



[Recommendations and roadmap for European sovereignty on open source hardware, software and RISC-V Technologies](#)

This report highlights the need for a strong European open source ecosystem to drive competitiveness and enable greater and more agile innovation.



The use of **open-source hardware and software** drastically lowers the barrier to design innovative System-On-Chips (SoCs), which is an area in which Europe excels today. Open-source is a disruptive approach and strong competences in this field are being developed worldwide, for example in China, the US and India. Europe needs to become a global player in the field to ensure its technology sovereignty. For this, it is important to put in place a roadmap and initiatives that would permit to consolidate ongoing European activities and to develop new technology solutions for key markets such as automotive, industrial automation, communications, health and aeronautics/defence.

An **open-source ecosystem** needs to be stimulated that can act as an alternative to licensing IPs from non-EU third parties. The realization of such an ecosystem requires a change in working with leadership and contributions from major European industrial and research players and other value chain actors. An approach similar to the [European Processor Initiative](#), bringing together key technology providers and users across the value chain, is needed with the goal of producing open source IP.

A Working Group on open-source hardware and software defined a **strategic roadmap** considering short (2-5 years), medium (5-10 years) and long term (>10 years) goals. The success of the roadmap depends on European actors working closely together to create a critical mass of activities that enhance and expand the European open source community and its influence on the world stage. The Working Group advocates that this roadmap of activities is supported via coordinated European level actions to avoid fragmentation and ensure that Europe retains technological sovereignty in key sectors.

The working group was set up after a [workshop on open-source hardware and RISC-V](#) in June 2021. The working group published a [first version of the roadmap](#) in December 2021. This first version was the inspiration behind topics in the [2021](#) and [2022](#) work programmes of the [Key Digital Technologies Joint Undertaking](#).

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Author

Working group on open source hardware and software

Contact

[Unit Microelectronics and Photonics Industry](#)

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