

The economic shutdown cannot last indefinitely, but without a vaccine, any easing of restrictions must be accompanied by precautions to protect lives. Eventually, the health crisis will be brought under control, but even then a return to pre-pandemic norms will take time. AECOM's Chief Growth Officer for the Americas, **Michael Renshaw**, discusses a phased return to operations and preparing for the new normal.

s the U.S. unemployment rate climbs to over 20 percent, states are under increasing pressure to lift restrictions on businesses which were put in place to curb the spread of the coronavirus. Governors face a tremendous burden deciding when, how, and which businesses to open given that a vaccine is still many months away and the U.S. continues to lead the world in coronavirus cases. The result is a patchwork of state-wide policies and

three multistate coalitions in the Northeast, West, and Midwest that hope to coordinate reopening measures.

Governors and state policymakers are not alone in this battle. The infrastructure industry also has an important role to play in softening the impact of the coronavirus pandemic. Not only is infrastructure a historically solid jobs creator, the industry can also engineer solutions to social distancing and virus detection, help policymakers plan for the future, and design more resilient communities.



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We've identified three steps to help guide reopening efforts across market sectors, and the infrastructure industry is instrumental to all three.

- / Ensuring a safe return to operations
- / Planning a phased return-to-service
- / Preparing for the 'new normal'

Safe return to operations

While the search for a vaccine continues, any reopening will have to take place under new safety protocols. First and foremost, states and companies must ensure employees and clients are protected to the fullest extent possible. This will require a comprehensive system of controls, beginning with proper personal protective equipment (PPE) for those who require it. It will also necessitate changes to the way people work. Can floor markings or dividers direct the flow of traffic? What cleaning protocols should be adopted? What about new ways of scheduling work? Accommodations must be made for vulnerable individuals and new protocols adopted for visitors.

While this pandemic and its impact are unprecedented, many engineered solutions have already been put to the test — in pandemics, weather events, and public gatherings and can be quickly repurposed. Floor plan layouts can be adjusted to maintain proper distancing, for example, and crowd

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control solutions can be adapted from theme parks and other entertainment venues. Heating, ventilation, and air conditioning (HVAC) flow rates can be adjusted, and contactless entry adopted.

In the event of a coronavirus resurgence, measures will be needed to detect the virus, using multiple data points to quickly pinpoint hotspots and prevent further spread. The virus can be detected through wastewater at the point of origin or at wastewater treatment plants. Instruments used to test air quality can be fitted to test for air-borne viruses. Thermal imaging and medical testing also have an important role to play. By enabling holistic virus detection at the waste, air, thermal, and medical testing levels, a safer return is possible.

Phased return to service

It will take time for people to feel safe enough to return to regular activities. Moving from a partial to a full return to service will require a phased approach, as the experience of our global colleagues where this has begun demonstrates. Scenario modelling and multi-channel communications can help ease this process.

Planing for a phased return to service requires consideration of multiple, interrelated factors. Transit agencies, for example, will need to determine which routes are likely to be most in demand, the number of users, optimal capacity, the number of trains, busses, or subways to put into service and on what timetables. AECOM has been helping transit agencies plan a return to service with scenario modelling based on proprietary algorithms and partnerships with big data providers. These tools enable us to evaluate multiple factors through customized 'what-if' scenarios to companies plan a return to service as well as investments for the future.

Preparing for the 'new' normal

Finally, we must ask ourselves what are we returning to? Changes to the way people experience the world may last far beyond the pandemic. If more people continue to work from home, what will be the implications for office spaces, and for roads that now have less commuters? How can transit investment adapt to changing rider preferences, and lower ridership? Will education be forever altered now that distance learning is a reality? What about healthcare? Will smaller hospitals take the place of large centralized locations where viruses can spread more easily? What about the impacts of telemedicine on the medical campus?

These questions and more require careful consideration as companies begin to reopen during the coronavirus pandemic.

THE FUTURE OF INFRASTRUCTURE CREATING OPPORTUNITY FOR EVERYONE

Investment in infrastructure has the power to alleviate today's economic distress and create opportunities for tomorrow.