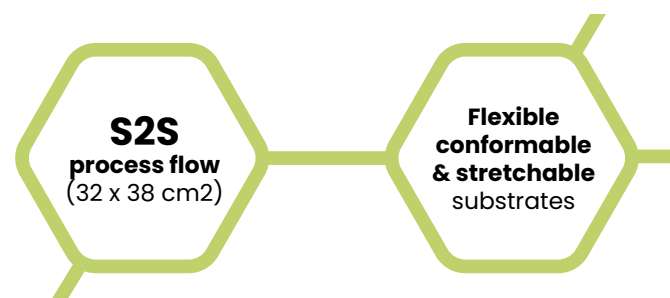




## CURRENT-STATUS

CEA Structural and Printed Electronics facilities are dedicated to the development and characterization of smart surfaces/objects embedding electronic functionalities, such as printed/stretchable/flexible antennas/filters, sensors, actuators, organic TFT-circuits (e.g., gate drivers), piezoelectric energy harvesters as well as SMD (surface mount devices), bare die and LEDs.

The facilities contain a large set of printing, post-processing and characterization equipment allowing to test a large variety of new products, materials and manufacturing processes at an affordable cost prior to industrial scale-up.



## CHALLENGE

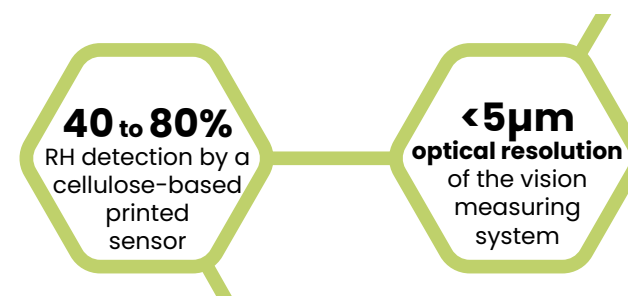
Increase the amount of bio-based materials to reduce the environmental impact of the developed smart electronic functionalities.

Evaluate and correct the deformation of substrates during the different technological steps.



## FURTHER DEVELOPMENT

Development of a cellulose based humidity sensor using both bioabsorbed inks and biobased substrates.



## BENEFITS FOR COMPANIES AND SME'S

The possibility to realize prototypes and studies using a large set of printing and characterization equipments prior to an industrial scale up.

Other benefits: Industrial transfer of printed electronic functions and related technologies, Research and Development services in the field of printed electronics and Training of future pilot line operators.

## APPLICATION EXAMPLES

**AUTOMOTIVE,  
WELL BEING/ MEDICAL,  
CONSUMER GOODS,  
PACKAGING**

## PROTOTYPE EXAMPLES

### SMART PRINTED LABEL:

CEA will optimize the process flow of the humidity sensor in StS configuration and carry on performances assessment before transferring it to ARJO partner for the upscale in Rtr.