

# UC 04: Eco-designed remote-control unit

## Objectives:

Provide an **eco-designed RCU with minimal e-waste generation** (reduced by 50%) by:

- ❖ Reducing the number of materials used, their volume and weight.

- ❖ Using:

**1. Low environmental impact flexible substrates:**

FR4 -> flexible substrates (ex. PET, PLA, PVA, cellulose derivatives, paper, ...) -> Bio-based substrates

**2. Inks with minimal environmental footprint**

Copper-based inks or Carbon-based inks

**3. An additive manufacturing process**

Screen-printing

### Partners

**DANISH  
TECHNOLOGICAL  
INSTITUTE**

Copper-based  
inks  
development

**synano**

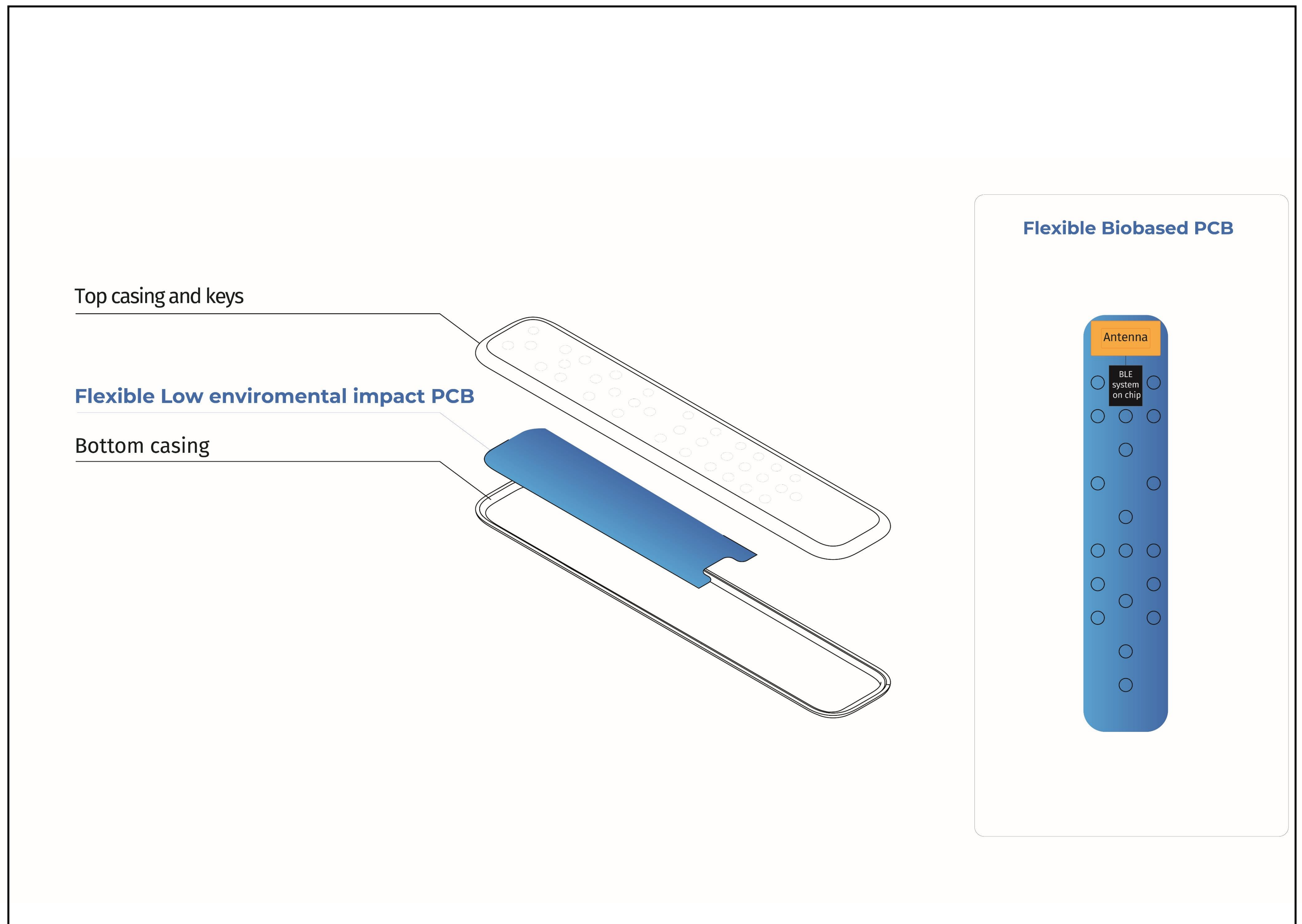
Carbon-based  
inks  
development

DE LA RECHERCHE À L'INDUSTRIE  
**cea**

Electronic  
circuits  
printing

**4MOD.**

Integration &  
Demonstrator



## Time plan

	YEAR-1				YEAR-2				YEAR-3			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Jul-Sep 2023	Oct-Dec 2023	Jan-Mar 2024	Apr-Jun 2024	Jul-Sep 2024	Oct-Dec 2024	Jan-Mar 2025	Apr-Jun 2025	Jul-Sep 2025	Oct-Dec 2025	Jan-Mar 2026	Apr-Jun 2026
Subtask 4.1.1: Specifications and requirements for material development												
Subtask 4.1.2: Development and manufacturing of low environmental impact materials												
Subtask 4.1.3: Printing technologies												
Subtask 4.1.4: Testing and integration into technology demonstrators												

Kick-off

Mile-1  
↓  
Specifications for materials

Mile-2  
↓  
Choice and design of materials / processes

Mile-3  
↓  
PoC of substrates and inks

Del-1

Mile-4  
↓  
Integration into technology demonstrator

Del-2

