

Executive Summary – Patent-Pending Battery Packaging Architecture

This document provides a non-confidential overview of a patent-pending packaging architecture designed to support battery safety, Extended Producer Responsibility (EPR) objectives, and circularity principles for consumer battery manufacturers, with particular relevance to EU and global regulatory environments.

EU & Global EPR Context

Portable batteries are identified as a priority product category under Regulation (EU) 2023/1542 and similar global EPR frameworks due to fire risk, low collection rates, and widespread consumer use. Packaging architectures that support safe interim storage and consumer participation are increasingly evaluated as part of compliance and risk management strategies.

Concept Overview

The invention is a dual-use, paper-based packaging architecture that functions as retail display packaging and converts post-purchase into a safe battery containment and return structure. The architecture incorporates passive terminal isolation using honeycomb or cellular geometry to reduce short-circuit and fire risk during interim consumer storage.

Business & Licensing Model

The intellectual property is offered as an architecture-level license. Licensees retain full control over final design, materials, manufacturing, and regulatory validation. The concept is designed for compatibility with existing packaging formats and production processes.

Legal Note

This concept is not represented as ensuring regulatory compliance. Any implementation would be subject to independent technical, legal, and regulatory review by the licensee.

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