

Plastic Waste Coalition

AI to advance pack circularity

Feb 2026



Plastic
Waste

With support of

BAIN & COMPANY 



DRAFT

What we heard from you: strong conviction in AI's potential but implementation held back by key bottlenecks

There is conviction that AI will unlock packaging circularity...

100%



considered AI

30%



started piloting AI

0%



has embedded at scale

... Mainly for applications around design, traceability and reporting

70%



design & optimization

65%



for packaging traceability

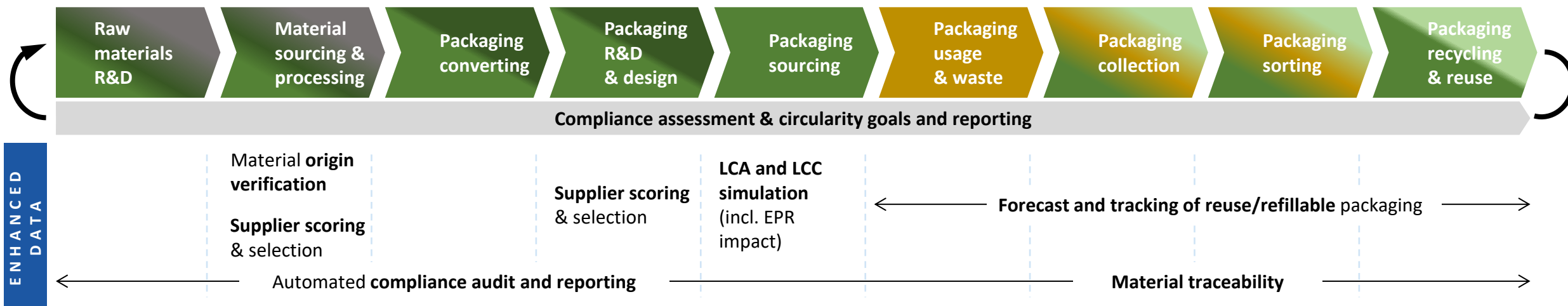
