

Transportation and Transformation Practices

## **The Recovery Track: How Public Transportation Can Survive COVID-19**

*By James Mourafetis, Fabian Rodriguez, and Scott Timpson*



Public transportation agencies have been severely affected by the Covid-19 Pandemic, yet they still must play a vital role to help reignite the economy in a quick, safe and sustainable manner. This is why a turnaround management approach is imperative to the situation.

## **The Situation**

State and Local Governments have been severely affected by the COVID-19 Pandemic as well as by the recent wave of social protests in many U. S. cities. This has led to unemployment reaching 14.7% in April, the highest unemployment rate in the history of the U.S. In addition to the constant threat to their health and well-being, people who are accustomed to freedom of movement in the world have lost their mobility, and have significantly curtailed the direct, face to face, social interaction that was taken for granted up until now. Employee and customer safety requirements have added substantial costs in providing traditional services. This, along with the loss of normal, familiar interplay in day to day activities has caused much inefficiency, even in routine activities and in providing the expected municipal services. This has especially impacted municipal services provided by Enterprise Funds including commercial business activities such as transportation, utility, waste management and intra-governmental service activities.

However, the greatest impact on the financial performance of these service activities may well have been the loss of revenue. The top line has been decimated due to the cessation of the normal social activity and citizen mobility all due to government restrictions such as “stay at home” orders, to complete lock-down of the normal business activity of buying and selling. This is a global phenomenon which is the by-product of country, federal, state and local containment measures, necessarily imposed to provide collective safety to all citizens. No one can predict when things will return to normal, even after the threat of the virus has been extinguished and social unrest has been substantially reduced. Even when COVID-19 is no longer a threat, many people will still curtail their social and interactive activity because of a lingering fear that the threat still exists. Municipal revenue has seen a severe decrease, especially in the areas of user fees and specific sales tax levies that were the majority of funding for these Enterprise Fund activities.

## **The Solution: A Proven Transformation Management Approach**

In order to successfully manage this crisis and support the restart of the economy safely and sustainably, public transportation agencies must first survive the initial downturn, manage their way through the crisis, and finally, recover. Survival will depend on achieving sustainable liquidity until there is enough clarity to predict the beginning of renormalizing citizen activity, along with an assessment of how much time it will take for a full recovery to occur. When will we have predictability? No one can say precisely but planning for these service activities will require multiple scenarios to be considered: ranging from worst to best case scenarios (this would be driven by desired Service Level requirements). The speed of the recovery will define the future scale of resources that the Enterprise Fund can afford. Survival, managing through the crisis and recovery will require elements of transformation, significant process and productivity improvements and business process reengineering. Communication must be continuous and effective with all stakeholders including employees, management, users of the service, creditors, vendors and the political hierarchy of the governmental structure.

## Application of The ARGO-EFESO Approach to a Public Transportation Enterprise

To illustrate the application of ARGO-EFESO's Transformation Approach, let's consider the case of public transportation organizations. Since the near total shutdown of social and economic activity, these companies have been severely affected by the pandemic. During lockdown, ridership plummeted across the board to an average of 20% of the pre-COVID-19 typical levels and we estimate that the capacity of public transport systems will stabilize to somewhere between 20 and 40% of pre-pandemic levels to maintain the physical distance of 6 ft recommended by the CDC. These factors will have a direct negative impact on revenues which combined with the reduction on corporate, sales, fuel and other tax revenues on which states and municipalities rely, may put these organizations on the verge of disaster.

In addition to the precarious situation on the revenue line likely to continue until a vaccine is available and with a significant number of local governments relaxing lockdown measures and reopening their economies, public transportation enterprises are now facing another major challenge: the need to enable ridership increases to support economic recovery while maintaining public-health measures to prevent a second spread of the virus as well as protecting their labor force. All these elements combined will require the definition and implementation of new sanitizing and physical distancing operating procedures, the allocation of human and financial resources to execute these procedures and an extra effort to reestablish employees and customers' trust in public transport.

