

# PROTECTING PARISIANS FROM DUST EMISSIONS DURING THE CONSTRUCTION OF "THE GRAND PARIS EXPRESS"

## Situation

APAVE, an international benchmark group in the field of technical, environmental and human risk management for over 150 years, operates on the Grand Paris Express construction site. APAVE has been commissioned to assess the quality of the air throughout the project.

The Grand Paris Express is the largest transport development passing through an urban area in Europe today. The project will require the construction of 68 new interconnected stations and four new lines of which 90 per cent will be underground. The first phase of the project is scheduled to be ready in time for the 2024 Paris Olympics. Due to the close proximity of local residents and sensitive receptors, the Parisian authorities requested that continuous PM10 and PM2.5 dust particulate monitors be deployed at each site. A live data feed from each monitor was needed to quickly identify any increases in dust levels that had the potential to give rise to complaints from local residents. Given the high profile nature of the project and the critical timeframe for the Olympics it was vital to have alerts that notified the site managers to take action quickly, but also to have ready and available data to investigate and resolve any complaints. Minimising the risk of delay caused by complaints was essential in order to deliver the project on time.

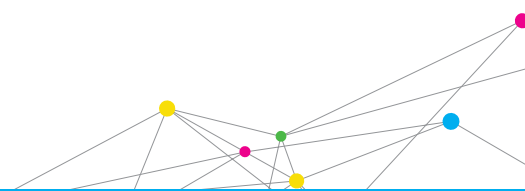


**"On past projects we used Dust Deposition Gauges to monitor around our sites and local communities. However, this monitoring method had some serious drawbacks, one of which being time resolution. With this method we were only able to get an average of the dust emissions over a period of several weeks. For this project, we needed a monitor capable of providing accurate real-time data. TSI® came highly recommended via our laboratory teams who have been using their instruments for decades. Once we saw the product, data reporting capabilities and the experience, history and pedigree TSI® has we knew that this offering was right for our needs."**



UNDERSTANDING, ACCELERATED

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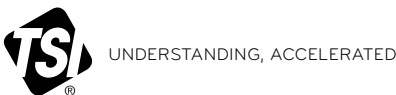
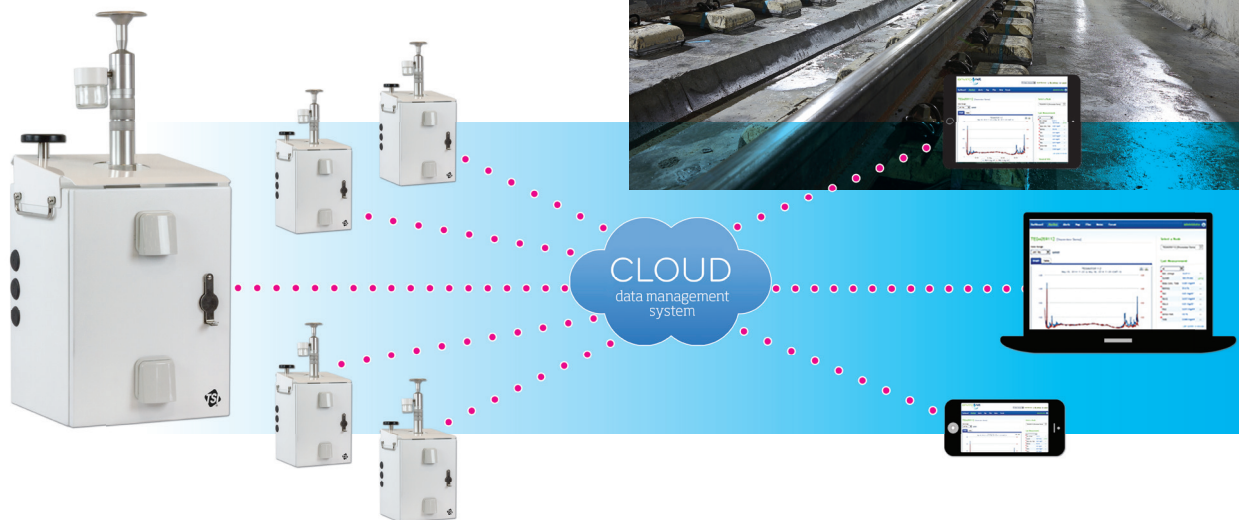
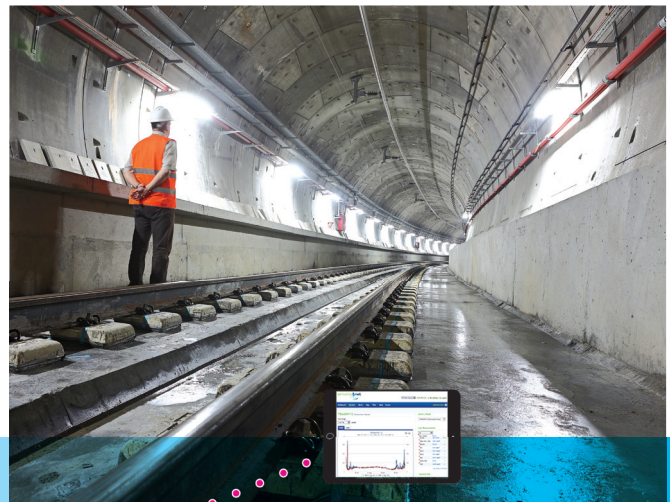
## Solution

TSI® DustTrak™ Environmental Monitors were deployed around the fence perimeter of each allocated site to measure the amount of dust particulates leaving the boundary. Each monitor is equipped with a cellular modem enabling real-time telemetry to be sent to the cloud platform where information can be viewed and shared with key stakeholders. Additionally, a variety of alerts can be created depending on the set threshold limits and sent out to specified recipients via email or SMS. For example, the site manager will receive an alert when the dust concentration level exceeds an average of 150µg/m³ over a 15-minute period. Such notifications enable site managers to respond rapidly and take effective action to reduce dust levels.

The monitoring platform also allows APAVE to invite other users to view their data which increases transparency. The platform enables them to set the access level to prevent a user from inadvertently changing any advanced settings. Functions such as these are a great way to keep key stakeholders informed, such as relevant local councils and community representatives.

## Conclusion

Having access to real time data from monitoring equipment is a huge benefit, both for understanding current site conditions, remediating abnormal situations and dealing with any complaints, if they arise. Should a stakeholder make a complaint then the data can be quickly accessed and investigated for the relevant time period. The cloud data management system enables the historical data to be viewed quickly and queries can be answered with factual supporting evidence. Sharing access to a live data stream is an invaluable feature. This close collaboration with stakeholders through TSI's cloud service, allows us to create a meaningful communication platform that helps to build trust and remove any potential barriers.



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