



Medical Wristband Body Temperature Monitor

*EERI474 – Conceptual Design
Presentation*

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This presentation will cover

- The design concept.
- A functional analysis of the system.
- An architectural synthesis of the system.
- The scope of the design.
- Resources needed to realise the design.
- Possible stumbling blocks.

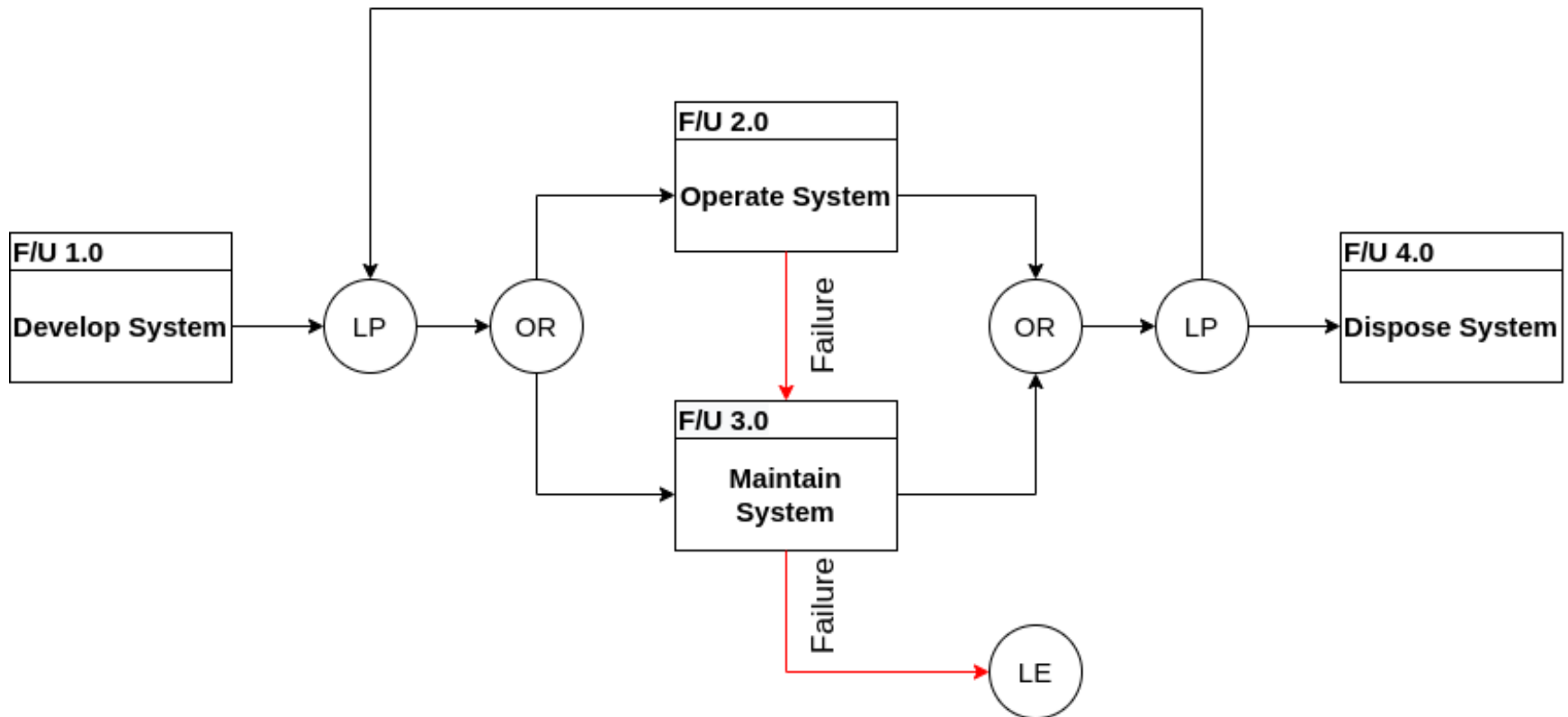


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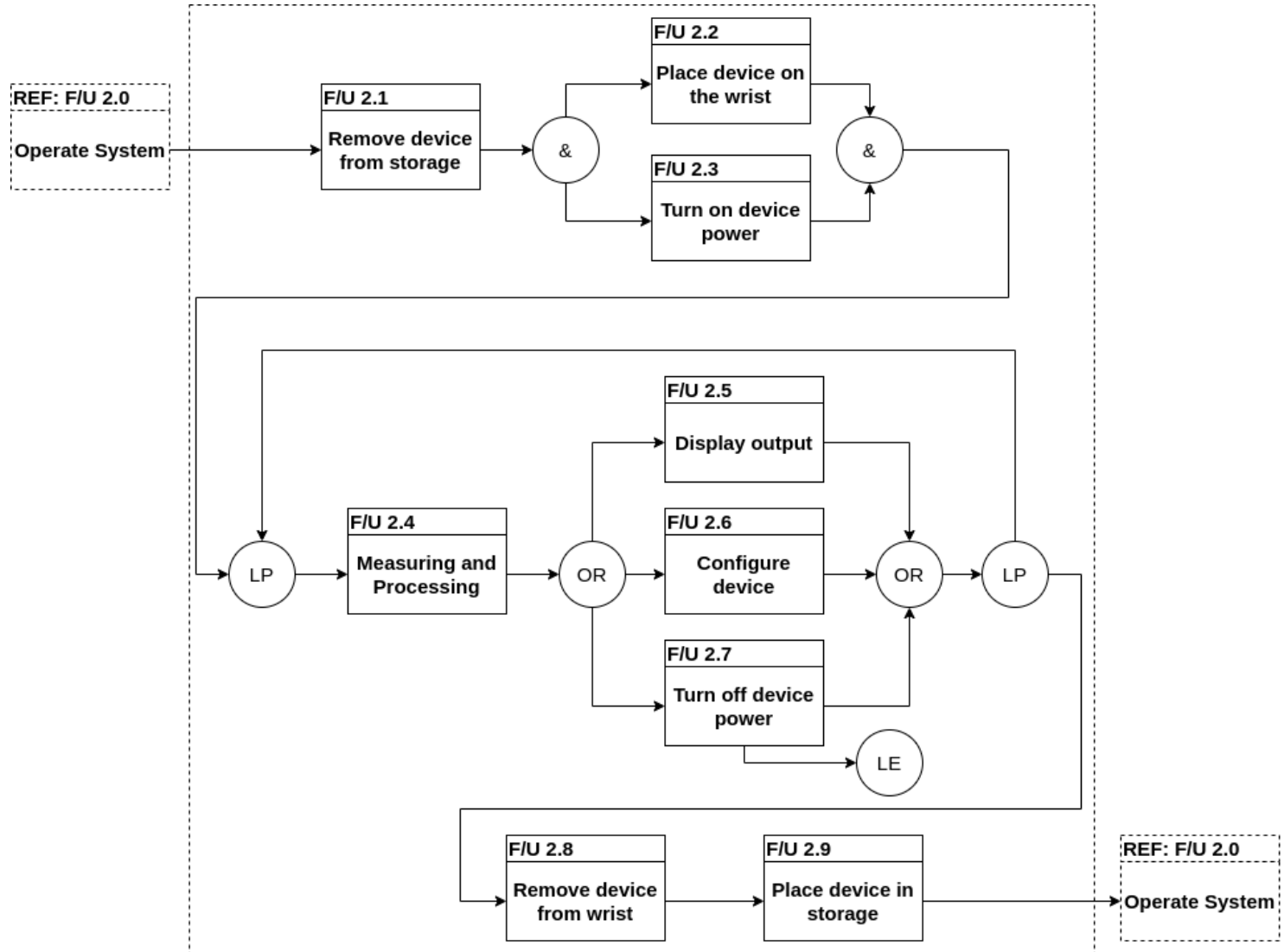


