

Making NTS practical

Personal protective strategies can be incorporated into route knowledge training to support drivers and guards. Rollo Campbell, Driver Trainer at LNER, has provided us with some of the personal protective strategies he uses, and why they are useful.

This is not an exhaustive list of strategies you can put in place; and you may find that not all these strategies are relevant to your operations. These examples are provided as suggestions that you can expand on and introduce into your route knowledge competence process.

Risk triggered commentary and commentary driving

Risk triggered commentary (RTC) is a technique in which staff verbalise what they are thinking as they are driving when they have identified a potential risk. It can bring information about a specific task or situation to an individual's attention and help them maintain focus and situational awareness. This is especially valuable in safety-critical repetitive situations that may be processed automatically. Instead of potentially driving on "auto-pilot" in high risk areas, drivers can use RTC to drive with their full attention on what they are doing now, the potential risks that may arise and what they will need to do. This could include all AWS warnings (cautionary signal aspects; emergency, temporary and permanent speed restrictions).

For areas where there is a particularly high risk, for example in locations where there is a strong route risk, drivers could use point and call. This is where drivers point at an important feature (e.g. a signal with a junction indicator) and call out its status (e.g. which route it is showing). The route story will inform where these areas of high risk are.

Actively acknowledge the timetable advisory system

Responding to repetitive alerts and alarms can become habitual, making them less useful over time. Drivers can ensure they continue to pay attention to these alerts and alarms by acknowledging them in a way that directs their attention to them, for example by pointing to the feature that caused the alert/alarm, or verbally acknowledging it. Over time, this acknowledgement of the alert may also become habitual, so individuals may need change their approach. The timetable advisory system is an aid to the driver's route knowledge, however it is only effective if the driver consciously acknowledges it.

Platforms: train length and stopping points

Arriving at a station is one of the most complex tasks for drivers, as they are monitoring their speed, signals, the platform train interface, and where they need to stop. Driving different formations can be confusing, leading drivers to stop at the wrong point on a platform. Relying on route knowledge alone is not always sufficient. Drivers may find it useful to check what the train formation is, and therefore where they need to stop the train, before coming into the platform. Drivers often have cues in the cab to remind them of the train formation, however these must be actively used for them to be effective.

Doors: check the position of the platform

Taking a few seconds before opening the doors gives drivers a final opportunity to check they are in the right position, and which side the platform is on. The design of in-cab monitors and the position of car stop markers may make the task of opening the doors more challenging for drivers when they are positioned on the opposite side to the platform. Drivers may feel pressure to stick to a timetable and open the doors as quickly as possible, so it is important to encourage them to take a few seconds to allow a final check.

Start over when interrupted during a complex task

Some complex tasks, such as door operations and dispatch, include several steps. If the driver is interrupted, they can miss a crucial step or make an error, particularly when the task involves recalling information about the route from their memory. Drivers may find it helpful to take a systematic and thorough approach to the task, and start the process again if they are interrupted part way through

On approach to a braking point for every station along a route, mentally check if you are stopping.

Stopping patterns are not always consistent, and sometimes irregular stopping patterns can lead to drivers making errors that lead to failure to call at stations. Driver can use their route knowledge as a cue to check if they need to stop at the upcoming station. If they are under restrictive signals as they reach their braking point for a station, they should check before taking power. This simple checking process helps drivers maintain overall awareness, assessing the current situation at the relevant time to ensure their attention is balanced between the overall situation and specific task. This provides drivers with the information they need at the relevant time.

When coming off a speed restriction, think about what comes next

It can be natural to take power when coming off a speed restriction, but if drivers first consider what the next signal and station are, they can check whether they need to take power. Drivers can overcome the natural habit of taking power when coming off a speed restriction by using their route knowledge to think ahead. This strategy can help drivers to prioritise their workload.

Getting in the right mindset

Spend a few minutes before your shift running through the key risks

By spending some time running through the key risks present in their shift, such as poor weather or odd stopping patterns, drivers can get themselves in the right mindset. For example, if the weather is poor or if their diagram has odd stopping patterns. Running through the shift and identifying these risks helps drivers get in the right mindset for the shift and brings key risks to their attention. Many of these risks are route specific, so running through the route and checking any information they are not sure of can also be helpful.

Spend a few minutes after your shift reflecting on the day

Spending time reflecting on what went well and what did not go well helps us understand and improve our own strengths and struggles. This short reflection exercise can help drivers take responsibility for their own competence.

Get to know your personality

We are all different; some of our traits help us in tasks and others hinder us. By recognising which elements of their personality could make errors more likely, drivers can select strategies to help mitigate them. For example, if someone is susceptible to rushing and trying to make up time, adding in a few seconds before opening doors could be effective. For someone who has a higher appetite for risk than their colleagues, they would need to pay more attention to their decision making, perhaps seeking additional support there.