The third key business component of public transportation organizations is the capital-intensive nature of the business. Effectively managing and adjusting an organization's fleet will be critical in appropriately matching a changing demand with the right level of capacity required for different levels of economic activity as well as to have the potential for a medium to long term decline in ridership.

With revenues shrinking, costs increasing, and dynamic capacity requirements expected in the short, medium and long term, public transportation organizations. They are in great need of a new approach and will greatly benefit from a disciplined, consistent and holistic management approach where on one side the service is provided meeting the requirements of the new normal under different scenarios of capacity utilization and, on the other, financial and operational discipline and management, including significant process and productivity improvements, are enhanced and exercised across all key components of cash flow generation.

### The Framework at a Glance

Our proposed framework to manage the current situation consists of 2 dimensions: Cash Flow (liquidity) Management and Dynamic Scenario Planning.

**Dimension 1- Discipline Cash Flow Management:** At the heart of the framework is the need to assess, manage and forecast cash flow generation throughout this crisis. This process requires developing an in-depth understanding and model of the three key drivers of Free Cash Flow: Revenues, Operating Costs and Change in Invested Capital. For each of these components, the organization needs to determine and quantify the impact of the COVID-19 crisis and the actions that can be taken to mitigate or improve such impact under different performance scenarios.



**Dimension 2- Dynamic Scenario Planning:** The second component of the framework is the effective use of scenario planning to optimally manage all human and economic resources throughout the crisis. We see at least 3 stages in the current situation that need to be managed and optimized. In the very short term, public transportation organizations need to *survive* having a clear business and operational response to a “lockdown” scenario where only the population associated with essential activity is using the service. The second scenario that companies need to *manage* is the partial restart of the economy which we believe will take place in some way or form before a vaccine becomes available (2021?). Finally, the third scenario is the long-term scenario that reflects the best assessment of the “new normal” and the recovery period.

Exhibit 1 below summarizes the approach applied to a public transportation organization:

