

**DRAFT –**

## **Imec and CEA-LETI joins forces on Artificial Intelligence and Quantum Computing**

LEUVEN (BELGIUM), November 19, 2018 — *During the state visit of His Excellency Emmanuel Macron President of the French Republic and in the presence of His Excellency Charles Michel, Prime Minister of Belgium, the Belgian research center imec and the French research institute CEA-Leti, two world-leading research and innovation hubs in nanotechnologies for industry, announced that they have signed a memorandum of understanding (MoU) that lays the foundation of a strategic partnership in the domains of Artificial Intelligence and quantum computing, two key strategic value chains for European industry, to strengthen European strategic and economic sovereignty. The joint efforts of imec and CEA-LETI underline Europe’s ambition to take a leading role in the development of these technologies. The research centers’ increased collaboration will focus on developing, testing and experimenting neuromorphic and quantum computing – and should result in the delivery of a digital hardware computing toolbox that can be used by European industry partners to innovate in a wide variety of application domains – from personalized healthcare and smart mobility to the new manufacturing industry and smart energy sectors.*

Edge Artificial Intelligence (eAI) commonly refers to computer systems that display intelligent behavior locally on the hardware devices (e.g chips) . They analyze their environment and take the required actions to achieve specific goals. Edge AI is poised to become a key driver of economic development. And, even more importantly perhaps, it holds the promise of solving many societal challenges – from treating diseases that cannot yet be cured today, to minimizing the environmental impact of farming.

Decentralization from the cloud to the edge is a key challenge of AI technologies applied to large heterogeneous systems. This requires innovation in the components industry with powerful, energy-guzzling processors.

“The ability to develop technologies such as AI and quantum computing – and put them into industrial use across a wide spectrum of applications – is one of Europe’s major challenges. Both quantum and neuromorphic computing (to enable artificial intelligence) are very promising areas of innovation, as they hold a huge industrialization potential. A stronger collaboration in these domains between imec and CEA-LETI, two of Europe’s leading research centers, will undoubtedly help to speed up the technologies’ development time: it will provide us with the critical mass that is required to create more – and faster – impact. and will result in plenty of new business opportunities for our European industry partners,” says Luc Van den hove, president and CEO of imec.

*“Two European microelectronics pioneers today are joining forces to raise the game in both high-performance computing and trusted AI at the edge, and ultimately to fuel European industry success through innovations in aeronautics, defence, automobiles, Industry 4.0 and health care,” E. Sabonnadière said. “This collaboration with Imec following earlier innovation-collaboration agreements with the Fraunhofer Group for Microelectronics of the Fraunhofer-Gesellschaft, the largest organization for applied research, will focus all three institutes to the task of keeping Europe at the forefront of new digital hardware for AI, HPC and Cyber-security applications.”*

Imec and CEA-LETI are inviting partners from industry as well as academia to join them and benefit from access to the research centers’ state-of-the-art technology with proven reproducibility – enabling

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a much higher degree of device complexity, reproducibility and material perfection while sharing the costs of precompetitive research.

### **About imec**

Imec is the world-leading research and innovation hub in nanoelectronics and digital technologies. The combination of our widely acclaimed leadership in microchip technology and profound software and ICT expertise is what makes us unique. By leveraging our world-class infrastructure and local and global ecosystem of partners across a multitude of industries, we create groundbreaking innovation in application domains such as healthcare, smart cities and mobility, logistics and manufacturing, energy and education.

As a trusted partner for companies, start-ups and universities we bring together close to 3,500 brilliant minds from over 70 nationalities. Imec is headquartered in Leuven, Belgium and has distributed R&D groups at a number of Flemish universities, in the Netherlands, Taiwan, USA, China, and offices in India and Japan. In 2016, imec's revenue (P&L) totaled 496 million euro. Further information on imec can be found at [www.imec-int.com](http://www.imec-int.com).

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### **About Leti (France)**

Leti, a technology research institute at CEA Tech, is a global leader in miniaturization technologies enabling smart, energy-efficient and secure solutions for industry. Founded in 1967, Leti pioneers micro- & nanotechnologies, tailoring differentiating applicative solutions for global companies, SMEs and startups. Leti tackles critical challenges in healthcare, energy and digital migration. From sensors to data processing and computing solutions, Leti's multidisciplinary teams deliver solid expertise, leveraging world-class pre-industrialization facilities. With a staff of more than 1,900, a portfolio of 2,700 patents, 91,500 sq. ft. of cleanroom space and a clear IP policy, the institute is based in Grenoble, France, and has offices in Silicon Valley and Tokyo. Leti has launched 60 startups and is a member of the Carnot Institutes network. This year, the institute celebrates its 50<sup>th</sup> anniversary. Follow us on [www.leti-cea.com](http://www.leti-cea.com) and @CEA\_Leti.

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CEA Tech is the technology research branch of the French Alternative Energies and Atomic Energy Commission (CEA), a key player in innovative R&D, defence & security, nuclear energy, technological research for industry and fundamental science, identified by Thomson Reuters as the second most innovative research organization in the world. CEA Tech leverages a unique innovation-driven culture and unrivalled expertise to develop and disseminate new technologies for industry, helping to create high-end products and provide a competitive edge.

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