexible operation management, can be enabled by expanding **deployment and use of digital solution across the transport systems** (vehicles and hubs), e.g. to real time monitoring of vehicle load factor (so that no new passengers will be boarded when the maximum possible one will be reached according to social distancing rules), real time automatic re-planning of service frequency according to actual traffic levels, monitoring of actual distances between workers (for instance using wearable devices) in maintenance sites and control rooms that will need to remain staffed during the emergency, ticket validation and verification systems that avoid the need of close contacts between passenger or between passengers and inspectors etc.

## Build trust & relaunch willingness to travel

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Rebuilding **users' trust over collective transport modes**, such as public transport and sharing solution, will be one of the key challenges of the post-COVID-19 period. During the emergency, we have been oriented to see public transport vehicles and hubs as a potentially dangerous sites, where people might be closer than the required distances and common acts such as touching a handrail or a ticket machine or the steering wheel of a shared car could represent a risk. Communication during the emergency has been in general poor, and focused on the short term only.

Most operators provide no information at all on their longer-term plans to make the transport safer, giving the impression that – besides being ill prepared to handle the pandemic – they also lack a strategic vision on such matter. A lasting feeling of unsafety for collective transport will particularly affect the modal choice for all trips where the private car represents an alternative. Besides, even the decision of traveling will be affected for medium/long distance trips when there is not a clear necessity: touristic journeys, attendance to cultural events, visits to friends and relatives in other cities / countries are might be postponed or cancelled for several months.

All such issues will be even more relevant because the end of the lockdown will be gradual, with virus not completely eradicated: people will look after travel solution that will minimize the risk of proximity with other persons. Safety threat will remains also perceived by employees, especially the one exposed to contact with passengers (such as drivers, ticket inspectors, hostesses etc.) and those working in sites where social distancing isn't easy, such maintenance staff.

Thus, clear **action plans to make collective transport systems permanently safer** for both passengers and workers shall be designed and launched with the appropriate level of commitment and resources. Such plan will include specific investments (e.g. equipment for digital health checks in transport hubs, tracking of passengers that later might be identified as infected, wearable devices monitoring distances between employees and other safety threats, monitoring and management of passenger movements in order to avoid the creation of crowds etc.) as well as improved operating procedures, e.g. passenger flows management in hubs to avoid the creation of crowds that have been so common in the last years. Reduction of available seats to increase the distance between passengers cannot be a long-term strategy, due to the huge impact on service profitability, but it could be applied in some services / geographies, if justified with higher risk levels.

Finally, transport service providers need to apply advanced **precision marketing** techniques to manage both tailored information by customer segments, and traffic stimulation campaigns, supporting the relaunch of travel demand when no-travel measures are progressively relaxed. Target audience for such marketing campaigns include both registered customers and the general public, for instance when they browse for transport information online. Investments in customer analytic tools should be accelerated by operators that are less equipped in this area, especially the ones working in medium/long distance transport services, since they risk a slower resuming of the demand.





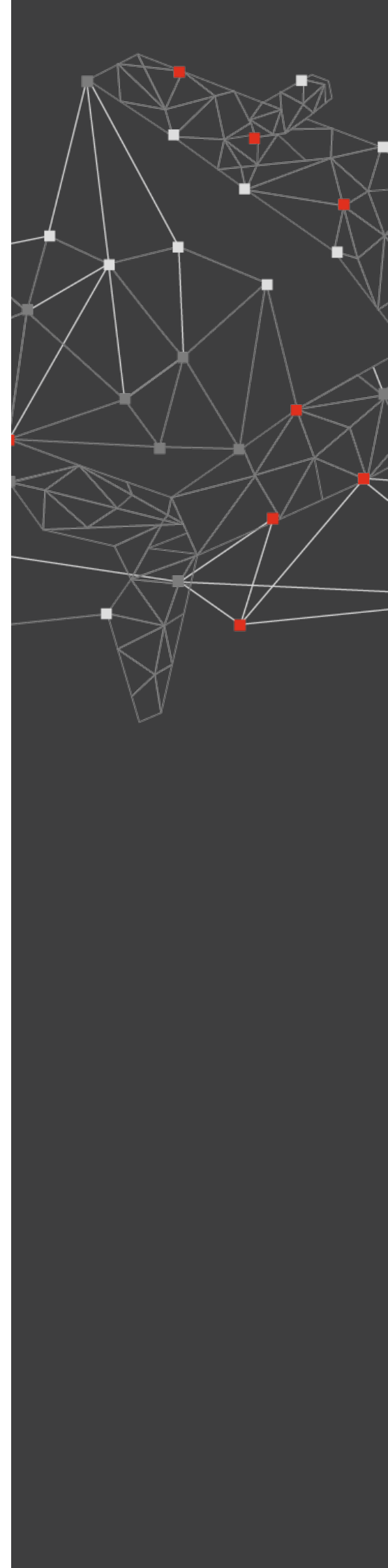




## Conclusion

Summarizing, the management of the emergency period is a major challenge for passenger transport operators, with a variety of new issues to be handled in a very short time, heavy pressure on finance, as well as growing concern of customers and employees about the safety of the transport system. With all such concerns, it can be hard to elaborate longer-term strategies.

Transport demand, however, – especially for collective transport – is not likely to return as quickly as it disappeared, if no concrete actions are taken. Forward thinking is needed to ensure a post-COVID-19 fast recovery for passenger mobility, through an overall improvement of transport system sustainability, safety and quality.







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