40%



for reporting and compliance



15 AI use cases accelerate packaging circularity and are mapped across the value chain

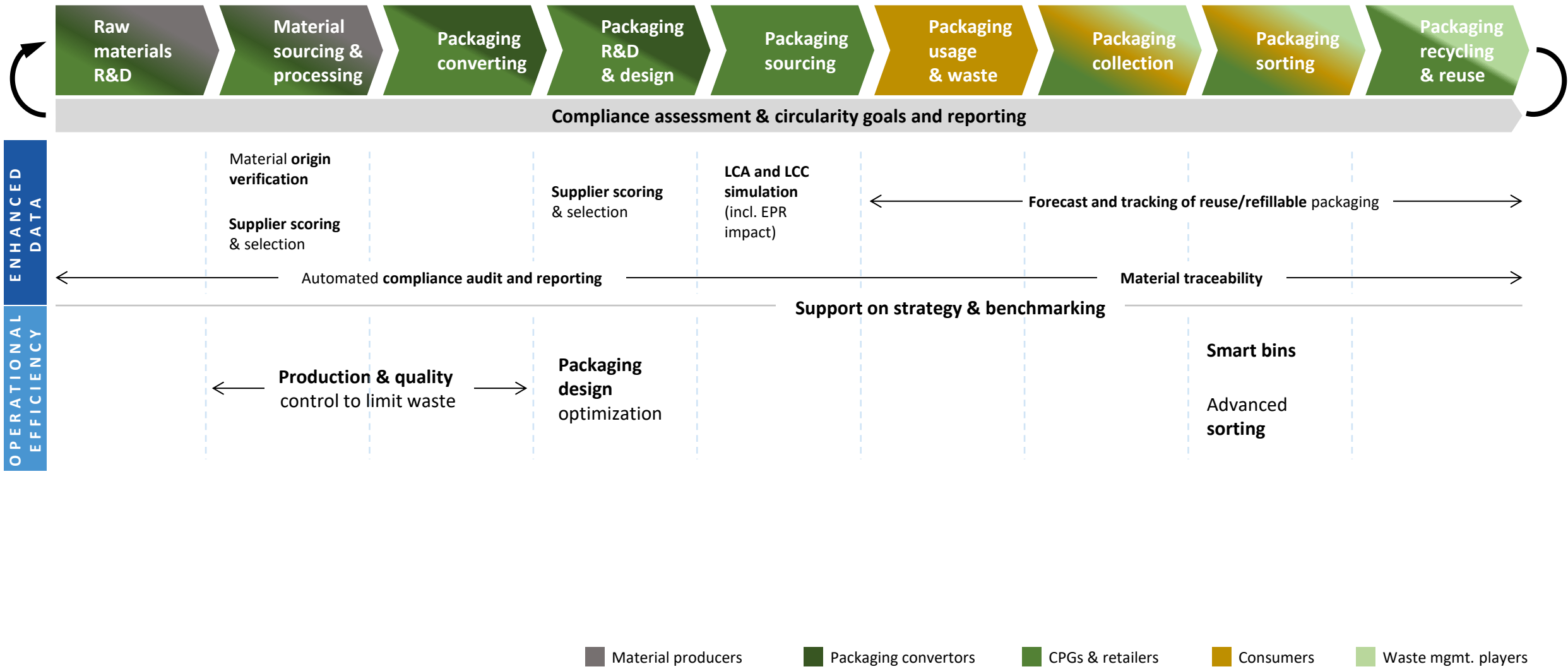


- Material producers
- Packaging convertors
- CPGs & retailers
- Consumers
- Waste mgmt. players

Note: 1) LCA = Life Cycle Assessment 2) LCC = Life Cycle Costing



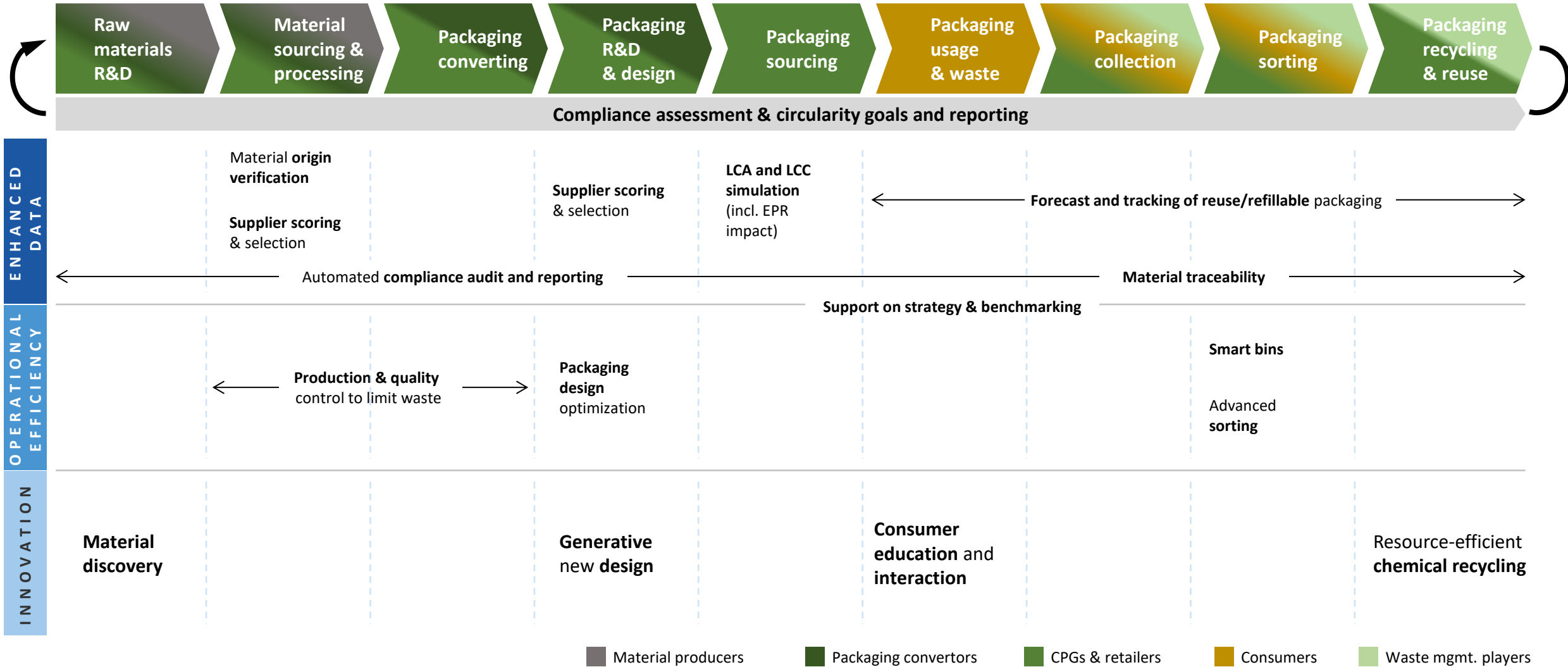
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Out of 15 identified, 8 AI packaging use cases show highest impact potential as they are solving for the key pain points



