

Advanced Weather Forecast Technology Helps Northamptonshire County Council

Northamptonshire, England

"With Route-Based Forecasting for Northamptonshire County Council, it's looking like we saved around 9.2% of the total winter maintenance budget."

Richard Woodhouse Senior Maintenance and Innovation Manager at Northamptonshire County Council For Northamptonshire County Council, and indeed all highways authorities, winter maintenance is about balancing safety and operational efficiency. Gritting roads too late or not at all during wintry weather can lead to accidents and traffic jams. On the other hand, unnecessary treatment of roads can result in avoidable costs and damage to highways assets and the environment.



"With Route-Based Forecasting for Northamptonshire County Council, it's looking like we saved around 9.2% of the total winter maintenance budget. Out of the 63 actions we undertook last season, 15 were through RBF – meaning that not all of the gritting fleet went out. The preparation for the season was very good. We sent the routes to DTN and they input them into the system. The overall experience with Route-Based Forecasting has been very good"

Richard Woodhouse Senior Maintenance and Innovation Manager at Northamptonshire City Council

What we did to help.

Recent advances in highway-specific weather forecasting technology, pioneered by DTN, allow hyper-local variations, in road temperature and conditions, to be modelled extremely accurately. Effectively, by capturing the interplay between highresolution weather forecasts, topography and highly localised variations in site characteristics (e.g. buildings, trees and bridges), a forecast can be generated every few meters along a gritting route.

What the impact was.

For winter maintenance decision makers, this means that decisions can now be made much more precisely, effectively and efficiently – and at route level rather than area level. For example, on marginal nights, if only higher (and therefore colder) parts of the gritting network are forecast to fall below zero, then only these routes need to be treated. This ensures public safety whilst minimizing unnecessary gritting treatments.

For Northamptonshire County Council, the acid test was to run the DTN unique Route-Based Forecasting service alongside its traditional forecast and to perform an objective comparison. This trial was supported by DTN during the 2018-19 winter season and the results were striking.

Northamptonshire's highways 2018-2019 winter season



The DTN Advanced Route-Based Forecasting service has already proven its value:

With the DTN Route-Based Forecasting service, Northamptonshire's highway's team demonstrated that the number of gritting actions across the highway's network could be significantly reduced. For the 2018-2019 season, this represented an overall saving of 9.2% of the total budget for winter maintenance.

About the DTN Advanced Route-Based Forecasting service

The DTN Route-Based Forecast Model was built and fine-tuned based on years of experience in working for the road weather industry. It is a physical model, designed to calculate forecasts for road surface temperatures and conditions for predefined gritting networks (or routes).



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