Functional Analysis

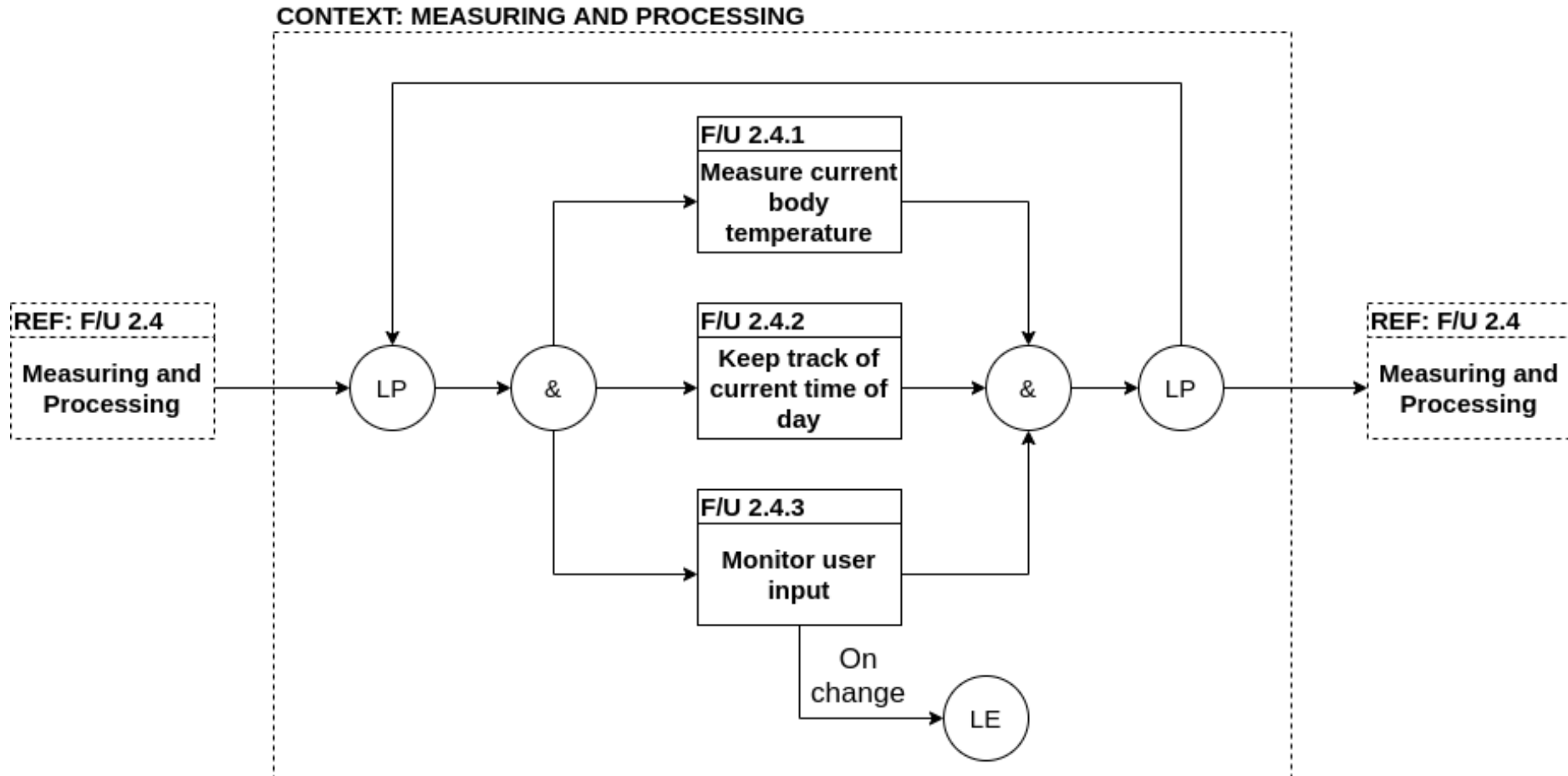
- System life cycle



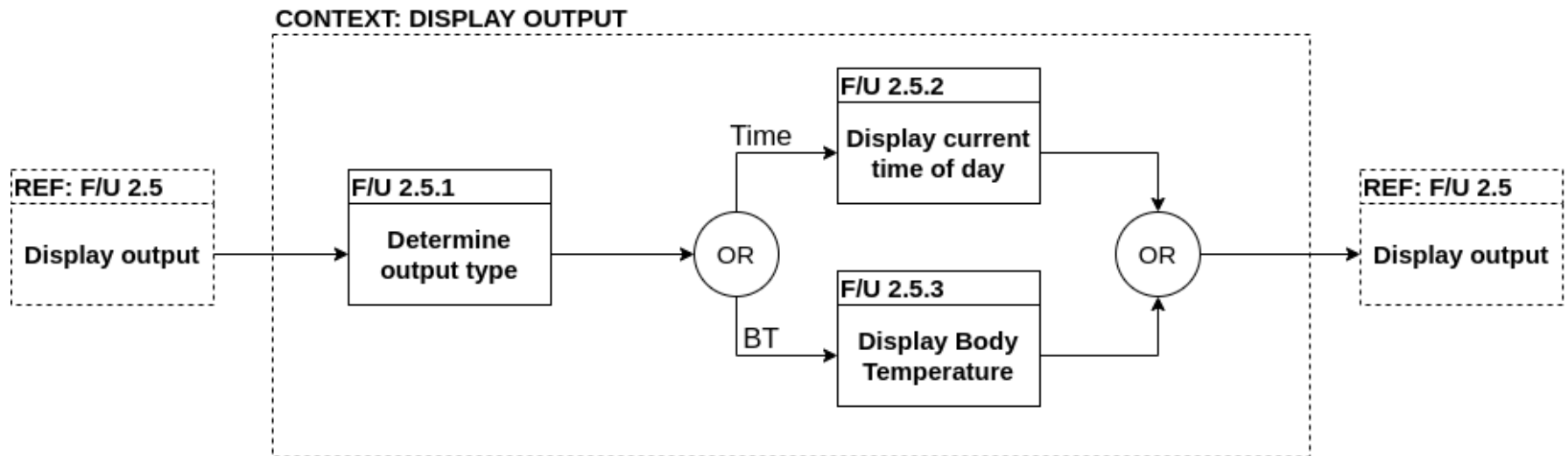
