

# Printed paper-based electronics

GUARRŌCASAS

## Description

Innovative and smart printed electronics based on multifunctional paper, from smart labelling to point of care bio platforms.



## Objectives

- To evaluate the environmental impact and check reliability of re-use and the recyclability paper devices and to assess their cost benefit, to decide if the production lines are economically feasible to bring them to the market compared to commercial counterparts,
- To define the most suitable end-of-life scenario to reduce environmental impacts, to design the tailor-made electronic devices incorporating sustainability criteria.

## Activities

- Sustainability assessment:
  - Life-Cycle Assessment LCA,
  - Life-Cycle Costing LCC,
  - Eco-design.

## Challenges

- Input data complex to collect 
- Technical knowledge required 
- Legal & legislation barriers 
- Technology readiness level 

## Expected outcomes

- Advantage for European industries in competition with non-European low-cost countries,
- Use of cellulose as an electronic material for insulators, electrolytes, conductors and semiconductors,
- Reduction of the environmental impact of electronics.

