



Post-Conference Workshop, Mole Vanvitelliana – Ancona June 12, 2025

## Latest Advancements in TSD monitoring of Road Pavement Networks

Road agencies are looking for efficient pavement management tools to maintain adequate structural conditions and preserve the asset value. Since the late 1990s the Traffic Speed Deflectometer (TSD) has been developed to continuously assess the structural capacity of the pavement through non-destructive testing while moving at traffic speeds, thus overcoming the typical drawbacks of traditional testing equipment such as Falling Weight Deflectometer (FWD).

Nowadays, the TSD has reached wide diffusion and is adopted for pavement monitoring in several countries all around the world. However, to date, road agencies still face challenges in managing and interpreting the huge amount of data deriving from TSD surveys and there is no consensus on a well-established method to use TSD measurements for estimating the remaining structural life of the pavement at the network level. By implementing such an approach in a pavement management system, this methodology can enable better budget allocation through a reliable identification of the maintenance and rehabilitation priorities of the network.

In this context, the aim of the workshop is to share experiences gained in different countries and promote a step forward in TSD data analysis for a more reliable pavement structural assessment taking also the opportunities deriving from the advent of smart pavements.

### Final Program

14:30-15:00 Welcome and Opening

*Pavement Management Needs and Future Challenges*

#### *Session 1: Italian perspective for TSD structural monitoring*

15:00-15:20 *An early heuristic approach to assess pavement residual life at the network level using the TSD*

Lorenzo Paolo Ingrassia – Università Politecnica delle Marche

15:20-15:40 *E-PMS and Minimum Environmental Criteria (CAM): residual service life prediction of existing pavements using TSD*

Davide Chiola – MOVYON

15:40-16:00 *Use of TSD in Roadworks Quality Control and in Road Maintenance Plans of Anas SpA*

Cristiano Sartori & Stefano Drusin – Anas SpA

16:20-16:40 *Coffee Break*

#### *Session 2: International experiences on TSD structural monitoring*

16:40-17:10 *Status of the introduction of traffic-speed bearing capacity measurements in Germany*

Dirk Jansen - BAST

17:10-17:40 *Utilising network level TSD/iPAVe data for structural and functional status monitoring and reporting in Europe and the USA*

Klavs Olsen & Ildiko Boström – ARRB Systems

17:40-18:10 *Advances in TSD Data Analysis and Application*

Hao Wang – Rutgers University

18:10-18:30 *Discussion and final remarks*



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