

Development of devices ready for series production

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The economy, industrial and social landscape is seeing a hugely accelerated demand for updated, ready to use advanced devices for satisfying the pressing requests induced by technology progresses (5G, IoT, novel automotive approaches, communications, space economy, fog computing, ...) and user demand (web-centric lifestyle). The demand is so high that a 'silicon crisis' is happening, with the fabrication of high-tech chips failing short to promptly satisfy industrial needs. On the research and innovation end, the capabilities to invent ever more sophisticated solutions for sensors and devices is very vital, with boost coming from progresses in nanotechnology and emerging novel approaches (technologies using single quanta for sensing, computing, communicating; 2D materials, ...).

The scene appears very promising, with a market eager to accept and deploy innovative, enhanced solutions and a R&I activity rich with ideas and results. One of the main bottlenecks that affect the enormous potential represented by the access of new device solutions to the market is well known: user readiness and compliance to industrial standards (stable performance, scalability, cost effectiveness) of the devices coming from scientific labs. I will discuss here a research approach that uses open access to facilities capable of industrial standard fabrication to overcome this specific limitation.