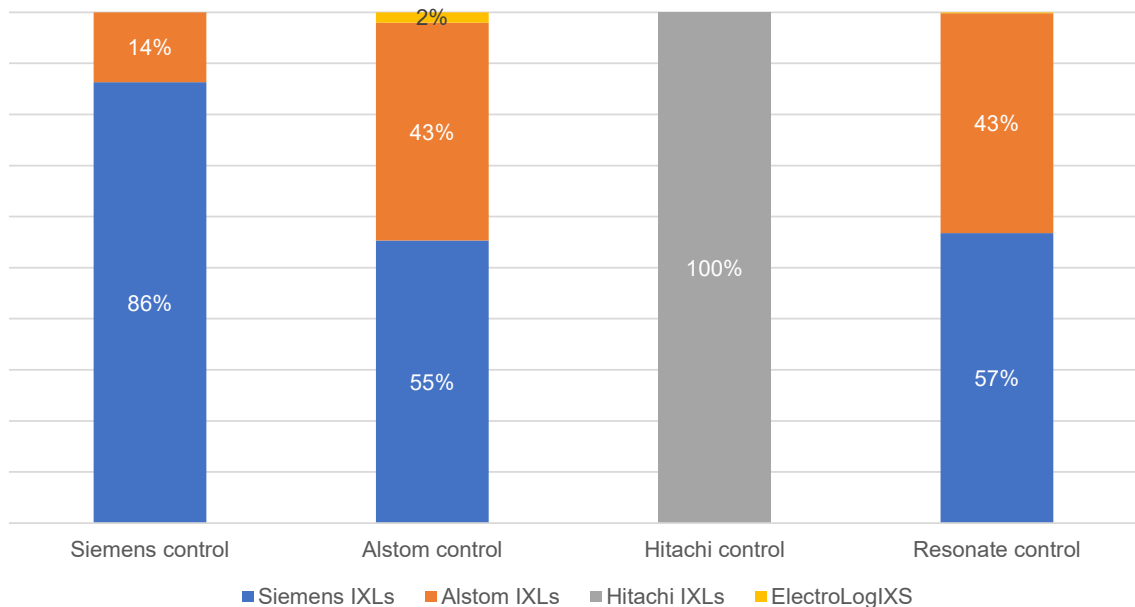


## Annex

### B. Extent of interfacing between control systems and interlockings

- B1. The figures below show the extent of interfacing between control and interlocking products within signalling projects. It is apparent from these figures that Siemens and Alstom interlockings and control systems have regularly interfaced, whereas Hitachi's interlocking and control have to date (albeit based on a far smaller number of instalments) not. To develop a presence in the market, suppliers products need to interface with other products on the network.
- B2. Figure A1 shows that of all interlockings controlled by Siemens' control system, 86% are Siemens (or predecessor) manufactured interlockings and 14% are Alstom manufactured interlockings. Similarly, of all interlockings controlled by an Alstom control system, 55% are Alstom and 43% are Siemens manufactured interlockings, with the remaining 2% being Alstom manufactured ElectroLogIXS interlockings. Finally, Resonate's control systems control 57% and 43% of interlockings.

**Figure A1: Percentage of control systems interfacing with interlockings**

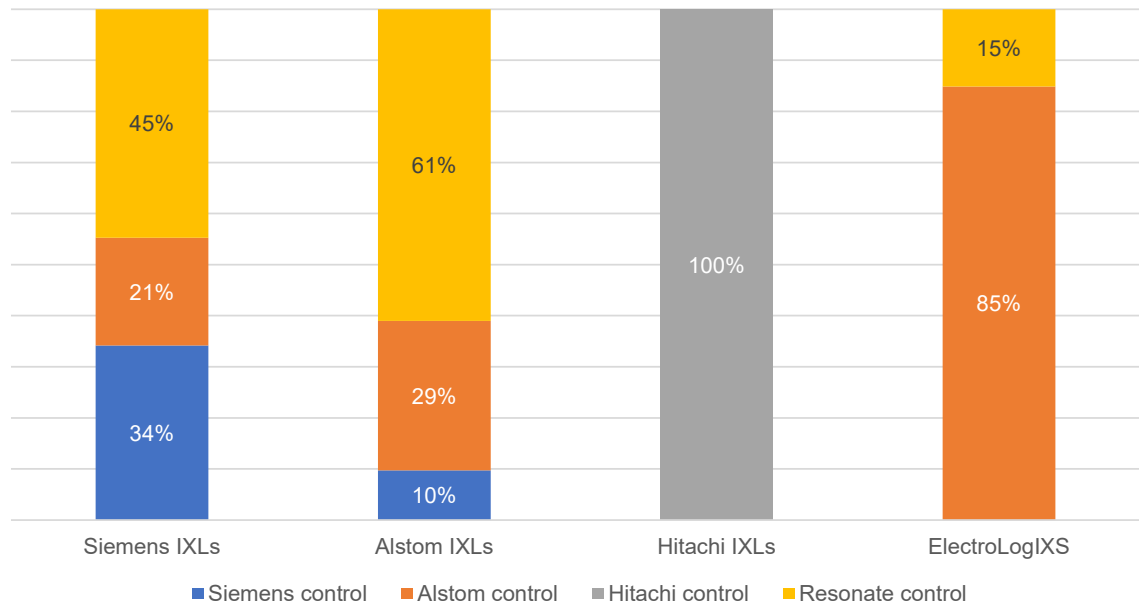


Source: Network Rail's Signalling Projects Asset Data Store (SSADS) supplied to us in October 2020.

- B3. Figure A2 shows that for Siemens (or predecessor) installed interlockings, 34% are controlled by a Siemens control system, 45% by a Resonate control system and

21% by an Alstom control system. Of Alstom (or predecessor) installed interlockings, 29% are controlled by an Alstom control system, 61% by a Resonate control system and 10% by a Siemens control system. The bulk of ElectroLogIXS interlockings are controlled by an Alstom control (85%), with the remaining 15% controlled by Resonate's IECC.

**Figure A2: Percentage of interlockings by control system**



Source: Network Rail's Signalling Projects Asset Data Store (SSADS) supplied to us in October 2020.