Cash Flow Drivers	Short Term Lockdown	Medium Term No Vaccine	Long Term Vaccine Locally available
<b>1</b> <b>Revenue Impact &amp; Actions</b> <i>Demand &amp; Required Service Levels</i>	<b>Impact</b> <ul style="list-style-type: none"> <li>Capacity ↓ to ± 30%</li> <li>Demand ↓ to ± 15%</li> <li>Tax income ↓ ~35%</li> </ul>	<ul style="list-style-type: none"> <li>Capacity ↓ to ~50%</li> <li>Demand ↓ to ~60%</li> <li>Tax income ↓ ~20%</li> </ul>	<ul style="list-style-type: none"> <li>Capacity restored Optimal Levels</li> <li>Demand ↓ to 90%</li> <li>Tax income ↓ ~5%</li> </ul>
	<b>Actions</b> <ul style="list-style-type: none"> <li>▶ Reassess demand by route daily</li> <li>▶ Redefine service level requirements</li> <li>▶ Define demand scenarios</li> </ul>	<ul style="list-style-type: none"> <li>▶ Match “limited” capacity with geographical demand</li> <li>▶ Reestablish trust on service</li> <li>▶ Evaluate price adjustment</li> </ul>	<ul style="list-style-type: none"> <li>▶ Identify long term changes in demand and review service portfolio and levels accordingly</li> </ul>
<b>2</b> <b>Operational and Cost Impact</b> <i>New Ops Process &amp; Costs + Cost Optimization</i>	<b>Impact</b> <ul style="list-style-type: none"> <li>New sanitization process required</li> <li>Workforce protection required</li> <li>Oversized fixed cost structure</li> </ul>	<ul style="list-style-type: none"> <li>Sanitization and workforce protection processes in place</li> <li>Define, communicate and enforce safety rules for passengers</li> </ul>	<ul style="list-style-type: none"> <li>Additional variable cost that will potentially become permanent</li> <li>Potentially oversized fix cost structure</li> </ul>
	<b>Actions</b> <ul style="list-style-type: none"> <li>▶ Define new sanitization process</li> <li>▶ Secure workforce protection</li> <li>▶ Drive operational efficiencies to gain productivity improvements</li> </ul>	<ul style="list-style-type: none"> <li>▶ Reallocate resources to new processes</li> <li>▶ Identify and capture cost reduction using ZBB</li> </ul>	<ul style="list-style-type: none"> <li>▶ Right size cost structure -Identify long term changes in cost and further optimize cost structure through phase 2 of ZBB</li> <li>▶ Shift to life cycle management to lower total cost of ownership</li> </ul>
<b>3</b> <b>Capital (Asset) Management</b> <i>Capital Flexibility and Right Sizing</i>	<b>Impact</b> <ul style="list-style-type: none"> <li>Overcapacity</li> <li>Unproductive assets</li> <li>Increase in Net Working Capital</li> </ul>	<ul style="list-style-type: none"> <li>Temporal under capacity</li> <li>Asset upgrades to accommodate safety requirements</li> </ul>	<ul style="list-style-type: none"> <li>Potentially excess capacity that is unnecessary to have under new normal conditions</li> </ul>
	<b>Actions</b> <ul style="list-style-type: none"> <li>▶ Minimize / variabilize cost of unproductive assets</li> <li>▶ Minimize cash conversion cycle</li> </ul>	<ul style="list-style-type: none"> <li>▶ Maximize flexibility of assets (leaseback assets)</li> <li>▶ Continue optimizing cash conversion cycle</li> </ul>	<ul style="list-style-type: none"> <li>▶ Right size asset base: Eliminate any excess capacity resulting from only serving demand levels of new normal</li> </ul>

**1 - 2 - 3 = Discipline Cash Flow Management & Forecast**

The framework makes explicit the need to identify and quantify the impact of the crisis on revenues, costs and invested capital and formulate the specific actions needed to mitigate and improve the situation for each performance scenario. The following are the most critical aspects in each case:

## Key Revenue Impact and Actions

- **Impact:** On the revenue side the main drivers of performance are the change in demand and the reduction of other complementary income of States and Municipalities that are used to support transit transport operations. In our example above, demand was reduced to 15% in the short term (lockdown) scenarios and is estimated to raise to 60% in the medium-term scenario where lockdown measures persist in certain sectors of the economy and eventually to 90% in the long term scenario where a permanent decline on ridership is expected to occur. Conversely, a reduction on tax related income of 35%, 20% and 5% is assumed for the short, medium and long-term scenarios respectively. These estimations reflect our best current understanding of the impact of COVID 19 on larger, metropolitan areas such as New York and Chicago but can be tailored to the specific situation of any given municipality based on the structure of the local economy.
- **Actions:** The following critical steps have been identified so as to mitigate and/or manage the impact of COVID 19 on the revenues of public transportation organizations:
  - Develop a consistent and disciplined model to track demand by route on a daily basis and predict forecasting based on the extent of lockdown measures taken at any point in time. This model can then be used to allocate existing capacity optimally to the ready geographical demand.
  - Redefine Service Level Requirements based on the demand forecast. This includes # of routes, frequency, expected number of passengers to transport by hour etc.
  - Reestablish trust in a transportation system that now requires new hygiene and sanitizing protocols as well as new rules for riders to maintain adequate physical distance and PPE.

