European consortium develops 40% cheaper LED monitors

- The Optintegral consortium has created four demonstration screens that combine printed electronics, high-efficiency LEDs and plastic optics.
- The mould-based hybrid manufacturing technology halves emissions while accelerating time-to-market for LED screens by 40%.
- Nine partners from five European countries are taking part in the project.

Barcelona, February of 2018.- The European consortium Optintegral, which comprises nine partners from five European countries, has developed a mould-based hybrid manufacturing technology for LED screens that not only reduces costs and time-to-market by 40%, but also halves the harmful emissions produced during the manufacturing process.

Specifically, Optintegral has developed high-efficiency technology for TOLAE (thin, organic and large-area electronics) LED screens incorporating photonic components for advertising use. The manufacturing process, which involves a hybrid mould-based system of printed electronics and optical injection, marks a new step in the transition from plasma technology to LCD and LED.

These innovations will make the manufacturing process for these devices "more flexible and automated", and therefore "competitive with labour costs within the European Union", according to Eduard Piqueras, the project's technical coordinator.

The project, which began in 2015 and reached completion this January, has produced three demonstration devices that showcase the technology developed during the research process. These devices could be brought to market within a year, giving users the opportunity to take advantage of the economic and energy-

consumption benefits of the flexible, large-format printed electronics used in TOLAE technology.

One of the demonstration devices comprises a large-scale, high-resolution 2D screen with lighter and finer backlighting than the models currently on the market. The consortium has also developed a flexible, large-format, super-thin RGB screen, plus a high-density 3D screen with a new lens system that makes it possible to create a 3D effect without special glasses.

The Optintegral consortium is led by the Catalan technology centre Eurecat. Its other partners consist of the Technical Research Centre of Finland (VTT), the University of Bath, the Spanish Association for Standardisation (UNE) and the companies Megatex, NeonElektro, SnellOptics and Holografika. The project has received funding from the European Commission's Horizon 2020 programme under the 643956 – Optintegral grant agreement.

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