

PRESS RELEASE

Mannheim, 18 May 2026

APARO: Digital Infrastructure for Operative Textile Circularity

Mannheim-based technology company builds software infrastructure for collection, sorting, traceability and EPR reporting – addressing the operational gap in the textile circular economy.

APARO, a newly founded technology company headquartered in Mannheim, Germany, develops operative software infrastructure for the textile circular economy. The platform connects collection, sorting, traceability and EPR reporting in a continuous material flow data model – closing a structural gap that will become relevant for all market participants with the introduction of EU-wide Extended Producer Responsibility (EPR) for textiles in April 2028.

HEAVY CIRCULARITY – THE INDUSTRIAL IMPLEMENTATION LAYER

APARO coins the term Heavy Circularity for the operative, industrial implementation layer of the textile circular economy. While industry debate frequently focuses on material innovation and product design, the operative infrastructure – collection, sorting, material flows, actor coordination – remains largely undigitised. Large material volumes, fragmented actors, physical process chains and rising regulatory requirements: this is the reality APARO addresses.

The textile circular economy today is fragmented, opaque and only limitedly steerable through data in many areas. The introduction of EPR systems creates, for the first time, the necessity to coordinate material flows digitally across the entire system. APARO does not target individual process steps, but the missing coordination at system level.

"Textile circularity will only become scalable when it becomes operationally steerable. It's about material flows, processes, data and actors that are often insufficiently connected today. APARO builds the digital infrastructure to make exactly this level steerable."

Andreas Papoutsakis, Founder and CEO, APARO

THE STRUCTURAL PROBLEM: PROS HAVE NO PRIMARY DATA

Producer Responsibility Organisations – so-called PROs – commission collectors and sorters, yet receive no structured primary data from their operational processes. EPR reporting today

is often a manual post-report rather than an output of live operational data. This is inefficient, error-prone and not scalable for the requirements that will apply from 2028.

"Good data helps companies in textiles and fashion be more efficient, identify new opportunities, and comply with regulations more easily. It should also be the basis for effective policy from the public sector. We're not there yet, and everyone has a role to play in achieving good data."

Traci Kinden, Director, TEXroad

APARO closes this gap: EPR reporting emerges as a by-product of the day-to-day operations of collectors and sorting facilities – not as an additional reporting obligation, not as a manual export, but as a structured data flow from ongoing operations.

At a glance:

- EU-wide mandatory separate textile collection in force since January 2025
- EPR obligation for textiles: April 2028, fully operative across all EU Member States
- Digital Product Passport (DPP) for textiles: introduction from 2027 (ESPR)
- 25 kg of textile waste per person per year in the EU – less than 1% recycled fibre-to-fibre today
- APARO headquarters: Mannheim – primary market focus: DACH and Europe

THE PLATFORM: MATERIAL FLOW AS THE CENTRAL CONTROL ELEMENT

The central logic of APARO is the material flow: it connects actors, processes and data across the textile circular economy. Collection, sorting, recovery and reporting today frequently operate in separate silos; a shared operative data foundation rarely emerges.

In the area of collection, APARO maps different collection models within a generic framework: containers, in-store collection, take-back systems, kerbside collection, events – every model is configurable without specific development effort for new collection formats. This is complemented by fill-level forecasting, route optimisation, fleet and telematics integration, and an operator app for drivers and dispatchers.

In the area of sorting, the platform enables an operative connection between collector and sorting facility: the sorter can see in real time what quantities the collector is currently gathering – before the truck arrives. Inbound and outbound data are captured at batch level, with material qualities and fibre compositions documented. APARO does not control sorting machinery, but creates the digital process and data layer to make material flows visible and steerable.

Traceability is conceived at material flow and batch level: physical movements are linked to digital data records, forming the foundation for EPR reporting, future Digital Product Passports and system-wide transparency. Beyond this, APARO creates a system-wide

database of LCA-relevant material flow data – structured primary data from operative post-consumer operations that is not systematically captured in any existing software infrastructure today.

"PROs commission collectors and sorters – but they receive no structured primary data from their processes. This data situation will have to change with EPR from 2028 onwards. APARO builds the infrastructure for this data to be generated – not additionally, but as an output of ongoing operations."

Andreas Papoutsakis, Founder and CEO, APARO

REGULATORY FRAMEWORK: EPR, DPP AND CSRD AS DRIVERS

With the entry into force of the EU Waste Framework Directive (WFD) in October 2025 and the EPR obligation for textiles from April 2028, a legal basis is created for the first time that mandates operative data transparency along the textile value chain. Simultaneously, the Digital Product Passport (from 2027, ESPR) and CSRD reporting obligations for companies create a growing need for verifiable material flow data.

APARO is designed for this regulatory framework: the platform architecture is structured from day one to be LCI-compatible (ISO 14040), so that operative data can be used directly as the basis for life cycle assessments, EPR verification and DPP declarations.

DEVELOPMENT STATUS AND OUTLOOK

APARO is deliberately transparent about its current development status: the company is currently at TRL 3–4. Concept and architecture are defined, initial modules are in development. Productive pilots or commercial deployments do not yet exist. APARO is actively seeking pilot partners along the value chain – collection organisations, sorting facilities and PROs – for the first operative deployment in the DACH region.

The initial market focus is DACH; however, the platform architecture is designed from the outset for European scalability. The long-term goal is to establish APARO as the leading European software infrastructure for the operative management of textile material flows – from collection through sorting and commercialisation to recovery.

ABOUT APARO

APARO is a technology company in the build-up phase, headquartered in Mannheim, Germany. The company develops operative software infrastructure for the textile circular economy under the term Heavy Circularity – coined by APARO for the industrial implementation layer of the circular economy. APARO structures material flows across different collection models,

connects actors and creates a system-wide data infrastructure for operative management, traceability, reuse and the implementation of EPR systems.

Beyond the operative management layer, APARO creates a system-wide database – for traceability, LCA-relevant material flow data and sectoral transparency not available in any existing infrastructure today.

APARO was founded by Andreas Papoutsakis, former CIO in European textile recovery, with experience in operative software, international textile logistics, platform architecture and innovation projects in robotics and AI.

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