To Photonics21 Secretariat
via eMail: secretariat@photonics21.org

Dear Photonics21 Secretariat,

We herewith submit the nomination of the following Photonics21 Board of Stakeholders candidate VTT Technical Research Centre of Finland Ltd / Ari Alastalo.

- Letter of Nomination -
Photonics21 Board of Stakeholders
Election 2025

Photonics21 Board of Stakeholders - Letter of Nomination

1. **Full legal name of the affiliation nominated as BoS Member (candidate's organisation):**

   VTT Technical Research Centre of Finland Ltd

2. **Full contact details of the affiliation (street, postal code, country) nominated as BoS Member and invoice address** *(In accordance with the Terms of Reference §5, which the Affiliation acknowledges having received, an Annual Service fee will be invoiced every year during the first quarter to the BoS Member. By signing the present letter, the BoS candidate agrees to pay this Membership Fee. The Fee will be considered an asset of the Photonics 21 AISBL in accordance with its statutes (article 12b).)*

   Tietotie 3
   02150 Espoo
   Finland

   Invoicing address:
   VTT Technical Research Centre of Finland Ltd.
   P.O. Box 8003
   00071 OSTOLASKUT
   Finland

   For 2025 invoice add order number 830783

3. **Name of the suggested BoS Representative (the personal candidate)**

   Ari Alastalo

4. **Information about the BoS candidate and the BoS representative**

a) Description of the activities and information about the expected contribution and value added the nominated BoS member (candidate's organisation) will bring to the BoS[1]

VTT Technical Research Centre of Finland Ltd is a state owned and controlled non-profit limited liability company established by law and operating under the ownership steering of the Finnish Ministry of Employment and the Economy. VTT is a Research and Technology Organisation (RTO) whose activities are focused on three areas: Carbon neutral solutions, Sustainable products and materials, and Digital technologies. VTT works to strengthen Finnish and European industrial competitiveness.

VTT has a staff of 2386, net turnover in 2024 was 190 M€ and other operational incomes were 103,4 M€. VTT has strong experience from participation and coordination of hundreds of European and international projects including R&D Framework Programme projects, Chips JU,

[1] The candidate is aware and accepts that according to the Photonics21 Terms of Reference (§ 5 (10) a member ship fee - as determined by the General Assembly of the Association - needs to be paid to the Photonics21 association.

SNS JU, Eureka Cluster and other thematic frameworks and programmes. VTT has been recognised with the "HR Excellence in Research" award by the European Commission.

One of VTT's research areas in Digital technologies is Microelectronics and Quantum Technologies in which VTT focuses on More than Moore technologies such as photonic integrated circuits, MEMS, Analogue RF circuits, post-CMOS integration of sensors and memory devices and superconducting quantum technologies. VTT hosts a clean room of about 2500 m2 with plans for expansion. For photonic integrated circuits, VTT focuses on the thick-SOI technology that is especially well suited for low-power applications. VTT is a hosting partner of the Chips JU PIXEurope Advanced Photonic Integrated Circuits Pilot Line for Europe coordinated by ICFO In PIXEurope, VTT develops its PIC capabilities at 200 mm wafer size to offer pilot production services to its customers.

In addition to PIXEurope, VTT is also a partner in the Chips JU pilot lines NanoIC (Advanced sub 2nm leading-edge system on chip technology, led by Imec), FAMES (Advanced Fully Depleted Silicon On Insulator technologies targeting 7nm, led by CEA-Leti) and APECS (Advanced Packaging and Heterogenous Integration, led by Fraunhofer). Furthermore, VTT is a coordinator of the superconducting quantum pilot line proposal and a partner in the other quantum pilot line proposals. In addition to the Chips-JU pilot lines, VTT pursues research and pilot production also for printable, flexible and wearable electronics targeting applications such as health and wellness.

b) Description of the activities and information about expected contribution and value added the BoS Representative (candidate / person) will bring to the BoS.

Ari Alastalo received D.Sc. (Tech.) and M.Sc. (Tech.) degrees in Technical Physics from Helsinki University of Technology in 1997 and 2006, respectively. Currently Ari works as a Research Manager at VTT Technical Research Centre of Finland in Microelectronics and holds a title of Docent in Applied Materials Physics from Aalto University. Before that he worked as a Principal Scientist at VTT focusing on printable thin-film electronics (transistors, memory devices, high-resolution processing) and wearable-sensors. Earlier he has worked on microelectromechanical systems (MEMS), array antennas for WLAN networks and theoretical materials physics of superconductors. Ari holds IPMA-C certificate in project management. He has authored 81 journal and conference articles and holds 12 patents. In his current position as a Research Manager Ari is responsible for the strategy, roadmaps and public project portfolio of VTT in the area of microelectronics and integrated photonics. Ari is also involved in VTT's Chips-JU pilot line activities.