1. **Purpose and context**

1.1 The purpose of this paper is to inform the board about the range of learning from operational experience (LOE) activities RSSB currently provides (or is in the process of developing) to support its customers in their obligations under ROGS to learn from accidents and incidents. Specifically, it focuses on how RSSB helps facilitate learning from international incidents.

1.2 While RSSB is highly active in LOE, more generally, the System Safety Risk Group (SSRG) supports the industry in disseminating LOE in order to build resilience into the railway. RSSB provides a range of services and products in support.

2. **Background: what is LOE?**

2.1. As both a listening and a learning organisation, RSSB helps the GB rail industry put things right when something goes wrong, and helps it remember the route that led to the solution.

2.2. In addition, RSSB plays a part in the accident investigation process by providing statistics to help the Rail Accident Investigation Branch (RAIB) set incidents into context, by offering RAIB expert knowledge from staff with extensive industry experience, and by bringing cross-industry groups together to tackle industry-wide issues.

2.3. We also produce an [LOE Annual Report](#) to look at some of the tools available to facilitate learning, capture some of the lessons learnt in the fiscal year and consider specific issues affecting rail users and employees.

3. **Learning from Operational Experience**

3.1. LOE is the process by which knowledge from the operation of the railway is gained, exchanged and used, leading to continuous improvement and the development of a positive safety culture.

3.2. The end of CP4 has seen the appetite of each of the National Safety Groups for LOE activities and deliverables grow. This has resulted in more informed debate and new workstreams, such as the passenger-train interface (PTI) and animal incursion initiatives.

3.3. Nevertheless, RSSB is aware of the need to continually develop its LOE activities further where they can add value.
4. Learning from international experience

4.1. In order to extract lessons from international incidents, RSSB produces two base papers: Rail Accident News (a monthly summary of rail accident news, issued at the start of each following month); and Rail Investigation Summary (a monthly summary of some of the world’s railway formal inquiry reports, also issued the following month).

4.2. The process for producing both documents is shown in the following table:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accident occurs</td>
<td></td>
</tr>
<tr>
<td>The media reports it</td>
<td></td>
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<tr>
<td>RSSB picks it up</td>
<td>RSSB uses publicly available information, building on and verifying it via its network of internal, external and international contacts.</td>
</tr>
<tr>
<td>RSSB analyses it</td>
<td>The initial findings are re-written into a form appropriate for dissemination to customers. The ‘stories’ are collected with others from a given calendar month and are updated as more information becomes available.</td>
</tr>
<tr>
<td>RSSB tracks it</td>
<td>The details of each story are tracked in order to flag up the coming key NIB investigations.</td>
</tr>
<tr>
<td>RSSB disseminates it (a)</td>
<td>The monthly summary ('Rail Accident News’ – see Annex A) is sent out to internal, external and international readers. The purpose is to allow these people to use this information in their own learning activities. For example, RAIB recently used Rail Accident News to gather information on worldwide incidents of wheelchairs and pushchairs rolling off platforms to support its Southend and Whyteleafe investigation.</td>
</tr>
<tr>
<td>NIB investigation published</td>
<td>After about a year, the National Investigating Body (NIB) will publish a report. RSSB then produces a monthly Rail Investigation Summary, which comprises the causes, contributory factors and recommendations.</td>
</tr>
<tr>
<td>RSSB disseminates it (b)</td>
<td>RSSB sends the Rail Investigation Summary to a similar range of internal, external and international customers.</td>
</tr>
<tr>
<td>RSSB archives it</td>
<td>Both Rail Accident News and the Rail Investigation Summary are uploaded to the Safety Intelligence Centre database and SPARK (see Annex A). In the case of the latter, appropriate keywords tag the document to aid research.</td>
</tr>
<tr>
<td>RSSB disseminates it (c)</td>
<td>Rail Accident News and the Rail Investigation Summary also provide material for papers to the Train Operations Risk Group (TORG), the People on Trains and in Stations Risk Group (PTSRG), the Infrastructure Safety Liaison Group (ISLG), the National Freight Safety Group (NFSG), the Dangerous Goods Group and the RSSB Board (although the Board has only requested the ‘news’ items and not the investigations thus far).</td>
</tr>
</tbody>
</table>

4.3. July 2013 saw four major train accidents occur across the world: in Canada on the 6th (47 fatalities), France (12th, 6 fatalities), Spain (25th, 79 fatalities) and Switzerland (29th, 1 fatality). In September 2013, RSSB produced a board paper to assess each accident, measuring them against GB practices and safety mitigations. The paper may be downloaded from Opsweb.