Functional Analysis – Operate system



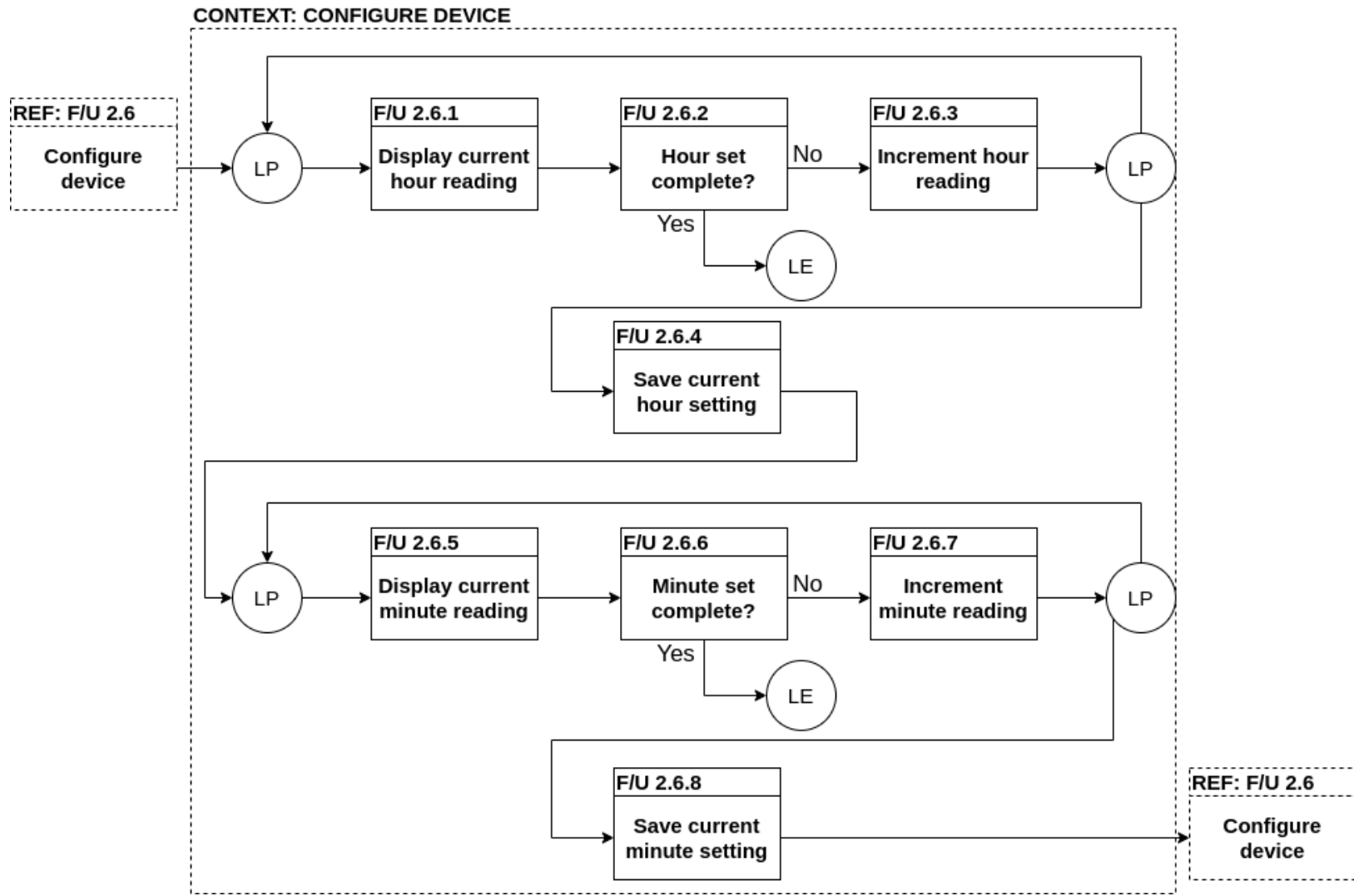
Functional Analysis – Measuring and Processing



