



## Technology Development Program [SME Stream]

<b>Anchor Firm</b>	<b>ERICSSON</b>   In partnership with 
<b>Challenge Statement</b>	<b>5G Asset tracking with Massive IoT</b>

<b>Challenge Launch Date</b>	July 23, 2020
<b>Challenge Deadline</b>	September 10, 2020
<b>Challenge Statement</b>	<p>Rogers is looking to build a solution enabled by the capabilities of 5G Narrowband – Internet of Things [NB-IoT] to solve the problem of asset management within the telecom supply chain.</p> <p>There are two main categories of tracking devices we are looking at to help solve this problem:</p> <ol style="list-style-type: none"><li>1. Short term tracking of high value packages (On the Box). This device will need a battery life from 1 -12 months, ability to achieve an ultra low-cost point at mid/high scale (1,00,000 / year), and a tiny footprint. One application of such a tracker is to place it on the box of smartphones as they are delivered around the country. A sensor that could be placed under clear packing tape without disturbing box stacking would be ideal.</li><li>2. Mid Term tracking of high value packages (on the equipment). This device will need a battery life of up to 5 years, the ability to achieve a very low-cost point at mid-scale (100,000/year), a tiny footprint with an IP-51 protection rating. One application of such a tracker is to place it on telecommunications equipment before it is boxed and shipped from the manufacturer. The device would remain attached and functioning while the equipment is installed and operating and provide location of the equipment should it ever be decommissioned/re-installed at another location. The device would also be able to alert/detect any attempts to tamper/remove it from the equipment.</li></ol>
	Ericsson Canada Inc. and Rogers Communications Inc
<b>Timeline</b>	up to 12 months [NOTE: Projects must be completed by March 31, 2022, no extensions will be available beyond this timeline].
<b>Available funding</b>	Up to \$300,000 CDN

<b>Applicant Type</b>	Ontario based SME Scale company
<b>Location</b>	Ontario [NOTE: live demonstrations in Ottawa are required every 6 weeks]
<b>Project Details</b>	<ul style="list-style-type: none"> <li>• Challenge details will be provided to the companies that move to the next stage of the process, invitation to submit a full application [This will be shared under NDA]</li> <li>• Further project details will be revealed with selected applicants once they are moved to full application stage</li> <li>• Project will be run in agile fashion, ideally in 2-week sprints</li> </ul>
<b>Project Goals/ Outcomes</b>	<ul style="list-style-type: none"> <li>• Develop initial prototype solution</li> <li>• Deploy prototype to large friendly user base</li> <li>• Refine prototype on early feedback</li> <li>• Begin early productization work</li> </ul>
<b>Applicant Capabilities</b>	<p>The SME applicant should have expertise in the following areas:</p> <ul style="list-style-type: none"> <li>• Ability to work in an Agile environment, define sprints, run scrum meetings, and drive a rapid demo-based environment.</li> <li>• Experience with supply chain management systems and operations</li> <li>• Project management tool [e.g. <a href="#">JIRA</a>]</li> <li>• Proven track record in developing asset management software</li> </ul>
<b>Additional Information</b>	<ul style="list-style-type: none"> <li>• Development of a real-time asset tracking low-cost NB-IoT devices that have varying cost points based on their expected life cycle <ul style="list-style-type: none"> <li>○ Cost of NB-IoT device should be considered disposable vs the cost of the product it is tracking. <ul style="list-style-type: none"> <li>▪ Exact volumes can be discussed under NDA</li> </ul> </li> <li>○ Trackers will either operate on NB-IoT B71 spectrum and should be able to provide sub 5m accuracy in open sky, and sub 50m accuracy in a box, on a truck. Integration of the devices into an asset management platform for e2e demonstration purposes</li> <li>○ Specifics of management platform to be provided under NDA</li> </ul> </li> <li>• Additional functionality that would be considered beneficial in the proposal <ul style="list-style-type: none"> <li>○ Tracking sensors to include tampering detection capabilities</li> </ul> </li> </ul>