

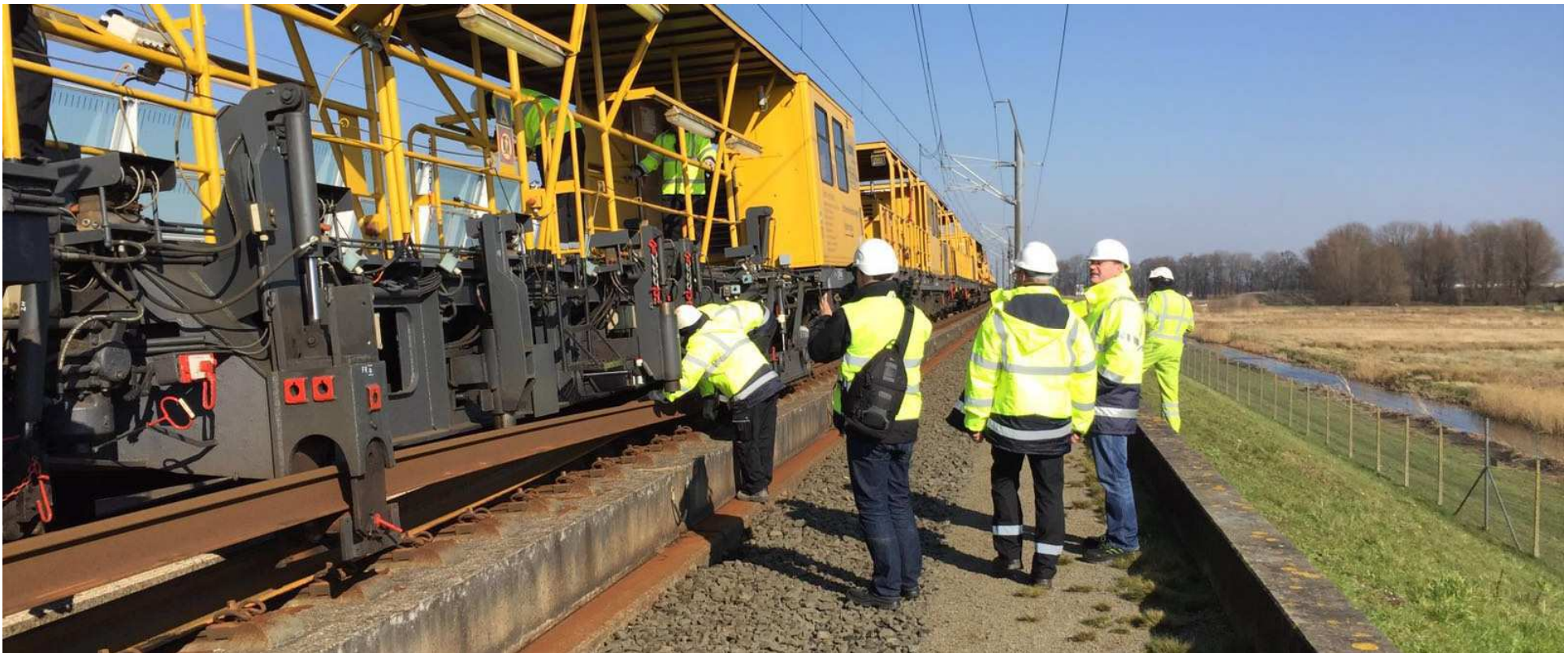
TORC Training at Infraspeed Maintenance

Christiaan Poll
Quality and Safety Manager

Context and scope of TORC game experience

1. Core task (what is our main business)
 - Build, maintain, renew and finance the Dutch part of the high speed railroad infrastructure between Amsterdam and Paris/London. The infrastructure includes 5 tunnels, 1 bridge, a 7 km long train viaduct, power supply, tunnel technical installations, 24/7 monitoring centre, signalling system (ERTMS level 1 and 2) and multiple interfaces with conventional track and the Belgium railroad system.
2. Target of the TORC experience:
 - For whom:
 - 58 Fieldstaff employees and 12 staff/management
 - Top- and middle management, work preparators/planners, project leaders, maintenance engineers and service technicians.
 - For managing disturbances during everyday maintenance activities and for managing crises-emergency situations
3. What were the expectations?
 - Discover present resilience capabilities of management and fieldstaff regarding the amount of Dutch Railway Regulations
 - Discover the presence or lack of tools and control options to cope with unexpected situations in the daily work
4. What was the process leading to the involvement in the project
 - Infrasppeed joined the TORC project in 2014 after presentations of Resilience Engineering and specific the TORC proposals by mr. Johan vd Vorm (TNO)

Impression of maintenance activities



Impression of a TORC Game session



Feedback

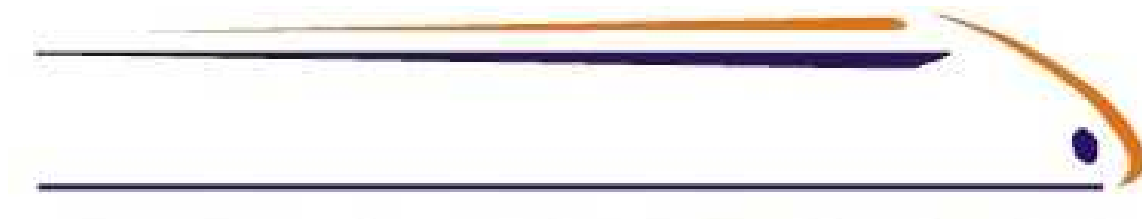
Added value from the game

1. The game has helped us to look for the presence and lack of tools and control options of persons at the job to cope with unexpected situations
2. The game learned us that compliancy and resilience do not automatically influence each other in emergency situations. People do naturally react to solve situations they encounter, regardless rules. We learned that our personnel is driven by two main factors (safety of workers and availability of the infrastructure) while solving unexpected situations.
3. The trained persons became more aware of the consequences of actions and decisions they make to other parties (colleagues, contractors, etc.).

Improvement needs

1. Our management has to decide to either let exist the present escalation model we use or to delegate decisions to a lower organisational level.
2. We are looking to use the TORC game principles for regular work evaluation. Specifically we are interested in the use of the “five step model” during evaluation of regular work and/or usage in incident investigations.
3. Fieldstaff has difficulty choosing strategies, resources are easier. It takes at least one playground to familiarize. A further differentiation between strategies for fieldstaff and management and simplification is needed.
4. The game itself does need much attention to own and recognisable business cases, including game-changers, strategies and resources.

THANK YOU FOR YOUR ATTENTION



TIME FOR QUESTIONS