

## **The future of nanoelectronics in industrial applications**

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Semiconductor industry entered the domain of nanoelectronics in the late 1990's by passing the 100-nm pattern size limit. This was the eventual result of relentless following dimensional scaling for digital logic according to Moore's Law, a path existing now for more than four decades. In technological terms, scaling can certainly continue for many more years; much more uncertain is whether doing so can be economically feasible. Systems for future applications will see an increasing content of non-digital More-than-Moore elements, characterized by miniaturization rules much more elaborate than simple patterning dimension only. At the same time, the economic value of the software embedded in these systems will quickly equal and surpass the hardware value. Overall result is that the simple linear value chain of the past semiconductor industry will have to evolve into a complex knowledge ecosystem spanning continents rather than countries.