### 5.5 Data communications procurement

The table below lists from where NRENs get their national and international connectivity. Note that all countries that participate in the GÉANT project also have contracts with one or more providers for their international connectivity.

<table>
<thead>
<tr>
<th>Country</th>
<th>National connectivity</th>
<th>International connectivity</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>One provider</td>
<td>GÉANT</td>
<td>Nationally, we also have peering contracts. For international connections, we have contracts with providers.</td>
</tr>
<tr>
<td>Belgium</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>For international connections we also have contracts with providers.</td>
</tr>
<tr>
<td>Croatia</td>
<td>One provider</td>
<td>GÉANT</td>
<td>For international connections, we also have contracts with providers.</td>
</tr>
<tr>
<td>Cyprus</td>
<td>One provider</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>Internationally through contracts with providers as well.</td>
</tr>
<tr>
<td>Denmark</td>
<td>Own network</td>
<td>NORDUnet</td>
<td>Nationally, we also have contracts with several providers.</td>
</tr>
<tr>
<td>Egypt</td>
<td>Several providers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td>Several providers</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Finland</td>
<td>One provider</td>
<td>NORDUnet</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>For international connections, we also have contracts with providers. RENATER chooses its providers via public tendering procurement.</td>
</tr>
<tr>
<td>Georgia</td>
<td>Own network</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Nationally, we also have contracts with several providers.</td>
</tr>
<tr>
<td>Germany</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>For international connectivity, we also have contracts with providers.</td>
</tr>
<tr>
<td>Greece</td>
<td>One provider</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Hungary</td>
<td>Several providers</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Iceland</td>
<td>One provider</td>
<td>NORDUnet</td>
<td></td>
</tr>
<tr>
<td>Iran</td>
<td>Through contract(s) with (a) provider(s)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ireland</td>
<td>Several providers</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>For international connections, we also have a contract with a provider.</td>
</tr>
<tr>
<td>Israel</td>
<td>One provider</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>For international connectivity, we also have contracts with providers.</td>
</tr>
<tr>
<td>Jordan</td>
<td>One provider</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Jordan Telecommunication Company is the only supplier.</td>
</tr>
<tr>
<td>Latvia</td>
<td>One provider</td>
<td>GÉANT</td>
<td>International connectivity also through contracts with providers.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Own network</td>
<td>GÉANT</td>
<td>For national and international connectivity, we also have contracts with providers.</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>International connectivity also through contracts with providers.</td>
</tr>
<tr>
<td>FYR of Macedonia</td>
<td>One provider</td>
<td>Through contract(s) with (a) provider(s)</td>
<td></td>
</tr>
<tr>
<td>Malta</td>
<td>One provider</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Maltacom is monopoly until 1 January 2003.</td>
</tr>
<tr>
<td>Moldova</td>
<td>Own network</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Internationally. We have a connection through the LMN &amp; GÉANT networks.</td>
</tr>
<tr>
<td>Morocco</td>
<td>One provider</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Connectivity provided by Maroc Telecom</td>
</tr>
<tr>
<td>Netherlands</td>
<td>One provider for transmission facilities*</td>
<td>GÉANT</td>
<td>For international connectivity, we also have contracts with providers. We also connect through peering with other networks at the Amsterdam Internet Exchange (AMS-IX) and at StarLight and STAR TAP in Chicago, USA.</td>
</tr>
<tr>
<td>Norway</td>
<td>Own network</td>
<td>NORDUnet</td>
<td>We also work through nationally through contracts with providers.</td>
</tr>
<tr>
<td>Poland</td>
<td>Own network</td>
<td>GÉANT</td>
<td>Nationally and internationally, we also have contracts with several providers.</td>
</tr>
<tr>
<td>Portugal</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>For international connectivity, we also have contracts with providers.</td>
</tr>
<tr>
<td>Romania</td>
<td>Several providers</td>
<td>GÉANT</td>
<td>For international connectivity, we also have contracts with providers.</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>Own network</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Internationally. We have a connection through the LMN &amp; GÉANT networks.</td>
</tr>
<tr>
<td>Slovakia</td>
<td>Own network</td>
<td>GÉANT</td>
<td>For international connectivity, we also have contracts with providers. We are planning the SANET II Project, which will establish a Gbps infrastructure through leased dark fibre.</td>
</tr>
<tr>
<td>Slovenia</td>
<td>Several providers</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>For international connectivity, we use several carriers.</td>
</tr>
<tr>
<td>Spain</td>
<td>One provider</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>Several providers</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Nationally and internationally we also have contracts with providers.</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Own network</td>
<td>GÉANT</td>
<td></td>
</tr>
<tr>
<td>Tunisia</td>
<td>One provider</td>
<td>Through contract(s) with (a) provider(s)</td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>One provider</td>
<td>Through contract(s) with (a) provider(s)</td>
<td></td>
</tr>
<tr>
<td>Ukraine</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>GÉANT</td>
<td>For international connections, we also have contracts with several providers.</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Several providers</td>
<td>Through contract(s) with (a) provider(s)</td>
<td>Nationally. We also have contracts with providers Internationally. We also connect through the GÉANT network.</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>Own network</td>
<td>Through contract(s) with (a) provider(s)</td>
<td></td>
</tr>
<tr>
<td>Yugoslavia</td>
<td>Own network</td>
<td>Through contract(s) with (a) provider(s)</td>
<td></td>
</tr>
</tbody>
</table>

* One provider for transmission facilities, i.e. lambdas, in the backbone and we own our own routers and switches.