Overcoming technical limitations on new packaging materials

Slow & costly innovation

Material discovery



Incorporating and getting access to more recycled content

Security of supply

Supplier scoring & selection



Staying up to date with regulations, getting accurate data and developing required reporting

Regulation evolution

Regulation cost

Design optimization



Making the packaging portfolio recyclable, and actually recycled

“Design for recyclability” trade-offs

Packaging capture

Generative new design

Advanced sorting & material traceability



Setting up refillable and reusable packaging systems

Complex economics

Track & forecast for refill & reuse

Stricter regulation on reporting

Robust data system for reporting

Automated compliance audit & reporting

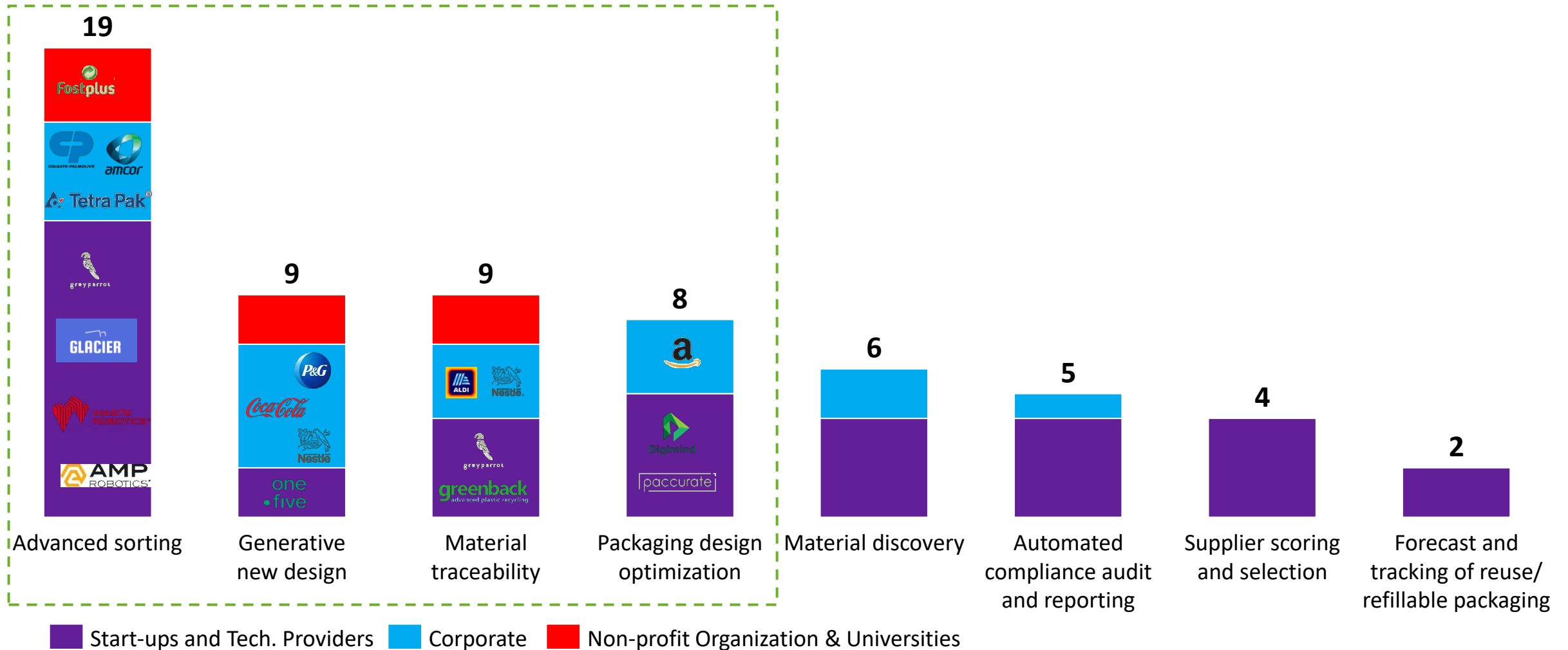
Material traceability

■ Sub pain point where AI can help

■ Corresponding AI use case

4 AI use cases stand out for maturity and traction, offering strong proof points to start implementing

Number of actors, by type, involved on prioritized AI use cases (based on 62 initiatives/actions)



Bottlenecks to scale AI include data quality, implementation cost, change management, limited resources and collaboration



Limited access to high-quality data



High implementation costs



Change management hurdles



Resource constraints



Limited collaboration across value chain

