**International Society for Weigh-In-Motion**

**Workshop Weigh-In-Motion for Enforcement 2018**

**Time + Date: 13:30 – 17:30, 22 March 2018,**

**Location: Intertraffic, Amsterdam RAI, Room D407**

With speakers and more than 50 participants from European Policy makers, Enforcement Agencies, Road Owners, Transport Telematics, Legal Metrology and (ISWIM) Vendors of WIM systems.

**Presentations:**

1. Bernard Jacob (Vice President Science ISWIM); “Welcome and introduction”. As chairman of the workshop he welcomed all participants and gave a short introduction of the International Society for Weigh-In-Motion and the purpose of the workshop.
2. Bernardo Martinez (EC/ DG-MOVE); “EU Legislation on on-board weighing equipment”. He explained the goals and content of Directive (EU) 2015/719 on weights and dimensions. By 2021 Member States must take measures to identify trucks or buses which may have exceeded the maximum authorized weight. The directive does not prescribe the choices for technology ; on-board weighing equipment or weigh-in-motion or both. He explained the data transmission between different parts of a vehicle configuration and the communication with the equipment used by enforcement agencies.
3. Chris Koniditsiotis (CEO, TCA), “National telematics framework and levels of assurance and on-board mass applications”. He started his video presentation with an explanation of the aims and structure of the Australian national telematics framework. Followed by the different levels of assurance used for different ways of heavy vehicle mass management. He gave two examples of the way on-board mass data is used in the Australian Intelligent Access Program.
4. Gerard Schipper (General Delegate, ECR). “Technical enforcement solutions, challenges and good practices”. His presentation included an overview of the road transport enforcement situation in Europe and the role WIM systems and on board weighing systems can play in future enforcement practices.
5. Róbert Mikulás (Ministry of Nat. Development), “Hungarian High Speed Weigh-In-Motion network”. The purpose, requirements and design of the network of 89 WIM sites (TSM) in Hungary including the connection to internal and external databases of the Transport Authority and various other authorities. He explained the procedures for verification of the WIM stations and the calculation of fines based on the WIM measurements.
6. Steve Phillips (Secretary General, CEDR); “The EU Road Owners perspective on overloading”. His aim was to encourage debate about the impact and control of inappropriate loading for the infrastructure condition. He made clear that there are many sides on overloading both technical and political, making it impossible to calculate one figure for the costs of overloading in Europe. He described the new challenges and opportunities of cooperative and automated driving.
7. Hans van Loo (Corner Stone Int.) representing Cock Oosterman (Head Certification, NMi); “NMi international WIM standard”. He presented the development, scope and content of the new international WIM Standard. The three elements required for a successful implementation of WIM systems for direct enforcement and the different steps in the type approval procedure.
8. Victor Dolcemascolo (Dept. Head, DGITM)’ “France National Project: WIM for Direct Enforcement of Overloading”. He gave an overview of the current situation of overloading and weight enforcement in France. Next he described the phases of the WIM for direct enforcement project, phase 1 : feasibility study for marketed HS-WIM systems and phase 2: Preparation of a type approval procedure and feasibility study of enforcement procedure (blank test).

 **Panel Discussion.**At the end of the workshop there was a discussion between the audience and a panel consisting of: Bernard Jacob (moderator, ISWIM), Bernardo Martinez (EC/DG-MOVE), Steve Phillips (CEDR), Gerard Schipper (ECR), Piotr Burnos (AGH), Victor Dolcemascolo (DGITM), Hans van Loo (NMi). The following topics were discussed by the panel:

1. **Load effects on road assets**
	1. One figure for the costs of overloading in the EU cannot be given, the same goes for one calculation method. First this because of the many important differences in road and bridge construction, traffic and environmental conditions between EU member states. Second it has proven hard to allocate a percentage of the different types of damages to the road infrastructure specifically to overloading. Third, the question is: “What exactly is considered overloading?”, often this depends on political rather than technical limits. A certain axle load may be considered overloaded for one type of vehicle and be legal for another while the damage to the infra remains the same.
	2. As a consequence both road managers and vendors of WIM systems are unable to provide a cost-benefit-calculation on the implementation of WIM systems. The calculation of the costs of the implementation is generally the easiest part; it is the calculation of the benefits that often proves to be difficult because of the lack of available and relevant references. Perhaps CEDR and ISWIM can work together to set up a library of reports and studies on the effects of overloading available in the various countries represented in CEDR.
	3. The use of WIM has two benefits for the management of road infra; first the reduction of overloading will result in less damages, less maintenance, lower maintenance costs and fewer traffic jams. Second a more accurate knowledge on the actual traffic loading allows the reduction of safety margins in the design and use of road infra. This way lighter and cheaper bridges may be constructed and load limits and life span may be increased without any construction costs.
2. **Impact on road transport**
	1. When overloading is detected for vehicles of a certain transport company experience has shown that this is often an indication for enforcement agencies that also other regulations are violated by this company and is a reason more additional and closer inspections.
	2. Did Victor have figures on the economic impact of overloading in France?
	3. The directive2015/719 on weights and dimensions defines what should be done by EU member states by 2021. However it does not state how this must be done, or how much/often, or what technology should be used. The measures may be implemented using on-board weighing, or in-road WIM or both.
3. **Future WIM for direct enforcement**
	1. It became clear that most consider on-board weighing and in-road WIM as complementary technologies. The combination of measurements from both types of weighing technology can be used to improve the accuracy and reliability of the measurements of both, e.g. by mutual calibration or use in data quality controls systems.
	2. Direct enforcement using WIM will not be a ‘magic’ solution that will solve all overloading problems. However it will be able to control the large bulk of the road transport in an efficient way allowing the enforcement agencies to allocate their limited human recourses to specific parts of the overloading problem, e.g. small delivery vans.