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ANDANTE

# AI for New Devices And Technologies at the Edge

# D1.3 Requirements monitoring report

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| **Deliverable No.** | D1.3 | **Due Date** | 29-*Feb*-2024 |
| **Type** | Report | **Dissemination Level** | *Confidential* |
| **Version** | 1.0 | **Status** | Final |
| **Description** | This deliverable aims to provide the results of monitoring the alignment (or not) of developments in use case systems defined in D1.4 | | |
| **Work Package** | WP1 – Use case system architectures description and application Requirements | | |

# Abstract (Published Summary)

The purpose of this document is to provide the results of monitoring the Edge AI use case system requirements defined in Deliverable 1.4 and any changes or updates that occurred during their development are reported here. For example, if a requirement has not been met, feedback is provided explaining the reason(s), the mitigation plan that was applied as well as the impact on the developments, features, and performance of the use case.

During the first year of the ANDANTE project, a list of requirements was defined for each Edge AI use case (Deliverable 1.4), to define the specifications of the use case hardware components and platforms that will help meet the use case KPIs. These requirements include, among others, specifications of external interfaces, processing elements, AI models, type of neural network (SNN, ANN), as well as timing constraints and power consumption for each of the platforms/boards, ASIC, SoC and FPGA for each use case.

Since the second year and until the end of ANDANTE, these requirements were continuously monitored to ensure that the development of the different hardware components (Integrated circuits and platforms) as well as the implemented demonstrators are aligned with the needs of the use cases applications and, therefore, meet the use case KPIs.

This document is the result of T1.2 and reports the final status of the use-cases requirements. This monitoring was essential to identify possible implementation gaps or delays, which could lead to incompatibility between the developed components and the demonstrators, preventing them from achieving the KPIs. Therefore, alignment between technology providers, hardware manufacturers, AI hardware and software designers, and application developers is a key step in the roadmap to create neuromorphic platforms that meet customer needs.

These requirements served as a basis for the development and implementation of ANDANTE technologies as well as the development of the integrated circuits, hardware platforms, AI algorithms and associated software necessary for the implementation of the various applications identified in ANDANTE.