

A series exploring Non-Technical Skills (NTS) and how they can benefit safety critical organisations

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8 of 8 – Maximising the impact of Non-Technical Skills: incorporating them into safety-critical employees' lifecycle

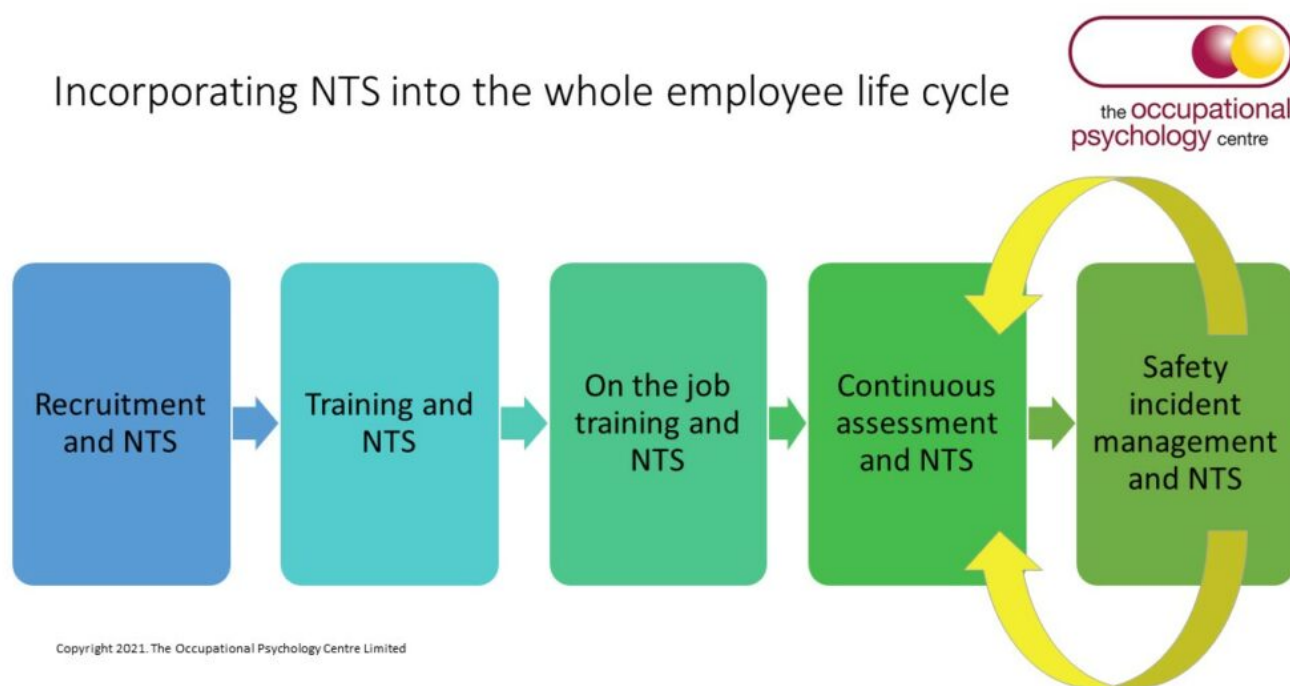
This is the 8th and final article from The [Occupational Psychology Centre](#) (OPC) about NTS. In it we explore how the effectiveness of NTS can be amplified through incorporating it into the whole employee lifecycle.

NTS include those personal characteristics that we bring to our safety critical roles that help us to deliver our jobs safely and effectively. If we are armed with the right NTS then they will help us to perform the technical requirements of the job to the required safety standard. So, if a train driver has a strong NTS of 'concentration' they are more likely to be able to stay focused and concentrate on the signals, station stops and track speeds, thereby helping avoid safety incidents. If a signaller has a strong NTS of 'checking' then they are more likely to pick up a discrepancy in the Weekly Operating Notice (WON) for a possession.

Given the importance that NTS play in safety critical roles we need to consider how to maximise their

effectiveness in our rail organisations. It is the OPC's opinion that to gain the most from NTS, they need to be incorporated into the entire employee life cycle – helping to maximise their effectiveness and deliver the substantial benefits we believe they can.

