## Purpose of the paper

1.1 This paper is the annual report on the activities of the System Interface Committees (SICs).

## Background

2.1 The SIC Protocol requires SIC Chairmen to provide an annual report to the RSSB board. SICs help the industry manage interfaces in an effective and efficient way – contributing to industry objectives on cost, performance, capacity, carbon and customer satisfaction. SICs are major users of RSSB resources which are used on research, meetings management, facilitation and technical advice. Together, SICs and RSSB support the industry in the achievement of their objectives and this report and its annexes, highlight those achievements.

2.2 TSLG appointed the SICs to act as either portfolio champions or support to portfolio champions, to lead the delivery of each RTS. The SICs remits have been revised to reflect their enhanced roles and the tactical and strategic activities they will be involved in. The relevant part of the remit is reproduced in the Annex A.

2.3 The lead for each of the technical chapters has been allocated as follows:

<table>
<thead>
<tr>
<th>RTS portfolio</th>
<th>Assigned champion</th>
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<tbody>
<tr>
<td>Control, Command and Communication (CCC)</td>
<td>Vehicle/Train Control and Communications SIC (V/TC&amp;C SIC)</td>
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<tr>
<td>Energy (ENE)</td>
<td>Vehicle/Train Energy SIC (V/TE SIC)</td>
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<td>Rolling Stock (RST)</td>
<td>Vehicle/Vehicle SIC (V/V SIC)</td>
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<tr>
<td>Infrastructure (INF)</td>
<td>Network Rail</td>
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</table>

2.4 Vehicle/Structures SIC (V/S SIC) and Vehicle/Track SIC (V/T SIC) support the assigned champions.

2.5 The SICs have been tasked as a priority from TSLG, to have portfolio maps compiling the five-year rolling plan starting in 2015/2016, including benefits, where they arise and the likelihood of success.
2.6 An evaluation framework has been developed by the Rail Delivery Group (RDG) and tested using the CCC draft programme. This approach is now being applied to all portfolios.


3.1 TSLG have endorsed the SICs reports for the period 2013 – 2015. The reports provide comprehensive details of the summary of activities in 2013 – 2014 and the planned activities for 2014 – 2015. The reports show an impressive array of work that supports the industry in becoming more cost effective in delivering increased capacity and performance. Hyperlinks to each of the five SICs reports are provided in the following summaries from the SICs.

3.2 **V/S SIC** continues to be focussed on measures which will make it easier (and hence more cost-effective) to establish if a vehicle (either new or cascaded) has clearance on any particular route. This complex work and the development of gauges takes a substantial amount of time and effort. To this end V/S SIC is progressing a number of projects.

3.3 The headline activities for **V/T SIC** was the progression of its three year strategic and broad based programme of research and application during 2013/2014, supporting the development of the VTAC for Control Period 5 and its collaboration with railways from across the world to build understanding of rail STUDS (squat type unknown defects).

3.4 **V/TC&C SICs** achievements have involved leading the development of the RTS CCC portfolio, development of the initial stage of a strategy on train positioning to support information sharing across diverse information and control systems and commencement of the process to manage the Network Rail Global System Mobile Communication Rail (GSM-R) voice communications. The SIC supported the development of the next generation of Radio Electronic Token Block (RETB) and continues to monitor GSM-R, RETB, TPWS, Automatic Warning System (AWS) etc.

3.5 **V/TE SIC** has focussed on, investigating electrical corrosion of wheel bearings, AC/DC changeover, delivery of the RTS Energy portfolio, development of the Energy Technical Specification for Interoperability Implementation Strategy, as well as contributing to Network Rail’s development of a TSI-compliant electrification design for Great Western. The SIC continued to monitor the development of energy storage technologies and commissioned knowledge searches into biofuels.

3.6 **V/V SIC** has published issue three of the Key Train Requirements (KTR) document. Following its appointment as the RTS Rolling Stock portfolio champion, The SIC has created a Rolling Stock Portfolio Working Group to develop route maps to support delivery of the rolling stock vision described in the RTS.
3.7 All of the current and planned activities related to the delivery of the RTS Rolling Stock portfolio are focussed on passenger rolling stock. Whilst the SIC and the Rolling Stock Portfolio Working Group are mindful of the omission of freight rolling stock, the absence of freight operator representation has prevented an understanding being gained of the likely future requirements for this sector. The SIC would welcome any freight operator input that could be provided.


4.1 **V/S SIC** plans work for the following areas: 26m gauge, locomotive gauge, freight gauges, gauging data, platform/train interface, embankments and bridge design.

4.2 Planned activities for **V/T SIC** are to focus on the causes and detection of rail foot defects which are now the highest cause of failure of broken rails. The SIC intends to provide support to generate competence in the industry by producing guidance notes, technical papers and training courses.

4.3 The focus for **V/TC&C SIC** will be strategic issues, in particular Automatic Train Operation and Traffic Management and Telecommunications and Positioning Systems. V/TC&C will pick up the European Train Control System strategy and GSM-R and will continue with its forward looking work in FuTRO and FC&PS AG. The Portfolio Mapping Group is developing the strategy to implement the CCC portfolio of the RTS. The preliminary evaluation shows this portfolio delivers £7.1bn of benefits over 30 years for an investment of £1.5bn. The net present value for the programme is £3.5bn. These benefits are primarily in the area of capacity and customer satisfaction and operators will receive benefits from increased capacity and reduced carbon.

4.4 Proposed priorities for **V/TE SIC** for the coming year are to explore opportunities to improve the mechanical resilience of the overhead electrified network and highlight potential issues and challenges facing the electrical supply network, inform the design and specification of new electrification systems. The SIC will continue to progress and further develop work in relation to the RTS Energy portfolio.

4.5 **V/V SIC** has started preparing for issue four of the KTR document. Particular areas of focus will be passenger saloon noise, vibration and ride specification. A knowledge search has already been undertaken and further work is now being considered with a view to creating recommendations for the robust specification of these aspects of train design. In respect to toilets, the SIC will develop guidelines to enable the specification of technologies that deliver optimum whole life solutions. The outputs from research project T1003 looking at the standardisation of coupling arrangements will be reflected in issue four of the KTR document.

5. Recommendations

5.1 The board is invited to **NOTE** the report of the activities of the five SICs for the period from September 2013 to November 2014.
Annex A  Annual Report from the System Interface Committees

A.1  Remit for RTS portfolio champions

A.1.1  As portfolio champions SICs are required to:

   a)  Provide cross-industry endorsement of the route map and plan.

   b)  Participate in and advise on the on-going review, gap analysis and strategic development of the route map.

   c)  Advise TSLG on the scope of the portfolios and programmes required to deliver the RTS and effectively deliver benefits and value from the available budget.

   d)  Help ensure that a whole system approach is adopted taking account of the wider and cross-system implications of the SIC scope of work and contributing to cross-system portfolios.

   e)  Contribute to the development and maintenance of the proposed whole system reference architecture.

   f)  Provide expert advice to TSLG Core Group and other industry decision making groups, including for example on specific projects.

   g)  Where appropriate provide the industry sponsor role for individual programmes or projects until dedicated industry sponsors/steering groups are appointed.