Vehicle/Structures System Interface Committee
Annual Report for 2019

Message from David Johnson, Chair of the Vehicle Structures System Interface Committee

During 2019 Vehicle/Structures System Interface Committee (V/S SIC) has continued to assist the railway industry in managing all aspects of identified system interfaces within the scope of its remit.

Having now developed a comprehensive suite of new gauges, using up to date infrastructure data and modern analysis methods, the key next step is to publish their route compatibility in the relevant Sectional Appendices. This will provide operators and rolling stock designers with the confidence to start using them for new traffic flows and rolling stock designs. V/S SIC request senior industry sponsorship to recognise this as a priority and provide the resources and management focus to carry out this work in the near future.

V/S SIC is looking forward to the year ahead and supporting the industry to deliver and implement solutions to its key issues.

I am pleased to present the end of year report setting out the key achievements of the V/S SIC and its subgroup over the last 12 months and its plans for 2020.

Achievements in 2019

In the last 12 months V/S SIC has completed and implemented the findings from research and studies as follows:

- Acted as Primary Client Group to deliver RSSB findings from research and development (R&D) projects that will be included in a future revision of Railway Group Standard GERT8073 Requirements for the Application of Standard Vehicle Gauges. The relevant R&D projects were:
  - Development of a new Locomotive Gauge (T995) - A gauge created using modern analysis techniques based on existing infrastructure restrictions, to which common existing locomotives conform to and which provides more space for new designs, where space for emission reduction equipment is becoming increasingly necessary.
- Freight Bogie Suspension Gauging (T1109) - Sets out a robust methodology for benchmarking freight vehicle suspensions, simplifying the process by which gauge compliance can be demonstrated, including wagons with new suspension designs. It also demonstrated that most existing freight bogies conform to Lower Sector Vehicle Gauge (LSVG).
- Development of a Standard 26 m Passenger Vehicle Gauge (T1092) - A new gauge using modern analysis techniques based on existing infrastructure restrictions for passenger vehicles up to 26 m in length.
- Development of Incremental Freight Gauges (T1132) - Determined economic need for variants of existing freight gauges and produced three new freight gauges that allow greater operation of the dominant 9’6” container traffic without the need to upgrade infrastructure to full W10 / W12 gauge.

Programme of work for 2020 – 2021

The following key activities / R&D projects are planned for the next 12 – 24 months:

• Act as Primary Client Group for ongoing R&D project, Assessing the Case for Implementing a Long-Term Gauging Strategy (T1158). This will offer an economic understanding and framework for deciding how to target gauging developments over the next 30 years.

• Provide gauging expertise to ongoing R&D projects, Minimising the impact of ‘high and tight’ platforms on the overall PTI step/gap dimensions (T1166) and, in conjunction with the PANTHER group, Development of a Suite of Pantograph Gauges (T1196).

• Promote and encourage publication of new gauges in the Sectional Appendix.

• Help resolve issues associated with low floor height vehicles.


• Provide technical input to draft a new RIS covering the format of data provided for gauging assessments to improve consistency across the industry and minimise the risk of errors in calculations.