



**A Roadmap for the Future of Smart Manufacturing in Semiconductor point of view
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The rapid rise of smart manufacturing (SM) and Industry 4.0 capabilities presents a number of challenges and opportunities for enhancements in manufacturing in terms of improved capacity, quality, and efficiency.

The microelectronics industry poses unique challenges in its SM migration arising from the industry's complex, high precision and highly dynamic production environment. Despite these obstacles, SM capabilities are already being realized in microelectronics manufacturing in key SM areas such as predictive maintenance. The challenges, opportunities and early successes point to the need for a SM roadmap to be included in the FI (Factory Integration) chapter of IRDS (International Roadmap for Devices and Systems).

The presentation will include an overview of SM tenets in place and those area where more industry efforts are needed to bring in the full benefits of the SM to the microelectronics industry.