Functional Analysis – Display output

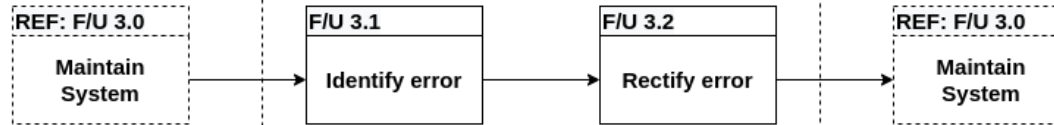


Functional Analysis – Configure device

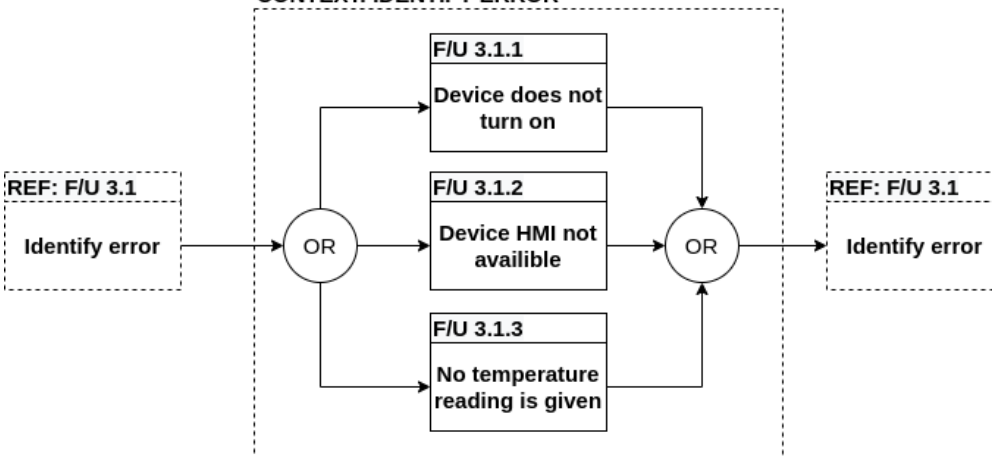


Functional Analysis – Maintain System

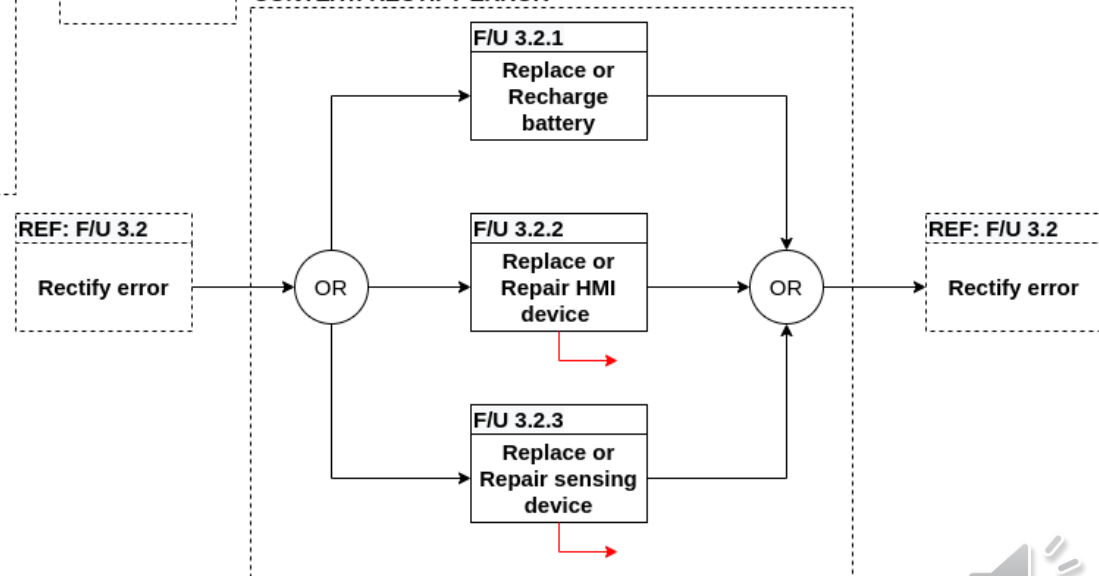
CONTEXT: MAINTAIN SYSTEM



