

 phoenix



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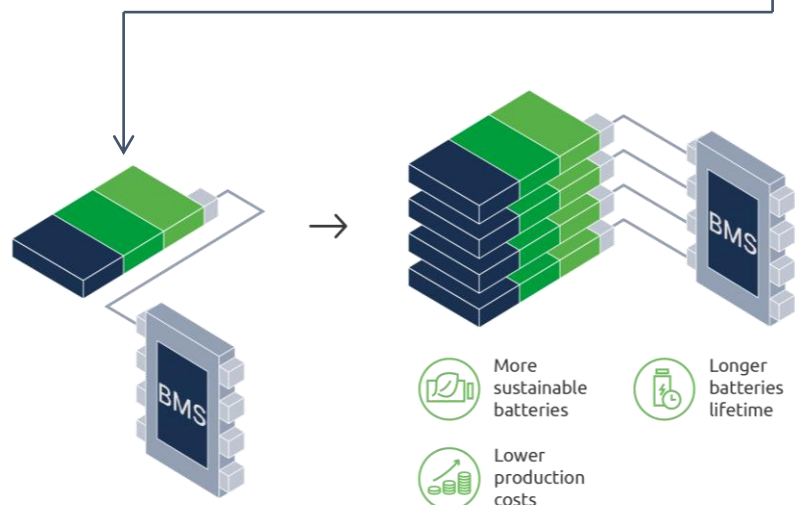
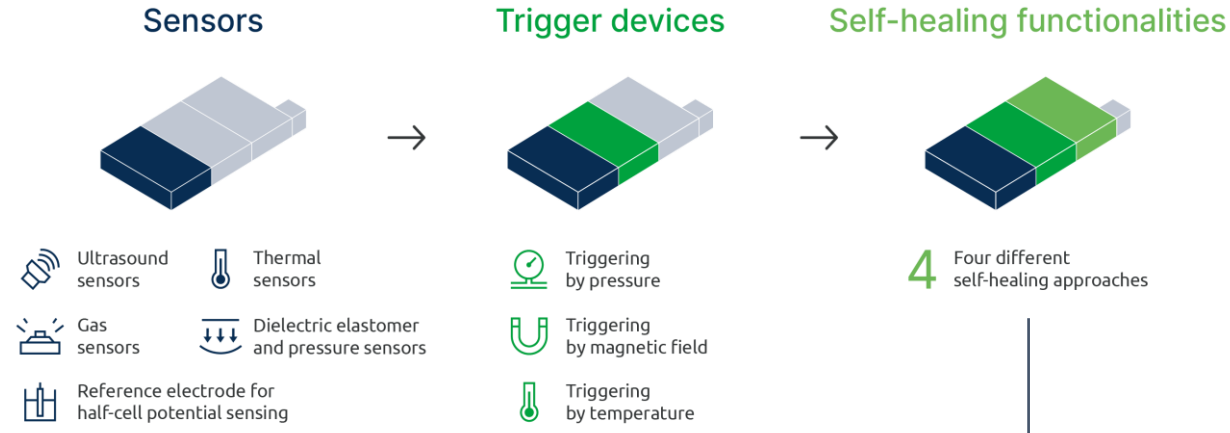
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# Project Overview

The PHOENIX project explores integrating self-healing, sensing, and triggering functionalities into batteries to prolong their lifespan and prevent degradation.



# Top Goals



Develop materials providing self-healing capabilities



Create and develop various types of sensors



Develop triggering devices that can activate the self-healing process



Create a self-contained solution



Detect and address critical battery degradation



Assess the sustainability of the developed battery technology

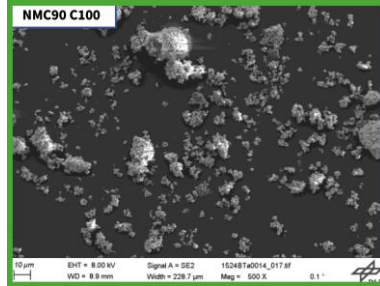


Implement an adaptable approach to mass production processes of battery cells

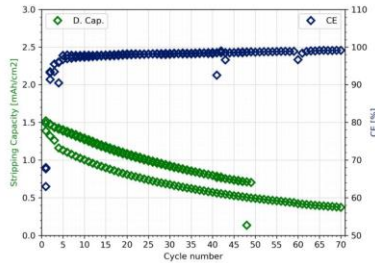
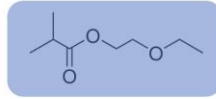


Contribute to the growth of a sustainable battery manufacturing industry in EU

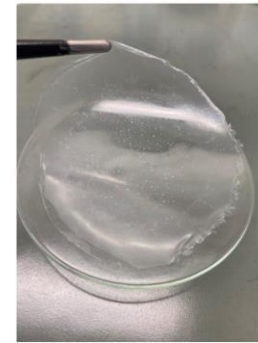




First synthesis of SH polymer embedded on NMC90 core/shell structure



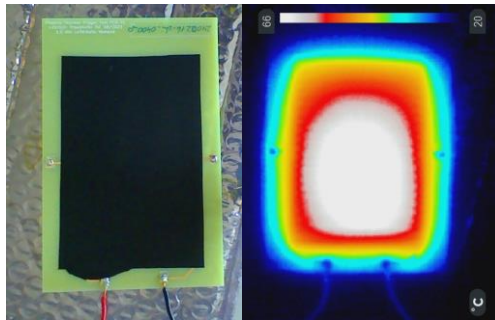
Experimentation with thermally triggered SH polymer electrolyte



Fabrication and characterization of thermally triggered MOF integrated separator for gas absorption



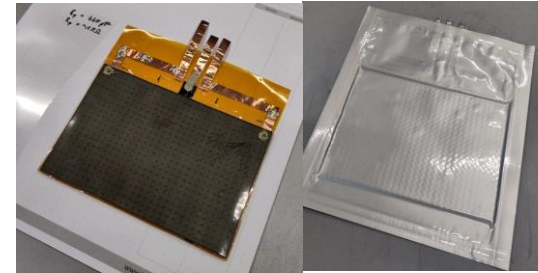
development and testing of HASEL actuator for pressure triggering



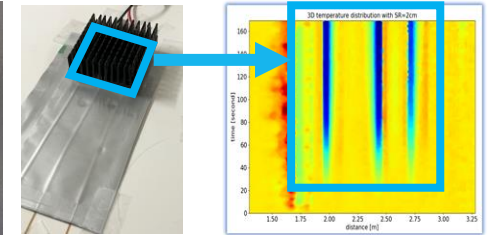
Development and tests with printed thermal element for temperature triggering



Improved flex-PCB design for ultrasonic sensor, integrating both sender and receiver



Encapsulation test of dielectric elastomer sensor for pressure sensing



Fibreoptics based temperature sensor with encapsulation test



## 1. Which objectives of my project could be added to the roadmap goals?

- Translation of technological insights into new guidelines, policies and legislation
- Fast uptake of novel insights into battery-related curriculae
- Definition of standard test-procedures for self-healing batteries, for relevant comparisons of performance

## 2. What are the expectations of my project from the future roadmap?

- Close follow-up by B2030+ during project duration for more up-to-date roadmap updates (living document?)
- Tight follow-up of industrial needs and facilitating industrial uptake