The image below shows the key touch points where NTS can be incorporated:



1. Recruiting employees with the best NTS profile

In the first instance, we need to incorporate NTS into our recruitment processes for safety critical personnel. It is crucial to identify the NTS that are most important for a particular role and then select suitable assessment tools to tap into, and measure those key NTS. In previous articles (see below links) we have explored which NTS might be the most important at supporting safe and effective performance for various roles. As an example, the [Visual Search Exercise \(VSE\)](#) can assess for the NTS of 'multiskilling'. Alternatively, we could use the [SAFE PQ Personality Questionnaire](#) to assess for the NTS of 'rule following',

'conscientiousness', 'emotional resilience', and 'cautiousness and patience'. Conversely, a carefully designed selection interview could help to assess an applicant's NTS of 'continuous improvement'. If the relevant assessment tools are carefully chosen then they can help improve the selection of rail employees who are more likely to perform the job to the required standards of safety and effectiveness.

OPC research, extending over 20 years, has identified empirical links between an applicant's performance on these types of NTS assessments at selection and their subsequent performance in training and also on the job; including their safety performance.

2. The need to educate rail employees about NTS and applying them in their day-to-day work

Once we have employed the best fit candidate with the best NTS profile for the role then we should include NTS as part of induction and ongoing training. [In article 7 we explored NTS training in detail.](#) Training gives us an excellent opportunity to educate employees concerning what NTS are all about and instil their benefits at an early stage of an employee's career. With this type of training intervention, we can also provide a range of practical NTS tools and techniques that they can apply whilst working, to help them stay safe. For example, advice could be given on how to demonstrate the NTS of 'assertiveness' whilst working out on the track with team members. Alternatively, we could provide tools around 'staying calm' whilst managing a traumatic incident when working as a Movements Operations Manager.

NTS training can have very real and tangible impacts. The OPC has worked with numerous major UK train and rail operators to help implement effective NTS training. There is evidence of employee incident rates falling after NTS training workshops.

3. NTS and continuous assessment: Helping to embed NTS

We continually assess rail employees on their technical skills competence in meeting the requirements for their safety critical roles. For example, we might cover the technical skill competence in dispatching a train or organising a line possession. However, we are not so proficient at including NTS assessment into our continuous reviews. If NTS do indeed have the power to help improve safety the way we believe they can, then we should consider how we incorporate NTS assessments into our continuous reviews too.

As an illustration; when reviewing the performance of our train despatchers we can use task checklist assessments and rule book examination/tests. However, in addition we could add in some NTS behavioural marker assessments to test for. E.g., A train dispatcher's ability to demonstrate the NTS of 'prioritisation', or a signaller's 'calmness under pressure' when having too much to do in the limited time available.

We can then use the findings from these NTS work based assessments to recognise and reward employees demonstrating exemplary NTS and to develop those employees with NTS shortfalls. Overall, this approach can help employees demonstrate more of their key NTS at work and help improve their safety performance. So, it should be our goal to combine both our assessments of technical competence with that of NTS.

4. Identifying NTS shortfalls at the time of a safety critical incident

[In article 5 we explored using NTS as part of the investigation process.](#) When faced with safety of the line incidents we need to undertake NTS led investigations to help uncover the NTS shortfalls that could have contributed to the incident. For example, when arriving late to work in a hurried and time-urgent manner, did the employee fail to anticipate the increased risk of making an error? Did the signaller fail to demonstrate the NTS of 'checking' when he just scanned the WON for planned engineering work? Identifying these NTS shortfalls at the point of an incident can help the employee to address these same

NTS gaps (with appropriate support and development plans) back at work, helping him/her stay safe in the future.

We have worked with hundreds of employees who have had safety incidents and, as part of the incident investigation, OPC psychologists have helped them identify their NTS shortfalls. Collaborating with line managers, we have prepared bespoke NTS development plans to help the employee improve their job, and safety, performance. During follow up sessions with these same employees they have shared really positive feedback on the experience – some have even told us that the experience was life changing for them.

Occupational Psychologist and Director at the OPC, Dr Stephen Fletcher summed up the 8 series NTS articles by saying: “In order for Non-Technical Skills to be a major catalyst for delivering a significant step change in our work and safety performance then, essentially, we need to see it’s integration into our rail organisations as a change programme. That will take time. It will require a concerted and sustained effort and it will need to be all embracing – touching all parts of our operations. So, it is important that NTS is implemented in our HR talent acquisition, retention and development processes as well as our safety management operations. However, a single change intervention e.g., training all employees in NTS is only likely to bring short term gains.

“More and more rail clients are talking about and embracing the need to consider the entire employee life cycle when thinking about applying and maximising the use of NTS. I am also hearing from more and more clients and other safety critical organisations that they are developing an NTS strategy that they plan to implement over many, many years. This is music to my ears.”

If you would like to know more about NTS and how it can help improve safety performance, then contact us at admin@theopc.co.uk or call 01923 23 46 46.



the occupational
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