4.4. Each of the accidents was also considered in a separate summary document, which was updated as more information came to light. These papers were posted on Opsweb, but were also emailed regularly to key customers, in order to keep them updated as quickly as possible.
4.5. Work is currently under way to develop a broader, more structured horizon-scanning process and take proactive steps to seek those European investigation reports which have been less than readily available hitherto.

4.6. An example of the process in proactive action may be seen in the box below:

Details of a fatal collision between a push-pull train and a cow in Germany on 12 January 2012 were presented to the Operations Focus Group (OFG) in March 2012. A parallel was drawn with a similar accident at Polmont in 1984. This led a customer to ask if the GB rail industry had learned from this earlier event. As a result, RSSB researched the lessons learnt from Polmont and convened a cross-RSSB group to consider the situation in terms of risk and safety performance statistics, rolling stock improvements, R&D and so on.

Edition one of the resulting special topic report was presented to OFG in June 2013. OFG took the opportunity to self-question and formed a subgroup to steer a second edition. The subgroup was made up of representatives from RSSB, the Association of Train Operating Companies (ATOC), the Associated Society of Locomotive Engineers and Firemen (ASLEF), and Network Rail. That second edition of the special topic report was published in June 2014; in the meantime, Network Rail had used the first edition to inform the Routes of the full nature of the risk from animal incursions. The company then decided to undertake a ‘deep dive’ of ‘objects on the line’ – which will include animals.

The second edition will be presented formally at TORG’s August meeting, in order to suggest that the topic be kept on the group’s radar and to demonstrate how RSSB could help drill into other risk areas.

4.7. Note that the process, while successful, can be hindered by language difficulties and technology. A case in point is the recent release of the Spanish-only report on the Santiago high-speed derailment of July 2013. RSSB has successfully obtained a translation, which is currently being re-written into language acceptable to customers. However, it is a resource-heavy project, and RSSB’s LOE resource is limited.

4.8. Further work includes coding more of the overseas investigation reports in the Incident Factors Classification System (IFCS) module of SMIS. Analysis of this data will clearly help facilitate cross-industry learning.

5. LOE in context

5.1. Learning from Operational Experience must always be seen in the context of a data-based approach to risk management. International accidents provide a useful reminder that such occurrences are always possible, no matter how mature and technologically developed a railway system is. They provide a potential source of information and cross-learning. However, this should not distract from the principles of a risk based approach when less severe local incidents provide an evidence base for the analysis of risk.

5.2. RSSB also provides support for such learning through systems like Close Call, and SMIS and is continually seeking to support the industry in learning from such information, in order to help companies to make themselves more resilient.

6. Recommendations

4.1. The board are asked to:
• **NOTE** the current LOE activities and developments
• **CONSIDER** whether it considers RSSB members have appropriate LOE processes in place
• **CONSIDER** if there any other LOE activities RSSB could be providing to further support the industry
Key RSSB LOE deliverables

**Rail Accident News** – a monthly summary of accident and incident news from across the globe

**Rail Investigation Summary** – a monthly summary of some of the world’s rail accident reports. Each provides a synopsis of the event, its causes and the recommendations that have been made to mitigate them. As the Rail Investigation Summary features information already in the public domain, it is also posted on the RSSB website.

(Both of the above are used as source material for a range of bespoke papers to the NSGs, the Dangerous Goods Group, ISLG and the RSSB Board.)

**Operational Feedback Updates** – these are ad hoc reports, produced to highlight issues raised by overseas rail accidents and inquiries into non-rail events with a view to promoting pan-industry learning.

**RED DVD** – a series of programmes about operational safety initiatives, including SPADs, which are of potential interest to anyone operating and managing the railway – from drivers and signallers to managers and specialists at all levels. It makes extensive use of incident reconstructions to make clear learning points which remain in the memory.

**Right Track** – a quarterly safety magazine aimed at front-line personnel to capture, share and promote safety learning and initiatives in an accessible way.

**Learning from Operational Experience Annual Report** – a summary of learning, investigation reports and best practice in a given fiscal year.

**SPARK** – a free, interactive web tool for the rail industry to share knowledge, reduce duplication and speed innovation.