*“Supplier data is fragmented and often inaccessible, **limiting our visibility into item-level packaging specifications.** For AI solutions to work effectively, **accessibility to data is crucial**”*

RetailerCo

*“The cost of AI based solutions is a challenge, to overcome it, we need to clearly demonstrate a compelling vision and showcase the **tangible benefits to justify the investment**”*

RetailerCo

*“The biggest challenge with AI isn't just the technology itself, but **shifting the mindset.** Teams often raise **skepticism about AI recommendations**”*

TechProvider

*“It takes **a lot of time for the associates** to look at solutions, understand them and really adopt them”*

CPGCo

*“It's not just a technical issue, the **real barrier** is market **collaboration, alignment on what is the exact demand and needs from brands**”*

TechProvider

We've created a report where you will find a library of in-depth resources on AI solutions, key companies & partners

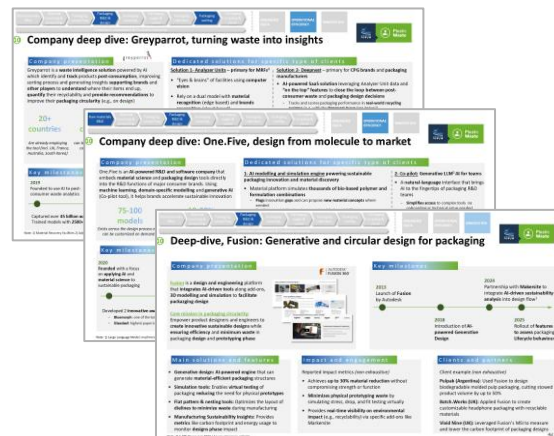
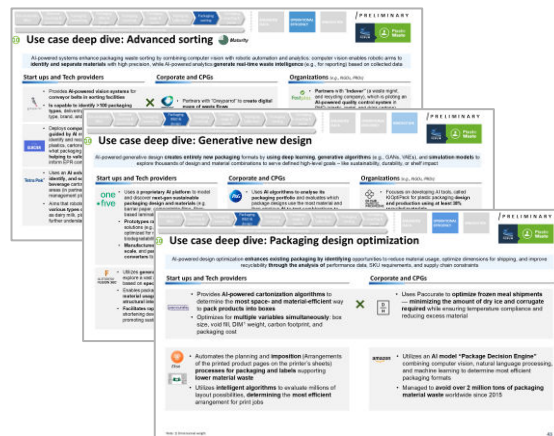


Brings AI use cases to life by providing examples of AI solutions from:

- Start ups/tech providers
- Large corporates/CPGs
- Organization (e.g., PROs, NGOs)

Presents in-depth profiles of promising startups and tech providers offering targeted AI solutions for each use case, supporting potential partnership opportunities

Offers a comprehensive list of startups and tech providers mapped to each AI use case





The Consumer Goods
FORUM



**Plastic
Waste**