## Key Operational and Cost Impact and Actions

- **Impact:** On the operational and cost sides, the main impact of COVID 19 on public transportation organizations are the additional processes and costs to provide the service while implementing and maintaining the appropriate levels of sanitation, hygiene, physical distancing among passengers and effective use of Personal Protection Equipment by both Customers and the Workforce.
- **Actions:** The following critical actions have been identified to mitigate and/or manage the impact of COVID 19 on the cost of public transportation organizations:
  - Define and implement new sanitation and hygiene procedures across the entire transportation system (buses, bus stop stations, ticket kiosks etc.).
  - Provide work force protection including personal protective equipment (PPE) and separating areas where personal interaction is required (e.g. screen to isolate driver or ticket clerks from customers).
  - Identify and capture cost reduction opportunities in the system without affecting the required capacity and service level requirements. ARGO-EFESO has identified the following areas where cost efficiencies might be utilized in current circumstances:

Reallocation of unused fixed cost resources to new activities (sanitation, new ridership rules enforcement, etc.) caused by the COVID-19 crisis.

- Drive operational efficiencies to improve worker productivity resulting in lower overtime and equivalent FTE offsets.
- Optimization and acceleration of Make vs Buy strategy where core processes are reviewed in detail to determine value added with outsourcing opportunities. In our experience significant value and cost efficiencies can be realized by changing the typical Design to Build Approach to a Design to Outsource Strategy where the organization retains key processes such as Design and Engineering controls but outsource other processes such as Procurement and Construction where other parties have more experience and greater levels of efficiency.
- Longer term, move to a whole lifecycle asset management model to lower the total ownership cost experience, however, start the modeling now for accuracy and efficiency.
- Review labor contracts to retain core activities and outsource non-core activities (e.g. janitorial services, snow cleaning etc.) where other parties have a lower cost structure, better aligned skillset for the tasks, and higher efficiency levels,
- Implement Strategic Sourcing and Procurement where consolidation of spending and suppliers are explored in depth in and outside the organization. For example, agencies might further leverage strategic alliances with partners that have greater economies of scale and purchase power advantage to improve procurement costs<sup>1</sup>.
- Apply Zero Based Budgeting (ZBB) approach to review cost structure in depth and transform to a more flexible cost base including full review of direct and indirect spending.
- Predict the right size of the cost structure once the new normal demand has been determined.

## Key Invested Capital and Asset Management Impact and Actions

- **Impact:** On the Invested Capital side the main impact of the crisis will be two-fold: on one side there will be forces affecting net working capital especially in the form of delayed payments and, on the other, there will be marked swings in required capacity that should be planned for, taking into consideration short, medium and long term scenarios.

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- **Actions:** The following critical actions have been identified to mitigate and/or manage the impact of COVID 19 on the invested capital of public transportation organizations:
- Improve liquidity through optimization of cash conversion cycle wherever possible, including efficient revenue and other income collection, renegotiation of payment terms with suppliers and reduction of inventories.
- On the asset management side, we recommend applying strategies to maximize the flexibility of the fleet and building a flexible elastic asset model to efficiently match capacity with demand, review the asset portfolio to divest unproductive assets and right size the asset base once a reviewed estimation of long-term demand is determined.

## Financial Planning and Forecasting: Putting everything together to define Optimal Financial Management

The last step of the framework, a byproduct of the process described above, is to develop a financial (cash) management model to estimate financial losses that the crisis will cause throughout its different stages and determine the financing needs required to ensure the viability of this vital public service. This model should be the centerpiece of the communication with the financial community and related negotiations.

## Conclusion

The COVID-19 crisis has produced a severe impact on the business, operations and economics of public transportation organizations. Significant reduction in revenues in the short and medium term, additional operational activities and costs, required for the public health and safety, are all taking place simultaneously. A robust management framework and approach is required to find the optimal balance between the need to safeguard the health of the citizens and the need to restart and support the economy and the viability of these enterprises.

ARGO-EFESO's restructuring and turnaround management approach based on a robust cash management strategy applied in this situation to 1) gain clarity on the extent of the financial impact in the organization, 2) identify and quantify specific actions on revenues, cost and asset management to improve the situation and 3) develop a compelling plan to respond to the crisis and overcome financial distress.

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