EXTENDING THE BOUNDARIES OF PRINTED ELECTRONICS

The Pictic large-surface printing platform develops smart plastics, papers, and textiles produced by printing electronic functions directly on flexible, 320 mm x 380 mm surfaces. The applications for these flexible circuits are complementary to those addressed by silicon-based technologies, and include human-machine interfaces, smart lighting, interactive displays, and environmental monitoring.

The platform is Europe’s only specialized R&D facility to bring together all of the necessary printing techniques—screen printing, inkjet, gravure, flexography, and slot-die—under one roof. The platform also has characterization, assembly, encapsulation, and other equipment.

The platform develops formulations for electronic inks, scales up printing processes for industrial rollout, and manufactures prototypes and preseries, working with corporations worldwide, as well as with Grenoble, France-based start-up Isorg.

The processes developed at the platform stand out for their precision and competitive pricing. Electronic functions are deposited on the substrate in a single step, eliminating the need to use lithography and other subtractive processes.

NOTABLE EQUIPMENT
Slot-die, gravure, and flexography process equipment

R&D
High-precision processes: alignment of electronics layers to within 10 microns; uniform deposition thicknesses (for example 9% for thicknesses of 1 micron)

KEY FIGURES
• 600 sq. m of clean rooms
• €8 million in investment
• 50 researchers and technicians
• A portfolio of 50 patents

LOCATION
Grenoble, CEA research institute Liten