CONTEXT: IDENTIFY ERROR

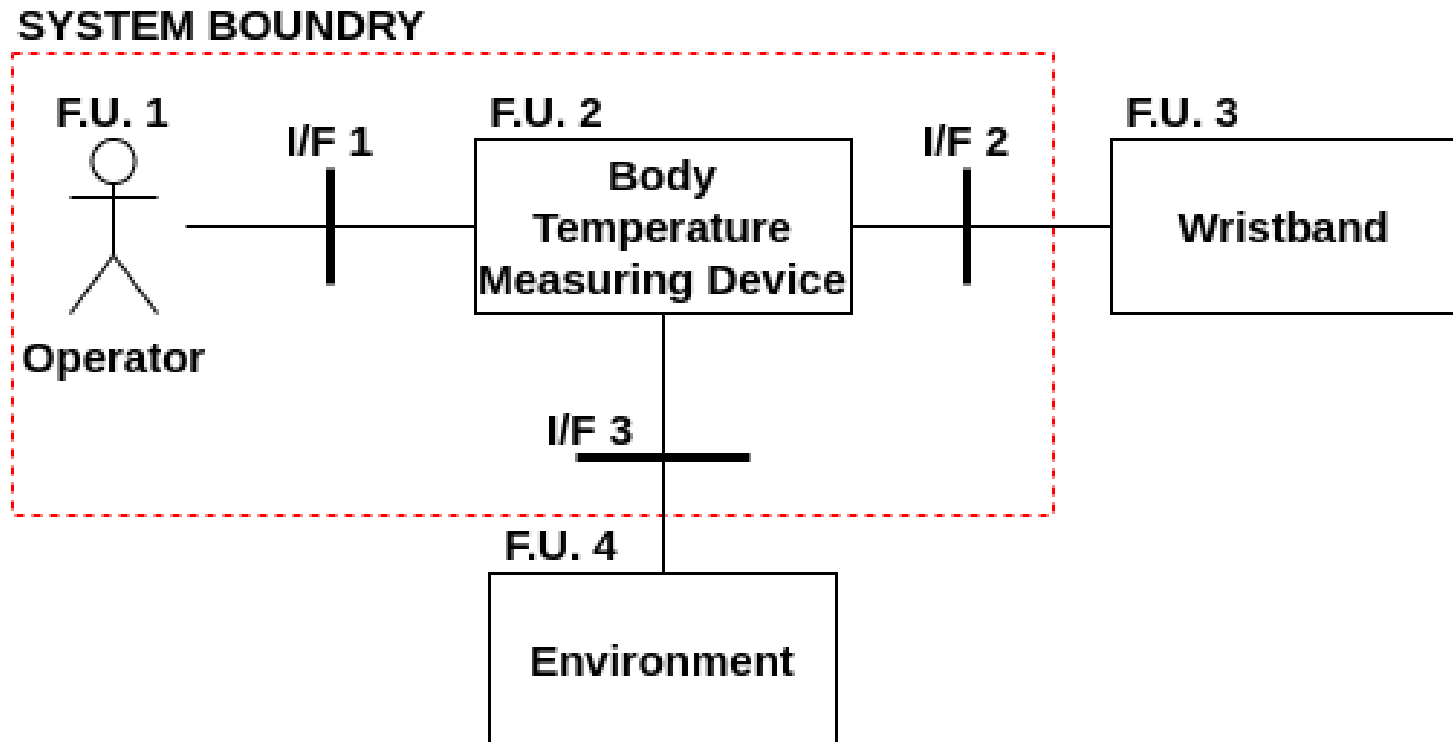


CONTEXT: RECTIFY ERROR



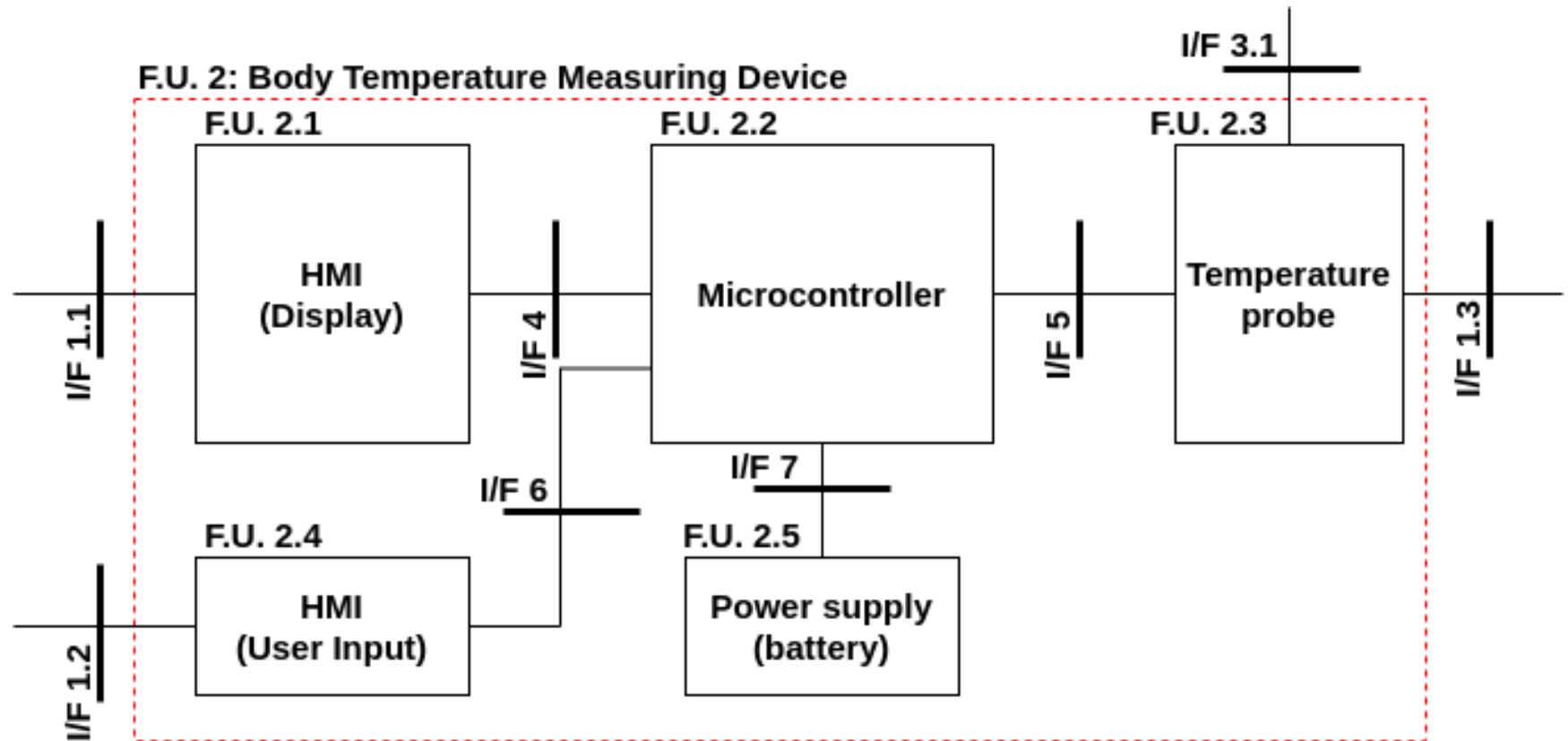
Architectural Synthesis

- System architecture



Architectural Synthesis

- Physical Architecture

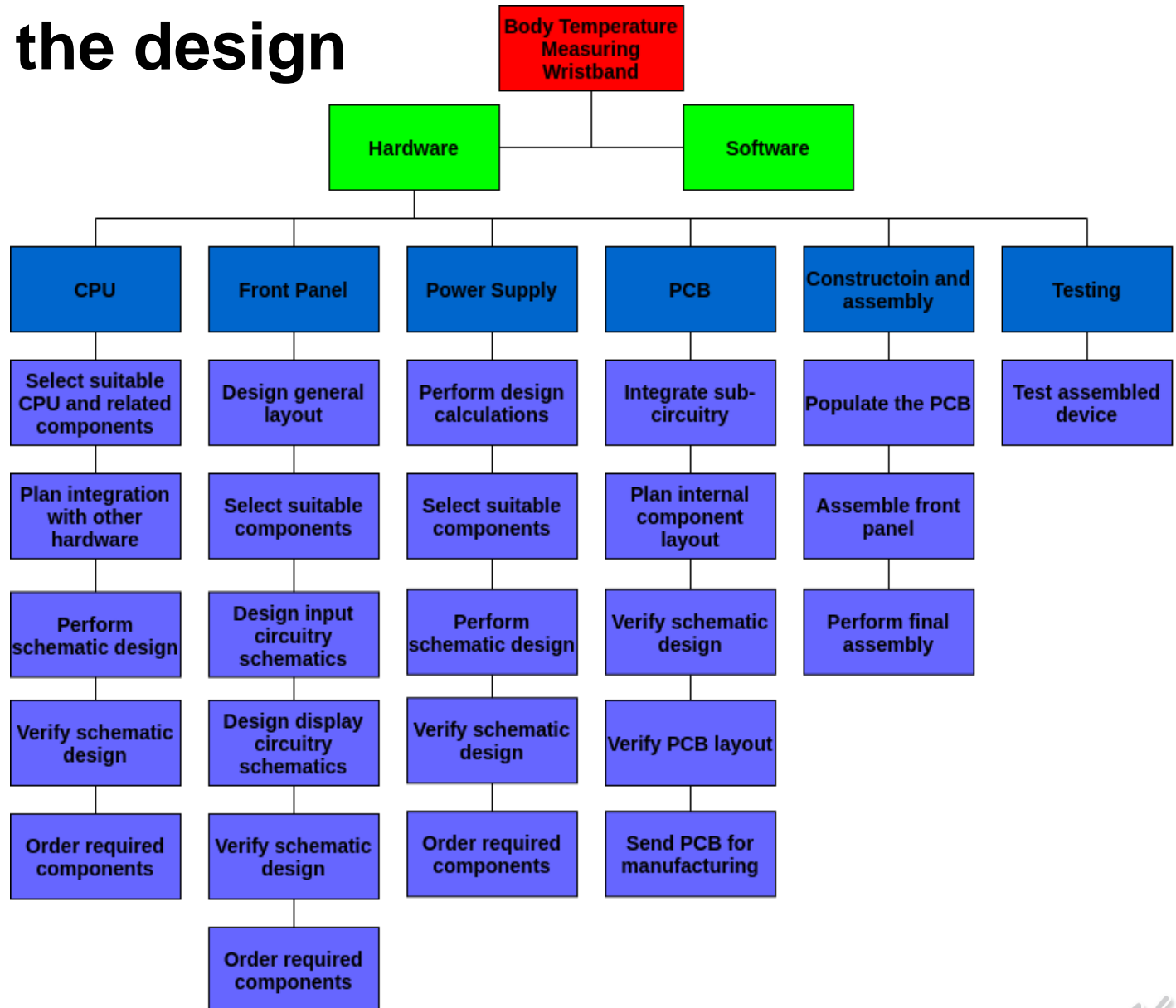


Resources needed

- Microcontroller
 - 8bit, 16bit
- Display
 - 7 segment, LCD
- User input
 - Button
- Power supply – battery
 - Either rechargeable or non-rechargeable
- Temperature probe
 - Thermistor, RTD, Infrared



Scope of the design



Possible stumbling blocks



- Body temperature reading from surface temperature reading.
 - Environment temperature will influence the measured surface (skin) temperature.
- Size of the designed product.
 - Size of the final product must be relatively small.
- Energy usage.
 - Battery operated; energy usage will influence battery life.

